



ENCYCLOPEDIA OF  
**EDUCATION**

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SECOND EDITION

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## **AACSB INTERNATIONAL**

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AACSB International—The Association to Advance Collegiate Schools of Business is a nonprofit association of approximately 900 educational institutions, corporations, and other organizations dedicated to the promotion and improvement of higher education in management, accounting, and business administration. AACSB International serves as a professional association for college and university management education and as the leading accrediting agency for bachelor, master, and doctoral degree programs in business administration and accounting around the world.

### **Program**

One of the primary functions of AACSB International is the accreditation of undergraduate and graduate degree programs in business administration and accounting. The association's demanding accreditation process begins with institutional self-evaluation, whereby a school assesses its own accomplishments relative to its stated mission and AACSB's accreditation criteria. AACSB International accreditation also requires a peer review, during which external analysts examine and evaluate the school's education programs, curriculum and faculty, assessment systems, and plans for growth and improvement.

In addition to its accreditation program, AACSB organizes and conducts a variety of professional development programs for faculty and staff of management and business administration schools. AACSB International also sponsors an annual two-day conference attended by more than 1,000 educators from around the world. The conference includes exhibits,

presentations, special events, affinity-group meetings, and discussions of important issues in management, business administration, and accounting education. Other AACSB International meetings include the Dean's Conference and the New Deans Seminar for deans and other administrators of business schools; a two-day biennial Public and Media Relations Conference for business school public relations personnel; and the Business School Development Conference, which trains business school administrators about strategies for raising funds from foundational and corporate sources. AACSB International also helps organize the Global Forum on Management Education. Held every five years, this conference brings together administrators and educators from business schools around the world, heads of corporate education and training programs, and corporate executives to discuss the advancement and practice of business and management education worldwide.

AACSB International's Knowledge Services program collects, collates, and disseminates statistical and analytical information about business schools around the world. Information available from Knowledge Services includes salary surveys and demographic analyses of business school faculty and staff; student, staff, and alumni satisfaction surveys; and Effective Practice reports featuring analyses and comparisons of the career services, curriculum, and instruction offered by various MBA programs.

AACSB International also sponsors affinity groups to facilitate the communication and networking of member institutions with common interests and goals. Affinity groups meet at AACSB International conferences and seminars, establish e-mail networks, schedule their own meetings at

times and locations convenient to group members, and post information on the AACSB web site. Each affinity group is also assigned an AACSB International staff liaison to help with record-keeping, program and meeting planning, and communications. In 2001, AACSB International affinity groups included the Small School Network group, the Metropolitan Schools group, the Woman Administrators in Management Education group, the MBA for Working Professionals group, and the Associated New American Colleges group. Institutions which are not members of AACSB International may participate in affinity groups if they are sponsored by an AACSB member.

AACSB International maintains relationships with business and management organizations around the world, and sponsors periodic educational exchange programs. Since 1993, AACSB International and Keizai Koho Center, a Japanese business organization, have sponsored an annual ten-day tour of Japan, during which AACSB members can study Japanese management techniques, corporate reforms, industrial technology, and business traditions. Tour participants also meet with Japanese business leaders, academics, and government officials.

AACSB International issues numerous print and electronic reports, surveys, accreditation manuals, curriculum guides, and guides to undergraduate and graduate business and management programs. Other publications include *Newsline*, the association's monthly newsletter, and *BizEd*, a bimonthly magazine that covers trends, practices, and issues in management education and training. AACSB also sponsors the Management Education Career Marketplace, an online job search and placement service with listings of open positions and resumes from those seeking jobs in business and management education.

### History

AACSB International was organized in 1916 by seventeen leading American colleges and universities. The new organization began its accreditation function in 1919 when it adopted its first standards for business degree programs. AACSB standards for programs in accountancy were established in 1980, with new standards and a peer review process adopted in 1991. By 2002, AACSB International membership included about 650 American institutions of higher education, nearly 200 institutions of higher

education in forty-nine foreign countries, and about fifty corporate and nonprofit organizations around the world. Formerly known as the International Association for Management Education or American Assembly of Collegiate Schools of Business, the association officially changed its name to AACSB International—The Association to Advance Collegiate Schools of Business in April 2001.

*See also:* BUSINESS EDUCATION.

### INTERNET RESOURCE

AACSB INTERNATIONAL. 2002. <[www.aacsb.edu](http://www.aacsb.edu)>.

JUDITH J. CULLIGAN

## ACADEMIC ADVISING IN HIGHER EDUCATION

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The role of the academic adviser shifts as student populations and administrative conditions in universities change over time. Faculty members are increasingly committed to teaching undergraduates, and academic advising is an innovative form of teaching that helps students become involved in their own choices. Instilling students with a sense of commitment to their future plans and responsibility for their decisions is the cornerstone of the academic adviser's work.

### Developmental Advising

Traditionally, faculty advisers simply helped students choose courses in a prescriptive approach to advising. Since the 1970s, however, scholars and faculty members have redefined the academic adviser's task to include guidance as well as imparting information. Developmental academic advising evolved out of this process; faculty advising took on importance as an experience that contributes to a student's personal growth. In two seminal works on academic advising, both published in 1972, Burns B. Crookston and Terry O'Banion targeted three goals, or vectors, for developmental academic advising: developing competence, developing autonomy, and developing purpose in the undergraduate student. Using this approach, advisers ask students to become involved in their own college experiences, explore with students the factors that lead to success, and show interest in both the students' academic

progress and extracurricular achievement. As they urge students to take responsibility for their own learning, developmental advisers avoid simply providing answers and instead ask open-ended questions. Developmental advising provides advantages not only for the student, but for the university as well: the school's academic community benefits from an advising process that bridges institutional divisions between academics and student affairs.

### **Differences between Developmental and Prescriptive Approaches**

Perhaps the most important part of any successful adviser/student relationship is a sense of shared responsibility: Students learn by taking control of their own choices and finding ways to handle the consequences of those decisions. Traditional or prescriptive advising situations, however, tend to emphasize the authority of advisers and the limitations of students. Prescriptive advisers supply answers to specific questions but rarely address broad-based academic concerns. An adviser using the prescriptive approach supplies information to the student, giving out information about campus resources. The developmental approach, on the other hand, urges students to take responsibility for their own college experience and career goals. In a developmental advising relationship, students and faculty share responsibility. This form of advising contributes to students' rational processes, environmental and interpersonal interactions, and behavioral awareness, as well as problem-solving, decision-making and evaluation skills. The relationship between adviser and student is vital, and both long-term and immediate goals are important. Successful advising functions first as a means of exploring careers and majors, and second as a method for selecting courses and arranging schedules. Most academic advising programs clarify their approach with a mission statement, which helps both advisers and students to understand their roles and responsibilities.

### **A Brief History of Academic Advising**

The historical aims of undergraduate education—involving students with learning and involving students with teachers—pertain to academic advising. The role of the academic adviser has shifted with cultural and historical changes. Before academic advising became a defined part of the university experience, formal divisions often kept students and

faculty apart and limited interaction between the two groups. In the late 1930s many colleges and universities developed formalized but unexamined advising systems, which focused solely on the academic aspects of student life. By the 1950s federal funding for education resulted in an emphasis on accommodating new student populations, and universities began implementing freshman orientation programs.

Changes in the advising process result primarily from shifts in the undergraduate student population. In the twentieth century, new populations gained access to colleges and universities, demanding innovative responses from faculty and administrators. After the passage of the Servicemen's Readjustment Act of 1944 (commonly known as the G.I. Bill), higher education became a possibility for students from a variety of backgrounds and age groups. As women, multicultural students, students with disabilities, and transition students began to matriculate, institutes of higher learning responded with changes in their approaches to student support structures such as academic advising. In the late twentieth and early twenty-first century, technological communication has signaled another major shift in the adviser/student relationship. Academic advisers are able to contact students through e-mail, and students are also able to seek out academic advisers through electronic communication. As online education has affected university classes and research, academic advising has also had to adjust, and advisers have had to meet the challenges of using online communication to strengthen, not diminish, their interactions with students.

### **Peer Advisers, Professional Advisers, and Faculty Advisers**

The adviser population is diverse; faculty from all disciplines advise students, and many schools, both colleges and universities, hire professional advisers and implement peer-adviser programs as well. Because faculty members often know the culture and requirements of both their own disciplines and the university as a whole, their expertise strengthens their relationships with the students they advise. Often, institutional recognition for faculty advising is limited on college and university campuses, and adviser/student relationships can suffer from a faculty member's busy schedule. Developing useful methods for evaluating academic advising helps faculty advisers receive credit for this important aspect of their work as teachers.

Many schools hire outside professional advisers to handle freshman orientation and other academic advising needs. Professional advisers tend to bring useful counseling experience to the advising process. These advisers, however, need training to understand the university's program and the role of academic advising in the institution. The primary role of the academic adviser is to offer support, encouragement, and information to improve a student's academic life and create a sense of responsibility in an undergraduate. Students should discuss personal, emotional, and mental health problems, however, with a trained counselor.

Many colleges and universities have implemented peer-adviser programs. Peer advisers tend to understand a fellow student's position and the undergraduate culture at their institution better than either faculty or professional advisers. Because peer advisers often know less than the faculty about college requirements and academic issues, however, training is an important part of any peer-advising program. Colleges and universities that offer peer advising usually require the student advisers to take part in extensive training programs, such as retreats, workshops, and meetings.

These three types of academic advisers work with either individual advisees or groups of students. With successful group facilitation, advising groups can provide students with an academic adviser as well as a sympathetic peer group. Discussion among members of an advising group is important, and students in the group need to learn effective ways of exchanging ideas and interacting with others.

### Student Populations and the Adviser/Student Relationship

Academic advising has evolved with academic trends and, most important, with student populations. Research shows that interaction between students and faculty increases student involvement on campus and makes students more likely to remain in school. These advantages of the academic adviser system are particularly valuable for the increasingly diverse student populations attending U.S. universities. Interested and informed advisers work with all students, not only to help them stay in school but also to help them become contributing members of the college or university community. Students with particular advising needs include academically underprepared students, students with disabilities, student athletes, students in transition, and international students.

Some student populations benefit from intrusive advising; academic advisers of academically underprepared students, for example, often initially assume responsibility for sustaining the advising relationship by contacting students frequently and encouraging them to succeed. Started out of concern for freshmen and sophomores who were unsuccessful in college, intrusive advising employs some prescriptive advising tools. The field of academic advising continues to react to changes in student populations. In meeting the needs of students, academic advisers must tailor their approaches in the increasingly diverse undergraduate student population.

### Conclusion

As college graduates face new expectations from the workplace, academic advisers can help them learn to take responsibility for their decisions. Academic advising, in developing these valuable relationships between teachers and students, becomes an important form of teaching. Academic advisers help undergraduates understand their choices as students and the effect of those decisions on their future plans. Through open-ended questions and discussions, academic advisers develop a valuable relationship with undergraduate students, helping them to become more responsible members of college or university communities and to develop a lasting sense of personal responsibility.

*See also:* ADJUSTMENT TO COLLEGE; CAREER COUNSELING IN HIGHER EDUCATION; COLLEGE STUDENT RETENTION; FACULTY ROLES AND RESPONSIBILITIES; GUIDANCE AND COUNSELING, SCHOOL.

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## ACADEMIC CALENDARS

Academic calendar use at the higher education level has followed a consistent and non-varied path over the last few decades. Five types of calendars have been principally used. These include the early semester, traditional semester, quarter system, trimester, and “4-1-4” calendars. A longitudinal review of use patterns revealed that the traditional semester (a calendar that divides the academic year into two terms of 15 to 17 weeks) was the dominant calendar used by U.S. colleges and universities from the 1950s to the early 1970s. The early semester (a variant of the traditional semester that divides the academic year into equivalent terms but begins and ends about two weeks earlier) replaced the traditional semester in prevalence in the mid-1970s and has remained the dominant calendar used since that time.

The American Association of Collegiate Registrars and Admissions Officers (AACRAO) conducted an analytical study of calendar use in 2001 to gauge the extent of change that has occurred. The study, based on data sets from the National College Stores, Oberlin, Ohio, and literature and institutional practice reviews, examined calendar use and conversions at 4,100 colleges and universities during the 2000–2001 academic year. Principal findings from the study and evaluative information on the impacts of calendar use or conversion on higher education instruction follow.

### Calendar Use during the 1990–2000 Decade

Marginal variations occurred in calendar use over the 1990–2000 decade. Most institutions used the early semester calendar; its use actually increased by 8 percent over the ten-year period. Use of the quarter calendar decreased cumulatively by 9 percent, while use of the traditional semester experienced a zero level of net change. Modest shifts occurred in use of the trimester and 4-1-4 systems.

### Current Calendar Use

A significant majority of higher education institutions currently use the semester calendar (either the early or traditional semester). The AACRAO study found that 70 percent of all institutions that participated in the study and 77 percent of the degree-granting institutions used a semester calendar for academic year (AY) 2000–2001. Two-thirds of the institutions used the early semester calendar and 4 percent used the traditional semester. Fifteen percent used the quarter system, few institutions used the 4-1-4 calendar, and the trimester was the least frequently used.

The pattern (i.e., predominance) of calendar use was consistent across institutions even when adjustments for basic indices such as institutional sector and size were made. Disaggregation by these institutional indices, in fact, yielded statistically similar results.

**Calendar use by institutional level or sector.** The early semester was the dominant calendar used across all institutional sectors. Eighty-three percent of the community colleges used it, along with 71 percent of the four-year doctoral and nondoctoral granting institutions, and 52 percent of the junior colleges. Fifty-nine percent of the professional schools (law/medical schools) and 40 percent of the graduate schools also used the early semester calendar. Trade schools, by contrast, used the quarter system more frequently than other calendars (with a use rate of 39%).

**Calendar use by enrollment size.** Again, because of its generalized high frequency of use, the early semester was the primary calendar used across all enrollment variants. Sixty-four percent of schools with small enrollments (total enrollments under 5,000) used it, as well as 68 percent of medium-sized schools (those with enrollments of 5,000 to 19,999), and 77 percent of schools with larger enrollments (equaling or exceeding 20,000 students).

### Calendar Conversions

Three hundred and eighty-five of the institutions participating in the AACRAO 2001 study changed their calendar during AY 2000–2001 (a conversion rate of 9.2%). This conversion rate is historically significant because it constitutes a rate that is four times the conversion rate that occurred in AY 1990–1991 and more than twice the rate that occurred in AY 1997–1998 (the last time the AACRAO study was conducted).

**Prevalent conversions.** The majority of the conversions entailed changes to the semester calendar; 55 percent of the converting institutions made this change (48% converted to the early semester system and 7% to the traditional semester). Seventeen percent of the institutions converted to the quarter calendar and 12 percent converted to the 4-1-4 calendar. Other conversions were nonconsequential.

**Conversion paths.** The most frequent change entailed institutions converting from the traditional semester to the early semester system; fifty-eight institutions (or 15% of those converting) made this change. Fifty-five institutions (14%) converted from the quarter calendar to a semester calendar (primarily to the early semester); and forty-four institutions (11%) converted from the semester to the quarter calendar.

**Conversions by institutional type or level.** Conversion rates by institutional level were again fairly consistent. Professional schools (law/medical schools) converted at a rate that was marginally higher than other school types (13%). Junior colleges, trade schools, and graduate schools converted at rates of 12% each. Community colleges and four-year doctoral and nondoctoral colleges and universities converted at lower rates (8% respectively).

**Conversions by institutional size.** Rates of conversion were also consistent across enrollment variants. Smaller institutions (those with enrollments of less than 5,000) converted slightly more frequently than institutions of other sizes (13%). Medium-sized schools (enrollment size of 5,000 to 19,999) and schools with larger enrollments (20,000 or more students) converted at a rate of 8 percent.

### **Effects of Calendar Use and Conversion on Instruction and Curriculum**

The AACRAO study did not address the impacts of calendar use or conversion on higher education instruction. An examination of these issues, especially effects on degree requirements, time-to-degree completion, course load/credit hour requirements, and curriculum restructuring, would have enhanced the study but were considered to be beyond its scope.

A review of institutional policy documents, technical approaches, and working papers from the Ohio State University, University of California at Davis, and other institutions did, however, provide the following evaluative assessments:

Most of the college and university administrators who have participated in imple-

menting calendar changes have had varied assessments of its impact. Administrators at some of the larger research institutions have suggested that the impact of conversion on teaching load, class size and staffing needs will vary depending on the conversion model adopted (typically the Constant Format model, the Constant Content model, or a hybrid of the two). Faculty and administrators of other institutions suggest that most of the models proposed are too inflexible and will ultimately have negative consequences on college curriculum. Most agree that the various models utilized or proposed either expand or shorten the length of instruction time but generally have a neutral effect on course content. Many also agree that rigidly defined schemes of assigning semester credits to courses must be considered and justified as part of the implementation process that precedes the calendar change; and that any conversion model adopted ensures that program instructional time and hours are maintained over the course of the academic year. (The Ohio State University 2001 Ad Hoc University Calendar Committee, n.p.)

The administrators at the Ohio State University (when considering a quarter to semester calendar conversion) admonished that the conversion would result in a reduction of the total credit value of curricula by approximately one third (as the total number of credits to graduate increases from 180 to 120) but felt that it was actually the distribution and “packaging” of the course content that would actually change, as a result of the reduction in the number of courses and credits offered per course. They further suggested that there are two primary issues to consider when contemplating a quarter to semester conversion: (1) the use of a semester calendar will bring institutions into conformity with 85 percent of the U.S. research institutions (most of the highly ranked institutions are on the semester calendar); and (2) consideration of a calendar change must occur simultaneously with the institution’s curricular review, including reviews of credits-to-graduate and general education curriculum requirements. The following assessments were offered in regard to effects on course load and time-to-degree completion:

A lack of documentation on this subject precluded a detailed discussion of the issue. Literature reviews provided little if any substantive or empirical information on these outcomes. Information from institutions that have made conversions suggest that the outcomes for students at these institutions are not well defined. The semester system, for example, reduces the number of terms per year but lengthens the span of each term imposing greater commitments on students. Students will be forced to make greater commitments to each term because failure to complete a term will delay degree completion by a full semester. There may, however, be a tendency for students to remain enrolled in a two semester system to avoid that delay. The lengthened commitment represented by semesters may have a particularly negative impact on the enrollment of students who are part-time, older, non-traditional, university employees, or public school teachers taking evening courses. The increased commitment necessary may cause scheduling difficulties for these students and result in delayed graduation or program completion. The quarter calendar may extend time-to-completion for more students than the semester system because students may be able to skip a quarter and delay their academic progress by only three months. Students on quarters can also change majors more casually than students on semesters because required courses in program majors can begin in the subsequent quarter. (The Ohio State University 2001 Ad Hoc University Calendar Committee, n.p.)

### Advantages and Disadvantages of Specific Calendars

Reports from the University of California at Davis and Ohio State University that examined the merits of calendar system use addressed the issue of quarter versus semester system advantages and suggested the following. Some of the advantages of the semester calendar cited are that: (1) it provides an opportunity for more thorough examination of subjects, research assignments, and term papers; (2) it increases time spent in each course, making it possible to receive in-depth learning and a better opportunity for

students to “rebound” from a poor start in a course; (3) it promotes greater interaction between faculty and students; (4) it reduces the tendency towards course fragmentation; and (5) for transfer students, it offers greater compatibility with other institutions’ calendars and curriculums.

Some advantages cited in favor of the quarter system include its ability to: (1) afford departments greater flexibility in providing course offerings and availability; (2) allow students increased flexibility in selecting majors and arranging class schedules; (3) allow fundamental, introductory courses to be offered more frequently, making scheduling easier and classes smaller; (4) allow students to receive instruction from more instructors; (5) provide opportunities to retake failed courses sooner; (6) allow students who miss terms to resume college enrollment sooner; and (7) provide more opportunities for students to drop in and out, possibly shortening time-to-degree for part-time and transient students.

*See also:* ACADEMIC MAJOR, THE; CURRICULUM, HIGHER EDUCATION; GENERAL EDUCATION IN HIGHER EDUCATION.

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BRENDA ASHFORD

## ACADEMIC DEAN, THE

Academic deans are typically the highest ranking academic officials in an institution, next only to the president or chancellor and the provost or chief academic officer. Academic deans preside over colleges, schools, or divisions comprised of a cluster of disciplines or disciplinary specialties, such as arts and sciences, engineering, fine arts, business, natural sciences, education, and health sciences. Most academic deans are situated in the institutional hierarchy as reporting to vice presidents or provosts; however, some hold the dual title of dean and vice president, a situation that is often an artifact of institution size and type. Smaller liberal arts institutions and community colleges, where numbers of faculty are fewer, may have a dean of faculty or academic dean who has jurisdiction over faculty in all disciplines. Deans' roles frequently vary according to academic field, institution type, and institutional context. In institutions marked by higher levels of disciplinary specialization, such as research and doctoral institutions, the number of academic deans is larger so as to accommodate the unique leadership demands of the diverse disciplinary programs housed in the institution.

Drawn from the senior faculty ranks, academic deans are seen by many as serving a dual role, that of scholar and administrator, particularly in institutions that place high value on research and publication in assessing faculty performance. Terms of appointment are typically in the range of five to seven years, and while appointments may be extend-

ed, very few serve more than ten years in a deanship position. This is no doubt due to the demands inherent in the role and the associated stress characteristic of the management environment. Deans answer to a variety of constituents, including faculty, the central campus administration, students, and alumni, and in order to be effective must be capable of understanding and serving their often disparate interests and conflicting goals.

Deans serve both academic and administrative purposes in that they are responsible for hiring department chairs and providing management oversight to bureaucratic processes within the unit. Depending on unit size, deans often have some number of associate and assistant deans to whom they delegate responsibilities associated with administrative functions related to finances, facilities, personnel, and management of academic or curricular programs. The position's uniqueness lies in its routine contact with a broad range of institutional constituents—the president or chancellor, the chief academic affairs officer, the faculty, students, external stakeholders such as donors and corporate supporters, and in some cases the boards that provide institutional or unit oversight. The unique position occupied by academic deans places them at the forefront of institutional change.

Decision-making responsibilities of academic deans typically encompass the following areas: (a) educational program/curriculum; (b) faculty selection, promotion, and development; (c) student affairs; (d) finance; (e) physical facilities development; and (f) public and alumni relations. Given the comprehensiveness of responsibility, it is not uncommon for the role of academic deans in larger, more complex institutions to resemble that of a chief executive officer of a moderately sized business enterprise. Resources under their control are often into the tens, sometimes hundreds of millions of dollars in large research institutions. With diminishing state support of higher education and increased operational costs, the need to identify new sources of revenue has increased considerably, and the work of garnering such support has become a primary function of academic deans in most institutional settings. Responsibilities associated with fundraising, the increasingly complex financial environment presented by issues of student access and equity, and increasing numbers of part-time faculty has made the role of the academic dean far more complex than it has been in the past.

### Typical Characteristics of Academic Deans

The press of responsibility and the critical role assumed by academic deans is reflected in the increasing skills required for the position. Typically, academic deans are not only required to be scholars of highest repute but also to possess some measure of managerial and leadership talent. Communication with faculty is a central activity to the deanship and one that often provokes disagreement, if not conflict. Faculty interactions often involve sensitive issues, such as tenure decisions and salary concerns, demanding an acute sensitivity to faculty needs and skills in problem-solving and conflict management. The most effective deans are skilled in building consensus, influencing outcomes in support of academic programs in a context of disparate goals, and in negotiating for resources in an increasingly scarce resource environment. On a university-wide level, many of the rivalries among academic units are resolved in the relationship between the dean and the central administration. Thus, persuasiveness and ability to navigate the political environment are essential. Effective deans also possess skills in collaboration and integration that facilitate development and implementation of new academic programs and cultivation of new opportunities for research and student learning.

Possibly one of the biggest challenges of academic deans is enacting leadership in a context where those being led neither believe they need to be led, nor are predisposed to succumb to administrative policy and procedural dictates. Such is the case with the typical faculty collective. To complicate matters further, faculty believe the kind of work in which they are engaged—teaching and research—does not require extensive bureaucratic structures, thus the administrative apparatus that demands their conformity is viewed as a nuisance and a diversion of resources. Consequently, deans must operate in an environment within which their authority is subject to ongoing challenge, making fortitude, perseverance, and humility important attributes for survival.

### Career Path to the Academic Deanship

One typically ascends to the full-time administrative post of the deanship through the academic ranks, having achieved success as a scholar and teacher. This particular path often includes time spent in a previous administrative role such as department chair and an assistant or associate deanship. An al-

ternative route, and one which is less characteristic of deans in research and doctoral institutions where scholarly performance is typically the primary prerequisite for candidacy, is that of the trained administrator. These individuals specialize in the practice and study of institutional management and have made a career in institutional administration. Another route that is becoming more common, particularly in professional schools such as business and engineering, is via the corporate world. The experience of the seasoned business executive is viewed as bringing added value in the development of important linkages with business and industry.

*See also:* BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; CHIEF ACADEMIC AFFAIRS OFFICERS, COLLEGE AND UNIVERSITY; COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY SENATES, COLLEGE AND UNIVERSITY; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; PRESIDENCY, COLLEGE AND UNIVERSITY.

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MARIETTA DEL FAVERO

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## ACADEMIC DISCIPLINES

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Discipline is defined by the *Oxford English Dictionary* as "a branch of learning or scholarly instruc-

tion.” Fields of study as defined by academic discipline provide the framework for a student’s program of college or postbaccalaureate study, and as such, define the academic world inhabited by scholars. Training in a discipline results in a system of orderly behavior recognized as characteristic of the discipline. Such behaviors are manifested in scholars’ approaches to understanding and investigating new knowledge, ways of working, and perspectives on the world around them. Janice Beyer and Thomas Lodahl have described disciplinary fields as providing the structure of knowledge in which faculty members are trained and socialized; carry out tasks of teaching, research, and administration; and produce research and educational output. Disciplinary worlds are considered separate and distinct cultures that exert varying influence on scholarly behaviors as well as on the structure of higher education.

The number of disciplines has expanded significantly from those recognized in early British and German models. Debates are ongoing about the elements that must be present to constitute a legitimate disciplinary field. Among such elements are the presence of a community of scholars; a tradition or history of inquiry; a mode of inquiry that defines how data is collected and interpreted, as well as defining the requirements for what constitutes new knowledge; and the existence of a communications network.

### **Disciplines and the Structure of Higher Education**

Influence in the academic profession is derived from disciplinary foundations. A hierarchical structure of authority is not possible in colleges and universities given the autonomy and expert status of faculty with respect to disciplinary activities. Consequently, the structure of higher education is an associational one based on influence and persuasion. Interaction between the professor and the institution is in many ways shaped by the professor’s disciplinary affiliation. This condition is not only a historical artifact of the German model of higher education that was built on the “scientific ethos” from which status in the profession has been derived, but it also results from faculty members having their primary allegiance to a discipline, not to an institution. Disciplinary communities establish incentives and forms of cooperation around a subject matter and its problems. Disciplines have conscious goals, which are

often synonymous with the goals of the departments and schools that comprise an institutional operating unit.

Colleges and universities are typically organized around clusters of like disciplines that have some cognitive rationale for being grouped together. The seat of power for decisions on faculty promotion, tenure, and, to some extent, support for research and academic work, lies in the academic department. Thus discipline as an important basis for determining university structure becomes clear. In institutions placing lesser emphasis on research and in institutions more oriented toward teaching, the faculty may adopt more of a local or institutional orientation than a cosmopolitan or disciplinary orientation. In these institutions faculty performance and recognition may be based on institutional as opposed to disciplinary structures. Therefore, the strength of discipline influence on organizational structure in research institutions, liberal arts colleges, and community colleges, for example, can be expected to vary.

### **Discipline Classification Systems**

Numerous analytical frameworks are evident in the literature for classifying academic disciplines for purposes of comparative study. Four of these frameworks have drawn much of the focus of empirical work in the study of discipline differences. These are codification, level of paradigm development, level of consensus, and the Biglan Model. Each of these frameworks is reviewed in turn with relevant commentary on categorical variation determined through empirical study.

**Codification.** Codification refers to the condition whereby knowledge can be consolidated, or codified, into succinct and interdependent theoretical formulations. As a cognitive dimension, codification describes a field’s body of knowledge as opposed to behavioral attributes of scholarly activity. Use of the codification framework in the study of discipline has essentially been displaced by the use of the high-low consensus concept, because consensus, or level of agreement among scholars, has been determined to be a function of codification.

**Paradigm development.** Paradigm development, as first developed by Thomas S. Kuhn, refers to the extent to which a discipline possesses a clearly defined “academic law” or ordering of knowledge and associated social structures. “Mature” sciences, or those

with well-developed paradigms such as physics, are thought to have clear and unambiguous ways of defining, ordering, and investigating knowledge. At the opposite end of the scale are fields such as education and sociology, which are described as pre-paradigmatic. These fields are characterized by a high level of disagreement as to what constitutes new knowledge, what are appropriate methods for inquiry, what criteria are applied to determine acceptable findings, what theories are proven, and the importance of problems to study. The terms *paradigm development* and *consensus* are thought to be interchangeable as they describe a common dimension of disciplinary fields—the extent of agreement on structure of inquiry and the knowledge it produces.

**Consensus.** The core of the paradigm development concept is the degree of consensus about theory, methods, techniques, and problems. Consensus implies unity of mind on elements of social structure and the practice of science. The indicators of consensus in a field are absorption of the same technical literature, similar education and professional initiation, a cohesiveness in the community that promotes relatively full communication and unanimous professional judgments on scientific matters, and a shared set of goals, including the training of successors. Researchers commonly attribute high levels of consensus to the physical sciences, low levels to the social sciences, and even lower levels to the humanities.

Greater particularistic tendencies, that is, judgments based on personal characteristics, have been exhibited by low-consensus disciplines. For example, in award structures in the sciences, the lower the consensus level the more awards are based on personal characteristics. With respect to the peer-review process, low-consensus editorial board members have been shown to be more likely to accept publications from their own universities. Also, in selection of editorial board members, low-consensus journals put more emphasis on personal knowledge of individuals and their professional associations.

**The Biglan Model.** Anthony Biglan derived his taxonomy of academic disciplines based on the responses of faculty from a large, public university and a private liberal arts college regarding their perceptions of the similarity of subject matter areas. His taxonomy identified three dimensions to academic disciplines: (1) the degree to which a paradigm exists (paradigmatic or pre-paradigmatic, alternatively re-

ferred to hard versus soft disciplines); (2) the extent to which the subject matter is practically applied (pure versus applied); and (3) involvement with living or organic matter (life versus nonlife systems). The natural and physical sciences are considered to possess more clearly delineated paradigms and are in the “hard” category. Those having less-developed paradigms and low consensus on knowledge bases and modes of inquiry (e.g., the social sciences and humanities) are considered “soft.” Applied fields tend to be concerned with application of knowledge, such as law, education, and engineering. Pure fields are those that are viewed as less concerned with practical application, such as mathematics, history, and philosophy. Life systems include such fields as biology and agriculture, while languages and mathematics exemplify nonlife disciplines. Biglan’s clustering of thirty-three academic fields according to his three-dimensional taxonomy is displayed in Table 1.

Subsequent work by Biglan substantiated systematic differences in the behavioral patterns of faculty with respect to social connectedness; commitment to their teaching, research, and service roles; and publication output. Biglan concluded that the three dimensions he identified were related to the structure and output of academic departments. Specifically, hard or high-paradigm fields showed greater social connectedness on research activities. Also, faculty in these fields were committed more to research and less to teaching than faculty from soft or low-paradigm fields. Those in hard fields also produced more journal articles and fewer monographs as compared to their low-paradigm counterparts. Greater social connectedness was exhibited by scholars in high-paradigm fields, possibly as a result of their common orientation to the work. Applied fields showed greater commitment to service activities, a higher rate of technical report publication, and greater reliance on colleague evaluation. Faculty in life system areas showed higher instance of group work with graduate students and a lesser commitment to teaching than their counterparts in nonlife systems areas. Empirical research applying the Biglan Model has been consistent in supporting its validity.

### Discipline Differences

While the disciplines may share a common ethos, specifically a respect for knowledge and intellectual inquiry, differences between them are vast, so much

TABLE 1

Task Area	Hard		Soft	
	Nonlife System	Life System	Nonlife System	Life System
Pure	Astronomy	Botany	English	Anthropology
	Chemistry	Entomology	History	Political science
	Geology	Microbiology	Philosophy	Psychology
	Mathematics	Physiology	Communications	Sociology
	Physics	Zoology		
Applied	Ceramic engineering	Agronomy	Accounting	Educational administration
	Civil engineering	Dairy science	Finance	Secondary/Continuing education
	Computer science	Horticulture	Economics	Special education
	Mechanical engineering	Agricultural economics		Vocational/Technical education

SOURCE: Based on Biglan, Anthony. 1973. "Relationships between Subject Matter Characteristics and the Structure and Output of University Departments." *Journal of Applied Psychology* 57(3):204-213.

so in fact that discipline has been referred to as the major source of fragmentation in academe. Disciplines have been distinguished by styles of presentation, preferred approaches to investigation, and the degree to which they draw from other fields and respond to lay inquiries and concerns. Put simply, scholars in different disciplines "speak different languages" and in fact have been described as seeing things differently when they look at the same phenomena.

Differences in discipline communication structures, reward and stratification systems, and mechanisms for social control have been observed. In addition to these variations in structure of disciplinary systems, variations at the level of the individual scholar, the departmental level, and the university level, summarized in a 1996 work by John M. Braxton and Lowell L. Hargens, are drawing a good bit of scholarly attention. To illustrate the extent and content of differences reflected in the literature, a comparative review of discipline differences, based on nature of knowledge, community life and culture, communication patterns, and social relevance or engagement with the wider context, has been synthesized from the work of Tony Becher in Table 2.

It is important to note that the differences captured here encompass both epistemological and social characteristics of each of the four discipline groups. Much of the early study of disciplinary variation focused primarily on the epistemological or cognitive aspects, and it was essentially studies in the sociology of science that brought attention to the social aspects of disciplinary work. Indeed the social

factor is becoming more a focus of study with increased attention to the disciplinary impacts on academic organization and leadership. In better understanding how social and epistemological characteristics are manifested in disciplinary groups, scholars will move closer to a theory of discipline differences.

*See also:* FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY ROLES AND RESPONSIBILITIES.

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TABLE 2

Characteristics of discipline groups		
Discipline Group	Category	Description
Hard-Pure	Nature of knowledge	Cumulative; atomistic (crystalline/tree-like); concerned with universals, quantities, simplification; resulting in discovery/explanation
	Community life/culture Communication patterns	Competitive, gregarious social patterns; politically well-organized; high publication rate; task-oriented 1. Social interaction in the context of teams; high people-to-problem ratio; rapid pace; demand for progress reporting strong 2. Leadership qualities include tough-mindedness, organizing ability, and entrepreneurial flair
	Social relevance/wider context	1. High prestige 2. Commonly held to be intellectually demanding and attracting individuals of high ability 3. Substantial dependence on external sponsorship 4. Research funding requirements call for effective professional political lobby
Hard-Applied	Nature of knowledge	Purposive; pragmatic (know-how versus hard knowledge); concerned with mastery of the physical environment; resulting in products/techniques
	Community life/culture Communication patterns	Entrepreneurial, cosmopolitan; dominated by professional values; patents substitutable for publications; role-oriented 1. Comparatively less teamwork in research; modest pace; time to publication of new knowledge not seen as crucial; contact maintained by correspondence 2. Leadership qualities include tough-mindedness, organizing ability, and entrepreneurial flair
	Social relevance/wider context	1. Research promise often assessed by utilitarian criteria instead of theoretical purity 2. Political insistence often required to promote favor of applied work 3. Active competition for research funds 4. Substantial dependence on goodwill of public and private support for research
Soft-Pure	Nature of knowledge	Reiterative; holistic (organic/river-like); concerned with particulars, qualities, complication; resulting in understanding/interpretation
	Community life/culture Communication patterns	Individualistic, pluralistic; solitary social patterns; loosely structured; low publication rate; person-oriented Pace of interchange leisurely; public networks are more symbolic (show of social solidarity) than for sharing of ideas; occasional conference attendance, stay in touch by reading what others publish; no strong requirement for rapid publication
	Social relevance/wider context	1. Knowledge largely atheoretical involving the study of the particular rather than general and the search for empathetic understanding not causal explanation 2. Forms of knowledge viewed ambivalently by the external world 3. Large monetary investment unneeded and consequently little demand on the public for support 4. Individualism is an inherent feature of research 5. Relatively weak professional organizations
Soft-Applied	Nature of knowledge	Functional; utilitarian (know-how versus soft knowledge); concerned with enhancement of professional or semiprofessional practice; resulting in protocols/procedures
	Community life/culture Communication patterns	Outward-looking; uncertain in status; dominated by intellectual fashions; publication rate reduced by consulting activity; power-oriented Pattern comparable to soft-pure; no strong requirement for rapid publication; relatively few conferences
	Social relevance/wider context	1. Research agenda susceptible to nonacademic interests 2. Comparatively less autonomy because of strong influence of practitioner associations 3. Relevance and usefulness of topics is often called into question by government and client interests

SOURCE: Courtesy of author.

and Output of University Departments.” *Journal of Applied Psychology* 57(3):204–213.

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MARIETTA DEL FAVERO

## ACADEMIC FREEDOM AND TENURE

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Professors have a variety of responsibilities, which generally fall within one of three main areas: research, teaching, and service. In research and teaching, and sometimes in service, inquiry is the key aspect of what professors do. In research, professors examine traditional and new ideas and draw conclusions; in teaching, professors share information and knowledge with students, raising questions and at times offering answers about issues. And, in service, professors bring their expertise to a problem, using inquiry to aid in the solution. These fundamental activities give rise to complex concepts: academic freedom and tenure.

### Roots of Academic Freedom

Academic freedom in the United States derives its conceptual basis from nineteenth-century German conceptions of freedom for professors in research and teaching. These conceptions, called *Lerhfreiheit*, offered legal protections for professors, who were employed as civil servants in German universities. U.S. professors who had studied in Germany in the

1800s (the most popular location for graduate study at the time) returned home focused on research as a search for truth. As American professors increasingly challenged a variety of economic, political, and social tenets, a need for academic safeguards soon arose. By the early 1900s, a few nationally recognized professors had been dismissed by their universities because of their findings on such issues as the abuse of immigrant labor, unions, and administrative control of universities.

Initially, disciplinary societies investigated these dismissals, although they had virtually no power to sanction institutions, other than through public discussion of institutional errors of judgment. A national professorial organization, the American Association of University Professors (AAUP), was founded in 1915 in an effort to provide opportunities for professors to influence, if not control, colleges and universities. Association leaders found, however, that the most pressing challenge was the protection of academic freedom, and the AAUP became the primary national group dedicated to the preservation of academic freedom. Although German professors were protected as civil servants, United States professors have had to rely on the activity of organizations such as AAUP. In 1915, 1925, and 1940, the AAUP developed national policy statements on academic freedom, and the 1940 *Statement on Principles of Academic Freedom and Tenure* has been endorsed by a wide range of educational organizations, whose membership ranges from mostly professors to mostly administrators. The statement provides a definition of academic freedom, including that:

1. The teacher is entitled to full freedom in research and in the publication of the results, subject to the adequate performance of his other academic duties; but research for pecuniary return should be based upon an understanding with the authorities of the institution.
2. The teacher is entitled to freedom in the classroom in discussing his subject, but he should be careful not to introduce into his teaching controversial matter that has no relation to his subject. Limitations of academic freedom because of religious or other aims of the institution should be clearly stated in writing at the time of the appointment.

The AAUP proposed that institutions assure such freedom through the device of academic tenure, and the 1940 statement outlined specific procedures in regard to the award and removal of tenure, indicating that “teachers or investigators should have permanent or continuous tenure, and their service should be terminated only for adequate cause, except in the retirement for age, or under extraordinary circumstances because of financial exigencies” (p. 4), and that moral turpitude may be cause for dismissal. The statement also indicates that professors should exercise restraint in their public utterances, in view of their special position as experts. Tenure is a device that protects, to some degree, professors’ academic freedom.

Thus, academic freedom is the freedom to inquire and to communicate the results of that inquiry both in publication and in the classroom. The AAUP definition has important exceptions to such freedom, including for institutions with religious aims since these institutions often require statements of faith that preclude unfettered inquiry, with truth defined by a church or denomination. However, a 1970 interpretation addressed this exception, indicating that church-related institutions, which were becoming increasingly secular, needed to address the principle of academic freedom.

### **Restrictions on Academic Freedom**

Other organizations have also developed statements on academic freedom, including the American Federation of Teachers (AFT), the National Education Association (NEA), and in the 1950s, the Association of American Universities. The AFT and NEA issued a joint statement in the 1990s, one that reflects much of the sentiment of the 1940 AAUP statement. The statement of the Association of American Universities on academic freedom in 1953, however, placed substantial restrictions on professors, claiming, for example, that membership in the Communist Party warranted dismissal. Such a claim was in the context of McCarthyism, when much of the nation was gripped with fear about Communist infiltration of political and intellectual sectors of society, yet the claim also put academic freedom in conflict with the First Amendment of the United States Constitution. The AAUP itself, in a 1956 statement on academic freedom, indicated that it was legitimate to question the competence of professors who were Communists. As several scholars have noted, restrictions on public utterances are, in fact, restrictions on freedom

of speech as constructed in the First Amendment of the U.S. Constitution. Thus, statements on academic freedom are not necessarily absolute statements of principle.

Nor does academic freedom exist outside the social characteristics of the academy. An empirical analysis of AAUP academic freedom cases involving dismissed professors in the 1980s indicated that there was a gendered bias in academic freedom and tenure issues, for institutions often removed women professors before considering the removal of other faculty members. This finding suggests that women occupy an especially vulnerable place in the academy, regardless of the protections offered by academic freedom and tenure. Throughout the 1970s, 1980s, and 1990s, the AAUP leadership and membership debated the relationships of academic freedom to such issues as race, ethnicity, and gender, and the association has addressed these relationships through a variety of policy statements.

In addition, academic freedom entails areas of behavior with important nuances. Examinations of professors in times of specific societal concerns about patterns of thought—such as McCarthyism or the segregation in the deep South—indicate that professors may restrict their work without acknowledging any restriction on their academic freedom. Any such apprehensions about academic freedom (which scholars have documented as a key issue of academic freedom) reflect external pressures and, perhaps just as important, individual professors’ hesitancy to challenge the status quo.

Finally, in view of the challenges to society and institutions that occur as a result of inquiry in the academy, there are disparate views regarding academic freedom, and there is even a tendency to individual interpretation. While the AAUP statements on academic freedom have been central points of reference, other organizations have added to the meanings of academic freedom, and individual colleges and universities may also develop their own definitions of the concept. In general, it represents the freedom of the professor to do research and to teach on matters of expertise, but specific characteristics often vary depending on the era, the topic of concern, the individual professor, and the institutions involved. Academic freedom is also dependent on a college or university’s willingness to protect the professor, especially by guaranteeing his or her appointment. Tenure is the primary device for such guarantees.

## Tenure

Tenure, in general, provides a lifetime contract between a professor and an institution, and as such serves as the primary safeguard for academic freedom. The AAUP initiated negotiations with the Association of American Colleges in the 1930s in order to develop its 1940 statement, and a central goal of the AAUP leadership was to ensure procedures, through the use of tenure, that would protect academic freedom. Careful processes for the dismissal of a tenured professor are offered in detail in the 1940 statement, with several subsequent interpretations to further the right of professors to due process. Institutions do dismiss professors with tenure, although far less often than they dismiss professors without tenure, since the dismissal of a tenured professor can be a protracted experience and may include lawsuits as well as lengthy institutional procedures.

Tenure often requires a probationary period of seven years, during which the professor is expected to develop the patterns of productivity, especially in scholarship and teaching, that will characterize his or her work for the remainder of the career. In the last year or so of the probationary period, the tenure candidate proceeds through a review process, which usually includes fellow professors as well as administrators and culminates in a decision to award or deny tenure. Professors who do not receive tenure may leave higher education, or move to another college or university—sometimes in a tenure-track position, and other times in a position that will never offer tenure.

There are a variety of arguments about the worth of tenure, including many opposing views. It is unclear whether institutions spend more or less money when they have tenured faculty members, as the condition of tenure is a device for recruiting potential professors at less than pure market competitive conditions, but then requires an institution to maintain its contract—and increases in salary and benefits—with the tenured professor. Some institutions have used contracts (often in three- or five-year sequences), rather than tenure, as a way of establishing flexibility. These institutions have often found, however, that it is extremely rare for them to dismiss any of the contracted professors. Additionally, tenure does not protect the academic freedom of untenured professors, an issue that became extremely important in the 1990s, when the number of part-time and non-tenure-track professors surged.

Nevertheless, tenure remains a dominant characteristic of the U.S. professoriate. For several decades, from two-thirds to half of all full-time professors have held tenure, and the national faculty associations continue to place considerable emphasis on tenure. Despite arguments against tenure, colleges and universities have not found any compelling substitutes that offer professors some security when they pursue controversial topics in their research and teaching.

Academic freedom is a cornerstone of the role of higher education, offering professors the opportunity to investigate issues, including highly controversial ones, in the ongoing search for truth. Tenure offers protection for professors who voice unpopular ideas. Neither academic freedom nor tenure, however, operates in a pure sense, as both are subject to social and institutional pressures.

*See also:* FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY ROLES AND RESPONSIBILITIES.

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## ACADEMIC LABOR MARKETS

The process by which colleges and universities acquire qualified applicants and hire faculty members, and by which academics seek and gain academic employment, is known as the academic labor market. Few general elements characterize the academic labor market. Depending on their mission, colleges and universities seek faculty with diverse backgrounds to perform different institutional roles. Likewise academics seek different positions depending upon their aspirations and education. The academic labor market fluctuates by demographics, the demands created by student preferences, and alterations in society's employment opportunities. Finally, the academic labor market is also influenced by social norms.

In the mid-nineteenth century American colleges tended to look very much the same. Led by an academic president, colleges employed a handful of faculty members who taught several subjects. In the twenty-first century postsecondary institutions range from community colleges that offer two-year associate degrees in the liberal arts and technical and pre-professional fields to research universities (often called *multiversities*) that provide baccalaureate through doctoral education, as well as televised football games. The distinction among these diverse institutions resides in their missions. Many colleges and smaller universities are dedicated primarily to teaching, whereas others attach great significance to their research output. Thus, the institutional mission defines the role of the faculty at a particular institution.

Teaching institutions search for and hire faculty members who are oriented primarily to the student and the classroom. In community colleges, instructors teach approximately fifteen hours, or five courses, per semester. At liberal arts (only baccalaureate degrees) and comprehensive (both baccalaureate and master's degrees) colleges, faculty members teach three or four courses per term. At the other end of the spectrum research universities seek academics who spend as much, if not more, of their time producing scholarship as they do in instructional activities. Since research university faculty members are expected to conduct and publish research results regularly, their teaching load generally consists of two courses each term.

Community colleges, therefore, tend to hire faculty members who are more interested in teaching

than in research. Approximately two-thirds of the faculty in these two-year colleges have earned master's degrees, while only 15 percent possess the doctorate. In almost all other types of collegiate institutions, the doctorate, which educates recipients to a life of research, is a requirement for entry. Most four-year and master's degree institutions seek faculty members for their interest in teaching. As a result of their doctoral education, these faculty also often engage in research and publication. However, except for prestigious liberal arts colleges, most do not exist in a "publish or perish" environment.

The competition for faculty appointments at research universities extends beyond the possession of the doctorate. Those aspiring to a faculty position are rarely selected for an interview if they have not published several articles and given several presentations at professional meetings. In days gone by the prestige of a particular dissertation mentor brought a young scholar to the attention of a research university department seeking a new hire. Today, however, while a renowned mentor may still be helpful, an applicant's publishing career is just as important.

### Supply and Demand

The institutional demands and professional preferences of faculty applicants are compounded by issues of supply and demand. The faculty supply depends in part on the output of graduate programs across the nation. When faculty positions are plentiful, students flock to graduate school—as they did in the late 1960s, when college enrollments soared. However, faculty members are not interchangeable across their specialties. If enrollment demands shift away from or towards certain academic programs, as they did in the mid-1970s, colleges and universities must respond by adjusting the distribution of faculty positions. By 1975 the supply of liberal arts faculty overwhelmed demand; thus many new Ph.D.s had to seek nonacademic employment and institutions hired instructors with more prestigious credentials than previously.

The supply of potential faculty members also depends on the professional interests and aspirations of graduate students. In 2000 there were 41,368 doctoral degrees awarded across the various fields, but these were not evenly distributed. Twenty-one percent of the doctorates were awarded in the life sciences, including biology and zoology, while only 2.5 percent were awarded in business. The number of graduates is only half the equation, however. The

graduates' aspirations and the availability of nonacademic professional employment further reduce the supply. In engineering, for example, 5,330 doctorates were awarded in 2000, but 70 percent of these graduates intended to enter industry research positions rather than education. Nonacademic employment opportunities are uneven across fields, and thus create either expanded or limited career choices for doctoral graduates. Of all doctoral graduates in 2000, only 38 percent intended to seek a teaching position. The rest planned to enter research and development (31 percent), administration (12 percent), or professional services, such as counseling (12.5 percent). By field, graduates in the humanities aspired to teaching positions most often (74 percent), while only 11 percent of doctoral engineers planned to teach.

### Gender and Ethnicity

The supply of faculty also involves gender and ethnicity differentials. Fields differ in attracting men and women, as well as members of various ethnic groups. In the early twenty-first century men continued to dominate some fields, such as engineering, physical science, and, to a lesser degree, business. In the year 2000 women earned 65 percent of the doctorates in education. Some other fields, such as humanities, social sciences, and life sciences, awarded doctorates in even proportions. All fields attract predominately white aspirants, but some fields appear to be slightly more attractive (or receptive) to members of certain ethnic groups. African Americans are slightly more likely to enter education (12.4 %) than other fields, while Asian Americans lean more toward engineering (17.5%).

On the demand side, social norms have affected the hiring of women and ethnic minorities in colleges and universities. The proportion of women within American faculties increased throughout the 1990s. By 1997, women composed 36 percent of all full-time instructional faculty; however, women are more likely to be employed as full-time faculty members within two-year (47%), rather than four-year (33%), colleges. The gender distribution among all part-time faculty gives a slight advantage to men (53%).

Institutions of higher education attempted to recruit faculty of color to campuses throughout the 1980s and the 1990s through affirmative action programs. However, the ethnic distribution still does not reflect national demographics. In 1998, 85 per-

cent of the faculty were white, 6 percent were Asian, 5 percent were African American, and 3 percent were Hispanic. Colleges and universities with enrollments consisting predominantly of one ethnic group (e.g., African American, Hispanic, Native American) tend to employ higher percentages of that ethnic group than other institutions. Approximately 16 percent of African-American faculty members teach in historically black institutions. This pattern reduces the distribution of faculty of color within the general labor market. Finally, high-demand labor markets support the hiring of minorities, whereas a high-supply market merely creates more competition across ethnic lines and seems to favor white candidates.

### Salary Issues

Salaries offered to faculty recruits largely depend on the type of institution, the rank at which a faculty member is hired, the field, and, to some degree, gender and ethnicity. Faculty members in public institutions receive 22 percent less compensation than their private-institution colleagues. On the whole, faculty members earn an average of \$8,600 more at four-year institutions than at two-year institutions, and two-year college faculty average 55 percent less than doctoral university faculty. Those who work in research earn higher salaries than faculty in teaching institutions. The salary differentials between institutional types largely spring from the imperative to recruit and retain faculty members who are at the forefront of knowledge in their fields.

Although 69 percent of American faculty teach in four-year colleges, 82 percent of Asian-American faculty members are employed at these institutions. Two-thirds of the Asian-American faculty are men. Not surprisingly then, Asian-American faculty average higher salaries than any other ethnic group. Full-time Hispanic faculty members earn slightly below-average salaries, in part because 43 percent of all Hispanic faculty teach in two-year colleges and 48 percent are part-time faculty.

Men still take home more money than women do, regardless of rank. The gender differentiation in salary is sometimes explained by the short length of time women have served as faculty, or by their lower publication rates, resulting in employment at lower ranks. Indeed, only 16 percent of all full-time women faculty are full professors, while 32 percent of all full-time men have attained this rank. However, men comprise 80 percent of all full professors. In

1998 the average female professor earned \$8,500 less than her male counterpart. This pay inequity crosses ethnic lines as well. Seventy-one percent of all professors are white men. Within the other ethnic groups, men also dominate the highest rank: 63 percent of all black professors, 85 percent of all Asian professors, and 73 percent of all Hispanic professors are men. Thus, women across all ethnic groups have yet to emerge proportionately into the highest ranks, and thus receive higher salaries.

Salary is also associated with field differentiation. Humanities and education, which attract significant numbers of women, are among the lower-paying fields, whereas engineering, law, and business, fields still dominated by men, produce higher salaries. In the 1999–2000 academic year, the salary difference between high-paying fields and low-paying fields, on average, was \$24,000 for professors and \$16,000 for assistant professors.

At the beginning of the twenty-first century few institutions are experiencing the rapid growth in enrollment, and thus the massive faculty hiring, of the late 1960s. Tight institutional finances and the need for flexibility have also changed the demand for faculty. As states cut back their support of public institutions, and as private institutions attempt to hold down escalating tuition costs, the sizable group of retiring faculty has enabled institutions to establish new hiring patterns. Rather than automatically replacing retirees with tenure-track assistant professors, many institutions have instituted non-tenure-track positions or hired part-time faculty to fill the classrooms. In 1997 only 73 percent of the faculty in public four-year colleges were full-time employees, while 59 percent of those at private four-year colleges were full-time. Students are more likely to be taught by part-time faculty at community colleges, where 66 percent of the faculty have part-time status. Private colleges and universities appear to have more opportunity to experiment with non-tenure-track and part-time positions than public institutions. Only 58 percent of their faculty are tenured, as opposed to 66 percent in public colleges and universities.

In ways similar to other labor markets, academe is composed of various types of organizations with differing needs. Its academic staff and its hiring patterns are changing as society changes its demands for education and its norms for equality.

*See also:* COLLEGE TEACHING; FACULTY MEMBERS, PART TIME; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY TEACHING, ASSESSMENT OF.

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DOROTHY E. FINNEGAN

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## ACADEMIC MAJOR, THE

The major field of study is the most prominent and significant structural element of the American baccalaureate degree. For students it is often a key to

choosing which college or university to attend. College catalogs frequently claim certain types of learning result from study in a particular academic major. They also often suggest that study in specific majors prepares individuals for graduate education and for specific jobs and careers, and that it can impart certain specialized knowledge. Research affirms that the academic major is the strongest and clearest curricular link to gains in student learning.

Across higher education there is a tremendous variety of academic majors—ranging from art history to political science to zoology. Collectively these represent several hundred fields and subfields of study. The major field of study is often thought of synonymously with academic disciplines (e.g., history, physics, music); however majors also represent professional fields (e.g., education, engineering) and interdisciplinary fields (e.g., African-American studies, ecological studies). Employers interview students at specific institutions based on the perceived match between their needs and a corresponding major program. A significant portion of the gifts and grants given to colleges and universities come based on the rank, reputation, or perceived quality of one or more academic majors.

The major provides in-depth study in one of the fields in which an institution awards a degree. General education imparts knowledge, skills, and abilities drawn from the various realms of liberal learning and is the *breadth* component to the undergraduate degree. The major, on the other hand, is the *depth* component, providing the student with (a) terms, concepts, ideas, and events pertinent to the field; (b) models, frameworks, genres, theories, and themes that link phenomena and give them meaning; (c) methods of research and modes of inquiry appropriate to the area of study; and (d) criteria for arriving at a conclusion or making generalizations about that which is studied.

An academic major may serve multiple purposes. The major may represent specialization in a disciplinary or interdisciplinary field attendant to liberal learning, and as such can be regarded as non-preparatory specialization. It may also serve as the student's first introduction to a field of study that is manifested in postgraduate study as well. In addition, the major serves as preparation for one or several professional fields. Thus, a student may choose to study biology for its own merits, in preparation for graduate work in the biological or life sciences, or as preparation for entry into medicine or health-

related fields. In some instances students may create their own majors reflecting their own interests or the specific competencies they wish to develop. Aside from such instances, the faculty with expertise in the field of study prescribe the entrance qualifications for students, the number of courses or credits required to complete the major, the content of those courses, the number and sequence of courses, and the requirement of exams, papers, or theses associated with satisfactorily completing study in the subject area.

### The Rise of the Disciplines and Majors

Major fields of study emerged in the nineteenth century as alternative components of the undergraduate degree. In 1825 the University of Virginia offered students eight programs from which to choose, including ancient languages, anatomy, and medicine. Following the American Civil War, academics increasingly received their advanced training in continental Europe. Specialization at the undergraduate level and in graduate and professional studies developed quickly in the latter half of the nineteenth century. The term *major* was first used in the 1877–1878 catalog of Johns Hopkins University, as was the term *minor*, signifying a course of specialized study less lengthy than the major—the major required two years of study, while the minor required but one. From 1880 to 1910, institutions offering the American baccalaureate degree widely adopted the free elective system, whereby a student might choose from the courses offered by the institution to amass credits necessary for degree completion.

In research universities particularly, the German concepts of *Lernfreiheit* and *Lehrfreiheit* were freely interpreted by American academics as the professors' freedom to teach and to conduct research as scholarly interest and inquiry dictated, and as the students' freedom to select those courses, seminars, and topics that propelled the individual's intellectual development and curiosity. Majors and minors became widely adopted in such institutions, providing prescription and socialization of students to the language, perspectives, and values of disciplinary inquiry.

The development of academic majors deeply structured not only the curriculum but also the organization of institutions. Nearly all colleges and universities have academic departments that reflect the primary academic disciplines and applied fields of study, such as English, education, mathematics,

and sociology. The department is often thought to be synonymous with the discipline or field of study, yet a department may offer several academic majors representing various subfields of study. Proponents of the department and the major argue that they enable an academic community to foster the development, conservation, and diffusion of knowledge. In contrast, critics claim that they promote intellectual tribalism, where specialization receives favor over the mastery of multiple epistemologies, where broader values of liberal learning and of campus unity are lost, and where innovation is inhibited due to parochial opposition to new subspecialties and research methods.

### Structure

Most colleges and universities offer majors, though they are more common in professional and technical colleges than in liberal arts colleges. While they are common features of baccalaureate-granting institutions, majors are frequently only present in the pre-professional, technical, and vocational subjects of associate degree (two-year) colleges. Credits required for the major represent 20 to 50 percent of the bachelor of arts degree and 20 to 40 percent of the associate of arts degree. Study in a professional field may require more credits and a greater proportion of the overall degree within the major than study in a liberal arts field. Also, professional majors may be subject to professional accreditation and state licensing.

Courses within disciplinary, applied, field, and professional studies majors possess an inherent coherence generated by the knowledge structures and paradigms of that single discipline or field. While such courses may be highly bounded by the way knowledge is organized within a given discipline, they possess a certain inherent coherence as a result. Interdisciplinary majors possess a coherence represented in the theme or focus to which they are addressed, although they are more permeable to the addition of subjects or topics than traditional disciplinary majors. Thus, the American studies major may incorporate relevant courses from history and literature, but may also include art or architecture. Coherence is found in the interdisciplinary focus on American society and culture.

### Interdisciplinary Majors

One innovation that draws upon the disciplines is the interdisciplinary major. One of the earliest interdisciplinary majors was American studies. Arising in

the 1930s, its organizers and proponents used the concept of culture to serve as one of its organizing principles. Other areas, such as Russian studies and Latin American studies, developed later, primarily due to government and foundation interests in foreign relations. Majors, like individual courses, come into existence in response to social, intellectual, or technical issues and interests. In the early 1970s, new interdisciplinary majors, such as women's studies and black studies, derived their interest from the civil rights movement. These majors relied on cultural issues for content and ethnography for method. Interdisciplinary majors often rely on related disciplines for their teaching faculty, and the interdisciplinary majors often use what may constitute electives in traditional disciplinary fields. Thus, a course in women's literature may serve as an elective in an English major and a required course in a women's studies major.

### Students, Academic Majors, and Disciplinary Knowledge

Disciplinary inquiry often supersedes institutional goals in defining the direction and purpose with which undergraduates study. A discipline is literally what the term implies. When one studies a discipline, one subjugates the ways one learns about phenomena to a set of rules, rituals, and routines established by the field of study. A student learns to study according to these rules, classifying phenomena according to commonly adopted terms, definitions, and concepts of the major field. Relationships among phenomena are revealed through the frames provided by the discipline, and the researcher or student arrives at conclusions based on criteria for truth or validity derived from the major field.

Disciplines can provide conceptual frameworks for understanding what knowledge is and how it is acquired. Disciplinary learning provides a logical structure to relationships between concepts, propositions, common paradigms, and organizing principles. Disciplines develop themes, canons, and grand narratives to join different streams of research in the field and to provide meaningful conceptualizations and frameworks for further analysis, and they impart a truth criteria used globally to define differences in the way knowledge is acquired and valued. They also set parameters on the methods employed in discovering and analyzing knowledge, and how they affect the development of students' intellectual skills.

Not only are the paradigms of inquiry imparted by disciplines, but so too are values and norms regarding membership and scholarly conduct within the major field, as well as the preferred modes of learning (canonized texts, methods of investigation, and schools of interpretation). Disciplines provide much structure and coherence to learning. It is easy to underestimate their power and importance in the advancement of knowledge and understanding at the undergraduate level. It is not clear whether a student or a faculty member can be truly interdisciplinary without first mastering one or more disciplines. The ascendancy of the disciplines in the late nineteenth century and their continuing dominance throughout the twentieth century have left an indelible imprint on the shape and direction of the academic major. It also has subjugated the aims of general and liberal studies to the perspectives and political rivalries of individual departments and specialized fields. It was only in the late 1980s and 1990s that interdisciplinary studies, multiculturalism, feminist pedagogy, and a renewed concern for the coherence and direction of the undergraduate program began to assail the baccalaureate degree dominated by the academic major.

### Evaluation of Programs and Majors

Academic majors are subject to review as part of the institutional accreditation process. Specialized accrediting bodies, such as the Accrediting Board for Engineering and Technology and the American Occupational Therapy Association, also evaluate many majors in applied and professional fields. Finally, institutions themselves often insist on periodic reviews of academic programs and their majors. Regional, specialized, and institutional program reviewers most frequently rely on the judgments and observations of peers in conducting these evaluations. Peer reviewers who visit a department or program as part of the accreditation process often praise those units that use their own statement of purpose and educational objectives to frame its description of the characteristics and competencies it intends its student to acquire in the given major. Such reviewers also expect the teaching faculty to establish measurable learning objectives for what they expect their student to learn—not only in specific courses, but in the major field as a whole.

### Conclusions

At the outset of the twenty-first century, students, teachers, employers, parents, and lawmakers often

ascribe a liberal arts education largely to the academic major studied; i.e., they believe the major and the degree are largely one in the same. Majors, at least conversationally, have become more imitative of graduate study. Until the rise of the universities, the elective system, and the academic major, most—if not all—of undergraduate courses were taken by all of the students at an institution. The academic major, a twentieth-century phenomenon, implies a uniformity of curriculum for any group of students; however, that uniformity has become the major more than the institution in which it resides. That the academic major is a powerful and predominant tool of the baccalaureate degree is both its strength and its limitation.

*See also:* CURRICULUM, HIGHER EDUCATION; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY ROLES AND RESPONSIBILITIES.

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## ACADEMIC RESEARCH

*See:* ACADEMIC DISCIPLINES; ACADEMIC FREEDOM AND TENURE; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY ROLES AND RESPONSIBILITIES; FEDERAL FUNDING FOR ACADEMIC RESEARCH; RESEARCH GRANTS AND INDIRECT COSTS; RESEARCH UNIVERSITIES; TEACHING AND RESEARCH, RELATIONSHIP BETWEEN; UNIVERSITY-INDUSTRIAL RESEARCH COLLABORATION.

## ACCELERATED SCHOOLS

Accelerated Schools emerged from a national school reform movement established in 1986 to replace academic remediation for at-risk students with academic enrichment. Research studies done in the 1980s documented a growing population of students who

were at risk of educational failure because they lacked the experiences in their homes, families, and communities on which school success is based. These students were heavily concentrated among minority, immigrant, and single-parent families—and those with low parental education and income. Studies of the schools such students attended found heavy reliance on repetition and drill, as well as a glacial instructional pace, compared to schools with more advantaged pupils. The consequences of this uninspiring instruction, with its low expectations and stigmatization of students in at-risk situations, were viewed as contributing to an achievement gap for at-risk students that led to failure and dropping out of school.

Accelerated Schools were designed to bring all students into the academic mainstream through academic enrichment and acceleration by replacing remediation with gifted and talented instruction. In the fall of 1986 two schools were established as pilot schools in the San Francisco Bay Area to implement the ideas that had been derived from the earlier research. The goal was to transform these schools from an emphasis on remediation to an emphasis on acceleration. The schools were exposed to the ideas behind the project and asked to consider if they wanted to move forward with them. Both schools agreed to work with teams from Stanford University to implement Accelerated Schools at their sites. From this initial work on implementation, replication, and research, considerable development has taken place in terms of the knowledge base, the process of transformation, and the expansion of Accelerated Schools. In 2001 there were about 1,000 Accelerated Schools enrolling almost half a million children in forty-one states and in several foreign countries.

The Accelerated Schools approach aims to make all students academically able at an early age through *Powerful Learning*, an approach to enrichment that integrates curriculum, instructional strategies, and school context. Powerful Learning is embodied in student research activities, artistic endeavors, community studies, and a range of applications where knowledge is applied to real-world activities. Students are expected to generate authentic ideas, products, artistic performances, and problem solutions across subjects that can be assessed directly for quality, rather than assuming that examination scores will be adequate assessment instruments.

The conversion to acceleration requires an internal transformation of school culture. The Accel-

erated School incorporates a model of governance and operations built around three principles that empower the school community to adopt accelerated strategies: (1) *Unity of Purpose* refers to consensus by school staff, parents, and students on common goals, a search for strategies for reaching them, and accountability for results; (2) *Empowerment with Responsibility* refers to the establishment of the capacity of the participants to make key decisions in the school and home to implement change and to be accountable for results; and (3) *Building on Strengths* refers to the identification and utilization of the strengths of all of the participants in addressing school needs and creating powerful learning strategies.

### Accelerated Schools Process

Accelerated Schools require the training and support services of both an external coach and internal facilitators to assist the school in following the model of transformation. External coaches are usually drawn from the central office staff of each district, and are given a day or more a week to work with the school. Internal facilitators are teacher leaders who are provided with time to assist the external coach in providing training and follow-up guidance. Both coaches and facilitators are trained at regional centers of the Accelerated Schools Project (ASP) through an intensive initial session of five days, followed by subsequent monthly training sessions of one or two days. Staff from regional centers train and communicate with coaches on a regular basis through telephone follow-up and school visits to provide support for coaches and facilitators and feedback to the school. Schools are provided with an Internal Assessment Toolkit to check implementation progress as well as guidelines for end-of-year assessment.

The transformation process puts great emphasis on placing school governance and decision-making in the hands of school staff, parents, and students so that they can take responsibility for transforming their own culture and practices. School staff and other members of the school community begin by taking stock of school strengths, challenges, and operations. This is done through initiating members into small research groups. Taking stock is followed by a community-wide effort to set out a future vision for the schools with specific goals. The results of the taking-stock summary are contrasted with the future vision to set out areas of priority that the school

must address. Governance at the school site is structured through cadres working on these priorities, a steering committee, and an overall decision-making body called *school as a whole* (SAW) that includes all school staff, parents, other community members, and student representatives. Each of these entities is guided through problem solving and decision making by a specific inquiry process that carefully defines each challenge and generates hypotheses on why the challenge exists. Hypotheses are tested, and solutions are sought that match those that are supported by data. Powerful learning approaches are developed to address learning challenges, and overall school results are evaluated periodically.

Both time and district support are major challenges. School staff and other participants need regular meeting times to do the research that taking stock, inquiry, and evaluation require, and to receive and apply training. Powerful Learning requires teamwork in constructing units, lessons, and learning experiences and sharing them—with the intent of always finding new ways to strengthen them. Governance can only be done through careful reflection and consideration of the usefulness of recommendations and the evidence that supports them. Appropriate time requirements include a minimum of six full days per year for staff development, as well as a weekly early-release day or its equivalent for governance, inquiry, and planning activities. Coaches and facilitators need time to plan and monitor school progress and provide additional training and support. District support includes not only meeting these time requirements, but also providing a coach with appropriate skills and the stability to enable the school to master the ASP process.

Results have been encouraging. Schools have reported substantial increases in student achievement, parent participation, community projects, student research, and artistic endeavors. Third-party evaluations have shown gains in student achievement of 8 percentiles in a national evaluation and about 40 percentiles in an urban sample of six schools when compared with similar schools not undertaking reforms. The accomplishments suggest that a school based on acceleration is superior to one using remediation for students in at-risk situations.

*See also:* ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; SCHOOL REFORM; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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HENRY M. LEVIN

## ACCOUNTING SYSTEMS IN HIGHER EDUCATION

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The objectives of colleges and universities differ from those of commercial enterprises for which profit is the primary motive in that colleges and universities seek to provide educational services within the existing levels of revenues available, although a

slight level of excess revenue may be desired by some governing boards. A balanced budget where expenditures remain within available revenues is always expected of a financially responsible college or university. A major reduction in the net assets of an institution should be cause for concern and may be a sign of financial instability.

### Revenue and Assets

The primary sources of revenue vary depending on whether an institution is public or private. Most private institutions depend heavily on student tuition as the major source of revenue, while public institutions receive a mixture of state appropriations and student tuition. The portion of the budget that comes from state appropriations may vary from state to state depending on the policy position of each state as to the percentage of the budget that tuition is expected to support.

According to 1996–1997 data from the National Center for Education Statistics, fund revenues for public institutions came from four primary sources: tuition and fees (19%), federal funds (11%), state funds (36%), and sales and services (22%). Private institutions also received the majority of total revenues from these four sources but had different percentages in each category: tuition and fees (43%), federal funds (14%), state funds (2%), and sales and services (21%). As noted, state appropriations are particularly important to public institutions and, in fact, represent the majority of revenues available to the overall higher education enterprise. In the academic year 1995–1996, direct general expenditures of state and local governments for postsecondary education totaled \$100.7 billion. Of this total, \$89.7 billion were appropriated for educational and general expenditures and \$11.0 billion for capital outlay. Without the state funding of public institutions, private colleges and universities have greater reliance upon tuition and fee revenue. In 1999–2000, the total tuition, room, and board per private institution student was \$20,277, while the same fees for public school students averaged \$7,302. Public and private institutions are all facing an increased reliance upon those tuition and fees for any level of improvement funding. Even within the public sector with its government funding, revenues from tuition and fees increased 318 percent from 1980 to 1996 while revenues from government appropriations during that time only increased 125 percent. Little evidence exists that this trend will change between now and 2010.

Other important sources of revenue include grants and contracts, private gifts, endowment income, investment income, and sales and services of auxiliary enterprises. Auxiliary enterprises include such operations as student housing and campus bookstores that are expected to be service components that finance their own operations. Some institutions also have teaching hospitals that are major financial component units. In addition to these revenue categories, higher education institutions must also account for sizable property holdings. The total value of higher education property in 1995–1996 was \$220.4 billion. Of this amount, \$11.4 billion was represented by land, \$150.5 billion by buildings, and \$58.5 billion by equipment inventory.

### Expenditures

Higher education institutions are very labor intensive, with the major portion of expenditures being devoted to salaries and benefits. Other expenditure requirements include such items as utilities, travel, scholarships and fellowships, communication costs, debt service on capital assets, supplies, and contractual services. In 1999–2000, total expenditures in higher education were \$257.8 billion. Of this total, public institutions accounted for \$159.7 billion and private institutions for \$98.1 billion.

As a foundation of the accounting system, most higher education institutions maintain expenditures by functional classification. These classifications include instruction, research, public service, academic support, student services, institutional support, operation and maintenance of plant, scholarships, and auxiliary enterprises. Current operating activities are further identified and separated depending on whether the source of revenue is unrestricted or restricted. Unrestricted revenues are presumed to be available for current operations without specific external restrictions being placed on the use of the revenues. Restricted revenues, which are available for current operations, must be used for the purpose designated by the donor or granting entity.

Colleges and universities also have other specialized accounts that are used for the unique functions of those institutions. Loan accounts are used to record loans to students, faculty, and staff. Specific reporting requirements may be imposed on loan funds (such as the Federal Perkins Loan Program) depending on the source of funding. These accounts function on a revolving basis accounting for principal, interest, and amounts available for new loans. An-

other special set of accounts are agency accounts that are used for resources held by the institution strictly in a custodial role.

Many institutions are the recipients of gifts and donations for which the donor stipulates that the principal be invested with the earnings available for designated purposes. Endowment accounts are used for these types of purposes. The account is deemed to be a true endowment if only the earnings can be spent with the principal remaining intact. A term endowment allows the principal to be used after some period of time or specified event. Governing boards may designate funds to function as endowments, but the board may rescind these decisions.

Three specialized types of accounts are used for plant activities. These types include accounts for the construction or acquisition of capital assets, resources set aside for the repair and replacement of capital assets, and resources set aside for the repayment of principal and interest (debt service) on capital assets.

The three financial statements required of higher education include the *Statement of Net Assets*, the *Statement of Revenues, Expenses, and Changes in Net Assets*, and the *Statement of Cash Flows*. Accounting standards are established for private institutions by the Financial Accounting Standards Board (FASB) and for public institutions by the Governmental Accounting Standards Board (GASB). Major new reporting requirements were established for public institutions effective with fiscal years beginning after June 15, 2001.

*See also:* GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES.

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HOUSTON DAVIS  
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## ACCREDITATION IN AN INTERNATIONAL CONTEXT, HIGHER EDUCATION

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The United States, and a small but increasing number of other countries, use the process of voluntary accreditation to assure minimum standards of quality in the operation and delivery of educational services. The idea of having institutions do self-policing through accrediting associations is not universal, and most countries accomplish quality assurance via recognition or approval by a government agency, or a government-approved quality assurance authority, or both.

Voluntary accreditation is a product of America's decentralized and market-oriented higher education system with its large private sector component. Accreditation by nongovernmental (or at least noncentral) bodies has happened in other situations: (1) in other federal states, such as Belgium, Canada, and Russia; (2) in countries that have consciously adopted parts of the American model, such as the Philippines and parts of eastern Europe; and (3) in countries where the formal regulation of quality assurance is a new development, such as Australia. Even in these countries, however, the requirement of quality assurance is not often totally voluntary, but usually proceeds from a national mandate or set of laws. This is due to historical traditions of state control or leadership in education; to the nature of the chartering and control of institutions; and to the lack of diversity, collegial traditions, and the small and elite character of the higher education sector in most national systems. Relatively few higher education systems in the world have a large or vigorous private sector, and many have laws or policies that restrict private institutions or make it difficult for them to operate. All these factors contribute to the tendency of institutional recognition and accreditation to be a traditional monopoly of the state in most parts of the world.

Globalization has challenged this status quo in two major ways. First, the increased cross-border movement of people, and the evolution of multistate agreements, such as the European Union, MERCOSUR, and the North American Free Trade Agreement (NAFTA), have caused national authorities and educators to have to develop mechanisms for the international recognition of legitimate institutions, diplomas, and credits. The old informal arrangements between friendly institutions and faculty

no longer suffice to assure either recognizable quality or adequate legal protection for institutions, graduates, or employers. Second, the rise of the multinational private commercial and professional sectors has created a whole universe of qualifications and educational providers. These vary widely in quality, and lie outside the regulatory reach of national authorities whose mandates focus on—and often restrict—their attention to public higher education and state sector jobs. The concept of voluntary accreditation is frequently better suited to quality assurance in this fluid transnational environment than are traditional methods, particularly as these are often restricted by laws and practices that ignore private institutions and limit the acceptance of foreign institutions and degrees. Accreditation is also a means for devoting serious attention to quality assurance by organizations that prefer to keep governmental regulation limited. It also allows governments that would prefer to limit their regulatory regimes to accommodate both the public's need for quality assurance and a desire to work via consensus with educational providers.

International organizations such as the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Council of Europe, the European Union, the Association of Southeast Asian Nations (ASEAN), and the Asia-Pacific Economic Corporation (APEC) have recognized the need for transparent and reliable procedures for recognizing institutions and degrees across borders, and even across global regions. These organizations have incorporated international educational mobility (of students, faculty, and institutions) and the mutual recognition of nationally accredited or approved institutions and qualifications (degrees and diplomas) into their treaties and other agreements. Examples of agreements in this area include the Lisbon Convention on the Recognition of Qualifications Pertaining to Higher Education in the European Region (UNESCO and the Council of Europe, 1997), the Bologna Process (European Union, 1999), the APEC Education Dialogue and Knowledge Sharing Network, and the education and professional mobility components of NAFTA. Except for the European Union's Bologna Process, none of these agreements binds national authorities or educational institutions to preset standards or commitments. They do contribute to an evolving international consensus on the need for information systems, agreed procedures, and quality assurance mechanisms for higher

education: Business and government need to assure educational quality; and this will occur voluntarily, through accreditation-like mechanisms, or it will be regulated in other ways.

*See also:* ACCREDITATION IN THE UNITED STATES, *subentries on* HIGHER EDUCATION, SCHOOL; HIGHER EDUCATION, INTERNATIONAL ISSUES.

E. STEPHEN HUNT

## ACCREDITATION IN THE UNITED STATES

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SCHOOL

John A. Stoops

HIGHER EDUCATION

Michael D. Parsons

### SCHOOL

The word *accreditation* is derived from the Latin *credito* (trust). Its application to American schools dates from 1871, when, on the basis of on-site visits by representatives of its faculty, the University of Michigan began “accrediting” secondary schools entrusted with providing adequate preparation for university studies. The practice was soon taken up by universities in nearby states, and in 1884 was adopted by the University of California. In 1899, graduates of 187 high schools in fifteen different states were eligible, by diploma alone, for admission to the University of Michigan.

#### A Community of Trust

Between 1895 and 1917, American colleges and secondary schools came together in five (later six) regional associations for consensus-building discussions about the developing system of American education. The movement of students from school to school, school to college, and college to college was on the agenda, along with other transactions that depended upon trust among institutions. The regional associations sought a voluntary method for identifying institutions capable of their objectives and worthy of trust, and accreditation became the preferred name of this process.

The diversity of sponsorship and purpose among educational institutions prohibited equating accreditation with advocacy. The regional associa-

tions simply wanted to establish that accredited institutions were what they said they were, had what they said they had, and did what they said they did in accordance with standards approved by the American academic community. Anything an accredited institution might say about its staff, facilities, curricula, services, or the accomplishments of its students was presumed to be true. Credibility was therefore essential for successful participation in the free American system. Institutions unwilling or unable to establish credibility through accreditation had to use some other means—none could prosper without it.

#### Regional School Accrediting Commissions

School accreditation moved from the West and South toward the Northeast. The North Central Association of Colleges and Schools (NCA) was founded in 1895 by educational leaders already involved in school accreditation. In 1904, NCA published a list of accredited schools. Also founded in 1895, the Southern Association of Colleges and Schools (SACS) established a commission for secondary school accreditation in 1912. The Northwest Association of Schools and Colleges (NASC) began accrediting colleges and schools in 1917, the year it was founded. It formed a secondary school commission in 1927.

Established in 1887, the Middle States Association of Colleges and Schools (MSA) was initially preoccupied with its successful effort to establish the College Entrance Examination Board. Consequently, MSA did not form a Commission on Secondary Schools until 1922. The New England Association of Schools and Colleges (NEASC), which dates from 1885, began accreditation of private secondary schools in 1927, and later public secondary school accreditation moved under the control of the Association. In 1962, California and Hawaii separated from the Northwest Association to form the Western Association of Schools and Colleges (WASC) and an accrediting commission for secondary schools.

After the middle of the twentieth century, all regional associations extended accreditation to other kinds and levels of schools. Commissions for elementary schools were established by the Southern Association in 1953, by the Middle States Association in 1978, and by the New England Association in 1987. After 1960, the original commissions for secondary schools of the other three associations were renamed Commissions on Schools, and they

extended their missions to include the accreditation of elementary schools. In 1968, The New England Association had begun a commission on vocational and technical education, so by 1990 the American school accreditation establishment included a total of eleven regional commissions.

### The Eight-Year Study

In 1932 the young and developing secondary school commissions of the (then) five regional associations implemented a nationwide eight-year study aimed at establishing standards for secondary school accreditation. The study culminated in 1940 with publication of the *Secondary School Evaluative Criteria*, in which hundreds of the *parts* of a secondary school were organized and listed, each to be evaluated separately against the backdrop of a community study and the school's philosophy. The intense rigor of the listing commanded wide respect. It appealed to the prevailing mind-set of the industrial age and encouraged the growth and embellishment of the apparatus of secondary education. Even its few critics agreed that *the instrument* (as it was often called) offered a useful indication of the effort a community was making.

After 1940 the study was incorporated and lived on as the National Study of School Evaluation (NSSE). Governed by the accrediting school commissions, NSSE revised the *Criteria* every ten years and published other support materials. Despite the growing diversity of accredited schools, the dominance of the *Criteria* was not challenged until 1980 when a new generation of leaders, influenced by post-industrial models of thought, insisted school evaluations should center on the processes by which the resources given to a school were transformed into desired results.

### From Parts to Processes

Moving from disembodied parts to (results-oriented) processes proved to be more than just a bend in the road; it was an entirely different road. Parts no longer had relevance apart from processes, and processes drew relevance only from results. This conversion entailed retraining thousands of schools, commissioners, and evaluators. NSSE and the commissions published new support materials on topics such as strategic planning, cyclical improvement, paradigmatic alignment, energy auditing, impact analysis, critical description, scenario analysis, and synergy development. Some commissions evaluated

schools more frequently, using fewer evaluators, and the periodic reports required of accredited schools became action-based, focusing on their movement toward goals that can be empirically defined and verified.

Accreditation standards were also revised. With total acceptance of the ubiquity of change, the commissions reasoned that status quo was incompatible with merit. Accordingly, schools were to be judged on the quality of their movement towards desired goals, and not of their current standing. Standards for accreditation became measures of school improvement activity. Regardless of prior accomplishments, schools had to demonstrate continuous improvement for continuous accreditation. In 1990 the sixth and last edition of the *Criteria* was published. By 1997 all commissions were using process-oriented protocols, and the methods for school accreditation that had prevailed from 1940 had expired.

### National and International Activity

As transportation improved, educators moved most of their deliberations from regional to national venues. Only accreditation, which had prospered from regional governance, continued to be regional. The regional commissions became the sole custodians of its meaning and traditions. They remained connected by their responsibility for NSSE; and, from 1968, they met annually for an exchange of information as part of the Council of Regional School Accrediting Commissions (CORSAC). There was no interest in establishing a national school accreditation authority.

However, American families were becoming increasingly mobile, and the public media were becoming nationally focused. After 1950 some commissions began serving American schools overseas, but efforts to establish regional jurisdictions abroad proved acrimonious. New national educational corporations with schools spread across all regions objected to dealing with different accreditation authorities. So the regional commissions began seeking ways to provide national and international services while preserving the independence they all cherished.

In 1994 the commissions established a "legal platform" for combined activities by replacing CORSAC with a corporation named the International Council of School Accreditation Commis-

sions, Inc. (ICSAC). The first project on this “platform” was conversion of the International Registry of Accredited Schools into a searchable database that is available online. The second was the establishment of a quadrennial international convocation, with the recurring theme of Peace and Justice through Education (Atlanta, 1996 and Chicago, 2000). The third was an umbrella accreditation authority named The Commission on International and Trans-Regional Accreditation (CITA). Designed to accredit kinds and configurations of schools in the United States not easily served by one commission, CITA also accredits the growing number of indigenous schools of foreign nations that have been converting to the American plan of education. (American overseas schools and Department of Defense schools that are overseas continue to be accredited by the separate regional commissions as before.) CITA began operations in 1996. By 2000 the number of schools continuously engaged in CITA accreditation protocols approached 1,000. Its name recognition had become so widespread that, in 2000, ICSAC was renamed CITA, Inc.

### Cooperative Activities

The flexibility of process protocols and school improvement standards presented the possibility that school improvement programs and accreditation could be synchronous. After 1985 some systemwide improvement programs for public and Catholic diocesan schools were redesigned as accreditation protocols. Similar collaborations developed between the regional commissions and organizations of special purpose and method schools (e.g., Christian, hearing impaired, Montessori) that enhanced the special rigors of these organizations and schools by offering special accreditation.

To avoid forcing these schools to choose one or the other accreditation (or do both), the commissions exercised their flexibility in designing protocols leading to both regional and special accreditation. In 1993, thirteen of these organizations came together as the National Council for Private School Accreditation (NCPSA), which soon established a working relationship with CITA. In 1999, CITA and NCPSA jointly began the International Academy of Educational Accreditors (IAEA), an agency designed to assist other nations establish accreditation systems.

These cooperative undertakings were fruits of the century-long growth of school accreditation, and

of perceptions of its modern potential. It began with secondary schools only and spread to schools of all kinds and levels. At a critical point it moved from assessing effort to examining processes aimed at results. It originated within separate commissions that later acquired the means and determination to combine for national and international endeavors. Positive relations with special accrediting organizations broadened its foundations. By 2001 its voluntary, peer-governed, internally driven, and externally monitored methods were spreading abroad, and its regional commissions were equipped to combine with others as needed.

*See also:* ACCREDITATION IN AN INTERNATIONAL CONTEXT, HIGHER EDUCATION; ACCREDITATION IN THE UNITED STATES, *subentry on* HIGHER EDUCATION; SCHOOL REFORM.

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JOHN A. STOOPS

## HIGHER EDUCATION

One of the primary differences between higher education in the United States and other countries is that there is no centralized government control in the United States. The types of review, oversight, and quality control performed by national education ministries in other nations is performed by private, not-for-profit accrediting agencies in the United States. Accreditation is a process that recognizes a postsecondary institution or a program of study within the institution as having met accrediting standards and qualifications.

### Historical Development

In the second half of the nineteenth century, Americans were building colleges and universities at a rate unmatched in the history of humankind. While the numbers were impressive, few of these institutions could meet the loosest definition of a college, and many could not match the quality of today's American high schools. Teachers' colleges, land-grant colleges, women's colleges, black colleges, research universities, and various specialized institutions were developing without anyone being able to answer the basic question, "What is a college?" Not only could this question not be answered, but potential students and their parents could not find an answer to questions about commonly accepted standards for admission to college and for completing a degree once the student was admitted.

The rapid, unregulated, growth helped produce public pressure for some type of rating or evaluation system. Higher quality colleges and universities called for government evaluation as a way to limit competition with what they correctly saw as inferior institutions. In 1870 the U.S. Bureau of Education listed the nation's colleges but did not offer an evaluation of the institutions. The bureau asked the Carnegie Foundation to evaluate the institutions. The foundation completed the study but refused to release the results for fear that the information would be misused. If colleges and universities wanted to be

evaluated, then they would have to take up the task themselves.

It was a group of secondary school masters in New England who took the initiative. In 1884 members of the Massachusetts Classical and High School Teachers Association, in cooperation with Harvard University President Charles Eliot, formed the New England Association of Schools and Colleges. This marked the beginning of what would come to be known as the regional accrediting associations. In order of development the six associations were: (1) New England Association of Schools and Colleges, 1885; (2) Middle States Association of Colleges and Schools, 1887; (3) Southern Association of Schools and Colleges, 1895; (4) North Central Association of Schools and Colleges, 1895; (5) Northwest Association of Schools and Colleges, 1917; and (6) Western Association of Schools and Colleges, 1923.

The regional agencies provide what is known as regional or institutional accreditation for member institutions. While the six regional associations differ in size, traditions, and character, they provide the basic framework for accreditation. Institutional accreditation focuses on issues such as: appropriateness of the institutional mission and objectives; effectiveness of the institution in meeting its mission and objectives; adequacy of financial and physical resources including library holdings, instructional space, laboratories, and offices; quality of faculty; effectiveness of management, including administrative structure and function; and adequacy of personnel and student services offered by the institution.

The basic framework developed over a period of time, as regional associations saw the need to cooperate and negotiate common standards. In 1949 the Federation of Regional Accrediting Commissions in Higher Education (FRACHE) was created. As an association of regional accrediting associations, FRACHE was succeeded by other institutional accrediting associations, and today the regional accrediting associations are represented by the Council for Higher Education Accreditation (CHEA). From FRACHE to CHEA, the associations have attempted to provide coherence and continuity to the rapidly changing accreditation process, serve as a communication and discussion forum for the regional associations, and provide guidance in the revision of regional accreditation policies.

## Regional versus Specialized Accreditation

Accreditation arose in the United States as a means of conducting peer evaluation of higher education institutions and programs. In its simplest form, accreditation can be defined as quality control. It is also a way to protect against governmental interference and to ensure academic freedom. In a more complex form, accreditation can be defined as a process in which an institution evaluates its educational mission, goals, objectives, and activities and seeks an independent peer judgment to confirm that it is achieving its goals and objectives and that it is equal to comparable institutions. There are two major types of accrediting associations: regional or institutional accreditation associations and specialized or programmatic accreditation associations.

A regional or institutional accreditation review offers an assessment of the overall quality and integrity of the institution. A team sent from the institution's regional association conducts the assessment. The team spends several days at the institution meeting with its officials, observing classes, and evaluating its facilities and programs. The institution will have prepared its own self-study as part of the preparation for the accreditation review. This report will also help guide and inform the assessment team.

Following the visit, the team writes an evaluation report, which includes an assessment of the institution, a rundown of its strengths and weaknesses, and suggestions for improvement in its curriculum, faculty, and other areas. Generally, institutions are reaccredited for ten years, but accreditation is not a guaranteed outcome when a team visits. If an institution has significant deficiencies, the accreditation association may withhold a decision on its status until the weaknesses have been corrected. The association may schedule return visits to check on the status of improvements and corrections. Finally, in extreme cases, the association may withhold accreditation.

While regional accreditation is responsible for a broad assessment of an institution's quality and integrity, specialized or programmatic accreditation focuses on academic programs that offer curricula in professional and technical fields. The intent is to ensure that graduates entering an accredited professional or technical field possess the necessary skills, knowledge, and competencies required to practice in that field. The earliest specialized accreditation occurred when the American Medical Association

(AMA) established the Council on Medical Education and Hospitals in 1904. In 1905 the council adopted standards for medical schools and published its first classification of these schools based on the performance of graduates in licensing examinations. Other professional education programs quickly followed the AMA starting with dental education in 1918 and then legal education in 1923, engineering education in 1936, and pharmaceutical education in 1940.

Today, specialized accreditation is the subject of some controversy as institutions are faced with a proliferation of programmatic accrediting agencies with each making demands on an institution's limited resources. For example, a large public institution such as Indiana University or the University of Illinois might face accreditation visits for business, teacher education, counseling education, education psychology, dental education, law, nursing, occupational therapy, physical therapy, library sciences, pharmacy, social work, journalism, optometry, psychology, and more. Institutions are concerned about the rising costs and the inflexibility of the specialized accreditation process. Institutional leaders are also concerned about what they see as the self-serving nature of some policies and practices of the specialized associations that seek to expand the associations' authority over institutional resources and policies. This is why some institutions are now rethinking the need for specialized accreditation.

In the meantime, specialized accrediting associations continue to function in much the same way that regional accrediting associations function but on a more limited and focused scale. Students entering programs accredited by specialized associations will know that the program has established appropriate goals and objectives, can provide evidence that these goals and objectives are being met, and has sufficient resources to ensure that the current level of quality will be maintained in the future. Students will also benefit in that accredited programs make it easier for graduates to move from one state to another. For example, graduates of programs accredited by the National Council for Accreditation of Teacher Education (NCATE) can more easily move their teaching licenses from one state to another. This is possible because many states have reciprocity agreements based on graduation from NCATE-accredited schools.

### **Accreditation and the Federal Government**

It is unlikely that accreditation is high on a student's list of concerns when selecting an institution. It is only when an institution is not accredited that a student becomes concerned. One reason is that lack of specialized accreditation will hamper a student's career after graduation. Another more immediate reason is that the federal government uses accreditation as a criterion for student financial aid. A student cannot use federal financial aid to attend an institution that is not accredited by a federally approved accrediting association. Accreditation is part of what is commonly called the "triad" and is a way for the federal government to use existing, nongovernmental agencies to fulfill public policy goals.

The triad establishes relationships between the federal government and eligibility for funding, state government and its responsibility for chartering institutions, and voluntary membership associations that require accreditation for membership. The triad evolved from the passage of the Higher Education Act of 1965, which provided the first broad-based, permanent, federally funded student financial aid programs for students in public and private universities. This act is an authorization statute that must be renewed after a fixed number of years. In the various renewals since 1965, accreditation has taken on an increased role as part of the oversight triad.

In 1992 the Higher Education Act gave the Department of Education increased authority over the accreditation process. Specifically, the Education Department was to require that all regional and specialized associations assess thirteen specific criteria in their reviews:

- academic calendars, catalogs, publications, grading, and advertising
- curricula
- faculty
- facilities, equipment, and supplies
- student support services
- recruiting and admissions practices
- fiscal and administrative capacity as appropriate for the scale of the institution
- program length and tuition and fees in relation to the subject matter taught and the objectives of the degree
- measures of program length in clock hours or credit hours
- student outcome measures

- default rate
- record of student complaints received by the accrediting association or state agency
- compliance with program responsibilities under Title IV of the Higher Education Act

The intent of these new requirements was to address concerns of fraud and abuse in the federal student aid program. The primary targets of the new requirements were proprietary and vocational schools, but the new rules applied to traditional colleges and universities as well.

The 1998 reauthorization of the Higher Education Act reversed some of the 1992 requirements, thereby returning some control and administrative discretion to the accrediting associations. Still, the reauthorization did not reverse the trend of the federal government taking an increasingly interventionist approach toward the associations. Over a three-decade period, the federal government had become a major investor in higher education with billions of dollars going to student financial aid yearly. The federal government was no longer willing to simply let the voluntary accrediting associations establish the rules of accreditation. The decreased number of fraud and abuse cases has reduced federal pressure on the associations, but the triad will never return to its old relationship of three independent parties acting together to ensure institutional integrity.

### Future Issues

Accreditation will remain a defining characteristic of American higher education. The federal government is unwilling to take on the task of accrediting public and private institutions of higher education. Even if there were such a movement, it would not survive institutional, state, and constitutional challenges. This is not to say that accreditation will remain static. Regional accreditation will continue to evolve to meet the needs of institutions just as it has for more than 100 years. Specialized accreditation will face stiffer challenges. It is probable that more and more major universities will discard specialized accreditation. In some fields, teacher education for example, new specialized associations are attempting to challenge NCATE. The federal government will continue to use the associations as part of the triad but will continue to try to intervene in the accreditation process to ensure that federal interests are protected.

Regardless of the accuracy of these predictions, the primary differences between higher education in

the United States and other countries will continue to be that there is no centralized control in the United States. The types of review, oversight, and quality control performed by national education ministries in other nations will continue to be performed by private, not-for-profit accrediting agencies in the United States.

*See also:* ACCREDITATION IN AN INTERNATIONAL CONTEXT, HIGHER EDUCATION; ACCREDITATION IN THE UNITED STATES, *subentry on* SCHOOL.

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MICHAEL D. PARSONS

## ACCREDITING COMMISSION OF CAREER SCHOOLS AND COLLEGES OF TECHNOLOGY

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The Accrediting Commission of Career Schools and Colleges of Technology (ACCSCCT), formerly known as the Accrediting Commission for Business Schools, is the accrediting authority for private postsecondary technical and vocational schools, colleges, and programs of instruction. Its more than 700 participating institutions of various types range from one-year vocational programs to continuing education programs, to full four-year undergraduate degree programs in qualified fields of study. The goal of the commission is to ensure the highest standard of career-oriented education for over 350,000 students in the United States and in Puerto Rico, and it is recognized as the accreditation authority in its area of expertise by the U.S. Department of Education.

### Program

On the request of an interested postsecondary institution, the commission first requires proof that the school or program is legally established and properly licensed by the state in which it operates. Once this has been proved, the person responsible for managing the program to be accredited must attend a workshop in which he or she learns the philosophy behind accreditation and the procedures by which to achieve it. During this workshop, information on resources, publications, and other aids that may help in the accreditation process are also made available.

After attending the mandatory workshop, the administrator of the petitioning institution must file a detailed self-evaluation report. In this document,

the school sets forth its mission statement and the plan by which it fulfills this mission. It must provide course syllabi, financial statements, an organizational chart documenting its administrative hierarchy, a list of faculty along with each instructor's educational and professional qualifications to teach, copies of all advertising and promotional materials, catalogs and brochures, and copies of all state and federal reviews of the program to be accredited. In addition, the institution must provide a statement of its graduation and job-placement rates, a description of the physical facilities available, and a statement of the student services offered and procedures used in handling student grievances. Finally the report must document student recruitment and admissions policies as well as the requirements students must fulfill to qualify for the degree or certification offered by the program.

Once this report is filed, the commission sends a team of investigators to verify the information. The team consists of an administrative expert, who evaluates the administrative and financial practices of the institution; an occupational specialist, who examines the equipment and practical instruction offered by the program; and an educational specialist, who investigates the quality and sufficiency of the faculty teaching the program. In addition the team includes a representative from the commission, whose role is to help both the investigative team and the institution fully understand and comply with accrediting requirements. In some cases a representative from the relevant state licensing or oversight board may also join the team.

After completing its survey, the team prepares a Team Summary Report and makes a copy for the institution so that it may address any questions or issues that arose during the investigation. The whole file then goes to the commission, which makes the determination as to whether or not to grant accreditation.

For a first-time applicant, the commission may make one of four decisions: to grant accreditation (for a period not to exceed five years); to accredit the institution "with stipulations"; to defer its decision pending receipt of additional information; or to deny accreditation. An institution accredited with stipulations is one that essentially meets the commission's standards but falls short in one or more aspects of its program. The stipulations provide the institution with accredited standing, while giving it an opportunity (usually with a strict deadline) to

rectify any such problems. If accreditation is denied, the institution must wait nine months before reapplying for consideration by the commission.

Even if accreditation is granted, however, the institution must maintain an ongoing dialog with the commission. It must file annual reports to show that it continues to maintain the commission's standards, and it must reapply for accreditation once the five-year term (or less, in some cases) is up. Failure to file the annual report, or to pass muster during the re-accreditation process, can result in an institution being put on probation or even being stricken from the list of accredited institutions.

Once accredited, member schools are a valued resource to the commission, which seeks their advice and cooperation in the ongoing process of establishing standards that reflect changes in technology and in educational and employment policies and standards. In return, member schools gain access to commission resources and advisors as they seek to improve their programs and remain abreast of the changing world of vocational and technical education.

Although accreditation is voluntary, it is necessary if a school wishes to participate in federally administered student grant and loan programs. Accreditation also serves as a sign of quality, making accredited schools more attractive to potential students and to the high school guidance counselors who advise them on career and postsecondary educational choices.

### Organization

The commission is made up of thirteen members, each of whom has been elected to serve a single four-year term. Six of the members are drawn from the public sector, representing government, the business and industrial communities, and the public postsecondary educational community. The remaining seven members are drawn from the private institutions served by the commission. The election of this latter group is done by direct vote of the commission's more than 700 member institutions, whereas the public representatives are selected by the commission itself, from a list drawn up by its own nominating committee.

The committee meets every four months to review applications for accreditation and to discuss possible changes in the standards or process used to guarantee continuing improvement in postsec-

dary education. It also publishes a quarterly newsletter, *The Monitor*, and maintains a website to circulate information of interest to professionals in the field of vocational and technical education.

### Financial Support

As an independent organization, the commission receives no public funds or outside financing. Instead it supports its activities entirely from its own income. Its income includes the fees it charges for its workshops and application process, as well as the annual dues it collects from the institutions it has accredited. Dues are calculated based on the number of students enrolled in the program, school, or institution and adjusted according to the amount of tuition charged per student.

### History

Although the ACCSCT only became an independent entity in 1993, it got its start in the early 1950s. At this time a number of groups became concerned about establishing professional standards for business schools, which were increasing in number and popularity. In 1952 the U.S. Office of Education (now the Department of Education) set up the National Association and Council of Business Schools to administer the accreditation process for the whole nation, and in 1956 this became the single accrediting authority of career schools in the nation. One of the earlier independent groups, the American Association of Business Schools, soon merged with the national organization, and together they formed the Accrediting Commission for Business Schools.

At about the same time, an organization was formed to evaluate the programs available from trade and technical schools offering postsecondary programs. Advancements in technology during the ensuing three decades blurred the once clear distinction between business and technical training, and the two accrediting organizations ultimately merged into the ACCSCT, a division of the National Association of Trade and Technical Schools. In 1993, as a result of provisions contained in 1992 amendments to the Higher Education Act, the Accrediting Commission became an independent organization.

**INTERNET RESOURCE**

ACCREDITING COMMISSION OF CAREER SCHOOLS  
AND COLLEGES OF TECHNOLOGY. 2002.  
<[www.accsct.org](http://www.accsct.org)>.

HAROLD B. POST  
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## ADAPTED PHYSICAL EDUCATION

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Adapted physical education (APE) is specially designed instruction in physical education intended to address the unique needs of individuals. While the roots of adapted physical education can be traced back to Swedish medical gymnastics in the 1700s, adapted physical education, as practiced today, has been significantly shaped by the mandates of the Individuals with Disabilities Education Act (IDEA). This act, enacted in 1997, amended the Education for All Handicapped Children Act, which was enacted in 1975 and stipulated that all children with disabilities had a right to special education.

### The IDEA Mandates

Specifically, IDEA defined special education as “specially designed instruction, at no cost to parents or guardians, to meet the unique needs of a child with a disability, including—(A) instruction conducted in the classroom, in the home, in hospitals, and institutions, and in other settings; and (B) instruction in physical education.” The inclusion of physical education in the definition of special education is significant for two reasons. First, it identified physical education as a direct service that must be provided to all students who qualify for special education services as opposed to related services, such as physical or occupational therapy, that are required only when they are needed for a child to benefit from a special education service. Second, it highlighted the importance of physical education for students with disabilities.

IDEA also defined physical education, mandating that all special education services be delivered in the least restrictive environment (LRE), and prescribed a management document called an Individualized Education Program (IEP). Physical education was defined as “the development of: (A) physical

and motor fitness; (B) fundamental motor skills and patterns; and (C) skills in aquatics, dance, and individual and group games and sports (including intramural and lifetime sports.” IDEA further delineated that “physical education services, specially designed if necessary, must be made available to every handicapped child receiving a free appropriate public education” and that “if specially designed physical education is prescribed in a child’s individualized education program, the public agency responsible for the education of that child shall provide the service directly, or make arrangements for it to be provided through other public or private programs.”

With respect to LRE, IDEA stated the following: “To the maximum extent appropriate, children with disabilities, including those in public or private institutions or other care facilities, are educated with children who do not have disabilities; and . . . special classes, separate schooling, or other removal of children with disabilities from the regular educational environment occurs only when the nature and severity of the disability is such that education in regular classes cannot be achieved satisfactorily.”

To ensure that IDEA was implemented as intended, the act required that IEPs must be developed and monitored for all students who qualify for special education. The IEP is developed by a team and includes the student’s present level of performance; annual goals and short-term instructional objectives; specific educational services that will be provided and the extent to which the student will participate in regular education programs; any needed transition services; the projected dates for the initiation and duration of services; and objective criteria and procedures for evaluating, at least annually, progress on the stated goals and instructional objectives.

Finally, IDEA mandated that qualified personnel deliver special education instruction. In this context, “qualified” meant that a person has “met State educational agency approved or recognized certification, licensing, registration, or other comparable requirements which apply to the area in which he or she is providing special education or related services.”

In summary, the legal basis for adapted physical education results from the mandates that require that all students who qualify for special education must receive physical education. If specially designed physical education is required, then these ser-

vices must be stated in the IEP, delivered in the LRE, and provided by a qualified teacher.

It is important to note that while IDEA requires that all students who qualify for special education have a right to adapted physical education if needed to address their unique needs, adapted physical education is, can, and should be provided to all students who have unique physical and motor needs that cannot be adequately addressed in the regular physical education program. It is not uncommon, for example, for many students to have temporary orthopedic disabilities such as sprained ankles, broken limbs, or muscle strains during their school years. Short-term APE programs would be appropriate for these students both to assist in the rehabilitation of their injuries and to minimize any fitness and/or skill deficits that may occur during their recovery. Other students may have mild physical or health impairments, such as asthma or diabetes, that do not interfere with their educational performance enough to qualify them for special education but that are severe enough to warrant special accommodations and considerations in physical education.

In the United States physical education and most major sport/recreation programs for youth are school centered, hence the emphasis on education in the terms *physical education* and *adapted physical education*. In other countries, physical education, recreation, and sport are commonly conducted independent or outside of the schools and sponsored by other organizations and agencies. In these settings, the term *adapted physical activity* may be used instead of adapted physical education.

### Trends and Issues

Although IDEA has provided a sound legal basis for adapted physical education, there are still a number of issues that need to be resolved by the profession to ensure that the physical and motor needs of all students with disabilities are appropriately addressed. Two major issues relate to who is qualified to provide APE services and how decisions are made regarding the appropriate physical education placement for students with disabilities.

**Who is qualified?** While IDEA specified that physical education services, specially designed if necessary, must be made available to every child with a disability receiving a free appropriate education, it stopped short of defining who was qualified to provide these services. IDEA stated that it was the re-

sponsibility of the states to establish teacher certification requirements. Unlike other special education areas (e.g., teachers of individuals with mental retardation or learning disabilities), most states did not have in place defined certification requirements for teachers of adapted physical education. Given the fiscal constraints placed on schools by the mandates of IDEA, most states were reluctant to place additional demands on their schools by forcing them to hire APE specialists. As a result, by 1991 only fourteen states had actually defined an endorsement or certification in adapted physical education.

The existence of a mandate that required that services be provided but that did not define who was qualified to provide these services created a dilemma for both teachers and students. In many cases, regular physical educators with little or no training related to individuals with disabilities and/or therapists with no training in physical education were assigned the responsibility of addressing the physical education needs of students with disabilities. Since these teachers do not have the prerequisite skills to address the needs of these students, these needs are largely going unaddressed. To respond to this situation, the National Consortium for Physical Education and Recreation for Individuals with Disabilities (NCPERID) created national standards and a voluntary national certification exam for adapted physical education. The adapted physical education national standards (APENS) delineate the content that adapted physical educators should know across fifteen standards. The national exam has been administered annually since 1997 at more than eighty test sites in the United States.

While the creation of the APE national standards and the national certification exam have been significant steps toward addressing the issue of who is qualified to teach APE, much more work still needs to be done. The NCPERID is working with a small number of states on developing a process through which states can adopt the NCPERID APE standards and APE national certification exam as their state credential. It is hoped that a uniform certification similar to the APENS exam will be adopted by all states by 2010, and this issue will be resolved.

**How are placement decisions made?** The intent of defining physical education as a direct service, specially designed if necessary, in IDEA was to ensure that the physical and motor development needs of these students were not ignored or sacrificed at the expense of addressing other educational needs. This

emphasis was warranted given the extensive research documenting marked physical and motor development delays and increased health risks (e.g., coronary heart disease and obesity) in many children with disabilities. There is also a wealth of research that has shown that well-designed and implemented physical education programs can reduce both physical and motor delays and many health risks in students with disabilities. While the intent of the law was clear, how it has been implemented has been less than optimal.

What has happened in many schools is that the majority, if not all, of the students with disabilities are being dumped into regular physical education classes. The justification for this practice can be linked to a number of subissues. First, like many other problems in the schools, most schools were not provided with sufficient resources to implement the mandates of IDEA. Given the need to comply with legal mandates and limited resources, many schools were forced to look for ways to meet the letter of the law using their existing resources. Two particular mandates shaped this behavior. First, part of the LRE mandate stated that students with disabilities be educated in the regular education environments to the maximum extent appropriate. Second, the IEP mandates required only that specially designed services be defined and monitored in the IEP. Many schools therefore deduced that if they put all the students with disabilities in regular physical education, then they would be addressing part of the LRE mandate and at the same time avoiding the additional time, effort, and costs related to actually creating specially designed physical education programs. Fiscally this solution was very attractive given that most schools lacked qualified personnel who were trained to assess the physical and motor needs of students with disabilities and who could make appropriate decisions regarding what would be the most appropriate (LRE) physical education environment in which to address their needs.

Ideally, this practice would have been identified and stopped during the early years of implementing the law via the required state and federal monitoring procedures. Unfortunately, it was not for a number of reasons. One of the reasons was that the IEP document was used as the primary monitoring document. Because physical education was not identified as a needed specially designed service, it was not monitored. In the rare cases in which parents understood their rights and demanded specially designed

physical education to meet the unique needs of their child, schools tended to handle these requests on an individual basis and subcontract to have these services delivered.

The approach to stopping the practice of placing all students with special needs in regular physical education must be multifaceted. The ideal solution would be simply for schools to hire qualified adapted physical educators as intended by the law. This solution, however, is not as simple as it may initially appear. First, schools would have to recognize that their current physical education placement practices were wrong and then be motivated to make a change. In many schools these practices have gone on unquestioned for more than twenty years. In addition, there are no new fiscal resources to hire the additional teachers needed to correct this problem. To obtain additional public monies to fund these positions, schools would have to explain why these new teachers were needed and why they had not provided these appropriate services in the past.

Resolving the problem of inappropriate placement of students with disabilities into regular physical education is important not only for the students with disabilities but also for the regular education students and the regular physical education teachers. Research in the field has repeatedly shown that many regular physical educators feel unprepared to address the needs of students with disabilities and that trying to accommodate the needs of these students has a negative impact on all the students in their classes.

Recognizing the dilemma schools face in resolving this problem, the issue is being addressed at two levels. The first level is to educate schools and state departments of education about this problem and recommend that they develop both long- and short-term solutions. An example of a long-term solution would be to require schools to hire certified adapted physical educators as replacements when existing physical educators retire or leave for other positions. An example of a short-term solution would be to use in-service training programs for school administrators and regular physical educators. These programs would focus on educating them on what is appropriate physical education and then providing them with some of the fundamental skills needed to offer a continuum of alternative placements in physical education as intended by the LRE requirements. The second level is to educate parents via the various parent advocacy organizations regarding their rights

and what should be involved in making an appropriate placement decision in relation to physical education. This information would allow parents to make more informed decisions and to advocate for appropriate physical education services for their children.

### Training

Through competitive grant provisions associated with the Education for All Handicapped Children Act and subsequently IDEA, a number of colleges and universities have developed pre-service adapted physical education teacher-training programs. Because adapted physical education training builds upon the traditional teacher training in physical education, most adapted physical education training occurs at the master's level. Most undergraduate physical education teacher preparation programs now include at least one APE course as part of their required curriculum. In recent years, many regular physical education teacher-training programs have also started to offer three- to twelve-credit emphases or minor areas of study in adapted physical education as part of their undergraduate programs. These emphasis areas typically are composed of one to three theory courses and one to two practical experiences where the students can apply their APE course work.

*See also:* MOTOR LEARNING; PHYSICAL DISABILITIES, EDUCATION OF INDIVIDUALS WITH; PHYSICAL EDUCATION, *subentries on* OVERVIEW, PREPARATION OF TEACHERS; SPECIAL EDUCATION.

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LUKE E. KELLY

## ADDAMS, JANE (1860–1935)

Founder and driving force behind Hull-House, the pioneer American settlement house, Jane Addams is best known for her contribution to urban social service; however, she was also an important and influential educator who espoused Progressive educational ideas and practice.

Born in the small northern Illinois village of Cedarville, Addams was deeply influenced by her father, John Huy Addams, a successful self-made businessman and a strong supporter of Abraham Lincoln, with a dedication to public service. Although her father was wealthy, Addams found a genuinely democratic community in Cedarville, where members of different classes mingled freely—an ideal that she would strive for in her adult career. As a child, she steeped herself in literary classics and she was a highly successful student at Rockford Seminary. Like others of this first generation of college women she was, as her biographer Allen F. Davis points out, "self consciously a feminist, not so much concerned with women's suffrage as women's role in the world" (p. 19).

Discovering her own role after graduation did not come easily. She suffered a long period of illness,

partly physical and partly psychological. Her depression was exacerbated by the sudden death of her beloved father. She briefly attended medical school but dropped out because of illness. For eight years Addams searched for an appropriate career. Two trips to Europe were influential in her search. In London she was shocked by the poverty she observed and deeply impressed by Toynbee Hall, England's first settlement house. In Germany she was stunned by the tasks of working women she observed. Her new observations led her to question her own education. In her autobiography, *Twenty Years at Hull-House*, she referred to it as a "Snare of Preparation." The first generation of college women, she now believed, had been educated away from life; "somewhere in the process of 'being educated' they had lost that simple and almost automatic response to the human appeal, that healthful reaction resulting in activity from the mere presence of suffering or of helplessness . . ." (p. 44). She was convinced that an adequate education should not be "disconnected from the ultimate test of the conduct it inspired" (p. 46).

This was to be the philosophy of education that inspired the rest of her career. By 1889 Addams had discovered her true role when she, with her friend Ellen Gates Starr, founded Hull-House in an impoverished section of Chicago that was home to many immigrants. Hull-House was, from its very beginning, dedicated to education. One of its first activities was a nursery school. Addams pursued not only the education of her poor neighbors; an important role of this new institution was the education of the middle-class women who resided within the house. In her influential essay, "The Subjective Necessity for Social Settlements," she argues that the function of social settlements is to extend democracy beyond the political democracy envisioned by the founding fathers into a form of social democracy. Working with the poor, middle-class men and women could connect with the vitality of working people while, at the same time, sharing their knowledge and culture with others. She saw Hull-House as a place "in which young women who had been given over too exclusively to study might restore a balance of activity along traditional lines and learn of life from life itself . . ." (1910, p. 51). Hull-House, like other settlements, was an educational institution that protests "against a restricted view of education."

John Dewey was a trustee and a frequent visitor at Hull-House. He credited conversations with Ad-

dams as highly influential in developing his own philosophy of education. Addams and Dewey shared a vision of education as the basis for producing a democratic community. They also shared a conception of education that went well beyond formal learning in classrooms. Hull-House itself was an educational setting, furnished as a middle-class home, with fine art and fashionable furniture, because Addams believed that in a truly democratic society the poor needed to have access to a setting that enriched the lives of the upper classes. Beyond the setting, Hull-House featured art and literature classes, political discussion groups, plays by Shakespeare and Sophocles, and lectures by prominent intellectuals, including Henry Demarest Lloyd and the radical African-American leader W. E. B. Du Bois.

Agreeing with Dewey and William James, Addams believed that knowledge should not be separated from its consequences. Education's role, therefore, was to provide the knowledge that would improve the life of all of the participants in the community. Unlike the formal education provided by the public schools and the universities, this education would not be abstract and focused on future goals, but would, rather, be an effort to relate to the needs and interests of the participants, both the children and adults who came to Hull-House. Like the university, Hull-House conducted social research but unlike the university, its aim was to use this knowledge for the improvement of community life.

Among the first activities of the new settlement were clubs in which children were organized in groups rather than conventional classes. "The value of these groups," she recalled in her autobiography, "consisted almost entirely in arousing a higher imagination and in giving the children the opportunity which they could not have in the crowded schools, for initiative and for independent social relationships . . ." (p. 63). These clubs provided opportunities for creative activities, absent from the rigid, public schools' curriculum.

Addams was inspired by the idea that education could ameliorate the sharp divisions in the new industrial society. As a way of overcoming the split between immigrant parents and their Americanized offspring, she created the Hull-House Labor Museum in which immigrants were given the opportunity to practice the handicrafts they had learned in their home countries, demonstrating to their children the skills they retained despite the difficulties of acculturation in this strange new society.

Addams's view of education was broad, involving not only the Hull-House neighborhood, but also the larger Chicago community and eventually the world. Although she was not a radical feminist, in her neighborhood she worked to educate the women to extend their traditional duties of maintaining their households and protecting the health of their children to a broader concern for community cleanliness and hygiene. Hull-House inspired a drive, led by the Hull-House Women's Club, to improve the health of the neighborhood by securing better garbage removal and an improved sewage system, an effort that eventually led Addams to an appointment as garbage inspector for the ward.

Addams was less successful when she was appointed to the Chicago School Board in 1905 by reformer Mayor Edward F. Dunne. She was at first identified as an ally of the Chicago Teachers' Federation's dynamic leader, Margaret Haley. She supported the reformers on the board in an effort to improve tax assessments to support public education through higher teacher salaries and the construction of new schools. These efforts alienated powerful business interests and especially the *Chicago Tribune*. But she also isolated herself from the reformers by her willingness to compromise on the controversial issue of removing political influence from the process of teacher promotions. When the other school board reformers were removed by a new mayor, to their dismay, Addams did not resign in protest. Addams' deep belief that she could promote social harmony through dialogue and compromise resulted in a conspicuous failure.

This search for harmony and reconciliation was to meet its biggest challenge when Addams became one of the leading opponents of World War I. Her efforts to induce the combatants to confer instead of continuing to fight and, most important, her efforts to keep her own nation out of the war led to a rapid decline in her reputation and influence. Addams, who had been widely regarded as an American heroine, was reviled and denounced during these years (as were the immigrants she defended).

The rapid decline of Addams' reputation in these difficult years was a severe challenge to her philosophy. Like Dewey, Addams had a deep and abiding faith in reforming society through a new kind of education—an education related to the lives and interests of the people it served. But, as Christopher Lasch has pointed out, “The leap from the school and the settlement to the reform of the social struc-

ture as a whole was a much greater leap than the progressives imagined” (1965b, p. 201).

Addams' efforts to avoid war were integral to her constant vision of building a better, more democratic society by educating people to appreciate their common interests and participating in a broader sense of community, an effort that was more deeply appreciated in the postwar years. In 1931 she was finally awarded the Nobel Peace Prize. Characteristically, she distributed the monetary reward to the Women's International League for Peace and her Hull-House neighbors.

*See also:* DEWEY, JOHN; IMMIGRANT EDUCATION, *subentry on* UNITED STATES; MIGRANTS, EDUCATION OF.

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## ADHD

*See:* ATTENTION DEFICIT HYPERACTIVITY DISORDER.

## ADJUSTMENT TO COLLEGE

Pursuing a college education requires adjustment on the part of all students, though the type and degree of adjustment experienced by each student will vary

depending on background, experience, and prior schooling. Adjustment to college will also vary depending on the size, mission (e.g., research intensive versus teaching intensive), affiliation (e.g., religiously affiliated institutions), and control (e.g., public versus private) of the institution in question. Arthur Chickering and Nancy Schlossberg (1995) point out that students who are leaving high school, attending college full-time, and living on campus tend to experience the most dramatic adjustment. Younger commuter students who are still living at home and maintaining high school friendships will experience slightly less change, and adult students who are attending part-time and are balancing school, work, and family may require the least adjustment.

### Types of Adjustment

Ernest Pascarella and Patrick Terenzini (1991) assert that adjusting to college entails the complementary processes of desocialization and socialization. Desocialization is the changing or discarding of selected values, beliefs, and traits one brings to college in response to the college experience. Socialization is the process of being exposed to and taking on some of the new values, attitudes, beliefs, and perspectives to which one is exposed at college. It is also the process of learning and internalizing the character, culture, and behavioral norms of the institution one is attending. Pascarella and Terenzini describe the transition from high school as a “culture shock involving significant social and psychological relearning in the face of encounters with new ideas, new teachers and friends with quite varied values and beliefs, new freedoms and opportunities, and new academic, personal and social demands” (pp. 58–59). This culture shock is especially acute for those students who do not have siblings or parents who attended college.

Specific types of collegiate adjustment involve changes in roles, relationships, academic demands, and social demands. In addition, some subpopulations of students will face specific adjustment issues depending on the institution in question.

**Roles.** Taking on the new role of college student often brings new challenges and forces adjustment in existing roles, such as those of son/daughter, friend, partner, spouse, and parent. This is especially the case for part-time adult students with full-time jobs and families. Adjustment also involves disengaging from old roles that no longer exist for the student in the collegiate environment, such as athlete (for those not participating in college athletics), or

social leader (a role often lost for students moving from small high schools to large colleges).

**Relationships.** New college students need to adjust to changes in their relationships. Students make new friends and develop new peer groups in college. In fact, students who remain preoccupied with friends from home tend not to adjust well to college. Students often need to renegotiate existing relationships, especially with their parents and family. However, while remaining preoccupied with friends from home detracts from adjustment, students who maintain compatible relationships with their families are more likely to experience success in college. College is often a place where one is more likely to meet people who are different from oneself in terms of ethnicity, race, and socioeconomic status.

Establishing relationships may be a struggle for students who do not fit the institution’s norms, such as students of color (at predominantly white institutions), international students, students with disabilities, adult students, and gay, lesbian, and bisexual students. For these students this situation often results in initial feelings of marginalization and isolation. In college (depending on the particular type of institution), there also are often different types of relationships with faculty than students may have experienced in previous educational settings. On the one hand, students are expected to be independent learners, yet there also exists the possibility of developing intellectual, collaborative, and social relationships with faculty.

**Academic demands.** For most college students, the transition to the college classroom requires an adjustment of academic habits and expectations. They often must study harder, improve their study habits, and take school more seriously. Classes are larger, instructors have differing teaching styles, the pace is faster, written work is more frequent, reading assignments are lengthier, standards are higher, and the competition is more acute. Students need to learn to set and balance priorities, and for commuter and adult students this includes balancing work, home, and school.

**Social demands.** The social environment of college requires adjustment on the part of new college students. Students must learn to balance the many social choices they have with their academic responsibilities. Developing new relationships represents an important element of social adjustment. Other social issues that require adjustment include

negotiating dating in an era of sexually transmitted diseases, homesickness, shifts in daily routines, and the lack of externally imposed structure on their lives.

**Student subpopulations.** There are specific adjustment issues for students of color; women students; gay, lesbian, and bisexual students; students with disabilities; and adult students—and especially for students who are members of more than one of these groups. For example, at predominantly white institutions, students of color (especially those from homogenous living environments) will face attitudes, belief systems, and power structures that often work against people of color. In classes, students of color may be asked to speak for their entire ethnic group on matters of race. Especially acute social adjustment issues for students of color include dealing with depression and stress, managing cross-cultural relationships, and adjusting to the campus racial/cultural climate. Some classroom environments will be experienced by women students as “chilly”; that is, women students may be addressed inappropriately and treated as less competent than male students.

College is the time when many gay, lesbian, and bisexual students choose to come out publicly for the first time. The homophobia and heterosexism they experience will require an enhancement of coping skills. Students with disabilities, depending on the type and severity of their disability, will also face a host of adjustment issues, including perhaps being independent for the first time and finding and establishing support services. Finally, older students may face issues of low confidence, low self-esteem, identity adjustment, and role stress to a more severe degree than traditional-age students.

### Services Available to Assist with Adjustment

American colleges and universities have taken on the responsibility of assisting students with their adjustment to college in multiple ways. Many standard services contribute to the positive adjustment of students, including academic support programs, counseling services, academic and career advising, living-learning centers, residence halls, campus activities, and health and wellness programs. In addition, there are also services specifically designed to aid in adjustment to college, including new student orientation programs, University 101 courses, freshman interest groups and learning communities, developmental/remedial courses, and early warning systems.

**New student orientation programs.** The primary purpose of new student orientation programs is to help students successfully adjust to college. The programs do this by connecting students to the institution, helping them to set and reach goals, and making them successful in the classroom. While new student orientation programs vary in length, scope, purpose, timing, and content, most aim to give students information about facilities, programs, and services and to give them a chance to meet and make connections with faculty, staff, and students.

**University 101.** Freshmen orientation seminars, or University 101, proliferated on college campuses in the 1980s and 1990s. These are often weekly seminars co-instructed by faculty and students. They serve to extend new student orientation activities throughout the first semester or first year.

**Freshmen interest groups.** Freshman interest groups (FIGs) are a form of learning community through which students take a series of linked courses as a cohort group (typically between twenty and thirty students). The courses that make up a FIG are chosen to reflect a general theme and frequently include some type of composition or writing course. There is often a common discussion section for these students led by another student or by one or more of the faculty teaching the courses in the FIG. The faculty work together to coordinate assignments and link and connect specific course subjects across classes. The emphasis in a FIG is on active and collaborative learning. The purpose of the program is to assist students’ academic adjustment by providing a “small college experience” (i.e., the small cohort) while taking courses that often have hundreds of other students.

**Remedial/developmental courses.** These courses are designed to help students who are not fully prepared for the college academic experience. They seek to help students gain the skills they need in order to succeed, and are typically focused in the areas of mathematics, English, and writing.

**Early warning systems.** These systems are designed to identify students who are having difficulty adjusting to the academic and behavioral expectations of college. It is important to identify such adjustment problems early enough in the student’s first semester in order to have some chance for a successful intervention. Examples include providing midterm grade reports early in the semester and having advisers or other staff follow up with all students who fall below

a certain cutoff point in grade point average. Early warning systems can be incorporated into FIGs or academic advising relationships.

*See also:* COLLEGE STUDENT RETENTION; STUDENT ORIENTATION PROGRAMS.

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PATRICK LOVE

**ADMINISTRATION, EDUCATIONAL**

*See:* AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS; EDUCATIONAL LEADERSHIP; NATIONAL ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS; NATIONAL ASSOCIATION OF SCHOOL ADMINISTRATORS; NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS; PRINCIPAL, SCHOOL; SCHOOL BOARD RELATIONS, *subentry on* RELATION OF SCHOOL BOARD TO THE SUPERINTENDENT; SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS; SUPERINTENDENT OF SCHOOLS.

**ADMISSIONS, COLLEGE**

*See:* COLLEGE ADMISSIONS.

**ADOLESCENT PEER CULTURE**

OVERVIEW

Helen Vrailas Bateman

GANGS

Dewey G. Cornell

Daniel C. Murrie

PARENTS' ROLE

Helen Vrailas Bateman

**OVERVIEW**

The view that peers play a central role in adolescence is widely accepted as fact. In the popular image of adolescence, however, adolescent peer groups often play a negative role in adolescent development. Traditionally, the adolescent peer culture of modern society has been perceived as a primarily negative influence, separate from that of adults and often leading to problem behaviors. Alcohol abuse, drug use, truancy, and premarital pregnancy are attributed to a separate youth culture. There are, however,

an increasing number of researchers who object to this negative image of adolescent culture and who argue for a more positive image of adolescent culture in modern society, its unique and important contributions, and its robust relationship with and similarities to adult culture. In the following section, these disparate points of view and the evidence for them are briefly examined.

### What Is Meant by Peer Culture?

The term *peer culture*, as introduced in 1988 by William Corsaro, was derived through Corsaro's study of children in nursery settings and contains the following aspects of social interaction:

1. Children in these settings appear to adhere to and behave according to a set of "social rules" and behavioral routines. If such rules and routines are breached, then comments and negotiations between children follow.
2. Children in these settings share a mutual understanding of actions and norms for procedures. This shared framework of understanding enables children to systematically interpret novel situations.
3. Children in these settings engage in activities that focus on themes that are repeated and that all members of the peer group recognize.

Corsaro also examined the relationship between the social systems shared by children and the culture of adults (namely, teachers and parents). Corsaro suggested that there was a dynamic interchange of elements between the two cultures, with elements that appeared in one culture reappearing in the other. In 1994 Corsaro and Donna Elder discussed how this interchange between cultures is particularly interesting in adolescence, during which the adolescent peer culture, while maintaining its own unique social system, introduces rules and systems that facilitate belonging in the adult society. Other researchers have shared this view of a distinct adolescent peer culture with its own structure. Support for this view of adolescent peer culture comes from a variety of sources.

### Societal Factors Contributing to Adolescent Peer Culture

While contact between adolescents and their peers is a universal characteristic of all cultures, there is a great deal of variability in the nature and the degree of such contact. In American contemporary society, adolescents spend significantly more time with their

peers than with younger children or adults. The pattern of age segregation in American society did not become the norm until the onset of the industrialized society. Changes in the workplace separated children from adults, with adults working and children attending school. The dramatic increase of mothers in the workplace has further contributed to the reduction in the amount of time adolescents spend with adults. School reform efforts during the nineteenth century, which resulted in age-segregated schools and grades, have reduced the amount of time adolescents spend with younger children. Finally, the changes in population are considered a factor that may have contributed to the emergence of adolescent peer culture. From 1955 to 1975, the proportion of the population that was adolescent (between the ages of fifteen and nineteen) increased dramatically, from 11 percent to 20.9 percent. This increase in the number of adolescents might be a contributing factor to the increase in adolescent peer culture both in terms of growth in size as well as in terms of its impact on society's other cultures (adults, younger children).

Research supports the view that adolescents spend a great deal of time with their peers. In 1977 Mihaly Csikszentmihalyi, Reed Larson, and Suzanne Prescott examined adolescent's daily activities and found that they spend more time talking to their friends than engaging in any other activity. In a typical week, high school students will spend twice as much time with their peers as with adults. This gradual withdrawal from adults begins in early adolescence. In sixth grade, adults (excluding parents) account for only 25 percent of adolescent social networks. Another important characteristic of adolescent peer culture is its increasingly autonomous function. While childhood peer groups are conducted under the close supervision of parents, adolescent peer groups typically make an effort to escape adult supervision and usually succeed in doing so. (Note, importantly, that this is in reference to informal peer groups.)

Adolescent peer culture also differs from that of younger-age children in the patterns of relationships between peers. Adolescence is characterized by the emergence of crowds as an important social context of development. This is a departure from the peer culture of younger children, which is defined by dyadic (two-person) and small-group relationships. Another unique characteristic of adolescent peer culture is the increasing contact with peers of the op-

posite sex. Unlike younger children, who adhere to sex-segregated groups, adolescents steadily increase their levels of association with members of the opposite sex. Adolescence is marked by the increased need and ability for intimate relationships both in the form of friendships and in the form of romantic relationships such as dating.

### **Are Peer Relations Necessary for Development?**

The question of the role that peer culture plays in adolescent development has to start with the issue of the necessity of peer relations in human development. Research using monkeys that were reared without peer monkeys showed that growing up peerless resulted in monkeys that were socially disadvantaged and depressed. Studies with humans suggest that lack of harmonious peer relations during adolescence is related to poor mental health later in life. Evidence from follow-back studies of adults consistently supports the view that psychological and educational maladjustment in adulthood is associated with histories of problematic childhood peer relationships. Longitudinal prospective studies also indicate that children who were identified as socially rejected by their peers in fifth grade were twice as likely to be delinquent as adolescents. Researchers found that children who had poor peer relationships at the age of nine were more likely to develop into adolescents who engaged in higher levels of substance abuse, had more conduct problems such as aggression and attentional problems, and committed more delinquent offenses. In 1995 Virginia Burks, Kenneth Dodge, and Joseph Price reported that children who were rejected by their peers in middle childhood had higher rates of depression and loneliness six years later. A large body of research therefore indicates that peer relationships are a very important factor in human development.

### **The Nature of Adolescent Peer Culture**

James Coleman's work on adolescent peer culture was extremely influential in shaping views on modern adolescent culture. In 1961 Coleman suggested that an adolescent subculture had emerged in industrialized societies that was distinct from that of more agrarian cultures (such as the Amish culture). According to Coleman, social and economic forces that encourage age segregation shape the socialization of adolescents in industrialized societies. In a rapidly changing society, parents' skills easily become obsolete. Parents therefore cannot transmit their accu-

mulated knowledge to their children, and hence they have fewer opportunities for direct influence over their children's development. Education takes place in school settings, for longer periods, further reducing the influence that family-centered learning has on adolescents. The period of schooling required in modern societies is becoming lengthier, and even within schools, children are segregated according to age in separate grades. These age-segregation patterns, according to Coleman, precipitate the creation of a separate adolescent culture in which adolescents speak a "language" increasingly different from that of adults. Modern industrialized societies encourage this "separate adolescent culture" by creating specialized marketing that cultivates and targets the adolescents' unique taste in music, clothes, and entertainment.

Such isolation from adults, Coleman claimed, results in the creation of adolescent societal standards and behavioral norms that are far removed from those of adult society. Adolescents look to their peers rather than to their parents and teachers for guidance and approval, thereby diminishing the ability of adults to influence adolescents' development. Coleman suggested that because of the aforementioned conditions, examining adolescent culture within the schools, its compositions and characteristics, is the only way in industrialized societies to understand and influence contemporary adolescents and their development.

Coleman's influential study examined adolescents and their parents in ten schools. Coleman found that on the average high school students are not very interested in academic goals but rather tend to focus more on social and athletic goals. This lack of focus on academic achievement, coupled with the decreased influence that parents and teachers have on adolescents' decision-making processes, led Coleman to declare that the existing school climate and culture was inadequate in addressing adolescent needs in industrialized societies. Coleman suggested that changes in the school culture should include a schoolwide emphasis on scholastic achievement as being the most desired outcome for students (rather than the present emphasis and glorification of athletic accomplishments) as well as an educational system that enables adolescents to become "active" rather than "passive" learners. Coleman argued that by becoming active participants in their learning processes, adolescents can assume roles of responsibility and leadership that are more appropriate to

their developmental needs and are therefore more likely to result in higher levels of engagement in academics and adherence to school norms. High school teachers should encourage creative, hands-on learning activities in high schools and engage in teaching practices that focus on intrinsic rather than on extrinsic motivation.

Subsequent research, for the most part, has supported Coleman's findings of the central role that peer culture plays in adolescent development. Some critics, however, object to the "oversimplification" of peer culture that is depicted by Coleman's work, calling into question his unidimensional description of adolescent culture. Instead, these critics argue that research supports the view that there are multiple adolescent cultures that can be very different from each other. For example, a 1968 study of Canadian adolescents conducted by David Friesen contradicted Coleman's work by finding that most students preferred to be remembered as outstanding scholars rather than as outstanding athletes or as popular students. Other studies suggest that there are significant differences in the importance adolescents place on grades, athletic ability, and appearance based on adolescents' gender and grade level. Critics also suggest that the nature of adolescent peer culture also changes over time, reflecting social, economical, and historical changes in society. Subsequent examination of the proposed lack of influence of parents on adolescent culture has also yielded mixed findings, with some studies suggesting that parental values remain very influential in shaping adolescent behavior such as the patterns of friendships adolescents have with their peers.

### Adolescent Peer Crowds and Cliques

In 1990 Bradford Brown suggested that, rather than having a monolithic approach to adolescent culture that depicts it as primarily "deviant," it is more appropriate to examine and understand the multiplicity of adolescent peer cultures and the factors that influence such variability in values and aspirations.

When examining peer groups, a distinction should be made between cliques (small, highly interactive groups) and crowds (large groups with more emphasis on reputation than on interaction). As noted earlier, peer groups and peer group membership change from childhood to adolescence. Some of the changes already mentioned are that adolescents spend more time interacting with their peers than younger children do, less time interacting with

adults, and more time interacting with opposite-sex peers. Adolescents also seem to gravitate more toward group and crowd membership. Research supports the view of an adolescent culture comprising very different groups and cliques, each with a unique blend of behavioral norms and beliefs. In 1975 Leo Rigsby and Edward McDill proposed categorizing the various crowds along two orthogonal dimensions: the degree to which they are committed to the formal (adult-controlled) reward system of school and the degree to which they are committed to the informal (peer-controlled) status system. In 1998 Margaret Stone and Bradford Brown further developed this categorization axis and found that all adolescent groups could be categorized across the two orthogonal axes of academic engagement and peer status. Within these axes various groups were formed (the "rebels," the "jocks," the "populars," the "normals," the "brains," the "black crowd," and the "wannabe black crowd"). The broad range of crowds had well-differentiated norms, beliefs, and goals and lent support to an image of adolescent culture that is far from monolithic and static. Stone and Brown also cautioned against generalizing their findings across all settings. Cultural and socioeconomic conditions can alter the type of groups that comprise a given adolescent culture.

Reasons for such changes in peer relationships can be attributed to multiple aspects of adolescent development. The need to establish a unique and autonomous identity different from that of one's parents is one of the driving forces behind adolescents' need to reduce their psychological dependency on their parents as well as on other adults. An additional benefit to belonging in various crowds and cliques is the opportunity to explore different value systems and lifestyles in the process of forming one's identity. Adolescents' social-cognitive maturation enables them to seek groups that can meet their emerging social and cognitive needs as well as their emerging values and beliefs.

Biological changes also play an important role in adolescents' need to form relationships with the opposite sex—both friendships and dating relationships. Finding the "right" clique to belong to can provide adolescents with a very much needed emotional and social support that can help them successfully navigate the demands of adolescence. Finding the "wrong" clique, on the other hand, can lead to maladaptive consequences that can include deviant behavioral patterns. The question of the direction of

peer group influence on adolescents, however, is not a simple one. The traditional way of thinking about peer influence is that it is unidirectional and direct; that is, the peer group exerts a direct and overt influence on the adolescent's behavior. Research indicates, however, that the influence is interactional. Adolescents tend to choose peer groups that share their own beliefs and norms. Conversely, peer groups tend to approach like-minded adolescents to join their group. While peer culture tends to influence adolescent behavior, it has become clear that peer culture accounts for only part of the variation in adolescent behavior. For example, adolescents' smoking and alcohol drinking patterns are attributed to peer pressure only 10 to 40 percent of the time. It is also important to note that peer culture influences are not limited to deviant behavior. As discussed above, many peer groups have positive influences on adolescents regarding academic achievement. When adolescents were asked to describe the degree and direction of peer pressure from their friends, the most commonly mentioned and strongest pressure adolescents reported was to stay in school and to finish high school. An interesting aspect of this bidirectional influence between cliques and individuals is the issue of the similarity between participants of adolescent cliques. Research indicates that cliques typically comprise adolescents who are similar in multiple dimensions, such as age, socioeconomic status, and race. Moreover, some research indicates that adolescents can be members of multiple groups and that there are similarities across group boundaries, reinforcing the image of adolescent culture—even within a homogeneous group of adolescents—as a complex system of multiplicity of styles and relationships not unlike adult society.

### Changes in Peer Culture during Adolescence

During adolescence, important changes take place in the structure of the groups and cliques that adolescents belong to. In early adolescence, adolescents tend to form cliques with same-sex individuals. The same-sex cliques evolve into mixed-sex cliques during middle adolescence. Finally, in late adolescence and early adulthood, these cliques gradually give way to dyadic dating relationships. This development parallels the increasing ability and need for intimacy that develops during adolescence. Even the nature and boundaries of the groups and cliques change during adolescence, with the groups becoming less important to adolescents' self-image and less insular

by the end of high school. In 1994 Brown, Mory, and David Kinney presented evidence that outlines the developmental trajectory of adolescent crowds. In middle school, the crowd system consists of only two crowds—the “trendies” (students who have high status) and the “dweebs” (lower-status students). The “dweebs” comprise the majority of the student body. The boundaries of these two middle school crowds are fairly rigid. As adolescents transition to high school a more elaborate social structure that is comprised of many different groups appears, thus enabling the majority of students (who had previously been classified as “dweebs”) to seek membership in groups such as the “normals” or the “punks.” Status differences between the groups are fairly salient during the early years of high school. By the end of high school, however, the boundaries between some of these groups seem to disappear, and status differences seem to diminish. This study illustrates very well the dynamic and changing nature of peer groups and peer culture during adolescence.

### Adolescent Peer Culture and School

Peer acceptance and membership in a clique is an important aspect of becoming an adolescent. Peer crowds and cliques can have a profound influence on how adolescents adjust to a school setting. As noted earlier, adolescents in school settings can become members of various cliques each with unique norms and beliefs. Laurence Steinberg, in his 1996 book *Beyond the Classroom*, reported the alarming results of studies that suggest that in today's schools, less than 5 percent of all students are members of a high-achieving crowd that sets high academic standards. Even more alarming is that in most schools there appears to be a great deal of pressure from the “prevailing” peer culture to underachieve in school. Steinberg reported that one out of six students deliberately hides her intelligence and interest in doing well in class out of the desire to be accepted by her peers. When adolescents were asked which group they would like to belong to, five times as many students selected the “populars” or the “jocks” as selected the “brains.” Moreover, an additional indication that high-achieving students with aspirations to academic excellence are not popular in schools today came from the fact that, when asked, the “brains” were least happy with the group they belonged to (nearly half wished they could be in a different crowd). Longitudinal data confirms the

fact that initial membership in a peer group that is academically oriented is correlated with higher grades, more time spent on homework, and more involvement in extracurricular activities. Beyond significantly lower academic achievement, adolescents whose friends in school were members of a “delinquent” crowd were more likely to exhibit more negative behaviors inside and outside the classroom (including conduct problems and drug and alcohol use).

The strong relationship between a positive and supportive peer culture in school and classroom settings and students’ academic, emotional, and social adjustment is also evident in research that examines students’ sense of belonging and sense of community in a school setting and their academic, social, and emotional adjustment. In 2002 Helen Bateman found that students define a supportive peer community as one that:

1. Shares their values and educational goals.
2. Actively supports their learning needs.
3. Provides a safe and pro-social environment in which adolescents can learn.
4. Values their contributions.

Students with a higher sense of community in the school and classroom have higher grades and higher academic self-esteem. Students with a higher sense of community also display higher levels of learning orientation and greater interest in complex problem-solving tasks. Finally, students with high sense of community also display higher levels of social skills and pro-social behavior.

### Conclusion

It is clear that convergent evidence from many different areas of research suggest that peer culture has a very strong influence on students’ adjustment to school during adolescence. Given the sensitivity of adolescents to peers, the effects of this informal social organization of the school community in crowds and cliques can surpass and counteract the effects of any formal school norms (such as regular attendance, the importance of academic achievement, and proper conduct). The issue of adolescents belonging to “positive” peer communities that encourage academic engagement and pro-social behavior should therefore become a central point of concern for parents and educators during the period of adolescence.

*See also:* PEER RELATIONS AND LEARNING.

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HELEN VRAILAS BATEMAN

## GANGS

Gangs pose a serious problem for many schools. Students at schools with gangs are more than twice as likely to be victims of violent crimes than students at schools without gangs, they report greater access to illegal drugs, and they are four times more likely to report seeing a student with a gun in school. Gangs generate an atmosphere of fear and intimidation that pervades the school environment. Schools with gangs are much more likely to employ security measures such as guards, metal detectors, and locker checks. Gangs are reported by nearly 40 percent of students in U.S. public schools, including 25 percent of students in rural areas and more than 50 percent of students in communities with more than 50,000 residents. Nearly two-thirds of Hispanic students, almost one-half of African-American students, and one-third of white students report gangs in their schools.

What is a *gang*? Definitions vary widely, but usually refer to a self-formed group of individuals who identify themselves by a name and engage in recurrent criminal activity. Gangs typically have recognized leaders, membership requirements and initiation rituals, and an identified territory. Youth gangs contain adolescents, but often also include young adults (persons age eighteen or older). This definition distinguishes youth gangs from other types of groups, such as ideological groups, motorcycle gangs, and organized crime groups, that are primarily adult organizations.

Gangs are not new to the United States, and they have long been associated with unfavorable social and economic conditions experienced by immigrants in urban neighborhoods. Most historians agree that the economic difficulties and sociocultural stresses experienced by immigrant groups of many ethnic backgrounds have generated gang activity. Following a wave of Irish immigration in the 1820s, New York City was plagued by gangs such as the

Bowery Boys, the Dead Rabbits, and the Plug Uglies, who marched brazenly through the streets in distinctive dress and confronted one another in armed combat. Mexican youth formed gangs when their families migrated to the southwestern United States in the early 1800s. More youth gangs followed waves of immigration to major industrial centers during the late 1800s and early 1900s. Many gangs were on the payroll of politicians and union leaders—or worked as junior confederates to organized crime. Frederic Thrasher’s classic 1929 study of youth gangs in Chicago focused on the effects of poverty, immigration status, poor parental supervision, and lack of recreational opportunities among ethnic minorities, including Polish, Italian, Irish, Jewish, and other immigrant groups. Thrasher identified more than 1,300 youth gangs, although his definition emphasized allegiance among members and did not require criminal activity.

According to a national law enforcement survey, there were approximately 28,700 gangs and 780,200 gang members active in the United States in 1998. Gangs increased rapidly during the 1980s and early 1990s. There is considerable research and debate on reasons for the increase in youth gangs; among the most likely factors are the emergence of the crack cocaine market, an influx of Asian and Latin American immigrants who had few employment opportunities, the proliferation of gang federations and alliances, and a sustained, national surge of single-parent households. Gangs are most prevalent in the western United States and least prevalent in the Northeast. Youth gangs are most common in large cities, especially Los Angeles, New York, Chicago, Detroit, and Houston. Ninety-four percent of U.S. cities with populations of more than 100,000 report youth gangs, though gangs are also present in smaller communities. Half of all suburban counties, one-third of all small cities, and one-fifth of rural counties report active youth gangs. Although gang membership declined nationwide from 1996 to 1998, the number of gang members in rural counties increased by 43 percent.

### Gang Characteristics

In his studies of Detroit gang activity in the 1980s, Carl Taylor distinguished three types of gangs. *Scavenger gangs* are informal groups that come together periodically and commit opportunistic, impulsive crimes. They are not well organized, leadership is variable, and the existence of the gang may be short-

lived. In contrast, *territorial gangs* have many of the features commonly associated with gangs: a well-defined territory or turf that they defend from outsiders, membership requirements and initiation rituals, leadership by an individual or core group of members, distinctive dress, and use of symbols or hand signs for covert communication. Taylor used the term *corporate gang* to characterize highly organized and profit-oriented gangs engaged in extensive, well-defined criminal enterprises, such as drug dealing and extortion. Such gangs display a corporate-like structure in the differentiated assignment of roles and responsibilities to members, who may be involved in marketing, sales, or distribution, or in more specifically criminal activities such as enforcement.

Although media accounts sometimes refer to “gang migration” from larger to smaller cities, research suggests that organized migration is rare. When it does occur, it is generally the result of families moving from one city to the next for mundane reasons. In some cases, a youth who moves to a new city may claim membership in a well-known hometown gang in order to bolster his or her status in the new community. Most small-town and rural gangs are homegrown independent groups, and some may take on the name of nationally known gangs in an effort to gain prestige and status. Many gangs are poorly organized and short-lived, and such a gang’s reputation may generate unwarranted public fear and concern.

Although gangs are often referred to as *youth gangs*, law enforcement estimates in 1998 suggested that 60 percent of gang members were adults (over age seventeen). Youth gangs have often been ethnically or racially homogeneous, although during the 1990s more than one-third of gangs were reported to have a racially mixed membership. Nationally, in 1998, 46 percent of gang members were Hispanic, 34 percent were African American, 12 percent were white, and 6 percent were Asian.

Most studies report that fewer than 10 percent of gang members are girls, although some studies have found rates as high as 30 percent, perhaps suggesting a trend toward greater female involvement in gangs. Early studies suggested girls formed auxiliary groups to male gangs, but in the 1990s many gangs had mixed gender membership, and 1 to 2 percent of gangs had more than 50 percent female membership. Gender studies indicate that girl gang members commit more crimes than girls who are

not in gangs, but fewer crimes than boy gang members.

### Gangs and Crime

Gang membership substantially increases a youth’s involvement in criminal activities, even though youths who join gangs tend to be predisposed to delinquency and often have previous arrest records. Youths who join gangs engage in more crime than youths with similar backgrounds, even if those youths do associate with delinquent peers. Association with gang members is linked to greater involvement in delinquent activity than association with delinquent nongang peers.

Gang members commit a disproportionate share of juvenile crime, especially serious crime. In some studies, gang members were found to commit crimes at twice the rate of other arrested youths. Gang crimes vary over time and across gangs, but most frequently involve weapons offenses, drug sales, assault, and auto theft. Shootings, particularly drive-by shootings, are strongly associated with gang conflicts. Violent gang crime is more common in large cities, while gang involvement in breaking and entering and other property crimes is relatively more common in rural and suburban areas.

Although many youths join gangs for protection, studies show that gang membership greatly increases the risk of violent injury or death. Gang members are more likely than other youths to carry concealed weapons, and gang rivalries often lead to violent feuds and turf battles. Informal codes of honor in many gangs demand that members respond aggressively to perceived acts of disrespect so as to protect and bolster their reputation. Acts of aggression often stimulate vengeful counter-attacks, followed by further retaliation in an escalating pattern.

Drug trafficking is commonly associated with gangs, and economic rivalries over drug markets, as well as disputes over drug deals and sales, can lead to violence. Many authorities believe that the development of lucrative crack cocaine markets in the 1980s stimulated the growth of gangs and led to a dramatic increase in violent crimes, particularly firearm-related homicides in large cities. Law enforcement surveys indicate that approximately one-third of youth gangs are specifically organized for drug trafficking, although members of other gangs frequently participate in drug sales in a less systematic

manner. Gang involvement in drug sales is common in rural and suburban areas as well as major cities. Nevertheless, the role of drug sales in homicides has proven to be smaller than expected, with substantial numbers of gang-related homicides associated with interpersonal conflicts and gang disputes over status and territory.

### Why Do Young People Join Gangs?

Historically, sociologists have contended that gang involvement is associated with membership in an underclass—that youths who join gangs tend to be members of racial or ethnic minorities from economically deprived and socially disadvantaged areas. Indeed, young gang members are often poor, minority youth from disorganized neighborhoods. However, membership in the underclass is not a sufficient explanation for gang involvement, since the majority of such youths do not join gangs. Likewise, youths from less disadvantaged backgrounds also join gangs.

Ask a young gang member why he joined a gang, and the most frequent answer will be that his friends are in the gang. Friendship patterns are powerful influences on gang membership, as is the excitement of involvement in delinquent activity. Gangs grow and spread largely through individual contacts between gang members and prospective members. The appeal of belonging to a powerful, seemingly prestigious group is strong in adolescence, and young teens may aspire for acceptance into a group led by older teens and young adults. Many young teens are characterized as gang “wannabes,” and researchers recognize a continuum of gang membership ranging from nonmembers to hardcore members. Although some gangs report lifelong membership, even devoted gang members usually cease active involvement in their gangs during their twenties. Longitudinal studies have found that more than 50 percent of gang members drop out of their gangs within a year of joining.

Gangs are appealing because they offer a sense of identity and social recognition to adolescents who feel marginalized in society and regard their future as bleak or uncertain. Conventional opportunities through education and employment may seem remote or unattainable to minority youth living in impoverished communities. Gangs offer opportunities for excitement, feelings of power and status, and defiance of conventional authority. Gangs also provide a well-defined, reliable peer group for recreation and

affiliation, which is a compelling concern during the teenage years. On a more practical level, gang involvement may provide financial opportunities through drug dealing and other criminal endeavors. In many neighborhoods gang membership offers protection from bullying or assault, and some youths may feel pressured to join a gang simply because they reside within the gang’s territory.

Though it may be tempting to speculate about the psychological profile of a gang member, there is no simple explanation. Gangs offer a variety of roles and opportunities: one youth may aspire to lead others or serve as protector to his or her neighborhood; another may seek financial gain through crime, while still another may be drawn into the pattern of violence and neighborhood warfare that characterizes some gangs.

Family factors such as parental absence or inadequate supervision play a role in some cases, but in other cases parents may encourage gang involvement because of their own history of criminal activity or gang membership. Some large, well-established gangs claim generations of gang members within families. Popular culture may also encourage gang membership by promoting positive images of gangs—such as the Jets and Sharks of the Broadway musical *West Side Story* or movies that glamorize gang feuds similar to that between the Crips and Bloods, gangs that originated in Los Angeles. Many celebrities in music and professional sports proudly display their gang affiliation through tattoos, dress, and gestures.

### Prevention and Intervention

The risk factors for gang membership are generally the same as for delinquency, and gang members are usually delinquent before they join gangs, suggesting that prevention efforts aimed at delinquency are relevant to preventing gang involvement as well. Although several strategies have been found to prevent or reduce general delinquency, programs aimed specifically at gangs have not met with much success. On an individual level, parental supervision and an emphasis on keeping youths from associating with delinquent peers is critically important.

One of the oldest gang prevention strategies attempts to alter the socioenvironmental factors presumed to produce gangs through community interventions such as increased recreational activities, neighborhood improvement campaigns, and

direct assistance to gang members in seeking employment, vocational training, health care, and other services. Despite the best of intentions, however, such programs have not demonstrated evidence of reducing gang activity. On the contrary, some critics have reported that such programs tend to increase gang cohesiveness.

In 1991 the Phoenix Police Department introduced the school-based Gang Resistance Education and Training (GREAT) program, modeled on the Drug Abuse Resistance Education (DARE) program and subsequently supported by the U.S. Bureau of Alcohol, Tobacco, and Firearms. The GREAT curriculum consists of nine weekly lessons taught to middle school students by law enforcement officers. The GREAT curriculum is used in schools in all fifty states, but has not been extensively evaluated. Two studies suggest that the program has modest short-term effects in improving student attitudes and reducing self-reported delinquency, but long-term, rigorously controlled outcome studies are needed.

Some demonstrable success in the war against gangs has come through law enforcement efforts leading to the long-term incarceration of gang leaders. Gang intelligence, intensive investigation, and well-planned prosecution have disrupted, and in some cases eliminated, gangs. However, high-profile, intensive policing efforts to suppress gang activity by saturating a neighborhood with law enforcement officers and generating numerous arrests on minor charges have not been successful.

*See also:* JUVENILE JUSTICE SYSTEM.

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#### PARENTS' ROLE

The pivotal role that parents play in a child's development is undisputed. Researchers have shown that

differences in parenting practices can have profound and lasting effects on all aspects of development—cognitive, social, physical, and emotional. Differences in parenting styles translate to differences in a myriad of outcomes, such as academic achievement, self-esteem, deviant behavior, autonomy, emotional maturity, and leadership ability, to name just a few. It would be safe to say that while poor parenting practices can lead to adolescents who are experiencing multiple problems, good parenting practices can lead to well-adjusted and successful adolescents. But what are the mechanisms through which parents can positively impact adolescent development? And what is the degree to which parents can remain influential in the face of the increasing influence of peers in adolescence?

### Different Types of Parenting Styles

Due to the well-documented importance of parenting practices on children's development, much research has been conducted in the area. In 1978 Diana Baumrind introduced one of the most influential theories of parenting styles. Baumrind suggested that parenting styles can be classified under four general patterns that differ along two dimensions: parental *responsiveness* and parental *demandingness*. Parental responsiveness entails the ability to respond to a child's evolving needs in a warm and flexible manner. Parental demandingness entails the ability to set rules and standards that a child has to respect and follow. Parents who are both demanding and responsive are characterized as *authoritative*. Parents who are demanding and directive but not responsive are characterized as *authoritarian*. Parents who are responsive but not demanding are characterized as *permissive*. Finally, parents who are neither responsive nor demanding are characterized as *rejecting-neglecting*.

The relationship between parenting styles and developmental outcomes has been well documented by Baumrind and many other researchers. Overall, adolescents whose parents are authoritative have the most positive outcomes—namely, higher levels of autonomy, confidence, maturity, social skills, and academic achievement. They are also more able to successfully adapt to life's challenges. Children of authoritarian parents tend to become more timid, less socially competent, and more dependent as they grow up. However, under certain circumstances, such as those of African-American families living in poor, high-crime areas, the authoritarian parenting

style seems to be most beneficial. Children of permissive parents tend to become adolescents that are lacking in maturity, self-discipline, leadership skills, and in the ability to stand up to bad peer influences. Finally, children of rejecting-neglecting parents seem to suffer the most serious problems—namely, poor academic skills, more deviant behavior (including drug and alcohol abuse), and an inability to control impulsive behavior.

Differences in parenting styles translate to different family environments with different family dynamics. Families in which there is an ongoing dialogue, good conflict-resolution practices, mutual respect, and flexibility are families in which adolescents seem to have more positive outcomes. Beyond parenting styles, the modeling of parental behavior inside and outside the family and the type of relationship between the parents is another factor that can influence adolescent development.

### Peer Influence and Parents

During adolescence, peers become increasingly important—adolescents spend more time with their peers than with any other group. Given the important role that peer culture plays in adolescents' lives (primarily in the form of groups and cliques), the degree to which parents can remain influential during this period is, and has been, an issue of scientific inquiry and debate.

Patricia Noller suggests that adolescents who are able to talk to their parents about issues that are important to them and who get emotional support from their parents are less likely to rely on peers for advice on important issues. They are less likely to succumb to peer pressure as it relates to using alcohol and drugs as means of coping with the pressure of adolescence. This leads to the conclusion that adolescents who already have, and can maintain, an open, positive, honest, flexible, and emotionally supportive relationship with their parents are more likely to take their parents' advice under serious consideration, and to better withstand pressure to participate in undesirable behaviors. On the other hand, adolescents that already have problematic relationships with their parents—characterized by lack of communication—are likely to become more dependent on their peers for advice and for emotional support.

Bradford Brown and colleagues suggest that rather than assuming that parental influence will be

reduced during adolescence due to the increasing influence of peer groups and cliques, the specific environmental conditions that might facilitate and/or hamper parental influence should be examined. They report that specific parenting practices are significantly related to specific adolescent behaviors, and that they are also associated with specific patterns of group or clique membership. However, this relationship is mediated (in most cases) by adolescent behavior. Brown and colleagues suggest that it is unlikely that peer groups and cliques are going to counteract parental norms. Adolescents tend to select peer groups that have goals, behavioral patterns, and value norms that are similar to their own (and which parental behavior has helped shape). Parents directly influence adolescents' behaviors and value systems, and thus are able to exercise a significant but indirect effect on peer group and clique influence and membership.

The selection of an appropriate environment (schools and neighborhood) is another way that parents can exert an indirect influence on adolescents' peer affiliations. The composition of cliques and groups, as well as their relative influence, can vary greatly from school to school and from neighborhood to neighborhood. In some high schools, students who aspire academic excellence are ridiculed and isolated from the predominant peer culture in the school, which may value truancy, alcohol and drug use, early sexual activity, and a lack of academic engagement. Conversely, there are schools in which academic excellence is valued by the peer culture.

Parents should try to place their children in schools in which positive peer groups and cliques are influential in the community culture of the school, while avoiding schools in which negative peer groups that advocate deviant behaviors are predominant. The degree to which an adolescent will continue to be influenced by parents is directly related to the type of group or clique he or she belongs to. If the adolescent is a member of groups in which parents and their advice are considered valuable resources, then a parent will continue to be very influential during adolescence. If, however, the adolescent becomes a member of a group that promotes deviant behavior, then the ability of the parents to exert influence on the adolescent's behavior is greatly diminished.

*See also:* PARENTAL INVOLVEMENT IN EDUCATION; PARENTING.

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## ADOPTION

*See:* FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ADOPTION.

## ADULT EDUCATION

*See:* CORPORATE COLLEGES; CONTINUING PROFESSIONAL EDUCATION; DISTANCE LEARNING IN HIGHER EDUCATION; LIFE EXPERIENCE FOR COLLEGE CREDIT; LIFELONG LEARNING; NONTRADITIONAL STUDENTS IN HIGHER EDUCATION.

## ADVANCED PLACEMENT COURSES/EXAMS

Development of the Advanced Placement program came about because of a perceived need to provide

motivated high school students with an opportunity to earn college credit. In 1954 the Educational Testing Service (ETS) was given a contract to develop exams in a group of experimental high schools and to compare the results of the high school students' scores on the exams to those of freshmen in twelve colleges. The resulting favorable comparison gave impetus to an expansion of efforts to further develop additional courses and examinations across the disciplines; this evolved into a program of the College Entrance Examination Board (College Board), with technical aspects of test administration and scoring handled by ETS. Advanced Placement courses are designed to mirror the introductory level college courses offered in the major discipline areas.

The most frequently cited reason for enrollment in AP courses has been the greater rigor and challenge of AP courses compared to traditional high school offerings. Successful candidates also gain the advantage of being allowed to take more advanced courses at the beginning of their college careers and to select more elective courses.

AP courses and examinations, which were initially developed for the highest-achieving 5 percent of high school seniors, were widely available to juniors and seniors (10 to 20 percent of such students in many schools) by the beginning of the twenty-first century, and AP courses in calculus and physics were being taken via computer by students as young as those in eighth grade. In 2000, 768,586 students from 13,253 schools (out of approximately 22,000 high schools nationwide) took 1,272,317 exams. The students had the option of submitting their scores to 3,070 colleges.

Students are not required by the College Board to take an exam if enrolled in an Advanced Placement course. About one-third of students enrolled in the courses take the exam. But individual schools may, and sometimes do, require enrolled students to take the exam. Students may also elect to take an AP exam without enrolling in the course in high school. There is no predetermined number or pattern of courses or exams students must take during their high school careers. Not all high schools offer Advanced Placement courses and some offer only one or two courses. Table 1 lists the Advanced Placement courses and examinations available in 2002.

In addition to creating the examinations used to assess students' mastery of college-level subject matter, the College Board provides schools with course

**TABLE 1**

<b>Advanced Placement courses and examinations</b>	
<b>Art</b>	Art History Studio Art: General Studio Art: Drawing
<b>Computer science</b>	A level (half-year course) B level
<b>Economics</b>	Microeconomics (half-year course) Macroeconomics (half-year course)
<b>English</b>	English Language and Composition English Language and Literature International English Language
<b>French</b>	Language Literature
<b>German</b>	Language
<b>Government and politics</b>	U.S. Government (half-year course) Comparative Government (half-year course)
<b>History</b>	European History U.S. History World History
<b>Latin</b>	Literature Vergil
<b>Mathematics</b>	Calculus AB Calculus BC Statistics (half-year course)
<b>Music</b>	Theory
<b>Psychology</b>	Psychology (half-year course)
<b>Science</b>	Biology Chemistry Environmental Science (half-year course) Physics B Physics C, Electricity and Magnetism (half-year course) Physics C, Mechanical (half-year course)
<b>Spanish</b>	Language Literature

SOURCE: Courtesy of author.

syllabi, including topical outlines and recommended texts. Examinations are developed in consultation with college faculty and high school teachers who are experienced in Advanced Placement teaching.

Grading of AP examinations is done independently by trained examiners. Exam results are assigned a rating with the College Board between 1 and 5. A 3 means the student is qualified to earn college credit and/or advanced placement in “virtually all four year colleges and universities, including the most selective.” A 5 is deemed “extremely well qualified.” The American Council on Education has also recommended, as a general rule, that colleges and universities award credit for grades of 3 or better on AP examinations. The College Board, however, does not assign college credits. Credits are assigned ac-

ording to the policy of the college or university to which the student applies for credit. At a particular college, the required score for credit and/or advanced standing is determined by the faculty of that college and may vary from examination to examination. William Lichten reported in 2000 that even though two-thirds of test takers earn a score of 3 or higher, only 49 percent receive college credit based on Advanced Placement exam scores. Lichten further noted that while a majority of colleges still award credit for scores of 3 or higher, many highly selective colleges and universities require at least a 4, and there is an increased tendency for institutions of higher education to require higher scores in some areas (e.g., English literature, foreign language) than in others. Some colleges do not accept credit for advanced placement courses or success on the exam at all, rejecting the assertion that the AP and college courses are equivalent. Information on the level of success required for earning college credit at a specific college or university based on the results of a particular AP exam is provided by the College Board at its website.

There is no fee for enrolling in Advanced Placement courses, but students must pay a fee to take the examination. Twenty-six states use state funds to support AP programs either through subsidizing exam fees, subsidizing the costs of teacher training, providing funds for materials and supplies for AP courses, offering incentives for providing AP courses or hosting training sessions, encouraging universities to accept AP credit, and encouraging the offering of professional development opportunities. Eighteen of these states provide direct assistance to students by paying for exam fees. The federal government has also provided funds to pay either partial or full examination fees for minority and low-income students, and in some cases individual school systems have taken the initiative to pay for the examination.

According to the College Board, college admissions personnel view AP courses as one indicator of future success at the college level. Participation in AP courses, therefore, is considered an advantage to a student who wishes to attend a highly selective college. The importance of AP programs in the college admissions process has even been the basis underlying a lawsuit filed in 1999 in California claiming bias because fewer Advanced Placement programs are offered in schools with higher percentages of minority and low-income students.

*See also:* CURRICULUM, SCHOOL, *subentry on* OVERVIEW; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS; STANDARDS FOR STUDENT LEARNING.

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## AFFECT AND EMOTIONAL DEVELOPMENT

*Affect* is a general term that encompasses mood and emotions. *Mood* is a feeling state that extends over a protracted period of time and is not about any particular object. An *emotion* is generally considered a transient feeling state that is usually about one particular object. Beyond these generalities, the definition of emotions and their development depends on whether one takes a functional perspective, a process viewpoint, or considers emotions to be discrete biophysiological states.

### Functionalist Perspectives

From a functionalist perspective, an emotion entails a readiness to adjust one's relationship to the environment with respect to something that is of importance to the person. The adjustment can be one of maintenance or change. Hence, this approach emphasizes the idea that emotions function to focus action that achieves personal goals. In doing so, emotions exert bidirectional influences on cognitive processing, social interaction, and physical experience. In addition, emotions play an important role in the emergence of self-awareness, because the interest and excitement that infants display when interacting with novel objects helps them develop a sense of self-efficacy. Within the functionalist approach, development entails the progressive ability to regulate emotions according to the demands of the physical and social worlds. In addition, children are socialized into knowing the appropriateness of different emotional displays in the culture in which they grow up. Concurrent to this, development also increases the range of responses that a person is able to mount to environmental changes, resulting in the emergence of families of emotions with differing nuances, which are centered on the commonly recognized emotions, such as joy, sadness, shame, and pride. Each family of emotions provides a range of behavior-regulatory, social-regulatory, and internal-regulatory functions for the person as well as action tendencies that match situational demands. Although functional theorists include many components in the generation of particular families of emotions—for example, concerns, cognitive appraisals, bodily reactions, and action tendencies—they emphasize that these components are organized around functional significances for the person. These theorists would also be careful to differentiate between different nuances of a particular emotion, such as discriminating between the fear of being robbed and the fear of dying from cancer, although these nuances may belong to the same emotion family. Hence, according to functional theorists, emotional processes are evoked with reference to motives and concerns of the developing person and as such undergo quantitative and qualitative change in development.

### Emotions as Discrete States

From this perspective, emotions are viewed as patterns of configurations in the brain, accompanied by particular neurochemical processes that result in

subjectively experienced feeling states, which are accompanied by automatic changes in bodily function as well as changes in behavior. These nonreducible affective states are taken to be distinguishable from each other, giving rise to the distinct basic emotions of happiness, interest, surprise, fear, anger, sadness, and disgust. Evidence for such a position is accumulating more from a cognitive neuroscience direction, which emphasizes the central circuitry of different emotional states, than from a search for unique configurations of autonomic nervous system arousal in peripheral bodily processes. Thus, the amygdala has been found to be important in the experience of fear and the left prefrontal cortex is associated with positive emotions while the right prefrontal cortex seems to be implicated in negative affect and withdrawal. In accordance with the assumption that the basic emotions are innate to all humans, discrete-state theorists posit a maturational timetable for their emergence, which can be observed through the initial occurrences of their expression in infants: Happiness, interest, sadness, and anger emerge from the first weeks to the fourth month of life, while fear begins to emerge only between the seventh and ninth months. In addition, the discrete-state view assumes the evolutionarily adaptive functionality of the basic emotions, that is, their provision of adaptive value for the organism. For example, happiness would motivate repeated encounters with a particular situation, interest would motivate exploratory behavior, and fear would motivate avoidant responses. Because they are deemed nonreducible states, these basic emotions do not undergo transformation in development. Development mainly entails the formation of links between emotion and cognition so that affective-cognitive structures are fashioned according to learning in new situations. In this way, new emotional experiences that are dependent on cognition can emerge, for example shame and pride, although these are not defined as new emotions but rather new couplings between thought and emotion. In addition, cognitive development will also give rise to new abilities to understand and self-regulate the basic emotions.

### Process Viewpoints

Although neither disclaiming the functional utility of emotions nor their grounding in feeling states, process views of the emotions and emotional development focus on how the different components that make up an emotional experience interact in order

for the subjective sense of the emotion to emerge. *Process viewpoints* are also known as systems perspectives, and their defining feature is that they do not privilege any one component of the emotional process, instead focusing on how emotions emerge from the self-organizing tendencies of interacting components. These components include felt experiences, cognitive appraisals, motivations, functions, and control elements. The number of ways in which these interacting components can coalesce to give rise to an emotional experience is assumed to be infinitely large. On the other hand, normal developmental trajectories result in a finite number of stable emotional patterns that are called *attractors*. It is these attractors that are commonly recognized and labeled with the terms that have become familiar, such as happiness, anger, surprise, and disgust. However, the infinite possibilities of combinations allow for infinitely different nuances of particular emotions to emerge as well as leaving open the possibility that new emotions may arise. Development in this type of paradigm allows for an open system of transformations, which can include both qualitative and quantitative change. From a dynamic systems perspective, cognitive and emotional systems continuously interact throughout development, giving rise to emotional interpretations that are similar to the affective-cognitive structures proposed by the discrete-state theorists. These emotional interpretations are situation specific, complex, and provide the bases of the self and personality. Examples include anxiety, pride, and humiliation. In common with functionalist and discrete-state theorists, systems theorists maintain that emotions serve adaptive functions for the person, especially in social contexts.

### Emotional Milestones

No matter to which paradigm one subscribes, there have been research findings that document emotional milestones in expressiveness and understanding that are generally agreed on, although individual differences exist. Right from birth until about six months of age, infants display signs that indicate the presence of all the basic emotions. In this period the social smile and laughter appear, the infant appears happier when interacting with familiar people, and emotional expressions are related to social events. In terms of understanding, the infant seems to come into the world already able to be receptive to the subjective states in other people, being able to match

the feeling tone of caregivers in face-to-face communication. Between seven and twelve months, negative emotions such as fear and anger become more prominent in parallel to an increasing fear of strangers. Concurrently, the infant begins to use the primary caregiver as a secure base for exploration while becoming more able to self-regulate his or her emotions. In this period social referencing develops, that is, the infant checks the emotional display/reaction of the caregiver to obtain guidance on how to act. In the second year of life, the self-conscious emotions (including pride, shame, guilt, envy, and embarrassment) emerge. In tandem, empathy with others' emotions begins to be displayed while an understanding of the difference between one's own and another person's emotions appears, a sort of emotional decentration. As cognitive development accelerates between the ages of three and six, the child also develops increasing linkages between cognition and emotion, which give rise to better emotional self-regulation, to the extent that a positive emotional display can be achieved without a concomitant positive feeling state. The increasing affective-cognitive links also foster a better understanding and interpretation of the emotional displays of others. After age six until about age eleven, emotional development involves the integration of the self-conscious emotions with a developing moral code, emotional self-regulation becomes more internalized and situation specific, and the ability to conform to the rules of emotional display improves. Emotional understanding also expands to take in multiple sources of information when interpreting the emotions of others and the realization that emotional displays may be deceptive. Naturally, further development is a lifetime affair.

### Emotions and Learning

There is recent evidence to show that emotional understanding in children relates positively to adaptive social behavior and negatively to measures of internalizing behavior that may index feelings of anxiety, depression, and loneliness. Furthermore, emotion knowledge has also been found to mediate the effect of verbal ability on academic competence. The ability to detect and react to emotion cues seems to be important to the maintenance of rapport between teachers and peers in school. This would encourage closer and more effective educational interchanges with teachers as well as guard against the morale decrements that accompany poor relations with peers.

*See also:* AGGRESSIVE BEHAVIOR; MORAL DEVELOPMENT; INTELLIGENCE, *subentry on* EMOTIONAL INTELLIGENCE; STRESS AND DEPRESSION.

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## AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION

Affirmative action is a government policy that seeks to remedy long-standing discrimination directed at

specific groups, including women and racial and ethnic minorities. The basic purpose of affirmative action policies and programs is to increase access to, and ensure the equitable distribution of, opportunities in higher education, employment, government contracts, housing, and other social-welfare areas. To this end, affirmative action provides regulations, procedures, and guidelines to assure that eligible and interested citizens receive equal consideration regardless of their race, ethnicity, gender, religion, or age. Affirmative action does not fully restrict all forms of discrimination or make them illegal. Rather, it attempts to redress historical inequities by providing traditionally underrepresented groups with more equal access to most public and private arenas. This access is regarded as "more equal" since it attempts to address years of inequities and inequalities within a short amount of time.

The civil rights innovations outlined in the U.S. Constitution were not available to all of the inhabitants of the new nation. Prior to 1865, most African Americans were slaves, and they were considered property and counted for census purposes as three-fifths of a person. For the most part, Native Americans received no consideration at all. Women, although counted as full persons in census data, had very few rights. In spite of a variety of legal and social changes, these groups continued to suffer blatant discrimination well into the second half of the twentieth century.

The Fourteenth Amendment to the Constitution provides the legal basis for affirmative action policies. Added to the Constitution in 1868, this amendment extends legal protection to all U.S. citizens. Specifically, the equal protection clause of the Fourteenth Amendment asserts that, "No state shall . . . deny to any person within its jurisdiction, the equal protection of laws." Although the language is clear, this legislation was infrequently enforced.

It was not until the Supreme Court ruled in the case of *Brown v. Board of Education* (1954) that the notion of equal protection received serious national consideration. Specifically citing the Fourteenth Amendment, the Court held that racial segregation in elementary and secondary education is unconstitutional because it promotes an unequal educational system. Following this ruling, President John F. Kennedy issued Executive Order 10925 in 1961, which asked federal contractors to adopt diversity programs in an effort to help end segregation. (This

order provides the legal foundation for affirmative action programs.)

In the spirit of the equal protection clause, the Civil Rights Act of 1964 bans discrimination on the basis of race, color, religion, sex, or national origin. To ensure compliance, federal funds are denied to those institutions that violate this mandate. More specifically, Title VII of the Civil Rights Act of 1964 states that:

It shall be an unlawful employment practice for an employer (1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin; or (2) to limit, segregate, or classify his employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual's race, color, religion, sex, or national origin.

### Compliance

To ensure compliance, the federal government established the Office of Federal Contract Compliance Programs (OFCCP) and the Equal Employment Opportunity Commission (EEOC). Established in 1965 under Executive Order 11246, the OFCCP reviews, monitors, and enforces an institution's affirmative action plan. The OFCCP posits that each employment agency is responsible for designing an "acceptable" affirmative action program, which "must include an analysis of areas within which the contractor is deficient in the utilization of minority groups . . . and further, goals and timetables to which the contractor's good faith efforts must be directed to correct the deficiencies, and thus to achieve prompt and full utilization of minorities . . . at all levels and in all segments of its work force where deficiencies exist" (41 C.F.R. Sec. 60-2.10).

Similar to the OFCCP, the EEOC also helps to enforce antidiscrimination laws and regulations. Created by Title VII of the Civil Rights Act of 1964, the EEOC also enforces other related legislation, including the Equal Pay Act of 1963, the Age Discrimination in Employment Act of 1967, and Title I of the Americans with Disabilities Act of 1990. The EEOC

investigates discrimination charges filed by individuals. If an employer is in violation, the EEOC first attempts to bring about voluntary resolution. If this fails, the EEOC may choose to file suit against the employer in federal court. At the conclusion of such a case, the EEOC issues a "notice of the right to sue," which allows an individual to file an additional suit in federal court.

To comply with affirmative action regulations, most colleges and universities reformed their admissions and hiring practices. Throughout the 1970s, higher education institutions established affirmative action programs and antidiscrimination policies designed to increase the number of women and minority students and faculty members in all fields and disciplines. These activities included actively encouraging women and minorities to apply for faculty and administrative positions, aggressively recruiting students from traditionally underrepresented groups, and offering support programs to help at-risk students succeed. Even so, affirmative action programs did not resolve all of the discrimination problems affecting higher education. Instead, it became one of them. In fact, white women received the greatest benefit from these programs, and many people questioned the constitutionality of affirmative action.

### Court Cases Affecting Affirmative Action

Since the late 1970s, several cases have challenged the constitutionality and legality of affirmative action mandates. The earliest and most influential of these cases was *Bakke v. Regents of the University of California* (1978). Alan Bakke, a white male who was twice denied admission to the University of California–Davis Medical School, charged the institution with practicing reverse discrimination because it reserved certain positions for disadvantaged students. In this case, the Supreme Court held that it is lawful to consider race or ethnicity as one factor in making admission decisions. The opinion also supported the goal of striving to create a diverse student body. At the same time, the Court also stated that the use of racial distinctions is highly suspect and requires meticulous judicial review. Regarding University of California–Davis Medical School's specific program, the Court rejected it as unlawful because it used a fixed quota, or set-asides, in order to attain diverse enrollment.

Rather than settle the constitutional debate surrounding affirmative action, the *Bakke* decision made it more muddled and confused. In this ruling,

the Supreme Court seemed to support the goal of affirmative action programs, while simultaneously making most of them illegal. In *Wygant v. Jackson Board of Education* (1986), the Court further limited an institution's ability to act on affirmative action legislation by developing the *strict scrutiny* test. Seeming to clarify the *Bakke* decision, *Wygant* required that the use of racial classification both support a compelling interest of state and be narrowly tailored to satisfy that particular interest. The Court's ruling in this case also stated that historic social discrimination was not by itself a compelling reason for an affirmative action policy, and that a public employer should only enact such a policy if it is indeed needed.

In the cases of *Kirwan v. Podberesky* (1994) and *Hopwood v. State of Texas* (1994 and 1996), U.S. circuit courts applied the Supreme Court decisions in *Bakke* and *Wygant*. In *Kirwan*, the U. S. Court of Appeals for the Fourth District ruled that a scholarship program for African-American students at the University of Maryland did not serve a compelling state interest, and therefore failed the strict scrutiny test. In 1994, the U.S. District Court of Appeals for the Fifth Circuit held that the University of Texas School of Law's admission policy of accepting less qualified minority applicants was unlawful because it was a quota system. In 1996, this same court also held that the equal protection clause of the Fourteenth Amendment did not permit the University of Texas to establish admissions policies that gave preferential treatment to one race over another.

As a result of the 1996 *Hopwood* decision, many people have concluded that affirmative action programs are unconstitutional, and many states have begun to rethink their use of affirmative action programs. Most notably, in 1996, California voters approved a law banning the use of such programs in state and local agencies, including the state's public colleges and universities. Yet, because many states are not bound to follow the Fifth Circuit's 1996 decision, the national debate over affirmative action continues.

The confusion the Supreme Court created in the *Bakke* decision continues to make it difficult for lower courts to rule on issues related to affirmative action programs. In 2000, the state of Michigan became a battle site for this debate. Highlighting the two-faced approach used by the Supreme Court in its *Bakke* ruling, the cases of *Gratz v. Bollinger* (2000) and *Grutter v. Bollinger* (2001) first upheld, and then

rejected the use of affirmative action programs in college admissions. In the *Gratz* case, the U.S. District Court for the Eastern District of Michigan, South Division ruled that the University of Michigan College of Literature, Science and Arts' consideration of race as a factor in its admission of undergraduate students was both a lawful and "narrowly tailored" way of achieving diversity in its student population. However, in the *Grutter* case, the same court ruled that the University of Michigan Law School's use of race in its admission decisions violated both the Fourteenth Amendment and Title VI of the Civil Rights Act of 1964, and was therefore unconstitutional.

The Supreme Court has yet to hear either case involving the University of Michigan. And as of March 2002, the Court has thus far refused to hear a case challenging the validity of California Proposition 209. Until these cases are heard the future of affirmative action programs and policies remains unknown.

### **Timeline of Affirmative Action Legislative and Judicial Developments**

- 1787** U.S. Constitution is drafted, including Article I, Section 2, which counts each African-American slave as three-fifths of a person.
- 1862** The Morrill Act establishes sixteen higher education institutions specifically dedicated to the education of African Americans.
- 1863** The Emancipation Proclamation is issued, ending slavery in the Confederate States.
- 1865** The Thirteenth Amendment is added to the U.S. Constitution, abolishing slavery throughout the nation.
- 1868** The Fourteenth Amendment is added to the U.S. Constitution, guaranteeing equal protection under the law.
- 1870** The Fifteenth Amendment is added to the U.S. Constitution, extending the right to vote to all male citizens.
- 1896** In *Plessy v. Ferguson*, the U.S. Supreme Court establishes the doctrine of "separate but equal," helping to promote segregationist laws and policies.
- 1948** President Harry S. Truman issues Executive Order 9981, which ends segregation in the U.S. Armed Forces.

- 1948** In *Sipuel v. Board of Regents*, the Supreme Court orders the University of Oklahoma to admit an African-American law student because the state does not provide a separate law school for African Americans.
- 1950** In *McLaurin v. Oklahoma State Regents*, the Supreme Court rules that it is unconstitutional for an African-American student to be physically segregated from other students because of his race.
- 1950** In *Sweatt v. Painter*, the Supreme Court rules that the state of Texas's newly established law school for African Americans does not provide separate but equal facilities. As such, it cannot deny the petitioner the right to attend the University of Texas Law School.
- 1954** The Supreme Court reverses its doctrine of separate but equal established in *Plessy v. Ferguson*. In *Brown v. Board of Education*, the Court holds that state laws mandating or permitting segregation are unconstitutional under the equal protection clause of the Fourteenth Amendment.
- 1964** The Civil Rights Act of 1964 is passed. This legislation includes Title VI, which prohibits public and private institutions receiving public funds from discriminating on the basis of "race, color, religion, sex, or national origin," and Title VII, which provides for the establishment of the Equal Employment Opportunity Commission (EEOC).
- 1965** President Lyndon B. Johnson issues Executive Order 11246, requiring organizations that receive federal contracts of \$50,000 or more and have fifty or more employees to develop affirmative action plans. The Office of Federal Contract Compliance Programs (OFCCP) is developed to monitor compliance with these regulations.
- 1967** President Lyndon B. Johnson issues Executive Order 11375, which amends and extends Executive Order 11246 to include women.
- 1972** Title IX of the Education Amendments of 1972 is passed, prohibiting gender-based discrimination in the programs and employment practices of federally funded organizations.
- 1978** In *Bakke v. Regents of the University of California*, the U.S. Supreme Court rules that University of California–Davis Medical School's special admissions program is unlawful.
- 1981** In *DeRonde v. Regents of the University*, the Supreme Court of California rules that the affirmative action plan in place at the University of California–Davis Law School violates of the equal protection clause of the Fourteenth Amendment.
- 1986** In *Wygant v. Jackson Board of Education*, the U.S. Supreme Court holds that the school board's plan to consider race in laying off teachers violates the equal protection clause of the Fourteenth Amendment. In this case the Court also established the *strict scrutiny* test.
- 1992** The U.S. Department of Education and the University of California, Berkeley establish an agreement ending the admissions practice of placing applicants into separate pools on the basis of race.
- 1994** In *Kirwan v. Podberesky*, the U.S. Circuit Court of Appeals for the Fourth Circuit holds that the University of Maryland's Banneker Scholarship Program unlawfully violates the equal protection clause of the Fourteenth Amendment.
- 1994** In *Hopwood v. State of Texas*, the U.S. District Court for the Western District of Texas holds that the admissions policy of the University of Texas School of Law established an unlawful quota system.
- 1996** The U.S. Circuit Court of Appeals for the Fifth Circuit holds that the equal protection clause of the Fourteenth Amendment does not permit an institution to establish preferential, race-based admissions policies. The Fifth Circuit also rules that the University of Texas Law School may no longer consider race in its admissions decisions.
- 1996** California Proposition 209, also known as the California Civil Rights Initiative, is voted into law, eliminating the use of affirmative action programs throughout state and local agencies, including public colleges and universities.

**2000** In *Gratz v. Bollinger*, the U.S. District Court for the Eastern District of Michigan, Southern Division rules that the University of Michigan College of Literature, Science and Arts' use of race in its admissions decisions is a lawful and "narrowly tailored" way of achieving diversity.

**2001** In *Grutter v. Bollinger*, the U.S. District Court for the Eastern District of Michigan, Southern Division holds that the University of Michigan Law School's use of race in its admissions decisions is unconstitutional, stating that the university's policies violate both the equal protection clause of the Fourteenth Amendment and Title VI of the Civil Rights Act of 1964. The court also rules that diversity is neither a "compelling interest" of the state nor a remedy for past discrimination.

Since the *Bakke* decision, some public and private entities have either chosen or been forced to abandon affirmative action programs. Rather than resolve issues surrounding the validity of these programs, this decision has actually caused more controversy. The legal challenges that resulted from the Supreme Court's ambiguous decision in this case suggest that the Court will soon be expected to make a final determination regarding the constitutionality of these programs.

*See also:* FACULTY DIVERSITY; MULTICULTURALISM IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE, *subentries on* CULTURAL EXPECTATIONS AND STUDENT LEARNING, RACIAL AND ETHNIC MINORITY STUDENTS IN HIGHER EDUCATION.

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## AFRICAN-AMERICAN STUDENTS

*See:* AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; AFRICAN-AMERICAN STUDIES; HISTORICALLY BLACK COLLEGES AND UNIVERSITIES; INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; LITERACY AND CULTURE; MISSISSIPPI FREEDOM SCHOOLS; MULTICULTURAL EDUCATION; MULTICULTURALISM IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE.

## AFRICAN-AMERICAN STUDIES

African-American studies (also known as black studies) is an inter/multidisciplinary field that analyzes and treats the past and present culture, achievements, characteristics, and issues of people of African descent in North America, the diaspora, and Africa. The field challenges the sociohistorical and cultural content and definition of western ideology. African-American studies argues for a multicultural interpretation of the Western Hemisphere rather than a Eurocentric one. It has its earliest roots in history, sociology, literature, and the arts. The field's most important concepts, methods, and findings to date are situated within these disciplines.

More than one hundred and fifty years after the signing of the Emancipation Proclamation, African Americans still struggle for a space in academia for a legitimate voice to express their interpretations and perspectives of their historical and contemporary experiences in Africa, the diaspora, and North America. Those in African-American studies argue not only that their voices have been marginalized, but that the history of African Americans' experi-

ences and contributions to the United States has historically and systematically been missing from the texts and the curricula. Thus, African-American studies functions as a supplementary academic component for the sole purpose of adding the African experience to traditional disciplines.

Implicit to African-American studies is the notion that the black diasporic experience has been ignored or has not been accurately portrayed in academia or popular culture. From the earliest period of the field to the present, this movement has had two main objective: first, to counteract the effects of white racism in the area of group elevation; and second, to generate a stronger sense of black identity and community as a way of multiplying the group's leverage in the liberation struggle.

### The Foundations of African-American Studies

The Atlanta University Conferences held from 1898 to 1914, under the auspices of W. E. B. DuBois, marked the inauguration of the first scientific study of the conditions of black people that covered important aspects of life (e.g., health, homes, the question of organization, economic development, higher education, common schools, artisans, the church, crime, and suffrage). It was during this period that African-American studies was formally introduced to the university and black academics initiated research studies.

One of the important goals of the scholars of this period was to counteract the negative images and representations of blacks that were institutionalized within academia and society. This was in response to the major tenet of social science research at this time that argued blacks were genetically inferior to whites and that Africa was a "dark continent" that lacked civilization. The American Negro Academy, founded in 1896, set as one of its major goals to assist, by publications, the vindication of the race from vicious assaults in all areas of learning and truth. In 1899 DuBois published a sociological study, *The Philadelphia Negro*. This landmark study highlighted the conditions of blacks in Philadelphia in the Seventh Ward. The study investigated the black experience as reflected in business, public education, religion, voluntary associations, and public health.

In 1915 the founding of the Association for the Study of Negro Life and History (ASNLH) by Carter G. Woodson marked the beginning of a new era in African-American studies. The ASNLH was founded

to promote historical research; publish books on black life and history; promote the study of blacks through clubs and schools; and bring harmony between the races by interpreting the one to the other. In 1916, Woodson founded the *Journal of Negro History* and served as its editor until his death. This was perhaps one of Woodson's greatest contributions to the area of African-American studies.

In 1926 Woodson and his colleagues launched Negro History Week. This event, which later evolved into a whole month, was not intended to be the only time of the year in which Negro history was to be celebrated and taught. Woodson and his colleagues viewed this as a time to highlight the ongoing study of black history that was to take place throughout the year.

It was during this time that historically black colleges and universities (HBCUs) began to respond to the scholarly activities in history and social science. It was becoming clear that black education should conform to the social conditions of black people. Black colleges began to add courses in black history to their curricula; this corresponded with the call by black college students for a culturally relevant curriculum, a theme that reoccurred later with greater political influence.

In 1919, prior to the influx of HBCUs offering black history courses as a part of their curriculum, Woodson issued the first report on African-American studies courses offered in Northern colleges. He reported the following courses:

1. Ohio State University, *Slavery Struggles in the United States*
2. Nebraska University, *The Negro Problem Under Slavery and Freedom*
3. Stanford University, *Immigration and the Race Problem*
4. University of Oklahoma, *Modern Race Problems*
5. University of Missouri, *The Negro in America*
6. University of Chicago, *The Negro in America*
7. University of Minnesota, *The American Negro*
8. Harvard University, *American Population Problems: Immigration and the Negro*

Furthermore, Woodson reported that a small number of HBCUs were offering courses in sociology and history pertaining to the Negro experience. Woodson stated that in spite of the lack of trained teachers,

Tuskegee, Atlanta University, Fisk, Wilberforce, and Howard offered such courses, even at the risk of their becoming expressions of opinions without the necessary data to support them.

The period from approximately 1940 to the mid to late 1960s marked yet another era of African-American studies in history and the social sciences, characterized by an growing legitimacy and an increasing number of white scholars entering the field. Prior to this time, black scholars did the majority of the research conducted on African-American studies.

### **The Emergence of African-American Studies Departments**

The student strike of 1968–1969, held at San Francisco State University (SFSU), forced the establishment of the Division of Ethnic Studies and departments of Black, Asian, Chicano, and Native Studies. The Black Student Union at SFSU drafted a political statement, “The Justification for African-American Studies,” that would become the main document for developing African-American studies departments at more than sixty universities. The demands/objectives within this document included the opposition of the “liberal-fascist” ideology that was rampant on campus (as shown by college administrations who had attempted to pacify Black Student Union demands for systemic curriculum by offering one or two courses in black history and literature); the preparation of black students for direct participation in the struggles of the black community and to define themselves as responsible to and for the future successes of that community; the reinforcement of the position that black people in Africa and the diaspora have the right to democratic rights, self-determination, and liberation; and opposition to the dominant ideology of capitalism, world imperialism and white supremacy. During this period, Nathan Hare and Jimmy Garrett collaborated to put together the first African-American studies program in the country.

African-American studies departments were created in a confrontational environment on American universities with the rejection of traditional curricula content. The curriculum preferred by these departments was to be an ordered arrangement of courses that progressed from introductory to advanced levels. Darlene Clark Hine (1990) contends that a sound African-American studies curriculum must include courses in African-American history,

literature, and literary criticism. These courses would be complemented by other courses that spoke to the black experience in sociology, political science, psychology, and economics. Furthermore, if resources would permit, courses in art, music, language, and on other geographical areas of the African diaspora should be available.

Mainstream university support for African-American studies emerged in the late 1960s. This was done in conjunction with the protests of the civil rights movement, the Black Power movement, and the admission of a massive influx of black students into predominantly white institutions. The preconditions for the growth of African-American studies were demographic, social, and political. Between 1945 and 1965, more than three million blacks left the South and migrated to northeast, north central and western states. The black freedom movement, in both the civil rights phase (1955–1965) and Black Power component (1966–1975), fostered the racial desegregation and the empowerment of black people within previously all-white institutions. The racial composition of U.S. colleges changed dramatically. In 1950 approximately 75,000 blacks were enrolled in colleges and universities. In the 1960s three quarters of all black students attended HBCUs. By 1970, approximately 700,000 blacks were enrolled in college, three quarters of whom were in predominantly white institutions.

### **Organization and Objectives**

One must be careful not to use African-American studies programs, departments, and centers interchangeably; they are not synonymous. According to Hine, African-American studies departments are best described as a separate, autonomous unit possessing exclusive rights and privileges to hire and terminate, grant tenure to their faculty, certify students, confer degrees, and administer a budget. Programs may offer majors and minors, but rarely do they confer degrees. Furthermore, faculty appointments in programs are usually joint, adjunct, or associate positions. Centers, on the other hand, focus more on the production and dissemination of scholarship and the professional development of teachers and scholars in the field than on undergraduate teaching. The difference in the structure and mission between centers, departments, and programs tend to complicate the attempt to assess and identify African-American studies accurately.

TABLE 1

**Basic objectives of African-American studies**

- To teach what is called the black experience in its historical and current unfolding.
- To assemble and create a body of knowledge that contributes to intellectual and political emancipation.
- To create a body of black intellectuals who are dedicated to community service and development rather than vulgar careerism.
- To advocate the cultivation, maintenance, and continuous expansion of a mutually beneficial relationship between the campus and the community.
- To establish African-American studies as a legitimate, respected, and permanent discipline.

SOURCE: Based on Karenga, Maulana. 1993. *Introduction to Black Studies*, 2nd edition. Los Angeles: University of Sankore Press. Pages 13–15.

However, Maulana Karenga outlines several objectives that African-American studies seeks to achieve. These basic goals are listed in Table 1.

These objectives have served as the backdrop for the discipline since its evolution in the 1970s. However, the discipline has been under great scrutiny and has been challenged by many academics about its objectives and its relevance. Karenga argues that there are fundamental and undeniable grounds of relevance of African-American studies that clearly define the field's academic and social contributions and purpose. These are outlined in Table 2.

From 1968 to 1971, hundreds of African-American studies departments and programs were developed. Approximately 500 colleges and universities provided full scale African-American studies programs by 1971. Up to 1,300 institutions offered at least one course in African-American studies as of 1974. Some estimates place the number of African-American studies programs reaching its peak at 800 in the early 1970s and declining to about 375, due to the lack of resources and support, by the mid-1990s.

African-American studies has been evolving as a result of a radical social movement opposed to institutional racism in U.S. higher education. Considering the conventional roles of American education and its institutionalized racism, African Americans in many sectors view education as oppressive and/or liberating. In result, many African Americans began to consider African-American studies and black education as having a special assignment to challenge

white mainstream knowledge for its deficiencies and corruption.

The development of African-American studies from the very outset was marked by blacks being compelled to evaluate the largely racist nature of established education in America. Due to European cultural hegemony, blacks and Africans in the diaspora have found the issue of perspective to be perennially problematic. The disastrous experience of chattel slavery, the basis for cultural hegemony, produced historical discontinuity and preempted normative culture building through a decentering process. Although the experience of oppression and exploitation required movement away from an African center, it was this experience that produced the conditions for the emergence of an African-centered consciousness. Thus, the problem of perspective emerged as the black intellectual tradition.

*See also:* ACADEMIC MAJOR, THE; MULTICULTURALISM IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE, *subentry on* CULTURAL EXPECTATIONS AND STUDENT LEARNING; WOMEN'S STUDIES.

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## AFTER-SCHOOL JOBS

See: EMPLOYMENT, *subentry on* AFTER SCHOOL.

## AFTER-SCHOOL PROGRAMS

See: RECREATION PROGRAMS IN THE SCHOOLS; STUDENT ACTIVITIES.

**TABLE 2**

### Relevance of African-American studies

African-American studies contributes to:

- Humanity's understanding of self.
- U.S. society's understanding of itself.
- The university's realization of its claim and challenge to teach the whole truth, or something as close to it as humanly possible.
- The rescue and reconstruction of black history and humanity.
- A new social science and humanities which will not only benefit blacks, but also the United States and the world.
- The development of a black intelligentsia and professional stratum whose knowledge, social competence, and commitment translates as a vital contribution to the liberation and development of the black community and thus as a contribution to society as a whole.
- The critique, resistance, and reversal of a progressive Europeanization of human consciousness and culture.

SOURCE: Based on Karenga, Maulana. 1993. *Introduction to Black Studies*, 2nd edition. Los Angeles: University of Sankore Press.

## AGGRESSIVE BEHAVIOR

Educational and psychological research conducted from the 1960s to the 1990s has established that academic underachievement in the elementary school years is associated with the failure to make adequate educational progress in adolescence and young adulthood. This research also demonstrates that in itself early problems with underachievement may not be the main cause of later-occurring educational problems. Rather, severely disruptive social behavior in early childhood, particularly aggression, has been implicated as a primary cause of both early and later-occurring academic underachievement, the need for special education, and problems with truancy and school dropout. With aggressive and disruptive behaviors showing sharp increases during the last three decades of the twentieth century and prevalence rates of elementary schoolchildren suffering from these behavior disorders estimated at about 20 percent in the 1990s, the negative impact of aggressive/disruptive behavior on children's educational progress has become a serious concern for American society. Accordingly, the purpose here is to review recent findings on the nature and causes of these behavior problems and their relation to children's failure to make educational progress, and to examine promising information regarding preventive measures and treatments.

### **Aggression and Related Behavior Problems: The Disruptive Behavior Disorders**

Narrowly defined, the aggressive child is one who purposely harms others either physically (e.g., fighting) or socially (e.g., spreading malicious rumors). Though this seems a straightforward definition, it does not adequately describe the great majority of aggressive children who are sometimes aggressive but who are more often oppositional (refusing to comply with adult requests), hyperactive, or inattentive. It is now known that this broader range of behavior problems provides a more reliable description of children who experience educational problems throughout their school careers. In fact very few children show severe forms of aggression, oppositionality, hyperactivity, or inattention alone. The great majority show some combination. An important outgrowth of this is that these children are diagnosed by psychologists, psychiatrists, and pediatricians as suffering from one or more of the disruptive behavior disorders, that is, attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), or, when older, conduct disorder (CD). Thus, these children are best described as suffering from some form of a disruptive behavior disorder (also called externalizing, acting out, or emotionally disturbed disorder) rather than focusing more narrowly on aggression alone.

### **Impact of Disruptive Behavior on Educational Progress**

There are three types of studies used to assess whether or not a particular aspect of children's lives—in this case disruptive behavior—has a negative impact on children's educational progress: (1) concurrent, correlational studies (also called observational studies) that document the co-occurrence of both disruptive behavior and various forms of academic failure; (2) longitudinal, correlational studies that document academic problems at a later time (poor achievement, placement in special education, truancy, etc.) based on disruptive behaviors occurring at an earlier time; and (3) experiments (also called clinical trials) in which disruptive behavior is allowed to develop in a control group but is decreased in a treatment group (usually by replacement with positive behaviors), and it is later observed that the treatment group experiences educational success but the control group does not.

Experiments can be evaluated after a short or long follow-up period after treatment. Given that

the study of children's social and academic development requires a long-term perspective, only long-term outcomes (follow-ups of at least three months) are considered here. There are two types of experiments: *prevention* trials begun in early childhood for children at risk of developing disruptive behavior but before symptoms have appeared and *intervention* trials begun after children have become symptomatic (i.e., have received a diagnosis of ADHD, ODD, CD, or are classified as severely behaviorally or emotionally disturbed). There are two types of preventions, those focusing exclusively on children and those focusing on children and their parents. There are also two types of interventions, those using medications such as methylphenidate (Ritalin) and those using educational and behavioral means to decrease disruptive behaviors. Because it most clearly establishes that the disruptive behavior targeted for prevention is an actual cause of academic problems and not just a co-occurring problem, by far the most important of these study types is the prevention experiment.

Concurrent and longitudinal correlational studies have clearly established a relation between early occurring disruptive behavior and both early and later-occurring school problems. However, child-focused intervention experiments using both behavioral/educational and medication treatments aimed at replacing disruptive behaviors with cooperative and attentive behaviors have not demonstrated positive educational gains for children. Nor have child-focused prevention experiments had good results. Realizing that the exclusion of parents in these experiments could explain their failure to demonstrate a causal role for disruptive behaviors in children's educational problems, family-based experiments have also been conducted. These studies, both intervention and prevention trials, have been successful, providing evidence that children's disruptive behavior does interfere with children's academic progress. They also provide a useful basis for planning large-scale preventive and interventive efforts.

### **Successful Prevention and Intervention**

In a 1998 paper, Steven McFadyen-Ketchum and Kenneth Dodge reviewed eight long-term, family-based experimental studies (four preventions and four interventions), which successfully decreased children's disruptive behavior and produced improved educational outcomes. In all of these studies

disruptive behavior was reduced, and cooperative attentive behavior was increased for periods ranging from one to fourteen years. Educational gains included higher grades, higher achievement scores, higher IQ scores, improved use of expressive language, decreased participation in special education, and decreased truancy and dropout rates. It is important to emphasize that these gains occurred only when parents as well as children were participants in the prevention and intervention programs. This means that in addition to replacing disruptive behavior with more cooperative/attentive behavior in children, it was also necessary to replace negative (e.g., nagging) and ineffective (e.g., failing to set clear limits) behaviors in parents with behaviors that were firm and friendly as well as with a parental willingness to consistently attend to children's cooperative efforts instead of taking them for granted.

### Contribution to Theory

It has long been known that children's cognitive and intellectual deficits interfere with early academic achievement and long-term educational success. The studies discussed here clearly identify an additional source of dysfunction that also seriously interferes with educational progress: aggression and other forms of disruptive social behavior. These studies also clearly demonstrate that preventive/interventive efforts can be successfully applied to these behavior problems with positive educational results. In addition, they achieve a third, though less obvious, goal, that is the clarification of theory regarding the causes of children's disruptive behavior disorders.

As mentioned above, prevention and intervention experiments whose goal was to decrease disruptive behavior in children, but without also addressing the contribution of parents, consistently failed to show positive gains in treatment when compared with control groups of children. In contrast, those experiments that included parents consistently succeeded. Children in these successful treatment groups showed both behavioral and educational gains compared to control-group children. The clear implication is that in addition to whatever genetic or other environmental factors may be at work (e.g., lead poisoning), the parents' support of their children's positive behavioral efforts is necessary if children are to experience educational success. Because some of these experiments were preventions conducted before disruptive behavior problems had developed, these findings demonstrate that positive

parental behavior toward young children plays a causal role in children's behavioral and educational success.

These findings may appear to be in sharp contrast to the often-reported finding that genetics play a primary causal role in the kinds of behavioral and educational problems being discussed here, especially for children diagnosed with ADHD. What these findings demonstrate, and what has also been argued by geneticists who study childhood behavior problems, is that genes are not destiny. Children can be helped to perform well in school if it is recognized that their parents play a causal role in producing cooperative, attentive behavior, and are included in the educational process.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; CLASSROOM MANAGEMENT; STRESS AND DEPRESSION.

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STEVEN A. MCFADYEN-KETCHUM

## AGRICULTURAL EDUCATION

Agricultural education encompasses the study of applied sciences (e.g., biology, chemistry, physics), and business management principles. One of the major purposes of agricultural education is to apply the knowledge and skills learned in several different disciplines to agricultural education.

Agricultural education goes beyond knowledge and skills development in that students are able to develop an understanding of: 1) the significance of agriculture in a global society, and the U.S. society in particular, through the application of scientific and business principles and problem solving strategies; and 2) the interdependency and relationships between the agricultural industry and other significant business interwoven with the entire economic and social structure of the community, state, nation, and world. This program places an emphasis on food systems, environmental issues, and development of life skills.

The study of agricultural education focuses on the needs of individuals and groups and in developing individually satisfying and socially responsible knowledge, skills, and occupational values. Such a focus recognizes the value of, and relies heavily on, experiences as the context in which knowledge and skills are learned.

Agricultural education focuses on, but is not limited to, study in horticulture, forestry, conservation, natural resources, agricultural products and processing, production of food and fiber, aquaculture and other agricultural products, mechanics, sales and service, economics, marketing, and leadership development. Of relevance to a general audience (K-adult), agricultural education programs assist with providing lifelong learning opportunities in and about agriculture. Agricultural education provides opportunities to learn basic agricultural skills and knowledge, occupation training and retraining, and professional growth and development.

Formal programs in agricultural education are conducted at secondary schools, community colleges, and universities. As a vocational education program, agricultural education focuses on three major components: formal classroom instruction, career experience programs, and leadership development. These components are delivered through a competency-based curriculum in the context of agriculture.

Agricultural education is an old and well-established area of study in the United States. The Philadelphia Society for Promoting Agriculture, one of the first organizations in the United States designed to deal with agricultural education, was founded in 1780. R. F. Johnstone, writing in 1854, attributed many early American ideas about agricultural practices and agricultural education to the British:

One of the first efforts made to arouse the minds of farmers of this country . . . was that of the . . . men who organized the New York State Agricultural Society in 1835. Those men had observed the good effects of the Royal Agricultural Society of England and resolved to awaken in their own State and country a spirit of inquiry similar to that which had been aroused by their English prototype. (16)

### **Early Congressional Efforts**

In 1862 citizens and politicians throughout the United States joined forces to further advance the lives of farmers and rural people through the creation of the land-grant college system, enacted as part of the Morrill Act. According to Kandel, "the major thrust of Morrill's arguments in 1857 and 1862 was to deplore the decline of American agriculture due to a

lack of scientific knowledge. [Morrill] said, ‘that this bill would lift up the intellectual and moral standard of the young and industrial classes of our country’”(Moreland and Goldenstein, p. 117).

Morrill also claimed that it was wrong to call the proposed colleges *agricultural colleges*, since he was interested in a broad education. Clearly, philosophical debates were already taking place over just what the role of education should be. According to Moreland and Goldenstein, there was “great debate whether their chief purpose was to provide vocational education only or a liberal education combined with some vocational applications” (p. 120).

The original plan of the land-grant colleges was to have young people who grew up on farms attend the colleges. This did not work as well as expected, however, so other programs were developed. The first of these was the establishment of agricultural experiment stations by the Hatch Act of 1887. The second was the creation of the state extension services by the Smith-Lever Act of 1914. The third was the creation of vocational agriculture programs for high schools, which were eventually funded through the Smith-Hughes Act of 1917.

The National Society for the Promotion of Industrial Education, formed in 1906, was instrumental in stimulating the states to pass vocational training acts. The philosophy of this and similar societies was to create “incentive aid,” which encouraged local school boards to establish vocational education programs while maintaining local control. In 1907 President Theodore Roosevelt observed, “We of the United States must develop a system under which each citizen shall be trained so as to be effective individually as an economic unit and fit to be organized with his fellows so that he and they can work in efficient fashion together” (Soretire, p. 18). Clearly, Roosevelt saw vocational education as both an economic necessity and as a socializing process.

**Smith-Hughes Act of 1917.** The culmination of the actions by these different organizations and state agencies was the passage of the Smith-Hughes Act of 1917. The purposes of this act were:

- To provide for the promotion of vocational education.
- To provide for cooperation with the states in the promotion of vocational education in agriculture and industry.
- To provide for cooperation with the states in the preparation of teachers of vocational subjects.

- To appropriate money and regulate its expenditure.

According to the Smith-Hughes Act, the main purpose of vocational education was to make young people fit for employment on the farm or in the farm home. The bill also stated that all secondary schools with agricultural education needed to provide directed or supervised practice in agriculture.

The Smith-Hughes Act allocated federal funds to the states for the purpose of agricultural education. These funds were to be matched by state and local funds, and were to be used for the training and salaries of teachers, supervisors, and directors of agriculture, and for programs in home economics, agricultural economics, and industrial subjects. The act also provided for a Federal Board for Vocational Education. To receive these monies, each state had to submit a plan detailing how they would spend it.

The act also required that all students were to participate in a work experience focusing on livestock and crop projects outside of the regular school day. This was certainly not a new idea. Rousseau and Pestalozzi had advocated supervised educational practice in Europe as early as the eighteenth century. More recently this practice has been discussed by Froebel, Dewey, Warmbrod, Lamar, and others.

Not all educators, however, agreed that vocational agriculture education was a good use of money, and there was both public and political debate regarding the value of vocational agricultural education. In fact, the balance between purely academic and vocational education remains a continuing debate.

The National Vocational Education Act, passed in 1963, broadened the scope of the original Smith-Hughes Act by adding flexibility, providing for career counseling and employment training, expanding the age groups covered, and providing for the needs of people with special educational needs. The objectives of this new act were:

1. To develop agricultural competencies needed by individuals engaged in or preparing to engage in production agriculture.
2. To develop agricultural competencies needed by individuals engaged in or preparing to engage in agricultural occupations other than production agriculture.
3. To develop an understanding of, and appreciation for, career opportunities in

agriculture and the preparation needed to enter and progress in agricultural occupations.

4. To develop the ability to secure satisfactory placement and advance in an agricultural occupation through a program of continuing education.
5. To develop those abilities in human relations that are essential in agricultural occupations.
6. To develop the abilities needed to exercise and follow effective leadership in carrying out occupational, social, and civic responsibilities.

It is difficult to get a precise sense of what philosophy was at the root of these various Congressional acts. The role that the federal government played seems to have been one of providing money for the training of farmers and farm wives in practical skills, and for training teachers in agricultural and home economics education. Little mention was made of socializing skills until the later congressional acts. To gain a deeper understanding of exactly what the philosophy of agricultural education was during those times, writings of a different sort must be examined, specifically, writings by people involved directly, as educators, with agricultural education.

### **An Early Philosophy of Agricultural Education**

At its onset agricultural education was part of a broad-based approach to rural education. The idea of making rural improvement a national issue was brought before President Roosevelt in 1906. As a result, the Country Life Commission was appointed in August 1908. The commission listed several factors that negatively affected rural families. Chief among them was the need for education.

As early as 1906 the importance of relevant education was being discussed, as was the idea of rural-life development. For example, Liberty Hyde Bailey began his book *The Training of Farmers* (1909) with the lines: "The so-called rural problem is one of the great public questions of the day. It is the problem of how to develop a rural civilization that is permanently satisfying and worthy of the best desires" (p. 3). In the preface to Aretas Nolan's *The Teaching of Agriculture* (1918), an author named Davenport wrote "That measure [success] is found in the performance of those who actually go to the land, live there, and succeed; for, after all, the fundamental purpose of our great system of agricultural education is to insure a better agriculture and make a country life as nearly perfect as possible" (p. vii).

Bailey was fairly articulate about the role of education. He believed that education should "assist the farmer to rely on himself and to be resourceful, and to encourage him to work with other farmers for the purpose of increasing the profitableness of farming and of developing a good social life in rural communities." Further, "all citizenship must rest ultimately on occupation, for all good citizens must be workers of one kind or another." A good citizen "must be actively interested in the public welfare, and be willing to put himself under the guidance of a good local leader" (Bailey, pp. 10–12).

According to Bailey, proper education is needed for this to happen; education, which must start at the elementary level. He felt that education began "with the child's world and not with the teacher's world, and we must use the common objects, phenomena and activities as means of education." Thus, "agriculture becomes a means of education" (p. 150).

Nolan, writing nine years after Bailey, added that the aims of vocational agricultural education should be to give the student "preparation for wholesome and successful farming and country life" (p. 2), as well as the skills needed to be a successful farmer. He also explained that agricultural education should be part of a larger educational picture that would produce "an educated country gentleman who works with his hands and gathers about him all the best things which civilization afford."

Good education depends on good teaching, which depends, in turn, on good teachers. The well-educated vocational agricultural teacher, according to Nolan, must be a thorough scientist and a technically trained agriculturalist. He should also have studied rural sociology, agricultural economics, public speaking and "other work to liberalize his general training" (p. 163), as well as having a thorough understanding of educational principles, psychology, and management. This is because the teacher's "influence and activities extend outside of the school to the rural life of the community" (p. 163).

Nolan devoted an entire chapter of his book to nature study, because it was his belief that studying nature in the field teaches observation and helps students understand the conservation of natural resources. Nolan believed the teaching of agriculture must result in the wise use and conservation of these natural resources.

However Theodore Eaton's *Vocational Education in Farming Occupations: The Part of the Public*

*High School* (1923) showed that the philosophy of agricultural education was beginning to change. Eaton agreed on the importance of “a philosophy of social purpose in organization, and an organization contributing to the achievement of that purpose” (p. 7), but his approach was a little more sophisticated than that of his predecessors. For example, his book includes a discussion of socialism versus democracy. He also connects Bailey’s idea of environment and conservation to John Dewey’s environment ideal, writing that the “environment is, perhaps, as Dewey tells us, best defined as consisting in those situations which affect the conduct, thoughts, emotions and attitudes of men” (p. 31–32).

Eaton goes on to outline four general purposes for education: (1) the adjustment of the individual to his environment, (2) social efficiency, (3) self-realization, and (4) individual growth. He believed that there were three fundamental principles that governed education. These were: (1) education is modification—all education consists in changes in the mode of action, thought, and feelings of human beings; (2) the business of the educator is the making of stimulus-response bonds in the “educand” (student)—the main problem for the educator is deciding which bonds the student should make; and (3) education is about being able to transfer newly acquired skills.

Philosophically, Eaton saw education in a dualistic and hierarchical manner. This view reflected the philosophy of Watson, Thorndike, and the other behaviorists. He thus defined education as “the formal process of interaction between the conscious and purposeful manipulator of environment, the ‘educator,’ at one pole, and the conscious, but so far as the aim of education is concerned, not purposeful ‘educand’ at the other pole” (p. 45).

By the time of Eaton’s writing in 1923, the philosophy of agricultural education was becoming complex, drawing elements from several different sources. The importance of socialization was carried over from earlier times, and a humanistic focus on the development of the individual was also stressed. Elements from Dewey’s pragmatic education theory were included, such as the ideas of education as change and transfer. Finally, aspects of behavioral theory were being added, which stressed the dualistic and hierarchic nature of education.

Eaton also discussed the importance of both supervised work on farms and supervised employment

in agricultural education. In his discussion Eaton claimed that supervised work needed to be complemented with classroom work that was balanced between academic and vocational classes.

From the above writings, one can begin to get a sense of the philosophy of the founders of agricultural education. Farm settlers were an individualistic lot, separated by significant distances and bad roads. But the nation was growing, and agricultural production needed to catch up with the rest of the country. For this to happen, the infrastructure of rural life needed to be improved, along with agricultural production methods. A change in philosophy was beginning at this time, as the writings of Thorndike and the early behaviorists began to influence the psychology of education.

### **Agricultural Education from the 1930s to the 1970s**

Agricultural education during the first third of the twentieth century was, for the most part, seated in the humanistic and pragmatic philosophy of John Dewey. It was therefore focused on training men and women in the practical skills needed to run a successful farm, on the development of a more proficient agriculture system, and on the development of rural communities. During the second third of the century, more emphasis was placed on the *science* of education, as educators came more under the influence of the positivistic philosophy that arose during that time and held sway as the predominant philosophy in mainstream education until the 1960s.

Glen Cook, for example, writing in 1936, continued the emphasis on both classroom work and supervised farm experience. He claimed that the ultimate purpose of agricultural education was to “train the individual to think in order that he may solve the problems, both social and economic, which he may meet, and to prepare him for complete living” (p. 13). He then added to that list the “worthy use of leisure time” and ethical character.

R. M. Stewart, in his 1938 essay “Teacher Education,” explained that more emphasis was being placed on developing better teachers. He felt that “the newer trends of teacher education today tend rather to relate themselves to the more specific practices of teachers and to the improvement of their programs” (p. 56). He maintained, however, that the local farms “constitute the natural educational settings in which problems of farming are discerned

and attacked” (p. 57). As such, he supported on-farm experience.

What became important within the institutions of teacher training was the improvement of the teacher education programs themselves. An important aspect of this improvement was the development of job placement for the graduates, for those graduating from production agricultural programs knew they would have jobs. In order to attract good people, teacher training programs needed to be able to do the same.

Another area of importance was the development of effective and up-to-date teaching materials. According to Stewart, “A forward-looking program of agricultural education always involves recognition of changing social and economic needs, and of the contributions of scientific and technical knowledge to the new problems arising” (p. 57). Farmer training originally involved teaching “scientific agriculture,” or the practice of applying scientific principles to agricultural problems. Then came technical science teaching, then social and economic training. From these came the “professional” aspects of agriculture. As a profession, Stewart explained, specific materials had to be developed, sorted, and evaluated in order to train teachers. What was needed were “more and better materials and methods and more focusing of attention upon what is to be done in the education of the people on the land” (p. 58).

Stewart also emphasized the importance of supervised training: “Supervised participation is rapidly becoming the core of agricultural education. . . . If the best way to learn is by doing, then the principle holds as true of the student teacher as of the student farmer. This places directed observation and directed teaching—under supervision—as the *central emphasis* on the professional side of a teacher’s preparation. The prospective teacher must have *representative experiences*, which include such things as administration, getting to know the people of the community, supervising pupil’s farming programs, and making commercial contracts” (p. 58).

In his 1940 essay Omer Aderhold echoes the philosophy of John Dewey, writing that “the schools, like the nation, are in need of a central purpose which will verify and guide all intellectual plans” (p. 2). To Aderhold, a nation’s education system must contribute to the “ends of the society in which it lives.” This means that education should be ground-

ed in democratic action, which requires an understanding, by the population at large, of the problems faced by the citizens.

Aderhold claimed that the major objectives of education should be to promote reflective thinking for the individual and to promote group living on an intelligent basis of cooperation for the group. This could be accomplished at both the individual and group levels, by encouraging the use of the scientific method of thought, that is, by drawing inferences and formulating hypotheses about problems, by testing those inferences, and then drawing sound conclusions. In this way vocational education could help farmers attain a higher standard of living.

During the 1940s and 1950s agricultural education maintained its status quo. The nation’s economy was doing well, the country was growing in status and power, and agriculture was becoming more efficient and effective as a result of agricultural chemical and mechanical advances. Farmers were entering the middle class and moving into the economic mainstream. Agricultural educators acted to support the scientific revolution, while at the same time keeping their own profession basically unchanged.

In a 1966 essay Robert Warmbrod and Lloyd Phipps summarized changes in the focus of agricultural education from its inception until the 1960s. They explained that, prior to 1917, agriculture was taught as an informational or general education subject. Following Smith-Hughes, there was an increase in the number of classes focusing on vocational agricultural and a reduction of classes oriented towards general education. This trend reflected the objectives of federal financial assistance.

Herbert Hamlin believed that this “specialization” led to an “over-simplification of public school education,” while Phipps claimed that the curricula needed to be expanded and that more emphasis needed to be placed on preparation for employment in agriculture-related industries. He also argued for occupational guidance and job counseling. A survey by the Research Committee of the Southern Region also found strong support for training to help people be good citizens, intelligent consumers, and efficient producers.

According to Warmbrod and Phipps the general public saw agricultural education as being of a vocational nature only. Experts in the field disagreed however, and believed that was too strict a defini-

tion. In addition, Warmbrod and Phipps stated that agricultural education should include training not only in vocational agriculture, but in those skills needed to be successful in any occupation, including preparation for advanced education.

In 1963 Congress passed the Vocational Training Act of 1963, which provided funding “for vocational education in any occupation involving knowledge and skills in agricultural subjects” (Warmbrod and Phipps, p. 7).

### Philosophical Writings after 1970

Since the 1970s agricultural educators have attempted to more directly define the philosophy of agricultural education. For example, Phipps claimed that agricultural educators are pragmatists; emphasize learning by doing; emphasize individual self-awareness, work-awareness, and career decision-making; believe in the importance of leadership and citizenship development; learn how to work with people who are disadvantaged and handicapped; advocate the use of problem solving as a way of encouraging thinking; and believe in community and community service.

A. Kahler and colleagues also set about defining the philosophy of agricultural education for *Project 2000*. They listed three functions of agricultural and agribusiness education: (1) educating individuals for employment in the fields of agriculture and agribusiness, (2) avocational agricultural course work, and (3) issues having to do with the “food crisis.” The authors went on to explain that agricultural education is based on decision making through problem solving; is centered on experience; addresses both individual and community needs; is related to resource management; and perceives agriculture as an integrated part of a dynamic world system.

This provides some insight into how agricultural educators see their world, which is, in the spirit of Dewey, as a place that is both experiential and that requires consciousness for problem solving. It is, therefore, neither a realist-based philosophy, nor a strictly empirical one. It retains the humanist’s view of the importance of the individual learner, but also points towards the importance of community at both the human and social level, as well as the environmental level. And finally, it is similar to a post-positivist philosophy in its recognition of diversity and process.

In a 1978 article G. M. Love compared agricultural education and general education. He described

agricultural educators as being pragmatists and experientially oriented. Metaphysically, agricultural educators see the world analytically and prescriptively. Furthermore, they believe that the “real” world is that which can be experienced with the senses. Meaning is not predetermined, it is determined by the individual within the context of his or her experiences and that of his or her community. Therefore, learning to solve current, life-like problems is the best way to equip a person to effectively solve problems in the future.

Epistemologically, agricultural educators believe that both knowledge and truth stem from empirical investigation. They also believe that both of these are temporary. A high value is placed on self-activity, association, and effect. For this reason vocational agriculture makes use of both work experiences and activities in student organizations. In addition, the improvement of social behavior through participation in the democratic process is an important aspect in the philosophy of agricultural education.

Educationally, agricultural educators see themselves as research project directors and their students as discoverers. Love wrote that teachers in agricultural education regard students as experience organisms who deserve individual attention and who work in a “life-oriented environment.” Thus, a flexible curricula is needed.

Love explained however, that while agricultural education is based on a realist philosophy, reality is based on the individual’s relationship to a larger community, and is therefore relativistic (and changeable).

Philosophically, agricultural educators see education as a process of problem solving. As teachers, agricultural educators see students as *experience organisms* and believe education is hierarchical, in that they see themselves as directors and their students as discoverers. Axiologically, therefore, they value their own experiences over those of their students. It is their job to direct the student towards that particular vision, which often includes the concept of democracy. In other words, although education is about discovery, it is a prescribed discovery, with political overtones.

Another recent attempt to articulate a philosophy for agricultural education was the one done by the National Summit on Agricultural Education. In 1989 agricultural educators at the university, community college, and secondary school levels held a

series of meetings to again look at where agricultural education is and where it needs to go. In their mission statement, this group explained that the mission of agricultural education was to provide a total dynamic educational system, to aspire to excellence, to serve people, and to inform the public about agriculture's needs, opportunities, and challenges. In attempting to accomplish this, the consortium listed the following objectives:

- To provide instruction in and about agriculture.
- To serve all populations.
- To develop the whole person.
- To respond to the needs of the market place.
- To advocate free enterprise.
- To function as a part of the total education system.
- To utilize a proven educational process, one which includes formal instruction, experiential learning, leadership, and personal development.

This list, while not really philosophical in nature, does suggest a view that is somewhat different than Love's. Specifically, its emphasis on the whole person suggests a move away from viewing the learner simply as a "sense organism," and away from a strict empirical view of reality. Also, by including all populations, the marketplace, and free enterprise, it takes a more overt political stand than did Love.

Agricultural education has had to change to meet the changing demands of its clientele. R. Kirby Barrick listed several points that he claimed were essential for a true discipline of agricultural education, including that it must be based on sound theory. Barrick understood that agricultural education has to look deeper into both theory and philosophy. Philosophically, this again suggests a movement away from a realist and empirically grounded philosophy.

To David Williams the discipline of agricultural education is only as strong as its means for verifying existing knowledge, for creating new knowledge, and for disseminating and applying that knowledge. This is done through research, which "must be the strongest component of a discipline, serving as a foundation for teaching and extension" (Williams, p. 5). Williams found several weaknesses in agricultural education research, including that it is often piecemeal (i.e., not cumulative); that it lacks a sound theoretical framework; and that it lacks depth.

Finally, according to R. A. Martin (1991), agricultural education is based on three critical compo-

nents: technical agriculture, experiential learning, and human development. For Martin the purpose of teaching agricultural knowledge and skills is to prepare students to be able to use that knowledge and those skills in meaningful ways in their lives. He claimed that one of the best ways of ensuring student understanding is through the use of experiential learning, both in and out of school. More importantly, according to Martin, "the heart and soul of the program is the student" (p. 21–22). As such, agricultural education is committed to the growth of the individual student in all three learning domains. But more importantly, from a philosophical basis, he points to a move away from a strictly empirical philosophy, and toward one which was both humanistic and idealistic.

### Current Status

Even though the philosophy of agricultural education has not continually been developing, principles that form the foundation for agricultural education have not changed. These principles are: providing up-to-date technical skills and knowledge in agriculture; conducting experiential learning activities in the real world or agricultural careers; and involving students in leadership and personal development activities at the local, state, and national levels.

In the early twenty-first century, there are more than 8,000 secondary school agricultural programs across the United States. More than 500,000 students are involved in these programs focused on career educational in agriculture.

Over the years the curriculum has changed dramatically. The original curricular focus was on production agriculture (farming). The expansion of careers in other areas of the agriculture industry (horticulture, food science, products and processing, biotechnology, entrepreneurship, forestry, and natural resources) has had a significant impact on the curriculum. The enrollment of students in these programs continues to grow.

Beyond the secondary school agriculture programs, community colleges and universities provide excellent opportunities for students to specialize and gain skills and knowledge in agriculture. University programs in agricultural education focus on teaching and learning processes that prepare students for professional positions in education, agri-industry, and public service agencies.

The future of agriculture education is bright. Although less than 2 percent of the U.S. population is involved in production agriculture, the food, fiber, and natural resource system requires the services of people well educated in the agricultural sciences. These people need experiential learning and personal leadership development training in the context of agriculture. Agricultural education programs can provide the education and training needed to serve the needs of the vast industry called agriculture.

*See also:* SECONDARY EDUCATION; VOCATIONAL AND TECHNICAL EDUCATION; YOUTH ORGANIZATIONS, *subentry on* NATIONAL FUTURE FARMERS OF AMERICA.

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## AIDS

See: RISK BEHAVIORS, *subentry on* HIV/AIDS AND ITS IMPACT ON ADOLESCENTS.

### ALBERTY, H. B. (1890–1971)

Harold Bernard Alberty, professor of education at The Ohio State University, was a pioneer in the field of curriculum. Born in Lockport, New York, Alberty attended rural schools in northeastern Ohio. In 1912 he graduated from Baldwin University (now Baldwin-Wallace College) in Berea, Ohio. He began teaching the eighth grade during his senior year of college. In 1913 he graduated from Cleveland Law School and was admitted to the Ohio bar. Alberty was promised a position in the law firm of one of his teachers, but that teacher died suddenly. Alberty was unable to find another position in law and continued to teach. He found teaching fascinating and promotions came quickly. Although still determined to practice law, Alberty realized he needed additional education in school administration and entered graduate school at the Ohio State University in the summer of 1920. The final summer of his master's degree program he enrolled in a course taught by Boyd H. Bode, “Modern Educational Theories,” that forcefully challenged Alberty's educational beliefs. Although their views differed on a number of accounts, Bode recognized Alberty's talent and offered him an assistantship in the department to continue his studies. Alberty was later appointed to the faculty.

Heavily influenced by Bode's thinking, Alberty began to explore the educational implications of experimentalism. School administration, teacher education, and the relatively new field of curriculum engaged his interest. In 1931 he published *Supervision in the Secondary School* with Vivian T. Thayer. In this publication the authors argued that school supervisors should be curriculum leaders and that, contrary to established patterns, leadership in the schools ought to be democratic. They asserted that “the ultimate criterion of a supervisor's success [is]

that the school in its organization within and without the classroom shall contribute towards the preparation of boys and girls for an intelligent participation in democratic citizenship” (p. 94). The implications of democracy for school practice became a central theme running throughout Alberty's thirty-five-year career at Ohio State.

One aspect of Alberty's work focused on the kind of general education needed for effective citizenship—education, as he wrote, that would “facilitate building, on the part of each pupil, of an independent social outlook on life” (1933, p. 273). He contrasted general education, required of all citizens, with specialized education, designed to develop individual talents and interests, and sought to create balance between these two types. Alberty assisted in the Eight-Year Study sponsored by the Progressive Education Association. In 1937 and 1938 he served as a member of the study's curriculum staff, aiding participating school faculties in clarifying their aims, helping them, in the words of Wilford Aikin, director of the study, “[to see] the social significance of their work and to give it direction” (p. 190). He worked with faculty in all the participating schools, including the Ohio State University School.

In addition, Alberty served on a committee associated with the Eight-Year Study that explored the place of science in general education. The committee's report, *Science in General Education* (1939), written by Alberty, reflected a conception of general education that Alberty described earlier in these words: “It must . . . be based upon the interests and needs of adolescents in our culture to the extent that they can be discovered; and . . . it must meet these needs and cultivate these interests in such a way as to contribute to the understanding, reconstruction, and refinement of the democratic way of life” (1937, p. 388). Alberty's work on the curriculum staff and in general education influenced his decision to accept the directorship of the Ohio State University School, a position he held from 1938 to 1941. As director, Alberty was provided the opportunity to further develop his curricular ideas and to assist the faculty to produce a guiding philosophy statement, one that helped teachers to understand the place of the disciplines in general education.

In 1941 Alberty chaired a committee charged with the task of writing a guiding philosophy for the Progressive Education Association. The document that was produced drew heavily on Alberty's prior experience with the faculties associated with the

Eight-Year Study. It presented a moderate position between two extreme factions of the PEA, the child-centered and social-reformist positions. Alberty's compromise pleased no one. Association members failed to agree to a platform; this, over time, contributed to its decline.

As director of the Ohio State University School and in his work with the faculties of the Eight-Year Study schools, Alberty sought to make sense of the range of curriculum work being done in general education. There were no specific guidelines to participation in the study; the hope was that school faculties would experiment with the curriculum. Considering the diversity of the schools and seeking a model that would be useful for curriculum development, Alberty generated a conceptual framework, called *core*, that included five types, or approaches, to general education. These types were generated from his study of school curricula but were formulated logically to reflect degrees of subject matter integration. Over time the model evolved. Type 1 was a separate subject design, where academic subjects were taught individually and the content was unrelated to the other subjects. In Type 2, correlated curriculum, formal connections were made among the disciplines but they were taught separately. Type 3, fusion, unified subject areas and organized the curriculum around themes or perhaps time periods. Alberty's preference was for Type 4, which was developed at the Ohio State University School, where the subject matter was organized around broad units, often chosen in consultation with students, and reflecting an understanding of the shared interests, common problems, and social issues facing young people. Type 5 was entirely driven by teacher-student planned activities without reference to formal structure. The work of the Eight-Year Study proved that a significant departure from the traditional subject-centered curriculum for general education, particularly Types 1, 2, and 3, had a positive effect on student learning. Unfortunately, this lesson was lost in post-*Sputnik* America, where a math- and science-focused curriculum was seen as the key to competing with the Soviet Union.

With the exception of Type 1, each of the approaches presented serious challenges to teachers. Alberty pioneered the resource unit as a means for replacing textbooks that dominated the curriculum and stifled innovation. Generated by teachers for teachers, the resource unit presented and organized instructional materials in ways that supported con-

tent integration. He worked tirelessly to further the cause of the core curriculum, believing that Type 4, usually taught in a block of time, was the best approach to secondary general education. His full argument is presented in *Reorganizing the High School Curriculum*, which went through three editions (1947, 1953, 1962), each of which was recognized by the National Education Association as a "Best Book." Despite the passage of time, the framework remains a useful departure point for thinking about curriculum reform, particularly cross-disciplinary or interdisciplinary curriculum design. The books themselves are unique in a number of respects, including how each presents the results of Alberty's ongoing engagement with curriculum issues with his students and in consultation with practitioners and his struggle to strengthen the link between democracy, democratic citizenship, and public education.

*See also:* BODE, BOYD H.; CURRICULUM, SCHOOL; EIGHT-YEAR STUDY; PROGRESSIVE EDUCATION.

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## ALCOHOL ABUSE AND DRINKING

*See:* DRUG AND ALCOHOL ABUSE; FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ALCOHOL, TOBACCO, AND OTHER DRUGS; PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS.

## ALTERNATIVE SCHOOLING

The term *alternative schooling* has always referred to nontraditional public and private educational approaches available by choice to parents and students. These programs, ranging from actual schools to programs within schools to single classrooms, began to evolve during the late 1960s and grew from a few isolated innovations in local communities into an educational reform involving millions of students. By the year 2000 it was estimated that over 15 percent of the students enrolled in public education in the United States were attending a public school of choice.

Since the late 1500s there have been private schools, parochial schools, or home schooling alternatives for those who could afford them or whose beliefs dictated a particular approach to education. Yet until the latter part of the twentieth century, public education in the United States was characterized by an unusual uniformity. With the exception of vocational/technical schools and a few selective programs for at-risk or gifted and talented students, almost all school districts had traditionally assigned families to schools based on residence addresses and geographic boundaries. Since students were assigned to a particular school, public education worked to assure that all schools had uniform programs. By the mid- to late 1960s, this emphasis on public school uniformity began to change. Beginning with a few highly innovative experimental schools and dropout and continuation programs, alternative schooling emerged as a grassroots revolution, which has grown

to include a variety of different types of educational options in the private and public sectors. These include religious and private not-for-profit schools, technological educational options, and thousands of distinctive public alternative, magnet, and charter schools. The concept of alternative schooling, which first emerged as a radical idea on the fringe of public education, evolved to a mainstream approach found in almost every community in the United States and increasingly throughout the world. This mosaic of distinctive educational programs is referred to as *public schools of choice*.

Alternative schools represent one of the most significant educational movements ever to occur in the United States. According to a 1999 study from the Policy Analysis for California Education (PACE) of Stanford University and the University of California, Berkeley, between 1993 and 1996 the number of students attending public schools of choice rose from 11 percent to 13 percent. PACE projected that the number of students attending a public school of choice would increase another 15 percent by 2000. Career-theme magnet schools, the most widely used type of educational option in public education, have likewise experienced dramatic growth. From 1991 to 1992 school districts across the United States operated 2,400 magnet schools and 3,200 magnet programs involving more than a million students. By 1996 the number of students attending magnet schools had grown to 1.5 million students, with over 120,000 students on waiting lists. In 2001 magnet schools were expected to enroll more than two million students in over 5,000 schools and programs. Charter schools also have experienced rapid growth, following the opening of the nation's first two schools in Minnesota in 1992, to an estimated 2,500 charters as of 2001, serving 1 to 2 percent of all public school students.

Two states in particular have experienced significant growth in alternative schooling within public education. In Minnesota, the numbers of students enrolled in some type of alternative schooling has grown from 4,000 students in 1990 to more than 112,000 students in the year 2000. In Arizona, as of 2000, there were 359 charter schools serving about fifty thousand students—about 6 percent of the states' 800,000 students.

National statistics regarding school choice often do not include the number of parents choosing non-public options (those choosing private schools, home schooling, participating in for-pay, online learning) or who are influenced in selecting their

home residence by where their children will go to school. The number of K–12 home-schooled students grew from approximately 800,000 in 1990 to 1.7 million in 1998; by 1999 it was estimated that there were approximately two million children and youth being home schooled. In 1993 the National Center for Education Statistics (NCES) estimated that 20 percent of the students in grades 3 to 12 were enrolled in public and private schools chosen by their parents. PACE estimated that the number would rise to 25 percent by the year 2000. In addition, 39 percent of the parents interviewed by NCES reported that the public school their children would attend influenced their choice of residence. Even more striking, they reported that 72 percent of parents earning more than \$50,000 responded that they had first chosen some type of school of choice—private schools, public school optional programs, or public schools—and then selected their residence.

For a concept that has had such a revolutionary impact on public education, the idea of alternative schooling and public schools of choice is really quite simple. It involves little more than diversifying public education by creating distinctive educational programs designed to meet the needs and interests of specific groups of students and providing these programs to parents, students, and teachers through voluntary choice. More recently, as charter schools have developed, the concept of school choice has also come to mean the opportunity for an individual school to exchange many state and locally mandated rules, regulations, and requirements for contractually specified student performance outcomes.

Since the first alternative public schools were identified and studied in the late 1960s, the underlying definition and characteristics of schools of choice have remained relatively unchanged. They include:

- **Voluntary participation:** Students, parents, and teachers voluntarily participate in a school of their choice.
- **Small school size:** Schools of choice (alternative, magnet, and charter schools) have sought to humanize and personalize learning by creating small educational options. The average enrollment for a school of choice has remained at approximately 250 students for more than twenty years.
- **Caring teachers with high expectations:** Since teachers voluntarily participate in schools of choice, they become highly invested in the

school. This investment translates into a strong motivation for both student achievement and school success.

- **Customized curriculum/personalized instruction:** Schools of choice offer students, parents, and teachers opportunities to participate in a highly focused curriculum with value-added enhancements. Students in public schools of choice meet state requirements for high school graduation through participating in a curriculum designed to both motivate student learning and provide experiences that relate to individual needs, interests, and career aspirations.
- **Safe learning environment:** Research has documented a remarkable lack of violence, vandalism, and disruptive behavior in schools of choice. Students and families consistently report feeling both physically and emotionally safe to participate and learn.

While these five critical components can be found in alternative, magnet, and charter schools, research during the latter 1990s further developed these core characteristics into a complex of essential components, which represent the current spectrum of different types of established school models.

### Types of Alternative Schools

By the year 2000 alternative schooling had expanded to include a dozen distinctive opportunities to participate in schools of choice.

- **Alternative or optional schools:** A wide variety of established alternative schools serve all levels and kinds of students. These schools range from programs for at-risk, expelled, and violent students to schools for the exceptionally gifted and talented. Many alternative or optional schools serve heterogeneous student bodies with average achievement and behavior characteristics.
- **Career-theme or technical magnet schools:** Originally popularized as part of court-ordered desegregation efforts, magnet schools emerged over time into specialized programs employing career themes. Students complete high school graduation requirements while they focus on and apply curriculum to a career theme, academic discipline, or area of emphasis, and by participating in relevant work and service experiences.
- **Charter schools:** As of 2001 these schools had been approved by legislatures in thirty-eight

states, the District of Columbia, and Puerto Rico. Charter schools exchange many of the rules and regulations of public education for the opportunity to operate with autonomy to demonstrate student achievement.

- **Contract schools:** School districts “contract” with an organization or group (usually private) to provide public education services. Examples of these schools include schools to teach disruptive and/or suspended students, programs to supplement reading services, and in some cases actually contracting out the entire administrative and/or educational operation of a school district.
- **Open enrollment programs:** Parents and their children may choose to attend any public school in their district or in another district to which their state education funds would follow. Transportation is usually provided if the students’ home residence district and school district share a common physical boundary.
- **Residential alternatives:** A number of states, including North Carolina, Maine, Louisiana, and Texas have established academic-focused residential science/mathematics high schools for gifted and talented students in cooperation with state universities.
- **Voucher programs:** Three states, Wisconsin, Ohio, and Florida, have attempted to establish voucher programs to provide publicly funded vouchers to poor students “trapped” in low-performing public schools. These vouchers may be applied to the tuition costs of attending private or parochial schools. Publicly funded voucher programs, as of 2001, continue to be involved in litigation regarding the issue of expending public funds for private or parochial education.
- **Home schools:** Since the 1970s there has been a dramatic growth in the home schooling of K–12 students. Most states require public schools to offer a variety of services, courses, and programs to home-schooled students.
- **Internet courses and programs:** During the late 1990s a growing number of courses, programs, and schools available through the Internet emerged. These learning opportunities are offered by community colleges, universities, private educational organizations, and an increasing number of public school districts.

- **Blending high school with college:** A number of states encourage high school students to begin taking college courses during the eleventh and twelfth grades. Some states have created “middle colleges” within community colleges and universities to better serve high school students. A number of states permit students to double-list mutually approved courses so that they meet both high school and college requirements.
- **Area learning centers:** Established first in Minnesota, area learning centers are open from early morning to late evening year-round (some are open twenty-four hours a day), serving K–12 students and adults. The centers offer both General Educational Development (GED) and regular diplomas as well as child care and are available to students on a full- or part-time basis.

Each of these school/program types are represented by established, successful working models. These programs serve as the benchmarks of effective practice in alternative schooling.

### Alternative School Models

Thousands of schools of choice offering alternative schooling have been developed, successfully evaluated, and replicated. Within these schools exist a wide array of approaches to implementing curriculum, instruction, and school governance and management. These established models reflect a truly worldwide educational revolution and include:

- **Schools that focus on unique curricular and instructional approaches:** These alternative schools include: Montessori schools, based on the ideas of the Italian physician and educator Maria Montessori; open schools, outgrowths of the British infant school design; Waldorf schools, inspired by the philosophy of the German educator Rudolf Steiner; multiple intelligence schools, founded on the theories of the Harvard University psychologist Howard Gardner; Paideia schools, established by the philosopher Mortimer Adler; free schools and self-directed education based on the concepts of the Scottish educator Alexander S. Neill; as well as continuous progress schools, schools without walls, and traditional “back-to-basics” schools.
- **Schools that focus on the needs and interests of students:** The vast majority of alternative

schools were developed to address the specific needs of children. These alternatives include: teen parent schools, dropout and dropout-prevention schools, schools for expelled or incarcerated students, and schools for the gifted and talented.

- **Schools that focus on career themes and professional relevance:** Career-theme magnet schools complement academic studies with intensive experience in workplace/career settings. These schools, which operate primarily at the secondary level, include: performing arts schools, radio and television broadcasting schools, health professional schools, law/legal schools, science/technology schools, teaching career schools, and dozens of other career-focused educational options as well as academic, disciplinary-focused programs in international studies, multicultural issues, environmental studies, and most of the traditional academic disciplines.
- **Alternatives that focus on experiential learning:** Based on the ideas of the American philosopher John Dewey, many alternative schools in the United States emphasize learning by doing. Examples of these programs include Schools Without Walls, where students learn in banks, businesses, courtrooms, museums, and government agencies rather than in typical school classrooms; Foxfire, where students learn by collecting and publishing the folklore of their region; and Outward Bound/Expeditionary Learning, where students learn through expeditions and experiences in their communities.
- **Alternatives that focus on organization, administration, governance, and funding:** There are also a number of established models for organizing, administering, governing, and funding alternative schooling. These include the stand-alone alternative schools, schools within schools, clusters of alternative schools, complex systems of alternatives, such as those found in Louisville, Kentucky; Houston, Texas; Los Angeles, California; and Vancouver, Washington. In many of these districts, as high as 30 percent of the total student enrollment participate in schools of choice. The most recent type of alternative school, the charter school, which may represent any of the described alternative models, receives a state charter and public funding to operate in a highly autonomous manner.

These models represent the landscape of alternative schools successfully operating as of 2001. No two are exactly alike, as a primal characteristic of these programs is their unique identity. While these schools share the common concepts of alternative programs, their actual operations often vary considerably.

### International Alternative Schools

As alternative schools began to appear in the late 1960s in the United States, similar development was occurring around the globe. Jerry Mintz's 1996 book *The Handbook of Alternative Education* identified alternative schooling in twenty-three nations representing the Americas, Europe, the Middle East, Russia, Asia, Australia, Micronesia, and the West Indies. Canada, with 114 programs reported throughout its provinces, clearly held the largest number, as most other countries reported five or fewer programs. Most of the programs identified represented the categories of independent, Montessori, Waldorf, open/choice programs, and schools for at-risk students. While the handbook represents the most recent source for documenting the existence of international alternative schools, many schools undoubtedly were not identified. Denmark, for example, has hundreds of Tvind alternative public schools, and other nations, such as Hong Kong, Brazil, Japan, Russia, and Australia have multiple examples of alternative schools. Charter schools have also begun to appear in other nations, particularly in Canada.

As most countries provide public education through national systems of organization and governance, it is important to note that local control, as is practiced in the United States, clearly appears to foster dramatically higher numbers and types of alternative schools. Yet, as of 2001, interest in and growth of alternative programs and schools in other nations is clearly on the increase. The public demand for choice in schooling appears to be significantly impacting educational systems throughout the world.

### Conclusion

Alternative schooling has become an integral component of public education in the United States and is also gaining increasing popularity in many other nations. These developments have evolved from a grassroots effort by parents and educators, experimenting to locate better ways to educate their school-age children and integrate educational ideas

from some of the world's most recognized educational leaders. Federal support in the United States of schools of choice has also contributed to the growth of choice programs. Nationally elected officials of the United States, representing their public constituencies, have clearly identified schools of choice as a valued priority. As of 2001 it is clear that alternative schooling, with three decades of development and success, is not only effective in teaching all types of students but is also highly desired by parents and students. It is also obvious that the practices developed in the early schools of choice are contributing to local, state, and national efforts to improve public education in the United States. Based on these realities, the continued growth and expansion of schools of choice is likely to continue.

*See also:* HOME SCHOOLING; MAGNET SCHOOLS; PRIVATE SCHOOLING; SCHOOL REFORM.

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## AMERICAN ACADEMY OF ARTS AND SCIENCES

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The American Academy of Arts and Sciences is an international learned society dedicated to the promotion of critical analysis of the important social and intellectual issues of the day through the free exchange of ideas and perspectives. Through its publication, *Daedalus*, as well as its meetings, conferences, and symposia, it strives to develop useful policy initiatives while encouraging the development of new generations of scholars committed to improving the level of social discourse and creating a truly civil society.

#### Program

The academy brings multidisciplinary, collaborative attention to bear on three major areas of interest: science, technology, and global security; social policy and education; and the humanities and culture. Within these broad areas of interest, a wide range of topics are explored with the goal of achieving practical improvements that will benefit society as a whole.

## Organization

The academy is governed by a council consisting of seventeen voting members and six nonvoting, advisory members. The council meets three times annually to set policy and plan initiatives. Although its base of operations remains in Massachusetts, it has two regional centers, one at the University of Chicago and another at the University of California at Irvine. In addition, it maintains affiliations with many of the nation's public and private universities.

## Members

From its initial sixty-one members, the academy has grown dramatically. At the end of the twentieth century it had a membership of 3,700 American fellows and 600 international (honorary) fellows. Among these were 160 Nobel laureates and 50 Pulitzer Prize winners. Membership is divided into classes, defined by the intellectual disciplines represented. There are five classes: mathematics and physical sciences; biological sciences; social sciences; humanities and the arts; and public affairs, business, and administration. To become a member, an individual must be nominated by a current member and elected by the academy as a whole. Once exclusively male, the academy inducted its first female member in 1848.

## Financial Support

The academy is a private, nonpartisan organization that maintains its independence in order to encourage the free and unfettered exchange of ideas. It receives its funding from individual charitable contributions as well as from grants provided by foundations and public agencies. In addition it receives revenues from the sale of *Daedalus*, a highly respected journal of opinion and policy. Most of its budget is devoted to covering the costs of individual research projects, as well as sponsoring seminars and symposia.

## History

During the American Revolution, a group of gentleman scholars gathered together in the city of Cambridge, Massachusetts, to form a scholarly society: the American Academy of Arts and Sciences. Numbering such leaders as John and Samuel Adams, James Bowdoin, and John Hancock among them, the first academy's membership shared the belief that, as "men of genius," they had a duty to their country and their fellow citizens to cultivate the arts and sciences and to spread knowledge of them throughout the populace.

The founders did not believe that a true scholar should remain aloof from the mundane world. Rather, they were convinced that the arts and sciences were fundamental to success in all aspects of life, from agriculture to commerce, architecture to industry. Further, they believed that these pursuits were vital to the happiness, dignity, and advancement of the populace.

Their goal was to create a forum in which intellectuals of all sorts would share their learned insights in order to come up with practical solutions to problems as wide ranging as international affairs, farming and animal husbandry, medicine, and meteorology. Drawing on the example of learned societies in Europe, they foresaw an important role for the "citizen scholar" in the new nation. Through their writings, speeches, and other activities, the early members of the academy were highly successful in spreading new ideas throughout New England's educated class and creating a culture that celebrated the practical application of scholarly knowledge.

At the outset, the academy took special interest in antiquities (archaeology), natural history, mathematics and philosophy, astronomy, meteorology, geography, and advances in medicine. Over time, however, the disciplinary focus of the organization changed, and by the twentieth century the emphasis was placed more squarely on the public service and policymaking aspect of the original charter. Nonetheless, the academy continues to take seriously its goal of mentoring new generations of scholars and honoring scholarly achievement.

Throughout its history, the academy has fulfilled its purpose by facilitating discourse among educated and interested people both in the United States and abroad. The present academy still holds tightly to the founders' conviction that knowledge is best shared, and as a matter of principle insists on the swift publication and wide dissemination of any findings, reports, or data it generates. It remains committed to the belief that the advancement of knowledge can only enhance the strength, welfare, and security of a healthy nation.

## INTERNET RESOURCE

AMERICAN ACADEMY OF ARTS AND SCIENCES. 2002. <[www.amacad.org](http://www.amacad.org)>.

JOHN VOSS

*Revised by*

NANCY E. GRATTON

## AMERICAN ALLIANCE FOR HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE

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The American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD) is the only voluntary professional organization in the world that brings together teachers, students, administrators, and practitioners in these related fields. AAHPERD's mission is to promote healthy lifestyles by supporting quality programs in health, physical education, recreation, dance, and sports. AAHPERD also strives to provide members with professional development opportunities that improve skills and encourage sound professional practices. Members come from elementary and secondary schools, colleges and universities, dance and sports training centers, health care institutions, and various government and voluntary agencies.

### Program

The central concern of AAHPERD is motivating people of all ages to achieve and maintain physical fitness, health, and well-being. Most alliance programs are responses to this concern. Through clinics conducted by master teachers, educators learn new ways of instructing large groups, improvising in the use of inexpensive equipment, and using available space creatively and effectively. AAHPERD programs demonstrate that when young people have opportunities to learn individual sports, as opposed to traditional team sports, they are more likely to build sports activity into their daily regimens and continue it throughout their lives.

The alliance is deeply concerned with the health problems of the day and especially with the way in which teachers may deal more effectively with such problems as accidents, smoking, drug and alcohol abuse, diet and obesity, and sexually transmitted diseases. AAHPERD encourages teachers, parents, and adult leaders to take greater responsibility for educating children and youth about the hazards of smoking, drinking, drug abuse, overeating, and other unhealthy behaviors.

Aware of the need for increased recreation opportunities for urban populations, the alliance has involved its members in planning for recreational facilities and programming sports and physical activities for children and youth in American cities.

Health educators in the alliance are involved with service programs in the inner city, as well as in isolated rural areas.

AAHPERD is particularly concerned with promoting physical fitness and health education in American elementary, middle, and high schools. The alliance supports efforts to improve teacher salaries and to have a greater share of the national income apportioned for school needs. AAHPERD has also taken up such issues as the scheduling of physical education activities, particularly in light of the pressures of academic requirements. Other issues of importance to AAHPERD are the age at which social values can best be taught and the school's responsibility for teaching sex education to students. Another major concern of the alliance is the extent to which the school should be open for activity beyond the traditional school day, week, and year, and the place of sports and athletics in the extended school schedules.

Programs for young people include Jump Rope for Hearts and Hoops for Hearts, which are popular educational fund-raising events sponsored jointly by AAHPERD and the American Heart Association and held in thousands of American elementary and middle schools. These events help raise funds for educational programs that teach students the benefits of physical activity and for medical research and programs that help prevent heart disease and stroke.

AAHPERD also organizes conferences, workshops, and other professional meetings; develops standards for health and physical fitness education; interprets problems and issues to the public; and maintains relationships with organizations and agencies that have similar agendas. The alliance awards scholarships and recognition awards for distinctive contributions to the profession of health and physical fitness education. Through their journals, newsletters, and other publications, AAHPERD facilitates professional exchange and helps disseminate research findings. Publications include the monthly *Journal of Health, Physical Education, Recreation, and Dance*; the monthly *Physical Activity Today*, which offers important research findings about sports, health, and physical fitness; the bimonthly *Strategies* magazine; the *American Journal of Health Education*, a refereed journal for professional health educators and researchers; the *Research Quarterly for Exercise and Sport*, which publishes articles about research in the science of human movement; and *Update*, the alliance's member newsletter.

AAHPERD holds an annual national convention, which includes workshops, conferences, sessions, and activities covering such topics as recreation, lifestyles and fitness, aging, physical education, and dance technology. The convention includes a major exposition where fitness, sporting goods, and publishing companies can exhibit products and services related to the interests of the alliance and its members.

### **Organizational Structure**

AAHPERD is an alliance of six national associations, six geographic district associations, and a research consortium. The district associations are central, eastern, midwestern, northwestern, southern, and southwestern. Each district elects its own officers, including a representative to the national board of directors. There are fifty-three state associations, including those for Puerto Rico, Guam, and the District of Columbia.

The six national associations each represent a special interest area. The National Dance Association (NDA) promotes sound professional practices in dance education. The American Association for Leisure and Recreation (AALR) supports professional recreation practitioners, educators, and students who advance the profession through creative recreation experiences. The American Association for Health Education (AAHE) helps health care professionals promote good health through education. The National Association for Sports and Physical Education (NASPE) promotes professional practices in sports and physical activity through research and dissemination of information to the public. The National Association for Girls and Women in Sports (NAGWS) recommends guidelines and standards for women's athletic programs in colleges and schools and works for gender equity by fighting for equal funding, equal quality, and respect for girls' and women's sports programs. The American Association for Active Lifestyles and Fitness (AAALF) helps educators conduct programs concerning physical activity and fitness. Members of AAHPERD's six national associations who are interested in research can also join the Research Consortium, which provides services and publications in support of alliance research.

A sixteen-member board of governors is the executive arm of the alliance, and as such it initiates and transacts alliance business. Members of the board meet twice a year—in the fall and in the

spring. The board is made up of a president, past president, president-elect, and one representative from each of the six associations and six districts.

Committees carry on a large share of the alliance's work and serve as a means by which members throughout the nation assist in planning, recommending policy, and giving direction to alliance programs. AAHPERD maintains twelve standing committees and organizes special committees as the need arises. Each committee is charged with responsibility for some part of the alliance's work.

In addition, some of the AAHPERD headquarters staff are specialists in various aspects of health education and recreation and offer consultation services to members and to national groups. They serve as liaisons with divisions and committees and act as directors of special projects.

### **Membership and Financial Support**

Membership in the alliance is open to all who are professionally engaged in health education, school nursing, safety education, physical education, athletics, recreation, and dance. Students in programs of professional preparation may become members and are entitled to special students rates. Others interested in supporting the alliance's activities may become associate or contributing members. In 2001 AAHPERD served over 26,000 members.

Most of the alliance's funds come from grants for special projects, the sale of professional publications, and membership fees, with a small amount coming from advertising and other miscellaneous sources.

### **History and Development**

The history of the alliance closely parallels the development of physical education as a part of the curriculum in U.S. schools and colleges. In 1885 William Gilbert Anderson, a physical fitness instructor in Brooklyn, New York, invited a group of gymnastics trainers to gather and discuss their profession; this group became the American Association for the Advancement of Physical Education. In 1893 the organization had its first contact with the National Education Association (NEA), when the latter sponsored the International Congress on Education and included physical education and hygiene as a program topic.

In 1903 the organization changed its name to the American Physical Education Association. A

committee on women's athletics was formed in 1917, beginning one of the most influential interest groups within the association. In 1937 the association became a department of the NEA, when it merged with the NEA's Department of School Health and Physical Education. A Division of Recreation was established, and in 1938 the name was changed to include this interest area. The National Dance Association became an official AAHPERD association in 1974, and the name changed again to reflect the status of dance in the organization.

#### INTERNET RESOURCE

AMERICAN ALLIANCE FOR HEALTH, PHYSICAL EDUCATION, RECREATION, AND DANCE. 2002. <[www.aahperd.org](http://www.aahperd.org)>.

CARL A. TROESTER JR.  
Revised by  
JUDITH J. CULLIGAN

## AMERICAN ASSOCIATION FOR HIGHER EDUCATION

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The American Association for Higher Education (AAHE) is an independent professional membership organization that promotes change and reform in higher education, fosters quality teaching and learning at the college and university level, and promotes public awareness of the value of higher education in the United States. The AAHE's objectives include identifying and analyzing critical problems, trends, and developments in higher education and seeking constructive solutions; helping to coordinate the efforts of educational institutions and agencies at all levels; encouraging the improvement of professional work in all areas of higher education; and developing a better understanding by the general public of higher education and of college teaching as a profession. In pursuing these goals, the AAHE provides a forum for the expression of ideas relating to higher education and public policy.

### Program

The AAHE National Conference on Higher Education is the best-known regular activity of the association. Held annually in March, the conference has established itself as a central forum for addressing the most pressing issues facing postsecondary educa-

tion in the United States. Other annual AAHE conferences include the Assessment Conference and the Conference on Faculty Roles and Rewards. The first is sponsored by the AAHE's Assessment Forum, which promotes the development of new and effective approaches to faculty, student, and institutional assessment. The second conference is sponsored by the AAHE Forum on Faculty Roles and Rewards, which was inaugurated in 1991 with the mission of reexamining methods of communicating faculty expectations and evaluating faculty rewards and remuneration.

Since 1993 the AAHE Quality Initiatives program has explored the application of continuous quality improvement principles to postsecondary education. In 1996 the Quality Initiatives program began holding an annual Summer Academy at which teams of six to ten people from up to thirty-five institutions gather to discuss and develop programs to enhance the quality of undergraduate education.

In early 2001 the AAHE launched a major diversity initiative aimed at studying and addressing the impact of race and ethnicity on student choice and learning in higher education. One of the goals of the initiative was to develop strategies for increasing the success of minority college students. In particular, the diversity initiative promoted the importance of including diversity issues in college curriculums and the removal of barriers to the success of minority students.

Other AAHE programs include the Service Learning Project, a two-part initiative that promotes the integration of service learning in all disciplines; the project includes the preparation and publication of an eighteen-volume series addressing community-based learning. The AAHE's Teaching Initiatives program helps institutions improve the effectiveness and status of college-level teaching. AAHE members involved in this initiative work to promote the view that postsecondary teaching is important scholarly work and to generate dialogue about the value and effectiveness of teaching in institutions of higher education.

AAHE publications include the bimonthly *Journal of Higher Education*, a scholarly journal published since 1930, and the bimonthly magazine *Change*, published in conjunction with the Helen Dwight Reid Education Foundation. *Change* features articles on new trends in higher education and analyzes the implications of new educational practices.

The *AAHE Bulletin*, published every month from September through June, is a newsletter for members that features interviews, reports, practical articles, and news about AAHE activities.

In 1991 the AAHE's National Teaching and Learning Forum began a major joint venture with the Educational Resources Information Center (ERIC) Clearinghouse on Higher Education to publish and disseminate important research literature on various topics in higher education. The AAHE also publishes numerous books, monographs, and papers on topics of concern to the higher education community, many in collaboration with other publishers and organizations. In addition to these, special publications are produced in conjunction with current AAHE projects or in areas where a need for additional information has been determined. All AAHE publications are available to the association's members free or at a reduced cost. Some are available electronically via the AAHE website.

Special projects consistent with the AAHE's goals are undertaken with funds from outside sources and through partnerships. Notable among these projects is the Urban Universities Portfolio Project: Assuring Quality for Multiple Publics, a three-year effort begun in 2000 in partnership with Indiana University–Purdue University Indianapolis (IUPUI) and the Pew Charitable Trusts. The Portfolio Project aims at helping urban institutions of higher education create institutional portfolios and innovative auditing processes that can be effectively communicated to the public. Such projects underscore the AAHE's concern for the teaching-learning process as the center toward which a major part of its activities are oriented.

### Organizational Structure

The AAHE is governed by a twenty-member board of directors, which is headed by a chair and a chair-elect. Board members are chosen by AAHE members by mail ballot each year. The board establishes policy, determines programs, and appoints committees as needed. The day-to-day operations of the AAHE are overseen by a staff of approximately twenty-five individuals under the direction of an appointed president.

### Membership

The AAHE is the only national higher education organization open to faculty, administrators, and students alike, regardless of rank, discipline, or type or

size of institution. Its membership is a cross section of the American academic community, including college and university presidents, deans, faculty, counselors, and registrars, as well as representatives from government, business, the media, educational foundations, accrediting agencies, and other organizations concerned with higher education. In 2001 the AAHE had approximately 10,000 members.

### History and Development

Founded in 1870, the AAHE was one of four original departments of the National Education Association (NEA). It was then known as the Department of Higher Education. In 1952 the name was changed to the Association for Higher Education, and in 1967 to the American Association for Higher Education. A major turning point in the history of the AAHE occurred in 1968, when it elected to move from a departmental relationship with the NEA to the status of independent organization.

#### INTERNET RESOURCE

AMERICAN ASSOCIATION FOR HIGHER EDUCATION.  
2002. <[www.aahe.org](http://www.aahe.org)>.

G. KERRY SMITH  
*Revised by*  
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## AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

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The American Association for the Advancement of Science (AAAS, pronounced *triple-A-S*) is the largest general scientific organization in the world. Its objectives are to further the work of scientists and promote cooperation among them, to foster academic freedom and responsibility, to improve and reform science education, and to encourage and facilitate better understanding about the nature of science, scientific research, and technology.

### Programs

From its early years, the AAAS has promoted quality science education for children and adults, and many AAAS programs promote science literacy in schools and in communities. Project 2061, begun in 1985, is a major long-term initiative aimed at helping all

Americans learn more about science, mathematics, and technology. One of Project 2061's main goals is the reformation of the American kindergarten through twelfth grade science, mathematics, and technology curriculum. In 1989 Project 2061 released its influential publication *Science for All Americans*, which established guidelines for what American students need to know about science, mathematics, and technology by the time they graduate from high school.

The AAAS's Directorate for Education and Human Resources also works for science education reform through fifty programs and a wide variety of publications. Among its many programs, the directorate produces a weekly half-hour radio program called *Kinetic City Super Crew*. The program features a team of resourceful children chasing adventures and solving problems using science. Other radio programs, including *Science Update* and *Why Is It?* draw young people into science with interesting jargon-free science stories.

At the adult level the AAAS produces or sponsors a number of radio and television programs about science. In 1992 the AAAS and the National Institute on Drug Abuse launched the Science Plus Literacy for Health Drug Education Project to create materials for use in adult science literacy programs and community-based adult substance abuse and mental health education programs.

The AAAS's Directorate for International Programs promotes international scientific cooperation and fosters the potential of science and technology to solve many challenges facing the global community, especially those involving health and the environment. The Directorate for International Programs also works to strengthen the role and status of engineers and scientists in developing countries.

Among scientists, AAAS is best known for its large annual scientific meeting, which is devoted to the discussion of research topics and problems in all branches of science. The organization is also known for its weekly magazine, *Science*, an international journal that offers rapid publication of new research findings, as well as analyses of social, governmental, and educational policies and trends of interest to scientists and science teachers. The journal is popular with members and nonmembers alike.

The AAAS annually makes awards for excellent science writing in newspapers and magazines of general circulation. Other annual AAAS awards include

the Philip Hauge Abelson Prize, the Scientific Freedom and Responsibility Award, the Award for International Scientific Cooperation, the Award for Public Understanding of Science and Technology, the Newcomb Cleveland Prize, and the Mentor Prize. All awards are presented at the annual national meeting.

### Organizational Structure

The AAAS is divided into twenty-four sections, each organized in an area of special interest, including agriculture, astronomy, biology, chemistry, engineering, linguistics, mathematics, medicine, psychology, physics, and zoology. The AAAS also includes sections covering the history and philosophy of science and the economic, social, and political sciences. Four regional divisions (Arctic, Caribbean, Pacific and Southwestern, and Rocky Mountain) each hold annual meetings, manage their own affairs independently, elect their own officers, and carry out other regional activities.

Affiliated with AAAS are 273 national and regional organizations in pure and applied science, including 226 scientific societies and forty-seven academies of science. Affiliates include such diverse organizations as the American Ethnological Society, the American Chemical Society, the American Ornithologists Union, the Institute of Food Technologists, the National Marine Educators Association, the Linguistic Society of America, the American Nuclear Society, and the Poultry Science Association. Each affiliate is entirely responsible for managing its own affairs. The AAAS maintains a special relationship with its forty-seven affiliate academies, because they, like the AAAS, cover many fields of science and in this sense take on the role of AAAS local branches.

The AAAS board of directors, elected annually by members for one-year terms, conducts association affairs. The board is headed by a chairperson, a president, and a president-elect. An eighty-three-member council meets annually to discuss and establish the association's general governing policies.

### Membership and Financial Support

Membership is open to any interested persons, especially working scientists, engineers, science educators, policymakers, and undergraduate and postdoctoral students in any scientific field. The activities of the association are financed by dues, advertising, nonmember subscriptions to *Science*, the sale of other association publications, and registration fees

at the annual meeting. Additional activities, such as the development of materials for teaching science in the elementary grades, are supported by grants from private foundations or government agencies interested in science and science education.

### History and Development

The AAAS was founded at the library of the Academy of Natural Sciences in Philadelphia, Pennsylvania, on September 20, 1848. The eighty-seven scientists who gathered that day were members of the Association of American Geologists and Naturalists who wished to form a new organization called the American Association for the Advancement of Science. In its wide coverage and membership and in its interest in science education and the public understanding of science, as well as in scientific research, the new AAAS was to a large extent patterned after the British Association for the Advancement of Science. Most early members were scientists or engineers, but some, notably U.S. President Millard Fillmore and author Henry David Thoreau, were laypeople who were interested in science. The first woman to become a member was astronomer Maria Mitchell, who joined in 1850. The AAAS began publishing the journal *Science* (first published by Thomas Edison beginning in 1880) in 1883, and many leading scientists of the following decades, including Edmund B. Wilson, Thomas Hunt Morgan, Albert Einstein, and Edwin Hubble published articles in the journal.

In the years since 1848, the association has grown to include some 138,000 members worldwide. The AAAS has attracted to membership most of the leading scientists of the day. Among the distinguished men and women who have served as presidents have been zoologist and geologist Louis Agassiz, botanist Asa Gray, astronomer Simon Newcomb, geologist John Wesley Powell, mathematician Mina Rees, anthropologist Margaret Mead, physicist Leon Lederman, paleontologist Stephen Jay Gould, and chemist Mary L. Good. The association has always included scientists of great distinction, but it has also maintained its basic and original character of a general scientific society open to any person interested in science.

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### INTERNET RESOURCE

AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. 2002. <[www.aaas.org](http://www.aaas.org)>.

DAEL WOLFLE

*Revised by*

JUDITH J. CULLIGAN

## AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION

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The American Association of Colleges for Teacher Education (AACTE), formally established in 1948, exists to enhance the condition and improve the quality of education schools in the nation's colleges and universities.

### Program

With offices in Washington, D.C., AACTE serves as the voice for its members at the national and federal level. Always seeking to strengthen teacher and principal preparation programs, AACTE works with its members to help them strengthen their offerings, build partnerships with their local pre-K–12 schools, find leadership for their programs, influence their state legislatures, work with the media, and carry out research and many other tasks.

AACTE's Governmental Relations unit seeks to influence federal policy regarding teacher education issues and also spends time tracking and analyzing federal and state education legislation for AACTE member institutions.

AACTE's Professional Development unit operates a busy schedule of conferences, workshops, and institutes throughout the year to help member institutions become better preparers of school professionals. The AACTE Annual Meeting attracts over twenty-five hundred participants who share the lat-

est teacher education research, policy, and practices and build contacts with other members. This department also oversees the association's publications, producing several books, monographs, and articles each year as well as a biweekly newsletter. The department also coordinates contracts and communications with the member-editors and publisher of the *Journal of Teacher Education*, the field's premier journal.

The Professional Issues unit serves as the association's liaison to groups involved with accreditation, academic standards, service learning, and many other issues affecting teacher education. This department offers both professional development and technical assistance to member institutions in many of these areas.

The Research and Information unit conducts an array of research and activities, and runs several grant-funded projects on issues such as culturally responsive practice and HIV/AIDS prevention education. It administers the Professional Education Data System, an annual survey of member institutions conducted jointly by AACTE and the National Council for Accreditation of Teacher Education. This department also houses the ERIC Clearinghouse on Teaching and Teacher Education.

These four programmatic departments at AACTE are supported by Finance and Administration and Executive Office functions. In addition to its staff, the association has several standing committees, special study groups, and focus councils comprising individuals from member institutions. These groups delve into issues such as special education, multicultural issues, reading, and technology to inform the board, staff, and membership of the specific concerns and topics facing teacher education.

### Organizational Structure

AACTE is governed by a twenty-two person board of directors, drawn from member institutions and is run by a staff of nearly fifty professionals and managers. The president and CEO of AACTE works closely with the chair of the board of directors to carry out the association's agenda. Each member institution is allotted a certain number of institutional representatives, based on the size of its education program, to receive member benefits and to vote on issues brought before the membership at the annual business meeting. There is also a chapter of AACTE in almost every state that works on education issues

specific to the region. State chapters also inform the national discussion through an annual meeting of their elected leaders.

### Membership and Financial Support

Comprising over 760 colleges and universities, AACTE's members are accredited four-year colleges and universities with education programs. In the first years of the twenty-first century, the association is seeking to expand its membership to include non-traditional providers of teacher preparation, such as for-profit, online, and other organizations. The association's activities are supported by the dues its members pay, based on the size of their education programs, and the grants it receives for special projects.

#### INTERNET RESOURCE

AMERICAN ASSOCIATION OF COLLEGES FOR TEACHER EDUCATION. 2002. <[www.aacte.org](http://www.aacte.org)>.

DAVID G. IMIG

## AMERICAN ASSOCIATION OF COLLEGES OF PHARMACY

The American Association of Colleges of Pharmacy (AACP) is a nonprofit, national organization representing pharmaceutical education in the United States. Its mission is to serve its member colleges and schools and their respective faculties by acting as their advocate and spokesperson at the national level, by providing forums for interaction and exchange of information among its members, by recognizing outstanding performance among its member educators, and by assisting member colleges and schools in meeting their mission of educating and training pharmacists and pharmaceutical scientists.

The association was established in 1900 with twenty-one member colleges. At that time, the typical pharmacy program was a two-year course of study, and most schools admitted students with only a grammar or elementary school education. As of 2001 the association comprised eighty-two colleges and schools with pharmacy degree programs accredited by the American Council on Pharmaceutical Education. The doctor of pharmacy degree (Pharm.D.), a four-year professional degree pro-

gram following a minimum of two years of pre-professional college study, is the predominant degree granted and is consistent with the profession's support of a single professional degree program. Students who successfully complete the requirements for a professional degree must also pass a state licensing examination in order to engage in professional practice.

All accredited U.S. colleges and schools of pharmacy are regular institutional members of AACP. Each regular member has two votes in the AACP House of Delegates (one representing the school's faculty voting in the Council of Faculties and the other representing the school's administration voting in the Council of Deans). Faculty may also be individual members of AACP, entitling them to receive a number of services and to participate in the various activities of the association. Nearly two-thirds of all full-time faculty choose to become members of AACP, a high percentage of individual membership for a national organization. The AACP enjoys the widespread support of the community it represents, and there is a high degree of faculty participation in association committees, academic sections, and special-interest groups. Several publications and reports are among the benefits of membership in AACP. The *American Journal of Pharmaceutical Education* is an internationally distributed quarterly publication devoted to communication among pharmaceutical educators. The *AACP News*, a monthly publication, provides current information on issues, events, and employment opportunities in pharmaceutical education. The annual *Roster of Faculty and Professional Staff* is a tool for locating and communicating with fellow educators in pharmacy schools across the country. The *Profile of Pharmacy Faculty* is an annual report that provides a summary of demographics, teaching discipline, rank, highest degree earned, tenure status, type of appointment, and compensation. Other annual research reports, such as the *Profile of Pharmacy Students* and the *Pharmacy College Admission Requirements*, are available for purchase by individual members of AACP.

The association is structured as a democratic organization with decision-making vested in a house of delegates, a board of directors, and the executive vice president. The house of delegates meets annually and generally considers issues of major policy. The board of directors consists of three presidential officers, three representatives of school administrations,

three representatives of school faculties, one representative of academic disciplines, and the executive vice president. The board generally meets three times per year to authorize policy and program implementation and to consider significant matters related to the operational and financial affairs of the association. The executive vice president is selected and employed by the board of directors as the chief executive officer of the association, with overall responsibility for the administration of the policies and programs adopted by the house of delegates and the board of directors. The executive vice president, who is responsible for all actions taken by staff members on the association's behalf, appoints the association's staff.

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RICHARD P. PENNA

## AMERICAN ASSOCIATION OF COMMUNITY COLLEGES

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The American Association of Community Colleges (AACC), a nonprofit, advocacy organization, represents more than 1,100 two-year, associate degree-granting, public and private, community, junior, and technical institutions with more than 10 million students from diverse age groups and a variety of socioeconomic, racial, and ethnic backgrounds. The AACC serves as the national voice for its member institutions and works with other higher education associations, the federal government, and national organizations to promote the goals of community colleges in particular and higher education in general. The association cites its mission as "providing a national focus agenda that promotes, supports, and advances the cause of its member colleges." Its leadership is exercised through involvement in federal policy initiatives, advocating its national agenda ex-

ternally and internally, doing research on community college issues, supporting educational services that promote professional growth, and building coordination with related-interest groups.

### History of the Association

The founding of the association was a critical event in the early history of the two-year college movement. The American Association of Junior Colleges (AAJC) was founded in 1920 when Philander Claxton, U.S. commissioner of education, and George Zook, higher education specialist, brought together thirty-four junior college representatives in St. Louis, Missouri. As Michael Brick noted in his 1964 study, these represented the fledging but rapidly expanding and unique American junior college system, which emerged at the turn of the century to offer the first two years of university course work and later added occupational courses. Although it was expected that the AAJC would function as an accrediting body for the increasing number of junior colleges, be a forum for addressing issues, and serve as a source of mutual support among institutions, it did lead to the forging of a common identity and provided a forum for discussing the proper role and organization of junior colleges within higher education.

The association has grown significantly since 1920. In the early twenty-first century it is governed by a thirty-two-member board of directors, has twenty-one affiliate councils, and seven commissions. There have been seven chief executives, beginning with the appointment in 1922 of Doak S. Campbell, a former professor at George Peabody College and a junior college president, as executive secretary. The AAJC acquired greater national stature with the selection in 1938 of Walter Crosby Eells, a Stanford professor, who assumed the full-time position and relocated the organization to Washington, D.C. Succeeding Eells were former junior and community college presidents Jesse Bogue in 1946; Edmund J. Gleazer Jr., as executive director, in 1958; Dale Parnell, as president, in 1981; David Pierce in 1991; and George R. Boggs in 2000.

In 1930 the association began its own journal, with Eells as editor, which evolved into the *Community College Journal*. In the 1980s it established its own Community College Press and began the *Community College Times*, a biweekly newspaper, and the legislative brief *AACC Letter*. With the creation of an Internet site in the mid-1990s, book publications, reports, press releases, policy briefs, national and state

enrollment, and other data became available via that medium. Continued since the 1920s, the annual conference has evolved to focus on seminars for aspiring and new presidents, session presentations by researchers and practitioners, recognition of current and noted former outstanding community college students, and meetings of affiliated councils. In April 2001, at its annual meeting in Chicago, Illinois, the AACC celebrated 100 years of the existence of American community colleges by honoring the oldest continuous two-year college, Joliet Junior College, founded in 1901 in Joliet, Illinois.

As the number of two-year colleges grew and membership increased, the association underwent several name changes. These occurred after two phenomenal growth periods. One growth period occurred after World War II due to the combined effects of the return of thousands of military personnel, the enactment of the Servicemen's Readjustment Act in 1944 (G.I. Bill of Rights), and the release of President Truman's Commission on Higher Education Report in 1947, *Higher Education for American Democracy*. The Truman Report, as it became known, called for expanding educational opportunity to veterans, women, and low-income individuals; preparing students for lives of citizenship and work through a series of terminal degree programs; and renaming these institutions community colleges to reflect their responsiveness to their local communities. The latter suggestion, however, did not become popular until the 1960s.

Leland Medsker and Dale Tillery, in a 1971 study, described how the next enormous growth period followed the civil rights movement in the 1960s, when community colleges with their open access admissions policies grew more rapidly than any other segment of higher education. The creation of financial aid under the Higher Education Act of 1965, supported by the association, greatly accelerated educational access. Community college enrollments more than tripled between 1960 and 1970, as older people, women, people of diverse racial and ethnic backgrounds, veterans, people with disabilities, and low-income individuals went to college for the first time. As the U.S. Bureau of the Census's statistics show, this growth occurred almost entirely in the two-year public sector, enrolling 95 percent of all college students.

After more than fifty years as the American Association of Junior Colleges, the organization became the American Association of Junior and

Community Colleges (AACJC) in 1972 to reflect the increasing name shift to community colleges and the highly expanded mission of technical and vocational education. In 1992 the AACJC became the American Association of Community Colleges, recognizing that its member institutions now referred to themselves almost exclusively as community colleges.

### The Twenty-First-Century Community College

After a century of evolution of the junior college into the community college and over eighty years as an association, the AACCC has gone from representing thirty-four institutions to more than 1,100 public and independent, comprehensive, and technical institutions in the twenty-first century. These institutions promote educational opportunity and access to college; offer lower, affordable tuition; and provide varied curricula for students of all ages. Curricular offerings include articulated transfer courses leading to the bachelor's degree; state-of-the-art technical and vocational certificate and associate degree programs leading directly to employment; contracted special skills courses for business and industry; non-credit adult education courses in basic literacy skills, General Educational Development (GED), English as a second language (ESL), and citizenship; concurrent enrollment courses for high school students; service-learning and school-to-work internship opportunities; innovative distance-learning options; continuing education programs; community development service programs; and partnership programs with four-year institutions, such as teacher preparation.

Community colleges also provide professional academic and career guidance; a range of financial assistance; many academic and student support services; flexible day, evening, off-campus, and weekend class meeting times; and distance-learning courses to accommodate diverse scheduling needs. Located in urban, suburban, and rural areas to serve local constituents, community colleges vary widely in their size, type, organization, and governance, from affiliation with state universities to multicampus districts and single institutions with locally elected governing boards. As of 2000, approximately one-third of all higher education institutions were community colleges, nearly half of all undergraduates were community college students, and almost two-thirds of them were from diverse racial and ethnic backgrounds. Thus, the AACCC represents a highly diversified and still-changing constituency.

*See also:* COMMUNITY COLLEGES; STUDENT SERVICES, *subentry on* COMMUNITY COLLEGES.

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BERTA VIGIL LADEN

## AMERICAN ASSOCIATION OF PHYSICS TEACHERS

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The fundamental objectives of the American Association of Physics Teachers (AAPT) are the advancement of the teaching of physics and the furtherance

of the role of physics in our culture. The association serves as the spokesperson for physics teachers at all levels of education and welcomes to membership all physicists who are interested in education.

### Program

The AAPT is one of the founding-member societies of the American Institute of Physics (AIP) and elects five members to the AIP government board. The AAPT also works closely with the American Physical Society (APS). There is close cooperation among the three organizations in educational programs. Some projects, such as the Physics Teacher Education Coalition (PhysTEC) and the National Task Force on Undergraduate Physics, are conducted jointly by the AAPT, the AIP, and the APS.

The AAPT publishes two journals, *The Physics Teacher*, published nine times per year, and the monthly *American Journal of Physics*. The AAPT also publishes the quarterly *Announcer*, which addresses association news and issues. In addition, the AAPT maintains the "Physical Sciences Resource Center," a website that provides resources and materials useful for teaching physics and astronomy in elementary, middle, and high schools.

The AAPT also gives several awards. The annual Oersted Medal, which recognizes notable contributions to the teaching of physics, is the association's most prestigious award. The annual Millikan Medal is awarded to a man or woman who has made creative contributions to the teaching of physics; the recipient of this medal gives the Robert A. Millikan Lectures at the AAPT's summer meeting. At the winter meeting another lecture, the Richtmeyer Memorial Lecture, is given by a selected member of the physics community. Other AAPT awards include the Klopsteg Memorial Lecture, the Excellence in Undergraduate Physics Teaching Award, the Excellence in Pre-College Physics Teaching Award, and the AAPT Distinguished Service Citation. The citation is given to four to six people each year. Past AAPT award winners have included Carl Sagan, Shirley Anne Jackson, Murray Gell-Mann, Enrico Fermi, and Richard P. Feynman.

The AAPT also awards numerous grants, endowments, and scholarships, and sponsors various workshops, conferences, task forces, competitions, and contests related to the study of physics.

### Organizational Structure

The AAPT is made up of forty-six sections representing parts of the United States, Canada, and Puerto Rico. Each section elects its own president and board of officers. The national association is governed by a president and a president-elect, who serve one-year terms, and a secretary and a treasurer, who serve two-year terms.

### Membership

The AAPT offers the following categories of individual membership: regular, junior (students), emeritus, and honorary. Members of AAPT include physics teachers in universities, colleges, and high schools; graduate and undergraduate students enrolled full-time in accredited degree-granting programs; and scientists in industrial and government laboratories. Industrial organizations interested in improving the teaching of physics join the association as sustaining members.

### History and Development

The AAPT was organized in December 1930 by a vigorous and influential group of physicists. In 1958 the association was incorporated under the laws of the state of New York, and in 1959 it was granted tax-free status. Starting with forty-two members in 1930, the organization has now grown to a membership of thousands.

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## AMERICAN ASSOCIATION OF SCHOOL ADMINISTRATORS

The American Association of School Administrators (AASA) was founded in 1865. AASA is the professional organization for more than 14,000 educational leaders across America and in many other countries. Its members are superintendents of public school systems, assistant and associate superintendents, principals, graduate students, and professors of educational administration, as well as others interested in educational leadership.

### Purpose

AASA's mission is to support and develop effective school system leaders who are dedicated to the highest quality public education for all children. The four major focus areas for AASA are:

- Improving the condition of children and youth
- Preparing schools and school systems for the twenty-first century
- Connecting schools and communities
- Enhancing the quality and effectiveness of school leaders

The organization, with a staff of fifty, is one of elementary and secondary education's long-standing professional organizations.

### Publications and Programs

AASA publishes a monthly magazine, *The School Administrator*, featuring articles and interviews on leadership, technology, and educational trends and issues. AASA's president, executive director, and guest columnist offer commentary in monthly columns. Its Internet site is a resource for administrators, graduate students, teachers, and members of the public seeking information about education in the news, policy and practice, legislation, and AASA activities.

Other publications include *School Governance and Leadership*, published for superintendents and school boards; the *AASA Bulletin*, a supplement to *The School Administrator*; and a variety of titles published in cooperation with Scarecrow Education.

The National Conference on Education, held annually, attracts more than 10,000 school system leaders, school board members, professors, and more than 350 exhibitors to its program sessions and exposition. Other conferences and seminars are held

throughout the year for rural and suburban school system leaders, women administrators, and the officers and staff of AASA's chartered affiliates.

### Governance

AASA is governed by an elected executive committee of twelve members, elected by the membership for three-year terms. The president appoints one member to the executive committee. The membership annually elects a president-elect, who serves a three-year sequence of one year as president-elect, then president, and immediate past president. The delegate assembly, comprising members from every state, meets annually to adopt resolutions that help determine the policy and action agendas for the association.

### Membership

Active membership in AASA is open to anyone employed in school district administration; associate, college professor, graduate student, and retired memberships are also available. As of 2001 the total membership exceeded 14,000. Financial support comes from membership dues, publication sales, conference registrations and exhibits, sponsorships, and federal and private foundation funding for specific programs.

### Influence

AASA maintains an active presence on Capitol Hill, effectively lobbying the U.S. House of Representatives and Senate on behalf of its members. The association has been active in advocating for increased funding and resources for schools serving large numbers of poor children; for additional funding for small, rural schools; and for full funding for special education provisions. The Legislative Corps, a grassroots-based communications network of AASA members who agree to respond to e-mail alerts by contacting their legislators, extends the influence of the government relations effort through messages from local administrators to their representatives in Washington, D.C.

AASA seeks to improve the preparation and skills of school system leaders through reform of educational-leadership preparation programs and improvement of the conditions surrounding the superintendency. Through leadership of the National Policy Board of Educational Administration and other programs, the association works to ensure that preparation programs are redesigned to meet the

current needs of school systems and their leaders. AASA collaborates with other professional organizations to better inform the public about the accomplishments of public school systems and to build support for improved educational opportunity for all students.

### History

AASA is a nonprofit association that was organized in 1865 by state and city school superintendents attending a meeting of the National Teachers' Association in Pennsylvania. At its first meeting in 1866 the group adopted the name National Association of School Superintendents. In 1870 the association became the Department of School Superintendence within the National Education Association. The association was part of the National Education Association until 1973, when it became an autonomous organization.

*See also:* EDUCATIONAL LEADERSHIP.

### INTERNET RESOURCE

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PAUL D. HOUSTON

## AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES

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The American Association of State Colleges and Universities (AASCU) is a Washington, D.C.-based organization whose more than 430 members include U.S. public colleges, universities, and thirty systems of higher education. More than half of the students in public four-year institutions in America are enrolled in colleges and universities that belong to AASCU. According to the AASCU website, as of 2001 more than one-third of the bachelor's degrees, more than one-quarter of the master's degrees, and almost 10 percent of the doctorates in the United States have been awarded by AASCU members.

AASCU's basic aims are to increase knowledge of the importance of public higher education in the United States and to identify the distinctive contributions of AASCU institutions. The association operates through a series of commissions, committees,

and task forces in which the membership's chancellors and presidents participate in discussions and take action on the major issues in higher education. AASCU aids its members in building academic quality, intellectual diversity, and academic freedom. The mission of AASCU is supported by a structure of operating divisions. For example, the association's Division of Government Relations and Policy Analysis monitors and analyzes public policy relating to higher education and acts as an advocate for its members in policy matters at the national, state, and campus levels. Within the division, Federal Relations and Policy Analysis lobbies for AASCU members, keeps the membership informed on current legislative proposals, and arranges for presidents and chancellors to testify before congressional committees. State Relations and Policy Analysis looks at affairs at the state level and keeps the membership informed through "EdLines," a weekly online news service; the annual *State Issues Digest*; and the *State Issues Network*. The subdivision of State Relations is cosponsor of an annual State Relations conference. AASCU has an Office of Urban and Metropolitan Programs, which maintains an information clearinghouse and acts as an advocate for urban institutions. The association has an Office of Rural Programs, which represents the interests of rural institutions of higher education and aids these institutions in revitalizing rural America.

The Division of Academic Leadership and Change deals with academic program issues. Its Office of Teacher Education seeks, through collaborative efforts, to improve teacher preparation. An International Education Office promotes AASCU members' participation in international education. There is also an Office for the Advancement of Public Black Colleges (OAPBC), cosponsored with the National Association of State Universities and Land Grant Colleges (NASULGC), which advocates the advancement of historically black public colleges and universities.

AASCU has two national conferences each year—a summer council, held in July, which brings together college and university presidents and their families for professional development, and an annual meeting in November for discussions of national higher education policy issues. The organization makes available professional development and support for member chief executive officers and their spouses. The spouse program provides an opportunity for presidents' spouses to meet during the na-

tional meetings. A spouse-mentoring program assists the spouses of new presidents and chancellors.

The association has a history of advocating low tuition and equal opportunity. It aids its institutions in finding ways to increase access to higher education for historically underrepresented and financially disadvantaged students, and it helps colleges and universities promote diversity. AASCU's president is a member of the small group of higher education associations that meets informally once a week to discuss issues of common interest, particularly in relation to federal legislation that affects their members. This group, often identified as the Big Six, represents the major types of higher education institutions in the United States. AASCU's membership overlaps with the NASULGC and the American Association of Community Colleges (AACCC), and these three often find common ground for cooperation on federal policy, promoting low tuition, and exploring state and urban issues.

One of the major associations representing public higher education, AASCU was created in response to the rapid expansion of a higher education sector in the 1960s and 1970s that was underrepresented nationally: comprehensive state universities, many of which had been teachers' colleges; municipal universities; agricultural schools; institutes of technology; and four-year institutions that had been community colleges.

*See also:* AMERICAN ASSOCIATION OF COMMUNITY COLLEGES; AMERICAN COUNCIL ON EDUCATION; ASSOCIATION OF AMERICAN COLLEGES AND UNIVERSITIES; NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES.

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HARLAND G. BLOLAND

## AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS

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The American Association of University Professors (AAUP) held its first meeting in 1915, in response to a 1914 call by a committee of full professors at Johns Hopkins university to organize a national association of professors. Concerned about the faculty role in college and university decision-making, the committee members made clear that the new organization was to serve university professors in ways parallel to the ways that the American Medical Association served doctors and the American Bar Association served lawyers, and the AAUP addressed many professorial concerns in its early years. The most pressing concern was academic freedom; although, according to the association's first president, John Dewey, academic freedom issues were thrust upon the organization.

The first academic freedom investigations, at the University of Utah and the University of Colorado, where the presidents had dismissed faculty members, set the precedent for future AAUP investigations, focusing on the reform of institutional practices and procedures. The association representatives negotiated with all of the parties involved (including dismissed professors not qualified for AAUP membership, administrators, and trustees) and the association published all of the evidence. The first AAUP report on the principles of academic freedom and academic tenure was the 1915 *General Declaration of Principles and Practical Proposals*. The report served as the basis for a 1925 conference on academic freedom that resulted in a code of academic freedom, the 1925 *Conference Statement on Academic Freedom and Tenure*. By 1930 the association recognized that it needed a method to inform professors, administrators, trustees, students, and even the general public when colleges and universities failed to meet the standards of academic freedom and tenure. In 1931 association members agreed to publish a list of such institutions, institutions that in 1938 became known as *censured* colleges and universities. The

AAUP still uses this method of highlighting the most intransigent administrations and governing boards.

The AAUP appointed its first full-time general secretary, Ralph E. Himstead, in 1935. Himstead was influential in the negotiations between the AAUP and the Association of American Colleges (AAC) dealing with a revision of the 1925 *Conference Statement*, insisting upon implementation of a maximum acceptable probationary period of seven years for professors in tenure-track positions. These negotiations resulted in the 1940 *Statement of Principles on Academic Freedom and Tenure*, which the AAUP continues to use, and the association has secured endorsement of the statement by a wide range of education associations.

### AAUP Committees

From its beginning the AAUP has designated its standing committees by letter—including Committee A for academic freedom, Committee T for governance issues, and Committee Z for salary concerns. Association concerns about professors' economic conditions began in 1916 when it negotiated with representatives of the Carnegie Foundation for the Advancement of Teaching to determine the future of a rapidly decreasing pension fund for professors. In 1920 Committee T presented the results of the first AAUP survey of faculty participation in institutional governance, concluding that extensive faculty participation was rare. Subsequent Committee T reports in the 1920s and 1930s reiterated that finding.

### Post–World War II Activities

In the decade following the end of World War II, the AAUP began a period of inaction, especially in the area of investigations of alleged violations of academic freedom. The association did not publish any investigations of alleged violations of academic freedom and tenure from the summer of 1949 until the spring of 1956, even though professors were under attack. Senator Joseph P. McCarthy was the primary force in these attacks, but requirements such as loyalty oaths for faculties and trustees' condemnations of irreligious professors went far beyond McCarthy's work in the United States Senate. The AAUP leadership feared the consequences of investigating the attacks, and the association offered no defense of beleaguered professors.

General Secretary Himstead died in 1955, and he was replaced by Ralph F. Fuchs. Fuchs accelerated the removal of the backlog of Committee A cases by

appointing a special committee to report on academic freedom cases arising since 1948. The committee exercised considerable caution in its 1956 report in response to still powerful anti-Communist sentiments; the report also signaled, however, a renewed AAUP commitment to academic freedom principles. William P. Fidler became the AAUP's general secretary in 1958, a position he would hold until 1967. The AAUP enjoyed considerable success while Fidler was general secretary, expanding its programs in a variety of areas.

In 1958 Committee Z began a remarkable program to address members' concerns about their low salaries and benefits. The committee began not only to survey colleges and universities to determine institutions' salary scales for professors, it also began grading the salary scales. This program continued until the 1980s, and the AAUP continues to publish an annual report of professors' salaries at most U.S. colleges and universities.

Also in 1958 Committee T began to develop a revision of a statement of principles on faculty-administration relationships that had first been presented in 1937. In the early 1960s the committee began negotiating with representatives of the AAC and the American Council on Education in order to develop a statement on governance. In 1966 the AAUP approved its *Statement on College and University Government*, a statement soon endorsed by the AAC, the American Council on Education, and the Association of Governing Boards of Universities and Colleges. The statement espoused a cooperative approach to governance, arguing that governing boards and administrations, faculties, and students all had important responsibilities in the operations and policies of colleges and universities.

The association initially expressed an interest in legal proceedings with the 1958 decision to file an *amicus curiae* brief in a United States Supreme Court case (*Barenblatt v. United States*, 360 U.S. 109, June 8, 1959) on academic freedom. In 1954 Professor Barenblatt refused to answer some questions, on the basis of the First Amendment, at a hearing of a subcommittee of the House Un-American Activities Committee. Although the Court used AAUP arguments to sustain a decision contrary to the association's arguments (the Court upheld Barenblatt's conviction for contempt of the United States Congress), the association had developed another means of addressing faculty concerns. Since then the AAUP

has often filed briefs in court cases, typically in support of professors' grievances.

By 1964 the AAUP leadership recognized that the faculty union movement was developing and began to raise questions about the association's role in collective bargaining. Despite the organizers' intent to create a professional association, the AAUP had often faced claims that it was a trade union, and association leaders had consistently denied any affiliation with unions and based association programs on negotiations with administrators and trustees. When the AAUP first approved collective bargaining in 1966, it did so as a tentative organizational commitment, declaring faculty unionization to be appropriate under only the most extreme conditions of administrative intransigence. In 1972 the AAUP established a firm commitment to faculty collective bargaining, although a substantial number of leaders and members were not convinced of the wisdom of such activity. For several years the association struggled with its new role, on the one hand continuing its work to reform practices in higher education, while on the other assisting local faculties in their efforts to unionize, an activity that at times led the AAUP into direct conflict with college and university administrations.

Since the mid-1970s the AAUP has attempted to address faculty concerns on a wide range of issues—in addition to academic freedom, tenure, and faculty unions. The association has offered policy statements on such matters as hate speech, the relationship of gender and race to academic freedom, and the rapid increase of part-time faculty members. It also continues to provide assistance to college and university faculties considering unionization. Most importantly, however, it remains the primary voice for professors on issues relating to academic freedom and tenure, supporting professors' unique opportunity to offer reasoned, even critical, assessments of the world at large.

*See also:* ACADEMIC FREEDOM AND TENURE; FACULTY ROLES AND RESPONSIBILITIES; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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PHILO HUTCHESON

## AMERICAN ASSOCIATION OF UNIVERSITY WOMEN

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The American Association of University Women (AAUW) is an education organization open to women who hold baccalaureate or higher degrees from a college or university on the AAUW list of qualified institutions or from foreign institutions recognized by the International Federation of University Women. In keeping with its purpose of practical educational work, the association develops programs that enable college women to continue their intellectual growth and to further the advancement of women in universities and colleges around the world. The AAUW also supports gender-discrimination lawsuits and works to promote legislation concerning issues of importance to women, such as equity in education, family and medical leave, child day care for working parents, reproductive rights, equal pay for equal work, affirmative action, and access to adequate health care.

### Program

For more than a century the AAUW has endeavored to improve the quality and effectiveness of education for women and girls at all levels. AAUW branches across America work to discourage discrimination and promote gender-fair practices in the classroom. Members develop mentoring programs and encourage girls and women to study mathematics, science, and technology. Its members also initiate communi-

ty-action projects and lobby local, state, and national legislators on women's issues. Analyzing their individual community needs, local branch members throughout the country have launched a variety of volunteer service projects embracing such activities as career guidance and scholastic counseling; working for school bond issues; cooperating with Head Start officials; and publishing valuable education information, such as lists of preschools and local compilations of scholarships and loans for prospective college students. Continuing interests of AAUW branches include mental health, aging, family-life studies, and the American judicial system. The AAUW also supports the United Nations, United Nations Children's Fund (UNICEF), and United Nations Educational, Scientific and Cultural Organization (UNESCO).

Basic to the AAUW's educational activities has been a drive for adequate financing and staffing of public schools by federal, state, and local governments. A standing committee on legislation assists branches in following the progress of pertinent bills at all levels, with emphasis on aid to education, foreign assistance, international cooperation and trade agreements, assistance for the disadvantaged, consumer education, urban problems, and protection of the physical environment.

In 1958 the AAUW established the AAUW Educational Foundation, which awards nearly \$3.5 million annually in fellowships and grants, making it the world's largest source of funding exclusively for women scholars. Over 7,800 awards have been made to women in 120 countries since the AAUW was founded. Notable AAUW awardees have included Marie Curie, Barbara McClintock, and Judith Resnik. Between 2001 and 2002 a total of 287 women received funding from the AAUW Education Foundation. The Education Foundation also supports numerous community-action projects and symposia, round tables, and forums that promote education and equity for women and girls.

The Education Foundation fellowship and grant programs include American Fellowships of up to \$30,000 for doctoral candidates and postdoctoral researchers; Career Development Grants of up to \$8,000 for college graduates who wish to advance their careers; Community Action Grants of up to \$7,000 for individual or organizational research programs that promote education and equity for women; Eleanor Roosevelt Teacher Fellowships of up to \$5,000 for women teachers in public schools;

and International Fellowships of up to \$30,000 to help women who are not U.S. citizens pursue university-level research. AAUW's Selected Professions Fellowships offer up to \$20,000 to U.S. citizens who follow certain designated degree programs where women have traditionally been underrepresented, particularly architecture, computer sciences, engineering, and mathematics. In 1969 the foundation established the Coretta Scott King Fund, which gives educational grants to talented but economically disadvantaged African-American women studying in specific fields. The Education Foundation also makes one annual University Scholar-in-Residence Award of up to \$50,000 to support a woman scholar doing research on gender-equity issues.

In addition, the Education Foundation makes three annual national awards to recognize outstanding achievement by women scholars; these are the AAUW Recognition Award for Emerging Scholars, the Founders Distinguished Senior Scholar Award, and the Annie Jump Cannon Award in Astronomy. The Eleanor Roosevelt Fund Award, presented biennially, honors an individual or institution for outstanding contributions to women's equity and education.

In 1981 the AAUW established the Legal Advocacy Fund to help women students and educators fight sex discrimination at colleges and universities. The fund accomplishes this goal through campus education and outreach programs, which draw attention to the problem of gender inequity at educational institutions. The fund also provides financial support for sex discrimination lawsuits and enlists volunteer attorneys and social scientists to serve as legal consultants. The Legal Advocacy Fund makes an annual \$10,000 Progress in Equity Award to recognize efforts to improve the climate for women on campus. Publications from the AAUW national office include *Action Alert*—a monthly public policy newsletter, *Outlook*—a magazine with articles discussing women's rights issues and describing leaders in the movement for women's rights, such as Ruth Bader Ginsburg, Shirley Chisholm, and Donna Shalala; and *Get the Facts*—e-mail and fax alerts that provide members with information about important legislation and congressional proposals that affect women and families. The AAUW also publishes numerous bibliographies, study guides, and legislative guides.

## Organizational Structure, Membership, and Funding

The AAUW is made up of three units: the association, a 150,000-member organization with more than 1,500 branches in fifty states, the District of Columbia, Guam, and Puerto Rico; the Education Foundation, which funds community action projects and offers fellowships and grants to outstanding women scholars; and the Legal Advocacy Fund, which supports women seeking judicial redress for sex discrimination at colleges and universities.

National AAUW officers are women distinguished in academic and civic life. The principal officers are elected at biennial conventions and serve four-year terms. The organization is composed of members-at-large and branch members, the branch being the basic unit through which the association functions in a community to promote its purposes and policies. All branches are members of their respective state divisions, which are organized into ten geographical regions. Each region has a vice president who is on the national board of directors.

All AAUW members are automatically affiliated with the International Federation of University Women, which unites the association in various countries. Dues are the main source of funds. The fellowships program is voluntarily supported by contributions from AAUW members, fund-raising projects in branch associations, bequests, and corporate and institutional sponsors. Endowment funds are used for fellowships, research, and publications.

## History and Development

The forerunner of the AAUW was the Association of Collegiate Alumnae, organized by 65 young women graduates in Boston, Massachusetts, in 1882. It was joined by the Western Association of Collegiate Alumnae (ACA) in 1889. In 1921 the ACA and the Southern Association of College Women combined to form the American Association of University Women.

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## AMERICAN COUNCIL OF LEARNED SOCIETIES

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The American Council of Learned Societies (ACLS) is a private, nonprofit federation of sixty-six national scholarly organizations in the humanities and social sciences. The object of the council, as set forth in its constitution, is the "advancement of humanistic studies in all fields of learning and the maintenance and strengthening of relations among the national societies devoted to such studies." The council funds humanities scholarships, convenes meetings and conferences that identify and address issues of concern to the academic humanities and its constituent learned societies, and advocates on behalf of the academic humanities.

### Purpose

ACLS is best known as a funder of humanities research through fellowships and grants awarded to individuals and, on occasion, to groups and institutions. The centerpiece of this work is the ACLS Fellowship Program. ACLS Fellowships are designed to permit recipients to devote six to nine months of research and writing in such fields as literatures and languages, history, anthropology, political and social theory, philosophy, classics, religion, the history of art, linguistics, musicology, and the study of diverse world civilizations and cultures. The intensive peer-review process that results in the selection of these fellows is an opportunity for distinguished scholars to reach broad consensus on standards of quality in humanistic research.

An endowment provides the funds that the ACLS Fellowship Program awards to individual scholars, but the council also funds scholarly re-

search through regranting funds awarded to it by foundations, the U.S. government, and foreign organizations. Some of these programs are focused on particular fields, such as the Henry Luce Foundation/ACLS Dissertation Fellowship in American Art that supports Ph.D. candidates working on the history of the visual arts of the United States. With the support from the Andrew W. Mellon foundation, the ACLS has begun a program of Frederick Burkhardt Residential Fellowships for Recently Tenured Scholars, designed to allow a small number of younger scholars in the humanities to undertake long-term, ambitious scholarly projects. The Charles A. Ryskamp Fellowship Program, also supported by the Andrew W. Mellon Foundation, provides sizeable fellowships to advanced assistant professors who have advanced their fields and who have well-designed and carefully developed plans for new research.

The ACLS has long engaged in international studies by providing opportunities for American scholars to advance scholarly projects on an international basis and by developing contacts with overseas academic communities. The development of area studies in this country owes much to the impetus provided by the ACLS. In the 1920s the ACLS became one of the first American scholarly organizations to promote studies of East Asia. The original concept of organizing scholarly expertise around an area or cultural region grew out of the council's early work in Oriental studies and language training, and its ability to bring a wide variety of humanists and social scientists together in interdisciplinary work. ACLS made it possible to launch area studies and sustain them over an extended period. After World War II, when the practical need for such competence was evident, ACLS and the Social Science Research Council joined to organize and develop African, Asian, Latin American, Near and Middle Eastern, Slavic, and East and West European studies. For more than forty years, the council has cooperated with the Social Science Research Council in organizing research and area studies on global issues. The ACLS Committee on East European Studies has expanded and consolidated scholarship on that region; it publishes *East European Politics and Societies*, the only significant peer-reviewed scholarly journal dedicated to that field. With funding from the Carnegie Corporation of New York, ACLS has begun a program proving grants to sustain individuals in Belarus, Russia, and Ukraine who are doing exemplary

work in a time of crisis and contraction, so as to assure continued future leadership in the humanities.

Among the council's publication ventures, the most ambitious and substantial is the *American National Biography* (ANB), which was published in print in 1999 and in an online version in 2000. The ANB is, in print, a twenty-five volume collection of approximately 18,000 biographies of significant individuals in American history, written by more than 7,000 expert authors. It is a successor to the *Dictionary of American Biography*, first published in 1928 and also sponsored by ACLS. Also important is the *Dictionary of Scientific Biography*, with articles on significant scientists from antiquity to modern times. A third major reference work, the *Dictionary of the Middle Ages*, was completed in 1989. In addition to these reference works, other publications of importance to scholarship sponsored by ACLS include the ongoing publication of the *Correspondence of Charles Darwin* in a thirty volume edition. The ACLS also published a critical and definitive edition of the *Works of William James* in nineteen volumes and supports the ongoing preparation and publication of the *Correspondence of William James* in twelve volumes. In 1999 ACLS, together with five of its constituent learned societies and ten university presses, launched the History E-Book Project, which will publish, in electronic format, both new and time-tested works of history.

The ACLS, as the most broadly based organization representing scholars as scholars rather than as specialists in particular fields, is well-positioned to serve as advocate on behalf of the scholarly humanities in public forums and policy arenas. The council's critical role in helping to establish (in 1964) and to reauthorize (in 1985) the National Endowment for the Humanities (NEH) is perhaps the most notable example of its exercise of this function.

ACLS draws together learned societies and affiliates for consideration of shared concerns, particularly those related to maintaining and improving conditions for scholarship, education, and communication among scholars in the humanities. Each member society appoints a delegate, who serves as its representative. The delegates gather each year at the ACLS annual meeting. The principal staff members of the constituent societies comprise the conference of administrative officers, which meets in the fall and again in the spring.

Through its committees ACLS has encouraged the development of research in many fields, set

criteria and professional standards, planned and accumulated bibliographical and reference materials, and helped to establish scholarly journals. Several national societies of scholars had their beginnings in ACLS committees. Among these are the Medieval Academy of America, the Renaissance Society of America, the Far Eastern Association (now the Association for Asian Studies), the American Studies Association, the American Association for the Advancement of Slavic Studies, and the Middle East Studies Association.

### Organization

The council consists of a fifteen-member board of directors and one delegate from each constituent society. An elected board of directors establishes and reviews policies, sets strategic directions, oversees the investment of endowed funds, and reports on all major decisions to the constituent societies. The council holds an annual meeting, elects officers and members of the board of directors, provides general and fiscal oversight, and assisted by the executive committee of the delegates, admits new members. Membership in the ACLS is restricted to organizations. There are three types of membership. The constituent learned societies of the American Council of Learned Societies are national or international organizations in the humanities and related social sciences. Associate members are a group of more than 200 colleges, universities, research libraries, and other scholarly institutions that each year signal their commitment to the work of the council through their financial contributions. Affiliate members are organizations and institutions (such as the Association of Research Libraries and the Federation of State Humanities Councils) whose goals and purposes are closely linked to those of ACLS.

The ACLS is supported by income from endowment, dues from constituent societies and affiliates, contributions from college and university associates, private and public grants, government contracts, and private gifts.

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## AMERICAN COUNCIL ON EDUCATION

The American Council on Education (ACE) is a national association of accredited, degree-granting colleges and universities, higher education associations, and other educational organizations. ACE is the premier public voice for higher and adult education, a definer of issues, and a leader in coordinating higher education policies and in representing higher education to government. The chief executives of the 1,800 member organizations are generally the representatives to ACE.

The council seeks to create consensus on policy issues among the associations in the Washington, D.C., higher education community. One of its most important tasks is to lobby Congress and the federal agencies, presenting a coherent, unified voice for higher education on particular issues. ACE has commitments to support increases in federal aid to students and to limit the federal regulatory burdens on colleges and universities. The council promotes diversity in higher education and has engaged the issue of how to strengthen teacher education.

The council maintains an extensive research program on higher and adult education, and it offers advice to institutions on such matters as minority and women's issues and college and university administration. ACE initiated a higher education/business forum, which brings together corporate leaders and higher education executives for discussions of mutual interest, and the organization administers the General Educational Development (GED) tests for adult learners. ACE publishes a semimonthly newsletter, *Higher Education and National Affairs*; a triennial magazine, *The Presidency*; and a number of special reports; and is involved in book and guide publishing with Greenwood Publishing Group's ACE/Oryx Series on Higher Education.

The council is the leader and convener of a series of informal and formal groups, which meet to discuss issues and coordinate activities, particularly in the federal relations area. At the center of coordination and policy is the group often called the Six or the Big Six. The Six include ACE's president, as the convener, and the chief executive officers of five other Washington, D.C., associations: the Association of American Universities (AAU), the National Association of State Universities and Land-Grant Colleges (NASULGC), the National Association of Independent Colleges and Universities (NAICU), the American Association of State Colleges and Universities (AASCU), and the American Association of Community Colleges (AACC). These represent the major sectors of accredited higher education institutions in the United States. As part of its coordinating responsibilities, ACE convenes the Washington Higher Education Secretariat, a group of more than forty-five higher education associations whose representatives meet monthly to discuss higher education issues and affairs.

The American Council on Education was founded in March 1918 as the Emergency Council on Education, a federation of fourteen national educational associations, to coordinate higher education's resources to meet national wartime needs. The presidents of colleges and universities were concerned with the unpredictability of federal government decisions that affected higher education, and they worried that wartime conditions would sharply curtail the number of students who would attend colleges and universities. In July 1918 the Emergency Council on Education changed its name to the American Council on Education. It set up a permanent Washington, D.C., office and named a director, Samuel Capen, who had been head of the federal Bureau of Education. One of his early acts was to establish the *Educational Record*, a quarterly journal that published articles on higher education.

From the beginning, ACE viewed itself as an umbrella organization, a vehicle that would speak for all of higher education on general education questions. Initially its members were associations of colleges and universities. ACE argued that because its membership covered all of higher education, and thus did not speak for any particular group in higher education, the council could speak for all of higher education. However, even as an association of associations, ACE offered to give financial and curricular advice to individual institutions. During the 1920s,

ACE expanded its interests to include international education, attempting to give some order to a confusing field by incorporating several international education associations.

In 1919 ACE defined its membership to include colleges and universities as well as associations. This gave the association a stronger financial base, provided a means for broadening its activities, and protected it from the charge that its purposes and activities were too far removed from the problems of individual institutions. However, the decision immediately engendered charges of duplication and overlap. Institutions were now members of ACE as well as members of the other presidential associations, such as the Association of American Universities (AAU). If a university was represented to the council through its national association, for example AAU, why did the institution need to also be a member of ACE? The issue of the relationship of institution and association membership in the council was to plague ACE for many years.

In the 1930s membership in ACE brought in representatives from lower education, including state departments of education and city school systems. They were later joined by some private secondary schools and, by 1940, town school systems. Then some trade associations and business corporations became members of ACE, and the council entered into some business arrangements. These activities added to the complexity of developing coherent coordinative policies.

In 1950 ACE purchased a building on Massachusetts Avenue large enough to accommodate its growing needs and to house fifteen other major higher education associations. Another move came in 1968, when the Kellogg Foundation funded the building of the National Center for Higher Education at One Dupont Circle. More than forty associations occupied the offices, managed by the council.

Representing higher education to the federal government has always been one of the most important but difficult activities of ACE. The various sectors of higher education have regularly presented different and sometimes opposing interests they wished to foster and protect. Public and private institutions at times have been divided on the question of how federal student aid should be distributed. The interests of research-dominated, graduate institutions and the perspectives of institutions emphasizing undergraduate education have not always

coincided. These and other conflicting interests reflected in the policies of the Washington, D.C., associations have made it difficult to find common ground among its members on which to present a unified position to Congress and the significant government agencies. Nevertheless, when the associations are in agreement, they can act swiftly and effectively.

For many years, the Washington, D.C., higher education associations were reluctant to enter the political arena with sustained, coordinated efforts. They and their constituents thought lobbying was unseemly for higher education, and they felt constrained by laws that restricted lobbying among non-profit organizations to a minor part of their activities. ACE tended not to act until it had some agreement among its association and institutional members. As a result the council was often accused of reacting slowly to events and practices of great concern to its members.

The American Council on Education, in 1962, restructured the council's board to virtually eliminate association representatives and replace them with institutional representation. Also in 1962, the Secretariat, a group of higher education association members of ACE, was created, partly as a result of the lack of association representation on the ACE board.

In the 1960s ACE and the other major associations entered into intensified relations with the federal government. Congress was in the process of passing major legislation to provide aid for higher education, including the Higher Education Act of 1965. The issue was whether the legislation would emphasize aid to institutions or directly to students. ACE took the lead in lobbying for aid to institutions of higher education. However, the 1972 amendments clearly emphasized direct aid. ACE's reaction to this defeat was to strengthen its governmental relations division and establish a policy analysis service. Also, in 1972 the ACE board was restructured to include six elected association representatives. In 1978 representation on the ACE board increased to thirteen associations.

In the 1980s major objectives for ACE and the other associations were to increase federal funding for student assistance programs, reduce the imbalance between federal student loans and grants, and increase the federal government's commitment to academic research. Through the 1990s ACE contin-

ued to emphasize coordination among the Big Six associations, increased federal support for student financial aid, improved policy analysis and research capacity, and reduced negative consequences for colleges and universities from the proliferation of federal regulations. The first Republican Congress in many years encouraged ACE and the other associations to seek a more bipartisan relationship than they had under Democratic majorities. The Big Six faced challenges in the 1990s that included major attacks on higher education for the rising cost of tuition, misconduct charges in university research, high levels of student loan defaults, overemphasis on rewarding research over teaching, and not paying enough attention to undergraduate education. The associations confronted the issues of academic earmarking and the creation of State Postsecondary Review Entities (SPREs), which threatened to sharply increase federal and state accountability controls over institutions of higher education. The Council for Postsecondary Accreditation (COPA), the national umbrella organization on accrediting, disintegrated, and the Big Six associations became deeply involved in creating a new national organization on accrediting.

ACE and the other members of the Big Six remain a cohesive voice for higher education, and despite having been joined by a large number of other groups interested in lobbying Congress on issues related to higher education, ACE and the other presidential associations are still the major voices representing higher education to the federal government.

*See also:* AMERICAN ASSOCIATION OF COMMUNITY COLLEGES; AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES; ASSOCIATION OF AMERICAN UNIVERSITIES; NATIONAL ASSOCIATION OF INDEPENDENT COLLEGES AND UNIVERSITIES; NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES.

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## AMERICAN FEDERATION OF TEACHERS

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The American Federation of Teachers (AFT) is a nationwide union of more than one million public school teachers, higher education faculty and staff, public employees, nurses and health care professionals, and paraprofessionals and other school-related personnel. The AFT is affiliated with the American Federation of Labor and the Congress of Industrial Organizations (AFL-CIO), a federation of trade and industrial unions representing more than thirteen million people. According to the AFT Futures II Report, adopted July 5, 2000, the union works “to improve the lives of our members and their families, to give voice to their legitimate professional, economic and social aspirations, to strengthen the institutions in which we work, to improve the quality of the services we provide, to bring together all members to assist and support one another and to promote democracy, human rights and freedom in our union, in our nation and throughout the world.”

### Program

Like other labor unions, the AFT works for higher pay and better benefits and working conditions for its members. The union also offers numerous benefits and services to its members, including low-cost insurance, retirement savings plans, credit union services, legal representation, and consumer discounts. The AFT, along with the AFL-CIO, strongly

advocates continued access to free public education and affordable health care. The AFT also negotiates contract provisions relating specifically to the teaching profession, such as class size, student discipline codes, adequate textbooks and teaching materials, and professional development and evaluation.

In the past the AFT has worked to desegregate public schools, eliminate child labor, establish collective bargaining rights for teachers, and address the educational needs of disadvantaged and disabled children. Among the AFT’s major educational reform initiatives during the 1990s and early 2000s was the *Lesson for Life: Responsibility, Respect, Results* campaign. Launched in 1995, this initiative promotes high academic standards, stronger curricula, and more safe and orderly classrooms. The AFT’s annual *Making Students Matter* report examines and evaluates academic standards in all fifty states. The *Educational Research and Dissemination Program* is a professional development program that uses a “train-the-trainer” approach in which subject matter experts help teachers improve their teaching of core subjects. The AFT’s *Zero Tolerance* initiative works toward implementing stricter policies for violent and disruptive behavior in schools so that teachers can teach and students can learn in a safe environment. The *Support for the National Board for Professional Teaching Standards* initiative promotes higher standards for teacher certification, including National Board certification, and salary increases for teachers who pass the board exam. Other AFT programs and initiatives address such issues as merit pay, distance learning, whistle blower protection, charter schools, and low performing schools. The AFT asserts that such reforms would be more effective in improving the quality of education than voucher systems of tuition payment or privatization of public schools.

The AFT also addresses issues of specific concern to the various branches of its membership. For members involved in higher education, the union tackles such issues as tenure, the role of part-time faculty, and the high cost of secondary education. For AFT members who are public employees, the union works to improve labor-management relations, job security, and the public perception of the value of government employees. The AFT must take on a wide range of issues, including professional certification and occupational safety, for the diverse body of workers called paraprofessionals and other school-related personnel. For nurses and health care

professionals, the AFT's *Health Care Quality First* campaign fights to protect the quality of patient care and preserve safe staffing levels for nurses and other health care professionals in the face of profit-driven managed health care and restructuring in hospitals and clinics.

The AFT holds a large annual convention every summer, and sponsors numerous meetings and conferences throughout the year on a variety of topics. The AFT also sponsors scholarships and educational grants for members and their children. Since 1992 the Robert G. Porter Scholars Program has awarded \$1,000 grants to AFT members who want to pursue courses in labor relations and related fields, and \$8,000 four-year college scholarships for dependents of AFT members who wish to study labor, education, health care, or government service.

ATF periodical publications include the weekly e-mail newsletter *Inside AFT*, the monthly journal *American Teacher*, the semimonthly newsletter *Health Wire* for nurses and health care professionals, the quarterly newsletter *PSRP Reporter* for paraprofessionals and other school-related personnel, and the monthly magazine *On Campus* for higher education teachers and staff.

## Organization

The national AFT is headed by a president, executive vice president, and a secretary treasurer who are elected by members. Local affiliates elect their own officers. The union is made up of five divisions: Pre-K–12 Teachers, Higher Education Teachers, Healthcare-Federation of Nurses and Health Professionals, the Federation of Public Employees, and Paraprofessional and School-Related Personnel. The Pre-K–12 Teachers division represents public school kindergarten, elementary, middle, and high school teachers, counselors, and librarians. The Higher Education Division represents more than 120,000 faculty, graduate employees, and professional staff at over two hundred two-year and four-year colleges around the country. The Healthcare-Federation of Nurses and Health Professionals division represent about 60,000 nurses and other health professionals working in hospitals, clinics, home health agencies, and schools in nineteen states. The AFT Paraprofessional and School-Related Personnel Division represents approximately 200,000 support staff in schools from kindergarten through college, including custodians, bus drivers, food service workers, groundkeepers, secretaries, bookkeepers, mechanics, and a

variety of other jobs. The Federation of Public Employees represents more than 100,000 city, county, and state employees in a variety of jobs in twenty-one states.

The AFT's various departments include the Financial Services Department, which assists treasurers and other officers of local AFT affiliates with financial and administrative duties. The Human Rights and Community Relations Department keeps local and state affiliates informed of current trends, publications, and laws related to civil, human, and women's rights. The International Affairs Department provides information to members on important international issues, particularly human and trade union rights for teachers and other professionals around the world. The Union Leadership Institute helps develop the leadership skills of local AFT officers, trains AFT members in activism, and educates members about the union and its activities. The Legislative Action Center keeps track of how the U.S. Congress and state legislatures vote on issues of concern to the union, communicates official AFT positions to elected officials, and enables members to send faxes or e-mails directly to elected leaders on key issues. The Pre-K–12 Educational Issues Department works to educate the public and institute reforms related to such issues as school standards, class size, early education, school choice, safety and discipline, and teacher quality.

## History

The AFT was founded in Winnetka, Illinois, in 1916 by a small group of teachers from three Chicago unions and one Gary, Indiana, union who believed that their profession needed a national organization to speak for teachers and represent their interests. They called their new union the Teachers International Union of America, and named Charles B. Stillman as president. They were joined by other teacher unions in Pennsylvania, Oklahoma, New York, and Washington, D.C. Within days of its establishment, the new union contacted the powerful AFL and requested affiliation. AFL president Samuel Gompers supported the affiliation, but suggested changing the union's name to American Federation of Teachers. The AFL issued a charter to the AFT on May 9, 1916.

Since its early years, the AFT has been on the forefront of the fight for civil rights and was one of the first unions to extend full membership to African Americans. As early as 1918, the AFT called for equal

pay for African-American teachers and, in subsequent years, for the election of African-Americans to local school boards and equal educational opportunities for African-American children. In 1954 the AFT filed a brief before the U.S. Supreme Court in support of the plaintiffs in *Brown v. Board of Education of Topeka, Kansas*. During the 1960s the AFT was actively involved in the civil rights movement and lobbied extensively for passage of civil rights legislation.

The AFT had included paraprofessional and other school-related staff since its early years, but an increasing number joined in the last two decades of the twentieth century. After the 1960s the union's membership grew more diverse as nurses, health care workers, and public employees joined as constituent groups.

*See also:* SHANKER, ALBERT; TEACHERS UNION.

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## AMERICAN OVERSEAS SCHOOLS

American overseas schools are kindergarten through twelfth grade institutions that have U.S. sponsorship through private businesses, churches, parent groups and/or government agencies and serve eligible U.S. students in foreign nations. In Latin American nations, however, such schools are not classified as *overseas*.

These schools typically have a basic American curriculum. Instruction is in English, although other languages—especially that of the host nation—may

be emphasized as well. Attendance by students from the host nation and from other countries is encouraged. Wherever appropriate and applicable, schools attempt to honor host-country rules related to education, so that school years and holidays can vary widely. Many schools in the Southern Hemisphere are in session only from March to December, and church-supported schools often observe special holidays of the sponsoring sect. Most of the schools observe holidays of the host nation—especially in Muslim nations—and some observe holidays of developing countries that have many students in attendance.

Not addressed in this discussion are college programs; special international programs in elementary and secondary schools, such as the International Baccalaureate; schools sponsored by foreign governments and international schools that operate in the United States (such as the United Nations school); and church mission schools in foreign lands, which are aimed primarily at host-nation children.

Two major classifications of American overseas schools exist: (1) dependent schools, operated by the U.S. Department of Defense (DoD); and (2) independent schools, some of which are sponsored by the U.S. Department of State (DoS). Either type of school can accept students from private and military sectors. In instances where there are not enough students to operate a DoD school, tuition is paid by the U.S. military to independent schools. Similar arrangements exist where private-sector dependents are located on or adjacent to a U.S. military site. In 2000 approximately 250,000 U.S. school-age children were overseas; most were enrolled in DoD schools, but these enrollments are dropping and independent schools' enrollments are increasing, a cycle that occurs when cold-war tensions ease.

### Department of Defense Dependent Schools (DoDDS)

Military schools officially started on American frontier posts in 1821, often under the leadership of a chaplain who doubled as the schoolmaster. These schools fluctuated in the recognition and support they received until schools were established in Germany, Japan, and Austria in 1946. DoDDS enrollment then grew rapidly, and by the end of the 1946–1947 school year enrollment had reached 2,992. By 1949 the U.S. Army, Navy, and Air Force were independently operating approximately 100 such units around the world, and by the late 1960s more than

300 schools were operated abroad. Then, in 1964, the Secretary of Defense combined the three separate school systems within the department, and by 1969 more than 300 DoD schools existed.

During the 1960s and 1970s, worldwide K–12 enrollment averaged 160,000 students. In 1976, the Department of Defense assumed the direct management of all of the schools. In 1979, the name for the system became the Department of Defense Dependent Schools (DoDDS), the name still commonly used to identify the system. After the Cold War ended, DoDDS schools decreased in number. As of 2000 approximately 220 schools existed in fifteen foreign countries and Puerto Rico, with about 68 percent of the students enrolled in elementary schools, 15 percent in middle schools, and 17 percent in high schools. All DoD programs are accredited by the North Central Association of Schools and Colleges.

### Independent Schools

Originally, independent schools, at least those sponsored by U.S. government agencies prior to World War II, were limited in number. The Office of Overseas Schools' records list eighteen such schools that existed in the early 1940s, mostly located in Latin America to combat the influence of German-sponsored schools. Before then, few employees took their families overseas. During World War II, the U.S. Department of State did provide some support via grants through the American Council on Education to a small number of schools. Nelson Rockefeller, a presidential adviser at the time, is credited with initiating this effort. During this period, American students either attended a DoD school, a corporate school, a mission school, a boarding school, or they stayed at home in the United States.

By the beginning of President John F. Kennedy's tenure in 1961, many government agencies and private businesses were expanding overseas. Groups of parents started their own schools, but without the benefit of federal aid. In 1961, the Fulbright-Hays Act established the Bureau of Educational and Cultural Affairs, and the Foreign Assistance Act created the United States Agency for International Development (USAID), both of which could give limited grants-in-aid to K–12 efforts. A 1963 Foreign Service Act provision allowed aid for dependents of persons carrying out U.S. government activities overseas. The U.S. Department of State established its Office of Overseas Schools (OOS) in 1964.

### State Department Schools

The major purpose of Department of State (DoS)-supported schools, other than educating American dependents, has been to provide a foreign showcase of democracy through high-quality education programs that are open to both host- and third-nation students. Curricula often are binational for acculturation purposes—and to meet host-nation regulations along with U.S. accreditation standards. In 1998 Congress strengthened U.S. educational activities overseas by returning the U.S. Information Agency to the Department of State. Overseas schools continued to expand and flourish.

In 2000 the State Department supported 181 schools in 131 nations. There is great variety among these schools, ranging from tiny schools such as the American Independent School in Sierra Leone and the American Embassy School in Reykjavik, Iceland, with about a dozen students each, to the Singapore American School, which has more than 2,500 students. Facilities for the schools range from rented homes and American Embassy rooms to multimillion-dollar campuses in such cities as London, Singapore, Madrid, and Manila. A few even have boarding facilities.

### Types of Schools

Independent schools fall into five major categories:

1. *Community schools*, which are nonprofit units supported by governmental and business interests and are established through parents in the area. These schools are the most common type supported by the DoS.
2. *Embassy schools* operate within an embassy or consulate, often for security purposes, and have small enrollments. As the American presence grows in the areas where these schools exist, community schools are often formed and ultimately replace the embassy schools.
3. *Corporate schools*, such as those operated by oil companies, primarily provide private education for children of company employees, whether they are from the United States or other nations. These schools are usually in nations where other U.S. schools do not exist. More than one language track is often involved, and nonemployees' children generally are accepted into the school.
4. *Proprietary schools*, as the name indicates, are

established as a business, with a definite profit motive in mind, or at least with the expectation that sufficient income will be generated to remain solvent as a not-for-profit corporation. Such schools are often started in developing nations, or as exclusive private schools in established areas.

5. *Church schools* with varied curricula and open admissions policies often can meet the American student enrollment needs in a community, and they can also receive tuition aid or special grants for secular purposes to assist with operating costs. These schools, however, are not to be confused with church mission schools, which have a completely different, and definitely religious, purpose.

Governance systems for American independent overseas schools vary. Although local control of public schools in the United States is a well-established feature, such control is often tempered by state and federal regulations. Independent schools overseas attempt to offer opportunities for more direct input from parents because of the insular nature of the enterprise. The bylaws of these schools usually mandate the direct participation of all stakeholders in governance decisions, usually to a much larger extent than would be experienced in American public schools.

Most American overseas schools, however, end up looking very much like schools in the United States. Curricula have common elements, pupil-teacher ratios are similar, texts are standard and represent those usually found in stateside schools; extracurricular activities, including athletics, are numerous and resemble those found in U.S. schools. Part of the reason for this similarity is that the American schooling model is a familiar one; but this also happens because parents are eager for their children to have the same, or at least a similar, school experience as those children “back home.” In many ways, this desire is also prompted by the knowledge that, at some point, children from the overseas school will have to transition back into the stateside school system.

As much as the American overseas schools may wish to mirror those in the United States, the schools are subject to local (foreign) governmental regulation. Schools must follow the laws of the host nation, even if they conflict with the stated mission of the school. Some nations, for example, require instruc-

tion in the official national language. Others control who can become a teacher, using requirements quite different from the licensing standards associated with American teacher preparation. However, if a school wants stateside accreditation, it has to meet the American licensing standards. American overseas schools may also have to incorporate under local law if they wish to conduct business activities in the host country, such as hiring employees, purchasing supplies, maintaining bank accounts, and building or renting facilities. Without such legal status in a country, a school could not operate. The U.S. Embassy in most areas has a legal attaché, provided by the U.S. Department of Labor, who can assist schools in personnel matters.

### Factors Affecting Overseas Schools

American overseas schools are not immune to changes in world policy. The number of DoD schools overseas decreases along with the number of U.S. military personnel located overseas during peaceful times. However, all other types of American overseas schools increase and become more multi-ethnic in the constituency of their governing boards, their staffs, and their students. In fact, in most independent schools in the early twenty-first century, U.S. children were in a minority—although the curriculum had to still meet American criteria and accreditation standards.

All of the schools try to keep up with the latest developments in schooling. Technology, for example, is important, and distance education is a popular means of instruction. However, incorporating the latest innovations is not always easy. For example, at the Karl C. Parrish School in Barranquilla, Columbia, the administrative team made a commitment to build a computer lab. The construction began and all the necessary wiring and furnishings were put into place; even air conditioning was installed. Then the country had a drought and the government declared that there would be daily twelve-hour blackouts because of the shortage of hydroelectric power.

Attracting and retaining qualified teachers and administrative staff can also be a challenge. As attractive as the idea of teaching abroad may be to educators, particularly the notion of travel and new experiences, there are some potential disadvantages to consider. Moving overseas to teach is not a good way to escape problems at home, whether those problems are personal or professional. Such prob-

lems can be magnified in new surroundings, and without well-established support networks in place a newcomer can be at a distinct disadvantage. Foreign environments have a way of testing people; often the greatest test is unpredictability. Therefore, flexibility is one of the most helpful traits a person who wants to embark on an overseas assignment can have. Other attributes that prove helpful are patience and tolerance. There also needs to be an understanding that teachers or administrators who move abroad to accept positions in American overseas schools will become foreigners themselves. And, as foreigners, American teachers abroad may face indifference, intolerance, or outright hostility—just as foreigners in the United States sometimes encounter these attitudes among Americans.

Living and working overseas is often easier on a military base, where the people, customs, and routines are familiar, than it is for educators who choose to work in independent schools. Yet the amount of cultural experience and travel is primarily the choice of the individual teacher, and the opportunities are obvious and unlimited for those who relish exploring new cultures and expanding their global awareness.

### Resources

A number of resources exist that provide information about American overseas schools. The Association for the Advancement of International Education (AAIE) has served primarily the independent sector since 1966. One of AAIE's earliest efforts was to establish school-to-school partnerships between overseas units and stateside counterparts. The mission of AAIE is to be the "preeminent forum for the exchange of ideas promoting intercultural, international education and to be proactive in providing services which meet the needs of American/International schools worldwide" (Simpson and Duke, p. 8).

Another useful resource is the American Overseas Schools Historical Society (AOSHS), founded in 1995 to collect and secure the stories and data relating to U.S. educational efforts overseas. Membership consists primarily of current and former employees and students of DoDDS. The main source of program and personnel information for DoD is the United States Department of Defense Dependents Schools (DoDDS).

Some information about teaching opportunities in overseas schools can be obtained from the Inter-

national Schools Services (ISS). Its annual *ISS Directory of Overseas Schools* is a comprehensive guide to American and international schools worldwide.

*See also:* FEDERAL EDUCATION ACTIVITIES; SECONDARY EDUCATION, *subentry on* INTERNATIONAL ISSUES.

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## ARISTOTLE (384–322 B.C.E.)

Aristotle, the Greek philosopher and scientist, was born in Stagira, a town in Chalcidice. At the age of seventeen he became a member of the Greek philosopher Plato's school, where he stayed for twenty years. After Plato's death in 348 B.C.E. Aristotle taught philosophy, first at Atarneus in Asia Minor, then in Mytilene on the island of Lesbos. Then he became tutor of Alexander the Great at the court of Macedonia. In 335 or 334 B.C.E. he returned to Athens and founded a school called the Lyceum.

Aristotle's first writings were dialogues modeled on Plato's examples; a few have survived in fragmentary form. The main body of writings that have come down to us consists of treatises on a wide range of subjects; these were probably presented as lectures, and some may be notes on lectures taken by students. These treatises lay unused in Western Europe after the collapse of the Roman Empire in the sixth century C.E., until they were recovered in the Middle Ages and studied by Muslim, Jewish, and Christian

thinkers. The large scope of the treatises, together with the extraordinary intellect of their author, gained for Aristotle the title, “the master of those who know.”

The treatises are investigative reports, describing a method of inquiry and the results reached. Each treatise includes: (1) a statement of the aim of the subject matter; (2) a consideration of other thinkers’ ideas; (3) an examination of proposed principles with the aim of determining the one that has the best prospect of explaining the subject matter; (4) a search for the facts that illustrate the proposed principle; and (5) an explanation of the subject matter by showing how the proposed principle explains the observed facts. The treatises were essential to the work of the Lyceum, which was a school, a research institution, a library, and a museum. Aristotle and his students compiled a *List of Pythian Winners*; researched the records of dramatic performances at Athens; collected 158 constitutions, of which only *The Constitution of Athens* has survived; prepared a literary and philological study called *Homeric Problems*; and put together a collection of maps and a museum of objects to serve as illustrations for lectures.

Aristotle’s writings on logic worked out an art of discourse, a tool for finding out the structure of the world. The other subject matters of Aristotle’s treatises are of three kinds: (1) the theoretical sciences—metaphysics, mathematics, and physics—aim to know for the sake of knowing; (2) the productive sciences—such as poetics and rhetoric—aim to know for the sake of making useful or beautiful things; and (3) the practical sciences—ethics and politics—aim to know for the sake of doing, or for conduct. Aristotle said that the theoretical sciences are capable of being understood by principles which are certain and cannot be other than they are; as objects of study their subject matters are necessary and eternal. The productive sciences and the practical sciences are capable of being understood by principles that are less than certain; as objects of study their subject matters are contingent.

Thus Aristotle’s idea was that distinct sciences exist, the nature of each to be determined by principles found in the midst of the subject matter that is peculiarly its own. A plurality of subject matters exists, and there is a corresponding plurality of principles explaining sets of facts belonging to each subject matter. What is learned in any subject matter may be useful in studying others; yet there is no hierarchy

of subject matters in which the principles of the highest in the order of Being explain the principles of all the others.

### Education for a Common End

Unlike Plato’s *Republic* and *Laws*, Aristotle’s treatises do not contain lengthy discussions of education. His most explicit discussion of education, in Books 7 and 8 of the *Politics*, ends without being completed. Yet, like Plato, Aristotle’s educational thinking was inseparable from his account of pursuing the highest good for human beings in the life of a community. The science of politics takes into account the conduct of the individual as inseparable from the conduct of the community. Thus Aristotle holds that ethics is a part of politics; and equally, politics is a part of ethics. This leads him to argue that the end of individuals and states is the same. Inasmuch as human beings cannot realize their potentiality apart from the social life that is necessary for shaping their mind and character, an investigation into the nature of society is a necessary companion to an investigation into the nature of ethics. The good life is inescapably a social life—a life of conduct in a community. For Aristotle, “the Good of man must be the end of the science of Politics” (1975, 1.2.1094b 7–8). In community life, the activity of doing cannot bring into existence something apart from doing; it can only “end” in further doing. And education, as one of the activities of doing, does not “produce” anything apart from education, but must be a continuing process that has no end except further education.

In Aristotle’s explicit remarks about the aims of education, it is clear that, like all activities in pursuit of the good life, education is “practical” in that it is a way of conduct, of taking action. At the same time, in pursuing the good life, the aim is to know the nature of the best state and the highest virtues of which human beings are capable. Such knowledge enables us to have a sense of what is possible in education. Educational activity is also a “craft” in the sense that determining the means appropriate for pursuing that which we think is possible is a kind of making as well as a kind of doing. It is commonplace to say that, in doing, we try to “make things happen.” Education is an attempt to find the kind of unity of doing and making that enables individuals to grow, ethically and socially.

The *Politics* ends by citing three aims of education: the possible, the appropriate, and the “happy

mean.” The idea of a happy mean is developed in the *Nicomachean Ethics*. There human conduct is held to consist of two kinds of virtues, moral and intellectual; moral virtues are learned by habit, while intellectual virtues are learned through teaching. As examples, while humans are not temperate or courageous by nature, they have the potentiality to become temperate and courageous. By taking on appropriate habits, their potentialities can be actualized; by conducting themselves appropriately they can learn to actualize their moral virtues. Thus children learn the moral virtues before they know what they are doing or why they are doing it. Just because young children cannot control their conduct by intellectual principles, Aristotle emphasizes habit in training them. First, children must learn the moral virtues; later, when their intellectual powers have matured, they may learn to conduct themselves according to reason by exercising the intellectual virtues.

Arguing that the state is a plurality that should be made into a community by education, Aristotle insisted that states should be responsible for educating their citizens. In the *Politics*, Book 8, he makes four arguments for public education: (1) from constitutional requirements; (2) from the origins of virtue; (3) from a common end to be sought by all citizens; and (4) from the inseparability of the individual and the community. In most states in the Greek world before Aristotle’s time, private education had prevailed.

Finally, Aristotle’s enduring legacy in education may be characterized as threefold. First is his conception of distinct subject matters, the particular nature and conclusions reached in each to be determined as the facts of its subject matter take their places in the thinking and conduct of the investigator. Second is his insistence on the conjoint activities of ethics and politics, aiming to gain the practical wisdom that can be realized only insofar as citizens strive for the highest good in the context of a community of shared ends. This means that the end of ethics and politics is an educational end. And, third, the education that states need is public education.

Although thinkers may know in a preliminary way what the highest good is—that which is required by reason—they will not actually find out what it is until they learn to live in cooperation with the highest principles of reason. The highest good is never completely known because the pursuit of it leads to

further action, which has no end but more and more action. The contingent nature of social existence makes it necessary to find out what is good for us in what we do; we cannot truly learn what it is apart from conduct. While reason is a part of conduct, alone it is not sufficient for realizing the highest good. Only by our conduct can we find out what our possibilities are; and only by further conduct can we strive to make those possibilities actual.

*See also:* PHILOSOPHY OF EDUCATION.

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## ART EDUCATION

### SCHOOL

Donovan R. Walling

### PREPARATION OF TEACHERS

D. Jack Davis

### SCHOOL

Art is more than creative expression, which has been the dominant theme of art education for much of the twentieth century. Expression is important, but researchers are also finding connections between

learning in the visual arts and the acquisition of knowledge and skills in other areas. According to a 1993 Arts Education Partnership Working Group study, the benefits of a strong art program include intensified student motivation to learn, better school attendance, increased graduation rates, improved multicultural understanding, and the development of higher-order thinking skills, creativity, and problem-solving abilities.

### Curriculum Developments

Art education has its roots in drawing, which, with reading, writing, singing, and playing an instrument comprised the basic elementary school curriculum in the seventeenth century. Drawing continued to be a basic component of the core curriculum throughout the eighteenth and nineteenth centuries, when educators saw drawing as important in teaching handwork, nature study, geography, and other subjects. Art education later expanded to include painting, design, graphic arts, and the “plastic arts” (e.g., sculpture and ceramics), although art continued to be seen primarily as utilitarian.

In the twentieth century, with the advent of modernism, art education in the United States edged away from a utilitarian philosophy to one of creative expression, or art-making for personal development. Art continued to be valued, although less often as a core subject, during the early decades of the century and then declined in importance with the advent of World War II. In the postwar period, particularly after the launch of *Sputnik* in 1957, core-subject emphasis shifted dramatically to mathematics and science. Art education reached a low point in the 1970s, when a shrinking school-age population (the graduating baby boomer generation) and a serious national energy crisis brought about many school closings and program cuts. Art programs were among the first to be reduced or eliminated.

But the 1970s also ushered in a period of intense work by art educators to revive interest in art education. At the Getty Center for Education in the Arts, for example, work began on the implementation of a transformational theory: discipline-based art education (DBAE). This theory proposed that art making (or “studio art”)—the thrust of creative expression—needed to be extended and informed by attention to the complementary disciplines of art history, aesthetics, and art criticism, even when teaching the youngest pupils. DBAE theory, most observers now agree, has been instrumental in rein-

vigorating art education and gaining a place for art in school reform.

Interest in the general quality of U.S. education rose during the 1980s, especially after the 1983 publication of *A Nation at Risk* by the National Commission on Excellence in Education. The commission’s report spoke of “a rising tide of mediocrity” in K–12 schools and ushered in ongoing school reform efforts at all levels. National attention reached a peak in 1994 with the passage of the federal Goals 2000: Educate America Act. This act led to the formation of goal-setting groups, among them the National Coalition for Education in the Arts, which took up the task of ensuring that the arts, writ large, would assume their rightful place within the basic curriculum. This coalition included, among others, the American Alliance for Theatre and Education, the National Art Education Association, the Music Educators National Conference, and the National Dance Association. It defined arts education broadly as “the process of teaching and learning how to create and produce the visual and performing arts and how to understand and evaluate art forms created by others” (Arts Education Partnership Working Group, p. 5).

The National Art Education Association took a central role in defining the expectations for art education, which were written into the national standards: Students should understand and apply art media and processes; use visual arts structures and functions; choose and evaluate a range of subject matter, symbols, and ideas; understand art in relation to history and cultures; reflect upon and assess the merits of their own work and that of others; and make connections between art and other disciplines.

This view of art education coalesced with other theories, which became generally accepted during the last quarter of the twentieth century. Three are noteworthy. First, constructivism supplanted behaviorism as a guiding instructional theory, drawing on work by educators and researchers, such as Jerome Bruner (1960), Jean Piaget (1974), and Lev S. Vygotsky (1978). Constructivism posits that learners play a crucial role in “constructing” their own knowledge. Where behaviorism tends to see the teacher as a dispenser of knowledge, constructivism views the teacher as a facilitator who helps students acquire understandings and put them to individual use.

Second, postmodernism became the successor to modernism. First identified in architecture by

Charles Jencks (1977), the unifying feature of post-modern theory is the absence of cultural dominance. In art education this led to greater emphasis on multiculturalism and expansion of the traditional canon.

Third, the multiple intelligences theory, developed by Howard Gardner (1983), points out that children think and learn based on individual intellectual strengths. Gardner initially identified seven intelligences—musical, bodily-kinesthetic, logical-mathematical, linguistic, spatial, interpersonal, and intrapersonal—and later added others. Art education, particularly as viewed through the lens of DBAE theory, taps intelligences that are not typically used in other core subjects.

By implementing arts curricula based on these theories, many arts educators believe that “students can arrive at their own knowledge, beliefs, and values for making personal and artistic decisions. In other terms, they can arrive at a broad-based, well-grounded understanding of nature, value, and meaning of arts as a part of their own humanity” (Consortium of National Arts Education Associations, pp. 18–19).

### Elementary and Middle Schools

Children are natural artists. From infancy, they delight in the interplay of light and shadow, shape and color. Objects dangling from a mobile and the elemental shapes of balls and blocks fascinate them. As children develop, they connect the visual and the tactile: playing in spilled cereal, sculpting sand on a beach, finger painting, and scribbling with crayons. They create shadows in patches of sunlight and lay out sticks to form patterns.

By the time most children enter formal schooling, they have moved from scribbling and stacking to more deliberate two- and three-dimensional representation. For younger children, first representations usually are of inner realities. When asked to describe their artworks, they tell detailed and imaginative stories. As time goes by, children’s drawings and sculptures begin to reflect their observations of the world.

Nurturing the natural development of artistic sensitivities and creative responses is the universal thrust of elementary art education. Formalized study is introduced gradually, as children move through the elementary grades and into middle school, which begins in the United States at fifth, sixth, or seventh grade, depending on the school system.

Elementary art specialists in some schools function mainly as art teachers, working with classes in isolation and focusing almost exclusively on art making. While a classroom teacher’s pupils work with a specialist (art, music, physical education, etc.), the teacher gains planning time. However, with increasing emphasis on DBAE and national standards, many art specialists and classroom teachers are now working as partners.

An art specialist may work directly with pupils for as little as forty or fifty minutes once each week, but ideally art is taught more often—daily in some schools. Art also is integral to language arts, social studies, mathematics, and science in many schools. The art specialist, in addition to teaching children, helps classroom teachers blend art with other subjects. Such collaboration also expands the subject matter of art, raising questions about aesthetics and the place of art in culture and society. When art is valued as a core subject in this way, children’s artworks proliferate in classrooms and corridors. The artworks incorporate themes from other subjects and are creative and individualistic.

Ideally the collaboration and integration that distinguish elementary art education are carried into programs for young adolescents. Many U.S. middle schools use a team-teaching approach to organize classes and schedules, which facilitates an art-and-humanities framework and fosters the inclusion of art in the core curriculum. In middle schools that function more like high schools, art classes tend to be organized around media and art forms and are treated as electives.

### Secondary Schools

Art education reform, which began in the 1980s and 1990s, focuses on moving art into the core curriculum, “where art is studied and created so that the students will gain insights into themselves, their world, human purposes, and values” (Wilson, p. 168). Some U.S. high schools are oriented in this manner, and most others are moving philosophically in this direction, even though many also continue to offer traditional art courses aimed, in part, at educating students as artists. Art is an elective subject in most secondary schools.

Course offerings, however, may be extensive. It is not unusual for larger high schools to offer thirty to forty separate art classes, including beginning, intermediate, and advanced levels. Subjects include

drawing, painting, photography, commercial art, sculpture, ceramics, weaving and fiber art, jewelry, design, and art history. Where DBAE theory has been influential, classes in aesthetics and art criticism may be offered separately, but art topics also will be addressed in the context of classes in most subjects. Some schools pair art with other subjects in teamed classes, such as photography with journalism and film making with film study.

The influence of postmodernism is evident in broadening the art canon to include more multicultural imagery. Art reproductions used in Western classrooms portray images from African and Asian cultures along with those from European sources. Particular attention to including African-American art images can be seen in many U.S. schools.

Adolescent notions of art are shaped by many influences, ranging from popular culture to formal schooling. Thus the teenage years are a time of aesthetic questioning. Secondary school art programs should be about educating students to be consumers, as well as producers, of art. Situating art education in the core curriculum facilitates such study and helps students develop sound judgment of art.

### Technology

The rapid advancement of computer technology has transformed art at all levels. Art-making, whether in the professional world or in schools, often is aided by computer programs that allow artists to create and manipulate images electronically. This new capability raises aesthetic questions about the nature of art. For example, must a finished artwork be frameable? When, for that matter, should a work be considered "finished"? In the commercial world, an illustrator's work may exist only as a computer file until it finally appears in a book or magazine. As an electronic file, the image also can be altered repeatedly by the artist or by a publisher's art director until the moment it is printed.

Computer technology also provides resources for art history and criticism. Images for classroom study are routinely available in electronic formats, such as CD-ROM, making it easy for a school to maintain an extensive collection of visual references. Electronic editions of encyclopedias and other texts offer "extras" not found in print, such as film footage and sound bites. These extras enliven and enlarge the resources so that students do not merely read the information, but experience it.

The number of "wired" classrooms continues to increase. Electronic connections between a classroom or laboratory computer and the Internet make virtual field trips increasingly available as instructional tools. If teachers cannot take their students physically to a museum, they may be able to take them electronically. Virtual tours of many of the world's art galleries and museums are expanding instructional horizons. Some institutional sites, such as the website of the Louvre Museum in Paris, also encourage cross-cultural studies by allowing electronic visitors to take the virtual tour in several languages and by providing links to other historical and cultural websites.

*See also:* ART EDUCATION, *subentry on* PREPARATION OF TEACHERS; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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DONOVAN R. WALLING

## PREPARATION OF TEACHERS

Visual arts teacher education includes the preparation of art specialist teachers as well as general classroom teachers. At the beginning of the twenty-first century, there are several issues that teacher education in the visual arts must address, including: (a) changes in approaches to determining the art content (art history, criticism, aesthetics, and production) and pedagogical knowledge base for teachers; (b) the challenges of alternative licensure options; (c) the administration of programs of teacher preparation; and (d) conceptions of quality in teacher education in the visual arts.

### Teacher Education and Visual Arts Education

Teacher education in the visual arts is unique because of the need to prepare two types of teachers at the elementary level (specialist and general classroom teachers), and because of the broad possibilities that exist for the preparation of the secondary teacher of the visual arts. The preparation of specialist teachers varies greatly, ranging from a professional degree in art, in which a substantial portion of the degree is devoted to courses in the visual arts, to a professional degree in education, in which there are fewer courses in art and more in professional education and general education. The preparation of general classroom teachers almost always occurs within an education program. Courses, when required, are usually taught by a professional art educator, who may be a member of either an art faculty or an education faculty.

### Current Structure and Organization

While most teacher education in the visual arts in the United States occurs at the undergraduate level, programs exist in a variety of types of institutions, ranging from large research institutions to small liberal arts colleges. A small number of programs are fifth-year, postbaccalaureate programs. The administration of programs for the preparation of visual

arts teachers also varies greatly. Some are administered as a subdiscipline within a visual arts program, while others are administered through a professional education unit. Regardless of the home base of the program, effective administration requires collaboration between the visual arts unit and the professional education unit on a campus. Neither the research nor the theoretical literature suggests a clear position about where such programs of instruction are most effectively administered.

### National Efforts to Improve Teacher Education in the Arts

Between 1996 and 2001 several major national efforts were initiated related to the preparation of visual arts teachers. The National Art Education Association (NAEA) published a new set of standards for art teacher preparation in 1999; the International Council of Fine Arts Deans (ICFAD) adopted an agenda for teacher education in 1998—and they published *To Move Forward* in collaboration with the Consortium of National Arts Education Associations and the Council of Arts Accrediting Associations in 2001. The purpose of this publication is an affirmation of a continuing commitment to arts education; the statement identifies accomplishments in a number of areas and suggests a reasonable number of next steps to advance student learning. The Council of Chief State School Officers, through its Interstate New Teacher Assessment and Support Consortium (INTASC), initiated an effort in 1998 to establish standards for teacher preparation in the arts, including the visual arts, for elementary classroom teachers and elementary arts specialists. The Arts Education Partnership has also addressed the issue of teacher education in the arts through the establishment of a national task force and by holding several meetings devoted to the topic. The Institute for Education Inquiry's (IEI) National Network for Educational Renewal launched a national arts and teacher education initiative in 1999 that is focused on including a comprehensive approach to teaching and learning in and through the arts in the preparation of elementary classroom teachers.

The five-point agenda adopted by the International Council of Fine Arts Deans in 1998 consists of: (1) defining the nature of teaching and learning in the arts for all students; (2) reviewing and revising the curriculum of undergraduate teacher education programs to insure that prospective arts specialists,

working with classroom teachers, are prepared to deliver a balanced curriculum (production and performance, history, criticism, and aesthetics) that addresses multicultural issues and the use of technology in the arts; (3) insuring that prospective arts specialist and classroom teachers are prepared to engage in meaningful collaborations with classroom teachers; (4) addressing and incorporating the national standards in the arts into the preparation of prospective arts specialist and classroom teachers; and (5) insuring that prospective arts specialist and classroom teachers understand the role of the arts in the real world by recognizing the necessity for effective advocacy and meaningful partnerships. Paramount in moving this agenda forward is the recognition that art teacher educators must be provided with opportunities for professional development. Four of the seven major sections of *To Move Forward* address teacher education issues—outlining accomplishments and identifying necessary steps to move forward.

Both the National Art Education Association (NAEA) and the Council of Chief State School Officers (CCSSO) have initiated efforts to establish performance-based standards for the preparation of specialist and classroom teachers in the arts. The NAEA standards deal with the visual arts specialist teacher only, while the INTASC standards deal with all of the arts, for the elementary arts specialist teacher and the classroom teacher. Both efforts herald a new direction for teacher education, in that both are based on performance standards for the prospective teacher as opposed to program standards that are often based on increments of time.

The NAEA standards support a comprehensive approach to teaching and learning in the arts and outline standards and skills for the art teacher candidates in the content of art, knowledge of the students, curriculum development, instruction, and assessment of student learning outcomes, teacher effectiveness, and program effectiveness. The INTASC standards are designed to promote standards-based reform of teacher preparation, licensing, and professional development. The standards are built around ten core principles related to: (1) “the central concepts, tools of inquiry, and structures of the discipline(s),” and the creation of learning experiences that make these aspects of subject matter meaningful for students; (2) “how children learn and develop,” and being able to provide “learning opportunities that support their intellectual, social, physical, and

personal development;” (3) “how students differ in their approaches to learning,” and creating “instructional opportunities that are adapted to diverse learners;” (4) using “a variety of instructional strategies to encourage students’ development of critical thinking, problem solving, and performance skills;” (5) “individual and group motivation and behavior to create a learning environment that encourages positive social interaction, active engagement in learning, and self-motivation;” (6) “effective verbal, nonverbal, and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom;” (7) “planning instruction based upon knowledge of subject matter, students, the community, and curriculum goals;” (8) using “formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social, and physical development of the learner;” (9) insuring that the teacher “is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community), and who actively seeks out opportunities to grow professionally;” and (10) fostering “relationships with school colleagues, parents, and agencies in the larger community to support students’ learning and well-being.”

While the IEI project and the Arts Education Partnership efforts have not produced any documents to date, both have strong potential for making significant contributions to the improvement of teacher preparation in the visual arts. The IEI project is planned to: (1) design a component in the teacher education curriculum to help prospective elementary education teachers understand and acquire literacy in the arts through a comprehensive approach to learning and teaching in and through the arts; (2) foster and enhance partner schools where prospective elementary teachers are mentored by experienced teachers demonstrating success in engaging students deeply in a comprehensive approach to teaching and learning in and through the arts in their classroom activity; (3) foster and enhance partnerships with local and regional arts organizations that can have a positive impact upon teacher education programs and upon teaching and learning in partner schools; and (4) work with faculty in arts departments and colleges, schools, and departments of education, as well as with appropriate campus administrators, to ensure that general education requirements include a comprehensive approach to

learning and teaching in and through the arts. The Arts Education Partnership has addressed the issue by establishing a task force that is examining how the partnership's constituent organizations can become involved in both pre-service and in-service teacher education.

All of these national efforts are focused on improving the quality of teacher education in the arts, and they emphasize a comprehensive approach to teaching and learning in and through the arts. Among the concerns raised through these efforts are: (a) relationships and responsibilities of the art educator, the professional artist, and the professional general educator in teaching and teacher preparation in the visual arts; (b) appropriate entry levels into practice for the art educator; and (c) validation of the basic preparation for teachers.

ART EDUCATION, *subentry on* SCHOOL; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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D. JACK DAVIS

## ASSESSMENT

#### CLASSROOM ASSESSMENT

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#### DYNAMIC ASSESSMENT

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#### NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

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#### PERFORMANCE ASSESSMENT

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#### CLASSROOM ASSESSMENT

Classroom assessments are those developed or selected by teachers for use during their day-to-day in-

struction. They are different from the standardized tests that are conducted annually to gauge student achievement, and are most frequently used to serve formative purposes, that is, to help students learn. However, classroom assessments also can be used summatively to determine a student's report card grade. Standardized tests, on the other hand, tend to be considered summative assessments, as they are used to judge student progress over an extended period of time.

As the research summarized below reveals, assessment used during instruction can have a profound impact on student achievement. But to do so, the assessments must provide accurate information and they must be used in appropriate ways.

### Research on Impact

In 1984, Benjamin Bloom published a summary of research on the impact of mastery learning models, comparing standard whole-class instruction (the control condition) with two experimental interventions—a mastery learning environment (where students aspire to achieving specific learning standards) and one-on-one tutoring of individual students. One hallmark of both experimental conditions was extensive use of formative classroom assessment during the learning process. Analysis of summative results revealed unprecedented gains in achievement for students in the experimental treatments—when compared to the control groups. To be sure, the entire effect cannot be attributed to the effective use of classroom assessment. But, according to Bloom, a major portion can.

Based on his 1988 compilation of available research, Terry Crooks concluded that classroom assessment can have a major impact on student learning when it:

- Places great emphasis on understanding, not just recognition or recall of knowledge; as well as on the ability to transfer learning to new situations and other patterns of reasoning
- Is used formatively to help students learn, and not just summatively for the assignment of a grade
- Yields feedback that helps students see their growth or progress while they are learning, thereby maintaining the value of the feedback for students
- Relies on student interaction in ways that enhance the development of self-evaluation skills

- Reflects carefully articulated achievement expectations that are set high, but attainable, so as to maximize students' confidence that they can succeed if they try and to prevent them from giving up in hopelessness
- Consolidates learning by providing regular opportunities for practice with descriptive, not judgmental, feedback
- Relies on a broad range of modes of assessment aligned appropriately with the diversity of achievement expectations valued in most classrooms
- Covers all valued achievement expectations and does not reduce the classroom to focus only on that which is easily assessed

A decade later, Paul Black and Dylan Wiliam examined the measurement research literature worldwide in search of answers to three questions: (1) Is there evidence that improving the quality and effectiveness of use of formative (classroom) assessments raises student achievement as reflected in summative assessments? (2) Is there research evidence that formative assessments are in need of improvement? (3) Is there evidence about the kinds of improvements that are most likely to enhance student achievement? They uncovered forty articles that addressed the first question with sufficiently rigorous research designs to permit an estimation of the effects of improved classroom assessment on subsequent standardized test scores. They also uncovered profoundly large effects, including score gains that, if realized in the international math and science tests of the 1990s, would have raised the United States and England from the middle of the pack in the rank order of forty-two participating nations to the top five. Black and Wiliam go on to reveal that “improved formative assessment helps low achievers more than other students, and so reduces the range of achievement while raising achievement overall” (p. 141). They contend that this result has direct implications for districts having difficulty reducing achievement gaps between minorities and other students. The answer to their second question is equally definitive. Citing a litany of research similar to that referenced above, they describe the almost complete international neglect in assessment training for teachers.

Their answer to the third question, asking what specific improvements in classroom assessment are likely to have the greatest impact, is the most inter-

esting of all. They describe the positive effects on student learning of (a) increasing the accuracy of classroom assessments, (b) providing students with frequent informative feedback, rather than infrequent judgmental feedback, and (c) involving students deeply in the classroom assessment, record keeping, and communication processes. They conclude that “self-assessment by pupils, therefore, far from being a luxury, is in fact an essential component of formative assessment. When anyone is trying to learn, feedback about the effort has three elements: redefinition of the desired goal, evidence about present position, and some understanding of a way to close the gap between the two. All three must be understood to some degree by anyone before he or she can take action to improve learning” (p. 143).

### Standards of Quality

To have such positive effects, classroom assessments must be carefully developed to yield dependable evidence of student achievement. If they meet the five standards of quality described below, they will, in all probability, produce accurate results.

These standards can take the form of the five questions that the developer can ask about the assessment: (1) Am I clear about what I want to assess? (2) Do I know why I am assessing? (3) Am I sure about how to gather the evidence that I need? (4) Have I gathered enough evidence? (5) Have I eliminated all relevant sources of bias in results? Answers to these questions help judge the quality of classroom assessments. Each is considered in greater detail below.

**Standard 1.** In any classroom assessment context, one must begin the assessment development process by defining the precise vision of what it means to succeed. Proper assessment methods can be selected only when one knows what kind of achievement needs to be assessed. Are students expected to master subject-matter content—meaning to *know* and *understand*? If so, does this mean they must know it outright, or does it mean they must know where and how to find it using reference sources? Are they expected to use their knowledge to reason and solve problems? Should they be able to demonstrate mastery of specific performance skills, where it’s the doing that is important, or to use their knowledge, reasoning, and skills to create products that meet standards of quality?

Because there is no single assessment method capable of assessing all these various forms of achievement, one cannot select a proper method without a sharp focus on which of these expectations is to be assessed. The main quality-control challenge is to be sure the target is clear before one begins to devise assessment tasks and scoring procedures to measure it.

**Standard 2.** The second quality standard is to build each assessment in light of specific information about its intended users. It must be clear what purposes a particular assessment will serve. One cannot design sound assessments without asking who will use the results, and how they will use them. To provide quality information that will meet people’s needs, one must analyze their needs. For instance, if students are to use assessment results to make important decisions about their own learning, it is important to conduct the assessment and provide the results in a manner that will meet their needs, which might be distinctly different from the information needs of a teacher, parent, or principal. Thus, the developer of any assessment should be able to provide evidence of having investigated the needs of the intended user of that assessment, and of having conducted that assessment in a manner consistent with that purpose. Otherwise the assessment is without purpose. The quality-control challenge is to develop and administer an assessment only after it has been determined precisely who will use its results, and how they will use them.

Within this standard of quality, the impact research cited above suggests that special emphasis be given to one particular assessment user, the student. While there has been a tendency to think of the student as the subject (or victim) of the assessment, the fact is that the decisions students make that are based on teacher assessments of their success drive their ultimate success in school. Thus, it is essential that they remain in touch with and feel in control of their own improvement over time.

**Standard 3.** Since there are several different kinds of achievement to assess, and since no single assessment method can reflect them all, educators must rely on a variety of methods. The options available to the classroom teacher include selected response (multiple choice, true/false, matching, and fill-in), essays, performance assessments (based on observation and judgment), and direct personal communication with the student. The assessment task is to match a method with an intended target, as depicted

TABLE 1

Target To Be Assessed	Assessment Method			
	Selected Response	Essay	Performance Assessment	Personal Communication
<b>Knowledge Mastery</b>	Multiple-choice, true/false, matching, and fill-in questions can sample mastery of elements of knowledge	Essay exercises can tap understanding of relationships among elements of knowledge	Not a good choice for this target	Can ask questions, evaluate answers and infer mastery—but a time-consuming option
<b>Reasoning Proficiency</b>	Can assess understanding of basic patterns of reasoning	Written descriptions of complex problem solutions can provide a window into reasoning proficiency	Can watch students solve some problems and infer about reasoning proficiency	Can ask student to “think aloud” or can ask follow-up questions to probe reasoning
<b>Performance Skills</b>	Can assess mastery of the prerequisites of skillful performance, but cannot tap the skill itself—not a good choice for this target	Can assess mastery of the prerequisites of skillful performance, but cannot tap the skill itself—not a good choice for this target	Can observe and evaluate skills as they are being performed	Strong match when skill is oral communication proficiency; also can assess mastery of knowledge prerequisite to skillful performance
<b>Ability To Create Products</b>	Can assess mastery of knowledge prerequisite to the ability to create quality products, but cannot assess the quality of products themselves—not a good choice	Can assess mastery of knowledge prerequisite to the ability to create quality products, but cannot assess the quality of products themselves—not a good choice	A strong match—can assess: (a) proficiency in carrying out steps in product development, as well as (b) attributes of the product itself	Can probe procedural knowledge and knowledge of attributes of quality products—but not product quality

SOURCE: Adapted from Stiggins, Richard J. 2001. *Student-Involved Classroom Assessment*, 3rd edition. Columbus, OH: Merrill.

in Table 1. The quality-control challenge is to be sure that everyone concerned with quality assessment knows and understands how the various pieces of this puzzle fit together.

**Standard 4.** All assessments rely on a relatively small number of exercises to permit the user to draw inferences about a student’s mastery of larger domains of achievement. A sound assessment offers a representative sample of all those possibilities that is large enough to yield dependable inferences about how the respondent would perform if given all possible exercises. Each assessment context places its own special constraints on sampling procedures, and the quality-control challenge is to know how to adjust the sampling strategies to produce results of maximum quality at minimum cost in time and effort.

**Standard 5.** Even if one devises clear achievement targets, transforms them into proper assessment methods, and samples student performance appropriately, there are still factors that can cause a student’s score on a test to misrepresent his or her real achievement. Problems can arise from the test, from the student, or from the environment where the test is administered.

For example, tests can consist of poorly worded questions; they can place reading or writing demands on respondents that are confounded with mastery of the material being tested; or they can have more than one correct response, be incorrectly scored, or contain racial or ethnic bias. The student can experience extreme evaluation anxiety or interpret test items differently from the author’s intent, and students may cheat, guess, or lack motivation. In addition, the assessment environment could be uncomfortable, poorly lighted, noisy, or otherwise distracting. Any of these factors could give rise to inaccurate assessment results. Part of the quality-control challenge is to be aware of the potential sources of bias and to know how to devise assessments, prepare students, and plan assessment environments to deflect these problems before they ever have an impact on results.

*See also:* ASSESSMENT, *subentries on* DYNAMIC ASSESSMENT, NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS, PERFORMANCE ASSESSMENT; ASSESSMENT TOOLS, *subentries on* PSYCHOMETRIC AND STATISTICAL, TECHNOLOGY BASED; STANDARDS FOR

STUDENT LEARNING; TESTING, *subentry on* STANDARDIZED TESTS AND HIGH-STAKES ASSESSMENT.

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#### DYNAMIC ASSESSMENT

The term *dynamic assessment* (DA) refers to an assessment, by an active teaching process, of a child's perception, learning, thinking, and problem solving. The process is aimed at modifying an individual's cognitive functioning and observing subsequent changes in learning and problem-solving patterns within the testing situation. The goals of the DA are to: (a) assess the capacity of the child to grasp the principle underlying an initial problem and to solve it, (b) assess the nature and amount of investment (teaching) that is required to teach a child a given rule or principle, and (c) identify the specific deficient cognitive functions (i.e., systematic exploratory behavior) and non-intellective factors (i.e., need for mastery) that are responsible for failure in performance and how modifiable they are as a result of teaching. In contrast, the term *static test* (ST) generally refers to a standardized testing procedure in which an examiner presents items to an examinee without any attempt to intervene to change, guide, or improve the child's performance. A static test usually has graduated levels of difficulty, with the tester merely recording and scoring the responses.

DA is usually administered to children who demonstrate some learning disability, low scores on

standardized tests, or some emotional or personality disturbance. Very frequently it is given to children coming from a low socioeconomic or culturally different background. The differences between the ST and DA approaches derive from different philosophical perspectives: ST is related to *passive acceptance* (acceptance of a child's disability and accommodation of the environment to fit these disabilities), while DA is based on *active modification* (active efforts to modify the child's disabilities by intensive mediation and the establishment of relatively high cognitive goals).

DA development has been motivated by the inadequacy of standardized tests. The inadequacy can be summarized in the following points: (1) Static tests do not provide crucial information about learning processes, deficient cognitive functions that are responsible for learning difficulties, and mediational strategies that facilitate learning. (2) The manifested low performance level of many children, as revealed in ST, very frequently falls short of revealing their learning potential, especially of those identified as coming from disadvantaged social backgrounds, or as having some sort of learning difficulty. Many children fail in static tests because of lack of opportunities for learning experiences, cultural differences, specific learning difficulties, or traumatic life experiences. (3) In many static tests children are described in general terms, mostly in relation to their relative position of their peer group, but they do not provide clear descriptions of the processes involved in learning and recommendations for prescriptive teaching and remedial learning strategies. (4) Static tests do not relate to non-intellective factors that can influence individuals' cognitive performance, sometimes more than the "pure" cognitive factors. Non-intellective factors (i.e., intrinsic motivation, need for mastery, locus of control, anxiety, frustration, tolerance, self-confidence, and accessibility to mediation) are no less important in determining children's intellectual achievements than are the "pure" cognitive factors. This is especially true with individuals whose emotional or motivational problems interfere with their cognitive performance.

In comparison with ST, DA is designed to provide accurate information about: (a) an individual's current learning ability and learning processes; (b) specific cognitive factors (i.e., impulsivity, planning behavior) responsible for problem-solving ability and academic success or failure; (c) efficient teaching strategies for the child being studied; and (d)

motivational, emotional, and personality factors that affect cognitive processes.

Lev Vygotsky's concept of a *zone of proximal development* (ZPD) and Reuben Feuerstein's theory of mediated learning experience (MLE) served as the main conceptual bases for most of the DA elaboration. The ZPD is defined as the difference between a child's "actual developmental level as determined by independent problem solving" and the higher level of "potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, p. 86). MLE interactions are defined as a process in which parents or experienced adults interpose themselves between a set of stimuli and a child and modify the stimuli for the developing child. In a DA context, the examiner mediates the rules and strategies for solving specific problems on an individual basis, and assesses the level of internalization (i.e., deep understanding) of these rules and strategies as well as their transfer value to other problems of increased level of complexity, novelty, and abstraction.

### The Nature of Dynamic Assessment

DA is meant to be a complement to standardized testing, not a substitute for it. It is presented as a broad approach, not as a particular test. Different criteria of change are used in DA: pre- to post-teaching gains, amount and type of teaching required, and the degree of transfer of learning. The choice to use change criteria to predict future cognitive performance (as well as predicted outcome of intervention programs) is based on the belief that measures of change are more closely related to teaching processes (by which the child is taught how to process information), than they are to conventional measures of intelligence. The major differences between DA and conventional tests in regard to goals, testing processes, types of instruments, test situations, and interpretation of results, are presented in Table 1.

**Using DA.** Clinical experience has shown that it is most useful to use DA when standardized tests yield low scores; when standardized tests hover around margins of adequacy in cognitive functioning; when there are serious discrepancies between a child's test scores and academic performance; when a child comes from a low socioeconomic or culturally or linguistically different background; or when a child shows some emotional disturbance, personality disorder, or learning disability.

**Reliability of DA.** One of the objectives of DA is to change an individual's cognitive functioning within the testing context so as to produce *unreliability* among test items (i.e., lack of consistency between repeated responses). DA reliability is usually assessed by interrater agreement (two or more observers rate the child's behavior) regarding the child's cognitive performance, mediation (teaching) strategies required to change the child's functioning, cognitive functions (i.e., level of impulsivity, planning behavior) that affect performance, and motivational-emotional factors. Such test reliability has been demonstrated with learning disabled and educable mentally retarded (EMR) children. Overall interrater agreement for the type of intervention (mediation) required to change a child's performance for deficient cognitive functions, such as impulsivity, lack of planning, and lack of systematic behavior, has been shown to be about 89 percent. For different cognitive tasks, different profiles of deficient cognitive functions have been observed and different types of teaching can be applied.

### Current Research

**Educational perspectives.** Previous research has shown that standardized IQ tests underestimate the cognitive ability of children from low socioeconomic settings, from minority groups, and children having learning difficulties. Criteria of change (i.e., pre- to post-teaching gains on a test), as measured by DA, have been found to be more powerful in predicting academic performance, more accurate in prescribing individualized educational plans and specific cognitive interventions, and better able to distinguish between different clinical groups than ST scores. David Tzuriel and Pnina Klein, using the Children's Analogical Thinking Modifiability (CATM) test, showed that the highest pre- to post-teaching gains were found among children identified either as disadvantaged or advantaged, compared with children with special education needs and mentally retarded children. Higher levels of functioning, for all groups, were found on the CATM than on the Raven's Colored Progressive Matrices (RCPM)—when the latter was given as a standardized test—especially when comparing performance on analogy items of the RCPM versus problems on the CATM. The advantaged and disadvantaged children scored 69 percent and 64 percent, respectively, on the CATM, compared with 39 percent and 44 percent on the RCPM. The effects of teaching were more articulated in difficult tasks than in easy ones.

TABLE 1

<b>Major differences between dynamic assessment and standardized testing</b>		
<b>Dimensions of comparison</b>	<b>Dynamic assessment</b>	<b>Standardized testing</b>
Testing goals	Assessment of change Assessment of mediation Assessment of deficient cognitive functions Assessment of nonintellective factors	Evaluation of static performance Comparison with peers Prediction of future success
Orientation	Processes of learning Metacognitive processes Understanding mistakes	End products (static) Objective scores Score profiles
Context of testing	Dynamic, open, and interactive Guidance, help, and feedback Feelings of competence Parents and teachers may observe	Standardized Structured Formal Parents and teachers are not allowed to observe
Interpretation of results	Subjective (mainly) Peak performance Cognitive modifiability Deficient cognitive functions Response to mediation	Objective (mainly) Average performance
Nature of tasks	Constructed for learning Graduated for teaching Guaranteed for success	Based on psychometric properties Termination after failures

SOURCE: Tzuriel, David. 2001. *Dynamic Assessment of Young Children*. New York: Kluwer Academic/Plenum. Reprinted with permission.

Findings with the Children's Inferential Thinking Modifiability (CITM) and the Children's Seriation Thinking Modifiability (CSTM) tests indicate that children from minority groups or disadvantaged background have an initial lower level of functioning than children from mainstream groups or an advantaged background. After a teaching phase, however, they showed higher levels of gain and narrowed the gap. The gap between the two groups was also narrower in a transfer phase consisting of more difficult problems. The degree of improvement was higher in high-complexity problems than in low-complexity problems.

In several studies DA was found to verify the distinction between *cultural deprivation* and *cultural difference*. Tzuriel, following Feuerstein, differentiated between those who function poorly as a result of cultural differences and those who have experienced cultural deprivation. The DA approach, in this respect, offers a solution not only for its differential diagnostic value, but also for its potential prescriptive remediation of deficiencies and its enhancement of learning processes.

For certain DA measures, significant positive correlations have been found between the level of

difficulty of an item and the level of improvement on that item, and DA post-teaching scores have been shown to be better predictors of academic achievement than static scores. In addition, a higher prediction value was found among children with high learning potential than among children with average learning potential. Findings of many studies raise heavy doubts, especially with low functioning groups, about the ability of ST scores to represent accurately an individual's ability and to serve as indicators for future intervention and change.

### **Evaluation of Cognitive Education Programs**

Dynamic assessment has also been used to evaluate cognitive education programs designed to develop learning and thinking skills. Given that one of the major goals of these programs is advancing *learning to learn* skills, it is essential that the change criteria in DA be assessed several studies have shown that experimental groups who received any one of a number of cognitive education programs (e.g., Bright Start, Instrumental Enrichment, Peer-Mediation with Young Children) attained higher pre- to post-teaching gains on DA tests than did control groups. The DA scores depicted the effects of the intervention better than ST scores did.

### Developmental Perspective

Developmental research using DA has focused on predicting learning ability by assessing the quality of parent–child interactions, specifically mother–child mediated learning experience (MLE). MLE interactions are defined as an interactional process in which parents, or substitute adults, interpose themselves between a set of stimuli and the child and modify the stimuli for the developing child. The mediator modifies the stimuli by focusing the child on their characteristics, by arousing curiosity, vigilance, and perceptual acuity in the child, and by trying to improve and/or create in the child the cognitive functions required for temporal, spatial, and cause-effect relationships. Major findings have been that children’s post-teaching scores are more accurately predicted by MLE mother–child interactions than by ST scores and that mediation for transcendence (expanding an experience by making a rule or principle, generalizing an event beyond the concrete experience) has emerged as the most powerful predictor of children’s ability to change following teaching. These findings support the hypothesis that mother–child mediation strategies are internalized and used later in other learning contexts. Children whose mothers used a high level of mediation for transcendence internalized the mechanism and used it in other learning contexts where they needed this type of mediation. Findings of several studies confirm the hypothesis that MLE interactions, conceptualized as the proximal factor of cognitive development (i.e., directly explaining cognitive functioning), predicted children’s cognitive change, whereas distal factors (i.e., SES, mothers’ IQ, child’s personality orientation, mother’s emotional attitudes toward the child) did not predict cognitive change in children.

### Future Research

In spite of the efficacy of DA, some problems exist. First, DA takes more time to administer and requires more skill, better training, more experience, and greater effort than ST. A cost-effectiveness issue is raised by psychologists, educators, and policymakers who are not convinced that the information derived from DA is worth the investment required to get it, and that the information acquired will then be used efficiently to enhance specific learning strategies and academic achievements.

Second, the extent to which cognitive modifiability is generalized across domains needs further investigation. This issue has practical implications for

the designing of tests and mediational procedures. Third, validation of DA is much more complex than validation of ST because it has a broader scope of goals (assessing initial performance, deficient cognitive functions, type and amount of mediation, non-intellective factors, and certain parameters of change). In validating DA one needs to develop criteria variables that measure changes that are due to a cognitive intervention.

Finally, the literature is replete with evidence showing a strong relation between IQ (an ST measure) and school achievement ( $r = .71$ ). This means that nearly 50 percent of the variance in learning outcomes for students can be explained by differences in psychometric IQ. However, three extremely important questions remain: (1) What causes the other 50 percent of achievement variance? (2) When IQ predicts low achievement, what is necessary to defeat that prediction? and (3) What factors influencing the unexplained variance can help to defeat the prediction in the explained variance?

*See also:* ASSESSMENT, *subentry on* CLASSROOM ASSESSMENT; TESTING, *subentry on* STANDARDIZED TESTS AND HIGH-STAKES TESTING.

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DAVID TZURIEL

## NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

The primary means to monitor the status and development of American education, the National Assessment of Education Progress (NAEP), was conceived in 1963 when Francis Keppel, U.S. Commissioner of Education, appointed a committee to explore options for assessing the condition of education in the United States. The committee, chaired by Ralph Tyler, recommended that an information system be developed based on a battery of psychometric tests.

### NAEP's Original Purpose and Design

A number of key features were recommended in the original design of NAEP, several of which were intended to make it substantially different than typical standardized tests of academic achievement. Many, but not all, of these features were incorporated into the first assessments and have persisted throughout NAEP's history. Others have changed in response to policy needs.

With respect to matters of content, each assessment cycle was supposed to target one or more broadly defined subject areas that corresponded to familiar components of school curricula, such as mathematics. For each subject area, panels of citizens would be asked to form consensus groups about appropriate learning objectives at each target

age. Test questions or items were to be developed bearing a one-to-one correspondence to particular learning objectives. Thus, from NAEP's beginning, there have been heavy demands for content validity as part of the assessment development process.

Several interesting technical design features were proposed for the assessment program. Of special note was the use of matrix-sampling, a design that distributes large numbers of items broadly across school buildings, districts, and states but limits the number of items given to individual examinees. In essence, the assessment was designed to glean information from hundreds of items, several related to each of many testing objectives, while restricting the amount of time that any student has to spend responding to the assessment. The target period proposed was approximately fifty minutes per examinee. All test items were to be presented by trained personnel rather than by local school personnel in order to maintain uniformly high standards of administration.

The populations of interest for NAEP were to be all U.S. residents at ages 9, 13, and 17, as well as young adults. This would require the selection of private and public schools into the testing sample, as well as selection of examinees at each target age who were not in school. Results would be tabulated and presented by age and by demographic groups within age—but never by state, state subunit, school district, school, or individual. Assessment results would be reported to show the estimated percentage of the population or subpopulation that answered each item and task correctly. And finally, only a subset of the items would be released with each NAEP report. The unreleased items would remain secure, to be administered at a later testing for determining performance changes over time, thereby providing the basis for determining trends in achievement.

The agenda and design laid out for NAEP in the mid-1960s reflected the political and social realities of the time. Prominent among these was the resistance of state and local policymakers to a national curriculum; state and local leaders feared federal erosion of their autonomy and voiced concern about pressure for accountability. Several of NAEP's features thwarted perceptions of the program as a federal testing initiative addressing a nationally prescribed curriculum. Indeed, NAEP's design provided nationally and regionally representative data on the educational condition of American schools, while avoiding any implicit federal standards or

state, district, and school comparisons. NAEP was coined the “nation’s educational barometer.” It became operational in 1969 and 1970 and the first assessments were in science, citizenship, and writing.

### Pressures for Redesign of NAEP

As federal initiatives during the 1960s and 1970s expanded educational opportunities, they fostered an administrative imperative for assessment data to help gauge the effect on the nation’s education system. NAEP’s original design could not accommodate the increasing demands for data about educationally important populations and issues. Age-level (rather than grade-level) testing made it difficult to link NAEP results to state and local education policies and school practices. Furthermore, its reporting scheme allowed for measurement of change on individual items, but not on the broad subject areas; monitoring the educational experiences of students in varied racial and ethnic, language, and economic groups was difficult without summary scores. Increasingly, NAEP was asked to provide more information so that government and education officials would have a stronger basis for making judgments about the adequacy of education services; NAEP’s constituents were seeking information that, in many respects, conflicted with the basic design of the program.

The first major redesign of NAEP took place in 1984, when responsibility for its development and administration was moved from the Education Commission of the States to the Educational Testing Service. The design for NAEP’s second generation changed the procedures for sampling, objective-setting, item development, data collection, and analysis. Tests were administered by age and grade groupings. Summary scores were provided for each subject area; scale scores were introduced for reporting purposes. These and other changes afforded the program much greater flexibility in responding to policy demands as they evolved.

Almost concurrently, however, the report *A Nation at Risk* was issued in 1983. It warned that America’s schools and students were performing poorly and spawned a wave of state-level education reforms. As states invested more and more in their education systems, they sought information about the effectiveness of their efforts. State-level policymakers looked to NAEP for guidance on the effectiveness of alternative practices. The National Governors’ Association issued a call for state-comparable achieve-

ment data, and a new report, *The Nation’s Report Card*, recommended that NAEP be expanded to provide state-level results.

As the program retooled to accommodate this change, participants in a 1989 education summit in Charlottesville, Virginia, set out to expand NAEP even further. President George Bush and the nation’s governors challenged the prevailing assumptions about national expectations for achievement in American schools. They established six national goals for education and specified the subjects and grades in which progress should be measured with respect to national and international frames of reference. By design, these subjects and grades paralleled NAEP’s structure. The governors called on educators to hold students to “world-class” standards of knowledge and skill. The governors’ commitment to high academic standards included a call for the reporting of NAEP results in relation to rigorous performance standards. They challenged NAEP to describe not only what students currently know and can do, but also what young people should know and be able to do as participants in an education system that holds its students to high standards.

### NAEP in the Early Twenty-First Century

The program that took shape during the 1990s is the large and complex NAEP that exists in the early twenty-first century. The NAEP program continues to evolve in response to both policy challenges and results from federally mandated external evaluations. NAEP includes two distinct assessment programs with different instrumentation, sampling, administration, and reporting practices. The two assessments are referred to as trend NAEP and main NAEP.

Trend NAEP is a collection of test items in reading, writing, mathematics, and science that have been administered many times since the 1970s. As the name implies, trend NAEP is designed to document changes in academic performance over time. During the 1990s, trend NAEP was administered in 1990, 1992, 1994, 1996, and 1999. Trend NAEP is administered to nationally representative samples of students aged 9, 13, and 17 following the original NAEP design.

Main NAEP consists of test items that reflect current thinking about what students should know and be able to do in the NAEP subject areas. They are based on contemporary content and skill out-

lines developed by consensus panels for reading, writing, mathematics, science, U.S. history, world history, geography, civics, the arts, and foreign languages. These content frameworks are periodically reviewed and revised.

Main NAEP is further complicated by having two components, national NAEP and state NAEP. The former assesses nationally representative samples of students in grades 4, 8, and 12. In most but not all subjects, national NAEP is supposed to be administered two, three, or four times during a twelve-year period, to make it possible to examine short term trends in performance over a decade. State NAEP assessments are administered to state representative samples of students in states that voluntarily elect to participate in the program. State NAEP uses the same large-scale assessment materials as those used in national NAEP, but is only administered in grades four and eight in reading, writing, mathematics, and science. In contrast to national NAEP, the tests are administered by local school personnel rather than an independent contractor.

One of the most substantial changes in the main NAEP program is the reporting of results relative to performance standards. In each content area, performance standards are defined for three levels of achievement: basic, proficient, and advanced. The percentage of students at a given grade level whose performance is at or above an achievement level standard is reported, as are trends in the percentages over successive administrations of NAEP in a content area. Achievement level reporting is done for both main NAEP and state NAEP and has become one of the most controversial aspects of the NAEP program.

NAEP's complex design is mirrored by a complex governance structure. The program is governed by the National Assessment Governing Board (NAGB), appointed by the secretary of education but independent of the department. The board, authorized to set policy for NAEP, is designed to be broadly representative of NAEP's varied audiences. It selects the subject areas to be assessed and ensures that the content and skill frameworks that specify goals for assessment are produced through a national consensus process. In addition, NAGB establishes performance standards for each subject and grade tested, in consultation with its contractor for this task. NAGB also develops guidelines for NAEP reporting. The commissioner of education statistics, who leads the National Center for Education Statis-

tics (NCES) in the U.S. Department of Education, retains responsibility for NAEP operations and technical quality control. NCES procures test development and administration services from cooperating private companies.

### Evaluations of NAEP

As part of the process of transforming and expanding NAEP during the 1990s, Congress mandated periodic, independent evaluations of the NAEP program. Two such multiyear evaluations were conducted, the first by the National Academy of Education and the second by the National Academy of Sciences. Both evaluations examined several features of the NAEP program design including development of the assessment frameworks, the technical quality of the assessments, the validity of the achievement level reporting, and initiation of the state NAEP assessments. The evaluations concluded that there are many laudatory aspects of NAEP supporting its label as the "gold standard" for assessment of academic achievement. Among the positives is NAEP's attempt to develop broad, consensus-based content area frameworks, incorporate constructed response tasks and item formats that tap more complex forms of knowledge, use matrix sampling to cover a wide range of curriculum content area topics, and employ powerful statistical methods to analyze the results and develop summary scores. These evaluations also concluded that state NAEP, which had developmental status at the start of the 1990s, served a valuable purpose and should become a regular part of the NAEP program, which it did.

The two evaluations also saw considerable room for improvement in NAEP, in many of the areas mentioned above where strength already existed. Two areas of concern were of particular note. The first was the need to broaden the range of knowledge and cognitive skills that should be incorporated into NAEP's assessment frameworks and included as part of the assessment design. Both evaluations argued that NAEP was not fully taking advantage of advances in the cognitive sciences regarding the nature of knowledge and expertise and that future assessments needed to measure aspects of knowledge that were now deemed to be critical parts of the definition of academic competence and achievement. Suggestions were made for how NAEP might do this by developing a portfolio of assessment methods and approaches.

The second major area of concern was the validity of the achievement level analysis and reporting process. Both evaluations, as well as others that preceded them, were extremely critical of both the process that NAEP was using to determine achievement levels and the outcomes that were reported. It was judged that the entire achievement level approach lacked validity and needed a major conceptual and operational overhaul. As might be expected, this critique met with less than resounding approval by the National Assessment Governing Board, which is responsible for the achievement level-setting process.

Many of the concerns raised in the two major evaluations of NAEP, along with many other reviews of various aspects of the NAEP program, have served as stimuli in an ongoing process of refining, improving, and transforming NAEP. One of NAEP's hallmarks as an assessment program is its capacity to evolve, engage in cutting edge assessment development work, and provide results of value to many constituencies. It continues to serve its role as "The Nation's Report Card."

*See also:* ASSESSMENT TOOLS, *subentries on* PSYCHOMETRIC AND STATISTICAL, TECHNOLOGY BASED.

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JAMES W. PELLEGRINO

#### PERFORMANCE ASSESSMENT

The term *performance assessment* (PA) is typically used to refer to a class of assessments that is based on observation and judgment. That is, in PA an assessor usually observes a performance or the product of a performance and judges its quality. For example, to judge one's competence to operate an automobile, it is normally required that one pass a road test, during which actual driving is observed and evaluated. Similarly, Olympic athletes are judged on the basis of observed performances. PA has long been used to judge proficiency in industrial, military, and artistic settings, and interest in its application to educational settings has grown at the start of the twenty-first century.

Educators' interest in PA can be attributed to several factors. It has been argued that performance measures offer a potential advantage of increased validity over other forms of testing that rely on indirect indicators of a desired competence or proficiency. That is, to assess ability to spell one might prefer to have direct evidence that a person can spell words

correctly rather than inferring the ability from tasks that involve identifying misspelled words in a list. Proponents of performance assessment have identified many possible benefits, such as allowing a broad range of learning outcomes to be assessed and preserving the complex nature of disciplinary knowledge and inquiry, including conceptual understanding, problem-solving skills, and the application of knowledge and understanding to unique situations. Of particular interest is the potential of PA to capture aspects of higher-order thinking and reasoning, which are difficult to test in other ways.

Moreover, because some research has reported that teachers tend to adapt their instructional practice to reflect the form and content of external assessments, and because performance assessments tend to be better than conventional forms of testing at capturing more complex instructional goals and intentions, it has been argued that “teaching to the test” might be a positive consequence if PA were used to evaluate student achievement. Finally, some proponents have argued that PA could be more equitable than other forms of assessment because PA can engage students in “authentic,” contextualized performance, closely related to important instructional goals, thus avoiding the sources of bias associated with testing rapid recall of decontextualized information.

### **Educational Uses of Performance Assessment**

Although performance assessment has been employed in many educational settings, including the assessment of teachers, a primary use in education has been to assess student learning outcomes. PA has long been used in classrooms by teachers to determine what has been learned and by whom. PA may be applied in the classroom in informal ways (as when a teacher observes a student as she solves a problem during seat work) or in more formal ways (as when a teacher collects and scores students’ written essays). Within the classroom PA can serve as a means of assigning course grades, communicating expectations, providing feedback to students, and guiding instructional decisions. When PA is used for internal classroom assessment, both the form and content of the assessment can be closely aligned with a teacher’s instructional goals. Therefore, the use of performance assessment in the classroom has been seen by some as a promising means of accomplishing a long-standing, elusive goal—namely, the integration of instruction and assessment.

Performance assessment has also been employed in the external assessment of student learning outcomes. PA received significant attention from educators and assessment specialists during the latter part of the 1980s and throughout the 1990s. This increased interest in PA occurred as subject matter standards were established and corresponding changes in instructional practice were envisioned. A growing dissatisfaction with selected-response testing (e.g., true/false questions and multiple-choice items) and an awareness of advances in research in cognition and instruction also spawned interest in PA. Constructed-response tasks (e.g., tasks calling for brief or extended explanations or justifications) became increasingly popular as a means of capturing much of what is valued instructionally in a form that could be included in an external assessment of student achievement. In addition, for subjects such as science and mathematics, tasks that involve hands-on use of materials and tools have been developed. The net result of approximately fifteen years of research and development effort is the inclusion of written essays and constructed-response tasks in tests intended to assess achievement in various subject areas, including writing, history, mathematics, and science. A survey of state assessment practices in the mid-1990s found that thirty-four states required writing samples, and ten states incorporated constructed-response tasks into their assessments.

### **Performance Assessment: Challenges and Opportunities**

A variety of technical and feasibility issues have plagued attempts to employ PA on a large scale. Among the technical issues that await satisfactory resolution are concerns about ensuring generalizability and comparability of performance across tasks and concerns about the scoring of complex tasks and the appropriate interpretation of performances. Efforts to use PA have also been limited due to concerns about the relatively high costs of development, administration, and scoring, when compared to more conventional testing. Finally, despite the hopes of advocates of PA regarding the likely benefits of its widespread adoption, some analyses have raised concerns about equity issues and the limited positive impact on classroom teaching of using PA in external testing.

Despite the problems that have prevented widespread adoption of performance assessment, many educators and assessment experts remain enthusias-

tic about the potential of PA to address many limitations of other forms of assessment. In particular, advances in the cognitive sciences and technology, along with the increasing availability of sophisticated technological tools in educational settings, may provide new opportunities to resolve many of these issues. For example, the costs of development, administration, and scoring may be decreased through the use of new technologies. And generalizability across tasks may be increased through the use of intelligent systems that offer ongoing assessment well integrated with instruction and sensitive to changes in students' understanding and performance, with performance data collected over a long period of time as opposed to one-time, on-demand testing.

*See also:* ASSESSMENT, *subentry on* CLASSROOM ASSESSMENT; STANDARDS FOR STUDENT LEARNING.

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EDWARD A. SILVER

## PORTFOLIO ASSESSMENT

*Portfolio assessment* is a term with many meanings, and it is a process that can serve a variety of purposes. A portfolio is a collection of student work that can exhibit a student’s efforts, progress, and achievements in various areas of the curriculum. A portfolio assessment can be an examination of student-selected samples of work experiences and documents related to outcomes being assessed, and it can address and support progress toward achieving academic goals, including student efficacy. Portfolio assessments have been used for large-scale assessment and accountability purposes (e.g., the Vermont and Kentucky statewide assessment systems), for purposes of school-to-work transitions, and for

purposes of certification. For example, portfolio assessments are used as part of the National Board for Professional Teaching Standards assessment of expert teachers.

### The Development of Portfolio Assessment

Portfolio assessments grew in popularity in the United States in the 1990s as part of a widespread interest in alternative assessment. Because of high-stakes accountability, the 1980s saw an increase in norm-referenced, multiple-choice tests designed to measure academic achievement. By the end of the decade, however, there were increased criticisms over the reliance on these tests, which opponents believed assessed only a very limited range of knowledge and encouraged a “drill and kill” multiple-choice curriculum. Advocates of alternative assessment argued that teachers and schools modeled their curriculum to match the limited norm-referenced tests to try to assure that their students did well, “teaching to the test” rather than teaching content relevant to the subject matter. Therefore, it was important that assessments were worth teaching to and modeled the types of significant teaching and learning activities that were worthwhile educational experiences and would prepare students for future, real-world success.

Involving a wide variety of learning products and artifacts, such assessments would also enable teachers and researchers to examine the wide array of complex thinking and problem-solving skills required for subject-matter accomplishment. More likely than traditional assessments to be multidimensional, these assessments also could reveal various aspects of the learning process, including the development of cognitive skills, strategies, and decision-making processes. By providing feedback to schools and districts about the strengths and weaknesses of their performance, and influencing what and how teachers teach, it was thought portfolio assessment could support the goals of school reform. By engaging students more deeply in the instructional and assessment process, furthermore, portfolios could also benefit student learning.

### Types of Portfolios

While portfolios have broad potential and can be useful for the assessments of students’ performance for a variety of purposes in core curriculum areas, the contents and criteria used to assess portfolios must be designed to serve those purposes. For exam-

ple, *showcase portfolios* exhibit the best of student performance, while *working portfolios* may contain drafts that students and teachers use to reflect on process. *Progress portfolios* contain multiple examples of the same type of work done over time and are used to assess progress. If cognitive processes are intended for assessment, content and rubrics must be designed to capture those processes.

Portfolio assessments can provide both formative and summative opportunities for monitoring progress toward reaching identified outcomes. By setting criteria for content and outcomes, portfolios can communicate concrete information about what is expected of students in terms of the content and quality of performance in specific curriculum areas, while also providing a way of assessing their progress along the way. Depending on content and criteria, portfolios can provide teachers and researchers with information relevant to the cognitive processes that students use to achieve academic outcomes.

### Uses of Portfolios

Much of the literature on portfolio assessment has focused on portfolios as a way to integrate assessment and instruction and to promote meaningful classroom learning. Many advocates of this function believe that a successful portfolio assessment program requires the ongoing involvement of students in the creation and assessment process. Portfolio design should provide students with the opportunities to become more reflective about their own work, while demonstrating their abilities to learn and achieve in academics.

For example, some feel it is important for teachers and students to work together to prioritize the criteria that will be used as a basis for assessing and evaluating student progress. During the instructional process, students and teachers work together to identify significant pieces of work and the processes required for the portfolio. As students develop their portfolio, they are able to receive feedback from peers and teachers about their work. Because of the greater amount of time required for portfolio projects, there is a greater opportunity for introspection and collaborative reflection. This allows students to reflect and report about their own thinking processes as they monitor their own comprehension and observe their emerging understanding of subjects and skills. The portfolio process is dynamic and is affected by the interaction between students and teachers.

Portfolio assessments can also serve summative assessment purposes in the classroom, serving as the basis for letter grades. Student conferences at key points during the year can also be part of the summative process. Such conferences involve the student and teacher (and perhaps the parent) in joint review of the completion of the portfolio components, in querying the cognitive processes related to artifact selection, and in dealing with other relevant issues, such as students' perceptions of individual progress in reaching academic outcomes.

The use of portfolios for large-scale assessment and accountability purposes pose vexing measurement challenges. Portfolios typically require complex production and writing, tasks that can be costly to score and for which reliability problems have occurred. Generalizability and comparability can also be an issue in portfolio assessment, as portfolio tasks are unique and can vary in topic and difficulty from one classroom to the next. For example, Maryl Gearhart and Joan Herman have raised the question of comparability of scores because of differences in the help students may receive from their teachers, parents, and peers within and across classrooms. To the extent student choice is involved, contents may even be different from one student to the next. Conditions of, and opportunities for, performance thus vary from one student to another.

These measurement issues take portfolio assessment outside of the domain of conventional psychometrics. The qualities of the most useful portfolios for instructional purposes—deeply embedded in instruction, involving student choice, and unique to each classroom and student—seem to contradict the requirements of sound psychometrics. However, this does not mean that psychometric methodology should be ignored, but rather that new ways should be created to further develop measurement theory to address reliability, validity, and generalizability.

*See also:* ASSESSMENT, *subentries on* CLASSROOM ASSESSMENT, DYNAMIC ASSESSMENT.

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JOAN L. HERMAN  
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## ASSESSMENT TOOLS

### PSYCHOMETRIC AND STATISTICAL

Mark Wilson

### TECHNOLOGY BASED

Sean Brophy

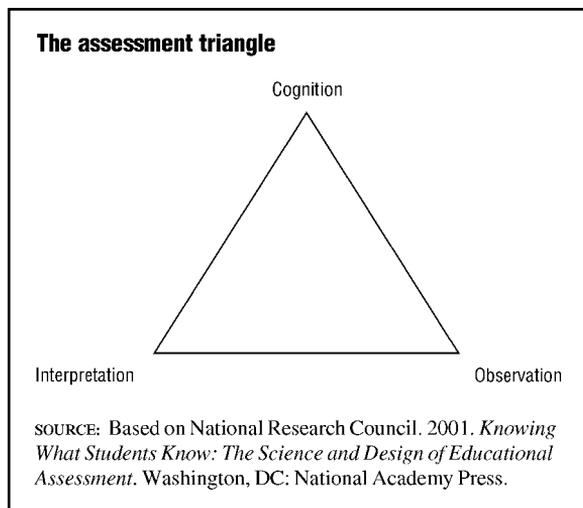
## PSYCHOMETRIC AND STATISTICAL

The place of psychometric and statistical tools in assessment must be understood in terms of their use within a process of evidence gathering and interpretation. To see this, consider the assessment triangle featured in a recent National Research Council Report and shown in Figure 1. The central problem in assessment is making inferences about cognition from limited observations. Psychometric and statistical tools are located at the interpretation vertex of the triangle, where their role is to negotiate between the other two vertices. To appreciate the way these tools work, one must first understand the other two vertices. Hence, each vertex is described below. Robert Mislevy and Mark Wilson describe similar and more elaborated approaches. The triangle should be seen as a process that is repeated multiple times in both assessment development and in the application of assessment in education.

### The Assessment Triangle

Ideally, all assessment design should begin with a theory of student cognition, or set of beliefs about how students represent knowledge and develop competence in a particular area. This theory should be the basis for a construct: the cognitive characteristic to be measured. Constructs are based on what the "assessment designers" know from foundational research in psychology and instruction and on experts' judgments about how students develop in a particular area. The construct distinguishes expert performance from other levels of performance in the area and considers those levels from the perspective of a developmental process. Furthermore, educational outcomes are not as straightforward as measuring

FIGURE 1



height or weight—the attributes to be measured are often mental activities that are not directly observable.

Having delineated the nature of the construct, one then has to determine what kinds of observations of behavior, products, and actions can provide evidence for making inferences concerning the construct, at the same time avoiding data that hold little value as evidence for the construct. In the classroom context, observations of learning activity are the relevant things that learners say and do (such as their words, actions, gestures, products, and performances) that can be observed and recorded. Teachers make assessments of student learning based on a wide range of student activity, ranging from observation and discussion in the classroom, written work done at home or in class, quizzes, final exams, and so forth. In large-scale assessment, standardized assessment tasks are designed to elicit evidence of student learning. These may range across a similar variation of types of performances as classroom-based assessments, but are often drawn from a much narrower range.

At the interpretation vertex is located the chain of reasoning from the observations to the construct. In classroom assessment, the teacher usually interprets student activity using an intuitive or qualitative model of reasoning, comparing what she sees with what she would expect competent performance to look like. In large-scale assessment, given a mass of complex data with little background information about the students' ongoing learning activities to aid in interpretation, the interpretation model is usually

a psychometric or statistical model, which amounts to a characterization or summarization of patterns that one would expect to see in the data at different levels of competence.

### Standard Psychometric Models

Probably the most common form that the cognition vertex takes in educational assessment is that of a continuous latent variable—cognition is seen as being describable as a single progression from less to more or lower to higher. This is the basis for all three of the dominant current approaches to educational measurement: Classical test theory (CTT), which was thoroughly summarized by Frederick Lord and Melvin Novick; generalizability theory (GT), which was surveyed by Robert Brennan, and item response theory (IRT), which was surveyed in the volume by Wim van der Linden and Ronald Hambleton. In CTT, the continuous variable is termed the true score, and is thought of as the long-run mean of the observed total score. In GT, the effects of various measurement design factors on this variable are analyzed using an approach that analyzes the variance. In IRT, the focus shifts to modeling individual item responses: The probability of an item response is seen as a function of the underlying latent variable representing student competence (often denoted by  $\theta$ ), and parameters representing the item and the measurement context.

The most fundamental item parameter is the item *difficulty*, but others are also used where they are thought to be useful to represent the characteristics of the assessment situation. The difficulty parameter can usually be seen as relating the item responses to the construct (i.e., the  $\theta$  variable). Other parameters may relate to characteristics of the observations. For example, differing item *slopes* can be interpreted as indicating when item responses are also possibly dependent on other (unmodeled) dimensions besides the  $\theta$  variable (these are sometimes called discrimination parameters, although that can lead to confusion with the classical discrimination index). Parameters for lower-item and upper-item asymptotes can be interpreted as indicating where item responses have “floor” and “ceiling” rates (where the lower asymptote is often called a guessing parameter). There is a debate in the literature about whether to include parameters beyond the basic difficulty parameters in the response model in order to make the model flexible, or whether to see them as indicating deviations from a regularity condition

(specific objectivity) that sees them as threatening the interpretability of the results.

A second possible form for the construct is as a set of discrete classes, ordered or unordered depending on the theory. The equivalent psychometric models are termed *latent class* (LC) models, because they attempt to classify the students on the basis of their responses as in the work of Edward Haertel. In these models, the form of cognition, such as problem-solving strategy, is thought of as being only possible within certain classes. An example might be strategy usage, where a latent class approach would be seen as useful when students could be adequately described using only a certain number of different classes. These classes could be ordered by some criterion, say, cognitive sophistication, or they could have more complex relations to one another.

There are other complexities of the assessment context that can be added to these models. First, the construct can be seen as being composed of more than a single attribute. In the continuous construct approach, this possibility is generally termed the *factor analysis* model when a classical approach is taken, and a *multidimensional item response model* (MIRM) when starting from the continuum approach as in the work by Mark Reckase and Raymond Adams and his colleagues. In contrast to the account above, where parameters were added to the models of the item to make it more complex, here the model of the student is what is being enhanced. These models allow one to incorporate evidence about different constructs into the assessment situation.

There are other ways that complexities of the assessment situation can be built into the measurement models. For example, authors such as Susan Embretson, Bengt Muthen, and Khoo Siek-Toon have shown how repeated assessments over time can be seen as indicators of a new construct: a construct related to patterns of change in the original construct. In another type of example, authors such as Gerhard Fischer have added linear effect parameters, similar to those available in GT, to model observational effects such as rater characteristics and item design factors, and also to model complexities of the construct (e.g., components of the construct that influence item difficulty, such as classes of cognitive strategies).

### **Incorporating Cognitive Elements in Standard Psychometric Models**

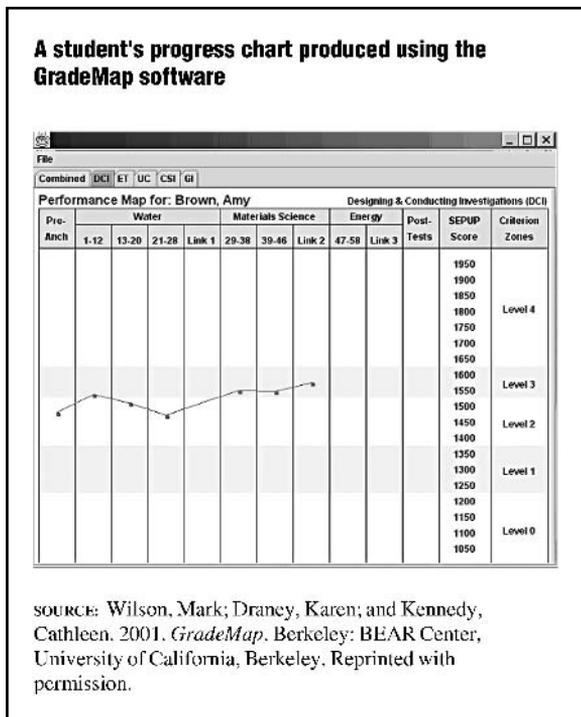
An approach called developmental assessment has been developed, by Geoffrey Masters and colleagues, building on the seminal work of Benjamin Wright and using the Rasch model, to enhance the interpretability of measures by displaying the variable graphically as a *progress map* or *construct map*. Mark Wilson and Kathryn Sloane have discussed an example shown in Figure 2, where the levels, called Criterion Zones in the figure, are defined in Figure 3. The idea is that many important features of assessments can be displayed in a technically accurate way by using the strength of the idea of a map to convey complicated measurement techniques and ideas. For example, one central idea is that the meaning of the construct can be conveyed by examining the order of item locations along the map, and the same technique has been used by Wilson as the basis for gathering validity evidence. In Figure 2, one can see how an individual student's assessments over time can be displayed in a meaningful way in terms of the Criterion Zones. The same approach can be adapted for reporting group results of assessments, and even large national surveys (e.g., that of Australia's Department of Employment, Education and Youth Affairs in 1997).

One can also examine the patterns of results of individual students to help diagnose individual differences. An example from the GradeMap software developed by Wilson and his colleagues is shown in Figure 4. Here, an overall index of "fit" was used to flag the responses of subject Amy Brown that needed extra attention. In the figure, the expected result for each item for Amy Brown is shown using the gray band across the middle, while the observed results are shown by the black shading. Clearly Amy has responded in surprising ways to several items, and a content analysis of those items may prove interesting. An analogous technique has been developed by Kikumi Tatsuoka (1990, 1995) with the advantage of focusing attention on specific cognitive diagnoses.

### **Adding Cognitive Structure to Psychometric Models**

One can go a step further than the previous strategy of incorporating interpretative techniques into the assessment reporting—elements of the construct can be directly represented as parameters of the psychometric model. From a statistical point of view, this would most often be the preferred tactic, but in

FIGURE 2



practice, it may add to the complexity of interpretation, so the merits should be considered for each application. A relatively straightforward example of this is the incorporation of differential item functioning (DIF) parameters into the psychometric model. Such parameters adjust other parameters (usually item difficulty parameters) for different effects between (known) groups of respondents. Most often it has been seen as an item flaw, needing to be corrected. But in this context, such parameters could be used to allow for different construct effects, such as using different solution strategies or linguistic differences.

Another general strategy is the delineation of hierarchical classes of observation that group together the original observations to make them more interpretable. This can be seen as acting on either the student or the item aspects of the psychometric model. This could be seen as a way to split up the students into latent groups for diagnostic purposes as in the work of Edward Haertel and David Wiley. Or it could be seen as a way to split up the items into classes, allowing interpretation of student results at the level of, say, classes of skills rather than at the individual item level, as in the work of Rianne Janssen and her colleagues. Wilson has combined the continuum and latent class approaches, thus allowing

constructs that are partly continuous and partly discontinuous. For example, the Saltus Model is designed to incorporate stage-like developmental changes along with more standard incremental increases in skill, as illustrated in the work of Mislevy and Wilson.

### Generalized Approaches to Psychometric Modeling of Cognitive Structures

Several generalist approaches have been proposed. One is the Unified Model, developed by Louis de Bello and his colleagues, which is based on the assumption that task analyses can classify students' performances into distinct latent classes. A second general approach, Peter Pirolli and Mark Wilson's M2RCML, has been put forward and is based on a distinction between knowledge level learning, as manifested by variations in solution strategies, and symbol-level learning, as manifested by variations in the success of application of those strategies. In work by Karen Drancy and her colleagues, this approach has been applied to data related to both learning on a Lisp tutor and a rule assessment analysis of reasoning involving the balance scale.

A very general approach to modeling such structures called Bayes Nets has been developed by statisticians working in other fields. Two kinds of variables appear in a Bayes Net for educational assessment: those that concern aspects of students' knowledge and skill, and others that concern aspects of the things they say, do, or make. All the psychometric models discussed in this entry reflect this kind of reasoning, and all can be expressed as particular implementations of Bayes Nets. The models described above each evolved in their own special niches; researchers in each gain experience in use of the model, write computer programs, and develop a catalog of exemplars. Bayes Nets have been used as the statistical model underlying such complex assessment contexts as intelligent tutoring systems as in the example by Mislevy and Drew Gitomer.

### Appraisal of Psychometric Models and Future Directions

The psychometric models discussed above provide explicit, formal rules for integrating the many pieces of information that may be relevant to specific inferences drawn from observation of assessment tasks. Certain kinds of assessment applications require the capabilities of formal statistical models for the interpretation element of the assessment triangle. The

psychometric models available in the early twenty-first century can support many of the kinds of inferences that curriculum theory and cognitive science suggest are important to pursue. In particular, it is possible to characterize students in terms of multiple aspects of proficiency, rather than a single score; chart students' progress over time, instead of simply measuring performance at a particular point in time; deal with multiple paths or alternative methods of valued performance; model, monitor, and improve judgments based on informed evaluations; and model performance not only at the level of students, but also at the levels of groups, classes, schools, and states.

Unfortunately, many of the newer models and methods are not widely used because they are not easily understood or are not packaged in accessible ways for those without a strong technical background. Much hard work remains to focus psychometric model building on the critical features of models of cognition and learning and on observations that reveal meaningful cognitive processes in a particular domain. If anything, the task has become more difficult because an additional step is now required—determining simultaneously the inferences that must be drawn, the observations needed, the tasks that will provide them, and the statistical models that will express the necessary patterns most efficiently. Therefore, having a broad array of models available does not mean that the measurement model problem is solved. More work is needed on relating the characteristics of measurement models to the specifics of theoretical constructs and types of observations. The longstanding tradition of leaving scientists, educators, task designers, and psychometricians each to their own realms represents perhaps the most serious barrier to the necessary progress.

*See also:* ASSESSMENT, *subentries on* CLASSROOM ASSESSMENT, NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS; TESTING, *subentry on* STANDARDIZED TESTS AND HIGH-STAKES ASSESSMENT.

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**FIGURE 3**

The evidence and tradeoffs scoring guide		
Category	Score	Using Evidence: Response uses objective reason(s) based on relevant evidence to support choice.
Beyond correct	4	Response accomplishes Level 3 and goes beyond in some significant way, such as questioning or justifying the source, validity, and/or quantity of evidence.
Correct	3	Response provides major objective reasons and supports each with relevant and accurate evidence.
Partially complete (ii) —some objective reasons and some evidence	2	Response provides some objective reasons and some supporting evidence, but at least one reason is missing and/or part of the evidence is incomplete.
Partially complete (i) —subjective and/or inaccurate reasons	1	Response provides only subjective reasons (opinions) for choice and/or uses inaccurate or irrelevant evidence from the activity.
Missing or irrelevant	0	No response; illegible response; response offers no reasons and no evidence to support choice made.
No opportunity	X	Student had no opportunity to respond.

SOURCE: Adapted from Wilson, Mark, and Sloane, Kathryn. 2000. "From Principles to Practice: An Embedded Assessment System." *Applied Measurement in Education* 13(2):181–208.

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MARK WILSON

## TECHNOLOGY BASED

Assessment methods can be learning opportunities for students, though identifying methods to accomplish this can be challenging. Some new instructional methods may target learning outcomes that traditional assessment methods fail to measure. Automated assessment methods, such as multiple-choice and short-answer questions, work well for testing the retrieval of facts, the manipulation of rote procedures, solving multiple-step problems, and processing textual information. With carefully designed multiple-test items it is possible to have students demonstrate their ability to perform causal reasoning and solve multi-step problems. However, students' participation in these kinds of traditional assessment activities do not necessarily help them "learn" and develop complex skills.

What students and teachers need are multiple opportunities to apply new information to complex situations and receive feedback on how well they are progressing toward developing the ability to synthesize and communicate ideas and to systematically approach and solve problems. Technologies are emerging that can assess students' ability to gather, synthesize, and communicate information in a way that helps improve their understanding and that informs teachers how they can improve their instruction. Several instructional techniques and technologies have been designed to help students develop complex skills and help teachers develop students' causal reasoning, diagnose problem-solving abilities, and facilitate writing.

### Developing Causal Reasoning

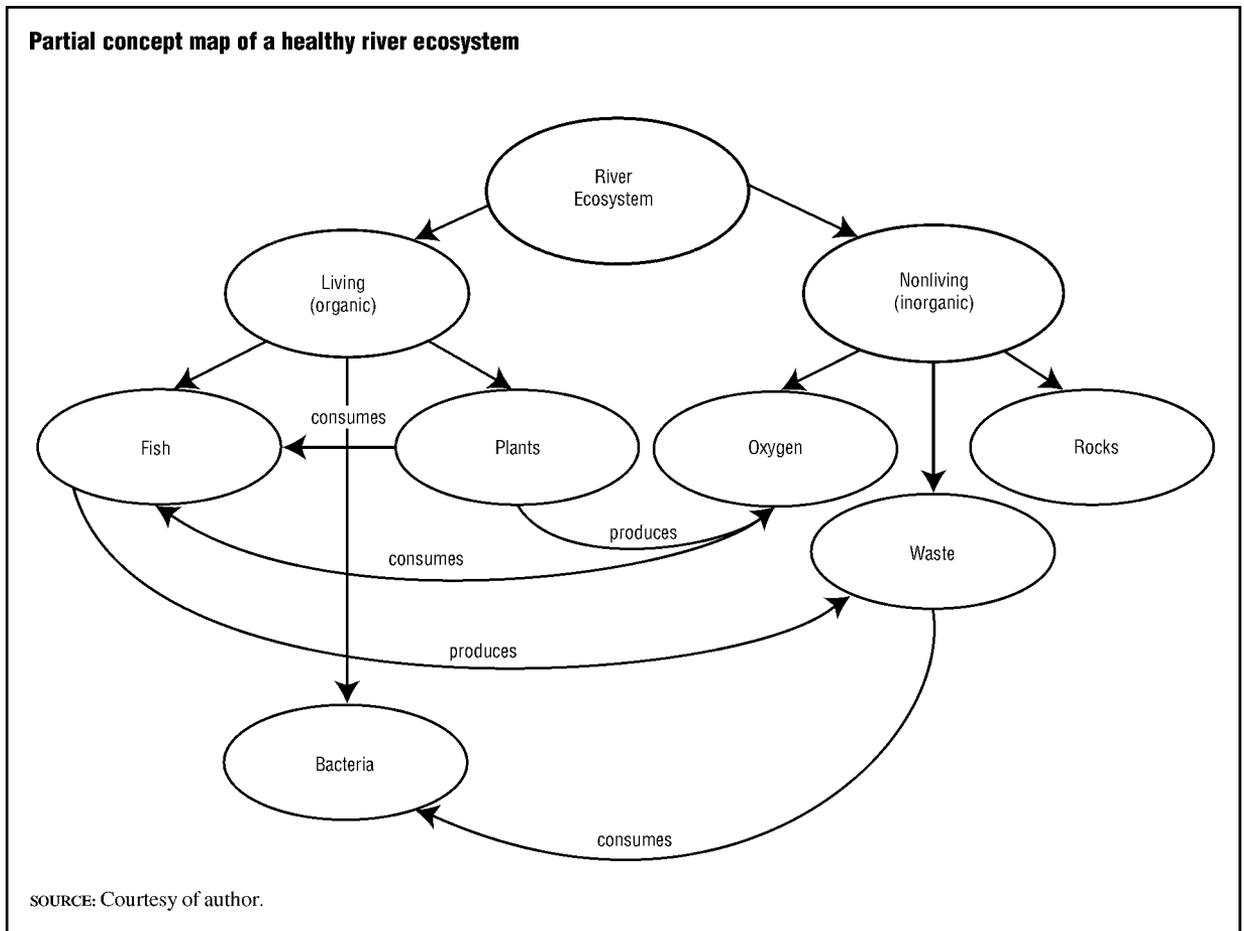
Volumes of information can be shared efficiently by using a graphical image. The potential for students to learn from integrating ideas into graphical infor-

mation can be very powerful and can demonstrate what they know and understand. One example of how information is portrayed in graphical form is a common street map. Expert mapmakers communicate a wealth of information about the complicated network of roads and transportation routes that connect the various locations in a city. Mapmakers use colored lines to indicate which roads have the higher speed limits, such as expressways and highways. Therefore, people can use the map as a tool to make decisions about a trip by using a map to plan out the fastest route, rather than taking the shortest distance—which may include city roads that have a lower speed limit or are potentially congested. A road map efficiently illustrates the relative location of one place and its relation to another, as well as information about the roads that connect these locations.

Learners can share what they know about a complex topic by creating a concept map, which illustrates the major factors of a topic and descriptive links detailing the relationships between these factors. For example, a river is a complex ecosystem containing a variety of elements, such as fish, macroinvertebrates, plants, bacteria, and oxygen, which are highly dependent on one another. Changes in any of these elements can have a ripple effect that is difficult to determine without some method to represent the links between the elements. Scientists often create a concept map of a system to help keep track of these interdependencies in a complex system. A concept map such as Figure 1 can help students notice when their intuitions are not enough to make sense of a complex situation. Therefore, creating a concept map can be a very authentic activity for students to do as they explore the intricacies of science.

Concept-mapping activities also provide an excellent opportunity for assessment. Students can demonstrate their current conceptions of a system at various stages of their inquiry. A simple method to evaluate concept maps is to compare what the learners create relative to what an expert creates. A point can be given for each relevant element and links identified by the students. A second point can be added for correctly labeling the link (e.g., *produce* as in "plants *produce* oxygen"). A common observation is that as students begin exploring a topic area like ecosystems, their concept maps contain only a few elements, many of which are irrelevant, and they use very few links or labels of links. If they include

FIGURE 1



links, they are unable to describe what the links are, though they know there is some dependency between factors. As students begin to investigate more about a system and how it works, they are often able to redraw their maps to include the relevant element links and labels to illustrate the interdependence of the elements of a system. However, grading these maps multiple times can be very time-consuming for a teacher.

New computer software has been developed to provide students with a simple interface to create hierarchical concept maps. The software can also score students' performance on these concept maps, depending on the goals of the instruction. For example, students' concept maps can be compared with those of experts for completeness and accuracy. An expert's model of a system would include a complete list of factors and named links. Comparing a student's map to an expert's map provides a method of

identifying if students know what factors are relevant, as well as the relationships between factors.

Causal maps are similar to concept maps and include information about how one factor influences another factor. For example, the relationship "fish consume plants" in Figure 1 could also be expressed as "fish decrease plants" and "plants increase oxygen." The visual representation—with qualitative information about the relationship between factors—gives students an illustration they can use to make predictions about what will happen to the system when one of the factors changes. They can use the causal map as a tool to answer the question "What happens if we add a larger number of fish into a river?" Then, students can follow the *increase* and *decrease* links to derive a hypothesis of what they think might happen to the other factors.

Causal maps also provide a method to use technology as both an instructional tool and an assessment tool to measure students' understanding of a

complex system. A research group at the Learning Sciences Institute at Vanderbilt University (formerly the Learning Technology Center) has created a computer system, called *teachable agents*, that provides students with a method to articulate what they know and to test their ideas by helping a *virtual agent* use their knowledge to answer questions. Students teach this agent how a particular system works by creating a causal map of a system, which becomes the agent's representation of its knowledge. Testing how well the agent has learned is accomplished by asking the agent questions about the relationships in the system. The agent reasons through questions using the causal map the students have provided them.

As the agent reasons through a question, the factors and links are highlighted to illustrate what information it is using to make a decision on how to answer the question. If the causal map is incomplete or has contradictory information, then the computer agent will explain that it doesn't know, or is confused about what to do next. The feedback from watching the computer agent "think" about the problem can help students identify what knowledge is missing or incorrectly illustrated in their causal map. Therefore, students learn by having to debug how their agent thinks about the world. This kind of computer tool tests a student's understanding of the processes associated with a system and provides an automatic method for self-assessment.

### Diagnosing Problem-Solving Abilities

*Problem solving* is a process that incorporates a wide range of knowledge and skills, including identifying problems, defining the source of a problem, and exploring potential solutions to a problem. Many challenging problems, such as designing a house, creating a business plan, diagnosing a disease, troubleshooting a circuit, or analyzing how something works, involve a range of activities. Such situations require the ability to make decisions using available information—and the inquiry process necessary to locate new information. This process can also include making reasonable assumptions that help constrain a problem, thus making it easier to identify a potential solution. Novices often don't have enough background knowledge to make these decisions, relying instead on a trial-and-error method to search for solutions. If a teacher could watch each student solve problems and ask questions about why they made certain decisions, the teacher could learn more about what the students understand and monitor

their progress toward developing good problem-solving skills.

The IMMEX system, created by Ron Stevens at UCLA, is a web-based problem-solving simulation environment that tracks many of the decisions a person makes while attempting to solve a problem. Stevens initially created IMMEX to help young immunologists practice their clinical skills. These interns are given a case study detailing a patient's symptoms, and they must make a range of decisions to efficiently and conclusively decide what is wrong with the patient. They must choose from a range of resources—including lab tests, experts' comments, and patient's answers to questions—to help gather evidence to support a specific diagnosis. Each decision that is made can have a cost associated with it in terms of both time and money. The young internists must use their current medical knowledge to make good decisions about what resources to use and when to use them. The IMMEX system tracks these decisions and reports them in the form of a node and link graph (visually similar to a concept map) that indicates the order in which the resources were accessed. In addition, a neural network can compare the decision path the intern makes with the decision path of an expert doctor to identify where the interns are making bad decisions. Students can use these traces to help them evaluate the strategies they use to solve a problem and learn about more optimal strategies. Also, an instructor can use these decision traces to evaluate common errors made by the students. The result is a system that provides students with the opportunity to solve complex problems and receive automated feedback they can use to improve their performance, while professors can use it to refine their instruction to better meet the needs of the students. IMMEX now has programs created for K–12 education.

### Facilitating Writing

Writing is a fundamental skill that requires careful use of language to communicate ideas. Learning to write well takes practice and feedback on content, form, style, grammar, and spelling. Essay and report writing are therefore critical assessment tools used to capture students' ability to bring together ideas related to a course of study. However, a teacher can only provide a limited amount of feedback on each draft of a student's essay. Therefore, the teacher's feedback may consist of short comments in the margin, punctuation and grammar correction, or a brief

note at the end summarizing what content is missing or what ideas are still unclear. Realistically, a teacher can only give this feedback on a single draft before students hand in a final version of their essays. Most word processors can help students check their spelling and some mechanical grammar errors, which can help reduce the load on the teacher. What students need is a method for reflecting on the content they've written.

*Latent semantic analysis* (LSA) has great potential for assisting students in evaluating the content of their essay. LSA can correlate the content of a student's essay with the content of experts' writings (from textbooks and other authoritative sources). The program uses a statistical technique to evaluate the language experts use to communicate ideas in their published writings on a specific topic area. Students' essays are evaluated with the same statistical technique. LSA can compare each student's writing with the writing of experts and create a report indicating how well the paper correlates in content on a scale from 1 to 5. The numerical output does not give students specific feedback on what content needs to change, but it helps them identify when more work needs to be done. Students can rewrite and submit their papers to the LSA system as many times as necessary to improve the ranking. The result should be that students' final essays have a much higher quality of content when they hand them in to the teacher. In addition, the students must take on a larger role in evaluating their own work before handing in the final project, allowing the teacher to spend more time evaluating the content, creativity, and synthesis of ideas.

### Summary

Assessment of abilities such as problem solving, written communication, and reasoning can be a difficult and time-consuming task for teachers. Performance assessment methods such as class projects and presentations are important final assessments of students' ability to demonstrate what research they have done, as well as their ability to synthesize and communicate their ideas. Unfortunately, teachers often do not have enough time to give students multiple opportunities to engage in these kinds of activities, or to give them sufficient feedback before they perform these final demonstrations of what they have learned. Systems like teachable agents, IMMEX, and LSA provide a method for students to test what they know in a very authentic way as they progress

toward their final objectives. These technologies provide a level of feedback that requires the students to reflect on their performance and define their own learning goals to increase their performance. In addition, teachers can use an aggregate of this feedback to evaluate where a class may need assistance. Technology can provide assessment methods that inform students on where they need assistance and that require the learners to define their own learning outcomes.

*See also:* ASSESSMENT, *subentries on* CLASSROOM ASSESSMENT, DYNAMIC ASSESSMENT; ASSESSMENT TOOLS, *subentry on* PSYCHOMETRIC AND STATISTICAL.

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## ASSISTIVE TECHNOLOGY

*Assistive technology* is a relatively new term used to describe devices and services that lessen or remove barriers faced by persons with disabilities. Although the term is contemporary, the use of assistive technology is not new. For centuries, individuals with disabilities have used a variety of assistive devices to help them overcome demands in the environment. For example, years ago individuals with a hearing loss realized that placing a horn to their ear amplified sounds and consequently created a primitive version of today's hearing aid. Unfortunately, until the 1970s it was up to individuals to find appropriate devices to help them ameliorate their disabilities. In 2002, with support from federal legislation, schools and businesses are required to help individuals with disabilities identify and use appropriate assistive technologies and services. The first piece of such legislation was Section 504 of the Rehabilitation Act of 1973 (Pub. L. 99-506). This law prohibits discrimination of persons with disabilities in places of federal employment. Section 504 mandates that federal employees with disabilities must have the necessary accommodations to enable them to access databases, telecommunications systems, and other software programs, to contribute to work-related tasks, and to communicate with others in their system.

Subsequent to Section 504 of the Rehabilitation Act, the Technology-Related Assistance for Individuals with Disabilities Act of 1988 (Pub. L. 100-407), better known as the Tech Act, was passed into law. This piece of legislation provided financial assistance for states to plan and implement a consumer-responsive system of assistive-technology services for individuals of all ages with disabilities. The provisions of the Tech Act required states to identify existing assistive-technology services and ensure that persons with disabilities acquired access to assistive-technology services, including assessment, funding for devices, training, and technical assistance.

Following on the heels of the Tech Act was the Americans with Disabilities Act (ADA) of 1990 (Pub. L. 101-336). This legislation is designed to prevent discrimination against persons with disabilities in four major areas: employment, public facilities, transportation, and telecommunications. Many of these accommodations are made through the use of assistive technologies, such as modified workstations, ramps at the entrances to buildings, and telecommunications devices for persons who are deaf.

The Education of the Handicapped Act (EHA) Amendments of 1990 (Pub. L. 101-476) officially changed EHA to the Individuals with Disabilities Education Act (IDEA). At this time, assistive technology was added to the list of special education services that must be included in a student's Individualized Education Program (IEP). IDEA defines assistive-technology services as "any service that directly assists a child with a disability in the selection, acquisition, or use of an assistive technology device."

Under IDEA, assistive-technology services include:

- the evaluation of the needs of a child identified with a disability, including a functional evaluation of the child in the child's customary environment;
- purchasing, leasing, or otherwise providing for the acquisition of assistive-technology devices;
- selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing of assistive-technology devices;
- coordinating and using other therapies, interventions, or services with assistive-technology devices, such as those associated with existing education and rehabilitation plans and programs;
- training or technical assistance for a child or, where appropriate, the family of the child; and
- training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of a child with an identified disability.

IDEA defined an assistive-technology device as "any item, piece of equipment or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve the functional capabilities of children with disabilities."

The use of assistive-technology devices and services by students with disabilities is further supported in the amendments to IDEA (Pub. L. 105-17). The law mandates that, beginning in July 1998, assistive technology must be considered for all students eligible for special education services. Although the regulations do not elaborate on how

assistive technology must be considered, the law states that the IEP team must be involved in the decision-making process. It further states that outside evaluators must be used when the IEP team lacks the expertise to conduct an evaluation and make an informed decision regarding assistive technology. In addition, it is the responsibility of the school system to secure funding for the device and to provide training to school personnel, family members, and the student as educationally appropriate.

### Assistive Technology and Human Functions

As of 2001, thousands of different assistive technologies have been developed to provide a broad array of support to individuals with disabilities. These assistive technologies have been categorized into seven functional areas: (1) existence; (2) communication; (3) body support, protection, and positioning; (4) travel and mobility; (5) environmental interaction; (6) education and transition; and (7) sports, fitness, and recreation. Following is a short description of each of the seven functional areas, with examples of assistive-technology devices and services available to support individuals with disabilities.

Problems in the existence area are associated with the functions needed to sustain life, including eating, grooming, dressing, elimination, and hygiene. Some assistive technologies in this area are adapted utensils, dressing aids, adapted toilet seats, toilet training, and occupational therapy services.

Students with communication needs have difficulties associated with the functions needed to receive, internalize, and express information, and to interact socially, including oral and written expression and visual and auditory reception. Solutions may include hearing amplifiers, magnifiers, pointers, alternate computer input, augmentative communication devices and services, social skills training, and speech/language therapy services.

Body support, protection and positioning issues are associated with the functions needed to stabilize support or protect a portion of the body while sitting, standing, or reclining. Assistive technologies may include prone standers, furniture adaptations, support harnesses, stabilizers, head gear, and physical therapy services.

Travel and mobility needs are associated with the necessity to move horizontally or vertically, including crawling, walking, navigating, stair climbing, and transferring either laterally or vertically. Tech-

nologies to assist with travel and mobility include wheelchairs, scooters, hoists, cycles, walkers, crutches, and orientation- and mobility-training services.

Difficulties in environmental interaction are associated with the functions needed to perform activities across environments, including operating computer equipment and accessing facilities. Assistive-technology solutions may include the use of switches to control computers, remote-control devices, adapted appliances, ramps, automatic door openers, modified furniture, driving aids, and rehabilitation services.

Problems in education and transition are associated with the functions needed to participate in learning activities and to prepare for new school settings or postschool environments. Assistive technologies may include educational software, computer adaptations, community-based instruction, and services from an assistive technologist.

Persons needing assistive technology for sports, fitness, and recreation require assistance with individual or group sports, play, and hobbies and craft activities. Those individuals may benefit from modified rules and equipment, adapted aquatics, switch-activated cameras, and braille playing cards, and may participate in adapted physical education services.

### Employing Assistive Technology

Federal law mandates that assistive technology must be considered for all individuals served under IDEA. When assistive technologies are being considered, it is important to remember that the consideration must be based on the needs of the individual rather than on the type of disability. Factors of human function must guide any decision as to the appropriateness of assistive technology. Every individual with a disability faces a unique set of challenges and demands, and the successful use of assistive technology means that these challenges and demands can be lessened or removed. The power and promise of assistive technology can be realized only when the needs of a person with a disability are identified and the assistive technology is designed to meet those needs. If this is not done, the potential power of assistive technology will not be realized.

*See also:* ADAPTED PHYSICAL EDUCATION; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF, PREPARATION OF TEACHERS.

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## **ASSOCIATION OF AMERICAN COLLEGES AND UNIVERSITIES**

The Association of American Colleges and Universities (AAC&U) is the national association that works

to advance and strengthen undergraduate liberal education for all college students, regardless of their academic specialization or intended career. Since its founding in 1915, AAC&U's membership as of 2001 included more than 735 accredited public and private colleges and universities of every type and size.

AAC&U functions as a catalyst and facilitator, forging links among presidents, administrators, and faculty members who are engaged in institutional and curricular planning. Its mission is to reinforce the collective commitment to liberal education at both the national and local levels and to help individual institutions keep the quality of student learning at the core of their work as they evolve to meet new economic and social challenges.

In 1995 the AAC&U board of directors approved five priorities that guide AAC&U's work: (1) mobilizing collaborative leadership for educational and institutional effectiveness; (2) building faculty leadership in the context of institutional renewal; (3) strengthening curricula to serve student and societal needs; (4) establishing diversity as an educational and civic priority; and (5) fostering global engagement in a diverse but connected world.

**Educational Vision**

AAC&U advocates for excellence in liberal education as an equal opportunity commitment—to all students regardless of where they study, what they major in, or what their career goals are. Although liberal education has always set the standard for excellence in higher education, the content of a liberal education has changed markedly over time, and the educational vision and nature of AAC&U's programmatic work has changed accordingly. Since AAC&U's founding, however, liberal education at American colleges and universities has consistently fostered the development of intellectual capacities and ethical judgment and the attainment of a sophisticated understanding of nature, culture, and society. AAC&U believes that liberal education prepares graduates better for work and for civic leadership in their society.

As it has evolved over the last few decades of the twentieth century and the first years of the twenty-first century, liberal education has come to place new emphasis on diversity and pluralism. In a board statement approved in 1998, AAC&U asserted that, "by its nature, liberal education is globalistic and pluralistic. It embraces the diversity of ideas and ex-

periences that characterize the social, natural, and intellectual world. To acknowledge such diversity in all its forms is both an intellectual commitment and a social responsibility, for nothing less will equip students to understand our world and to pursue fruitful lives.”

In the twenty-first century AAC&U members are working together to reinvent liberal education and stress both its analytic and practical benefits. Liberal education now involves first-year seminars and programs, newly revitalized and developmental general education curricula, topically linked courses and learning communities, undergraduate research, community-based diversity projects, online scientific experimentation, and advanced interdisciplinary studies.

This contemporary liberal education is both conceptually rigorous and pragmatic. Ideally it will prepare graduates to use the knowledge they gain in college and across their working lives in thoughtful, ethical ways.

## History and Development

AAC&U’s mission has consistently focused on advancing liberal education and defining the aims of a college education in America. First named the Association of Colleges (AAC), the organization was established at a meeting of college presidents in 1915 in Chicago, Illinois. Robert L. Kelly, president of Earlham College, served as its first president. Although most of its founding-member schools were small liberal arts colleges, from the outset, AAC has been composed of colleges and universities from all sectors of higher education, including public or tax-supported institutions.

In 1923 the association voted to admit new members and amended its original charter to read “College of Liberal Arts of” in the case of universities or other institutions that had several departments or schools, beginning its long history of including many types of colleges and universities among its membership. This aspect of the association distinguishes it from most other higher education associations.

Throughout its history, AAC has also consistently engaged the challenges of diversity in American higher education. In 1969 AAC released a statement on “Racial Problems and Academic Programs” asserting, in part, that “The nation owes a debt of gratitude to its minorities for giving a fresh

and morally compelling impetus to the movement for restoring relevance to academic programs, not in any trivial or opportunistic sense but in the sense that the worth of an educational system is ultimately measured by the quality of the society it serves.” AAC also launched its continuing Project on the Status and Education of Women, the first such office at a Washington-based association, in 1971. The project’s first director, Bernice R. Sandler, coined the phrase “chilly climate” to describe the campus environment for many women and minority men.

Acting on recommendations of a blue-ribbon committee, AAC voted in 1976 to withdraw from all formal federal lobbying activities and dedicate itself solely to the mission of being the “voice for liberal learning” in the United States. At this time, AAC assisted in establishing the National Association of Independent Colleges and Universities to work on federal relations on behalf of private or independent institutions. In 1995 the organization formally changed its name to the Association of American Colleges and Universities to better reflect the diversity of its member institutions.

In 1985 AAC issued an influential report to the academic community on “Integrity in the College Curriculum.” The conclusions of this report guided AAC’s work from the mid-1980s into the 1990s. The organization continues to work on issues of curricular coherence in the undergraduate experience through a variety of programs and initiatives.

## Programs and Organizational Activities

All of AAC&U’s work connects goals for student learning with institutional planning and practice. Through a combination of continuing programs and grant-funded initiatives, AAC&U provides resources and direct practical assistance to campuses working on improving undergraduate education. It also works more broadly to shape the national dialogue on central educational issues.

During the 1980s and 1990s AAC&U programs and initiatives focused on curriculum transformation and general education reform, undergraduate learning outcomes, re-forming college majors, faculty development and preparing future faculty, building faculty leadership for educational and institutional change, campus diversity, and global learning. At any given time AAC&U generally runs about ten to fifteen funded projects. The organization also runs a variety of meetings and summer in-

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stitutes, including the Asheville Institute on General Education (sponsored since 1991 in collaboration with the University of North Carolina, Asheville). It also publishes several quarterlies including *Peer Review*, *On Campus with Women*, *Diversity Digest*, and *Liberal Education*, its flagship journal, which it has published under this title since 1959.

Signature AAC&U initiatives have included Greater Expectations: The Commitment to Quality as a Nation Goes to College; American Commitments: Diversity, Democracy and Liberal Learning; Preparing Future Faculty; Shared Futures: Learning for a World Lived in Common; and Science Education for New Civic Engagements and Responsibilities.

### Membership and Financial Support

Membership in AAC&U is institutional and open to all accredited colleges and universities in the United States. As of 2001 AAC&U comprised 700 member institutions. The association's general operating funds are furnished by membership dues and income from publication sales and meeting attendance. For major programs and initiatives, the association seeks grants from independent and corporate foundations and from the federal government. AAC&U has its headquarters in Washington, D.C.

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The Association of American Universities (AAU) is a Washington, D.C.-based organization representing sixty-one of the most prestigious North American higher education institutions, fifty-nine in the United States and two in Canada. Membership is by invitation only, with an approximately 50 percent split between public and private institutions. A majority of 75 percent of the current members must approve an institution before it can become a new member.

The member institutions have major interests in quality research and graduate and professional education. AAU represents those interests nationally and provides its members with a forum to discuss common institutional issues. Two AAU meetings are held annually, with one meeting taking place on a member's campus and one held in Washington, D.C.

AAU's internal structure includes an Executive Committee from the membership; a Council on Federal Relations, consisting of senior officers from the institutions whose responsibilities include federal relations for their own campuses; the Association of Graduate Schools, composed of the graduate deans of the AAU institutions; and a Public Affairs Network whose participants are public affairs officers of the AAU institutions.

Each year AAU institutions award about half of the doctorates given in the United States, one-fifth of the master's degrees, and one-sixth of the bachelor's degrees. According to the association's website, AAU member institutions contribute more than half of higher education's research and development performance and receive around 60 percent of the federal funds for academic research.

### History

The AAU was formed in 1900, during a meeting at the University of Chicago of fourteen representatives of the major institutions of higher education granting doctoral degrees. The American system was fragmented, and standards for graduate study were low. Diploma mills abounded, and European institutions' opinion of American higher education was unflattering. The purposes of the Chicago meeting were to find means to raise the standards of higher education institutions, increase the value of American graduate degrees, protect the term *university*

from indiscriminate use, and gain the respect of European universities. The result of the meeting was the creation of the Association of American Universities.

By 1914 the association was acting as an accrediting agency that provided European institutions with lists of approved colleges whose graduates were deemed capable of advanced graduate work. Graduate deans did site visits, and certified colleges were included in the “AAU Accepted List.”

Although the AAU was essentially a presidents’ organization, the focus on accreditation resulted in drastic losses of attendance by presidents. AAU had become a deans’ forum. In 1949, in order to return the association to the presidents, and as a result of the deans’ desire to expand the accreditation service, AAU dropped accreditation entirely. It split into two organizations, one a presidential organization keeping the name Association of American Universities, and the second taking on the name the Association of Graduate Schools in the AAU.

For a good part of its life, AAU’s federal affairs activities were minimal. However, World War II brought AAU and its institutions into a closer relationship with the federal government, and in the postwar period the creation of the National Science Foundation (NSF), the Office of Naval Research (ONR), and National Institutes of Health (NIH) meant large sums of research funds were directed to AAU institutions. The relationship with the federal government became more complicated and demanding, and AAU established a permanent office in Washington, D.C. However, AAU’s reluctance to participate in lobbying continued, and it was not until 1977 that the association named its own president for the Washington office. This was followed in 1978 with the naming of a director of federal relations and the development of a full-time staff that dealt with federal issues.

By the 1980s AAU had expanded its activities to include an interest in foreign languages and area studies, the organization of a clearinghouse on corporate–university research partnerships, and the collection of data on graduate education. AAU joined other Washington higher education associations in lobbying on such issues as student financial aid, federal support of the humanities, tax policies affecting higher education, and intercollegiate athletic activities.

As university–industry relationships became closer in the U.S. struggle to remain economically

competitive, AAU became deeply involved in the problems that emerged. Three issues in particular concerned AAU: conflicts of interest and research misconduct, indirect research costs disagreements, and academic earmarking.

Robert M. Rosenzweig’s 1998 study revealed how the increasing complexity of university–industry research relationships generated conflict-of-interest questions. For example, some commercial clients of universities required the institutions to prevent or postpone publication of research results—a violation of academic values. In response to this and other issues related to university–industry relations, AAU set up a clearinghouse to allow its members to share their policies. Several highly publicized cases of alleged misconduct in research in the late 1980s combined with the probability of more such cases led AAU to put together and distribute workable guidelines for institutions.

No issue was more contentious and difficult for AAU to deal with than that of earmarking—the practice by an institution of directly soliciting influential members of Congress for research dollars, thus avoiding the conventional practice of competitive peer review as a basis for being awarded federal funding. This issue seriously divided AAU’s membership. Peer review was a well-established and legitimate method for determining who would receive federal research awards and reflected university values of rewarding merit. But earmarking proved attractive to some colleges, universities, and members of Congress, for it provided direct aid to individual institutions and perhaps to the local economies. The issue was deeply divisive, and the association was never able to reach a satisfactory solution. Earmarking increased greatly in the 1990s and into the 2000s.

AAU and its members have had a long history of contentious negotiations with the federal government concerning indirect costs, the reimbursement of facilities, and administrative costs of federally funded research. Indirect costs have been an issue since the 1930s. Determining indirect costs is complicated. The issue involves disputes in which government tends to see universities as demanding exorbitant reimbursement for overhead costs, while universities contend that the charges are reasonable and necessary to take account of administrative and facility costs to the institutions.

AAU is an association member of the American Council on Education (ACE) and participates in and

coordinates activities with the informal group of Washington Associations, often called the Big Six. AAU also has affiliations with the Council of Graduate Schools (CGS), the Association of American Medical Schools (AAMS), and the Council on Government Relations (CGR).

*See also:* AMERICAN ASSOCIATION OF COMMUNITY COLLEGES; AMERICAN COUNCIL ON EDUCATION; ASSOCIATION OF AMERICAN COLLEGES AND UNIVERSITIES.

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## ATTENDANCE POLICY

*See:* COMPULSORY SCHOOL ATTENDANCE.

## ATTENTION

Because some forms of learning are critically dependent upon attention, it is important for educators to be familiar with modern developments in this field. The most widely known definition of attention extends back to the late 1800s. The psychologist and philosopher William James (1842–1910) defined it as “the taking possession of the mind, in clear and vivid form, of one out of what seem several simultaneously possible objects or trains of thought” (pp. 403–404).

This definition conveys intuitive feeling for the subject. However, it is common to break the subject down into two subdivisions: (1) arousal and (2) selection of information. The processes involved in *arousal* involve achieving and maintaining an alert state sufficient to remain in contact with environ-

mental stimuli. This sense of attention separates the waking state from conditions such as sleep or coma. *Selective attention* refers to the processes involved in selecting information for consciousness, for immediate response, or for storing information in memory. The conscious content of selective attention is only a small subset of the information that could be available at any given moment. Thus, the ability to switch or orient one’s attention is critical to the successful use of attention in any environment.

Attention can also be considered in terms of its underlying anatomy. It is useful for educators to think about attention as an organ system, not unlike the familiar organ systems of respiration and circulation. Attention has a distinct anatomy that carries out basic psychological functions and that can be influenced by specific brain injuries and states. The network involved in achieving an alert state involves midbrain centers that are the source of the chemical norepinephrine. This network appears to be asymmetric at the cortical level, with greatest involvement of the right cerebral hemisphere, particularly in the frontal regions. Two networks are involved in the process of selection of information. One of these relates to orienting to sensory information, and involves areas of the parietal lobe, frontal eye fields, and superior colliculus, which are also part of the eye movement system. A second network is related to attention to internal thoughts. This network involves areas of the frontal midline (anterior cingulate), the left and right lateral prefrontal cortex, and the underlying basal ganglia.

### The Study of Attention

The study of attention has greatly expanded as new methods have become available for its study. From the early beginnings of psychology in the late 1880s, studies of attention employed simple experimental tasks that required rapid responses to single targets—or to one of a small number of targets—in an effort to study limitations in people’s speed and capacity for attending to input information. A good example of the type of tasks used is the *Stroop effect*. This effect occurs when subjects are asked to respond to the color of ink in which a conflicting word may be written (e.g., the word blue written in red ink). Performance on this task requires an act of selection to ignore the word and respond to the ink color. Another task used to explore selection is a *visual search task*. It has been shown that attention can be efficiently summoned to any part of a natural

scene in which luminance or motion clearly signal a change, but even radical changes of content that occur outside the focus of attention are not reported. This indicates that the subjective impression of being fully aware of the world around one is largely an illusion. People have very poor knowledge about things they are not currently attending to, but a very good ability to orient toward an area of change.

In the 1950s functional models of information flow in the nervous system were developed in conjunction with an interest in computer simulation of cognitive processes. In the 1970s studies using microelectrodes on alert monkeys showed that the firing rate of cells in particular brain areas were enhanced when the monkey attended to a stimulus within the cells' receptive field. In the 1980s and 1990s human neuroimaging studies allowed examination of the whole brain during tasks involving attention. These newer methods of study also improved the utility of more traditional methods, such as: (1) the kinds of experimental tasks discussed above, (2) the use of patients with lesions of particular brain areas, and (3) the use of recordings of brain waves (EEG) from scalp electrodes. The ability to trace anatomical changes over time has provided methods for validating and improving pharmacological and other forms of therapy.

### Attention in Infants

Infants as young as four months old can learn to anticipate the location of an event and demonstrate this by moving their eyes to a location where the event will occur. Thus, caregivers can teach important aspects of where a child should focus, and they can also use orienting to counteract an infant's distress well before the infant begins to speak. Infants also show preferences for novel objects in the first few months of life. In early childhood, more complex forms of attentional control begin to emerge as the frontal areas undergo considerable development. These networks allow children to make selections in the face of conflicting response tendencies. Late in the first year, infants first show the ability to reach away from the line of sight, and later the developing toddler and preschooler begin to develop the ability to choose among conflicting stimuli and courses of action.

Infants come into the world with a definite set of reactions to their environment, and even siblings can be very different in their reactions to various events. These individual differences, which include

individual differences in orienting and effortful control of attention, constitute *temperament*. One infant, for example, is easily frustrated, has only a brief attention span, and becomes upset with even moderate levels of stimulating play. Another may tolerate very rough play and frequently seek out exciting events, focusing on each interest so strongly that it is difficult to get the child's attention. Thus, even early in life, when attention serves mainly orienting functions, children will differ in what captures their interest—and in how this interest is maintained. These functions will continue to serve the child during the school years, where interest accounts for about 10 percent of the variability in children's achievement. However, later-developing attention systems will prove to be even more important in schooling.

### Effortful Control

Later in childhood, maturation of the frontal lobe produces more reliance on executive attention, allowing increased scope for methods of socialization. The strength and effectiveness of this later developing effortful control system is also an important source of temperamental differences. Among older children, some will be able to intentionally focus and switch attention easily, to use attention to inhibit actions they have been told not to perform, and to plan for upcoming activities. Other children will be less able to control their own attention and actions. These differences reflect effortful control and have been found to play an important role in the development of higher-level systems of morality and conscience as well as being generally important in the control and programming of action and emotion.

### Intelligence

Children's abilities also differ in the cognitive domain, as is shown in tests of intelligence. Differences in cognitive ability rest in part on the frontal structures related to the development of the executive attention systems. Areas of the left and right ventral prefrontal cortex become active in questions that require general intelligence. A likely reason is that these areas are important for holding information in the mind, while other brain areas retrieve related knowledge that might be important in solving problems. The ability to solve problems like those present in intelligence tests requires both specific knowledge and the ability to retrieve information in response to the prompts present on the test. High-level atten-

tional networks involving frontal areas are very important in this process.

The learning of new skills, such as reading and arithmetic, also requires attention so that relevant input can be stored. The storage of such information rests upon structures that lie deep within the temporal lobe. Attention appears to play an important role at several stages of acquisition of reading. It is important for subjects to be able to break visual and auditory words into their constituent letters or phonemes in order to gain knowledge of the alphabetic principle that allows visual letters to be related to word sounds. The role of frontal attentional networks also plays a key role in accessing word meanings.

Teachers are usually aware that maintaining an alert state in the school environment is dependent both upon factors that are intrinsic to the child—such as adequate rest, good nutrition, and high motivation—and those that can be controlled by the teacher, such as the use of novel and involving exercises at an appropriate level to challenge the student. Capturing the child's interest is important in fostering achievement, but effortful control allows the practice of skills that can lead to new interests, and the developing goal structures of children will allow the development of interest in activities or skills that will lead them to their chosen goals.

Teachers thus need to be aware of individual differences in the development of the mechanisms of selective attention important in the storage and retrieval of information relevant to various tasks. Assessment of attentional capacities may be very useful for this purpose. Children can then be encouraged by exercises appropriate to their level to sustain the effort necessary for effective problem solving. Assessment of the school environment may also be useful in considering children's attentional capacities. The application of effortful control can be tiring, and the opportunities for skill learning and for active play may be important in supporting its activity.

Finally, attention is also important in the development of children's social skills. When teachers point out aspects of other children's experiences and focus on the welfare of others, they can train the direction of a child's interest and concern. Again, this activity will be easier with some children than with others, but it can serve the goal of encouraging empathy and discouraging aggression in a child's development.

*See also:* LEARNING, *subentry on* PERCEPTUAL PROCESSES.

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## ATTENTION DEFICIT HYPERACTIVITY DISORDER

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The most common reason that children are referred to child-guidance clinics is for attention deficit hyperactivity disorder (ADHD). ADHD is a behavioral disorder with a strong hereditary component, which likely results from neurological dysfunction. According to the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders, Text Revision (DSM-IV-TR)*, there are three diagnostic categories of ADHD: (1) ADHD, Predominantly Inattentive Type; (2) ADHD, Predominantly Hyperactive-Impulsive Type; and (3) ADHD, Combined Type. ADHD often occurs simultaneously with other behavioral and learning problems, such as learning disabilities, emotional or behavioral disabilities, or Tourette's syndrome.

A 1998 study by Russell A. Barkley stated that ADHD is a deficit in behavior inhibition, which sets the stage for problems in regulating behavior. Students with ADHD may experience problems in working memory (remembering things while performing other cognitive operations), delayed inner speech (self-talk that allows people to solve problems), problems controlling emotions and arousal, and difficulty analyzing problems and communicating solutions to others. Hence, students with ADHD

may find it difficult to stay focused on tasks such as schoolwork—tasks that require sustained attention and concentration, yet are not intrinsically interesting. In addition, the majority of individuals with ADHD experience significant problems in peer relations and demonstrate a higher incidence of substance abuse than that of the general population.

Although professionals did not recognize ADHD as a diagnostic category until the 1980s, evidence of the disorder dates from the beginning of the twentieth century. The physician George F. Still is credited with being one of the first authors to bring those with “defective moral control” to the attention of the medical profession in 1902. In the 1930s and 1940s Heinz Werner and Alfred Strauss were able to identify children who were hyperactive and distractible—children who exhibited the Strauss syndrome. Later, in the middle of the twentieth century, the term *minimal brain injury* was used to refer to children of normal intelligence who were inattentive, impulsive, and/or hyperactive. This term fell out of favor and was replaced by *hyperactive child syndrome*. Professionals eventually rejected this term, as inattention, not hyperactivity, was recognized as the major behavior problem associated with the disorder.

Students with ADHD are eligible for special education services under the category “other health impaired (OHI).” This category has dramatically increased in size; however, the number of students served in this category remains well below the estimated prevalence rate of 3 to 5 percent of the school-age population. From discrepancies such as this, researchers have estimated that fewer than half of all students with ADHD are receiving special education services.

As Barkley noted in his 1998 study, the effective diagnosis of ADHD requires a medical exam, a clinical interview, and teacher and parent rating scales. During the medical exam the physician must rule out other possible causes of the behavior problem, and through the clinical interview, the clinician obtains information from both parents and child about the child’s physical and psychological characteristics. Finally, parents, teachers, and in some cases children themselves, complete behavioral rating scales, such as the Connors scales and the ADHD Rating Scale–IV in order to quantify observed behavior patterns.

Frequently students with ADHD are treated with psychostimulants, such as methylphenidate

(Ritalin), which stimulate areas of the brain responsible for inhibition. Despite some negative publicity in the media, most authorities in the area of ADHD are in favor of Ritalin’s use. In addition to medication, students with ADHD also benefit from carefully designed educational programming. In the early 1960s William Cruickshank was one of the first to establish an educational program for students who would meet what has become the criteria for ADHD. This program, proposing a degree of classroom structure rarely seen in the early twenty-first century, advocated: (1) a reduction of stimuli irrelevant to learning and enhancement of material important for learning and (2) a structured program with a strong emphasis on teacher direction. In addition to educational programs that emphasize and provide structure, a 1997 study by Robert H. Horner and Edward G. Carr indicated that students with ADHD benefited from instructional approaches examining the consequences, antecedents, and setting events that maintain inappropriate behaviors. Other researchers’ findings indicated that they also profited from behavior management systems in which the student with ADHD learns to monitor his or her own behavior. These strategies, although effective, are not generally powerful enough to completely remedy the symptoms of children with ADHD. The majority of children diagnosed with ADHD continue to demonstrate symptoms in adulthood.

*See also:* SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## AUGUSTINE, ST. (354–430)

St. Augustine was bishop of Hippo, in North Africa, and his writings established the intellectual foundations of Christianity in the West. He was born in Thagaste, a town forty-five miles south of Hippo in the Roman province of Numidia, which is now Algeria. His father, Patricius, was a pagan, and his mother, Monica, a Christian. In his late teens he went to Carthage for further study, and through his reading of Cicero, he became enthused about philosophy. He became a teacher of rhetoric in Carthage and later in Rome and Milan. Augustine was a restless seeker rather than a systematic thinker, and after a brief flirtation with the dualistic philosophy of Manichaeism, he immersed himself in the Neoplatonic philosophy of Plotinus. His whole life may be characterized as an intellectual and moral struggle with the problem of evil, a struggle that he worked out through synthesizing the ideas of the Neoplatonists with Christianity. He upheld the teachings of the Bible, but he realized that maintaining them in the intellectual and political climate of his age required a broad liberal education.

In his struggle against evil, Augustine believed in a hierarchy of being in which God was the Supreme Being on whom all other beings, that is, all other links in the great chain of being, were totally dependent. All beings were good because they tended back toward their creator who had made them from nothing. Humans, however, possess free will, and can only tend back to God by an act of the will.

Man's refusal to turn to God is, in this way of thinking, *nonbeing*, or evil, so although the whole of creation is good, evil comes into the world through man's rejection of the good, the true, and the beautiful, that is, God. The ultimate purpose of education, then, is turning toward God, and Augustine thought the way to God was to look into oneself. It is here one finds an essential distinction Augustine makes between knowing about something (*cogitare*), and understanding (*scire*). One can know about oneself, but it is through understanding the mystery of oneself that one can come to understand the mystery of God. Thus the restless pursuit of God is always a pursuit of a goal that recedes from the seeker. As humans are mysteries to themselves, God is understood as wholly mysterious.

### Augustine and Teaching

To be a teacher in the context of this struggle was, for Augustine, an act of love. Indeed, he advised teachers to "Imitate the good, bear with the evil, love all" (1952, p. 87). This love was required, for he knew the hardships of study, and the active resistance of the young to learning. He also considered language to be as much a hindrance as a help to learning. The mind, he said, moves faster than the words the teacher utters, and the words do not adequately express what the teacher intends. Additionally, the student hears the words in his own way, and attends not only to the words, but also to the teacher's tone of voice and other nonverbal signs, thus often misunderstanding the meaning of the teacher. The teacher, thus, must welcome students' questions even when they interrupt his speech. He must listen to his students and converse with them, and question them on their motives as well as their understanding. He saw education as a process of posing problems and seeking answers through conversation. Further, he saw teaching as mere preparation for understanding, which he considered an illumination of the "the teacher within," who is Christ.

Augustine, then, thought teachers should adapt their teaching to their students, whom he distinguished into three kinds: those well educated in the liberal arts, those who had studied with inferior teachers of rhetoric and who thought they understood things they did not actually understand, and those who were uneducated. The teacher needs to begin with all students by questioning them about what they know. When teaching well-educated students, Augustine cautioned teachers not to repeat

for them what they already knew, but to move them along quickly to material they had not yet mastered. When teaching the superficially educated student, the teacher needed to insist upon the difference between having words and having understanding. These students needed to learn docility and to develop the kind of humility that was not overly critical of minor errors in the speech of others. With regard to the uneducated student, Augustine encouraged the teacher to be simple, clear, direct, and patient. This kind of teaching required much repetition, and could induce boredom in the teacher, but Augustine thought this boredom would be overcome by a sympathy with the student according to which, “they, as it were, speak in us what they hear, while we, after a fashion, learn in them what we teach” (1952, p. 41). This kind of sympathy induces joy in the teacher and joy in the student.

All three of these kinds of teaching are to be done in what Augustine called the *restrained style*. This style requires the teacher not to overload the student with too much material, but to stay on one theme at a time, to reveal to the student what is hidden from him, to solve difficulties, and to anticipate other questions that might arise. Teachers also should be able from time to time to speak in what he called the *mixed style*—using elaborate yet well-balanced phrases and rhythms—for the purpose of delighting their students and attracting them to the beauty of the material. Teachers should also be able to speak in the *grand style*, which aims at moving students to action. What makes the grand style unique is not its verbal elaborations, but the fact that it comes from the heart—from emotion and passion—thus moving students to obey God and use his creation to arrive at full enjoyment of God. This hoped-for response is wholly consistent with what is probably the most famous quotation from Augustine’s autobiography, *The Confessions*: “You arouse us so that praising you may bring us joy, because you have made us and drawn us to yourself, and our heart is unquiet until it rests in you” (1997b, p. 3).

### Influence

Of the two great traditions in liberal education, the oratorical and the philosophical, Augustine is distinctly an orator. He believed more in imparting the truth to students than in supporting the individual student’s quest for truth. He used the dialogical mode as one who knows the truth, unlike the Greek philosopher Socrates, who used dialogue as one who

does not know anything. He thus established a Christian philosophy, which has influenced scholars and educators throughout the history of the West.

Augustine directly influenced the Roman statesman and writer Cassiodorus and the Spanish prelate and scholar Isidore of Seville who, in the sixth and seventh centuries, established the *seven liberal arts* as a way of enriching the study of the Scriptures. The Anglo-Saxon scholar and headmaster Alcuin, in the eighth century, used Augustine’s works on Christian teaching as textbooks. The Italian philosopher and religious leader Thomas Aquinas’s attempt in the thirteenth century at synthesizing Aristotle and Christian faith may be understood as an extension of the work of Augustine, as can the Christian humanism of the Dutch scholar Erasmus in the fifteenth and sixteenth centuries.

In the first decade of the new millennium, Augustine’s use of psychological autobiography speaks directly to those educators who view introspection and empathy as critical features in the life of a teacher. His awareness of the centrality of personal and political struggle in human existence, and of the educative and healing power of human dialogue still speaks to the condition of many teachers and educators.

*See also:* PHILOSOPHY OF EDUCATION.

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## AUTISM, EDUCATION OF INDIVIDUALS WITH

Though *autism* is a familiar term in the early twenty-first century, it was only recognized in the 1940s as a severe disability. Since that time, there has been extensive interest in and professional activity concerning autism. Children with autism have difficulty communicating, playing, and establishing relationships with others. Autism, often referred to as a neurological disorder, is usually evident by age three, reported in all countries, and affects between 2 and 21 individuals per 10,000, with 4 to 5 times more males than females diagnosed. About 80 percent of children with autism also meet the criteria for mental retardation, with significant limitations in IQ and adaptive behavior scores.

### History

In 1943 Leo Kanner described those with autism as being unable to relate to themselves or others, with the term *autism* derived from the root *auto* for *self*. Since then, autism had been defined by the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, as a pervasive developmental disorder having three classic behavioral features for its diagnosis: "the presence of markedly abnormal or impaired development in social interaction and communication and a markedly restricted repertoire of activity and interests" (p. 66). Currently the term *autism spectrum disorders* is used to refer to a comprehensive though controversial classification, which includes individuals with some characteristics of typical autism, but who may not be diagnosed with autistic disorder. Autism spectrum disorders range along a continuum of severity, from less severe forms such as pervasive developmental disorder/not otherwise specified (PDD-NOS) and Asperger's syndrome, to more severe forms that also are distinct from autism, such as childhood disintegrative disorder and Rett syndrome. Currently there is no biological diagnostic test for autism; diagnosis is based on behavioral indices. A diagnosis typically qualifies a child for special education services under the Individuals with

Disabilities Education Act (IDEA) during infancy and the preschool years. The current incidence figures for autism have varied through the 1990s and into the twenty-first century, leading many to believe that actual incidence is higher than previously calculated.

### Schools' Responses and Methods of Teaching

Children with autism have extensive, long-term educational needs that require thorough planning by a multidisciplinary team, ongoing monitoring of progress, and a wide range of service options. Of the three treatment approaches under study for those with autism, many educational/behavioral approaches have the strongest research basis. Pharmacological approaches are not viewed as being appropriate or effective for all, and must be used cautiously and in combination with sound educational treatments. Biomedical-neuroscience approaches are experimental with no validated treatments existing currently. There have been no controlled comparisons of educational or combined interventions despite the fact that some interventions claim "recovery" or cure with little scientific data to support such claims.

Authorities agree that students with autism benefit from individualized and often intense educational services beginning early in life. The most promising educational interventions for these children have the following characteristics: (1) behaviorally based; (2) carefully planned and monitored instruction involving task analyses of skills, individualized incentives, goals embedded in routines and activities, and adequate intensity and quality; (3) ongoing, planned opportunities for interaction with typical peers; (4) need-based supports and intervention for families; (5) services delivered in many different settings to meet support needs and promote generalization; (6) broad curricular content that addresses all developmental needs; and (7) proactive use of positive behavior support for challenging behavior. Children with autism typically require the services of special educators, general educators, and speech and language pathologists; occupational or physical therapists often address children's movement and sensory limitations. A collaborative team approach is necessary to plan, problem-solve, implement, and monitor the individualized education programs (IEPs) of these students.

### Goals and Purposes of Education

Educational goals for students with autism usually aim for skills in communication, social interaction, appropriate behavior, choice making, and functional academic abilities. As these students grow older they need to reduce their dependence on others and extend their abilities to include supported functioning in the home, school, and neighborhood, using the nearby community, building social relationships with peers, engaging in leisure activities, and learning to work (paid or voluntary) with the necessary supports. Given sound intervention that starts early, the educational outcomes for these students can be highly effective, though there is much heterogeneity in their improvement.

### Relationship of Autism to IDEA

Students with any of the pervasive developmental disorders typically qualify for special education services. The U.S. Department of Education reports that in 1998 to 1999 there were 53,561 students between the ages of six and twenty-one with labels of autism enrolled in public schools in the United States—.09 percent of the school population. Of these, 18 percent spend 80 percent or more of their day in general education classrooms, while 65 percent are in special education classrooms most or all of the day, and 17 percent in separate settings. Many schools are unequipped to address the comprehensive educational needs of this population. Litigation, which has characterized recent special education services for these students, has often judged their IEPs to be inadequate for achieving reasonable educational benefits.

### Educational Trends, Issues, and Controversies

There is consensus about the recommended educational practices for students with autism. Analyses of the empirical basis of educational interventions are available, along with guidelines for selecting treatments (e.g., causes no harm, developmentally appropriate, scientifically validated). Unfortunately, because most individuals with autism have lifelong, pervasive support needs, families and educators, out of a sense of urgency, may adopt interventions based

on testimonials rather than empirical support. Critical aspects of intervention also remain unknown, including the impact of family factors on outcomes and the relationship between an individual with autism, the appropriate treatment protocol, and the expected outcomes. Finally, there is a vast discrepancy between what is known about effective educational interventions and what is available for children with autism across settings, cultures, and income levels.

*See also:* SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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MARTHA E. SNELL

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## **BAGLEY, WILLIAM C. (1874–1946)**

Professor of education at Teachers College, Columbia University (1917–1940), William C. Bagley is commonly referred to as the founder of essentialist educational theory. Bagley was born in Detroit, Michigan, and after his family relocated to the east coast, he attended elementary school in Weymouth, Massachusetts. When his family moved back to Detroit in 1887, Bagley attended high school there and graduated from Detroit’s Capitol High School in 1891 at the age of seventeen. Bagley entered Michigan Agricultural College (now Michigan State University), with the intention of preparing himself to become a farmer. Upon graduation in the spring of 1895, Bagley had no land and no money to begin farming. After a fruitless search for employment, he soon decided to teach, a decision that influenced the rest of his life. He accepted a teaching position in a rural one-room schoolhouse near Garth and Rapid River, Michigan.

### **Early Career**

Bagley taught in Michigan for two years, during which time he dedicated his professional life to the improvement of teaching. He attended the University of Chicago in the summer of 1896, and then transferred to the University of Wisconsin in Madison. Working under Joseph Jastrow, he earned his master’s degree in psychology, in the spring of 1898. Upon completion of this degree, he accepted a Sage Fellowship at Cornell University to study with well-known psychologist Edward Bradford Titchener. For four years, Bagley worked under Titchener and learned the structuralist psychology of his mentor. Bagley completed his Ph.D. in 1900 and spent the

following academic year as an assistant in Titchener’s laboratory. Still committed to the improvement of good teaching, Bagley accepted a position, beginning in the fall of 1901, as principal of Mera-mec Elementary School in St. Louis, Missouri. He worked in St. Louis for only one year, after which he accepted his first professorship as director of the Teacher Practice School and professor of psychology and pedagogy at the Montana State Normal School in Dillon, Montana. While in Montana, Bagley became active throughout the state by speaking at teachers institutes, by delivering commencement speeches, and by creating the first journal in the Rocky Mountain region dedicated specifically to education, *The Intermountain Educator*.

While working in Montana Bagley wrote his first major book, the *Educative Process* (1905). As a comprehensive portrayal of an early “science of education,” the work became a popular textbook throughout the United States for courses on the introduction to educational psychology. The *Educative Process* was well received by professors as well as by the general public. With this book, Bagley’s name received national, and even international, prominence.

Bagley received an offer to return to New York State to work at Oswego State Normal School in Oswego, New York. In the fall of 1906 he began his appointment there as superintendent of the Teacher Training Department. He also served as principal of the practice school and taught courses on educational methods. After only two short years he left Oswego to accept his first position at a state university, the University of Illinois.

At Illinois, Bagley helped to develop the Department of Education to the point that it became one of the most well known in the nation. In the nine

years he was on the Illinois faculty, Bagley attracted to Illinois such prominent educational scholars as Guy M. Whipple, Lewis Flint Anderson, Lotus D. Coffman, and Charles H. Johnston. He also worked with several of his colleagues in 1910 to create the *Journal of Educational Psychology*, a scholarly publication that has remained significant for almost 100 years. Moreover, during this time, he helped to found Kappa Delta Pi, an honor society in education that has since opened chapters internationally.

As a professor at the University of Illinois, Bagley worked diligently to create a School of Education that was to differ remarkably from the Department of Education that he inherited. This transition ultimately required three main ingredients: an additional number of education faculty members, the construction of a building to house the school, and the creation of a program that permitted the School of Education to enroll its own students. Bagley had to prevail against the view, held by many professors of liberal arts, that future teachers needed no special preparation beyond a sound liberal arts education. Bagley certainly agreed that a sound liberal arts education was essential for future teachers. He also, however, believed that for people who planned to be teachers, a liberal arts curriculum should be accompanied by an equally sound sequence of professional education courses. Bagley eventually founded the University of Illinois' School of Education, although the construction of the building was not completed until 1918, one year after he left Illinois.

### Teachers College

In the fall of 1917 Bagley began his final academic appointment at Teachers College, Columbia University, where he joined a stellar education faculty that included such prominent scholars as John Dewey, Edward L. Thorndike, William Heard Kilpatrick, and George D. Strayer. Bagley's official position was professor of normal school administration. This role allowed him to use his many years as a normal school professor, to work toward the improvement of normal school education across the nation—in effect becoming for more than twenty years the nation's dean of normal schools, or dean of teacher education.

While at Teachers College, Bagley entered into some of the most heated educational discussions of his career. Sometimes with, and often against, his colleague Kilpatrick, Bagley engaged in debates about the relative weight that should be given in ed-

ucational theory to academic subject matter, on the one hand, and to the interests and needs of students on the other. Bagley never denied the importance of designing a curriculum that met the interests and needs of students. He often argued, however, that the emphasis that theorists such as Kilpatrick placed on the individual needs of students often eclipsed the necessity for academic subject matter in the curriculum. Importantly, Bagley sought a reasonable view of professional education that balanced the needs of students with a rigorous academic curriculum.

While at Teachers College in the 1920s, Bagley also entered into educational discussions about the role of intelligence testing in the schools. In *Determinism in Education: A Series of Papers on the Relative Influence of Inherited and Acquired Traits*, Bagley argued against the determinist viewpoint, held by people such as Thorndike, that education played little or no role in the improvement of a person's intelligence. Instead, Bagley asserted that the recently created intelligence tests actually measured the educational opportunity experienced by students rather than their innate ability.

In 1934 Bagley published what he believed to be his most significant contribution to educational theory. In *Education and Emergent Man: A Theory of Education With Particular Application to Public Education in the United States*, Bagley applied Gestalt psychology to teaching, arguing against what he called mechanistic psychology, represented most prominently by Thorndike and what might be termed *extreme pragmatism*, advocated by Kilpatrick. This final book of Bagley's, however, received little attention from his colleagues. This lack of recognition likely played into the final major event of Bagley's career, the founding of essentialism in 1938.

In that year, Bagley joined with some of his colleagues to create an organization that would counteract some of the extreme tendencies of Progressive education. In the *Essentialist's Platform*, which Bagley published in April 1938, the essentialists offered several basic educational principles. First, they recognized the right of an immature student to the guidance of a well-educated, caring, and cultured teacher. Second, they proposed that an effective democracy demanded a democratic culture in which teachers impart the ideals of community to each succeeding generation of children. Third, they called for a specific program of studies that required thoroughness, accuracy, persistence, and good work-

manship on the part of pupils. Bagley's basic point with his role in the founding of essentialism was that the currently dominant theories of education were feeble and insufficient. He wanted these dominant theories complemented, and perhaps replaced, with a philosophy that was strong, virile, and positive. He did not, however, want to destroy completely the dominant theories that he was critiquing. Throughout his life, he supported both the academic disciplines and certain basic tenets of Progressive education.

Soon after the founding of essentialism, Bagley retired from Teachers College. During retirement and until his death on July 1, 1946, in New York City, he served as editor of *School and Society*. He died while completing editorial work for this journal. Bagley can be remembered as an untiring fighter for professional education, a supporter of the academic disciplines, and both a critic and a supporter of different aspects of the complex movement known as Progressive education.

*See also:* CURRICULUM, SCHOOL; KILPATRICK, WILLIAM H.; PHILOSOPHY OF EDUCATION.

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J. WESLEY NULL

#### BARKAN, MANUEL (1913–1970)

"A visionary art educator at Ohio State University" who had "designed a model of art education that combined the teaching of art history and art criticism with art making activities" (J. Paul Getty Trust, p. 39), Manuel Barkan recognized the role of disciplinary structures of knowledge in guiding curriculum decisions but his views on curriculum reform embodied a synthesis of viewpoints, some reflecting the influence of social reconstructionism and Progressive education from the 1930s.

Barkan was born in Brooklyn, New York, in 1913; his parents were Orthodox Jews who had emigrated to the United States from Poland. He went to the New York public schools and entered New College at Teachers College, Columbia University in the 1930s. In this setting students went beyond mere academic discussion and were urged to participate in various social and political movements, in other words, "to have a special concern for reconstructing educational institutions in the light of the needs of a changing civilization." (*Teachers College Bulletin*, p. 7). Discussion seminars were organized around the pressing social issues of the day rather than around formal courses in abstract subject matter. The student's final step took the form of a period of internship in a public or private school.

In succeeding years Barkan taught art for the Roslyn, Long Island, school district. He left New York to accept a position in the education department of the Toledo museum and, during the war years, worked as an industrial designer. In 1947 he was offered a position to teach design at the Ohio State University, a position which he had initially accepted. On arriving he realized that art education was his vocation of choice, and began work on his doctorate. While a graduate instructor, he taught undergraduate courses in art education and became head of the art education area after receiving his degree in 1951. He held this position until his death in 1970.

Barkan regarded the social environment as a place where the child learns through his or her inter-

actions with others. This stood in marked contrast to the prevalent view in art education that favored creative self-expression and tended to view the social environment essentially as a corrupting influence that could thwart the unfolding of individual creativity. Barkan did not regard self-expression as the principle aim of art education as was common with his contemporaries. Rather, he saw it as a means through which children could be encouraged to interact with other human beings thereby to establish their sense of self. His first book, *A Foundation for Art Education* (1955), based on his doctoral dissertation, provided a reasoned account of what art education should attempt to accomplish, and drew heavily upon concepts from the transactional psychology of Ames and Cantril, the social theories of George Herbert Mead, and the philosophy of John Dewey.

Barkan's next book, *Through Art To Creativity* (1960), studied a series of art classrooms as social environments, documenting the interactions between teachers and children. Its point was to show how effective teachers stimulate the child's imaginative powers through their action, speech, and gestures. The book title reflected the widely held belief that through experiences in the arts a general creativeness could be cultivated that would transfer to other areas of human endeavor such as the sciences. However, Barkan later disavowed this claim.

By 1957 Soviet space achievements triggered a series of curriculum reforms in the United States grounded in the leading ideas of the disciplines, an idea clearly articulated by the cognitive psychologist Jerome Bruner. This was at variance with the socially oriented views of curriculum that Barkan acquired in his New College days. Still adhering to the belief that the curriculum should focus on problem-centered inquiries, he sought ways to integrate these with the structures of knowledge found in the disciplines. A problem-centered curriculum addressed problems in society or in daily living. Although this engaged students in authentic problem-solving activities, it did not lead them to an understanding of the underlying disciplines through which human understanding has been developed—disciplines that might ultimately assist in meeting the problems faced by society.

Arthur Foshay and David Ecker suggested to Barkan that a curriculum can be “both problem-centered and discipline-centered”—to enable students to confront problems centered in their lives, problems involving man's relation to man, man's re-

lation to himself, in his solitude and so forth, but that such inquiries had to be discipline centered as well. This synthesis rested upon the realization that problem-centered human meaning questions are also confronted by artists, critics, and historians when engaged in their work. They are problem centered and discipline centered at the same time, and hence, the artist, the critic, and the art historian are “models of inquiry” (Barkan 1966, p. 246). This synthesis of views was most clearly articulated in Barkan's address at the Penn State Seminar on Research and Curriculum Development that was held in 1965.

Basing curriculum reforms on the organized structures of knowledge was an innovative idea readily applicable in science and mathematics education, however, for art educators, it entailed a totally new way of thinking about curriculum since the teaching of art and the training of art teachers was almost wholly guided by developmental considerations and philosophies of creative expression. Thus, in the period following this seminar until his death in 1970, Barkan worked on several curriculum development projects that embodied aspects of these views. With Laura Chapman he prepared *Guidelines for Art Instruction through Television for the Elementary School* followed by a set of guidelines for aesthetic education, a program of the Central Midwestern Regional Educational Laboratory.

In the years since 1970 the concept of discipline-based art education has taken hold in art education. For Barkan art was indeed a discipline, but not one undertaken in academic isolation since the problems confronted within the visual arts come from life itself. Though Barkan's contribution was duly acknowledged by proponents of the discipline-based view, this movement tended to lose sight of the social vision that undergirded Barkan's integrated vision of the curriculum.

*See also:* ART EDUCATION.

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ARTHUR D. EFLAND

## BEACON EDUCATION MANAGEMENT, INC.

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A participant in the field of public school management, Beacon Education Management managed

twenty-five charter schools of approximately 7,500 students in Michigan, Missouri, Massachusetts, New York, North Carolina, and the District of Columbia as of April 2001.

Beacon was incorporated as a for-profit company in Delaware in December 1999, and is headquartered in Westborough, Massachusetts; its predecessor entities commenced operations in 1993, originally as Alternative Public Schools, Inc., in Nashville, Tennessee.

As the Alternative Public Schools, this company attracted notice as a pioneer in the public school management business when it assumed management of Turner Elementary School in Wilkinsburg, Pennsylvania, in 1995. That management arrangement generated national attention and considerable debate, including a court action by the Pennsylvania State Education Association to declare the contract invalid. Eventually, the Pennsylvania Supreme Court ruled that the Wilkinsburg School Board did not have the authority under state law to contract for the management of the school, and the arrangement ended after three years. The debate stimulated by the Wilkinsburg contract was an important part of the evolution of innovative public-school management arrangements that began to develop in the latter part of the 1990s.

By 1996 Beacon was also managing a charter school in Massachusetts, and had attracted an investment by the notice of William Hambrecht, a prominent California investment banker. Michael B. Ronan, formerly superintendent of the Uxbridge, Massachusetts, school district, joined Beacon in 1997, assuming the post of chief operating officer, and later chief executive officer. Ronan led the company's growth in the ensuing four years.

Beacon's philosophy is based on the concept that management of public schools should be a collaborative enterprise with parents, students, teachers, and the local community. Though Beacon is a growing national provider of education management services, the company strives to meet the local needs of its students, educators, administrators and parents, while at the same time capitalizing on economies of scale and maintaining systemwide quality. The Beacon School Design consists of a rigorous and comprehensive standards-based curriculum that emphasizes teacher-directed instruction and project-based learning, supported by Beacon's back-office administrative and financial services.

As of May 2001 the company's principal business was the management and operation of charter schools. It was also planning, however, to expand into the contract management market as the other key category in which to leverage its core strengths.

Beacon's strategy focuses on the following competitive strengths:

- **Adaptability:** Its education management services model is flexible and can be tailored to specific community circumstances.
- **Revenue model:** Beacon charges a fixed fee based on a percentage of the school's revenues. Therefore, its incentive to make a profit from this fee does not conflict with the charter board's goal of maximizing services to students.
- **Controlled cost structure:** Beacon strives to maintain relatively low central office expenses, focus on geographic regions that are composed of cluster groups of three to six schools, and maintain a corporate culture that emphasizes and respects the careful use of public funds.

Beacon has had two primary influences on the education management arena. As a pioneer, it helped introduce the concept of contract management of public schools to educators as well as the general population. Later, Beacon's core strategies—local adaptation, fixed fee revenue model, and careful cost controls—influenced the evolution of school management practices as the industry has grown and developed.

In December 2001 Beacon merged with Chancellor Academies, Inc., to form Chancellor Beacon Academies, Inc., based in Coconut Grove, Florida. The combination created the second largest public school management system in the United States.

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WILLIAM DELOACHE JR.

### BENJAMIN, H. R. W. (1893–1969)

Harold R. W. Benjamin was a professor of education and university administrator whose written work spoke to educational policy concerns. He was born in Gilmanton, Wisconsin and received degrees from Oregon Normal School, the University of Oregon, and Stanford University. Benjamin had a long and illustrious career in education as an elementary and secondary school teacher, a school administrator, a university professor (professor emeritus at Vanderbilt University), and dean of the College of Education at the universities of Colorado and Maryland. At the University of Maryland, where he was dean from 1947 until 1952, a campus building is dedicated to his name.

Benjamin is most well known for the 1939 publication of his satirical commentary on the nature of schooling and school reform, *The Saber Tooth Curriculum*. Written under the pseudonym J. Abner Peddiwell, *The Saber Tooth Curriculum* is considered a classic work that illustrates how unexamined traditions of schooling can result in resisting needed change. The book presents a series of lectures by Professor Peddiwell on the topic of stone-age education. Readers learn that in the Paleolithic curriculum, children were taught how to grab fish, club woolly horses, and scare saber tooth tigers. They needed these skills to sustain themselves—to get food and protect themselves from danger. In time, however, colder climatic conditions prevailed. The local waters grew muddier, making it impossible to see, let alone grab the fish, and the horses and tigers eventually died away. Yet the schools continued to teach fish grabbing, horse clubbing, and tiger scaring techniques, believing them to be fundamentals with inherent character-building and mind-training value. Progressive stone-age educators would argue that new skills needed to be taught, including fishnet making and ways to deal with a new menace, the glacier bear.

Through *The Saber Tooth Curriculum* Benjamin showed how schools often conduct themselves in

ways that are unresponsive to the emerging needs of the life experience. The book was also a criticism of the mentalistic methods of teaching touted by traditional humanists in the liberal arts at the time. J. Abner Peddiwell periodically reappeared in Benjamin's speeches and in 1965, Benjamin wrote Peddiwell's autobiography, highlighting the story of his formal education, in a book titled *The Sage of Petaluma*.

Benjamin was also a noted authority in the field of comparative international education and was known for his facility with languages. He conducted studies and acted as a consultant in countries across Europe, Asia, Africa, and most extensively, Latin and South America. Benjamin's penultimate work in comparative education, *Higher Education in the American Republics* (1965), is an examination of the history, governance, financing, and curriculum programs of higher education in Central American, South American, and Caribbean nations (excluding Cuba), as well as in the United States. Benjamin catalogued important differences between the nations, focusing on boards of control, administrative offices, financial support, degree programs, selection and admissions processes, methods of instruction, and characteristics in the student and faculty populations.

As a writer with a clear progressive agenda, Benjamin authored several other books, including *Under Their Own Command* (1947), and the 1949 Inglis lecture, given at Harvard University and published as *The Cultivation of Idiosyncrasy*. Throughout his work, Benjamin highlighted his concerns for the preservation of democratic processes in American schooling and for an awakening of instructional consciousness toward individual differences.

**See also:** EDUCATIONAL POLICY; PHILOSOPHY OF EDUCATION.

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PETER HLEBOWITSH

### BENNE, KENNETH D. (1908–1992)

Kenneth D. Benne is well remembered as both an influential philosopher of education and a theorist of organizational change. The thematic link between these two domains was, for Benne, theorizing the practices of democratic life.

#### Contribution

Born in 1908, Benne began his early career as an elementary and secondary school teacher in rural Kansas and went on to become a cofounder of three major scholarly organizations: the Philosophy of Education Society, the National Training Laboratories Institute of Behavioral Science, and the International Association of Applied Social Scientists. His breadth of interests and influence is further illustrated in his professional association presidencies: the Philosophy of Education Society, the American Education Fellowship, and the Adult Education Association of the United States.

Benne completed his B.S. degree in 1930 at Kansas State University with a double major in science and English literature. He completed an M.A. in philosophy at the University of Michigan and a Ph.D. at Teachers College, Columbia University, in 1944. His doctoral dissertation, "A Conception of Authority," was published by Teachers College Bureau of Publications. It was republished in 1971 in response to that later era's challenges to authority in education and in the wider society. For a period of five decades and through professorships at Teachers College, Columbia; University of Illinois at Urbana-Champaign; and Boston University, Benne continued to write, teach, and practice in the field of democratic educational and social change. His authorship includes more than 200 articles and books in philosophy, adult education, social science, and organizational change. He defied academic convention by publishing his poetry within his writings, and late in life self-published a volume of poems, *Teach*

*Me to Sing of Winter* (1988), many of which he had sent to his friends over a fifty-year period.

### Concept of Democratic Authority

For fifty years following his dissertation, Benne continued to search for how authority could be constituted in democratic life, and how people could develop the capacities to engage in democratic authority relations in their efforts to solve shared problems. Benne's original insights included a working conception of authority that distinguished it as a human relationship distinct from the more varied phenomena of power. In addition, he analyzed that relationship as triadic in nature, including a bearer of authority, a willing subject, and an agreed-on "field" of interaction that marks the limits of legitimate authority. Finally, he presented criteria for distinguishing nonauthoritarian from authoritarian authority relationships. Benne's concept of democratic authority depended heavily on dialogue among the participants in authority relations so that coercive influences could be detected and addressed. His commitment to dialogic authority prefigured German theorist Jurgen Habermas's conception of uncoerced speech communities, as well as Brazilian educator Paulo Freire's dialogic pedagogy.

### Social Foundations of Education

While Benne was working out his conception of authority in democratic life at Teachers College, he was also a part of the Kilpatrick discussion group there, named after the influential philosopher of education William Heard Kilpatrick and including R. Freeman Butts, Harold Rugg, George Counts, Bruce Raup, and other educational theorists with disciplinary roots in the social sciences and humanities. Over a period of fifteen years, this group founded and developed the field of social foundations of education, the interdisciplinary, critical analysis of the relationships between education and social contexts. Several Teachers College graduates, including Benne, migrated to University of Illinois at Urbana-Champaign, which became a site for the further development of the social foundations enterprise.

At Urbana, Benne teamed up with other social-foundations-trained scholars to create a social foundations division in the College of Education. There Benne coedited, with his University of Illinois colleagues B. O. Smith, Ralph Stanley, and Archibald Anderson, the *Social Foundations of Education* (1956), the leading social foundations of education book of its era.

Benne's interest in democratic authority relations took him beyond philosophy of education to conceptualize learning in organizations other than in schools. During the Columbia and Illinois years, Benne had been active in cofounding the concept of the training group, or T-group, with Kurt Lewin and other social and behavioral scientists at National Training Laboratories in Bethel, Maine. Later, after Benne left Urbana for Boston University, he relied on his organizational change background when he teamed with Warren Bennis and Robert Chin to coedit and author *Planning of Change* (1961), an influential book that has remained in print for more than forty years. Bennis, who soon became a leader in the organizational change and development field, wrote an "intellectual memoir" in 2001 that recalled *Planning of Change* as "an attempt to encompass in one volume the most seminal and original essays in the yet unborn field of organizational change" (Bennis, Spreitzer, and Cummings, p. 261). Bennis credits Benne with coining the phrase "change agent" in that volume.

A Benne contribution that has received much less attention was his coauthorship in 1943 of the *Discipline of Practical Judgment in a Democratic Society* with Raup, Smith, and George Axtelle. This book, which came out during the war years and was scarcely noticed, was re-released in 1950 as the *Improvement of Practical Intelligence: The Central Task of Education*. It again caused hardly a stir in the midst of the postwar era that feared threats to democracy from external ideologies rather than from within. This volume sought to address what the authors framed as the basic problem confronting contemporary civilization, namely "the development of methods of public deliberation and institutions that will create and clarify common perspectives and will promote decisions and policies in which all interested parties participate" (Raup et al., p. 41). They saw this as an educational and political challenge to which educational philosophers had a contribution to make. It was a belief that Benne never abandoned, as is demonstrated in his last book, *The Task of Post-Contemporary Education: Essays in Behalf of a Human Future*.

*See also:* EDUCATIONAL PSYCHOLOGY.

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STEVE TOZER

## BEREA COLLEGE

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Known for its unique approach to service learning, Berea College provides an education to those traditionally denied access because of race or poverty. Founded in 1855, the college was fully incorporated on April 5, 1866, with the first bachelor's degrees granted in 1873. Berea began as a one-room school in Berea, Kentucky, under the direction of the abolitionist Reverend John G. Fee. Edward H. Fairchild was the first Berea president (1869–1889), followed by William B. Stewart (1890–1892) and William G. Frost (1892–1920). Reverend Fee was never an official president, but served as the president of the board of trustees from 1858–1892. Articles of incorporation for the college were adopted in 1859 in the midst of increasing hostility to abolitionists.

Fee advocated an education built on Christian character, excellence, and equality for all, including

African Americans. Teachers for Berea were recruited from Oberlin, an Ohio institution known for its antislavery stance. Following the Civil War, Berea began to enroll African-American and white students. The admission of African-American students was not without controversy and influenced policy from 1875 through 1890; the debate continued through the tenure of William Frost. Frost sought to strengthen the financial endowment of Berea, and gained support from notables such as Theodore Roosevelt, Julia Ward Howe, Charles Eliot, and Woodrow Wilson.

Concern for the education of African Americans in the era of Jim Crow was undermined when the Kentucky legislature passed the Day Law in 1904, which forbade the education of African Americans and whites together. In 1901 Berea was the only interracial institution in the South. Although Berea officials challenged the law, the Kentucky Court of Appeals and the U.S. Supreme Court upheld segregation. The enforced segregation led Berea to establish the Lincoln Institute near Louisville, Kentucky, for the education of African-American students.

The effects of the Day Law and the influence of Frost led Berea to stress the education of the white mountain people of Appalachia, whom Frost believed were of pure Anglo-Saxon stock. Part of the new mission was to train teachers to teach in the remote areas of Appalachia. Frost also advocated a form of manual training that integrated intellectual and vocational labor as a form of social and economic support. This emphasis on labor was continued during the term of President William James Hutchins, who served Berea from 1920 to 1939. Building on its commitment to the region, Berea committed itself to remedial education through a nongraded high school, continuing to serve students needing financial assistance. Guided by Berea's motto, "To Promote the Cause of Christ," Hutchins sought to prepare mountain leaders for Christian citizenship and service to others. Following the end of World War II and the repeal of the Day Law in 1950, Berea once again slowly began to educate African Americans. During the 1960s changes were made in the curriculum to place more emphasis on student freedom, flexibility, and responsibility. This resulted in strengthening the liberal arts and the professional programs, and included a growing interest in African-American studies and civil rights.

In the early twenty-first century, Berea's mission emphasizes a commitment to equality of opportunity.

ty for students from Appalachia, including all people of color. This commitment is grounded in a strong focus on the Christian ethic through study of the liberal arts; an understanding and appreciation of labor; a sense of democratic community; and an obligation of service to Appalachia. Students are admitted to Berea on need and pay no tuition except through their labor.

*See also:* SERVICE LEARNING, *subentries on* HIGHER EDUCATION, SCHOOLS.

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SAM STACK

### BESTOR, A. E., JR. (1908–1994)

After establishing himself as an academic historian, Arthur Eugene Bestor Jr. achieved national renown during the 1950s as a critic of Progressive education. In the 1920s Bestor attended the Lincoln School at Teachers College, Columbia University. He received a Ph.B. and Ph.D. in history from Yale University in 1930 and 1938, respectively. In 1959 Bestor earned an LL.D. from Lincoln University. After serving as an instructor at Yale, Bestor taught at Teachers College, Columbia University (1936–1942); at Stanford University (1942–1946); at the University of Illinois (1947–1962); and at the University of Washington (1962–1986). Three phases characterize Bestor's academic career: historical scholarship; Progressive education criticism; constitutional scholarship.

During the 1930s and 1940s, Bestor investigated the history of eighteenth- and nineteenth-century utopian socialism in the United States. In his most important work on this topic, *Backwoods Utopias* (1950), Bestor traced the development of communitarian societies from their sectarian origins in the 1660s through their demise as secular experiments

in social reform during the mid-nineteenth century. Bestor demonstrated that commitment to voluntarism, experimentalism, social harmony, faith in reform, and group procedures characterized this uniquely American brand of communitarian socialism. He contrasted the communitarian approach to reform with individualist, gradualist, and revolutionary approaches. Influenced by his father's political progressivism and activism, particularly manifest in his leadership capacities at Chautauqua, Bestor considered communitarian societies a model for social reform—"a method for social regeneration of mankind." (1950, p. 7)

Bestor won notoriety, however, not for his serious scholarship, but for his popular criticism of Progressive education. The teacher shortage that followed World War II resulted in an increase of enrollments in education courses and a corresponding decrease of enrollments in liberal arts courses. Tensions between the two faculties emerged at many institutions, including University of Illinois, where Bestor was teaching. Bestor aimed his initial attack on Progressive education for a lack of academic standards, and specifically, at advocates of "life adjustment" education on the faculty at the University of Illinois. Bestor eventually broadened his critique from life adjustment education in particular to Progressive education writ large.

In *Educational Wastelands* (1953), Bestor charged that professional educationists had "lowered the aims of the American public schools," particularly by "setting forth purposes for education so trivial as to forfeit the respect of thoughtful men, and by deliberately divorcing the schools from the disciplines of science and scholarship" (pp. 8, 10). For Bestor, the traditional liberal arts curriculum represented the only acceptable form of secondary education. He claimed that Progressive educators, "by misrepresenting and undervaluing liberal education, have contributed . . . to the growth of anti-intellectualist hysteria that threatens not merely the schools but freedom itself." (p. 11)

Bestor articulated his ideal high school curriculum in *The Restoration of Learning* (1956), where he prioritized, in order of decreasing importance, the functions of the secondary school as follows: (1) intellectual training in the fundamental disciplines, which should be geared to the serious student and targeted at the upper two-thirds of ability; (2) special opportunities for academically superior students; (3) balancing programs for the top third of students

with programs for the bottom third; (4) physical education; and (5) vocational training. Of lowest priority, Bestor considered, were extracurricular activities; his priority was the further education of top students and retention in school of the least able. For Bestor, secondary education existed almost exclusively to serve the academically talented, even at the expense of nonacademic students.

Inspired by the experience of the communitarian utopians he had studied, Bestor discarded the protocols of academic discourse and employed rhetorical tactics and even methods of propaganda in his attack on Progressives. In *Educational Wastelands* (1953), for example, he assigned pejorative nicknames to Progressive educators, such as “curriculum doctors,” “life adjusters,” and “curriculum engineers” and dubbed Progressive education “regressive education.” (p. 44). Although academic responses to his criticism appeared, Bestor refused to issue rejoinders. Faculty at the University of Illinois attempted to block publication of his criticism because of its lack of academic integrity, and even scholars sympathetic with his critique disapproved of his methods. Bestor published extensively in professional journals and popular periodicals, and his views garnered wide exposure. Despite his political liberalism, however, Bestor’s criticism resonated with conservative opponents of Progressivism and public education. Over time, Bestor adjusted his views to accommodate his increasingly conservative audience.

As the *Sputnik* crisis brought an emphasis on science and mathematics to education reform, Bestor’s advocacy of the liberal arts became obsolete. After earning a law degree in 1959, Bestor returned to serious scholarship and devoted the remainder of his career to the study of constitutional history. Bestor analyzed sweeping historic developments such as territorial expansion, slavery, and the Civil War, as well as their interrelationships, in terms of how they influenced and were influenced by constitutionalism. In contradistinction to his educational criticism, Bestor wrote his constitutional history in a dignified, scholarly tone.

In the midst of the “excellence” educational reform movement of the 1980s, a second edition of Bestor’s *Educational Wastelands* was released. Its main text was unchanged from the first edition, but the second edition was notable for the retrospectives written by Clarence J. Karier and Foster McMurry, and, in a new preface and a supplementary state-

ment, for Bestor’s resolute commitment to the positions he struck thirty years earlier. To document “that educational standards are still endangered as they were in 1953, and that deterioration remains unchecked” (p. 227), Bestor uncritically presented a litany of purportedly damaging findings about American education, which had been alleged in the 1983 report, *Nation at Risk: The Imperative for Educational Reform*. Bestor had changed neither his stance on, nor his tactics for, criticizing the public schools.

*See also:* CURRICULUM, SCHOOL.

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WILLIAM G. WRAGA

### BETHUNE, MARY MCLEOD (1875–1955)

A leading African-American activist and educator, Mary McLeod Bethune was born in a log cabin near Mayesville, South Carolina. Bethune was the fifteenth of seventeen children born to Samuel and Patsy McLeod. Her parents and several of her older siblings had been born slaves, and the family was scattered as the children were sold to different owners. After the Civil War, the McLeods managed to re-

assemble their family and eventually bought five acres of land near Mayesville, where they made a living growing cotton and corn.

McLeod began working in the fields at an early age. She did not attend school because there were no schools for black children nearby. When Bethune was nine years old, however, the missionary board of the Presbyterian Church opened a one-room school for African-American children in Sumter County, about four miles from the family farm, and Bethune was invited to attend. She studied there for four years, and then won a scholarship to attend Scotia Seminary for girls (now Barber-Scotia College) in Concord, North Carolina, where she studied for the next five years. Wishing to become a missionary in Africa and supported by another scholarship, Bethune enrolled in 1894 in the Bible Institute for Home and Foreign Missions (now the Moody Bible Institute) in Chicago. After two years of training she applied to the Presbyterian Mission Board for a position in Africa, but was devastated to discover that the board would not send black missionaries to Africa.

Bethune returned to the South and taught for a brief time at her former elementary school in Sumter County. In 1897 she was appointed to a teaching post at Haines Normal and Industrial Institute in Augusta, Georgia. The school's founder was the pioneering black educator Lucy Craft Laney. Laney's determination, intelligence, and spirit of service greatly impressed Bethune and provided an early model for much of her later work as an educator and missionary. After one year at Haines, Bethune was transferred to the Kindell Institute in Sumter, South Carolina, where, in 1898, she met and married Albertus Bethune and moved with him to Savannah. Their son, Albert, was born the following year.

In 1899 Bethune moved with her husband and infant son to Palatka, Florida, where she established a Presbyterian mission school. The Bethunes remained in Palatka for five years, and then moved further south to Daytona Beach, where Mary felt that her services as a teacher and a missionary were greatly needed. In October 1904 she rented a small house for eleven dollars a month, made benches and desks out of discarded crates, obtained other supplies through charity and resourcefulness, and enrolled five young students in the Daytona Normal and Industrial Institute for Negro Girls. Bethune taught them reading, writing, and mathematics, along with religious, vocational, and home economics training.

The Daytona Institute struggled in the beginning, with Bethune selling baked goods and ice cream to raise funds. The school grew quickly, however, and within two years had more than two hundred students and a staff of five. In 1907 the institute was able to relocate to a larger, permanent facility, and in 1910 Bethune bought land to be used for agricultural instruction and the cultivation of food crops for the student cafeteria. Bethune was a talented and tireless fundraiser who solicited donations from individuals, churches, and clubs, and later from prominent business leaders and philanthropists. Over the next decade, the school expanded steadily: taking in more students, increasing its academic offerings, constructing more school buildings, and gradually gaining a national reputation. By 1922, Bethune's school had an enrollment of more than 300 girls and a faculty of 22. The Daytona Institute became coeducational in 1923 when it merged with the Cookman Institute in nearby Jacksonville. By 1929 it was known as Bethune-Cookman College, with Bethune herself serving as president until 1942. In 1941, Bethune-Cookman began awarding bachelor's degrees as a fully accredited college.

During her lengthy career as an educator and activist Bethune served in a variety of increasingly important positions. Notable among her many accomplishments was the founding in 1920 of the Southeastern Association of Colored Women and in 1935 of the National Council of Negro Women. She also served as president of the National Association of Colored Women from 1924 to 1928, took part in Calvin Coolidge's Child Welfare Conference in 1928, and participated in Herbert Hoover's 1930 White House Conference on Child Health. During the Great Depression, Bethune served as special adviser on minority affairs to Franklin D. Roosevelt, and she became the first African-American woman to head a federal agency when Roosevelt appointed her director of the Division of Negro Affairs of the National Youth Administration in 1936, a position she held until 1943. During the 1940s, Bethune was also a member of the council that selected the first female officers for America's new Women's Army Auxiliary Corps. In 1945 Bethune served with W. E. B. Du Bois and Walter White as an adviser on interracial affairs during the charter conference of the United Nations.

Before she died, Bethune wrote a "Last Will and Testament" that was published posthumously in August, 1955, in *Ebony*. In her will, Bethune be-

queathed to subsequent generations her thirst for education, her sense of responsibility to young people, and her spirit of service.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; MULTICULTURAL EDUCATION.

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JUDITH J. CULLIGAN

## BILINGUAL EDUCATION

*Bilingual education* is a broad term that refers to the presence of two languages in instructional settings. The term is, however, “a simple label for a complex phenomenon” (Cazden and Snow, p. 9) that depends upon many variables, including the native language of the students, the language of instruction, and the linguistic goal of the program, to determine which type of bilingual education is used. Students may be native speakers of the majority language or a minority language. The students’ native language may or may not be used to teach content material. Bilingual education programs can be considered either *additive* or *subtractive* in terms of their linguistic goals, depending on whether students are encouraged to add to their linguistic repertoire or to replace their native language with the majority language (see Table 1 for a typology of bilingual education). *Bilingual education* is used here to refer to the use of two languages as media of instruction.

### Need for Bilingual Education

At the beginning of the twenty-first century, proficiency in only one language is not enough for economic, societal, and educational success. Global interdependence and mass communication often re-

quire the ability to function in more than one language. According to the 2000 U.S. Census, more than 9.7 million children ages five to seventeen—one of every six school-age children—spoke a language other than English at home. These *language-minority children* are the fastest-growing segment of the U.S. school-age population. Between 1990 and 2000, the population of language-minority children increased by 55 percent, while the population of children living in homes where only English is spoken grew by only 11 percent.

Language-minority students in U.S. schools speak virtually all of the world’s languages, including more than a hundred that are indigenous to the United States. Language-minority students may be monolingual in their native language, bilingual in their native language and English, or monolingual in English but from a home where a language other than English is spoken. Those who have not yet developed sufficient proficiency in English to learn content material in all-English-medium classrooms are known as *limited English proficient* (LEP) or *English language learners* (ELLs). Reliable estimates place the number of LEP students in American schools at close to four million.

### Benefits of Bilingualism and Theoretical Foundations of Bilingual Education

Bilingual education is grounded in common sense, experience, and research. Common sense says that children will not learn academic subject material if they can’t understand the language of instruction. Experience documents that students from minority-language backgrounds historically have higher dropout rates and lower achievement scores. Finally, there is a basis for bilingual education that draws upon research in language acquisition and education. Research done by Jim Cummins, of the Ontario Institute for Studies in Education at the University of Toronto, supports a basic tenet of bilingual education: children’s first language skills must become well developed to ensure that their academic and linguistic performance in the second language is maximized. Cummins’s *developmental interdependence theory* suggests that growth in a second language is dependent upon a well-developed first language, and his *thresholds theory* suggests that a child must attain a certain level of proficiency in both the native and second language in order for the beneficial aspects of bilingualism to accrue. Cummins also introduced the concept of the *common underlying proficiency*

TABLE 1

<b>A typology of bilingual education</b>				
WEAK FORMS OF EDUCATION FOR BILINGUALISM				
Type of Program	Typical Type of Child	Language of the Classroom	Societal and Educational Aim	Aim in Language Outcome
<u>Submersion</u> (structured immersion)	Language-minority	Majority language	Assimilation	Monolingualism
<u>Submersion</u> (withdrawal classes/sheltered English)	Language-minority	Majority language with "pull-out" L2 lessons	Assimilation	Monolingualism
<u>Segregationist</u>	Language-minority	Minority language (forced, no choice)	Apartheid	Monolingualism
<u>Transitional</u> (early exit bilingual education)	Language-minority	Moves from minority to majority language	Assimilation	Relative monolingualism
<u>Mainstream</u> with foreign language teaching	Language-majority	Majority language with L2/FL lessons	Limited enrichment	Limited bilingualism
<u>Separatist</u>	Language-minority	Minority language (out of choice)	Detachment/autonomy	Limited bilingualism
STRONG FORMS OF EDUCATION FOR BILINGUALISM AND BILITERACY				
Type of Program	Typical Type of Child	Language of the Classroom	Societal and Educational Aim	Aim in Language Outcome
<u>Immersion</u> (foreign language immersion/Canadian immersion)	Language-majority	Bilingual with initial emphasis on L2	Pluralism and enrichment	Bilingualism and biliteracy
<u>Maintenance/Heritage Language/Developmental Bilingual Education</u>	Language-minority	Bilingual with emphasis on L1	Maintenance, pluralism, and enrichment	Bilingualism and biliteracy
<u>Two-Way Bilingual Education/Dual Language/Two-Way Immersion/Dual Immersion</u>	Mixed language-minority and language-majority	Minority and majority	Maintenance, pluralism, and enrichment	Bilingualism and biliteracy
<u>Mainstream Bilingual</u>	Language-majority	Two majority languages	Maintenance, pluralism, and enrichment	Bilingualism and biliteracy
Notes: L2 = Second language; L1 = First language; FL = Foreign language				
SOURCE: Based on Baker, Colin. 1996. <i>Foundations of Bilingual Education</i> , 2nd edition. Clevedon, Eng.: Multilingual Matters.				

*model* of bilingualism, which explains how concepts learned in one language can be transferred to another. Cummins is best known for his distinction between *basic interpersonal communication skills* (BICS) and *cognitive academic language proficiency* (CALP). BICS, or everyday conversational skills, are quickly acquired, whereas CALP, the highly decontextualized, abstract language skills used in classrooms, may take seven years or more to acquire.

Stephen Krashen, of the School of Education at the University of Southern California, developed an

overall theory of second language acquisition known as the *monitor model*. The core of this theory is the distinction between acquisition and learning—acquisition being a subconscious process occurring in authentic communicative situations and learning being the conscious process of knowing about a language. The monitor model also includes the natural order hypothesis, the input hypothesis, the monitor hypothesis, and the affective filter hypothesis. Together, these five hypotheses provide a structure for, and an understanding of how to best design and

implement, educational programs for language-minority students. Krashen put his theory into practice with the creation of the *natural approach* and the *gradual exit model*, which are based on a second tenet of bilingual education—the concept of comprehensible input. In other words, language teaching must be designed so that language can be acquired easily, and this is done by using delivery methods and levels of language that can be understood by the student.

### **Bilingual Education around the World**

It is estimated that between 60 and 75 percent of the world is bilingual, and bilingual education is a common educational approach used throughout the world. It may be implemented in different ways for majority and/or minority language populations, and there may be different educational and linguistic goals in different countries. In Canada, immersion education programs are designed for native speakers of the majority language (English) to become proficient in a minority language (French), whereas heritage-language programs are implemented to assist native speakers of indigenous and immigrant languages become proficient in English.

In Israel, bilingual education programs not only help both the Arabic- and Hebrew-speaking populations become bilingual, they also teach Hebrew to immigrants from around the world. In Ireland, bilingual education is being implemented to restore the native language. In many South American countries, such as Peru and Ecuador, there are large populations of indigenous peoples who speak languages other than Spanish. Bilingual education programs there have the goal of bilingualism. Throughout Europe, bilingual education programs are serving immigrant children as well as promoting bilingualism for speakers of majority languages.

### **Bilingual Education in the United States**

Since the first colonists arrived on American shores, education has been provided through languages other than English. As early as 1694, German-speaking Americans were operating schools in their mother tongue. As the country expanded, wherever language-minority groups had power, bilingual education was common. By the mid-1800s, there were schools throughout the country using German, Dutch, Czech, Spanish, Norwegian, French, and other languages, and many states had laws officially authorizing bilingual education. In the late 1800s,

however, there was a rise in nativism, accompanied by a large wave of new immigrants at the turn of the century. As World War I began, the language restrictionist movement gained momentum, and schools were given the responsibility of replacing immigrant languages and cultures with those of the United States.

Despite myths to the contrary, non-native English speakers neither learned English very quickly nor succeeded in all-English schools. A comparison of the high-school entry rates based on a 1908 survey of public schools shows, for example, that in Boston, while 70 percent of the children of native whites entered high school, only 32 percent of the children of non-native English-speaking immigrants did so. However, at the beginning of the twentieth century one could easily find a good job that did not require proficiency in English.

By 1923, thirty-four states had passed laws mandating English as the language of instruction in public schools. For the next two decades, with significantly reduced immigration levels, bilingual education was virtually nonexistent in the public schools, although parochial and private schools continued to teach in languages other than English.

In the post-World War II period, however, a series of events—including increased immigration, the *Brown vs. Board of Education* Supreme Court decision, the civil rights movement, the Soviet launch of the *Sputnik* satellite, the National Defense Education Act, the War on Poverty, and the Elementary and Secondary Education Act of 1965—led to a rebirth of bilingual education in the United States. In 1963, in response to the educational needs of the large influx of Cuban refugees in Miami, Coral Way Elementary School began a two-way bilingual education program for English-speaking and Spanish-speaking students. In 1967, U.S. Senator Ralph Yarborough introduced a bill, the *Bilingual Education Act*, as Title VII of the *Elementary and Secondary Education Act*, noting that children who enter schools not speaking English cannot understand instruction that is conducted in English. By the mid-1970s, states were funding bilingual education programs, and many passed laws mandating or permitting instruction through languages other than English.

In 1974, the Supreme Court heard the case of *Lau v. Nichols*, a class-action suit brought on behalf of Chinese students in the San Francisco schools,

most of whom were receiving no special instruction despite the fact that they did not speak English. The Court decided that these students were not receiving equal educational opportunity because they did not understand the language of instruction and the schools were not doing anything to assist them. The Court noted that “imposition of a requirement that, before a child can effectively participate in the educational program, he must already have acquired those basic [English] skills is to make a mockery of public education.”

While there has never been a federal mandate requiring bilingual education, the courts and federal legislation—including Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin in federally-assisted programs and activities, and the Equal Educational Opportunities Act of 1974, which defines a denial of educational opportunity as the failure of an educational agency to take appropriate action to overcome language barriers that impede equal participation by its students in its instructional programs—have attempted to guarantee that LEP students are provided with comprehensible instruction.

The population of the United States became more and more diverse as immigration levels reached record levels between the 1970s and the turn of the century, and bilingual education programs were implemented throughout the country. The Bilingual Education Act was reauthorized in 1974, 1978, 1984, 1988, 1994, and 2001, each time improving and expanding upon the opportunities for school districts and institutions of higher education to receive assistance from this discretionary, competitive grant program. The 2001 reauthorization significantly changed the program, replacing all references to bilingual education with the phrase “language instruction educational program” and turning it into a state-administered formula-grant program.

### **Characteristics of Good Bilingual Education Programs**

Good bilingual education programs recognize and build upon the knowledge and skills children bring to school. They are designed to be linguistically, culturally, and developmentally appropriate for the students and have the following characteristics:

1. High expectations for students and clear programmatic goals.
2. A curriculum that is comparable to the

material covered in the English-only classroom.

3. Instruction through the native language for subject matter.
4. An English-language development component.
5. Multicultural instruction that recognizes and incorporates students’ home cultures.
6. Administrative and instructional staff, and community support for the program.
7. Appropriately trained personnel.
8. Adequate resources and linguistically, culturally, and developmentally appropriate materials.
9. Frequent and appropriate monitoring of student performance.
10. Parental and family involvement.

### **Debate over Bilingual Education**

The debate over bilingual education has two sources. Part of it is a reflection of societal attitudes towards immigrants. Since language is one of the most obvious identifiers of an immigrant, restrictions on the use of languages other than English have been imposed throughout the history of the United States, particularly in times of war and economic uncertainty. Despite claims that the English language is in danger, figures from the 2000 Census show that 96 percent of those over the age of five speak English well or very well. Rolf Kjolseth concluded that language is also closely associated with national identity, and Americans often display a double standard with regard to bilingualism. On the one hand, they applaud a native English-speaking student studying a foreign language and becoming bilingual, while on the other hand they insist that non-native English speakers give up their native languages and become monolingual in English.

Much of the debate over bilingual education stems from an unrealistic expectation of immediate results. Many people expect LEP students to accomplish a task that they themselves have been unable to do—become fully proficient in a new language. Furthermore, they expect these students to do so while also learning academic subjects like mathematics, science, and social studies at the same rate as their English-speaking peers in a language they do not yet fully command. While students in bilingual education programs maintain their academic prog-

ress by receiving content-matter instruction in their native language, they may initially lag behind students in all-English programs on measures of English language proficiency. But longitudinal studies show that not only do these students catch up, but they also often surpass their peers both academically and linguistically.

Proposition 227, a ballot initiative mandating instruction only in English for students who did not speak English, and passed by 63 percent of the 30 percent of the people in California who voted in 1998, is both a reflection of the public debate over bilingual education and an example of the impact of public opinion on education policy. Although only 30 percent of the LEP students in California were enrolled in bilingual education programs at the time (the other 70 percent were in all-English programs), bilingual education was identified as the cause of academic failure on the part of Hispanic students (many of whom were monolingual in English), and the public voted to prohibit bilingual education. Instead, LEP students were to be educated through sheltered English immersion during a temporary transition period not normally to exceed one year. Three years after the implementation of Proposition 227, the scores of LEP students on state tests were beginning to decline rather than increase.

### Research Evidence on the Effectiveness of Bilingual Education

There are numerous studies that document the effectiveness of bilingual education. One of the most notable was the eight-year (1984-1991) Longitudinal Study of Structured English Immersion Strategy, Early-Exit and Late-Exit Programs for Language-Minority Children. The findings of this study were later validated by the National Academy of Sciences. The study compared three different approaches to educating LEP students where the language of instruction was radically different in grades one and two. One approach was *structured immersion*, where almost all instruction was provided in English. A second approach was *early-exit transitional bilingual education*, in which there is some initial instruction in the child's primary language (thirty to sixty minutes per day), and all other instruction in English, with the child's primary language used only as a support, for clarification. However, instruction in the primary language is phased out so that by grade two, virtually all instruction is in English. The third approach was *late-exit transitional bilingual education*,

where students received 40 percent of their instruction in the primary language and would continue to do so through sixth grade, regardless of whether they were reclassified as fluent-English-proficient.

Although the outcomes were not significantly different for the three groups at the end of grade three, by the sixth grade late-exit transitional bilingual education students were performing higher on mathematics, English language, and English reading than students in the other two programs. The study concluded that those students who received more native language instruction for a longer period not only performed better academically, but also acquired English language skills at the same rate as those students who were taught only in English. Furthermore, by sixth grade, the late-exit transitional bilingual education students were the only group catching up academically, in all content areas, to their English-speaking peers; the other two groups were falling further behind.

Virginia Collier and Wayne Thomas, professors in the Graduate School of Education at George Mason University, have conducted one of the largest longitudinal studies ever, with more than 700,000 student records. Their findings document that when students who have had no schooling in their native language are taught exclusively in English, it takes from seven to ten years to reach the age and grade-level norms of their native English-speaking peers. Students who have been taught through both their native language and English, however, reach and surpass the performance of native English-speakers across all subject areas after only four to seven years when tested in English. Furthermore, when tested in their native language, these bilingual education students typically score at or above grade level in all subject areas.

Ninety-eight percent of the children entering kindergarten in California's Calexico School District are LEP. In the early 1990s, the school district shifted the focus of its instructional program from student limitations to student strengths—from remedial programs emphasizing English language development to enriched programs emphasizing total academic development; from narrow English-as-a-second-language programs to comprehensive developmental bilingual education programs that provide dual-language instruction. In Calexico schools, LEP students receive as much as 80 percent of their early elementary instruction in their native language. After students achieve full English profi-

ciency, they continue to have opportunities to study in, and further develop, their Spanish language skills. By the late 1990s, Calexico's dropout rate was half the state average for Hispanic students, and more than 90 percent of their graduates were continuing on to junior or four-year colleges and universities.

The evidence on the effectiveness of dual immersion (or two-way) bilingual education programs is even more compelling. In dual immersion programs, half of the students are native speakers of English and half are native speakers of another language. Instruction is provided through both languages and the goal of these programs is for all students to become proficient in both languages. In her research, Kathryn Lindholm-Leary, a professor of child development in the College of Education at San Jose State University, found that in developing proficiency in the English language, both English and Spanish speakers benefit equally from dual-language programs. Whether they spend 10 to 20 percent or 50 percent of their instructional day in English, students in such programs are equally proficient in English. Mathematics achievement was also found to be highly related across the two languages, demonstrating that content learned in one language is available in the other language. Despite limited English instruction and little or no mathematics instruction in English, students receiving 90 percent of their instruction in Spanish score at or close to grade level on mathematics achievement tests in English.

Bilingual education offers great opportunities to both language-majority and language-minority populations. It is an educational approach that not only allows students to master academic content material, but also become proficient in two languages—an increasingly valuable skill in the early twenty-first century.

**See also:** BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; FOREIGN LANGUAGE EDUCATION.

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NANCY F. ZELASKO

## BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE

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The term *bilingual* refers to individuals who can function in more than one language. The category of bilinguals is very broad—encompassing individuals who are sophisticated speakers, readers, and writers of two or more languages, as well as those who use a limited knowledge of a second language (L2) for purposes such as work or schooling, and who may be literate in only one language (or even completely illiterate). Because of the consequences of colonization, migration, nation-formation, traditions of exogamy, and modernization, some degree of bilingualism is typical of most people in the world.

Bilingualism is a feature not just of individuals, but also of societies. Societies in which two languages are used regularly, or in which more than one language has official status or a recurrent function, can be called bilingual. For example, Canada is a bilingual country because French and English are both official languages, even though many citizens of Canada are monolingual English speakers. Saudi Arabia is also a bilingual society, as most Saudis speak both Arabic and English, though English has no official status. The nature of individual bilingualism is quite different in different communities—there are those where bilingualism is the norm for all educated citizens (as it is, for example, in relatively small language communities like Scandinavia and The Netherlands); those where bilingualism is the norm for the minority language speakers but not those with the greatest political or economic power in the society (e.g., for Quechua speakers in Peru, for Turkish speakers in the Netherlands, for Spanish speakers in the United States); and those where bilingualism is the norm for the upper classes and better educated but not the relatively powerless (e.g., Colombia). It must be noted that the United States and other traditionally English-speaking countries observe a norm of monolingualism (low expectations for second/foreign language proficiency, low value placed on immigrant languages, universal emphasis on the need to speak English) that is possible only for speakers of a 'language of wider communication' living in an economy that is globally highly influential.

Bilingualism is often the product of second language (L2) learning after the first language (L1) has been acquired—either through nontutored exposure or through instruction. Individuals can become bilingual at any age, depending on when the need to learn the L2 emerges or when instruction becomes available. In some cases, though, bilingualism is a characteristic of a child's earliest language system. For example, children growing up in bilingual households—where both parents speak two languages regularly, or where each parent speaks a different language—are typically bilingual from the very beginning of language acquisition. Children growing up with parents who speak a minority language (within the larger societal context) may also be natively bilingual, if visitors, neighbors, television, regular caretakers, and other sources make the majority language available.

*English as a second language* (ESL) refers to the process of producing bilinguals by teaching English as an L2 to learners in an English-speaking context. ESL is distinguished from English as a foreign language (EFL), which is instruction delivered in a context where English is not used regularly outside the classroom, using the instructional techniques and the intensity of instruction required to achieve success. The term ESOL (English for speakers of other languages) is meant to encompass both ESL and EFL. Given the importance of English in the modern, globalized economy, ESOL is a large field of practice buttressed by considerable bodies of research and many curricular resources.

ESL instruction also needs to be distinguished, in the American schooling context, from instruction referred to as *bilingual education*, in which some instructional content is delivered in the learner's L1 while English is being acquired. Bilingual programs range from those that use the native language briefly (and primarily for emotional support), to programs that seek to develop L1 literacy as a source of transfer to English literacy, to those that continue to teach L1 oral and literacy skills at least through the elementary grades. Some districts also offer *two-way bilingual*, or *double immersion* programs, in which half the students are L1 speakers of English and half are L1 speakers of another language, and instruction is given to all children in both languages, with the goal of producing high-level bilinguals from both English- and other-language backgrounds.

Bilingual education programs, which were first supported by federal funding as a result of the Federal Bilingual Education Act of 1968, are offered in districts where sufficient numbers of students from a single L1 background exist; such programs came under attack as ineffective in 1998 in California, where they were severely curtailed as a result of ballot proposition 227. Since then, political action to eliminate the bilingual schooling option has spread to other states. The difficulty of carrying out well-designed evaluations of bilingual education has frustrated its supporters because there is, as a result, no unambiguous demonstration that bilingual education generates achievement advantages. Nonetheless, both theory and meta-analyses suggest that bilingual education is the best approach to ensuring educational achievement and reducing the risk of reading failure for many language-minority children.

The major challenge of education for language minority children in the U.S. is to ensure adequate

literacy development; scores from the National Assessment of Educational Progress (NAEP) continue to show serious deficits in literacy for non-native speakers of English, even after several years of U.S. schooling. Thus, focusing on educational treatments that promote literacy is a high priority in research and practice innovations.

### **Early Literacy Development of English Language Learners (ELLs)**

The central role of language in the emergence of key literacy-related skills raises important questions about the nature of literacy development among bilingual children, and, about the impact of bilingual or second language instructional settings on children's emerging literacy-related abilities. There is surprisingly little systematic research on these issues. It is known, however, that Spanish-speaking children (the most widely studied group) just beginning kindergarten in the United States show wide variation in both their Spanish literacy skills and in their level of oral English proficiency. Since children's abilities in both of these areas have been shown to independently predict English reading performance in middle school, both must be considered critical to children's future academic success.

There is also considerable evidence that many key literacy-related skills, including phonological awareness, print concepts, decoding skills, and extended discourse, are transferable from an L1 to an L2. Low-income ELLs, like other children of low socioeconomic status, tend to begin school with relatively few literacy-related skills in general, and they may have vocabularies in each of their two languages that are more restricted even than those of their low-income, monolingual peers—possibly because they have had fewer resources and opportunities to acquire at home the language and literacy skills that have been linked to school success.

### **Language-of-Instruction Studies**

One critical question is how effective literacy instruction is linguistically organized in bilingual or second language (ESL) classroom settings—and with what effect. Non-English-speaking or bilingual preschool children in the United States typically find themselves in one of three types of classroom language settings: first-language classrooms in which all interaction occurs in the children's primary language; bilingual classrooms in which interaction is split between the primary language and English; and

English-language classrooms in which English is the exclusive language of communication. Studies of the education offered to L2 learners tend to focus on language use, rather than on the quality of children's learning opportunities. These studies, nevertheless, converge on two important sets of findings.

First, studies that have compared preschool program types by language have found certain academic and linguistic advantages for children in bilingual, as opposed to English-only, classrooms at both the preschool and the K–6 level. One longitudinal evaluation of the Carpinteria Preschool Program in California found Spanish-language classrooms to be associated with higher levels of language and early literacy attainment in both Spanish and English through grade five. Unfortunately, these studies have not examined what, specifically, goes on in preschool classrooms to produce such results.

Second, studies that have explored the language proficiencies of Spanish-speaking children who attended preschool versus those who stayed home have found that the main effect of preschool attendance, even in bilingual programs, is improved English proficiency. There is contradictory evidence, however, as to whether acquiring English in preschool necessarily endangers children's home language development.

Systematic studies focused on investigating the predictors of English literacy development for ELLs were launched in 2000, when the National Institute of Child Health and Human Development (NICHD) and the Office of Educational Research and Improvement (OERI) initiated collaborative funding focused on bilingual reading. Questions about both the design and quality of schooling for ELLs are of practical as well as theoretical importance, especially since the majority of ELL preschoolers and school-age children in the United States find themselves in predominantly English-language classroom settings. Expressing concern for the additional risk that such settings may pose, the National Research Council report *Preventing Reading Difficulties in Young Children* recommended the need for additional research to examine “whether high-quality preschool experiences are equally beneficial to Spanish-speaking children when offered in English as when offered in Spanish” (Snow, Burns, and Griffin, p. 157).

## Consequences of Bilingualism

There has been much discussion of the consequences of early bilingualism. Historically, early bilingualism was seen as dangerous, leading to confusion and exacerbating language disorders and language delay. Research has made clear that early bilingualism may well bring cognitive advantages, particularly in domains such as helping children understand the arbitrary nature of language systems and literacy systems. Nonetheless, such advantages are also small—few months' precocity on tasks that monolingual children also typically come to accomplish without difficulty.

Obviously, the major positive consequence of bilingualism is knowing two languages—and thus being able to converse with a larger array of individuals, as well as having access to two cultures, two bodies of literature, and two worldviews. For children in language-minority communities, maintaining their ancestral language preserves ties to their grandparents and keeps open the option of experiences that build ethnic identification and pride, as well as cultural continuity. Speaking other languages also has economic advantages, as bilinguals are in demand in the new global economy.

Despite these advantages, the most typical trajectory for immigrant families in the United States is that only first-generation children (or the *one-and-a-half* generation—those born in the U.S. shortly after their parents' arrival) are bilingual, and that the second and later generations are likely to be absorbed into the norms of the larger monolingual society. Given the relatively poor outcomes of foreign language teaching in the United States, this trajectory reflects the forfeiture of linguistic resources that might well be conserved with educational policies more focused on maintaining and developing immigrants' language skills in L1 as well as L2.

## Factors Influencing Second Language Learning

Forces that impinge on the likelihood of successful L2 learning include cognitive influences (e.g., knowledge of L1, linguistic analysis capacity, memory), motivational influences (e.g., interest in the L2, value of the L2 to the learner, positive affect toward speakers of the L2), social influences (e.g., opportunities to interact with L2 speakers, access to useful feedback from L2 speakers), and instruction (e.g., quantity, quality, design). These influences all tend to covary with age, with the social status of the learn-

er, and with other factors, such as reasons for learning the L2.

Although the myth of a critical period for L2 acquisition dominates public understanding, there are, in fact, no biological data supporting the existence of a critical period for second language learning. Older learners can achieve high, even native-like levels of proficiency in an L2 under the right conditions, and younger learners sometimes do not achieve this level of proficiency. Very young learners in an immigrant situation are also much more likely to lose their first language in the process of acquiring the second, thus ending up monolingual rather than bilingual as a result of L2 acquisition.

### Summary

Questions about individuals' second language learning cannot be understood without simultaneous attention to the larger sociocultural and sociolinguistic framework within which learning a second language is occurring. Certainly there are cognitive challenges associated with L2 acquisition—learning new phonological, grammatical, semantic, and interactional rules is hard. But the cognitive challenge associated with learning Spanish, for example, is quite different for the Aymara speaker in Peru, who sees it simultaneously as the language of economic advancement and of oppression, than it is for the English speaker in Kansas, who sees it as the language of underpaid immigrant workers, or for the third-generation Mexican American in California, who sees it as the language of history and extended family. Until it is understood how the larger sociocultural and sociolinguistic factors interact with the cognitive and psycholinguistic factors influencing acquisition and maintenance of a second language, it will be difficult to design optimal educational programs for either language-minority children or English speakers learning foreign languages.

*See also:* BILINGUAL EDUCATION; INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; LANGUAGE AND EDUCATION; LITERACY AND CULTURE.

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## INTERNET RESOURCE

CENTER FOR APPLIED LINGUISTICS. "Two-Way Immersion." <[www.cal.org/twi](http://www.cal.org/twi)>.

CATHERINE E. SNOW  
MARGARET FREEDSON-GONZALEZ

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## BINET, ALFRED (1857–1911)

Best known for his development with Théodore Simon of the first standardized intelligence test, Alfred Binet can be considered one of the few "renaissance" psychologists of the twentieth century. His research included the measurement of individual differences in reaction times, association of auditory times with specific colors, auditory and visual imagery, and children's memory capabilities. In his early research, Binet also investigated children's fears. Using questionnaires, he studied creative artists of his time, such as Alexandre Dumas, in an attempt to provide insight into their methods of work and the sources of their creativity. As Theta Wolf notes, Binet also was known for his severe criticism of the methods of experimental psychology for its "sterile laboratory conditions" (pp. 90–91). His work on individual differences described in a 1896 article with Victor Henri initiated his work on measuring individual differences and took into account both the quantitative and qualitative aspects of individuals' responses. Binet was also a leader in providing programs for children with mental disabilities and establishing a pedagogical institute to provide appropriate instructional methods.

### Background

Binet's choice of a career as a psychologist matured outside of any formal educational study. He first entered law school earning his license at age twenty-one and then began study for the doctorate. However, he lost interest in that field and began medical studies, but did not complete them. Soon after, he began reading books in psychology. For the next six years he worked in the laboratory of Jean-Martin Charcot, a well-known neurologist, with mental patients and also developed an interest in hypnosis. At age thirty Binet completed a paper that stressed the importance of studying the normal individual before studying persons with serious emotional problems. The paper, which received a substantial monetary award from the Academy of Moral and Political Sci-

ences, was cited for the demonstration of Binet's competence as an observer and his knowledge of the experimental method. The award committee concluded that Binet had a "gifted and uncommon mind" (Wolf, p. 6).

### Research

In 1890 Binet published papers that dealt with the observational study of his two daughters. Wolf suggests that these studies preceded those of Piaget's and possibly influenced Piaget in his research. Between 1888 and 1894 Binet studied in his father-in-law's laboratory at the College de France and took courses in botany and zoology. Wolf also noted that he became interested in comparative psychology, and researched the behavior and physiology of insects, earning a doctorate in 1894.

At the same time Binet and Henri Beaumis began the first French psychological journal. In 1894 Binet published four original papers, eighty-five reviews, and was appointed to the board of associates of the *American Psychological Review*. He also published two books: one on experimental psychology and other "on the psychology of master calculators and chess players" (Wolf, p. 9).

Binet's wide range of interests in a number of different academic areas was demonstrated by his authorship of several articles for biology journals and his review of research findings from the field of histology, anatomy, and physiology. In 1895 Binet was invited to give a series of lectures at the University of Bucharest. Though offered a professorship, Binet declined the appointment to return to Paris. Although Binet was now considered to be the "foremost, if not the only French experimental psychologist," he never received an appointment at a French institution of higher learning (Wolf, p. 22). Raymond Fancher believes this was due in part to Binet's lack of official credentials resulting from his self-trained status and lack of personal support from his instructors.

### Measurement of Children's Abilities

In the 1890s, Binet became associated with Théodore Simon, who had earned a medical degree and was an intern at an institution for retarded children. He became Binet's collaborator in the development of the first intelligence scale.

In 1899 Binet was invited to become a member of the new Society for the Study of the Child because

of his interest in children's intellectual development. Wolf mentions that under Binet's leadership, members of the society aggressively pushed the French Ministry of Instruction to offer suitable instructional programs for children with mental disabilities. Binet's leadership also led to an appointment to a government commission to study the needs of these children in the public schools. He became convinced of the need to ascertain how to differentiate children with learning problems from those who could not learn adequately.

Wolf considers that Binet's greatest productivity was between 1901 to 1911. After his appointment to the government commission on the retarded in 1904, Binet noted that educational officials were primarily interested in administrative problems of the schools. There was no interest in how to differentiate objectively retarded children from normal children or to provide appropriate instruction for them. In 1905 Binet and his colleagues recommended special classes and schools for the retarded, which up to that time did not exist. A bill for such provisions was introduced in 1907 and in 1909 a law passed establishing classes for educational improvement. Binet and Simon were provided the criteria for entry and aided in the selection of students for the first special classes in the Paris schools. In 1905 Binet along with Simon published the first standardized scale of intelligence for which he is best known. The scale was composed of thirty items and was the product of more than fifteen years of careful investigations and experimental research with children. Subsequent revisions of the scale appeared in 1908 and 1911. A number of these items are still included in the latest (1960 and 1986) revisions of their test. During this period Binet also helped to establish the first pedagogical laboratory in France. Wolf noted that in the same time period he worked on the psychology of court testimony and, in 1909, published a popular book for teachers and parents about children, which contained many of his ideas about intelligence. In 1906 Binet and Simon published a paper that addressed "new methods for diagnosing idiocy, imbecility, and moronity," an important contribution because, for the first time, criteria were specified that allowed professionals to agree on different levels of retardation (Wolf, pp. 142-143).

### Contribution

Alfred Binet remains an important figure in modern psychology. He was among the first to emphasize

that no child suspected of retardation should be removed from the regular classroom without undergoing a psychological and medical assessment that would help confirm the retardation. Binet and Simon emphasized that diagnostic errors could be due to lack of “attitude” on the part of the examiner; variability in the meaning of the terms used, or lack of precision in the examination of the child.

Binet and Simon stated that test items used in assessment of children needed to be graded in difficulty and be age appropriate. In their discussion of new methods for the diagnosis of retarded children, Binet and Simon emphasized the properties inherent in the assessment of intelligence. These included the need to separate natural intelligence from lack of performance due to inadequate instruction. Attempting to reduce the effects of instruction, Binet and Simon did not require the child to read or write any material. For them the heart of the meaning of intelligence was judgment, to comprehend well, and to reason well.

Binet’s sophisticated comments written in 1911 on how to proceed with an examination of the child could easily be repeated word-for-word for early-twenty-first-century psychology students. He stressed the importance of the observation of children and their activities, and outlined with Simon the normal development of intelligence in children from three to twelve years of age in an article published in 1916 (b). These comments were the result of detailed presentation of many test items and careful observations of the responses of the subjects. This article also contained a revision of the 1905 scale. Their monograph could also be read in the early twenty-first century by psychologists for its observational insights in the assessment of children’s abilities. Binet and Simon’s discussion of the different attitudes and motivations of school personnel concerning retarded children also remains relevant. The intelligence scale of 1908 was changed from one that assessed lack of intelligence into one that classified the intelligence of the retarded, the normal child, and those of superior intelligence. Of the thirty items that composed the 1905 scale, Binet and Simon retained only fourteen without any change.

Binet established the Laboratory of Experimental Pedagogy in Paris in 1905, the first such laboratory established in a school in Europe. The purpose of the laboratory was to provide a continuing source for experimental work with children and provide consultative help to teachers who wished to teach re-

tarded children. Because of the work in these areas of psychology and education Binet can be considered the first school psychologist in the Western world.

One result of this lab-school collaboration was a study by Binet and Simon that focused on vision problems of school children. They noted that children might be labeled slow only because of difficulty in seeing the blackboard. Their concern resulted in the development of a standardized test of vision that teachers could use without the involvement of physicians. Binet was also interested in criteria for a good school, evaluation of teacher competence, the influence of environmental factors on intelligence, such as socioeconomic status, and the provision of classes for those of superior intelligence.

*See also:* ASSESSMENT; INTELLIGENCE.

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## BLIND STUDENTS

*See:* VISUAL IMPAIRMENTS, EDUCATION OF INDIVIDUALS WITH.

### BLOOM, B. S. (1913–1999)

Renowned as the architect of the taxonomy of educational objectives and famous for his work on mastery learning, Benjamin S. Bloom was a true educational researcher, who thrived on questions to guide his inquiry. His research revolved around the following queries.

- What is the variety of educational objectives that can (and perhaps should) be taught in school?
- To what extent are human characteristics such as intelligence and motivation fixed at birth and to what extent can they be modified by experience?
- How can one teach entire classrooms of students so that the results approximate what can be achieved in one-to-one tutoring?
- How is it that certain individuals reach the highest level of accomplishment in their chosen fields?

These are but some of the questions that Bloom asked, and answered, during a career that spanned five decades, the vast majority of which was spent on the faculty of the University of Chicago.

Bloom was born in Lansford, Pennsylvania, of Russian immigrant parents. His father was a picture framer and his mother a housewife. Bloom attended public schools in Lansford, graduating in 1931 as class valedictorian. In the fall of 1931 he enrolled at the Pennsylvania State University, completing his B.A. and M.A. degrees in psychology in four years.

Following college graduation, he was employed for a year as a research worker with the Pennsylvania State Relief Organization. He then moved to Washington, D.C., where he took a similar position with the American Youth Commission. It was while working at the commission that he met Ralph W. Tyler. Bloom was so impressed with Tyler that he decided to study with him. He began his doctoral studies at Chicago in the summer of 1939. That summer he met his future wife, Sophie, and they were married a year later.

While completing his doctoral program, Bloom was a research assistant in the Office of the Universi-

ty's Board of Examinations under Tyler's supervision. He received his Ph.D. in 1942, and remained with the Board of Examinations until 1959. In 1948, Bloom convened a meeting of college and university examiners throughout the country to discuss the possibility of designing a common framework for classifying the wide variety of intended learning outcomes that the examiners routinely encountered. Eight years later *The Taxonomy of Educational Objectives, The Classification of Educational Goals, Handbook I: The Cognitive Domain* was published. By the late 1960s, it became known simply as Bloom's taxonomy.

The majority of Bloom's writings during his years with the board (and concurrently as a junior faculty member in the Department of Education) focused on testing, measurement, and evaluation. Then, in 1959 to 1960, he left his position with the board and spent a year at the Center for Advanced Study in Behavioral Sciences at Stanford University in Palo Alto, California.

During his stay at the center, Bloom began work on what was to become his work *Stability and Change in Human Characteristics*. The book consisted primarily of an extensive review of research in several areas (e.g., intelligence, achievement, and personality). Based on this review, Bloom suggested that the ability of environmental factors to influence change in human characteristics decreases over time, as the characteristics become more stable. He discussed his findings with U.S. President Lyndon B. Johnson, and his testimony before Congress played a large part in the federal Head Start program in 1965. The program became an important part of Johnson's Great Society, and has enjoyed bipartisan congressional support since then.

In 1968 Bloom published a small paper titled "Learning for Mastery," which had great significance in the field. His central thesis was that most students (perhaps more than 90%) could master what they were expected to learn in school, and it was the task of teachers to provide the quality of instruction that would produce these results. Critical elements of this quality of instruction were (1) clearly communicating the learning expectations; (2) giving students specific feedback as to their progress in achieving them; and (3) providing additional time and help as needed by students.

During the 1970s Bloom worked at incorporating this thesis into a full-blown theory of school

learning and challenging educators to solve what he termed in 1984 the “two sigma problem.” Based on available data, Bloom argued that the average student who received tutoring scored two standard deviations higher on standardized achievement tests than average student who received traditional group-based instruction. Because the Greek symbol sigma is used to denote the standard deviation of a population, the problem of finding ways to design and deliver group-based instruction that was as effective as one-to-one tutoring was known as the two sigma problem.

In 1984 Bloom published his last major study, in which he identified and described the processes by which those individuals who reached the highest levels of accomplishment in their chosen fields (e.g., concert pianists, research mathematicians, Olympic swimmers) were able to develop their capabilities so fully. The results suggested that the initial characteristics (or gifts) of the individuals would not by themselves enable extraordinary levels of accomplishment unless there is a long and intensive process of encouragement, nurturing, and training.

Bloom will be remembered for introducing educators to the world of possibilities: There are educational objectives that lie beyond rote memorization. All students, not just a select group, can learn and learn well. Talent is not something to be found in the few; it is to be developed in the many. His unflagging belief in the power of education, both for the welfare of individuals and for the betterment of society; the frameworks he developed for thinking about and talking about educational issues and problems; the *Taxonomy*; his theory of school learning; and his stages of talent development are his enduring legacy to education.

*See also:* EDUCATIONAL PSYCHOLOGY; INSTRUCTIONAL DESIGN; INSTRUCTIONAL OBJECTIVES; INSTRUCTIONAL STRATEGIES; TAXONOMIES OF EDUCATIONAL OBJECTIVES.

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LORIN W. ANDERSON

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### BLOW, SUSAN (1843–1916)

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A defender of Friedrich Froebel’s original German methods, Susan Blow was an influential educator who helped start public kindergartens in St. Louis and trained many younger kindergarten directors. She was the daughter of a wealthy St. Louis businessman and Republican politician, Henry Taylor Blow, who served two terms as a U.S. Congressman and as minister to Brazil. Her mother, Minerva Grimsley, from an affluent St. Louis family, was a devout Presbyterian, as was Blow’s father. Educated at home by private tutors until she was sixteen, Blow then attended Henrietta Haines’s private girls’ school in New York City. Blow led the faction of the American kindergarten movement that interpreted Froebel’s pedagogy symbolically and resisted Progressives’ attempts to make kindergarten practice more child-centered and psychologically based.

Blow was particularly attracted to philosophical and spiritual aspects of Froebel’s ideas, which she encountered while traveling in Europe with her family in 1870. When she returned to St. Louis in 1871, she met with William Torrey Harris, the superintendent of the St. Louis schools, who was a Hegelian and already a kindergarten supporter. While substitute teaching in St. Louis, Blow began experimenting with Froebel’s methods. With Harris’s encouragement, she went to New York City in 1872 to study under Maria Kraus Boelte, one of the German kindergarten experts who had brought the movement to the United States. Blow immersed herself in the specificities of Froebel’s carefully prescribed “gifts” and “occupations,” the series of blocks and other educational materials and handwork activities, which formed the core of his pedagogy. When she returned, she convinced Harris to pay for a teacher and provide space for a kindergarten class, which

opened in the Des Peres School in 1873. Other than a short-lived experiment in Boston in 1870, this was the first public kindergarten in the United States.

In 1874, Blow started a kindergarten training school, which soon became a center for the diffusion of Froebelian methods. Numerous kindergarten directors and leaders, including Elizabeth Harrison and Laura Fisher, trained under Blow, who visited Germany again in 1876 to learn more from German kindergarten educators. A charismatic public speaker, Blow began a series of popular lectures for mothers and others interested in kindergartens. Her fame spread. By 1877, her classes, which she expanded to include other educational and philosophical topics, attracted more than 200 participants.

Under the influence of William Torrey Harris, with whom she collaborated closely for many years, Blow became deeply interested in Hegelian philosophy and its application to education. Like Harris, Blow was committed to the kindergarten more for its intellectual and academic benefits than for its potential as a means of Progressive educational and social reform. This tension within American education generally, between promoting school achievement and promoting schools as agents of social change, fractured the kindergarten movement. Blow and Harris saw the kindergarten as a mentally stimulating rather than emotionally nurturing environment. Younger kindergarten teachers began challenging Blow, especially Alice Putnam in Chicago, and Anna Bryan in Louisville, who adapted symbolic kindergarten activities to the realities of urban children's daily lives, and encouraged open-ended free play over teacher-directed replication of Froebel's stylized forms.

In the later part of her career, Blow became an increasingly dogmatic adherent to Froebelianism. Because of mental and physical health problems, she withdrew from direct kindergarten work in 1884, and in 1889, moved to Cazenovia, New York. She entered into a long period of treatment with the Boston neurologist James Jackson Putnam, with whom she corresponded extensively. In 1894, she began writing five volumes on the kindergarten, published under the auspices of her mentor, William Torrey Harris. These books, which included a translation of Froebel's *Mother Play*, a book of songs and games for use by parents and kindergarten teachers, propounded Blow's abstract interpretation of Froebel's work. She was a lecturer at Columbia University's Teachers College from 1905 to 1909, where she

taught a kindergarten course. Obstinate orthodox and rather abstruse, her lectures were not a success, and Blow was eventually replaced by Patty Smith Hill, the leader of the Progressive wing of the kindergarten movement.

In the twentieth century, the merging of Progressive education and the new science of child psychology widened the division between didactic, teacher-directed kindergarten pedagogy and more developmental, child-centered approaches. Blow was a member of the International Kindergarten Union's Committee of Nineteen, which attempted to mediate these differences that had become highly contentious. The divide proved irreconcilable. Blow authored the conservative report, which, along with a moderate and progressive report, was published in 1913 in *The Kindergarten*. Although Blow's personal dynamism and determination delayed the decline of traditionalist orthodoxy in the face of changing educational views, she was unable to sustain Froebelianism. The loss of Froebel's aesthetically sophisticated symbol system, which some are trying to revive in the early twenty-first century, should be balanced against the increased attention to socioemotional well-being and individual creativity, which are the hallmarks of modern early childhood education. Susan Blow was a firm advocate for the more formalistic vision of preschool education. Her force of character and intellect helped bring kindergarten philosophy into the mainstream of educational thought, and into the consciousness of the American public.

*See also:* EARLY CHILDHOOD EDUCATION, *subentries* on OVERVIEW, PREPARATION OF TEACHERS.

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BARBARA BEATTY

## BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY

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Independent, nonprofit, and public colleges and universities utilize a board format for their governing structure. These boards are often referred to as a *board of trustees* (similar terms include *board of regents* or *board of visitors*), and they act as the legal agent or “owner” of the institution. As a collective body, the trustees hold the authority and responsibility to ensure the fulfillment of an institution’s mission. They are also ultimately responsible for the fiscal health of the college or university. The board of trustees’ governing role is typically limited to selection of the president and policy approval, with the daily operations and management of the institution vested in the president.

### Structure and Composition

An institution’s charter and bylaws dictate its board size. These governing documents are informed by history, tradition, and needs of the institution. A board can range from a small handful of individuals to more than fifty people. Trustees are elected or appointed to the board for a specific term, which may be renewable. Most trustees come from the for-profit corporate world. Many institutions work diligently to assemble a diverse representation of community leaders on their board in an effort to broaden support for the institution. For some state

and religiously affiliated institutions the board itself may not select all of the trustees. In the case of public institutions, the governor will usually make the appointments. For religious colleges and universities, the affiliated organization (i.e., a church governing council) will either select or approve the trustees. On occasion, independent colleges and universities will make an individual a life trustee. Life trustees typically have demonstrated an exceptional level of commitment to the institution. Other constituents who may receive a trustee position in an ex officio capacity include alumni, faculty, staff, and students. In some cases these ex officio trustees have full voting rights, while in other cases they are only a representative voice.

### Governance

By law, the board of trustees is the governing body for an institution. Many states have established coordinating or consolidated boards that oversee institutional boards of public colleges and universities. A coordinating board may function in an advisory or regulatory capacity. The role of an advisory board is limited to review and recommendation, with no legal authority to approve or disapprove institutional actions, while a regulatory-type coordinating board would have program approval. Consolidated boards within a state usually take the form of one single board for all postsecondary institutions, though they may take the form of multiple boards, with each board responsible for one institutional type (e.g., two-year institutions, four-year institutions). It is not uncommon for states to utilize both coordinating and consolidated boards. On most campuses, tradition and higher-education culture dictate some level of shared governance with faculty. On some campuses, shared governance even extends to staff and students.

### Authority

The authority of a board of trustees is derived from the institution’s charter. The charter lays out the initial structure and composition of the board. Once the board is in place, it has the power to modify its own structure and composition as it believes necessary. Authority is given to the board as a whole rather than to individual trustees, and individual trustees have little authority and no ownership of an institution. It is the board, in its entirety, that is recognized as the legal owner of an institution’s assets. For some public and religiously affiliated institutions, there

may be another board (i.e., a consolidated board) or parent organization (i.e., the church denomination) to which the institutional board is beholden. This will impact, and potentially limit, the board's range of autonomy and authority.

### Responsibilities

Typically, the board chair is responsible for setting the agenda of the board. Most often this agenda is established in collaboration with the college president. Other board officers, such as the secretary or treasurer, usually have their associated roles completed by institutional staff. The board, as a group, has several basic responsibilities, including setting or reaffirming the institution's mission, acting as the legal owner of the institution, selecting a president, evaluating and supporting the president, setting board policies, and reviewing institutional performance.

Beyond these responsibilities, most boards are involved with institutional fundraising, strategic planning, and ensuring sensible management. The selection of a president can be the greatest influence a board has on an institution. Boards typically relinquish significant amounts of their power and authority to the president. The president usually takes the lead in setting an agenda for the board, and, therefore, for the institution. As an individual, a trustee is typically expected to support the institution financially, either personally or through influence. Trustees also act as ambassadors in their home community to build support for the institution.

### Board Committees

Each board determines the number and type of committees they believe will serve the institution best. The following types of committees are typically found at colleges and universities: *Academic Affairs* oversees curriculum, new educational programs, and approves graduates; *Audit* is responsible for ensuring institutional financial records are appropriately reviewed by a third party; *Buildings and Grounds* reviews and recommends capital improvements and maintenance plans for the campus; the *Committee on Trustees* is charged with developing a list of potential trustees and reviewing the commitment of current trustees; *Executive* acts on issues of urgency that arise between full board meetings and sets the board agenda in concert with the president; *Finance* reviews and recommends institutional budgets; *Institutional Advancement* ensures appropriate

plans are in place for alumni relations, fundraising, and public perception of the institution; *Investment* oversees the long-term assets of the institution, as well as determining how the endowment funds are invested; and *Student Affairs* is charged with issues concerning the out-of-classroom experience of students—this may include health centers, recreation facilities, residence halls, and student activities.

*See also:* COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY SENATES, COLLEGE AND UNIVERSITY; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; PRESIDENCY, COLLEGE AND UNIVERSITY.

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ALAN P. DUESTERHAUS

## BOBBITT, FRANKLIN (1876–1956)

Professor of educational administration at the University of Chicago, Franklin Bobbitt played a leading role during the first three decades of the twentieth century in establishing curriculum as a field of specialization within the discipline of education. Born in English, Indiana, a community of less than 1,000 people in the southeast part of the state, Bobbitt

earned his undergraduate degree at Indiana University and then went on to teach, first in several rural schools in Indiana and later at the Philippine Normal School in Manila. After receiving his doctorate at Clark University in 1909, he joined the faculty of the University of Chicago, where he remained until his retirement in 1941. As part of his university duties Bobbitt periodically undertook surveys of local school systems in which he assessed the districts' operations, particularly the adequacy of their curricula. His most famous surveys were a 1914 evaluation of the San Antonio Public Schools and a 1922 study of the Los Angeles City Schools' curriculum.

### Scientific Curriculum Making

Bobbitt is best known for two books, *The Curriculum* (1918) and *How to Make a Curriculum* (1924). In these volumes and in his other writings, he developed a theory of curriculum development borrowed from the principles of scientific management, which the engineer Frederick Winslow Taylor had articulated earlier in the century in his efforts to render American industry more efficient.

The key principal for Taylor was the task idea, the notion that each worker should be given a narrowly defined production assignment that he was to perform at a specific rate using certain predefined procedures. It was the responsibility of an emerging profession of efficiency experts to identify these precise steps. The procedures for curriculum planning, which Bobbitt referred to as job analysis, were adapted from Taylor's work and began with the identification of the specific activities that adults undertook in fulfilling their various occupational, citizenship, family, and other social roles. The resulting activities were to be the objectives of the curriculum. The curriculum itself, Bobbitt noted, was comprised of the school experiences that educators constructed to enable children to attain these objectives.

Some of these objectives, according to Bobbitt, were general in nature and represented the knowledge that all children needed to prepare for their responsibilities as adult citizens. Such an education, he maintained, would provide students with the large group consciousness necessary for them to act together for the common good. Other objectives, however, were more specific and constituted the skills that youth needed to prepare for the array of specialized occupations that adults held in modern society. The curriculum that Bobbitt advocated included elements of general education for all youth, but was for

the most part differentiated into a number of very specialized vocational tracks. Influenced no doubt by the then-popular mental testing movement, Bobbitt believed that schools should assign children to these specialized curricular tracks, on the basis of assessments of their intellectual abilities, which foretold their ultimate destinies in life.

### Social Efficiency Movement

Bobbitt along with a handful of other early-twentieth-century educators, including W. W. Charters, Ross L. Finney, Charles C. Peters, and David Snedden, gave life to what has come to be called the social efficiency movement in education. The schools, for these individuals, were a key institution in dealing with the disruptions and dislocations in American life that they associated with the nation's late-nineteenth- and early-twentieth-century transformation into an urban, industrial society. The purpose of education, they argued, was to prepare youth for the specific work and citizenship roles, which they would hold when they reached adulthood, and in so doing render society more orderly and stable. The test for the schools and its program, as these thinkers saw it, was its utility in fulfilling this social purpose.

### Bobbitt's Contribution

Bobbitt's legacy falls into four areas. First, he was one of the first American educators to advance the case for the identification of objectives as the starting point for curriculum making. He, along with the authors of the National Education Association's *Cardinal Principles of Secondary Education*, argued that the content of the curriculum was not self-evident in the traditional disciplines of knowledge, but had to be derived from objectives that addressed the functions of adult work and citizenship. Education was not important in its own right for Bobbitt. Its value lay in the preparation it offered children for their lives as adults. Second, his so-called scientific approach to curriculum making served as a precedent for the work of numerous educators during the next half-century in spelling out the procedures for designing the course of study. It was a method that became and has remained the conventional wisdom among American educators concerning the process of curriculum development.

Third, Bobbitt along with other early-twentieth-century efficiency-oriented school reformers made the case that the curriculum ought to be differentiat-

ed into numerous programs, some academic and preparatory and others vocational and terminal, and that students ought to be channeled to these tracks on the basis their abilities. His work lent credence to efforts to vocationalize the curriculum, and provided legitimacy to what has become one of the most questionable features of the modern school curriculum, the practices of tracking and ability grouping. Finally, Bobbitt was one of the first American educators to define the curriculum as an instrument of social control or regulation for addressing the problems of modern society. True to the ideals of social efficiency, he saw the task of the schools as that of instilling in youth the skills, knowledge, and beliefs that they required to function in the urban, industrial, and increasingly heterogeneous society that America was becoming during the early years of the twentieth century.

*See also:* CURRICULUM, SCHOOL.

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BARRY M. FRANKLIN

### **BODE, BOYD H. (1873–1953)**

A leading spokesperson of Progressive education and a founder of American pragmatism, Boyd H. Bode was born Boyo Hendrik Bode in Ridott, Illinois. Bode was the eldest son in a family of eight children of Dutch parents, Hendrik and Gertrude Weinenga Bode. His father, both a farmer and min-

ister in the Christian Reformed Church, fully expected Bode to follow him into the ministry. To this end, Boyd was allowed to pursue an education. He received a bachelor's degree in 1896 from William Penn College (affiliated with the Quakers) and from the University of Michigan in 1897. He completed his Ph.D. in philosophy at Cornell University in 1900. While away at school Bode decided not to enter the ministry, and wrote to his father: "Your letter gave me the impression that you still have the fear that I—after all—will still lapse into unbelief. Let me again put your mind at ease that here is little danger for that . . . . It appears to me that morals without religion does not mean much."

During the 1890s American higher education developed in directions that made a career in academics, separate from the ministry, possible. Upon graduating from Cornell, Bode assumed a position at the University of Wisconsin, Madison, as an instructor and later assistant professor of philosophy and psychology. In 1909 he took a position at the University of Illinois, where he served as professor of philosophy until 1921. Although he left Wisconsin a firm idealist, among his supporters in Madison were the pragmatists John Dewey and William James, whose positions Bode had challenged in publication. At the time Bode found the pragmatist position inadequate to account for the nature of the mind or of knowing, and a weak foundation for morality.

Despite his professional success at the University of Illinois, Bode became increasingly dissatisfied with the role of idealism in solving pressing human problems. By 1909 he wrote of his work in philosophy to friend and fellow philosopher Max Otto: "A good deal of the work is mere drill and I don't find that I am getting anything out of it any more." Gradually he began to reevaluate idealism; and his views about both Dewey and James' positions changed. The pragmatist challenge to idealism demanded attention, and as Bode struggled to respond he gradually thought himself out of idealism and into pragmatism. He sought a philosophy that made a difference, as he put it, a philosophy "brought to earth." He concluded that Dewey was correct: Human experience was sufficient to explain questions of truth and morality.

At Illinois, partly because of the influence of his Cornell classmate William Chandler Bagley, Bode became increasingly interested in educational issues. In particular, he recognized the profound educa-

tional differences that follow differing conceptions of mind, a concern fully explored a few years later in his classic *Conflicting Psychologies of Learning* (1929). In 1917 he joined Dewey and other pragmatists in coauthoring *Creative Intelligence*, in which Bode developed a pragmatic conception of consciousness as action. At Illinois he began to teach a graduate seminar on educational theory, and soon he was teaching regularly in the department of education. In 1916 Dewey published *Democracy and Education*, which offered a definition for philosophy that was consistent with Bode's developing thinking. Bode began to publish on educational issues, including entering the debate over the question of transfer of training. In 1921 *Fundamentals of Education* was published, and he assumed the position as head of the department of principles and practice of education at The Ohio State University. His departure from the University of Illinois caused quite a stir. Bagley asserted that he was "a remarkable teacher—by far the most effective, I am sure, at the University of Illinois." Students protested that he was being pushed out from the university because he was seen as "Socrates [who] corrupted the young men of Athens" and held a "too liberal attitude in intellectual matters" for the time.

At Ohio State Bode came to be perhaps the most articulate spokesmen for pragmatism in education. Acknowledging his influence, *Time* magazine declared Bode to be "Progressive education's No. 1 present-day philosopher." Bode was at the center of what came to be known as the "Ohio School of Democracy" in education. In numerous publications he sought to clarify the educational meaning of democracy as a way of life. In articulating his position, which centered on the ideals of faith in the common person's ability to make wise decisions and in the "method of intelligence" as a means of establishing truth (with a small "t"), he took issue with those, including John L. Childs and George Counts, who would impose a social vision on the public schools. His hope was grounded in a profound faith in the process of democratic decision making, the "free play of intelligence" in pursuit of social goods, and in the goodness of people, the "common man," rather than in the foresight of a few to anticipate the future. In *Democracy as a Way of Life* (1937) he presented his social and educational vision. On another front he challenged the extreme wings of educational progressivism, pointing out that it is not possible to build a school program on needs and interests with-

out a clear social philosophy. He chastised progressive educators who ignored the importance of social philosophy in *Progressive Education at the Crossroads* (1938). He asserted that needs and interests are assigned, they do not inhere in individuals. Moreover, he forcefully argued that the disciplines of knowledge have a central role in education, and that to ignore their power and place in human progress as some progressives did was to invite educational disaster. Thus, he stood in a middle position between child-centered progressives on one side and those who were committed to reconstructing the society through a predetermined social program on the other. Both sides took issue with him.

In addition, Bode wrote about the dangers inherent in what he called the "cleavage" in American culture, that fundamental tension between the demands of democracy and the tendency to look outside of experience for ideals. America could not have it both ways: Democracy was an evolving experiment that drew its aims and means from human experience—the struggle to learn how to live together in order to maximize human development in its various forms. This issue increasingly demanded his attention in his later years particularly in response to the growing attack on progressivism and public education from the right.

Bode argued his position from the pulpit and through publication. As a speaker he was forceful and funny. One attendee at his session during the 1937 Progressive Education Association conference wrote that "To have heard Dr. Boyd Bode of Ohio poke linguistic rapiers, sheathed in salving humor, into every sacred tradition of society, democracy, and theology, was to have experienced an awakening. Shocking it was at times—challenging every minute—and disturbingly logical."

Bode is not well remembered. When recalled, usually he is dismissed as a disciple of his colleague and friend John Dewey. But Bode was not a disciple. He differed with Dewey on a number of fronts, not the least being his dissatisfaction with Dewey's concept of "growth" as an educational ideal. More properly, he ought to be considered one of the founders of educational American pragmatism. Even today the clarity of his prose and quality of his thinking distinguish him from other philosophers of education; his works remain one of the surest and most pleasant roads to understanding of pragmatism and education.

*See also:* DEWEY, JOHN; PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION.

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ROBERT V. BULLOUGH JR.

## BOND, HORACE MANN (1904–1972)

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President of two historically black colleges from 1939 to 1957, and dean of the School of Education at Atlanta University from 1957 until shortly before his death in 1972, Horace Mann Bond was also a historian and social scientific observer of the condition of African Americans. He was born on November 8, 1904, in Nashville, Tennessee, the sixth of seven children of a Congregationalist minister and a teacher, both of whom had attended Oberlin College. Bond grew up as his father pastored various churches and took other ministerial positions in Tennessee, Kentucky, Alabama, and Atlanta, Georgia. He attended schools in Alabama and Georgia and graduated from the Lincoln (Kentucky) Institute, a high school for African Americans indirectly tied to Berea College. His collegiate career began at Lincoln University in Pennsylvania, from where he graduated, and continued with postbaccalaureate study at the Pennsylvania State College (now University). He did his graduate work at the University of Chicago, from

which he earned a master's degree and a Ph.D. in education, with an emphasis on the history and sociology of education. He finished his doctorate in 1936. Among his teachers were Newton Edwards in history of education, Frank S. Freeman in tests and measurements, and Robert Park in sociology. His family valued education enormously, encouraging all their children to achieve to their utmost. Horace's closest sibling, J. Max Bond, also earned his doctorate in education and had a rewarding academic career.

#### Career

Bond worked at a variety of academic institutions before finishing his doctorate, including Langston University in Langston, Oklahoma; Fisk University in Nashville, Tennessee; and Dillard University in New Orleans, Louisiana. He also worked as a researcher for a time for the Julius Rosenwald Fund, a philanthropic organization with which he would maintain a close, working relationship for approximately two decades, lasting until its dissolution in 1948. He worked his way up in the hierarchy of black colleges, becoming a dean at Dillard in 1934, chairman of the education department at Fisk University later in that decade, and president of the Fort Valley State College in Georgia in 1939. In 1945 he was chosen as president of his alma mater, Lincoln University, in Chester County, Pennsylvania, where he served until 1957. While at Lincoln, he pointed the attention of the college and its students and faculty toward Africa and Africans, building relationships with famous African Lincoln alumni, such as Kwame Nkrumah of Ghana and Nnamdi Azikiwe of Nigeria. He made several trips to Africa in these years and was an officer of the American Society for African Culture (AMSAC). After leaving Lincoln, he became dean of the School of Education at Atlanta University. He worked at Atlanta until his death in 1972.

#### Publications and Scholarly Pursuits

Bond's publications in the 1920s included two articles critical of the racial bias in the intelligence testing movement. He continued to publish numerous articles in the 1930s, a decade in which he also published a textbook for education courses in historically black colleges, *The Education of the Negro in the American Social Order* (1934), and *Negro Education in Alabama: A Study in Cotton and Steel* (1939), which was based on his doctoral dissertation. While at the rural Fort Valley State College in the 1940s, Bond published *Education for Production: A Text-*

book on *How to Be Healthy, Wealthy, and Wise* (1944). In the 1950s, after leaving Lincoln, he gave several lectures at Harvard University, which were subsequently published as *The Search for Talent* (1959). The theme of black academic excellence, which had animated Bond's own life and much of his early work, as well as his Harvard lectures, was explored again in *Black American Scholars: A Study of Their Beginnings* (1969). Finally, Bond's *Education for Freedom: A History of Lincoln University*, was published posthumously in 1976. His scholarship was mainly in the areas of educational tests and measurements, educational history, and educational sociology. Much of his early and middle career was devoted to teacher training, and issues involved in its pursuit in black colleges. His later years were devoted to the pursuit of positive relations between Africans and African Americans, as well as expansions of his earlier scholarly interests.

Bond was an accomplished student, and his early scholarly career was one of great promise. His detour into academic administration, encouraged by the Rosenwald interests, took him away from his scholarly pursuits until late in his life. By that time, his absence from the scholarly arena for several years hampered his efforts, though it did not stop his productivity. His accomplishments as a college president were considerable at Fort Valley, where he pioneered the collegiate development of one of the three black colleges in the Georgia State University System. His tenure at Lincoln, however, was marred by acrimonious relationships with some faculty and alumni, which eventually culminated in his dismissal as president, an outcome which he considered, with some bitterness, to be totally unjust. At Atlanta he was reasonably successful as a dean but exhibited little enthusiasm for the work. He was more interested in research on black educational history and black academic achievement and pursued these interests after being named head of the School of Education's Bureau of Educational Research.

### Family Life

Bond married Julia Agnes Washington, a student he met while on the Fisk faculty in the 1920s, in 1929. Julia Washington was from an economically successful and prominent African-American family in Nashville, Tennessee, and she and Horace had three children: Jane Marguerite, born in 1939; Horace Julian, born in 1940; and James, born in 1945. He had high academic expectations for all of his children,

expectations which were met initially only by his daughter. His son, Horace Julian, became a leader in the black college student wing of the civil rights movement in the 1960s, went on to become a state legislator in Georgia, and in his political activism achieved a fame that had eluded his father. In the early twenty-first century he serves as president of the National Association for the Advancement of Colored People (NAACP) and teaches history at the University of Virginia.

*See also:* MULTICULTURAL EDUCATION.

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WAYNE J. URBAN

## BOWEN, HOWARD (1908–1989)

Economist Howard Bowen was a notable figure in university administration and the author of several classic works on the economics of higher education. Born in Spokane, Washington, he married Lois B. Schilling of Green Bay, Wisconsin, in 1935; they had two sons. Bowen earned his B.A. in 1929 and his M.A. in 1933 from Washington State University. He earned his Ph.D. at the University of Iowa in 1935 and pursued postdoctoral study at the University of Cambridge, England, and the London School of Economics from 1937 to 1939.

After teaching economics at the University of Iowa from 1935 to 1942, Bowen took a position as

the chief economist at Irving Trust Company from 1942 to 1945, and then held the position of chief economist, Joint Committee on Internal Revenue Taxation, U.S. Congress (1945 to 1947). Yet he recalled his experience at the University of Iowa with the most pleasure, and he decided to return to university teaching and research. He accepted an appointment as dean of the College of Commerce in 1947 at the University of Illinois. There he was instrumental in substantially improving the programs in the college, although at considerable political cost. Senior professors resisted the curricular and faculty changes that Bowen implemented, and he had to resign his position in 1952.

Unwilling to leave higher education, he took a position as a professor of economics at Williams College in Massachusetts. Bowen found the life there to be enriching, with well-prepared students and well-qualified faculty members. Yet he preferred administration to teaching, and in 1955 he accepted the presidency of Grinnell College in Iowa, where he was able to increase enrollment, the quality of students and of the faculty, and the endowment, helping to elevate the college to national stature. Bowen remained there until 1964 when he became president of State University of Iowa, a position he held until 1969. While president he convinced the legislature and governor to change the institution's name to the University of Iowa. The late 1960s was a turbulent period in United States higher education, with many student demonstrations over such issues as the war in Vietnam and racism. Bowen made the decision to use local and state police officers to quell demonstrations, a decision he later reflected upon as difficult but necessary. He also tried to maintain a dialogue with protesting students, even inviting them into his home for discussion.

Bowen oversaw a great deal of growth in enrollment, facilities, and the budget in his years as president of the University of Iowa. Nevertheless, approaching the end of his career, he realized that he did not want to spend more than five years in the position. He and his wife moved to California, where he returned to teaching and research, as professor of economics at Claremont Graduate School, a position which he held, however, for only one year (1969–1970).

In the spring of 1970 the president of Claremont University Center resigned, and the governing board asked Bowen to serve as acting president for one year. Discussions about the reorganization of Clare-

mont University Center, a very decentralized group of institutions, led to his appointment as chancellor of the center from 1971 to 1974. In 1973, frustrated by the challenges of a decentralized university, he requested and received a half-time release from his duties as chancellor, and returned to full-time faculty status in 1974.

Bowen finished his career as the R. Stanton Avery Professor of Economics and Education, Claremont Graduate School, holding that position from 1974 to 1984. He decided that his experience in education combined with his administrative expertise offered an important vantage point, and he published three important works, *Investment in Learning*, the *Costs of Higher Education*, and *American Professors: A National Resource Imperiled* (co-authored with Jack Schuster).

Bowen argued in his works that the economics of higher education centered not on profit motives, but rather on prestige and increasing the quality of students' educational experience. He also stressed that society and individuals benefited from higher education far more in terms of non-monetary issues such as emotional development, citizenship, and equality than in financial returns. As a result, Bowen contended, higher education ought to be based on social and individual considerations and not simply on the basis of efficiency and accountability.

Bowen held membership in several economics, finance, and education associations, including the National Academy of Education and the American Economic Association. He was president of the American Finance Association (1950), the American Association for Higher Education (1975), the Western Economic Association (1977), and the Association for the Study of Higher Education (1980). He was also the recipient of awards from the National Council of Independent Colleges and Universities, the National Association of Student Personnel Administrators, the Council of Independent Colleges, the Council for the Advancement and Support of Education, the Association for Institutional Research, and the Association for the Study of Higher Education. His works on the economics of higher education, assessing both the financial and nonfinancial returns on higher education for individuals and the society at large, remain classics. He also identified how colleges and universities sought to raise more money in order to spend more money, rather than seeking ways of efficiently using their income. His coauthored work on the professoriate, al-

though highly controversial for its prediction that there would be a shortage of well-qualified professors by the mid-1990s, nevertheless captured a deep sense of unease within the academic profession.

*See also:* ACCOUNTING SYSTEMS IN HIGHER EDUCATION; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; TEACHING AND RESEARCH, THE RELATIONSHIP BETWEEN.

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PHILO HUTCHESON

### BOYER, ERNEST (1928–1995)

An innovator of secondary and postsecondary education, Dr. Ernest L. Boyer served as U.S. Commissioner of Education from 1977 to 1979 and president of the Carnegie Foundation for the Advancement of Teaching from 1979 to 1995. Born in Dayton, Ohio, Boyer finished high school early to study at Messiah Academy in Grantham, Pennsylvania. He completed his studies in Illinois at Greenville College in 1950, and received master's and doctoral degrees in speech pathology and audiology at the University of Southern California, in 1955 and 1957, respectively. He began his teaching career at Loyola University in California while a graduate student, and then served as a professor of speech pathology and audiology at Upland College in California.

In 1960 Ernest Boyer moved from teaching to administration and leadership. He accepted a position with the Western College Association, as direc-

tor of the Commission to Improve the Education of Teachers. Two years later he became the director of the Center for Coordinated Education at the University of California, Santa Barbara. In this position Boyer was free to administer projects for the improvement of the California education system, from kindergarten to college.

In 1965, eight years after earning his doctorate, Boyer moved to Albany, New York, and joined the new State University of New York (SUNY) system as its first executive dean. Three years later he was named vice president and, two years after that, chancellor. He was intent on creating new connections in the system between the many independent colleges.

One of his most significant accomplishments as chancellor was the creation of the Empire State College in Saratoga Springs, New York. This college allows adult students to earn degrees without attending classes on campus. The students earn degrees via workshops, reading, television, and hands-on experience. Boyer also created the rank of "Distinguished Teaching Professor" to emphasize the importance of teaching and learning, not merely research. He established an experimental three-year degree program for the brightest students so that they could move quickly toward graduate work. While chancellor of SUNY, Dr. Boyer unified sixty-two campuses. He established a dialogue between the campuses and called for cooperation and community. He initiated a statewide art program and equal opportunity centers for the minority students. Boyer remained with the SUNY system until 1977, when President Jimmy Carter invited him to become the U.S. Commissioner of Education.

#### Washington, D.C.

As Commissioner of Education, Boyer vowed to give priority to basic education, skills, and educational reform. During his tenure, Boyer created a service-learning program enabling students to get hands-on experience in their communities. He also became increasingly aware of the troubles of Native American education systems, and set up programs and conducted studies on the improvement of the Native American school system. In addition to helping the nation's less-privileged students, Dr. Boyer also managed to increase federal funds for education by 40 percent over three years.

Regarding the challenges of working in Washington, Boyer remarked: "I became informed about

the issues of public education, got involved in the discussions about excellence and quality, and confronted more directly the crisis that may overwhelm us in the end: the gap between the haves and the have-nots” (Goldberg, p. 47). His mission in Washington focused on the government’s obligation to bridge the gap that separates those who are challenged by economic disadvantage and prejudice. Toward the end of his term as commissioner of education, Boyer was offered the position of president of the Carnegie Foundation for the Advancement of Teaching, a post he assumed at the end of 1979.

### **Carnegie Foundation for the Advancement of Teaching**

Boyer moved the foundation center to Princeton, New Jersey. He did, however, keep an office in Washington to maintain his connections to political agendas related to education. He expanded the Carnegie Foundation to include public education: “My top priority at Carnegie will be efforts to reshape the American high school and its relationship with higher education . . . I’m convinced that the high school is the nation’s most urgent education problem.” Dr. Boyer’s main goal as president was not to create programs but to initiate dialogue concerning education issues. His speeches and writings conveyed ideas on education, and are a testimony to the impact that he had on the nation’s education system.

### **Reports and Publications**

One of Boyer’s major accomplishments was creating a dialogue between teachers and administrators about teaching methods and programs. While at the Carnegie Foundation, he wrote several reports that changed the face of education. By addressing certain issues including secondary and primary education, Boyer was able to generate discussions about issues facing education reform.

*High School: A Report on Secondary Education in America* (1983) was the result of a fifteen-month study of the nation’s high schools. Here Boyer recommended adopting a “core curriculum” for all students and tougher foreign language and English requirements; he also called for community service before graduation, and stressed excellence for all students and teachers.

Boyer’s next report, published in 1987, *College: The Undergraduate Experience in America*, found that many faculty members of undergraduate insti-

tutions placed more emphasis on research than teaching. Boyer claimed that the students were not getting the full attention of their instructors, contending that the nation must put more resources into undergraduate education, expand orientation and faculty mentoring for new students, and create community service programs for students. With both *High School* and *College*, Boyer connected students with their teachers and professors and the worlds outside the institutions. The development of community service programs in many high schools and colleges around the nation has benefited all involved.

Boyer persisted in his commitment to stimulate the debate about education practices. In 1990 the Carnegie Foundation published *Campus Life: In Search of Community*. Boyer realized that the old ideas of campus communities were disappearing due to the diverse backgrounds of many students, writing “if a balance can be struck between individual interests and shared concerns, a strong learning community will result” (Perrone, pp. 22–23). Many colleges and universities have since created programs to rebuild their campus community using Boyer’s ideas.

Also published in 1990, *Scholarship Reconsidered: Priorities of the Professoriate* challenged the current views of faculty priorities and the true meaning of scholarship. Calling for a new approach to teaching, Boyer categorized four kinds of scholarship: discovery, integration, application, and teaching. This report has fueled debates in many circles around the country and has influenced many colleges and universities to assess their faculty differently. In 1997 Charles E. Glassick, Mary Taylor Huber, and Gene I. Maeroff wrote a response, *Scholarship Assessed: Evaluation of the Professoriate*. Their preface stated, “the effort to broaden the meaning of scholarship simply cannot succeed until the academy has clear standards for evaluating this wider range of scholarly work.”

In *Ready to Learn: A Mandate for the Nation* (1991) Boyer emphasized the importance of preparing young children for school. Education of the parents of preschoolers was essential so that they might know “all of the forces that have such a profound impact on the children’s lives and shape their readiness to learn.” This study led to educational television programs such as *Sesame Street*, and landmark legislation such as the Ready to Learn Act of 1994.

In 1995 the Carnegie Foundation published a groundbreaking report, *The Basic School: A Community for Learning*. This report emphasized the importance of the first years of formal learning. Boyer wanted the general public to understand that the school is a community with a vision, “teachers as leaders and parents as partners.” He also called for a “powerful voice for the arts in education.” This report led to the Basic School Network, as outlined by Boyer himself in the report. A trial program consisted of sixteen schools, public and private, including the Tiospa Zina tribal school in North Dakota. Boyer worked closely with school administrators and staff on the tenets of the Basic School, including new ways to create a curriculum, the importance of language and the arts, and the involvement of parents. Unfortunately, Boyer did not live to see his dream come true. However, the Basic School Network now boasts centers and affiliates around the country and is a successful tool for improving elementary education.

### International Achievements

Boyer spent a great deal of time examining the U.S. education system, and his interest extended outside our nation as well. He set up a learning program with the Soviet Union in the 1970s, an unheard of accomplishment due to the consequences of the cold war. He also set up a similar agreement with Israel. Boyer established a partnership with the National Center for Education Development Research (NCEDR) in Beijing, China. This partnership has created a discourse between the People’s Republic of China and the United States on all levels of education. He worked on various international committees under Presidents Nixon, Ford, Carter, and Reagan. Under President Ronald Reagan he was appointed chair of the U.S. Department of State’s Overseas Schools Advisory Council.

### Awards

Dr. Boyer has received honorary degrees from colleges and universities around the world, including the University of Beijing and Tel Aviv University. He served as senior fellow at the Woodrow Wilson School of Public and International Affairs at Princeton University, where he also taught public policy courses. He was awarded the Distinguished Service Medal, Columbia University–Teachers College; the Horatio Alger Award; The Harold W. McGraw Jr. Prize in Education; and countless other awards.

### Values and Principles

Boyer’s focus was on the people who were involved in all aspects of education. He saw education not as the policy behind it or buildings that house it, but he saw it as the students, parents, faculty, and staff. Boyer’s main idea and philosophy of life centered on unity and cooperation. All the analyses and studies that he conducted promoted cooperation within the education system.

Dr. Boyer was a man with a heart and head for public speaking. People describe him as charismatic and persuasive but never overbearing. His main principles were simple yet profound: schools are a community; focus on the children; serve others; and knowledge and learning are a continuous journey. As Boyer once wrote, “In the end, our goal must not be only to prepare students for careers, but also to enable them to live with dignity and purpose; not only to give knowledge to the student, but also to channel knowledge to humane ends. Educating a new generation of Americans to their full potential is still our most compelling obligation.”

As Dr. Doug Jacobsen discusses in his article, “Theology as Public Performance: Reflections on the Christian Convictions of Ernest L. Boyer,” “a small act of care or kindness could transform a life from despair to hope. Boyer’s personal faith was journey towards holiness, but that journey was never solitary. The straightest path to heaven was the path that took the most detours to serve others” (p. 9).

After a three-year battle with cancer, Ernest Boyer died in 1995. In 1997, the Boyer Center at Messiah College, Grantham, Pennsylvania, was established. This center houses Boyer’s letters, papers, and speeches, in addition to photographs, awards, and other memorabilia. The Boyer Center fosters the enrichment of learning for students and teacher through implementation of the educational vision of Ernest Boyer.

*See also:* FACULTY ROLES AND RESPONSIBILITIES; NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS.

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## BRAIN-BASED EDUCATION

The overall goal of brain-based education is to attempt to bring insights from brain research into the arena of education to enhance teaching and learning. The area of science often referred to as "brain research" typically includes neuroscience studies that probe the patterns of cellular development in various brain areas; and brain imaging techniques, with the latter including functional MRI (fMRI) scans

and positron-emission tomography (PET) scans that allow scientists to examine patterns of activity in the awake, thinking, human brain. These brain imaging techniques allow scientists to examine activity within various areas of the brain as a person engages in mental actions such as attending, learning, and remembering. Proponents of brain-based education espouse a diverse group of educational practices and approaches, and they generally attempt to ground claims about effective practice in recently discovered facts about the human brain. They argue that there has been an unprecedented explosion of new findings related to the development and organization of the human brain and that the current state of this work can inform educational practice in meaningful ways. Indeed, advances in brain science led brain-based educator David A. Sousa to proclaim that "no longer is teaching just an art form, it is a science" (1998, p. 35).

#### Summary Principles of Brain-Based Research

Although brain-based education has no seminal source or centrally recognized leader, examples of commonly cited works include special issues of education journals and popular books such as *How the Brain Learns: A Classroom Teacher's Guide*, by Sousa; *Teaching with the Brain and Mind*, by Eric Jensen; *Making Connections: Teaching and the Human Brain*, by Renate Nummela Caine and Geoffrey Caine; *A Celebration of Neurons: An Educator's Guide to the Human Brain*, by Robert Sylwester; and *Teaching for the Two-Sided Mind: A Guide to Right Brain/Left Brain Education*, by Linda VerLee Williams. Such works, invariably written by education writers rather than brain researchers, claim to help teachers turn research on brain function into practical lessons and activities that will enhance student learning. A common step in many brain-based education efforts involves disseminating findings from brain science in the form of basic summary principles that are designed to be accessible to educators. For example, Caine and Caine (1994) claim to have deduced twelve principles from brain science that hold strong implications for education and that can be linked to specific educational practices:

- "The brain is a complex adaptive system."
- "The brain is a social brain."
- "The search for meaning is innate."
- "The search for meaning occurs through patterning."
- "Emotions are critical to patterning."

- “The brain processes parts and wholes simultaneously.”
- “Learning involves both focused attention and peripheral perception.”
- “Learning always involves conscious and unconscious processes.”
- “We have at least two different types of memory: a spatial memory system and a set of systems for rote learning.”
- “We understand and remember best when facts and skills are embedded in natural, spatial memory.”
- “Learning is enhanced by challenge and inhibited by threat.” (pp. 88–95)

There are three problems with such summary principles. First, they are not necessarily endorsed by brain scientists as appropriate summaries of the research. Second, they are exceedingly global statements that could potentially encompass a wide variety of educational practices that are not necessarily compatible with one another. Third, few of the practices that are deemed “brain based” have been evaluated for their relative effectiveness. These problems make it difficult to evaluate the merits and usefulness of the kind of global claims offered by brain-based education writers, as exemplified by Caine and Caine.

Nevertheless, brain-based education proponents typically argue that a particular educational approach or practice *is* warranted by these kinds of basic summary principles and the related supporting evidence from brain research. Given that such links between brain research and education practice are initially speculative in nature and are often not subjected to evaluations that demonstrate their effectiveness, the label of “brain-based education” does not necessarily imply that the recommended educational approach or practice is “evidence based.” The brain science evidence merely provides a rationale for speculating about potentially useful educational practices.

Often proponents of brain-based education use collections of claims (as above) to promote a rationale for doing away with traditional forms of education in favor of educational reforms based on constructivist learning principles and more active engagement in individualized learning and group problem solving. For example, Susan Kovalik, developer of the Integrated Thematic Instruction model,

argued “disciplines have to go; the textbooks have to go; the worksheets have to go—because they have nothing to do with how the brain works” (Cohen, p. 1). Along these lines, brain-based education is often cited as a mandate for “orchestrated immersion,” such as having children work through problems in curriculum by engaging in activities that simulate real-world problem solving or by engaging in group cooperative learning.

Are such broad claims warranted by the evidence provided by brain science? In 1996, seventy-four brain scientists and education professionals gathered at a meeting held by the Education Commission of the States and the Charles A. Dana Foundation to explore the extent to which neuroscience had uncovered facts about the brain that educators might apply in the classroom. At the conclusion of this meeting, which was called “Bridging the Gap between Neuroscience and Education,” neuroscientists warned educators that many brain research findings might be too narrow and isolated to ever provide a detailed plan of action for restructuring schools. Furthermore, some scientists “cautioned educators to resist the temptation to . . . use neuroscience as a propaganda tool to promote a pet program” (Taher, p. 5). At this same meeting Joseph LeDoux, a prominent psychologist and neuroscientist, warned that “these ideas are very easy to sell to the public, but it’s too easy to take them beyond their actual basis in science” (Taher, p. 5).

The specific claims made within brain-based research vary widely but typically take the form of two interrelated assertions: (1) assertions of basic summary principles that are held to be broadly supported by neuroscience research and (2) assertions that particular educational approaches or practices should be promoted on the basis of the stated principles of brain science. Critics of contemporary brain-based education literature, such as John T. Bruer and Paul Grobstein, have raised questions about whether the basic summary principles delivered to teachers might be too overly simplified to capture the most useful information in brain research and have raised concerns about the validity of the inferential leap that takes place between accepting a basic summary principle from brain research and creating a particular recommendation for educational practice. The remainder of this article summarizes the major points raised in critiques of brain-based education in light of evidence available in the early twenty-first century and discusses promising directions for fu-

ture research that might help the fields of brain science and education to mutually inform one another in productive ways.

### Critiques of Brain-Based Education

In some cases, summary principles can oversimplify research to the extent that the most useful level of detail for educational implications is lost. For example, in a 1999 article, Bruer pointed to Sousa's summary claiming that brain research had established that the left hemisphere of the brain is responsible for language processes (including logical processes, coding information verbally, reading, and writing) and the right hemisphere is responsible for spatial processing (and also creativity, intuition, and encoding information via pictures). Sousa had furthermore argued that, based on this insight, teachers should provide time for both left and right hemisphere activities so that children receive a balance of left and right hemisphere activity. Bruer, however, pointed to more recent brain research that demonstrated that the left and right hemispheres do not strictly divide the labor of thought between processing information about space on the right and language on the left, with this research finding instead that both spatial and language processes draw upon the left and right hemispheres and that subcomponents within each of these skills draw differentially on left and right hemispheres. In light of these findings, the related brain-based education claims appear to be invalid. This discussion underscores the dangers of relying on outdated notions of brain organization and function and the importance of making rigorous and detailed links between educational practice and the best available brain science data.

In other cases of brain-based research, summary statements appear to be general enough to have broad appeal to educators, but they are perhaps so broad that they have little or no meaningful connection to brain research and have only vague or perhaps misleading implications for educational practice. To take one example, in 1994 Caine and Caine stated that one basic principle of brain research (already mentioned above) was that wholes and parts are perceived simultaneously. Bruer pointed out that although this is statement is likely to be true, the statement is framed in such a way that it cannot be used to identify any particular brain system, nor can it provide direct and compelling implications for educational practice. Furthermore, Bruer directly challenged the validity of the inference that

the Caines made in using this principle to argue that whole-language instruction and cooperative learning are warranted by brain research because such programs encourage students to think about both parts and wholes.

Another challenge Bruer posed for many basic summary statements relating to brain science is that the evidence that best supports many such summary statements does not actually come from neuroscience or brain scans but comes, rather, from other disciplines that have been around for decades. For example, in his 1998 article "Is the Fuss about Brain Research Justified?" Sousa listed several claims about how current "brain research" can influence educational practice. On the topic of memory, he wrote about insights into how previous knowledge and judgments of meaningfulness influence people's ability to store new information. On the topic of timing and learning, he wrote about insights into how breaking learning time up into twenty-minute segments that are spaced over time might be an advantage over massing all that same study time together into one long stretch. One problem with these claims is that these insights were achieved with little or no direct support from brain studies. Instead, these claims are well supported by existing evidence in cognitive psychology, in the form of compelling information-processing studies on the influence of prior knowledge on memory recall and on the benefits of spaced versus massed practice in recall. In this sense, referring to these claims as brain based can be misleading; after all, existing bodies of cognitive psychology may have a great deal more to contribute to educational practice than the currently available brain studies.

### Directions for Future Research

This literature on brain-based education that makes summary claims about brain processes and their implications is augmented by a literature that makes much closer ties to emerging research in brain science and that cautiously explores possibilities for enhancing research. For example, Pat Wolfe (2001) made several recommendations to educators related to taking a proactive stance as consumers and users of insights from brain science. These recommendations are for educators to learn the general structures and functions of the brain, to gain some skills in assessing the validity of a study, to exercise caution and restraint when attempting to employ insights from research studies in a classroom, and to intelligently

combine insights from brain science with knowledge from cognitive psychology and educational research. To achieve these goals, Sousa argued in 1998, there is a need for professional development opportunities for prospective and current teachers to get firsthand contact with scientists involved in cognitive neuroscience—the field of combining cognitive psychology with brain-imaging techniques. Such programs are beginning to become available at a national level and involve some of the nation’s top scientists, as evidenced by advanced courses offered by the National Institute of Mental Health, Harvard University, and the University of Washington.

Other brain-based education literature that makes closer ties with brain research focuses on brain imaging of particular learning disabilities. Sousa wrote “we are gaining a deeper understanding of learning disabilities, such as autism and dyslexia. Scanning technology is revealing which parts of the brain are involved in these problems, giving hope that new therapies . . . will stimulate their brains and help them learn” (p. 54). Such direct ties between investigations of brain mechanisms associated with learning problems and intervention attempts provide a promising direction for brain-based educational research. Understanding how brain mechanisms of basic visual and language processes work together in typically and atypically developing readers is of central interest to many brain scientists and educators. Several studies centered on these issues were underway in fMRI laboratories in the early twenty-first century, with many of the studies involving brain scans collected before a particular educational intervention. Such direct interplay between educational intervention and brain-based measurements provides a means of assessing the degree to which a particular educational program impacts brain mechanisms associated with learning within a particular domain, such as reading.

Early mathematical abilities represent another very promising area of research that holds the potential for rigorous interaction between brain science investigation and educational practice. fMRI imaging work has provided insights into brain mechanisms of basic numerical abilities such as symbol recognition, digit naming ability, and estimation of magnitude. Future work that combines educational psychology and cognitive neuroscience may examine how educational programs help to train up these brain mechanisms and how remediation programs might help children with atypically developing

mathematical abilities improve the operation and integration of these brain mechanisms for number symbol identification, naming, and magnitude estimation.

The examples of early reading and early mathematics skills have several qualities in common that perhaps make them ideally suited for a new form of brain-based education. In both of these domains, multiple years of brain research have been invested in elucidating the specific brain mechanisms that underlie the particular skill; efforts have been made to map out differences in the brain activity patterns between typical and atypically developing learners; and each of these two content domains represent an educational challenge that many students and teachers struggle with.

As mentioned at the 1996 “Bridging the Gap” meeting, perhaps the best way to pursue this form of brain-based research will involve collaborations between educational researchers and brain science researchers. Such forms of collaboration hold the advantage of combining teachers’ intervention ideas with techniques for imaging brain areas associated with particular cognitive skills, thereby allowing researchers to track the changes in brain activity patterns that occur over the course of learning. Perhaps by explicitly combining evidence-based investigations of specific educational practices with brain imaging and psychological studies of learning, future research might take a step closer toward the goals of brain-based education and provide empirically validated contributions to enhancing education based on scientific insights into learning.

*See also:* LEARNING, *subentry on* NEUROLOGICAL FOUNDATION.

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BRUCE MCCANDLISS

## BRAMELD, THEODORE (1904–1987)

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A philosopher and visionary educator who developed the reconstructionist philosophy of education, Theodore Brameld spent a lifetime working for personal and cultural transformation through education. Influenced by John Dewey's educational philosophy, Brameld urged that schools become a powerful force for social and political change. He welcomed reasoned argument and debate both inside and outside the classroom. After completing a doctorate in philosophy at the University of Chicago in 1931, Brameld taught at Long Island University and spent much of his career at New York University and Boston University.

In the 1930s Brameld was drawn to a social activist group of scholars at Teachers College, Columbia University, including George Counts, Harold Rugg, Merle Curti, and William Heard Kilpatrick. Counts especially influenced him profoundly. Writing in *The Social Frontier*, a journal of educational and political critique, Brameld argued for a radical philosophy that focused analysis on weaknesses in the social, economic, and political structure. From this analysis came constructive blueprints for a new social order that challenged social inequities like prejudice, discrimination, and economic exploitation. These issues were addressed in *Minority Problems in Public Schools*, published in 1945.

Placing abundant faith in the common person, Brameld considered democracy the core of his educational philosophy. In 1950 he asserted in *Ends and Means in Education: A Midcentury Appraisal* that education needed a reconstructed perspective and suggested reconstructionism as an appropriate label to distinguish this philosophy. Many of Brameld's ideas grew out of his experience in applying his philosoph-

ical beliefs to a school setting in Floodwood, Minnesota. There he worked with students and teachers to develop democratic objectives. Insisting that controversial issues and problems ought to play a central role in education, he considered no issue out of bounds for discussion and critical analysis.

Brameld never wavered in his conviction that philosophy must be related to real-life issues. Philosophers as well as educators must act decisively on their values, he affirmed. Throughout the 1940s and 1950s he remained defiant and courageous in the face of intimidation and harassment by the forces of McCarthyism that tried to muffle his resolute voice.

Starting in 1950 with the publication of *Patterns of Educational Philosophy: A Democratic Interpretation*, Brameld developed his cultural interpretation of four philosophies of education: essentialism, perennialism, progressivism, and reconstructionism. He viewed essentialism as an educational philosophy concerned mainly with the conservation of culture; perennialism as centering on the classical thought of ancient Greece and medieval Europe; progressivism as the philosophy of liberal, experimental education; and reconstructionism as a radical philosophy of education responding to the contemporary crisis. In his writings throughout the 1950s, Brameld maintained that reconstructionists—like progressivists—opposed any theory that viewed values as absolute or unchanging. Values must be tested by evidence and grounded in social consensus.

Brameld continued to refine his philosophy in his many publications. In 1965 a small but influential book, *Education as Power*, appeared in English, Spanish, Portuguese, Japanese, and Korean editions (and was reissued in 2000). *Education as Power* clearly and concisely outlines many of the major tenets of reconstructionism.

Education has two major roles: to transmit culture and to modify culture. When American culture is in a state of crisis, the second of these roles—that of modifying and innovating—becomes more important. Reconstructionism, Brameld affirmed, is a crisis philosophy; the reconstructionist is “very clear as to which road mankind should take, but he [or she] is not at all clear as to which road it will take” (2000, p. 75).

Above all, reconstructionism is a philosophy of values, ends, and purposes, with a democratically empowered world civilization as the central goal of education. Social self-realization, “the realization of

the capacity of the self to measure up to its fullest, most satisfying powers in cooperative relationship with other selves” (2000, p. 93), is the capstone of reconstructionist theory and practice, but Brameld also pays attention to politics, human relations, religion, and the arts in his philosophy. A commitment to existential humanism remains constant. Defensible partiality, a central concept in reconstructionism, suggests a search for answers to human problems by exploring alternative approaches and then defending the partialities that emerge from a dialectic of opposition.

Brameld’s abiding interest in the concept of culture led him to write a scholarly volume, *Cultural Foundations of Education: An Interdisciplinary Exploration* (1957), that demonstrated his debt to influential anthropologists. Following this came application of his theoretical framework to Puerto Rican culture and education in *The Remaking of a Culture* (1959), and application to a study of a Japanese fishing village and a segregated community in *Japan: Culture, Education, and Change in Two Communities* (1968).

One of Brameld’s last books, *The Teacher As World Citizen: A Scenario of the 21st Century* (1976), provides a visionary outline and culmination of many of his lifelong hopes and beliefs. Written as if looking back from the eve of the year 2001, the teacher-narrator recalls global transformations of the preceding quarter century. Radical changes have occurred, especially establishment of a World Community of Nations based on a global Declaration of Interdependence.

Brameld’s conception of the utopian spirit as a realizable vision of what could and should be achieved was influenced greatly by scholars like Lewis Mumford whose comprehensive organic, ecological, and humanistic philosophy had a profound influence on Brameld’s reconstructionism. Some critics found Brameld’s educational philosophy too goal-centered and utopian while others were disturbed by his advocacy of teachers as social change activists. Still others criticized his early interest in Marx, as well as his ongoing critique of the capitalist value system. Brameld’s unpopular commitment in intercultural education and education for a world community in the 1950s was more widely embraced as multicultural and global education a half century later.

After becoming professor emeritus at Boston University in 1969, Brameld taught at Springfield

College in Massachusetts and at the University of Hawaii where he continued to write, conduct research, and become involved in community change initiatives. As he did throughout his professional life, Brameld wrote letters to the editors of newspapers and worked on articles for scholarly journals. Brameld participated in demonstrations against nuclear power and enjoyed spending time at his home in Lyme Center, New Hampshire and traveling around the world as an instructor with World Campus Afloat (a study-abroad program now known as the Semester at Sea).

Theodore Brameld died in October 1987 in Durham, North Carolina, at the age of eighty-three. The Society for Educational Reconstruction (SER), founded in the late 1960s by Brameld's former doctoral students and others inspired by his ideas, continues to sponsor conferences and symposia focusing on various dimensions of the reconstructionist philosophy of education.

*See also:* PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION.

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DAVID R. CONRAD

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## BROOKINGS INSTITUTION

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The Brookings Institution is a private, independent, and nonpartisan research institution dedicated to the study of policy issues of U.S. national interest. It conducts research and disseminates its findings to the nation's leadership as well as to the general public, in the hope of offering practical solutions to problems in the areas of government, economics, and foreign policy. It prides itself on the caliber of its research fellows, the timeliness of its research, and the jargon-free accessibility of its publications on complex issues.

### Program

The Brookings Institution provides an institutional base for scholars drawn from within academia as well as from the fields of government, business, and the professions. Although the institution does not exercise control over the results of the research, its president and board of directors do set the general research agenda. Having identified the problems that need to be addressed, the institution then invites specialists in relevant fields to conduct the necessary research and, when the work is done, provides a publishing venue to disseminate the results to the public.

In addition to serving this research function, the institution conducts graduate programs in economics, foreign and domestic policy, and urban issues, among other subjects. It provides facilities for visiting scholars engaged in private research relevant to the institution's own areas of interest. In addition it awards postdoctoral research fellowships to qualified individuals and sponsors advanced study seminar programs, which are open to government officials, business executives, labor leaders, and others.

Research at the institution falls under three general areas of specialization: economics, foreign policy, and government. Within each of these general disciplinary areas, there are a number of individual policy centers devoted to specific topics. Thus the

economics policy center is comprised of the Urban Center, which focuses on urban development and the resolution of problems facing the nation's cities, and the Center on Social and Economic Dynamics, which studies such things as demographic change. In foreign policy there is the Center for Northeast Asian Policy Studies and the Center on the U.S. and France. Under government, there is the Brookings Center on Educational Policy and the Center for Public Service.

One important division in the government studies area is the Presidential Appointee Initiative. This center, established in the 1960s, provides guidance, advice, and training for individuals joining government service during the transition from one presidential administration to the next. The goal here is to guarantee the smooth continuity of governmental services and programs.

The institution also operates the Brookings Institution Press, which publishes the results of recent and ongoing research. In addition to books, the press also publishes the highly respected *Brookings Review*, a quarterly newsletter that features articles, written by the staff, dealing with the important policy issues of the day. It also produces several annual papers on educational policy, trade issues, economic activity, financial services, and urban affairs. The Latin American and Caribbean Economic Association, a research center at the institution, publishes *Economia*, a semiannual review of economic policy issues of importance in that region of the world.

### Financial Support

The institution supports its activities with an endowment, supplemented by grants from foundations, corporations, and private individuals. In addition, it contracts to undertake research for the government and collects fees for some of its educational programs. It does not accept direct government funding, however, and maintains its independence from governmental control by asserting its right to independently publish its findings, even when the research is done in service to a government contract.

### Organization

The institution is run by a board of trustees, which approves research projects and is charged with maintaining the independence of the organization. Heading the board is the institution's president, who acts as chief administrative officer and serves the important roles of fund-raiser and organizational

spokesperson. The actual research is conducted by a professional staff of residential scholars, assisted in their efforts by the contributions of academics and professionals whenever the need arises.

### History

In 1916 a group of civic-minded business executives and educators came together to discuss their perception that the day-to-day operation of the government was woefully in need of modernization. They formed the Institute for Government Research (IGR), the first private organization dedicated to research in the field of public policy. The IGR set as its first task the reorganization of the accounting and operational practices used by various government agencies. Their success in this effort earned them the role of adviser to Congress as it drafted accounting and budgeting legislation in the early 1920s.

Over the next few years other groups were formed that shared the IGR's concerns, notably the Institute of Economics (founded in 1922) and the Robert Brookings Graduate School (founded in 1924). In 1927 these two organizations joined forces with IGR to form the Brookings Institution, named for the St. Louis businessman who provided much of the inspiration for the enterprise. Robert Somers Brookings was named first chairperson of the new institution.

Robert Brookings provided more than inspiration and leadership during the institution's early years. Over his lifetime he personally contributed more than \$1 million to the enterprise. On his death in 1932, however, his financial support ended, and the institution had to find new funding sources. It began to accept contract work from the government and private organizations, and for the next several years these provided the bulk of its income. Institute research contributed to much of the important legislation and administrative and policy initiatives of the 1930s and 1940s, including the development of the accounting procedures that supported the Social Security Administration, researching the problems of mobilization and manpower needs before the United States' entry into World War II, and the development of the Marshall Plan for European postwar recovery.

In 1952 the institution underwent significant reorganization, during which the three-field division of research into centers for economic, government, and foreign policy studies was developed. Academic

specialists were actively recruited, and the institution gained broader public recognition. Throughout the next two decades the institution enjoyed the respect and support of the nation's political leadership, but this relationship broke down during the Nixon administration.

During this time the government began developing its own policy analysis capabilities and the Congressional Office of the Budget was formed, thus eliminating many of the contract opportunities on which the institution had long depended for funding. The institution shifted focus to reflect these changes, expanding its outreach to the general population and increasing its educational programs. By 1995 the Brookings Institution had once again redefined its role, nearly eliminating its contract work with the government and placing greatest emphasis on independent research and educational programs. It remains, however, one of the most highly respected and influential policy think tanks in the nation's capital.

#### INTERNET RESOURCE

BROOKINGS INSTITUTION. 2002. <[www.brookings.edu](http://www.brookings.edu)>.

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Revised by  
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### BROUDY, HARRY S. (1905–1998)

Relatively late in a career that spanned seven decades of academic writing and public speaking, Harry S. Broudy became in his time a prominent philosopher of education in the United States. He achieved this status in part by writing and speaking to many audiences about popular educational debates of the day, including the purposes and practices of general education, teacher education, aesthetic education, and democratic education in a post–World War II society.

Broudy was born in Filipowa, Poland, in 1905 and in 1912 came to the United States with his family, settling in Milford, Massachusetts. Broudy attended Massachusetts Institute of Technology before graduating from Boston University in 1929 with a bachelor's degree in Germanic literature and philosophy. At Harvard, where he completed his master's

and doctorate of philosophy degrees, Broudy read Heidegger and Kierkegaard in German and Bergson in French. Studying with William E. Hocking, C. I. Lewis, Alfred North Whitehead, and John Wild, among others, Broudy completed his Ph.D. dissertation, "The Metaphysical Presuppositions of Existence," in 1935.

After a brief period working in the Massachusetts Commonwealth Department of Education, Broudy began his academic career in 1937, teaching the philosophy of education at North Adams State Teachers College. From there he moved to Framingham State Teachers College in 1949, then on to the University of Illinois at Urbana-Champaign in 1957. Although he had already achieved national stature in philosophy of education circles and had become president of the Philosophy of Education Society in 1953, his move to Illinois marked the beginning of a three-decade period in which Broudy's work was embraced by many audiences with a range of educational concerns.

Though he formally retired from the University of Illinois in 1974, Broudy continued teaching, advising students, serving on university committees, and writing. By the time of his last book, *The Uses of Schooling* (1988), Broudy had accepted many invitations to speak on various subjects in education, received three honorary doctoral degrees, had become a member of the National Academy of Education and a fellow of the Center for Advanced Study in Behavioral Sciences at Stanford University, and served as advisory board member and senior faculty member of the Getty Institute for Educators on the Visual Arts. In 1992, the *Journal of Aesthetic Education* devoted an entire issue to Broudy's contributions.

One remarkable feature of this extraordinary record of achievement and prominence is that Broudy accomplished it without aligning himself with successive trends in education or philosophy. When he completed his dissertation on existentialism in 1935, most philosophers of education were engaged in one or another brand of pragmatism. In the 1940s and 1950s, when early-twentieth-century ideas of differentiated curriculum were being solidified into a three-track schooling system that prepared children and youth for different places in American society, Broudy tried to articulate a democratic logic and practice of a common curriculum that was based on a general education for all students. When analytic philosophy began to dominate the fields of philosophy and philosophy of education in the 1960s and

1970s, Broudy's research program remained grounded in a classical realist epistemology and an appeal to what he saw as the logic of democracy.

Democracy demanded, he believed, a common general education for all, based on the academic disciplines, which required different ways of knowing the world and of verifying that knowledge. As Donald Vandenberg put it, "Broudy consistently distinguished between two questions, What is good knowledge? And what is knowledge good for? He relegated the first to specialists in the various disciplines and the second to define his own research program" (p. 7). Broudy's concerns about a common education in a democratic society were reflected throughout his career, beginning with *Building a Philosophy of Education* (1954) and extending through *Democracy and Excellence in American Secondary Education* (with B. Othanel Smith and Joe R. Burnett) (1964), *The Real World of the Public Schools* (1972), *Truth and Credibility: The Citizen's Dilemma* (1981) and *The Uses of Schooling* (1988). *The Uses of Schooling* is a concise, eloquent summation of Broudy's educational thought. It contends that the criteria used in determining and justifying general or liberal studies in schooling are misconceived and misapplied because the full range of the purpose of education in democratic life is not well understood. Understanding the uses of schooling requires attention to not only the usual "replicative" and "applicative" criteria of use, which attend to whether students can replicate and apply what they have learned; but also the "associative" and "interpretive" uses of knowledge as well. These uses require an "allusionary base" of information, understanding, and values, derived from the disciplines that inform experience with ideas that help each person represent predicaments and problems symbolically. Equipping each person with these symbolic tools, Broudy believed, should be an essential aim of schools in a democratic society.

Broudy's regard for the associative and interpretive functions of schooling is also related to other bodies of his considerable authorship. For example, *Aesthetic Education in a Technological Society* (1962) and *Enlightened Cherishing: An Essay in Aesthetic Education* (1972) illustrate how aesthetic studies, like general studies, tend to fall into the "nice, but not necessary" category of curriculum policy formation. Broudy pointed out that aesthetic studies provide the student with associative and interpretive experiences and develop the capacities for interpretation

and informed criticism, as well as a richer vocabulary for self-expression.

Similarly, beginning with *Case Studies for the Foundations of American Education* (1960) and ending with "Case Studies—How and Why," Broudy for much of his career infused his extensive writing on teacher education with a vision of the use of cases in professional preparation. The cases Broudy described were designed for stimulating association, interpretation, and criticism, not simply for replication and application. Broudy believed that, compared to other professions, the absence of widely used case studies in teacher preparation was a considerable limitation on the profession.

It is likely that Broudy would be regarded in the early twenty-first century as a "public intellectual": one who sought to inform the social and educational debates of his day from a scholarly perspective, framed in language accessible to the nonspecialist.

*See also:* ART EDUCATION, *subentries on* PREPARATION OF TEACHERS, SCHOOL; PHILOSOPHY OF EDUCATION.

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STEVE TOZER

## BUCHANAN, SCOTT (1895–1968)

Scott Milross Buchanan shaped the Great Books program in American higher education as it developed at the People's Institute (New York City), the University of Chicago, and St. John's College (Annapolis, Maryland). A philosopher, critic, author, and educator, Buchanan promoted and experimented with the pursuit of the liberal arts through discussion of classic texts in philosophy, literature, mathematics, physics, astronomy, political science, history, economics, and languages.

Buchanan was born in Sprague, Washington, to William Duncan Buchanan, a medical doctor, and Lillian Bagg Buchanan. Their only child, he moved with his family to Jeffersonville, Vermont, where he spent his boyhood years. His father died in 1902.

Soon after he entered Amherst College in 1912, Buchanan became a devoted follower of its president, Alexander Meiklejohn, an educator nationally noted for his defense of liberal education and his masterful use of Socratic seminar methods. Buchanan's custom-tailored undergraduate curriculum amounted to a triple major in Greek, French, and mathematics. After graduating with a B.A. in 1916, he spent two years as an administrator and an instructor at Amherst before attending Oxford as a Rhodes scholar from 1919 to 1921. There, he met Stringfellow Barr, a Rhodes scholar from Virginia who would become his lifelong friend and his partner in innovative academic endeavors.

Upon returning to the United States, Buchanan married Miriam Damon Thomas, a teacher and social worker. The couple had one child, Douglas Buchanan. Determined to seek further academic study, particularly in philosophy, Buchanan entered Harvard University, where the English mathematician and philosopher Alfred North Whitehead offered him intellectual encouragement. He received his doctorate at Harvard in 1925. His dissertation, a philosophical inquiry into imaginative and scientific possibility, was published in 1927 as *Possibility*.

From 1925 to 1929 Buchanan served as assistant director of the People's Institute, an educational

outreach endeavor affiliated with Cooper Union College in New York City. The intent of the institute, founded in 1895 by Columbia University professor Charles Sprague Smith, was to deliver academic and literary lectures that would attract and invigorate a community of both recent immigrants and privileged intellectuals. With Buchanan's help, this popular approach to adult education soon included smaller discussions after and between the lectures and a series of seminars at public library branches. On the advice of Columbia University professor Mortimer Adler, Buchanan incorporated elements of the Columbia Honors Course in Great Books for the library seminar series. The original list of books was adopted from British intellectual Sir John Lubbock who devised it in the 1880s for publication and use in the Workers' and Mechanics' Institute in London.

While lecturing at the People's Institute, Buchanan explored the elements of poetry and mathematics and determined that relationships among the words of poetry and the ratios of mathematics deserved further inquiry. That inquiry became his book *Poetry and Mathematics*, published in 1929, the same year Buchanan accepted a faculty appointment in the philosophy department at the University of Virginia. There, he renewed his friendship with Stringfellow Barr, a professor of history, and worked with a committee on honors courses that pushed unsuccessfully for an emphasis on Great Books during the first two years of honors study. During a year-long leave of absence in England in 1931 through 1932, he studied the work of George and Mary Boole and other mathematicians, publishing his findings about symbols in literature and measurement in *Symbolic Distance in Relation to Analogy and Fiction* (1932).

In 1936 Buchanan and Barr left the University of Virginia at the invitation of Robert Maynard Hutchins, president of the University of Chicago, who was attempting to strengthen the liberal arts program against the wishes of many on his faculty. Buchanan and Barr joined Mortimer Adler and Richard McKeon, who had come to Chicago from Columbia University, and together they formed a Committee on Liberal Arts chaired by Buchanan. Although all four were instrumental in crafting the Great Books program at the University of Chicago, Buchanan worried about some of their philosophical differences. Within a year, he and Barr accepted the challenge of trustees of the barely surviving St.

John's College, Annapolis, Maryland, to revive it as a prominent liberal arts college.

With Buchanan in the position of dean and Barr in the position of president, St. John's quickly became known as an intellectually exciting and innovative institution. Firmly defending the liberal arts, it required all students to read and discuss approximately 100 enduring classic texts of the Western intellectual tradition, from ancient Greece to the twentieth century. Tutors and Socratic seminars were the means to dialogue that illuminated the learning from these texts. The program areas covered included languages, mathematics, science, political science, philosophy, literature, music, and history.

Buchanan quickly became known as a brilliant thinker and teacher, as well as an ardent defender of the liberal arts during a time of increasing vocational education and a proponent of the required curriculum during a time of elective coursework. For him the aim of a liberal education was to spark insight, understanding, and imagination that would result in a disciplined and vibrant intellect prepared for lifelong learning. During his stay at St. John's, Buchanan joined with friends and associates Mark Van Doren, Mortimer Adler, Robert Maynard Hutchins, and others who sought to infuse liberal arts into the public debate about the ends and means of higher education. While at St. John's, he authored *The Doctrine of Signatures: A Defense of Theory in Medicine* (1938).

Buchanan left St. John's in 1947 to pursue a series of endeavors that were personally important to him. For two years, he directed Liberal Arts, Incorporated, in Pittsfield, Massachusetts. From 1948 to 1958, he served as a consultant, trustee, and secretary of the Foundation for World Government; and, during that time, he spent a year as chairman of the Department of Religion and Philosophy at Fisk University, Nashville, Tennessee. He became a founder and senior fellow of the Center for the Study of Democratic Institutions in Santa Barbara, California.

A final manuscript, *Truth in the Sciences*, remained unpublished when Buchanan died in 1968. It was published in 1972.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; ST. JOHN'S COLLEGE.

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KATHERINE C. REYNOLDS

## BUDGETING, PUBLIC SCHOOL

*See:* PUBLIC SCHOOL BUDGETING, ACCOUNTING, AND AUDITING.

## BUROS, OSCAR KRISEN (1905–1978)

Founder of the Institute of Mental Measurements, Oscar Krisen Buros produced the first major source of evaluative information on tests and test products. Born at Lake Nebagamon, Wisconsin, he was the fourth oldest of the nine children of Herman and Tone (Tillie) Buros (both immigrants to the United States from Norway). In 1925 he graduated with a B.S. with distinction from the University of Minnesota (Educational Administration and Supervision). He received his M.A. from Teachers College, Columbia University, in 1928. He was a professor of education at Rutgers University from 1929 through 1965. During his tenure at Rutgers University he taught courses in testing and statistical methods in the Department of Educational Psychology.

When he retired from Rutgers University in 1965 he held the title of professor of education and director of the Institute of Mental Measurements. During his career, he was active in several important projects and programs in the field of educational measurement, including the Eight-Year Study, Edu-

cational Testing Service Invitational Conference on Testing Problems, and the beginnings of the testing program for the military, where he served as academic examinations officer from 1942 to 1945. He also served as an educational consultant in Africa. From 1956 to 1957 he was a Senior Fulbright Lecturer in Statistics at Makerere College, Kampala, Uganda. Then in 1965 to 1967 he held the position of visiting professor at the University College of the University of East Africa, Nairobi, Kenya.

The creation of the Institute of Mental Measurements was Buros's primary contribution to education. Under the auspices of the Institute of Mental Measurements, Buros published, beginning in 1938, critical reviews of commercially available tests. Concerned about the proliferation of tests, and the unsubstantiated claims by their developers about the potential uses of tests in education, psychology, and business, Buros initiated a movement to examine the testing industry and its products. These reviews were published in a series created by Buros called the *Mental Measurements Yearbook (MMY)*. The 1938 yearbook contained reviews of more than 200 tests; over the years, multiple yearbooks have been published (the Fourteenth *Mental Measurements Yearbook* contains reviews of more than 400 tests). Each yearbook limits its scope to only new or revised, commercially available tests.

Over the history of the *Mental Measurements Yearbook* series, more than 6,300 tests have been reviewed. These reviews provide essential information to test users about the strengths and weaknesses of testing products, aiding in informed consumer decisions about test products. Buros published a total of eight *Mental Measurements Yearbooks* during his lifetime. In addition, a new series, called *Tests in Print*, was started in 1961. Because each *Mental Measurements Yearbook* only evaluated new and revised commercially available tests, Buros realized that a volume that provided an inventory of all in-print commercially available tests would be useful to test consumers as it would provide a starting place for examining the quality of test products.

In addition, *Tests in Print* identified which yearbook contained the relevant test reviews. Therefore, a consumer could first refer to the most recent volume in the *Tests in Print* series (*Tests in Print V* was published in 1999) to identify possible tests for their use and then refer to the relevant test reviews in the *Mental Measurements Yearbook* series to gain additional insights into the appropriateness of these tests

for their use. The Institute of Mental Measurements started another series in the mid-1960s that collected test reviews by content category, such as personality or reading. Several of these volumes were published by the Institute of Mental Measurements.

Buros received many recognitions and awards for his work in educational testing. These include an award from the Psychometric Society in 1953 for his twenty years of service to users of psychometric techniques; a citation from the American Educational Research Association and the American Psychological Association, also in 1953, for his contributions to measurement; the Educational Testing Services Award for Distinguished Service (1973); and in 1980 a posthumous tribute from the American Educational Research Association and the National Council on Measurement in Education for his high principles of quality and integrity represented in his work and in his life.

A biographical entry of Buros would not be complete without mention of the contributions of his devoted wife, Luella Gubrud Buros. Upon their marriage in 1925, she abandoned a promising career as an artist to become her husband's partner in his crusade to provide candidly critical information about tests and test products. The Institute of Mental Measurements was always strapped for financial resources, and so Luella Buros provided support as typist, administrative assistant, and advertisement consultation; plus, borrowing from her artistic talent, she added an element of elegance to the products through her aesthetic sense of style and design. Upon the death of her husband in 1978, Luella Buros continued her personal and financial support of the Buros Institute of Mental Measurements as the work of Oscar Buros was transferred to the University of Nebraska—Lincoln. In 1994 the Oscar and Luella Buros Center for Testing broadened its focus to finally achieve Buros's dream of extending the critical evaluations of tests beyond commercially available instruments.

*See also:* TESTING.

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## BUSINESS EDUCATION

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### SCHOOL

Tena B. Crews  
Wanda L. Stitt-Gohdes

### COLLEGE AND GRADUATE STUDY

Kwabena Dei Ofori-Attah

### PREPARATION OF TEACHERS

Judith J. Lambrecht

## SCHOOL

For many years, *business education* has been defined as the courses at the secondary level that prepare students for the business world. While that definition continued to have validity at the beginning of the twenty-first century, by then the range of the courses had expanded to include preparation for additional study at postsecondary institutions. As business education courses changed over the years, so did the level at which the classes are taught. For example, computer applications courses are often taken at the middle school level and keyboarding may be introduced in the third grade. Secondary level courses include accounting and management, but also branch into technology-based courses such as desktop publishing, multimedia, computerized accounting, and web page design.

The advent of business education in America occurred when the Plymouth Colony hired a school teacher to teach reading, writing, and casting accounts. Casting accounts, the predecessor to accounting, was a subject taught in business arithmetic. Signs of early school-to-work initiatives were evident as students who wanted a commerce or busi-

ness career left school to work as an apprentice. It should not be surprising, then, that bookkeeping was the earliest business course taught in public schools, being offered in Boston in 1709, in New York City in 1731, and in Philadelphia in 1733.

The founding of Benjamin Franklin's Academy in 1749 was a significant event for business education. The Academy had three departments: the Latin School, the English School, and the Mathematical School. Business subjects offered included "accounts, French, German, and Spanish for merchants; history of commerce; rise of manufacturers; progress and changing seats of trade" (Hosler, p. 3). By 1827 Massachusetts passed legislation requiring municipalities with 500 or more families to establish a high school; Bookkeeping was one of the specific courses that had to be offered. During this time private business colleges opened to meet the increasing demand for well-educated business workers.

Several occurrences in the 1860s hastened the development of business education as an area of study. In 1862 the Morrill Act, more commonly referred to as the land-grant act, gave every state 30,000 acres of land for every congressional representative to establish a college for agricultural, mechanical arts, and business instruction. Also in 1862 shorthand was first offered in public high schools; the first comprehensive high school, which offered both college preparatory and vocational programs of study, was established. Educators generally accept this as the most important contribution to education. Finally, in 1868 Christopher Sholes invented the first practical typewriter. Historically, typewriting and subsequently keyboarding courses frequently encouraged students to enroll in additional business education courses. In the late 1800s John Robert Gregg brought his shorthand system to the United States from Great Britain and "by 1935 it was offered in 96 percent of public high schools teaching shorthand in this country" (Hosler, p. 10).

A turning point regarding business education curriculum occurred in 1946 with the invention of the first electronic computer, ENIAC (Electronic Numerical Integrator and Calculator). As might be expected, the 1960s brought significant change in business education. IBM introduced the first Selectric typewriter in 1961 and the Magnetic Tape Selectric typewriter in 1964. In 1962 the United Business Education Association (UBEA) changed its name to the National Business Education Association (NBEA). In 1963 the Joint Council on Economic Ed-

ucation brought together “over 60 collegiate and secondary school business educators . . . to discuss how economics could be implemented in business courses” (Hosler, p. 23). That same year the National Business Education Association published the first *NBEA Yearbook*. The year 1965 saw the first mini-computer invented and word processing was then offered as a part of the business education curriculum. This marked the beginning of dramatic curricular change in business education.

The 1980s saw an era of standards development and the need for increased accountability. In 1983 the U.S. Department of Education accepted the Standards for Excellence in Business Education, developed by Calfrey C. Calhoun. This was followed in 1985 by *The Unfinished Agenda, The Role of Vocational Education in the High School*, and in 1987 by the *Database of Competencies for Business Curriculum Development, K–14* and the *Business Teacher Education Curriculum Guide*. The National Association of Business Teacher Educators (NABTE) published *Standards for Business Teacher Education* in 1988. All these efforts affected business education curriculum and standards from kindergarten through graduate school.

The Secretary’s Commission on Achieving Necessary Skills (SCANS) report, *Learning a Living: A Blueprint for High Performance*, was published in 1992. It provided clear guidelines regarding foundational skills needed for workplace success. This was followed in 1994 by the Goals 2000: Educate America Act. The Goals 2000 Act, as it is often called, codified into law the six original education goals:

1. School readiness
2. School completion
3. Student academic achievement
4. Leadership in math and science
5. Adult literacy
6. Safe and drug-free school

Two new goals were also added to encourage teacher professional development and parental participation. This act also established the National Skills Standards Board to develop voluntary national skill standards.

### Federal Legislation

As the nation grew and developed, and the economy changed from agrarian to industrial to technological, a number of factors consistently have influenced

funding for educational endeavors. A few of these influences include the economy, society, demographics, and technological advances. Beginning in 1862 with the passage of the Morrill Act, the U.S. government supported vocational education. However, it took nearly one hundred years after the Morrill Act for business education to be brought under the vocational education umbrella. And yet, at the beginning of the twenty-first century, some continue to hold the opinion that business education is not vocational education. However, the following definition of vocational education provided by the 1990 Carl D. Perkins Vocational and Applied Technology Education Act, challenges that perspective: “organized educational programs offering a sequence of courses which are directly related to the preparation of individuals in paid or unpaid employment in current or emerging occupations requiring other than a baccalaureate or advanced degree” (Scott and Sarkees-Wircenski, p. 3). Clearly, business education at both the middle and high school levels falls under this definition. The value and merit of secondary business education programs is their ability to enable a student to pursue a program of study, graduate, and successfully move into the workforce or postsecondary education.

The Smith-Hughes Act of 1917, also known as the Vocational Act of 1917, promoted the vocational education programs of agriculture, trade and industry, and home economics. Key elements of this legislation defined vocational education as “less than college grade, for persons over 14 years of age who desire day time training, and for persons over 16 years of age who seek evening class training” (Scott and Sarkees-Wircenski, p. 122). This legislation also provided funding for teachers’ salaries for the three program areas.

With the Vocational Act of 1963, the definition of vocational education was broadened to include “any program designed to fit individuals for gainful employment in business and office occupations” (Scott and Sarkees-Wircenski, p. 130). This was the first piece of federal legislation to specifically include business education. Vocational education funding was amended several times in the 1970s; however, the passage of the Carl D. Perkins Vocational Education Act of 1984 brought with it a stronger emphasis on local control. “The act had two interrelated goals, one economic and one social. The economic goal was to improve the skills of the labor force and prepare adults for job opportunities—a long-standing

goal traceable to the Smith-Hughes Act. The social goal was to provide equal opportunities for adults in vocational education” (Scott and Sarkees-Wircenski, p. 145). The 1984 Perkins Act was amended in 1990 and renamed the Carl D. Perkins Vocational and Applied Technology Education Act. This act was significant for two reasons: first, a major goal was increased vocational opportunities for the disadvantaged; and second, funds were authorized for technical preparation (tech-prep) programs. Tech-prep programs are often referred to as 2+2+2, which refers to the articulated agreements between two years of concentrated vocational coursework at the high school level plus two years of advanced technical education at the postsecondary level and the potential for an additional two years of education leading to the baccalaureate degree. An important part of the Perkins legislation was the requirement of implementing state councils on vocational education and the development of long-term state plans for vocational education.

The Goals 2000: Educate America Act of 1994 had as its goal the development of national goals and standards and assistance to states in helping students reach these goals and, in turn, helping them succeed in a technology-based economy and society. A key part of this legislation was the creation of a National Skills Standards Board “to stimulate the development of a voluntary national system of occupation standards and certification” (Scott and Sarkees-Wircenski, p. 156).

“The School-to-Work Opportunities Act (1994) was passed to address the national skills shortage by providing a framework to build a high skilled workforce for our nation’s economy through partnerships between educators and employers” (Scott and Sarkees-Wircenski, p. 157). It was hoped the School-to-Work Opportunities Act (STWOA) would encourage the integration of academic and vocational courses, improve career guidance, and include work-based learning, many times in the form of apprenticeships.

In 1998 the Carl D. Perkins Vocational-Technical Education Act was amended. The amendments included more funding at the local level and required an equity coordinator in every state. While business education is specifically included in little federal legislation, the impact of federal legislation is felt in every business education program today. Not only does the funding provide computers for classrooms, more importantly it provides for exploratory

courses at the middle school level and career guidance, which helps students imagine opportunities available to them in the world of work and for which business education is a key factor.

### **Certification**

Certification is the process by which an individual becomes licensed to teach in a particular subject area or grade level. All fifty states have various routes to certification; however, common elements include a baccalaureate degree and some competency test. Typical baccalaureate degree programs include a liberal arts core and upper division courses in business education subject matter and professional education, including a teaching internship. In recent years a number of states have moved to using the Praxis II subject-area test in Business Education as the competency test. The advantage of this test for teachers is its mobility, allowing a person to earn a degree in one state and meet certification requirements there, and move to another state and already have met its certification requirements.

Teaching certification is not a lifelong certification. Certificates must be renewed over a period of time, such as every five years. States require a varying number of either graduate credit hours or continuing education units over a specified period of time for teachers to retain for their certification. Typically, colleges and universities use certification guidelines in planning their pre-service teacher preparation programs. These programs are reviewed periodically by the associations that accredit them.

### **Curriculum**

The primary mission of business education is to provide instruction for and about business. In the past, courses such as accounting, data processing, economics, shorthand, typing, basic business, business law, business math, office procedures, and business communication were taught as a part of the business education curriculum. Many of these courses continue to be taught, but the content and technology aspect has changed drastically. Common business education courses now include computerized accounting, business management, business law, economics, entrepreneurship, international business, word processing, desktop publishing, multimedia computer programming, and web page design. Keyboarding is still taught in some business education programs as a separate course or as a four- to six-week part of a semester course in computer applica-

tions, but there is a push to teach keyboarding at a much earlier stage in education. Many schools teach keyboarding at the middle school level and some offer keyboarding as early as the third grade.

Historically, curriculum was developed on a course-by-course basis; and the courses were seen as separate entities. Today a much more integrated approach is taken to ensure business skills at many levels throughout the curriculum. National standards have been incorporated into business education in the United States. In 1995 the National Business Education Association revised existing standards that were developed around specific courses offered. The revised standards centered around twelve topical areas: accounting, business law, career development, communications, computations, economics, personal finance, entrepreneurship, information systems, international business, management, marketing, and interrelationships of business. In 1995 the NBEA determined the following standards that exemplify what America's students should know and be able to do in business:

1. Function as economically literate citizens through the development of personal consumer economic skills, a knowledge of social and government responsibility, and an understanding of business operations.
2. Demonstrate interpersonal, teamwork, and leadership skills necessary to function in multicultural business settings.
3. Develop career awareness and related skills to enable them to make viable career choices and become employable in a variety of business careers.
4. Select and apply the tools of technology as they relate to personal and business decision making.
5. Communicate effectively as writers, listeners, and speakers in social and business settings.
6. Use accounting procedures to make decisions about planning, organizing, and allocating resources.
7. Apply the principles of law in personal and business settings.
8. Prepare to become entrepreneurs by drawing from their general understanding of all aspects of business.
9. Understand the interrelationships of different functional areas of business and the impact of one component on another.

10. Develop the ability to participate in business transactions in both the domestic and international arenas.
11. Develop the ability to market the assets each individual has whether they be in the labor market or in the consumer goods market.
12. Manage data from all of the functional areas of business needed to make wise management decisions.
13. Utilize analytical tools needed to understand and make reasoned decisions about economic issues—both personal and societal.

The NBEA standards were developed by business educators at every level and are revised periodically. They were also developed with the belief that business education courses are designed for all students who need a general understanding of the role of business and its role in the economy.

The curriculum has developed into a critical-thinking curriculum with software applications combined. The students create real-world projects and are being taught about the “business of business” and not just simply how to create an accounting spreadsheet or use a word-processing software package. Topics such as ethics, diversity in today's society, global society, online learning, and emerging technology are also incorporated into the curriculum.

Work-experience programs are also a viable part of the business education curriculum. States have implemented different regulations, but many states have Cooperative Business Education (CBE) and/or apprenticeship programs associated with business education. Normally a course or courses are associated with the work-experience program, and students are given a specific amount of release time from school to work.

The connection between school and work has always been an important part of business education. These programs give the students the opportunity to gain hands-on experience in a real-world setting. It also gives them the opportunity to increase necessary business skills and connect their classroom knowledge to the business environment.

### **Student Organizations**

Business education students have two student organizations from which to choose: Future Business Leaders of America (FBLA) and Business Profession-

als of America. In 1942 the National Council for Business Education sponsored the first FBLA chapter in Johnson City, Tennessee. Four years later the sponsorship was transferred to the then UBEA, now NBEA. In 1969 FBLA became an independent association. In 1958 Phi Beta Lambda, a collegiate division of FBLA was organized. Scott and Sarkees-Wircenski stated the purpose of FBLA-PBL is “to provide . . . opportunities for students in business and office education to develop vocational and career supportive competencies, and to promote civic and personal responsibilities” (p. 188).

### International Business Education

The International Society for Business Education (ISBE) is an organization for anyone interested in international business education. Membership includes teachers, trainers, and administrators; however, collective memberships are also available to organizations, such as educational institutions, governmental and other agencies, industry, trade unions, and employers’ associations. ISBE was founded in 1901 in Zurich, Switzerland. Approximately twenty countries worldwide have membership in ISBE. Groups from Eastern Europe, the Far East, Central and South America, and Africa are expected to join in the near future.

### Trends

Educational environments experience continuous change and business education is no exception. Although it is clear that technology is an integral part of business education in the early twenty-first century at every level, a continuing question revolves around the appropriate use of technology: Does it drive the curriculum or should it be viewed as one tool in the curriculum toolbox? Distance learning and online learning are trends in the delivery systems. Providing educational excellence in a multifaceted technological environment is a huge challenge. Accountability for the education of students results in a careful approach to many areas in education and technological applications are no exception. As business changes, business education must continue to change to keep up with the needs of business.

Certification in many areas such as Microsoft Office User Specialist (MOUS), A++ (the name of the certification for networking), Certified Novell Administrator (CNA), and many others are also being considered at the secondary level. Some

courses are being designed so that the students will either become certified by the end of the course or be given the information to obtain certification on their own at the end of the course. Certification is obtained from an accrediting organization and may involve taking a test, depending on the type of certification.

### Challenges

The shortage of business education teachers is definitely an additional challenge. Alternative certification processes are being developed in many areas of the country to address this shortage. Incentives such as scholarships or grants are also being allocated to encourage adults to choose business education as a major at the postsecondary level.

The ever-changing role of technology continues to be a challenge for all educators, but especially business educators. Business education teachers are constantly required to update their software and hardware skills as well as learn new technologically-based information. The incorporation of this new knowledge and the constant maintenance and updating of hardware is a real challenge for business educators.

### Future Directions

Students may choose to take business education courses for a variety of reasons, such as learning about business, updating technology skills, and exploring career options. No matter what their reason, it is necessary for the business educators to provide those students with the skills to become productive and active members of society.

*See also:* EXPERIENTIAL EDUCATION; VOCATIONAL AND TECHNICAL EDUCATION, *subentries on* HISTORY OF, TRENDS.

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## COLLEGE AND GRADUATE STUDY

More than 4,000 educational institutions in the United States offer undergraduate and graduate degrees in business. These institutions include two-year private and public colleges, four-year colleges, and graduate schools. A business school may be set up as a college or school within a university; in other cases, it may be a department within a two-year or a four-year educational institution such as a polytechnic. A degree in business is very popular in the United States because it gives the holder a specialized skill highly valued by the commercial, business, and industrial world. The types of degrees offered by business schools in the United States include associate, bachelors, certificate, diploma, masters, and doctoral degrees.

### Degrees

A diploma degree usually is awarded after completion of a short-term course, lasting anywhere from eight to twelve months, and is designed for students who need basic or advanced skills for employment

in business administration, management, or accounting. A diploma degree may also be an essential step for students who may later choose advanced studies in business. Business schools award diplomat degrees in areas such as marketing, accounting, management, finance, or office practice.

The associate in science (A.S.) or associate in arts (A.A.) in business administration degrees are generally two-year programs offered by for-profit schools or two-year community colleges in the United States. Most students who plan to enter the business job market soon after their studies enroll in associate degree programs. These programs also prepare students for their bachelor's degree in business. In many cases, the only requirement for a student who holds the associate degree in business studies and wishes to obtain the baccalaureate or bachelor's degree is to complete two years of further studies in a preferred area in business such as accounting, finance, or marketing. Many institutions such as Kaplan College, Hickey College, Allentown Business School, and Gibbs College also offer associate, certificate, or diploma degrees in business.

In the United States, as elsewhere in the world, business schools offer programs leading to the award of a bachelor of science (B.S.) and bachelor of arts (B.A.) degrees. A student working on the baccalaureate degree in business may obtain a B.S. degree in several areas including accounting, economics, finance and investments, management, and marketing. A student pursuing the B.A. degree in business may complete concentrated courses in business administration such as marketing, management, or accounting and study several areas in the social sciences. The baccalaureate program in business prepares students to work in several areas in business. It also prepares students for further studies in business at the graduate level.

Business schools in the United States also offer degrees in graduate studies. These degrees include master of science (M.S.) or master of accountancy (M.Acc.), executive master of business administration (E.M.B.A.), doctoral (Ph.D.) programs, and other professional certificate programs such as certified public accountant (C.P.A.). The master of accountancy (M.Acc.) is a program that attracts students who want to be corporate accountants. The M.S. degree is conferred on students who focus their studies on a particular subject area in business such as accounting, marketing, finance, banking, international business, or taxation.

The master of business administration (M.B.A.) is generally a two-year program, although it may be shorter in some business schools. Part-time students may take as many as six years to complete it. Students pursuing the M.B.A. degree may specialize in one of several specialized business areas: accounting, economics, finance, banking, computer information systems, marketing, management information systems, international business, health care administration, taxation, and e-commerce.

The master of business administration degree is very popular and in high demand all over the United States and the rest of the world because of the high prestige it confers on people who successfully complete it. It is often perceived as an avenue toward achieving an executive position in business, industry, education, and government. The financial rewards are in most cases very lucrative. These, and other factors like job satisfaction, make the M.B.A. a terminal or the highest degree required for a top position in the field of business for many people.

Several business schools in the United States offer joint degree programs. These degrees are offered in conjunction with other departments within the college or university system or a different educational institution elsewhere. Students pursue these degrees by simultaneously enrolling in the two programs that are of interest to them. A student may pursue a joint graduate degree in one of the following combinations: law and business (J.D./M.B.A.), medicine and business (M.D./M.B.A.), public policy studies and business (M.P.P./M.B.A.), social services administration and business (A.M./M.B.A.), master of science in accounting and business administration (M.S./M.B.A.), master of engineering management and business administration (M.Eng. Mgt./M.B.A.).

Business schools in the United States have designed several executive educational programs for people who do not want to quit their job for full-time studies in business. These programs are designed to be equivalent to a master's degree. These degrees are awarded in several areas after several credit hours of college work in business. The executive programs may lead to the award of the executive master of science in finance (E.M.S.F.), executive master of business administration (E.M.B.A.), international executive of master of business administration (I.E.M.B.A.), global executive master of business administration (G.E.M.B.A), and executive master of international business (E.M.I.B). Students who enroll in these programs usually work inten-

sively on weekends to complete the program within two years.

A certificate of advanced graduate studies (C.A.G.S.) or post-master's certificate (P.M.C.) in business administration is designed for graduate students who want to acquire special skills or update their business skills. A student may obtain a business certificate in financial planning, business management, business administration, business microcomputing, accounting, or marketing.

The Chicago School of Business within the University of Chicago in 1920 set up the first doctoral program (Ph.D.) in business administration in the United States. The doctor of business administration (D.B.A.) is the highest degree in business studies. Because a master's degree in business is often the only degree needed for gainful employment, few business schools offer doctoral programs in business studies. These include Baruch College, City University of New York; The Carroll School of Management, Boston College; Graduate School of Business and Behavioral Science, Clemson University; Columbia Business School, Columbia University; and John Molson School of Business, Concordia University. Other educational institutions that have doctoral programs in business include Johnson Graduate School of Management, Cornell University; College of Business, Florida State University; Fisher College of Business, Ohio State University; DuPree School of Management, Georgia Institute of Technology; Pamplin College of Business, Virginia Tech University; and Stanford Graduate School of Business, Stanford University.

Students pursuing the Ph.D. in business generally study for about five years after a master's degree program. Areas of specialization for the Ph.D. program in business include finance, marketing, accounting, business economics, organizational behavior, and human management, or business administration. Many people who hold Ph.D.s in business become college or university professors, business consultants, or research fellows.

### **Admission to Business School**

Admission requirements for business studies vary from program to program and from institution to institution. Students seeking a certificate, diploma, or associate degree have few requirements to meet. The requirements may include a high school transcript, General Educational Development (G.E.D.)

test scores, ability to speak and write English, completion of self-assessment form, and a personal interview. For a certificate of advanced graduate studies (C.A.G.S), a graduate degree in the area of interest or a closely related area is required. Many of the two-year community colleges have an open door policy for admission, which makes it possible for a student who is eighteen years old or older to gain an admission. Under this policy, college and university students who have good academic records but decide to enroll in a community college for business education may have not find their A.A. degree a complement to their education.

Students who want to get an undergraduate degree in business have to meet the same admission requirements as other students enrolling for a baccalaureate degree. However, students who desire a B.S. or B.A. degree in business may apply to the business school after completing twenty or more credit hours of college work. In some cases, such students would be expected to have successfully completed several business courses at this time of their college work.

Generally, graduate schools and colleges have higher admission requirements. For the master of business administration (M.B.A.) program, business schools require students to have a baccalaureate degree, and an acceptable score on the Graduate Management Admission Test (GMAT). Indeed, very few business schools do not require a GMAT score. Other admission requirements include college transcripts showing acceptable grade point average (GPA), recommendation letters, resume, essays, and interview. Students applying for the executive master's degree in business such as executive master of business administration (E.M.B.A.) must also have seven or more years of professional work experience. Students applying for admission to complete a joint degree program must meet the admission requirements of all the departments or schools concerned. For instance, a student who wants a joint degree in law (J.D.) and business (M.B.A.) must meet the admission requirements of both the law school and business school. This means the student must obtain appropriate test scores on both the GMAT and the Law School Admission Test (LSAT).

The admission requirements for doctoral studies in business are similar to the requirements for a graduate degree. Emphasis is however, placed on essays written by the student, academic background and performance, research interest and po-

tential, prior exposure to academic research, and the strength of recommendation letters.

*See also:* CURRICULUM, HIGHER EDUCATION; GRADUATE SCHOOL TRAINING.

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#### PREPARATION OF TEACHERS

A person planning to teach business subjects in the twenty-first century faces a wide array of possibilities regarding the students, subject areas, school levels, and sites at which business subjects are taught. The routes to certification and licensure are equally diverse. The challenge in business teacher education is to provide viable paths for professional development and growth in settings that often require diverse technical skills and teaching competencies.

Business education as a field is part of two worlds that are sometimes viewed separately because of funding and licensing requirements. Business education is provided to meet both general education,

and career and technical education needs. General education can further be divided between personal-use business skills and preparation for advanced study in business—two different types of goals. Calhoun and Robinson summarized these goals in 1995:

- Specialized instruction to prepare students for careers in business.
- Fundamental instruction to help students to assume their economic roles as consumers, workers, and citizens.
- Background instruction to assist students in preparing for professional careers requiring advanced study.

Several statements from the Policies Commission for Business and Economic Education (1997, 1998, 1999) note that business education represents a broad and diverse discipline (perhaps *field of study* is a better term) that is included in all types of educational delivery systems: elementary and secondary schools, one- and two-year schools and community colleges, and four-year colleges and universities. For many business teachers, a new and growing site for work is providing training or human resource development services in industry. Business education can begin at any level; it can be interrupted for varying periods of time; and it will very likely be continued throughout the life of an individual. Business education includes education for administrative support occupations, marketing and sales occupations, information technology occupations, business teaching, business administration, and economic understandings. At the secondary level of education, business courses are generally electives for students.

### History of Business Teacher Education

The earliest teaching of business subjects in public grammar and secondary school dates back to the 1700s with the study of bookkeeping. Programs in private academies soon became popular in public high schools, especially for students who were not preparing for college. In the 1800s private business schools were also a large source of business preparation, and commercial teachers, as they were called, often were recruited from business colleges. The first collegiate institute to offer a program of preparation for business teachers was Drexel Institute in Philadelphia in 1898. One- and two-year normal schools came into existence in the early 1900s. From these informal to more formal preparation programs, two requirements were essential to ensure professional

competency in business teacher education: on-the-job experience and attendance at a university or teacher's college. These two prevailing requirements continue in the early twenty-first century.

The purposes of business teacher education coincide with the general breadth of the field and the dual objectives of employment-related and general education. Sources of funding for education have affected how business teachers are licensed. Since passage of federal vocational legislation in the early 1900s, such as the Smith-Hughes Act in 1917, the George-Deen Act of 1937, and the George-Barden Act of 1946, up through the Vocational Education Act of 1963 and the Tech-Prep and School-to-Work legislation of 1990, 1994, and 1998, teaching licensure, as provided by the various states, is generally of two types: (1) standard licensure for teaching in the secondary schools; and (2) career and technical licensure for teaching in programs reimbursed by state and federal career and technical education funds. Career and technical education programs and their corresponding licensing requirements can exist at either the secondary or postsecondary levels. Initial standard licensing in the past has generally required the completion of an undergraduate program. This is changing for those programs that have moved or are now moving to a postbaccalaureate degree requirement for standard, initial licensure. Postbaccalaureate- or graduate-level licensing is particularly attractive to persons who already possess a bachelor's degree in business and then decide they would like to enter teaching.

Work experience has been considered an essential part of business teacher preparation. It is frequently required for a career and technical education license. However, work experience is not generally required for graduation from business teacher education programs. Opinions about the value of work experience are mixed. Teachers value their business work experience and believe it gives them confidence in their teaching, but John Burrow and Nancy Groneman found in 1976 that the amount or frequency of related work experience of business teachers has not been shown to result in greater teaching effectiveness.

### Professional Development for Business Teachers

In addition to initial licensing, business teacher education has been a provider of in-service teacher education and graduate coursework for the completion of advanced degrees. Provision of professional devel-

opment opportunities is the responsibility not only of colleges and universities that provide formal coursework, but also of professional organizations in the field. Although business teachers participate in a wide variety of business professional groups, three can be said to have a key interest in teacher preparation: National Business Education Association (NBEA, founded in 1878), National Association for Business Teacher Education (NABTE, founded in 1927), and Delta Pi Epsilon, the graduate research-focused society of the profession (DPE, founded in 1936). NBEA and NABTE, respectively, are responsible for developing the *National Standards for Business Education*, which have directed curriculum development in the field at the K–14 grade levels, and *Business Teacher Education Curriculum Guide and Program Standards* for programs that prepare business teachers.

### Trends in Business Teacher Education

There was a gradual and consistent increase in the number of business teacher education programs from the 1940s through the 1970s. Augmented funding from federal and state vocational legislation may have contributed to this. However, since 1980 several trends have been a source of concern: the shrinkage in the number of programs preparing business teachers in a time of teacher shortages; program responses to technological change; maintaining balance in business program offerings; and the use of technology as a form of distance learning.

In 2001 NABTE found that there were 124 institutions in the United States providing business teacher preparation by offering at least a bachelor's degree that meets the requirements of a "comprehensive" teaching license, or a license to teach the broadest range of business courses at the secondary level. This total of 124 programs compares to a high of 305 programs in 1980, an almost 60 percent loss of programs. A critical issue has been to understand reasons for program eliminations. Perhaps, when funds are being retrenched, teacher preparation program for courses that are generally electives at the secondary level are easier to eliminate than others. Retrenchment has been common as states have reduced or failed to increase funding to public universities.

This downward trend in program availability might justify the continued expectation of a business teacher shortage in the early 2000s. Because the demand for business teachers, in particular, parallels

the demand for entry-level business employees, and the information technology area continues to be one of growth, a shortage of business teachers is a reasonable projection. Several states and professional organizations have implemented or are discussing alternative ways for teachers to become licensed more quickly than a four-year degree generally allows.

A major preoccupation of all business teachers is maintaining up-to-date programs with regard to information-processing technology. Demand in the workplace for employees in information technology jobs has made the provision of technical courses increasingly popular among students. Courses range from personal-use applications of personal computers through the preparation of employees to manage telecommunication networks.

As the demand for information technology courses increases, questions are also being raised about the too-early specialization of high school students for rapidly changing employment expectations. Further, interest in technical courses and technical certifications at either the secondary or postsecondary levels tends to reduce student time for other business courses and nonbusiness general education course work. Lack of more breadth may not only limited students' ability to understand business operations and the place of technology for meeting business needs, but it may also prevent broader understanding about the world and the diversity of options available for many life choices. Maintaining balanced curriculum choices for students is a challenge.

Not only must teachers be prepared to teach using current information-processing technology, programs themselves may be offered using telecommunications technology. Distance learning—the offering of selected courses or complete teacher-preparation programs over the Internet—is being viewed as one way to address a variety of challenges: the need to take full advantage of technology capabilities to serve the profession, the need to provide professional development opportunities for current teachers, and a way to counter the shrinkage of available teacher preparation programs for students across the country.

The ability to use technology to give students access to resources and allow communication with multiple groups of people makes telecommunications capabilities the new fad of the early twenty-first

century. Too little is known about the outcomes of programs offered in part or in total by distance learning to be able to judge their quality. It is not known whether such new ventures broaden educational opportunities for under-served groups of people, or whether learning at a distance compromises learners' chances to actually become part of professional communities of teachers. Business teachers are not alone in experimenting with these new possibilities and their associated costs and risks.

### Future Directions

Business teacher preparation continues to maintain a historical commitment to preparing teachers who have two basic goals: preparing students both for employment and for economic citizenship. They teach from the elementary, middle, and secondary school levels through the collegiate level in both public education and private training settings. Over the past two centuries, teacher preparation has progressed from informal on-the-job learning through four-year-degree and graduate-level licensing programs. Forces moving toward higher licensing standards are currently being countered by a shortage of teachers, which tends to create pressure to reduce licensing requirements. Nevertheless, changing technological capabilities require all business teachers to become responsible for doing more in the classroom as they teach about technology as a business tool as well as consider using technology as a teaching aid. Technology appears to be both part of a problem and part of the solution. It continually makes new demands on teachers' time and capabilities at the same time that, in the form of distance learning, it makes business teacher education opportunities available to more people when the number of traditional, campus-bound programs has been shrinking.

*See also:* NATIONAL BUSINESS EDUCATION ASSOCIATION; VOCATIONAL AND TECHNICAL EDUCATION, *subentries on* HISTORY OF, PREPARATION OF TEACHERS, CURRENT TRENDS.

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JUDITH J. LAMBRECHT

## BUSINESS INVOLVEMENT IN EDUCATION

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The focus of this entry is on business involvement in influencing state and federal elementary and secondary education policy since 1983, the year the landmark report, *A Nation at Risk: The Imperative for Educational Reform*, was released.

### ***A Nation at Risk***

No education report in U.S. history has galvanized national attention like *A Nation at Risk* did when banner headlines in newspapers across the country declared that "a rising tide of mediocrity" threatened not only U.S. schools, but also its democratic institutions. In thirty-six short pages, it starkly declared, "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war." The words rang true for many business leaders who not only were facing an economic downturn, but also growing international competition. They recognized that the U.S. economy demanded a fundamental transition to an emerging information age that relies on a workforce with ever-increasing skills and knowledge.

After the release of the report, governors and other state leaders established blue ribbon commissions in many states that included prominent business and civic leaders. The 1984 Perot Commission in Texas is one of the best-known examples of post-*Nation at Risk* models for business involvement in state education policy. However, in most states, these business-led commissions were short-lived; they disbanded after their recommendations were enacted into law.

### **Partnerships with Business**

Through the 1980s, school-business partnerships formed the core of business involvement in education. By the end of the decade, many business leaders were expressing dissatisfaction with these local partnerships as little more than "feel good" projects that had few measurable or lasting results.

There was a marked shift in business involvement beginning in 1989 and continuing into the early twenty-first century. In 1989 President George Bush met with the chief executive officers of the Business Roundtable (BRT), an organization of chief executive officers from leading American companies that focuses on public policy issues that affect the economy. The president challenged the business leaders to commit personal time and company resources to improving elementary and secondary education in the United States. That same year, the president and state governors met in Charlottesville, Virginia, for the first National Education Summit and agreed to set National Education Goals to be achieved by the year 2000.

The Business Roundtable accepted the president's challenge. CEOs agreed that schools were preparing too few students to meet world standards in core academic subjects, and too many students were leaving school unprepared for productive work and effective citizenship. After considering different leverage points for change and assessing where CEOs of large U.S. corporations could most effectively improve U.S. education performance, members of the BRT decided to concentrate their efforts at the state level. Under the U.S. Constitution, states have primary responsibility for education.

**State policy.** In 1990 the CEOs made a ten-year commitment and adopted a state policy agenda to improve student achievement that was undergirded by the fundamental belief—revolutionary at the time—that all children can and must learn at higher

levels. The changing economy demanded that all students obtain skills and knowledge once required only by those at the top. The policy agenda, refined over the decade, includes nine essential components of a successful education system: standards, assessments, accountability, professional development, school autonomy, technology, learning readiness, parent involvement, and safety and discipline. It was viewed as a coherent whole, with each of the essential elements aligned to high standards that articulate what all students need to know and be able to do to succeed in school, at work, and in life. It was not an *a la carte* menu.

**State coalitions.** In addition to adopting a state policy agenda, the BRT also asked business leaders to promote education reform in at least one state where the company had a significant employee presence. Companies were asked to join or create a state coalition to advocate these changes in the state capitol. The basic strategy was to encourage companies to shift from the “adopt-a-school” approach to an “adopt-a-state” model of partnership. The organizational structures and membership of these coalitions differ, and a variety of models have proven to be effective, depending on state-specific situations. In some states, CEOs turned to the state business roundtable of business council. In other states, CEOs created a new state business organization, an umbrella group of business organizations and companies, or a business–education coalition that includes business and education leaders. Some of these coalitions also include government and civic leaders. A few states have several state coalitions, each with a unique niche for business involvement. Today, forty-three states have state-level coalitions that provide a vehicle for business leaders to influence state education policy.

### Standards-Based Reform

Throughout the 1990s this state policy agenda, which became known as standards-based reform, emerged as the leading reform strategy, with a primary focus on standards, assessment, and accountability. Other national business groups such as the National Alliance of Business and the Committee for Economic Development issued publications and policy statements that embraced this approach. It was complemented by a U.S. Department of Labor Commission, the Secretary’s Commission on Achieving Necessary Skills (SCANS), that detailed the core competencies required in the modern work-

place. Business leaders were instrumental in sustaining this agenda as elected and appointed officials turned over in each state. With President Clinton’s election in 1992, the business community backed two federal initiatives that were passed by Congress—Goals 2000: The Educate America Act, and the School to Work Opportunities Act—and one that failed to win support—the call for a voluntary national test.

At the state level, the standards movement hit a rocky period in the mid-1990s as opposition to outcomes-based education and national standards spread like wildfire across the country, largely fueled by conservative groups, but also striking a nerve with many parents who were concerned that many states’ standards were “fuzzy,” value-laden, and not measurable. Concerned that this opposition might sink the standards movement, governors and CEOs joined together in 1996 to create Achieve, an independent, bipartisan, nonprofit organization to help states benchmark standards and assessment systems, to build partnerships for states to work together, and to serve as a clearinghouse on standards and school reform.

By the end of the 1990s it was clear that the business community’s initial ten-year commitment was insufficient. Despite the fact that forty-nine states had developed and strengthened their standards in core academic subjects, and promising progress could be seen in some of the states that had benefited from strong business involvement, far too many students still were not proficient in reading and mathematics, according to the National Assessment of Educational Progress (NAEP). The business community would have to stay the course and remain involved as a permanent partner with educators and policymakers. The need for ongoing business involvement was reinforced by a study of two states that made significant gains on NAEP and other measures during the 1990s—North Carolina and Texas. In both states, researchers found that one of the key factors explaining the gains was the business community’s role in developing and sustaining reform. In both states, the business community provided a stable, persistent, and long-term influence on the state’s education reform agenda.

### Federal Education Policy

With President George W. Bush’s election in 2000, a new phase of business involvement emerged. He had seen firsthand the importance of a close working

partnership with business leaders on education reform issues as governor of Texas. In January 2001 the president introduced a basic framework for reform, known as *No Child Left Behind*, and asked CEOs to work with him and the Congress to get it passed. Companies and business organizations formed a coalition, the Business Coalition for Excellence in Education (BCEE), and put together a sophisticated lobbying effort that contributed to passage of a strong bill with overwhelming bipartisan support in December 2001.

The business community recognizes that the federal role in education in the United States is limited, with the lion's share of the resources at the state and local levels. However, perhaps more than any other group concerned about public schools, the business community recognizes the national and international context in which education operates. National leadership is needed to address the disturbing achievement gaps between poor students and their more affluent peers, as well as between African-American and Hispanic students and white and Asian students. Business leaders frequently cite the continuing achievement gap between the United States and its international competitors in math and science. Particularly troubling was the finding from the 1996 Third International Mathematics and Science Study (TIMSS) that showed the performance of U.S. students compared to their international peers declines as students progress through school. It is hardly surprising that according to the 2002 results of an annual survey of employers and college professors conducted since 1998 by Public Agenda and *Education Week*, far too many high school graduates continue to be rated "poor" or "fair" on skills such as writing clearly, grammar and spelling, being organized and on time, and basic mathematics.

The No Child Left Behind Act of 2001 included principles for reform advocated by the business community based on experience in promoting higher student achievement at the state level. Business support for this federal legislation went far beyond any previous involvement on federal education issues. CEOs and national business organizations like the National Alliance of Business, National Association of Manufacturers, American Electronics Association, and The Business Roundtable were convinced that the time was right for federal legislation that linked resources and accountability. If properly implemented, it could help accelerate reforms at the state and local levels that were begin-

ning to show results. In part because the legislation requires schools to disaggregate student achievement data by major student subgroups and holds schools accountable for achievement gains by each of these student groups, business leaders and civil rights organizations were among the most passionate advocates for the bill's passage.

### Staying the Course

In 1950, 80 percent of all jobs were classified as "unskilled labor," but by 2000, 85 percent of all jobs were classified as "skilled labor." The twin forces of technology and globalization mean that an excellent K-12 education system for all students, the competitiveness of the U.S. workforce, the vibrancy of its communities, and the future of its democracy are connected in ways that have never been clearer. Since the publication of *A Nation at Risk* in 1983, the condition of the economy has fluctuated, causing some critics of business involvement in education to argue that business overstates the connection between the quality of education and the health of the economy. However, despite the ups and downs of the business cycle, there is compelling evidence that higher skilled workers have more opportunities to succeed in the changing workplace.

While other education interest groups may not always agree with the positions taken by the business community on education issues, business is recognized as an effective voice for better schools and respected by political leaders on both sides of the aisle. As governors and other state policymakers vie for companies to locate in their states, they know that the quality of education in the state is a competitive advantage. Business is viewed as a credible advocate for education reform policies because business has an enlightened self-interest in strengthening public education in the United States. Business leaders are a force to be reckoned with in state capitols, and business leaders have helped states stay the course on standards-based reform. After working hard to pass the No Child Left Behind Act of 2001, the business community announced its intention to work closely with states to implement the federal legislation. All evidence points to continued involvement by the business community in helping to shape education policy in the United States.

*See also:* NO CHILD LEFT BEHIND ACT OF 2001; SCHOOL REFORM; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

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SUSAN TRAIMAN

## BUSING

See: TRANSPORTATION AND SCHOOL BUSING.

## BUTLER, NICHOLAS M. (1862–1947)

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President of Columbia University from 1902 to 1945, Nicholas Murray Butler was a prominent figure in the development of the modern American university and of public secondary education.

Born into a religious and politically active middle-class family in Elizabeth, New Jersey, Butler valued public service from an early age. He graduated from Paterson High School in New Jersey at age thirteen. Following independent study, he entered Columbia College in 1878 and began a sixty-nine-year association with that institution.

### Early Career

While an undergraduate, Butler gained the attention of Columbia president Frederick A. P. Barnard. Butler considered a political and legal career, however, Barnard convinced him that he could have more impact in the emerging field of professionally directed education. Butler earned an A.B (1882), M.A. (1883) and Ph.D. (1884), all in philosophy, at Columbia, specializing in the writings of the German philosopher Immanuel Kant. He studied for a year at the universities of Berlin and Paris.

In 1885 Butler returned to Columbia as an assistant professor of philosophy. He quickly joined a faculty contingent seeking to expand Columbia College into a European-style graduate university—a vision shared by Barnard and his successor, Seth Low. As Low assumed the presidency in 1890, he asked Butler to outline this proposal to the faculty in a general assembly. The presentation marked Butler as a rising star. Elected dean of the philosophy department, he played significant roles in establishing Columbia's summer school and relocating the university to Morningside Heights on the upper West Side of Manhattan.

During this stage of his career, Butler saw that a professionally guided public school system would be vital to industrial-age America. This system would require competent teacher-training institutions, a professional literature base, separation from politics, and organized associations. When Barnard's plans for a Columbia training school for teachers was thwarted, he persuaded Butler in 1887 to accept the presidency of the Industrial Education Association of New York, which promoted vocational training for working-class children. Butler refocused the aims of the association on teacher training and encouraged it to purchase land adjoining Columbia. By 1893 it had become Teachers College, affiliated with Columbia.

In 1891 Butler founded the *Educational Review*, a journal of educational philosophies and developments. Serving as editor until 1921, Butler invited national educational and political figures to contribute. He also helped transform the National Education Association from an intellectual association into an organization advocating Progressive educational policies. While its president (1894–1895), Butler formed committees to examine the transition of students from school to college. One notable result was the introduction of the College Entrance Examination Board (1900), which standardized college entrance tests and clarified the role of secondary education.

Butler's interest in politics helped to establish professional autonomy for education systems. From 1887 through 1895 he served on the New Jersey State Board of Education. He chaired the Paterson school board from 1892 through 1893. In these roles he led efforts to remove state political interference from local New Jersey school systems. In New York City, he did the same, spurring the creation of a citywide school board that emphasized professionalism and policy over political spoils (1895–1897). When New York City's consolidation was complete, New York State sought a similar reform with Butler's advice, completed in 1904. During this time, Butler established a friendship with Governor Theodore Roosevelt, who nicknamed him "Nicholas Miraculous."

### Columbia University

When Low resigned as Columbia's president in 1901, Butler became acting president, and president a year later. During his forty-four-year tenure, Columbia experienced phenomenal growth in enrollment, resources, and prestige. In 1911 Columbia's

7,500 students made it the largest university in the world. By 1914 it had the largest university endowment in America. Adopting a "corporate" model, Butler centralized the administration and ended the faculty's power to make top administrative appointments. He believed faculty should do what they do best—teach and research. His greatest faculty challenge involved academic freedom. Butler believed a faculty member's academic freedom was limited to an area of expertise and extended only to what he termed "university freedom," defined as a university's right to reach its institutional potential. No individual was greater than the university or had the right to harm its reputation. This issue subsided somewhat following World War I, and Butler took pride in the diversity of faculty perspectives and talent. Columbia in this age was often referred to as the "American Acropolis."

### Political Career

His friendship with Theodore Roosevelt placed him in the president's inner circle until they disagreed over Roosevelt's antitrust initiatives. In 1913 he opposed Theodore Roosevelt's presidential bid and received Republican electoral votes for the vice presidency. He ran for the presidency on the Republican ticket in 1920, receiving New York's convention votes as "favorite son." He opposed the party's embrace of prohibition, however, and lost clout. His interests shifted toward international issues as American diplomatic influence increased. From 1925 to 1945 he was president of the Carnegie Endowment for International Peace. In 1927 he assisted the U.S. State Department in developing the Kellogg-Briand Pact, which called for disarmament and conscientious objection to war. In 1931 he shared the Nobel Peace Prize with Jane Addams.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; RESEARCH UNIVERSITIES.

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BENNETT G. BOGGS

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## **CAMPBELL, ROALD F. (1905–1988)**

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Born in Ogden, Utah, Roald Fay Campbell was reared on a farm near Aberdeen, Idaho, and first attended Idaho Technical Institute (now Idaho State University) in Pocatello. He took several years off from college to serve as a Mormon missionary in Texas and to teach school, then resumed his undergraduate studies at Brigham Young University.

After graduating from Brigham Young at age twenty-four, Campbell returned to southern Idaho as superintendent of schools in the rural town of Moore and then took a similar post in larger Preston. After four years there, during which he spent his summers earning a master's degree at Brigham Young University, his native curiosity and ambitious instincts prompted him to seek a doctorate and pursue a scholarly career. Campbell was accepted into the doctoral program at Stanford University's School of Education. Over the next six years, he continued to serve as superintendent of schools in Preston while pursuing his studies each summer.

He took a leave of absence from his job during the 1939 to 1940 academic year and began his dissertation study, an inquiry into the relationship between school board members' socioeconomic status and their voting records on educational issues. Stanford awarded Campbell his doctorate in the autumn of 1942. At the same time, he left the Preston school superintendency, and launched his long and successful professorial career.

He accepted a three-faceted appointment at the University of Utah as assistant professor and chair of the Department of Elementary Education, and di-

rector of the Wm. M. Stewart School—a laboratory school associated with the teacher education program at the university. Over the next decade, Campbell advanced through the ranks of associate professor and professor, while continuing to dispatch his dual administrative duties. He became a specialist in the emerging scholarly field of educational administration and found his research increasingly gratifying. Wishing to work single-mindedly as a scholar, and to spread his wings beyond the Great Basin, he moved to The Ohio State University as professor of educational administration in 1952. Over the next five years his research and writing about educational leadership was recognized nationally and internationally.

Campbell moved to the University of Chicago in 1957, where he served variously over a thirteen-year period as William C. Reavis Professor of Educational Administration, director of the Midwest Administration Center, chair of the Department of Education, and dean of the Graduate School of Education. These years were clearly the apogee of his career. Under his leadership, the University of Chicago achieved international renown as one of several premier institutions for scholarship in education and school administration. During his Chicago years, Campbell became a charter member of the National Academy of Education and of the board of directors of the University Council for Educational Administration. He served as founding editor of the *Educational Administration Quarterly*, president of the American Educational Research Association (1969–1970), and received many honors and awards. He wrote or coauthored more than a dozen books, many of which were landmarks in his field.

Living in an era that seemed to reduce everything to its parts and every scholar to a specialist, Roald Campbell stood as an exception. His was a lifelong quest to understand, bring together, and refine knowledge that could improve education. He read widely in many fields, studied other cultures, questioned every proposition about education and leadership, and ultimately struck every idea against the touchstone of reality: Could it work to further improve what we know and how we act as educators? His passion to form and integrate ideas was matched by his desire to influence events and institutions. Teacher and mentor to dozens of distinguished scholars and educational leaders throughout North America and the world, Campbell was a professor's professor—admired as much for his humane instincts and reasoned personal qualities as for his enduring professional achievements. To paraphrase Matthew Arnold, he lived life steadily and he lived it whole.

Beginning a remarkable retracing of his life's journey, Campbell returned to Ohio State in 1970 as the first Novice G. Fawcett Professor of Educational Administration. There he launched a massive national study of state policymaking for public education. He also opened a new domain of scholarship for himself and his field—the history of thought and practice in educational leadership. This theme shaped his intellectual activity during the 1970s. He started by assaying the existing state of scholarship and graduate education in educational administration, coauthoring a comprehensive study of professors in his field. From this base, with a group of younger colleagues, he began to explore the historical roots and philosophical underpinnings of educational administration.

In 1974 Campbell retired from the Fawcett Professorship and moved with his wife back to Salt Lake City to be closer to their children and grandchildren. But retirement was not in the cards. The University of Utah named him a distinguished adjunct professor, the first appointment of its kind. Over the next fourteen years he taught a variety of courses in the Department of Educational Leadership, and continued to research and publish at a prolific rate. He devoted enormous time and energy in fostering the growth of younger colleagues. In 1988, while visiting his sister in Aberdeen, Idaho, Campbell died suddenly of heart failure. He was 82. His customary autumn graduate seminar was scheduled to convene a few days later, and he left the course syllabus as well

as a complete book manuscript stacked neatly on his University of Utah desk. Roald Fay Campbell was arguably the twentieth century's most influential and respected figure in the scholarly field of educational leadership.

*See also:* DEWEY, JOHN; IMMIGRANT EDUCATION, *subentries on* INTERNATIONAL, UNITED STATES; MIGRANTS, EDUCATION OF.

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L. JACKSON NEWELL

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## CANADA

As in all immigrant societies, the spread of formal education in Canada followed a predictable pattern as religious orders and missions attempted to “civilize” both the aboriginal and the settler communities. All levels of formal education from the seventeenth century onward had their roots in Catholicism, Anglicanism, and after 1763, when the British assumed control, a whole range of protestant denominations. Dramatic change occurred in 1867 with the enactment of the Constitution Act (formerly the British North American Act) when the principle of secular and separate systems of education funded by the state was accepted throughout Canada with a few significant exceptions. Section 98 of the act allocated exclusive jurisdiction for education to the provinces. This division of constitutional powers has remained in place and has been the basis for a degree of tension between the federal government and the ten provincial governments. The federal government is responsible for education in the three northern territories. With regard to public educa-

tion, Canadians subscribe to three common social and educational values: equality of access, equality of opportunity, and cultural pluralism.

### **Influences on the Educational Systems**

According to Rodney Clifton, Canada is the “only country without a national office of education: all other nations, including all other federated nations, have national offices of education that coordinate and/or administer various aspects of their educational system” (p. 7). While there are many similarities among Canada’s systems of education, they have each developed in unique ways. These systems are profoundly influenced by the distribution of the population of 31 million across the vast country, which covers four and one-half time zones. More than 80 percent of Canadians live in urban centers within 100 miles of the border with the United States.

Canadian society has developed as a mosaic of peoples, beginning with aboriginal populations and then followed by French, British, and other European settlement. Canada has two official languages: English is the mother tongue of 61 percent of the population, and French is the mother tongue of 26 percent. Most French speakers live in Quebec, where they make up 82 percent of the population, but there are also many French speakers in New Brunswick, Ontario, and Manitoba. Education is available in both official languages, but to a greater or lesser degree, depending on the region. In the last two decades of the twentieth century, immigrants from all parts of the world were attracted to Canada, with the largest proportion coming from Asia.

The patterns of immigration have had an enormous impact on the structure and organization of educational systems. Although the systems of the western provinces of Manitoba, Saskatchewan, Alberta, and British Columbia followed the patterns laid down in Ontario, more emphasis was placed on meeting the needs of all people, not just Anglicans and Catholics. While “separate” (Catholic) publicly funded schools were resisted in Manitoba, by World War II only British Columbia, out of the ten provinces, maintained a secular system of education. This stance was modified in 1977, when the province began providing subsidy to private and independent schools. In 1998 Newfoundland abandoned denominational education and became the only province with a secular system.

The French tradition and language have dominated educational systems in Quebec and parts of New Brunswick and Manitoba. Since the “Quiet Revolution” in Quebec in the 1960s and the adoption of a bilingual and multicultural policy at the federal level in the 1970s, French culture has become part of all Canadian educational systems. The challenge has been to privilege the “founding” cultures while at the same time recognizing aboriginal peoples and the vast range of other cultures that form Canadian society. The complexities that come with geography, immigration, and settlement gave rise to socialization processes that placed great emphasis on the role of education in molding Canadian citizens.

### **Twentieth-Century Developments**

The “Great Transformation” in Canadian society, as it was dubbed by Karl Polanyi in 1944, is very much a twentieth-century phenomena. Mass public education that was free and compulsory through high school had become the norm by the 1950s. Public education is provided free to all Canadian citizens and permanent residents until the end of secondary school, normally at eighteen. The ages for compulsory schooling vary from one jurisdiction to another, but generally it is required from age six or seven to age sixteen. As the federal government assumed more responsibility for funding university education from the mid-1950s and recognized the importance of human capital, so the systems of higher education expanded. Expansion of the university system and the development of parallel college systems changed the nature of higher education in Canada. By 1976 every province was operating a binary system of universities and colleges, and furthermore the number of universities offering graduate programs had risen to forty-seven from the 1960 level of twenty-eight.

As in other countries of the Organisation for Economic Co-operation and Development (OECD), the baby boom generation flooded into the higher education system in the 1960s and the early 1970s. Enrollment continued to expand into the 1990s, but over the next decade it reached a plateau and then began to decline. Between 1991–1992 and 1999–2000, university full-time enrollment decreased from approximately 580,000 to 540,000, while part-time enrollment fell from 280,000 to 240,000. Between 1992–1993 and 1999–2000, full-time community college enrollment increased from approximately 360,000 to 400,000. Part-time community college enrollment declined from approximately

180,000 to 90,000. Furthermore, the gender balance has been reversed so that women are in the majority at the undergraduate level in both community colleges and universities and at parity with men at the graduate level.

The federal government had, through the incremental development of a science and technology policy, created an elaborate structure for funding and supporting research. In addition to the three national funding councils, which were established in the late 1970s and cover all the disciplines and fields represented in the academy, the government created other programs, such as the Networks of Centres of Excellence, the Canada Foundation for Innovation, and the Canada Research Chairs.

Education in Canada has traditionally been a public enterprise. Private or independent schools educate approximately 5 percent of the school-age population. Although these schools do generally follow the curriculum and diploma requirements of their jurisdiction, they function independently of the public system and charge fees. Five provinces—Alberta, British Columbia, Manitoba, Quebec, and Saskatchewan—provide some form of financial assistance to these schools. Prior to the 1990s, higher education was almost totally a public enterprise. During that decade the number of private institutions offering vocational and degree programs increased dramatically. Four provinces—Alberta, British Columbia, Ontario, and New Brunswick—have passed legislation to allow for the establishment of private universities.

### **The Place of Education in the Society**

As an institutional form, education occupies a unique place in Canadian society. By the late 1960s, education had become a central legitimating institution in the modern Canadian state. Between 1960 and 1995–1996, the cost of public education increased from \$1.7 billion to almost \$60 billion. One in fourteen employed Canadians work in education, and 25 percent of the total population is involved with education. Public education is a major industry involving approximately 16,000 elementary and secondary schools, 200 postsecondary colleges, 75 universities and university colleges, 300,000 teachers, and 60,000 instructors and professors.

Relative to other developed countries, Canada invests a substantial amount on education. At all levels of education, Canadian expenditure per student

is second highest (after the United States) among the G-7 countries (the other G-7 members being France, Italy, Germany, Japan, and the United Kingdom) and is substantially above the OECD average. Canada's educational expenditure of 7 percent of gross domestic product is the highest level among the G-7 countries and is one of the highest in the OECD. Eighty percent of Canada's adult population has completed upper-secondary (referred to as high school in North America) or postsecondary education. This is much higher than the OECD average of 64 percent. Fifty-two percent of the adult population has completed postsecondary education. This rate is the highest in the OECD and double the OECD average. Yet it should be noted that this ranking is due to the very high proportion of the population that is enrolled in nonuniversity postsecondary education.

By the mid-1990s, Canadian governments had created a mass postsecondary system. With a participation rate of more than 40 percent for eighteen- to twenty-one-year-olds, Canada ranked first among OECD nations. The system can be characterized as soft federalism. While the federal government has since the 1950s shouldered a significant portion of the bill for universities, constitutionally the responsibility has remained with the provinces. The level of institutional autonomy enjoyed by universities is probably more pronounced in Canada than in any other OECD country. The public monopoly over the binary structure (colleges and universities) accounts for the limited competition and the perceived equivalence among credentials across the country. This state public system is relatively homogeneous and, as a vestige of its roots in the United Kingdom and France, is still committed to the ethos of liberal education rather than vocationalism.

### **Issues and Problems**

The key issues and problems facing the Canadian education systems are as follows: deprofessionalization; the dominance of a political-economic imperative in the formulation of state educational policy (accountability, privatization, market, choice, and decentralization); multiculturalism and diversity; restructuring and retrenchment; and the demographic changes facing all industrialized nations.

As governments have limited the size of the "public space" in Canadian society, so necessarily the ideals of professionalism have come under attack. On the one hand, the creation of professional

“colleges of teachers” in British Columbia (in 1986) and in Ontario (in 1996), as well as the current attempts for such undertakings in Quebec, are indicators of the professionalizing trend. Other such initiatives, also present in other provinces (namely, Alberta, New Brunswick, and Nova Scotia), aim at raising the standards in teacher training and at better controlling its quality through the definition of standards for training and practice. Yet the discourse of professionalism has in some respects been co-opted by the state and transformed into government by norms. The substitution of credentials for professional practice, while intended to support professionalization, serves instead to undermine it. Credentialism becomes the overriding trend and the substitute for the promotion of professionalism.

In the 1990s, accountability replaced autonomy in discussions of roles within the state. Accountability has also come to mean recognition of the dominance of market ideology. Governments press educational institutions and systems to be more responsive to the economy and to create alliances with the private sector. The accountability models are embedded within the broader, ideological mechanisms—variously characterized as public-sector reform, new public management, and the “evaluative state”—that have accompanied the political-economic transition from welfare state to the global economy.

The severe limitations on public expenditures are linked to the general suspicion of public institutions and a belief in the greater efficiency of free-market forces. The key policy terms that are the symbols of both market and accountability are “choice” and “privatization.” The battle against federal and provincial deficits and the adoption of neoliberal assumptions concerning the role of the state has led governments to inflict considerable budget cuts on educational systems while looking to maximize their services. Yet while the position of the provinces got worse, by 2000 the federal government had moved into surplus. Efforts to decentralize responsibility and increase the autonomy of school boards and school staffs has translated into a more significant role for parents, the development of an “in-service training” culture, and the elaboration of school programs that promote the acquisition of competencies required in the new knowledge society. A parent council structure was created in British Columbia in 2002 and was already in place in six other provinces, including Ontario and Quebec.

For a majority of teachers in urban settings, the combination of immigration policy, the long-standing commitment to diversity and multiculturalism and the new emphasis on “inclusion” has created schools very different from the ones that existed in the 1980s. Schools can contain students who speak as many as eighty different languages, a high proportion of ESL (English as a second language) students, and many students with special needs. The increasing cultural and linguistic diversity has become most evident in the three major urban centers, Montreal, Toronto, and Vancouver. On the other hand, diversity and equality have been safeguarded and extended through the teaching of heritage languages, curriculum design, and the development of programs to combat racism. The development of French-language school boards across the country is a good indicator of this trend.

A major retrenchment and restructuring has occurred throughout Canada as provincial ministries have drastically reduced the number of school boards through amalgamation. These changes have been accompanied by a tightening of control over expenditures at the local level.

Skills and knowledge have become central elements in economic policy as human resource policy has become the modern equivalent of human capital theory in the 1960s. In postsecondary education there has been a growing emphasis on technical and professional programs. Universities are developing closer links with business and industry. Since the late 1980s, the shift has been toward more private and less public expenditure on postsecondary education. Part of this shift is related to the increase in tuition fees, which have more than doubled, but this trend also includes the rise in nongovernmental sources of funding for research.

The most pressing need in Canadian education systems and the society at large is the expected shortfall in the supply of professional personnel. By 2010, Canada will need to replace 50 percent of its teachers, instructors, and professors.

*See also:* IMMIGRANT EDUCATION; INTERNATIONAL EDUCATION; LANGUAGE AND CULTURE; MULTICULTURAL EDUCATION.

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DONALD FISHER

## **CAPSTONE COURSES IN HIGHER EDUCATION**

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In higher education, capstone courses, also known as senior seminars, offer undergraduate students nearing graduation the opportunity to summarize, evaluate, and integrate some or all of their college experience. The First National Survey of Senior Seminars and Capstone Courses conducted in 1999 suggested that these courses place the highest priority on culminating learning in the academic major. Enrollments in sections of senior seminars and capstone courses are most often kept at fewer than thirty students. These courses are generally treated as academic major or core requirements, most are at least one academic term in length, and most require a major project or presentation.

The earliest capstones can be traced to the end of the eighteenth century when college presidents taught courses generally integrating philosophy and religion. One of the most famous was a class at Williams College in Massachusetts taught by President Mark Hopkins that inspired, among others, future U.S. President James A. Garfield. Since its inception, the senior seminar has appeared and disappeared in colleges and universities throughout the United States.

The goals and methods of senior seminars and capstone courses in American higher education have been studied at least four times. The first was a study conducted in the early 1970s and sponsored by the Carnegie Council on Policy Studies in Higher Education. For this research, 270 catalogs from colleges and universities in the United States for the year 1975 were examined for course type and structure. The study found that only 3 percent of participating institutions sponsored senior seminars. Arthur Levine, the study's author, later concluded that these courses are offered, at any given time and in various forms, at one in every twenty institutions nationwide.

In a second effort, Joseph Cuseo evaluated proceedings from four national Conferences on the Se-

nior Year Experience and two national Conferences on Students in Transition that convened in the 1990s. His work, centering on characterizing the types, goals, and forms of the senior year experience, including capstone courses, suggested the following goals for the senior year:

1. promotion of the coherence and relevance of general education;
2. promotion of integration and connections between general education and the academic major;
3. fostering of integration and synthesis within the academic major;
4. promotion of meaningful connections between the academic major and work and career experiences;
5. explicit and intentional development of important student skills, competencies, and perspectives that are tacitly or incidentally developed in the college curriculum;
6. enhanced awareness of and support for the key personal adjustments encountered by seniors during their transition from college to postcollege life;
7. improvement of seniors' career preparation and pre-professional development, that is, facilitation of the transition from the academic to the professional world;
8. enhancement of seniors' preparation and prospects for postgraduate education;
9. promotion of effective life planning and decision making with respect to practical issues likely to be encountered in adult life after college (for example, financial planning, marriage, family planning).

In August 2000 Jean Henscheid reviewed modern senior seminars and capstone courses in publication abstracts and presentations available on the Educational Resources Information Center (ERIC) database. The review suggested that these courses are most often associated with a specific academic discipline and coordinated through an academic department or unit. Also in 2000, the National Resource Center for the First-Year Experience and Students in Transition at the University of South Carolina reported results from a nationwide survey of colleges and universities. This survey, in addition to the findings reported above, revealed that coursework and other experiences students have before they enter the

academic major are generally not topics covered, at least in the 864 senior capstones or seminars described by these respondents.

### Types of Courses

In the early twenty-first century senior seminars and capstone courses in higher education generally fall into one of five types. Varying goals, instructional strategies, and topics separate these course types.

**Discipline- and department-based courses.** The overriding goal of discipline- and department-based courses is to summarize learning within the academic major. These types of classes are also likely to make connections between the academic learning and the professional world. Some institutions use these courses as a means to encourage seniors to pursue postgraduate study. This subset of courses makes up the majority of the capstone courses offered. These courses are typically offered through the academic department and may be required for graduation. Faculty members within the academic discipline typically teach these courses at the conclusion of the students' academic careers. The classes are taught either by a single faculty member or team-taught by faculty members or staff; three hours of semester credit are normally offered for a letter grade. As this type of class is normally offered as the final "piece" of a student's academic major, credit for these classes is typically a requirement of the major. Topics for discipline and department-based courses vary by the academic major; but include issues that are relevant to the professions related to that major. These courses often use a major project and or presentation as a means for communicating and summarizing the student's academic learning.

**Interdisciplinary courses.** Interdisciplinary courses, representing a smaller percentage of senior seminars and capstones, offer students an opportunity to synthesize general education, major classes, and cocurricular learning. These courses are more likely to be found at private institutions, taught by a single faculty member. Letter grades are prevalent, and students receive three to four semester hours of credit for completing these courses. Credit for interdisciplinary senior seminars and capstone courses is applied most often as a major requirement, core requirement, or a general education requirement. Presentations and major projects are most often employed as instructional components in these courses. Topics are broad, often involving philosophical issues such as ethics. These courses tend to stress the inter-

relatedness of different academic majors and their role within society.

**Transition courses.** Transition courses, the third most prevalent type of senior seminars and capstones, focus on preparation for work, graduate school, and life after college. Faculty or career-center professionals most often teach these courses, which typically award a letter grade, although they are less likely to do so than discipline- and department-based courses and interdisciplinary courses. These classes generally earn the participating students one semester of credit.

Topics for transition courses mainly consist of students' transition issues, and students enrolled in them are likely to engage in job search and life transition planning. Discussions center around self-assessment, financial planning, the job search and the first year on the job, relationships, and diversity. Presentations weigh heavily in evaluation of performance in these courses, but rather than major projects, students often develop a portfolio or use the career center.

**Career-planning courses.** Career-planning courses assist students as they engage in pre-professional development. In some cases career planning is the only goal of these courses. In the 1999 First National Survey of Senior Seminars and Capstone Courses, these courses were the least frequently reported major type. Career planning courses are likely to be taught by career-center professionals, but in some cases academic faculty might teach them. Although students typically receive grades for these courses, they are less likely to receive as many credit hours as students enrolled in other types of senior seminars or capstone courses. The classroom experience in these courses is evaluated most often by the creation of a portfolio, followed by a major project and a presentation. Classroom topics for career-planning courses include current trends in the field, procedures for licensure and job seeking, students' roles in the workplace, and development of a résumé, cover letter, and portfolio.

**Other.** There are also a small number of senior seminars and capstone courses that do not fit in these four types. These courses often span curricular and cocurricular boundaries and attempt to address institutional goals. These courses do share many of the characteristics of other courses. The primary goals (fostering integration and synthesis within the academic major and promoting integration and con-

nections between the academic major and world of work) are similar to those of most types of the other senior courses. These courses do not generally focus on general education, and are almost always taught by a member of the academic faculty. They tend to be the smallest of the senior courses, often enrolling fewer than nine students. They are most often held for one academic term and students are usually assigned a letter grade.

### The Future

As is true with many trends in higher education, senior seminars and capstone courses will likely continue to appear and disappear in various forms. Instructional technologies and the changing delivery of student services will affect the content and character of these courses in the future. This, along with changing student demographics and needs of the institutions offering them, will determine the future goals and structure of these courses.

*See also:* COLLEGE SEMINARS FOR FIRST-YEAR STUDENTS; CURRICULUM, HIGHER EDUCATION, *subentries on* NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM, TRADITIONAL AND CONTEMPORARY PERSPECTIVES.

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## CAREER COUNSELING IN HIGHER EDUCATION

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The career services office supports the educational mission of a college or university by helping students to develop, evaluate, and pursue career goals. In the process, students acquire the knowledge and skills necessary to make lifelong career decisions. Career services offices accomplish these goals through career counseling and a range of programs and services designed to help students make the connection between the academic program and the workplace.

### Career Counseling

Ideally, the career services office assists students throughout their stay at the institution, providing appropriate assistance at each stage of the student's career development. This process often begins with career counseling designed to help students develop the self-knowledge and awareness of options needed to select an academic major or a tentative career direction. Students are guided in thinking about their interests, values, competencies, and personal characteristics. Through conversation and exercises, students often discover previously unidentified interests.

Career counseling is frequently offered on a one-on-one basis, but at times this service is provided through group workshops, classes, or computerized guidance systems. When a student is asked to begin the exploration on a computer, an individual follow-up session with a counselor is generally encouraged. Career counseling often includes the use of standardized assessment instruments such as the Strong Interest Inventory, the Self-Directed Search, or other instruments designed to clarify career interests, values, personality, or self-identified skills.

As part of the career counseling process, students may be asked to research careers through either reading or interviews with professionals. Thus, a career resource library is an essential component of the career services office. These libraries generally include books on a wide range of career options as

well as job search manuals and information on employers. Some information formerly provided in book form, such as directories of employers, is increasingly being delivered through the Internet.

### **New Trends**

In the last decades of the twentieth century, the career services field began to place an increasing emphasis on experiential learning, the mixed bag of ways that students can connect classroom learning with experience in the world around them. The forms of experiential learning that most commonly fall under the career services umbrella are internships and cooperative education. Cooperative education is a full-time, paid work experience that generally occurs during a regular semester. Students receive credit for the work and do not take classes during that time. Internships are usually served part-time, concurrent with classes or during the summer or other school breaks, and may or may not be paid. In some institutions, internships and cooperative education are part of the academic program and may be handled by faculty departments. However, career services offices are becoming increasingly involved at a variety of levels. Some simply provide resources such as internship directories or online databases of available experiences; others develop internships, place students at the sites, and monitor their progress.

Another trend in career services is for colleges to engage alumni as career resources for students, thereby teaching students the skill of networking. Many colleges make alumni career resource databases available to interested students. These databases include employment and contact information on alumni who have volunteered to serve as mentors or otherwise assist students with career-related questions. Some colleges also coordinate events designed to connect students with alumni. These can include panels of alumni who speak at student events, dinners at which students are seated with alumni in relevant fields, or field trips through which students spend time shadowing relevant alumni.

### **The Job Search**

A traditional function that remains an essential part of the career services role is helping students to develop job search skills. Career services counselors critique students' résumés and letters, provide booklets on résumé and employment letter writing, and teach résumé writing, job interviewing skills, and job

search strategies in group sessions. In practice job interviews, students are videotaped so they can see themselves in action. Some career services offices involve alumni or employers in critiquing résumés, conducting practice interviews, or leading workshops. Many also offer sessions on related topics such as networking, professional dress, or the transition to the work place. Etiquette dinners, designed to train students in the etiquette needed for job interviews and professional dinners, have become popular events on many campuses.

Nearly all career services offices also help students connect with potential employers for post-graduate positions. This is handled through a variety of methods. In on-campus interview programs, employers are invited to spend a day or more on campus, interviewing student candidates. Students who make a positive impression are later invited to the employment site for more extensive interviews. Some campuses give students access to a large number of employers in one day by coordinating career fairs, at which employers are stationed at tables to screen candidates and give information about their job openings. A trend that became popular in the 1990s and continues to be widely used is the consortium job fair, in which a number of colleges collaborate to coordinate a large event for the students at all participating schools.

Additional strategies designed to connect students with employers are résumé mailing services, in which career services offices send batches of applicable résumés to requesting employers, and candidate matching databases, which do the same thing electronically. Some colleges disseminate booklets of student résumés or offer credential services, in which student's résumés, letters of recommendation, and other application documents are mailed to employers at the student's request. For students who choose to go to graduate school rather than enter the workforce, career services offices often offer services such as graduate school fairs and databases to assist students in identifying programs that meet their criteria.

### **The Impact of Technology**

The career services field has been strongly affected by the rise of the Internet in the 1990s. By the beginning of the twenty-first century, most career services offices had websites through which they offered career information and links to outside sites applicable to their student populations. Many also provided

students with the option of scheduling appointments or campus interviews via the World Wide Web. Web-based databases, including employer databases, candidate résumé databases, internship databases, and job listing databases, are becoming increasingly common. In many cases, career services offices are forming partnerships with outside vendors to offer these services.

Many of the services named above are made available to alumni as well as current students, sometimes for a fee and sometimes at no charge. Some offices also offer fee-based services to community members.

*See also:* ACADEMIC ADVISING IN HIGHER EDUCATION; ADJUSTMENT TO COLLEGE; COLLEGE STUDENT RETENTION; INTERNSHIPS IN HIGHER EDUCATION; STUDENT SERVICES, *subentries on* COLLEGES AND UNIVERSITIES, COMMUNITY COLLEGES.

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## CARIBBEAN

*See:* LATIN AMERICA AND THE CARIBBEAN.

## CARNEGIE CLASSIFICATION SYSTEM, THE

The Carnegie Classification (of Institutions of Higher Education) is a taxonomy of U.S. colleges and universities. The categories are based on information about the institutions, such as types of degrees conferred, academic disciplines offered, and specialization. The classification system shows the diversity of American colleges and universities. The purpose of the Carnegie Classification system is to assist in higher education research efforts; it is not intended to rank the quality of the institutions.

### History and Updates

The Carnegie Classification system was developed in 1970 by the Carnegie Foundation for the Advancement of Teaching, an independent, nonprofit center for educational research and policy studies. The Classifications were first published in the Carnegie Commission on Higher Education's report, *New Students and New Places* (1971). Revisions to the classifications were published in 1976, 1987, 1994, and 2000. Reclassifications reflect changes in the U.S. institutions, such as new colleges, closings, and the developments in existing institutions. Data from the National Center for Educational Statistics (NCES) are used to update revised editions of the Carnegie Classification. An extensive revision planned for 2005 will offer a multiple-classification system that will allow for more types of comparisons among the variety of institutions.

### Classification Categories in 2000

The Carnegie Classification system includes all U.S. colleges and universities that grant degrees and are accredited by the U.S. Secretary of Education. Based on the 2000 edition of the Carnegie Classification, there are ten categories of institutions. Each category is briefly described below, and examples of public, private not-for-profit, and private for-profit institutions in each category are shown in Table 1.

- Doctoral/Research Universities—Extensive: These institutions typically offer a wide variety of baccalaureate degrees and award fifty or more doctoral degrees per year across at least fifteen

TABLE 1

<b>Carnegie Classification of institutions of higher education</b>				
<b>Carnegie Classification</b>	<b>Total number/ percentage</b>	<b>Public institution example/number</b>	<b>Private not-for-profit example/number</b>	<b>Private for-profit example/number</b>
Doctoral/Research Universities—Extensive	151; 3.8%	University of California, Berkeley; 102	Vanderbilt University; 49	None
Doctoral/Research Universities—Intensive	110; 2.8%	College of William and Mary; 64	Baylor University; 44	University of Sarasota; 2
Master's Colleges and Universities I	496; 12.6%	Lincoln University; 249	Fairfield University; 246	Colorado Technical University; 1
Master's Colleges and Universities II	115; 2.9%	Mississippi University for Women; 23	Le Moyne College; 85	Huron University; 7
Baccalaureate Colleges—Liberal Arts	228; 5.8%	Coastal Carolina University; 26	Allegheny College; 202	None
Baccalaureate Colleges—General	321; 8.1%	Western Montana College; 50	Tri-State University; 226	DeVry Institute of Technology; 5
Baccalaureate/Associate's Colleges	57; 1.4%	Utah Valley State College; 15	Peace College; 31	Sullivan College; 11
Associate's Colleges	1,669; 42.3%	Sante Fe Community College; 1,025	Maryland College of Art and Design; 159	ITT Technical Institute; 485
Specialized Institutions	766; 19.4%	United States Naval Academy; 67	Hebrew Union Seminary; 593	University of Phoenix; 106
Tribal Colleges and Universities	28; 0.7%	Institute of American Indian and Alaska Native Culture and Arts Development; 22	Blackfeet Community College; 6	None
<b>Total</b>	<b>3,941; 100%</b>	<b>1,643; 41.7%</b>	<b>1,681; 42.6%</b>	<b>617; 15.7%</b>

SOURCE: Carnegie Foundation for the Advancement of Teaching website.

academic disciplines. Doctoral degrees include the Ph.D., Doctor of Education, Doctor of Juridical Science, and Doctor of Public Health, among others.

- **Doctoral/Research Universities—Intensive:** These institutions typically offer a wide variety of baccalaureate degrees and award at least ten doctoral degrees per year across at least three academic disciplines or at least twenty doctoral degrees per year overall.
- **Master's Colleges and Universities I:** These institutions typically offer a wide variety of baccalaureate degrees and award forty or more master's degrees per year across three or more academic disciplines.
- **Master's Colleges and Universities II:** These institutions typically offer a wide variety of baccalaureate degrees and award twenty or more master's degrees per year.
- **Baccalaureate Colleges—Liberal Arts:** These institutions award at least half of their baccalaureate degrees in liberal arts fields. Examples of liberal arts fields include English, foreign languages, biological sciences, mathematics, philosophy and religion, physical sciences, social sciences, and humanities.
- **Baccalaureate Colleges—General:** These institutions award less than half of their baccalaureate degrees in liberal arts fields.
- **Baccalaureate/Associate's Colleges:** In these institutions, the number of bachelor's degrees awarded represent at least ten percent but less than half of all undergraduate awards.
- **Associate's Colleges:** This is the largest category in the Carnegie Classification. In these institutions, the number of bachelor's degrees awarded represent less than ten percent of all undergraduate awards.

- **Specialized Institutions:** These institutions typically award degrees in a particular field. Examples include medical and law schools; religious institutions, such as seminaries and rabbinical schools; schools of business, engineering, art, and design; and military institutes.
- **Tribal Colleges and Universities:** These institutions are members of the American Indian Higher Education Consortium and are typically tribally controlled and located on reservations.

### 1994 Classifications

The 1994 edition of the Carnegie Classification comprised the following eleven categories, outlined below for comparison with the revisions that were made in 2000:

- **Research Universities I** typically offered a full range of baccalaureate programs, awarded fifty or more doctoral degrees, and received annually \$40 million or more in federal support.
- **Research Universities II** also typically offered a full range of baccalaureate programs and awarded fifty or more doctorates, but they received between \$15 million and \$40 million per year in federal support.
- **Doctoral Universities I** offered a full range of baccalaureate programs and awarded at least forty doctoral degrees annually in five or more disciplines.
- **Doctoral Universities II** offered a full range of baccalaureate programs and awarded at least ten doctoral degrees in three or more disciplines or twenty or more doctorates per year total.
- **Master's (Comprehensive) Colleges and Universities I** offered a full range of baccalaureate programs and awarded forty or more master's degrees annually in three or more disciplines.
- **Master's (Comprehensive) Colleges and Universities II** also typically offered a full range of baccalaureate programs, but they awarded twenty or more master's degrees per year in one or more disciplines.
- **Baccalaureate (Liberal Arts) Colleges I** were primarily undergraduate colleges with a major emphasis on baccalaureate programs. They awarded forty percent or more of their degrees in liberal arts fields, and their admissions policies were selective.
- **Baccalaureate (Liberal Arts) Colleges II** were also primarily undergraduate colleges with a major emphasis on baccalaureate programs. They awarded less than forty percent of their degrees in liberal arts fields, and their admissions policies were less selective.
- **Associate of Arts Colleges** offered associate of arts certificate or degree programs.
- **Specialized Institutions** offered at least fifty percent of degrees in a particular field. Examples include medical and law schools; faith-related institutions, such as seminaries and rabbinical schools; schools of business, engineering, art, and design; and military institutes.
- **Tribal Colleges and Universities** were members of the American Indian Higher Education Consortium and were typically tribally controlled and located on reservations.

### The Carnegie Foundation for the Advancement of Teaching

The Carnegie Foundation, the third oldest foundation in the United States, was founded by Andrew Carnegie in 1905 and chartered by an act of Congress the following year. Governed by an independent, national board of trustees, the Carnegie Foundation uses its endowment to support educational research and publications. In addition to establishing the Carnegie Classification of Institutions of Higher Education, the foundation developed the largest pension system in the United States (TIAA-CREF), founded the Educational Testing Service, developed the Graduate Record Exam, and published numerous influential studies on the American higher education system. The Carnegie Foundation is located in Menlo Park, California.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* SYSTEM.

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## CARNEGIE UNITS

Adopted in the early 1900s to both standardize and ensure the quality of high school education, the Carnegie unit is viewed almost a century later by critics as an impediment to flexibility. Yet, for all of its limitations, the Carnegie unit remains the putative guarantor that students have invested in each of their courses an amount of time that warrants the credit that so many colleges and employers presume represents learning.

In fact, the search for the answer to the elusive question of how much learning results from each course gave birth to the Carnegie unit, and keeps the approach alive as a surrogate for knowledge gained. In another era, college admissions officers—especially at selective colleges—concerned themselves mostly with applicants from private preparatory schools, believing that they needed to become familiar with the quality of only those few schools. Even at a state institution such as the University of Michigan, it was the responsibility of the faculty to oversee academic standards at the secondary level. Admissions officials and faculty everywhere, however, could not keep track of the standards at new public high schools that proliferated across the country during the first decades of the 1900s.

Thus, the Carnegie Foundation for the Advancement of Teaching encouraged the adoption of what came to be known as the Carnegie unit, which equates seat-time with learning. Each unit represented about 130 instructional hours. The Carnegie Foundation defined a unit as a course that met for a period each school day for about 50 to 55 minutes. The Carnegie unit continues to influence much that is crucial to teaching and learning in high schools—the length of the class period, the school day and the school year, as well as the time expended to receive a diploma. The unit affects the very way that knowledge is organized for instructional purposes, discouraging interdisciplinary teaching because of the difficult question of deciding how many units to attribute to each discipline. Those who would organize and convey knowledge differently inveigh against the “tyranny” of the Carnegie unit, asserting that seat-time is not a proxy for learning and that secondary schools must be flexible to engage students and to heighten learning. The following developments add to the challenge:

- Block scheduling
- Out-of-classroom field experiences

- Distance learning and independent study
- Portfolios and other performance-based assessments

Under block scheduling, a course meets for a specified number of hours; but, this number may vary from that of traditional courses because of the way the time is arranged. Out-of-class experiences involve time configurations that only remotely relate to seat-time. Distance learning made possible by technology, in combination with independent study, tends to free students to spend as little or as much time as they require to cover the material. Performance-based assessment may be used in conjunction with the Carnegie unit, or it may argue for an appraisal of learning without regard for seat-time. Aspects of school reform underscore the idea that secondary students might benefit from less reliance on Carnegie units. The Coalition of Essential Schools, for instance, advocated a more limited but more intense curriculum under the motto of “Less Is More.” Furthermore, the move to integrate subject matter, especially at small alternative high schools, made it less clear how to satisfy the unit requirement. But no widely accepted alternative guarantor of quality emerged by the beginning of the twenty-first century.

In fact, demands for accountability helped preserve the Carnegie unit. Taxpayers wanted assurances that the \$350 billion a year they bestowed on public schools was not squandered. Colleges sought methods to compare applicants and to gauge the extent of their preparation. David Tyack and Larry Cuban cited the “interlocking reasons” (p. 107) that defenders of the status quo gave for regarding the Carnegie unit as part of a system that could not withstand tampering. This system—the time devoted to each class and each course, the departmental organization, the lecture method of teaching—was likened by its guardians to the building blocks that support an entire structure. Remove one, they said, and the stability of the others, and of the high school itself, was imperiled. Colleges and universities, prodded by the Carnegie Foundation, forced the unit requirement on secondary schools. It may be that altering or altogether eliminating the Carnegie unit will ultimately depend on whether educators can agree on a more meaningful symbol for knowledge gained in secondary education.

*See also:* CURRICULUM, SCHOOL; NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS; SECOND-

ARY EDUCATION, *subentry on HISTORY OF; SCHOOL REFORM.*

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GENE I. MAEROFF

## CATEGORIZATION AND CONCEPT LEARNING

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Education in every form entails the acquisition and modification of conventional categories and labels, as well as processes for inferring category membership. Consider these statements: "Fractions are numbers between two integers"; "Plants get energy through photosynthesis"; and "A noun is a person, place, or thing." The first claims a formal relation between well-defined number concepts. The second explains a biological concept by analogy. The third specifies (erroneously) a linguistic category. Teachers frequently make statements like these to elementary and secondary students. How, in fact, are the named concepts learned? How do concepts change with age, experience, and particularly education?

### Form and Format of Conceptual Knowledge

A common misconception is that concepts are well defined, like dictionary entries. Though hundreds of concepts, particularly scientific ones, are well defined within a community of experts, most are "fuzzy" and metaphorical. Even patently well-defined categories like "odd number" are treated as if some examples are better than others.

Adults' concepts fall into a wide variety of abstract representations, such as taxonomic hierarchies, kinship systems, and legal definitions. Some representations mirror the structure of the physical environment, whereas others are rather arbitrary products of their cultural and linguistic environ-

ments. Most are a synthesis (e.g., biological categories reflect real patterns among organisms, yet are shaped by culturally specified theories). Children's concepts also reveal abstract representations, but these are generally less elaborate and less well-defined than those of adults.

Conceptual knowledge, as symbolic as it seems, is encoded as patterns of electrochemical activation within powerful neural networks in the neocortex. These concept patterns are derived from repeated experience. Experience trains massively interconnected systems of neural units (analogous to groups of neurons) by changing connection strengths. Over time, associated input patterns (e.g., sights and sounds of a cat) will activate a characteristic response pattern. This response is a concept (cat). Critical features of these concept patterns are graded activation (i.e., some inputs activate the response more strongly than others) and learning algorithms that specify how connection strengths change with experience. This pre-symbolic view of conceptual representation, though unintuitive, is dominant among cognitive scientists, and work in the mid-1980s through 1990s has answered some early criticisms. Still, questions remain about how conceptual thinking emerges from neural networks. For example, it is not clear how current theoretical models can capture intricacies of conceptual knowledge (e.g., nonliteral usage of concepts, as in the ironic use of *award* in the "Golden Turkey Awards" for the year's worst movies).

A comprehensive proposal by Lawrence W. Barsalou in 1999 holds that concepts are inherently perceptual and experiential. So-called abstract conceptual knowledge is in fact the productive activation of remembered aspects of perceptual and internal experiences. As experiences are retained in memory, the associations among them permit new mental simulations that support a variety of functions. These functions include conceptual redescription, inference, imagination, and productive combination of concepts. These functions are traditionally ascribed to symbolic, completely abstract concepts, but Barsalou argues that they can more simply be attributed to a powerful system for manipulating stored perceptual knowledge. The power of the system rests on selective simulation: when the concept *cat* is activated, one does not recall every cat experience, but the experiences evoked by current contextual demands and recently activated information. Thus, the word *skunk* might normally activate

the property *smelly*, but after watching a documentary showing footage of skunks foraging at night, the property *nocturnal* might be activated as well.

Educators should judiciously use definitions to teach new concepts. Students will not typically use definitions to judge category membership. Exposing students to multiple examples that highlight the distinctive properties of the category of interest, or comparing contrastive categories, is more effective. A common misunderstanding of concept learning can be seen in the traditional western approach to mathematics education that emphasizes abstract or “content-free” knowledge. There is no evidence of such decontextualized knowledge, and it should be assumed that mathematical concepts are derived from organized experience with concepts of quantity (e.g., cardinality, equivalence) and operations on quantities (e.g., concatenation; transformation), in a variety of familiar materials. Although it is trivially apparent that diverse, rich experiences eventually increase knowledge of mathematical and scientific concepts, the general, powerful principles for optimizing the presentation of multiple examples in classrooms, so that students’ conceptual knowledge is effectively and efficiently enriched, have not yet been derived.

### Theories of Category Learning

How do experiences give rise to new categories? Presumably individuals are exposed to various members, and sometimes told about category membership. Parents use various strategies for teaching children new categories, category labels, and associated properties. But how does experience generate new categories?

In the 1994 model of Robert M. Nosofsky and his colleagues, people distinguish contrasting categories by gradually modifying the degree of attention allocated to various features of possible category members, until the simplest and most diagnostic decision rule (i.e., set of attention “weights” focusing on the fewest possible features) is attained. Atypical category members (e.g., ostriches, which differ from typical North American birds in many regards) are represented separately, as exceptions. Current controversy focuses on the information retained from multiple experiences, exact algorithms for describing changes in represented categories with experience, and the uniformity of category learning across domains. For example, there is evidence that people

treat atypical examples differently across the domains of natural, object, and social categories.

How do children learn categories? Little research addresses changes in category learning processes during and after childhood. Research on children’s categories often confounds their conceptual knowledge with their comprehension of category labels. A current debate concerns what categories children acquire first. Though prelinguistic infants differentiate related categories (e.g., *cats* vs. *lions*), their knowledge might not transcend surface similarity. Knowledge of the dynamic or hidden properties of categories becomes evident after the first six months, but two-year-olds still sometimes fail to differentiate related categories (e.g., calling any water fowl *duckie*) or categorize different-looking entities. In such cases parents can shape children’s naming. Children, however, select and organize social input about categories and labels. For example, parents predominantly use basic-level labels when talking to children. Basic-level categories (e.g., *car*, *bird*) capture a useful intermediate level of generality, compared to very broad (e.g., *animal*) or narrow (e.g., *parakeet*) categories. Compared to parents, however, preschool children use a much higher proportion of basic level labels, suggesting that children’s inductive dispositions (or limitations) shape their acquisition and use of category labels.

Adults can help children focus on similarities of, and variability between, category members. Both social input and selection and tailoring of available examples can facilitate category learning. An unresolved question is how analog (i.e., rich, realistic), versus digital (i.e., reduced, electronic), examples can facilitate children’s concept learning. This is a practical question, given the growing availability of computer technology for young children. A problem is that children sometimes mistake which features define a category (e.g., rejecting a barren island but accepting a tropical peninsula as examples of island). Predicting children’s misconceptions about categories is therefore crucial for teachers. Verbal instruction about critical features can be ineffective or misleading, so teachers must orchestrate creative experiences and instruction to advance children’s grasp of conventional categories.

### Conceptual Change in Children

Children, adolescents, and adults enter classrooms with naive preconceptions about the world. Shifting these preconceptions can be onerous. In 1985 Susan

Carey documented children's changing biological concepts and related inferences about biological properties. For example, a child who conceptualizes people as prototypes of animals will extend traits of humans (e.g., respiring, sleeping) to similar creatures (e.g., gorillas), but not dissimilar ones (e.g., worms). In contrast, adults often generalize biological properties in a less anthropocentric manner.

The process of conceptual change is mysterious, and frustrates educators' desires to facilitate it. Researchers have suggested many procedures to promote conceptual change, but naive concepts can be extraordinarily intractable. For example, even after formal physics instruction, older students make pervasive errors about concepts like force. One approach to teaching stipulates having students articulate their concepts, setting up a demonstration that would yield different results under the naive and the conventional belief system, having students predict an outcome, and then conducting the demonstration. Apparently articulating and confronting the discrepancy between own and others' beliefs, and seeing relevant evidence, can provide a powerful springboard for conceptual change. Note, however, that this approach is effective with older students revising well-defined concepts in a mature science. Its effectiveness for young children, whose capacity to recognize disconfirming evidence is limited, has not been established.

### The Functions of Categorization in Children's Thinking

The content of children's categories changes with age, but what of the uses of categorization and concepts? Concepts constrain perception, language, social interaction, and problem solving—every aspect of cognition. Categories permit economic thinking, inferring properties of novel instances, organizing memories, making analogies, and solving problems with flexibility. It is not known how education, informal learning, and maturation separately alter these functions. In short, there is a lack of a developmental theory of the ecology of categorization that takes into account development and schooling. Outlining this theory is a major task for developmental and educational psychology in the twenty-first century.

*See also:* LANGUAGE ACQUISITION; LEARNING, *sub-entry on* CONCEPTUAL CHANGE.

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## CATHOLIC SCHOOLS

In 1783 Philadelphia Catholics established the first Catholic parish school in the United States, and over the next two centuries, Catholic parochial schools would educate tens of millions of American citizens. By the middle of the 1960s, when the Catholic parochial school movement had reached its high point, there were more than 5.7 million children in parish elementary schools—12 percent of all of the children enrolled in schools in the United States at that time. The challenges of providing parish-based education have changed from one generation to the next, but Catholic schools have survived in spite of substantial obstacles.

### Foundations

During the sixteenth, seventeenth, and eighteenth centuries, colonial Catholics struggled merely to survive in that vast territory that would become the United States of America. In fact, the progress of the church in all of the colonies of the New World (Spanish, French, and English) was due largely to the personal sacrifices and skills of a cadre of great priests. Their willingness to give their all, including their lives, left a Catholic imprint on virtually every region of the country.

That is not to say that Catholic schools emerged because of these missionary efforts. It would take many generations for American Catholics to feel secure enough to establish their own schools. In fact, the very survival of Catholicism as a religion in America was in doubt until the late eighteenth century. Those Catholic schools that did emerge in the early decades of the American Republic were the direct result of a collaboration of interested parents, determined pastors, and compassionate sister teachers. Of special note was the persistence of Elizabeth Seton, who recruited and trained the sister teachers who were the backbone of the parish school system for nearly 125 years.

Yet the most important ingredient in the eventual spread of Catholic education in the nineteenth century was parental support. Beginning in the early 1800s, many American Catholic parents were willing to build and support parish schools. These parents believed that the future of Catholicism in the new nation was tied to educating the next generation in the ways of the faith.

Rapid social change and population growth, accompanied by misunderstanding, hostility, and resistance, were important ingredients in the process of Catholic educational development in the years before the Civil War. Civic leaders argued in favor of common schools that would transform a diverse population of children into a homogeneous, deferential, and very American citizenry. Catholics resisted these common schools because of their distinct Protestant overtone, and they built their own schools.

The tensions between public and Catholic schoolmen forced the two sides to modify the content of their curricula. After a decade of violence in the 1840s, both sides sought other ways of winning the hearts and minds of the Catholic population. Public schoolmen took measures to make their schools less sectarian. Catholic schoolmen countered with measures to make their schools more secular. Both sides were competing for the attention and loyalty of Catholic parents and their children. It was a competition that would continue well into the twentieth century.

### Educational Choices

In the later decades of the nineteenth century, Catholics shifted their attention to controlling the growth and development of Catholic education from within

the denomination. Catholic schoolmen realized that it was not enough to promulgate decrees requiring Catholics to send their children to parish schools. Catholic parents faced a variety of educational choices and their responses were determined largely by their perceptions of the values and dangers of common schooling. A significant percentage of Catholic parents—perhaps a majority—had relatively few qualms about public education. In fact, these parents saw the public school as the best means of insuring the future prosperity of their children in American society.

A second group of parents could not quite accept the idea of a curriculum totally devoid of religious instruction, but they were not willing to abandon the goals of public education. Their choice was to build formal working relationships with local school boards that provided for publicly supported secular institutions taught by Catholic teachers in parish-owned classrooms; religion was an after-school activity.

A third group of parents spurned formal relationships with public school boards, but nevertheless adapted many of the fundamental elements of the public school curriculum for use in parish classrooms. The result was the prototype for the Catholic parochial school that came to dominate the educational landscape in the twentieth century.

A fourth group of parents, most of whom were immigrants from Europe, not only spurned the public schools, but also established parish schools that emphasized native culture, language, and religion. The ethnic Catholic school was a powerful force within the Catholic Church well into the twentieth century. The movement ended abruptly, however, with the animosity toward all things foreign during World War I.

The style and substance of Catholic parochial education varied from region to region, diocese to diocese, and even from parish to parish across the United States during the last half of the nineteenth century and even into the first decade of the twentieth century. Bishops and pastors could not force Catholic parents to send their children to parish schools. State legislatures could not mandate public control over parochial institutions. Both sides learned that decisions on the education of Catholic children would be a family affair.

## A Search for Order

At the turn of the twentieth century, American Catholic education remained a chaotic patchwork of school experiments held together by a common belief in the value of daily Catholic moral instruction as part of the educational process. Out of this chaos came a search for order during the years from 1900 to 1950. This search was evident in the movement within individual dioceses to establish school boards and appoint superintendents to provide greater uniformity in Catholic schooling from one parish to the next. The search was also evident in the establishment of the Catholic Educational Association in 1903 and the National Catholic Welfare Conference in 1918, two organizations that brought order to Catholic education on the national level.

The Catholic response to teacher preparation was a case study of the pressures on parochial education in the twentieth century. If parochial education was to survive, it had to compete with public education on its own terms. To do so meant that Catholic leaders had to better prepare women religious and other teachers for the classroom. Nevertheless, women religious never received all the teacher training they needed. At its core, Catholic teacher preparation was a combination of on-the-job training and summer school instruction.

The leadership role played by women religious in parochial education should not be underestimated. In fact, it would not be difficult to make the case that sister-teachers were the single most important element in the Catholic educational establishment both in the nineteenth and the twentieth centuries. Training was only a small part of their commitment to Catholic children.

## A Generation of Crisis

The years from 1950 to 1990 were a generation of crisis in Catholic education. First, there was the crisis of growth in the 1950s when demand for parochial education (due to the increase in the school-age population during the Baby Boom) far outstripped the available space. Then came the crisis of confidence during the social upheaval of the 1960s when Catholic parents asked themselves if parochial schools were necessary. Self-doubt in the 1960s was followed by the crisis of decline in the 1970s when devoted pastors and parents asked themselves if Catholic schools would survive. Although the answer by the end of the decade was an unequivocal

yes, it was unclear who would pay the high cost of sustaining these schools. In fact, the economic burden of parochial education would be the predominant issue of parochial schooling in the 1980s.

The 1980s were years of uncertainty. Once a haven of white immigrant children who were making the transition from Europe to America, the Catholic schools of the 1980s had become visible symbols of the commitment of some parents—both Catholic and non-Catholic—to the education of their children. To be sure, many Catholic parishes had closed their schools in the previous three decades and other parishes were unwilling to open new schools. But just as important were the many parishes in the inner cities as well as in the affluent suburbs that made great sacrifices to sustain their schools.

### **An Uncertain Future**

The future of American Catholic parochial education is uncertain. In the 1960s, there were more than 5.7 million children enrolled in Catholic elementary schools, but by 2001 the enrollment had slipped to less than 2.6 million, a plunge of 54 percent. Even though the rate of decline had abated, it is not likely that Catholic education will ever see the strength of numbers it had at the middle of the twentieth century.

Why did Catholic parents abandon their schools over the last thirty years of the twentieth century? The answer is complex, intermingled with changing social values, changes in family structure, changes in the forms and content of public education, and the rising cost of private education relative to other living expenses. All these factors contributed to the decline of parochial education during the years from 1970 to 2000.

The beginning of the decline of Catholic parochial education can be traced to the drastic drop in religious vocations in the late 1960s. For more than a century, orders of priests and nuns staffed Catholic classrooms at minimal cost. However, in the years after the end of the Second Vatican Council in 1965, tens of thousands of these men and women abandoned their religious vows, and many others shifted to different ministries, forcing parish pastors and principals to hire lay teachers and pay them a living wage. Many school administrators found this task to be economically unfeasible and closed their schools.

A second factor was the changing structure of the American family. Where once the typical Ameri-

can Catholic family consisted of two parents and a gaggle of kids, the new American Catholic family was often a single parent with one or two children. Even in two-parent households, both parents worked and were in need of day-care facilities and after-school programs. Catholic families no longer had the time or energy to contribute to the operation and maintenance of a private parish school.

Related to the change in the structure of the typical Catholic family over the past thirty years has been a correlate change in American values. In such a consumer-oriented culture, Catholic parents found that they have no money left to pay parochial school tuition, let alone the resources needed to build a new school.

Another factor was the changing nature of public education. As late as the 1950s, public schools taught a form of nonsectarian Protestantism as part of the curriculum. Catholics in those areas and even in the big cities did not always feel welcome. But a 1961 decision by the Supreme Court stripped all public schools of any references to religion. Students of all faiths were treated equally.

Catholic parents were also attracted to public schools by the quality of the facilities, teachers, and courses. The principal concern of many parents—Catholic as well as non-Catholic—was the future careers and economic security of their children. Unlike their parents and grandparents, Catholic parents in the late twentieth century did not tend to value the spiritual development of their children as highly as their career development.

### **Catholic Schools and the Courts**

There are also a sizable number of parents and educators—both Catholic and non-Catholic—who believe that they are being deprived of the right to fairly choose between public and private schools. At the turn of the twenty-first century, these “school choice” advocates have petitioned states legislatures and even the U.S. Congress to provide tuition tax credits and vouchers that would allow parents to make a fair choice between public and private schools. Legislatures in Wisconsin, Arizona, Ohio, and Vermont did establish school voucher programs, but these programs quickly became entangled in court litigation. Other school aid programs have been proposed in Michigan, California, Texas, and Florida.

Not surprisingly, Catholic school advocates have been active supporters of the school choice and

tax voucher movements. If found to be constitutional, such aid could be an important source of financial support for many parents who struggle to pay thousands of dollars in parish school tuition each year. In 2000 the U.S. Supreme Court ruled in favor of providing tax-supported computers and remedial instruction in Catholic schools and in June 2002 upheld the use of public money for religious school tuition. Whatever the decision, however, Catholic school advocates do not believe that the voucher issue will affect the future of Catholic education.

### Catholic Schools as Models

Many of the parish schools that have survived are worthy of emulation. In a 1993 study, *Catholic Schools and the Common Good*, three social scientists outlined the successful hallmarks of Catholic education, qualities that have been adapted by many public schools.

Foremost among the qualities of parish-based education is decentralization. For the most part, parish schools are administered at the local level. Funding for the schools comes from the community and teachers are hired by principals without interference from school superintendents or other educational bureaucrats. Parents have a greater involvement and effectiveness in the education process because they are working single institutions in their own neighborhoods rather than a centralized bureaucracy. A second quality related to the first is the fact that parents, students, and faculty share a broad set of beliefs that give each school a moral purpose. Shared values are possible if parents, students, and faculty care about education.

Another hallmark of parochial schools worthy of emulation is size. The small size of most parish schools promotes interaction between students, parents, and staff. Because teachers serve in many different roles during the school day (disciplinarians, counselors, and friends as well as specialists in one or more academic disciplines) they become mentors and role models. The small size of most parish schools insures that parents and teachers know one another and their children well.

Finally, parish schools place a special emphasis on academics. Small size and limited resources necessarily requires administrators to concentrate on basics. The result is a student body well grounded in the mathematical and literary skills so necessary for success at future educational levels. Large schools

with cafeteria-style curricula may very well meet short-term demands for relevant instruction, but there is little evidence that courses in industrial management and family living are as valuable as literacy and mathematical skills in a constantly changing society.

The parents of the children who are educated in these schools will determine the future of Catholic parochial education in the United States. More than two centuries ago, the parents and pastor of St. Mary's Parish in Philadelphia established the first American parochial school. As long as there are parents and pastors interested in parochial education, these schools will survive. Even though American Catholic parochial education is unlikely to attain the position of influence it had in the mid-twentieth century, parish schools will remain important education laboratories for some time to come.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; JEWISH EDUCATION, UNITED STATES; NATIONAL CATHOLIC EDUCATIONAL ASSOCIATION; PRIVATE SCHOOLING; PROTESTANT SCHOOL SYSTEMS; SECONDARY EDUCATION, *subentry on* HISTORY OF.

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TIMOTHY WALCH

## CENTERS FOR TEACHING IMPROVEMENT IN COLLEGES AND UNIVERSITIES

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Although teaching has been at the core of faculty life from the beginning of the modern university, emphasis on teaching improvement is a more recent phenomenon. Centers and programs that support excellence in college and university teaching have grown substantially since the mid-twentieth century, and offer a broad range of services and resources to various constituencies.

### Terms

Teaching-improvement support is typically offered either through programs (run by individual faculty members or faculty committees) or centers (centrally located and funded units), and is categorized in a variety of ways—most typically as *faculty development* (or, in the case of graduate students, *teaching assistant development*). While some resist this term and its implications that instructors need to “be developed” (Gaff, p. 175), it is nonetheless commonly used to refer to a large range of activities focusing on the professional work of faculty and graduate students as teachers (and, to a lesser extent, as researchers).

Other terms often associated with teaching-improvement centers are *educational* or *instructional development*, which emphasizes the design of a course, the curriculum, and student learning activities. Organizational development, which focuses on the organizational structure of an institution and its subcomponents, is another form of support sometimes blended into teaching centers or programs.

### History

Only in the late 1950s and early 1960s did significant cracks appear in the foundational assumption in higher education that content competence equated with teaching competence. According to Wilbert J. McKeachie, a pioneering researcher on college teaching, the first centers for the improvement of

college teaching developed in the early 1960s at the University of Michigan and Michigan State University. Behaviorist psychology shaped the mission of these centers. Faculty developed instructional materials that reinforced student progress through a series of carefully designed learning steps. Early centers tended to focus on teaching in disciplines that responded best to such programmed learning, including foreign languages, statistics, and anatomy.

The social revolutions of the 1960s profoundly reshaped American colleges and universities. Students demanded, and often received, a larger voice in campus life. One manifestation of this change came with students evaluating classroom teaching, a rarity before the 1960s and the norm by the late 1970s. Despite the many flaws in these evaluations, university administrators soon began making personnel decisions in response, in part, to student commentary about teaching. Some faculty called for new support to improve teaching, both to enhance their own practice and to meet higher performance standards being advocated by students and administrators. In the late 1960s, only forty to fifty faculty development programs existed at colleges and universities nationwide; by the middle of the 1970s that number had exploded to more than 1,000. Private funds (from groups including the Danforth Foundation and the Lilly Endowment) and federal grants (from sources such as the Fund for the Improvement of Postsecondary Education) helped establish many of these new programs. Although this seed money allowed teaching centers to blossom quickly across the nation, over the next decade many programs struggled to survive when their initial grants expired.

These new teaching programs varied widely in their mission and structure. Typically a teaching-improvement program developed to meet an individual campus’s needs, rather than in response to a larger national trend. Depending on the resources and interest involved, colleges developed formal or informal teaching-improvement programs; only the most well-funded universities tended to establish formal teaching centers that coordinated and enhanced improvement programs campus-wide. Centers at research universities often focused initially on training graduate students to teach. At comprehensive universities and community colleges, less well-funded programs usually concentrated on improving faculty teaching techniques.

As the number of teaching programs and centers expanded, college teachers and faculty develop-

ers created professional organizations to share best practices. The American Association for Higher Education (AAHE) spun off the National Education Association (NEA) in 1969. In 1976 a group of faculty developers founded the Professional and Organizational Development Network for Higher Education (POD), and in 1978 private and public grants helped establish the National Institute for Staff and Organizational Development (NISOD). Publications, conferences, and other activities by these three groups helped advance both the practice of faculty development and the visibility of teaching in higher education.

The assessment movement that took center stage in the 1980s reshaped both perceptions of teaching and the work of teaching-improvement programs. Advocates of assessment, from inside and outside the academy, asked pointedly, “Are students learning anything in college?” (B. Wright, pp. 299–300). As attention shifted from teaching to learning, faculty development work also changed its focus. Improving teaching techniques remained an important component of most programs, but more and more developers encouraged faculty to think about student learning. “Classroom assessment techniques” (CATs), pioneered by Thomas A. Angelo and K. Patricia Cross, emerged as a new and powerful way for faculty to regularly and informally monitor learning. Besides promoting the use of CATs, many teaching programs also emphasized topics such as cognitive processes, motivational strategies, and learning styles.

In the early 1990s Ernest L. Boyer of the Carnegie Foundation for the Advancement of Teaching, along with allies from the AAHE and other groups, proposed a significant reconsideration of faculty roles and responsibilities, including teaching. These proposals responded both to the assessment movement and demands for more public accountability in higher education, and to advances in learning sciences. A core component of Boyer’s vision involved “the scholarship of teaching.” Boyer argued that, like other forms of scholarship, to be scholarly the act of teaching must be public, open to critical evaluation by peers, and usable by others in the discipline.

The intellectual energy created by Boyer’s proposal coincided with other trends to produce another period of growth and expansion for teaching-improvement programs. By 1994 roughly one-third of colleges and universities had a formal center for teaching improvement, and another third was con-

sidering the creation of a center. These centers existed at many (61%) research universities, and at some (41%) doctorate-granting institutions; such centers were relatively rare at liberal arts colleges and community colleges, although nearly all institutions had some sort of faculty development program, often focusing on teaching and learning.

Teaching centers populated many research universities by the 1990s due, in part, to increased emphasis on graduate student teaching assistant training. In 1986 the Ohio State University hosted the first national conference on teaching assistant development; seven years later a consortium of universities and private foundations launched Preparing Future Faculty, a major national initiative to train graduate students to be effective teachers and scholars. Preparing Future Faculty programs, and variations on that model, spread quickly, becoming a significant component of teaching center work at many research universities by the end of the decade.

Teaching centers also became assets to colleges and universities that struggled to deal with technological revolutions, changing student demographics, and increased competition in higher education. As computers and networked technology became ubiquitous, new ways of teaching and learning enticed many colleges and universities to explore distance and asynchronous education. These changes challenged teaching centers to help faculty and institutions focus on learning rather than on gadgets and gimmicks. Changing student demographics also confronted college teachers, leading to increased work for teaching centers to address the needs of adult learners in more culturally diverse classrooms. The quality of teaching and learning also became an issue as the growth of for-profit higher education and the proliferation of distance-learning programs gave students new opportunities to choose where, when, and how to pursue their education.

### Resources and Services

Although the breadth of content and scope of teaching-improvement programs and centers can vary substantially from institution to institution, most offer some combination of the following services.

**Consultation services.** These services enable individual faculty and graduate students, as well as departments and schools, to better observe, assess, improve, and enhance their teaching practices. Such consultations may include instructional or curricu-

lum design assistance, creation of models for evaluating teaching, videotaping of classes for review, classroom observation, or interviewing students to gather anonymous feedback for the instructor.

**Programs on teaching.** These programs include a broad range of offerings across such categories as audience (from a guest speaker on effective lecturing for all university faculty, to a workshop on active learning for physics teaching assistants), length (from a semester-long credit-granting graduate course on teaching sociology, to a one-hour lunch discussion about diversity in the classroom), and incentives for participation (from a required orientation for all new teaching assistants to a voluntary discussion group on teaching with cases, to a stipend-funded fellows program on service learning).

**Grants, awards, and other incentives.** Incentives are offered to motivate improvement in teaching or to reward excellence in teaching. These incentives can take a variety of forms, such as grants or release time for course redesign or other curricular innovations; fellows programs to build teaching-improvement support between peers; or financial support for attending professional conferences.

**Print and electronic resources.** These resources typically include libraries of books, videotapes, and articles on a variety of issues pertaining to teaching and learning in higher education. Some centers or programs publish their own newsletters or develop websites to further highlight research, principles of good practice, or other explorations on teaching.

### Leadership and Constituencies

The people who lead teaching-support efforts likewise represent a broad range of backgrounds and institutional status. A 1996 survey of POD members (with a 46% response rate) revealed that of the 517 respondents, 53 percent were women; 90 percent were white; 77 percent had a doctorate as the highest degree earned; 26 percent had their graduate degree in education (versus 12% in psychology, and 11% in English); 44 percent had a faculty job classification (versus 36% with administrative or staff status); 44 percent had part-time appointments in faculty development (versus 30% with full-time); and 59 percent worked in programs or centers that report to a provost or other chief academic officer (versus 16% to a dean).

Teaching-improvement programs and centers often serve faculty and graduate students from

across the entire institution, while others are dedicated to a particular school or division. The distinct mission and curricular changes of many professional schools, in particular, has motivated the creation of separate support units, such as Harvard Medical School's Office of Educational Development, established in 1985.

In a similar vein, participants vary in their level of motivation and reasons for using the resources and services offered: some are strongly encouraged or even required to participate by administrators, while others are more intrinsically motivated to examine their teaching or to learn innovative practices. In order to create an open environment for its constituency, most centers have a policy of confidentiality, and distance themselves from the formal review processes at the institution.

### Assumptions and Impact

Some core assumptions infuse most teaching-improvement programs or centers: (1) that teaching practices can be learned and developed (versus the view that good teachers are born, not made); (2) that knowledge of a subject does not necessarily translate into effective teaching of that subject; (3) that the educational research literature can offer models and strategies for improving teaching; and (4) that great teaching, like all scholarly activity, is a constant process of inquiry, experimentation, and reflection.

Assessing the impact of teaching-improvement centers and programs is a complicated and sometimes elusive process: John P. Murray describes how in some programs, "faculty participation is often low," and those "most in need of development are the least likely to participate," making it difficult to judge whether or not these initiatives "cause any substantial or lasting changes in the classroom" (pp. 59–60). On the other hand, Arlene Bakutes claims that "research data indicate that faculty development centers and their counterparts are successful," citing a University of Delaware survey showing that 73 percent of faculty respondents made changes to their teaching due to their work at that university's Center for Teaching Effectiveness (p. 170). Jerry G. Gaff asserts that "faculty development has moved slowly from a fragmented, often misunderstood, and peripheral position to an integrated, better understood, and more centrally located position of importance" and is "on the verge of becoming fully institutionalized in American higher education" (p. 173).

See also: COLLEGE TEACHING; TEACHING AND LEARNING, *subentry on* HIGHER EDUCATION.

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ALLISON PINGREE

## CENTRAL ASIA

See: EASTERN EUROPE AND CENTRAL ASIA.

## CHALL, JEANNE (1921–1999)

Leading teacher, researcher, and writer in the field of reading, Jeanne S. Chall held views on the importance of direct, systematic instruction in reading that were slighted in the 1980s but justified in the late 1990s. She was deeply committed to teaching; to the importance of children's successful reading acquisition and the need to address failing readers; to the power of research to answer practical questions; and to the merit of understanding the historical background of research questions.

Born in Poland, Chall emigrated as a girl to New York City with her family. She graduated from the City College of New York in 1941 with a B.A. (cum laude). She became an assistant to Irving Lorge, who directed educational research at Teachers College, Columbia University. She then served as research assistant to Edgar Dale at the Bureau of Educational

Research at Ohio State University, where she received an A.M. in 1947 and a Ph.D. in 1952. Her review for Dale of the existing research on readability led to her *Readability: An Appraisal of Research and Application* (1958) and a keen appreciation of the value of historical synthesis. Dale's and Chall's collaboration culminated in their *Dale-Chall Formula for Predicting Readability* (1948), which combined vocabulary complexity with sentence length to evaluate text readability. (Chall updated it in 1995.) Between 1950 and 1965 Chall rose from lecturer to professor at City College. These years brought a lifelong collaboration with Florence Roswell on the diagnosis and treatment of reading difficulties, and led Chall to question whether some methods were superior to others in preventing reading failure.

In 1965 Chall moved to Harvard University to create and direct graduate programs in reading for master's and doctoral candidates. An excellent clinician herself, she founded the Harvard Reading Laboratory in 1967 (now named after her), directing it until her retirement in 1991. She was a member of numerous scholarly organizations, editorial boards, policymaking committees, and state and national commissions. She served on the board of directors of the International Reading Association, 1961 to 1964, and on the National Academy of Education's Commission on Reading that resulted in the report *Becoming a Nation of Readers* (1985). She received many professional awards, the last given by the International Dyslexia Association in 1996.

Chall was engaged in both practice and research, often at the same time. For more than fifty years she taught students of all ages, including remedial ones, and advised schools. She was a consultant for children's encyclopedias, an educational comic book, educational software, and educational television, including the children's literacy programs *Sesame Street*, *The Electric Company*, and *Between the Lions*.

Chall's most important professional contribution was a byproduct of the professional furor over Rudolf Flesch's *Why Johnny Can't Read—and What You Can Do About It* (1955). Flesch attacked the prevailing sight word methodology of teaching reading, claiming that reading professionals had ignored their own research. With beginning reading instruction now on the national agenda, the Carnegie Corporation funded a study that Chall conducted from 1962 to 1965. She reviewed the existing research, described methods of instruction, interviewed leading proponents of various methods, and analyzed two

leading reading series of the late 1950s and early 1960s. The results appeared in her *Learning to Read: The Great Debate* (1967).

Chall identified what she called "the conventional wisdom" of reading instruction: that children should read for meaning from the start, use context and picture clues to identify words after learning about fifty words as sight words, and induce letter-sound correspondences from these words. Like Flesch, she concluded that this conventional wisdom was not supported by the research, which found phonics superior to whole word instruction and "systematic" phonics superior to "intrinsic" phonics instruction. She also found that beginning reading was different in kind from mature reading—a conclusion that she reaffirmed in her *Stages of Reading Development* (1983), which found that children first learn to read and then read to learn. She recommended in 1967 that publishers switch to a code-emphasis approach in children's readers, which would lead to better results without compromising children's comprehension.

Chall's *Learning to Read* quickly became a classic. Major textbook publishers reacted by emphasizing more phonics earlier in their series, although no publisher already committed to initial whole word instruction switched to systematic phonics. Chall's book was updated in 1983 (and 1996) with even stronger research findings to support its conclusions, but by 1983 textbooks of all kinds were under attack from the Whole Language movement, which condemned textbooks as a genre. The climate was an unsympathetic one for Chall's coauthored study *Should Textbooks Challenge Students: The Case for Easier or Harder Textbooks* (1991), which explored the relationship between the decline in difficulty of textbooks between 1945 and 1975 and lower SAT scores. Chall's coauthored study of thirty low-income urban children, *The Reading Crisis: Why Poor Children Fall Behind* (1990), was also not universally well received. Whole Language proponents criticized it for relying on outdated tests; social scientists complained that it did not adequately explain its ethnographic techniques.

Chall showed her regard for the reading instruction of the past by reissuing, largely for home schooling use, stories from school readers of the 1880s to 1910s, titling them the *Classic American Readers* (1994). She had already given her own collection of over 9,500 imprints related to the history of reading research and the teaching of reading,

spanning more than two centuries, to the Harvard Graduate School of Education's Monroe C. Gutman Library.

Chall's last work, published posthumously, was *The Academic Challenge: What Really Works in the Classroom* (2000). In it, she divided American instruction into "child-centered" and "teacher-centered" approaches, suggesting that the twentieth century was dominated by the former (discovery approaches) in spite of research that supported the superiority of the latter (explicit teaching). Earlier, Helen Popp had persuaded her to coauthor a contribution to explicit teaching: a handbook for teachers, *Teaching and Assessing Phonics* (1996). The Chall-Popp Phonics program was completed after her death (2000).

Written in a climate in which many members of her own profession still disdained explications of the English writing system, the 1996 handbook is true to many of Chall's core concerns: teaching reading, particularly to at-risk children, and research-validated explicit instruction.

*See also:* READING, *subentries on* BEGINNING READING, COMPREHENSION, TEACHING OF.

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E. JENNIFER MONAGHAN

## CHARACTER DEVELOPMENT

When a person is said to have character, it usually implies they have distinguishing moral qualities, moral virtues, and moral reasoning abilities. Less frequently used terms include *morality*, *virtue*, and *ethics*. A moral person understands right and wrong and willfully chooses what is right; a virtuous person engages in good behavior intentionally, predictably, and habitually; an ethical person figures out what is right or good when this is not obvious. At the beginning of the twenty-first century, there appears to be a desire to reconsider earlier goals of American education by taking character building more seriously. Most people share the view that schools should be formally and strategically involved in building moral character, virtues, and ethical behavior and should work in concert with parents and the community.

#### Looking Back

From the beginning of written history, the importance of building moral character has been recognized by parents, educators, and concerned citizens in every culture and society. Between 1640 and 1940, educators in the United States were as concerned about moral education as academic education. Throughout this 300-year period, the dominant pedagogical method was inculcation (repetitive direct instruction combined with reinforced practice), and the goals were inspiration, commitment, and habituation. During the early 1900s the American philosopher, psychologist, and educator John Dewey and other progressive educators expanded those goals to include critical thinking and reflection about values and morals; they stressed the value of experiential learning for building character. In 1951 the National Education Association (NEA) recommended combining these traditional and progressive approaches. This was not accomplished because concerns about academic competence and teaching specific values caused character education to be put aside as a formal undertaking. Public schools abandoned the dual focus on moral character and aca-

ademic success and adopted a singular focus on academics. Character education continued informally through the hidden curriculum of Western democratic values and the independent efforts of teachers.

Between 1940 and 1970 cognitive-developmental psychologists generated some renewed interest in character by identifying levels of moral reasoning and trying to accelerate moral development. The more widely adopted values clarification movement was a response to the nation's preoccupation with individual freedom and self-improvement and the nationalistic push for better science and mathematics education. A third influence was built on the work of Erik Erikson and Robert James Havighurst, who identified processes and stages of socioemotional development. Affective-developmental psychologists and moral philosophers concerned with conscience and emotion began to expand the understanding of affective moral development.

Public concern about a moral decline in society and the disintegration of families and communities led to the reemergence of character education in the 1980s. By 1995 it had become a social movement with thousands of schools and communities involved. Throughout the 1980s and 1990s, proponents of traditional and progressive approaches engaged in a friendly dialogue, which energized the movement and accelerated the synthesis of ideas. Schools drew strategies from both approaches with little regard for the theoretical foundation for this synthesis. They taught and trained students using stories, moral exemplars, reinforcement, and lists of virtues as recommended by traditionalists; they provided active student experiences within caring communities through class meetings, cooperative learning, and service learning as recommended by progressives.

Many important contributions to character education occurred during the final two decades of the twentieth century. In 1992 representatives from many organizations devoted to building the civic virtue and moral character of students formed the Character Education Partnership (CEP). According to CEP's eleven principles, effective character education schools:

1. promote core ethical values as the basis of good character;
2. define character comprehensively to include thinking, feeling, and behavior;

3. promote core values intentionally and proactively through all parts of school life;
4. are caring communities;
5. give students opportunities for moral action;
6. have meaningful and challenging academic curriculums that respect learners;
7. develop students' intrinsic motivation;
8. have professionals who exemplify core values and maintain a moral community;
9. require moral leadership from educators and students;
10. recruit parents and community members as full partners;
11. evaluate school character, student character, and adults as character educators.

### The Eclectic Ideal

Research and practice suggest that the most effective character education schools combine direct instruction, modeling, reinforcement, and various community-building strategies (class meetings, service learning, cooperative learning, intercultural exchange, social-skills training, and caring interpersonal support) to promote the development of moral virtues, moral reasoning, and other assets that make the will and ability to do what is right and good probable. They are concerned with all aspects of development, including social, emotional, moral, intellectual, and academic. They are child-need-centered without abandoning the responsibility to transmit core ethical values to youth. They endorse Robert D. Heslep's view that character education includes civic education (learning about laws, government, and citizenship), social education (learning social roles, responsibilities, and skills), prudential education (learning how to take care of oneself), cultural education (becoming historically and culturally literate), and moral education—the latter providing a context of principles that guide civic, social, prudential, and cultural education.

Good character educators are aware of the overlapping and interconnected parts of the moral person: knowledge, understanding, reasoning, autonomy, values, beliefs, standards, principles, perspective taking, conscience, empathy, emotion, virtues, intentions, will, commitment, motivation, duty, behavior, and habits. Marvin Berkowitz's 1995 model of the complete moral person includes moral values (beliefs and attitudes with an affective component),

moral behavior (intentional moral acts), moral emotion (energizing feelings), moral character (a personality characteristic), moral identity (being or trying to be moral), and meta-moral characteristics such as self-discipline. Thomas Lickona's moral feeling, thinking, and action, and Kevin Ryan's knowing, loving, and doing the good are perhaps easier to remember and use. William G. Huitt's 2000 model treats moral will or volition as a part distinguishable from moral emotion, moral thought, and moral behavior.

Thomas F. Green (1999) connects the thinking and feeling parts of the moral person by describing five voices of conscience (craft, membership, responsibility, memory, and imagination). Jerome Kagan explains how several specific moral emotions compel adherence to standards of right and wrong beginning in early childhood. Many define moral behavior in terms of specific virtues or habits of conduct from which inner parts of the moral person can be inferred. Gordon G. Vessels distinguishes between primary virtues that reflect personal integrity (e.g., kindness, courage, ability, and effort) and primary virtues that reflect social integrity (e.g., friendship, teamwork, and citizenship). He incorporates elaborations of these virtues and theoretical propositions about moral-developmental processes into behavioral objectives for various age groups.

### Early Twenty-First Century

At the beginning of the twenty-first century, the time devoted to character education in many schools is decreasing due to the popular focus on academic standards, accountability, standardized testing, and whole-school reform. The well-researched whole-school reform models that include character education are not among the most popular: Basic Schools, Child Development Project (CDP), Modern Red Schoolhouse, Positive Action, Responsive Classroom, School Development Program, and Expeditionary Learning Outward Bound. In general, American society may not be ready to think in terms of preventing social problems and improving schools by implementing a curriculum that balances character education and academic instruction, and the addition of nontraditional assessment measures that document products and processes reflecting good character and character growth such as Huitt's (2001) proposed use of cumulative electronic portfolios with scanned pictures and video clips.

Trends and concerns suggest that in order for character education to become a highly valued and fully integrated feature of education once again, character educators will have to focus on reducing societal problems and address concerns about the effectiveness of academic instruction in the schools. Barring a major shift in priorities, the future of character education appears to hinge on the evaluation of its potential for reducing school violence, drug use, teen pregnancy, disrespect, and prejudice; and improving school climate, student discipline, school safety, intercultural understanding, and academic achievement. Models for this type of program evaluation research are available. Leaders in education are not likely to change course unless research results show that academic goals are achievable using a curriculum that addresses all aspects of development, thereby integrating academic and character goals, objectives, and methods.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; AGGRESSIVE BEHAVIOR; MORAL DEVELOPMENT; STRESS AND DEPRESSION.

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GORDON G. VESSELS

## CHARTERS, W. W. (1875–1952)

Professor and director of the Bureau of Educational Research at Ohio State University, Werrett Wallace Charters contributed to the fields of curriculum development and audiovisual technology. Born in Hartford, Ontario (Canada), Charters earned his A.B. in 1898 from McMaster University, a teaching diploma from the Ontario Normal College in 1899, a B.Pd. from the University of Toronto, and his M.Ph. and Ph.D. from the University of Chicago, respectively in 1903 and 1904. After a three-year career in Canadian public schools as a teacher and principal, Charters spent the remainder of his career in the United States. Before joining Ohio State University in 1928, Charters served as a faculty member and/or dean at six institutions: the State Normal School in Winona, Minnesota, the University of Missouri, the University of Illinois, the Carnegie Institute for Technology, the University of Pittsburgh, and the University of Chicago. In 1923 Charters was awarded an honorary doctorate from McMaster University.

In his earliest scholarship, Charters attempted to develop what he called a "functional" theory of instruction derived from the ideas of the Progressive educator John Dewey (who, despite having discouraged Charters from pursuing doctoral study, had served as his doctoral adviser). In his first book, *Methods of Teaching*, Charters maintained that the function of school subject matter was "to satisfy needs and solve problems" faced by society (pp. 3, 31). A school's program of curriculum and instruction would put into practice this conception of subject matter by introducing subject matter when it addressed an actual or potential student need, enabling students to perceive its function. Charters dis-

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cussed ways to organize subject matter and teaching to achieve such conditions, indicating, among other things, that students should not only be told about, but also should be allowed to “construct” functions of subject matter for themselves. Although he continued to embrace the notion of “functional” education, subsequently Charter’s work departed significantly from Dewey’s educational theory.

Charters’s most significant contribution to the field of curriculum development came in the form of his activity-analysis approach to curriculum construction. Activity analysis essentially involved specification of the discrete tasks or activities involved in any social activity. For purposes of curriculum construction, the resulting specifications translated into program objectives. Activity analysis was considered a “scientific” approach to curriculum construction insofar as it represented a quantification of human activities as a basis for selecting educational objectives. Because activity analysis often amounted to little more than an accounting of tasks, critics of the approach characterized it as “scientism” in curriculum work and rejected it as overly mechanistic.

Charters’s version of activity analysis differed from those of his contemporaries largely in terms of the emphasis that he placed on the inclusion of social ideals in the curriculum. In 1923 Charters articulated seven “rules” that governed curriculum construction.

1. Identify major educational aims through a study of contemporary social circumstances.
2. Classify the major aims into ideals and activities and reduce them to operational objectives.
3. Prioritize the aims and objectives.
4. Reprioritize the aims and objectives to lend greater importance to those relevant to children’s experience than to those relevant to adults but remote from children.
5. Identify those aims and objectives achievable within the constraints of the school setting, relegating those best accomplished outside the school to extraschool experiences.
6. Identify materials and methods conducive to the achievement of the selected aims and objectives.
7. Order materials and methods consist with principles of child psychology.

Charters’s approach to curriculum construction influenced a generation of curriculum scholars, in-

cluding George S. Counts, Ralph W. Tyler, and Hilda Taba.

During the latter part of his career, Charters focused his attention on audiovisual education. In his book *Motion Pictures and Youth*, Charters summarized a series of twelve studies that he had directed that investigated the effects of motion pictures on children and youth. Among the earliest of their kind, these studies examined attendance at and content of movies and how they influenced children. In addition to ascertaining the retention of information from movies, the studies found that children and youth accepted movie content as true and that movies could exert a significant influence on attitudes. In his summary, Charters recognized not only that motion pictures were “a potent medium of education” (p.60), but also that films were potentially miseducative. Charters concluded that film clearly was a powerful source of information and attitudes, but that the extent of its influence on children and youth relative to other institutions, such as the home, church, and school, remained unclear.

Charters’s contributions to scholarship were dwarfed, however, by his managerial and organizational accomplishments. In addition to directing the Bureau of Educational Research at Ohio State University from 1928 to 1942, Charters directly or indirectly managed numerous educational projects. These include codirecting the Commonwealth Teacher Training Study (1929), founding the Institute for Education by Radio (1930) and the *Journal of Higher Education*, serving on the United States Senate Committee on Racketeering (1933–1934), and conducting evaluations of pharmaceutical and library education programs and of the United States Armed Forces Institute (1942).

*See also:* CURRICULUM, SCHOOL.

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WILLIAM G. WRAGA

## CHIEF ACADEMIC AFFAIRS OFFICERS, COLLEGE AND UNIVERSITY

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A college's chief academic affairs officer, often referred to as the chief academic officer (CAO), fulfills the essential role of ensuring that an institution's educational mission is achieved. Successful completion of this overarching goal involves work across multiple constituencies and the use of a number of measures, such as personnel and budgetary decisions, to influence educational outcomes. Despite the important role that the CAO plays in the educational endeavor, there is little empirical knowledge about the position. Current knowledge comes from a handful of empirical works and multiple personal reflections on what a chief academic officer should be engaged in doing, as well as how they should be doing it. Three main issues related to the CAO are examined: varying titles, typical career path, and the main roles of chief academic officers.

### Various Titles

One of the difficulties in understanding the nature of the work of the CAO is the litany of various terms for the position. The two most common terms in current parlance are *provost* and *chief academic officer*. However, at least nine different terms have been used to refer to the position. One reason for the numerous titles is that CAOs are expected to complete many different roles within different institutions. Furthermore, as colleges and universities have grown, the way in which responsibility for the academic life of educational institutions is handled has also changed. This growth has coincided with a transformation in the titles applied to those in charge of academic affairs.

The role of the CAO evolved as colleges became more complex. Initially, colleges required little more administrative representation than that of a president. Until 1950 the role of chief academic officer was embodied within the presidency. But as institutions grew and diversified, it became necessary to es-

tablish the position of *dean*, then to create multiple deanships. These deans either oversaw individual colleges or were responsible for a specific dimension of institutional functioning, such as the dean of research or the dean of students. In this manner, the role of CAO became more clearly delineated, as deans of instruction or deans of faculties (two of the several terms used to refer to the CAO) presided over campus academic issues. Other terms include *academic dean*, the title most commonly found in small liberal arts colleges; *academic vice president*, *vice president for academic affairs*, and *vice president instructor* are used when an institution utilizes the *vice president* moniker for its administrative leaders. Otherwise, the title of provost is often used. In some instances, both the terms *provost* and *vice president of academic affairs* are incorporated to indicate the role of the individual as the second-in-command to the president as well as the head of institutional educational concerns. The title of *vice chancellor* is also sometimes used.

### Typical Career Path

The typical career path of a CAO begins with a prolonged stint as a faculty member. During their time as faculty members, CAOs generally serve on many campus administrative committees, and often on the faculty senate. CAOs also tend to have prior experience as both chair and dean. In their current role, CAOs frequently serve as the second-in-command within their institutions, reporting directly to the president or chancellor.

The tenure of individuals in the role of CAO tends to be fairly abbreviated. A 1987 study by Gary Moden et al. found that the mean length of service of the CAO was 5.3 years. After serving in the CAO role, individual career paths go in varied directions. Moden and his colleagues found that 37 percent of CAOs aspired to a presidential position, while 35 percent viewed the CAO position as a final one, contemplating retirement at the end of their positional tenure or shifting to a similar position at another institution. Only 14 percent desired to return to teaching in their initial discipline. Women were underrepresented at the CAO level, with males making up 81 percent of the respondents in the Moden study; the report does not include the racial/ethnic composition of their sample.

### Role of the Chief Academic Officer

While they support the president's needs, the central role of most CAOs is to maintain an inward vigi-

lance toward the fulfillment of an institution's educational mission. The CAO therefore works closely with various constituencies on campus to enact that mission. By virtue of their position as second-in-command to the president, CAOs usually have jurisdiction over all academic deans, admissions, librarians, chief researcher, and all other academic officers. Therefore, the CAO generally has the power of approving all faculty appointments, as well as all college or departmental budgets and academic expenditures. CAOs are thus viewed as providing the internal focus of the administration, while the president provides the external vision and connection to community. While they may feel as if they are "on call" to the president, CAOs also have a great deal of power in their own right.

The CAO's internal focus may be conceived as having two elements: the development and implementation of academic goals for the institution and the allocation of resources to various departments and support services on campus to support those academic goals. As a result of this internal focus, CAOs frequently seek to balance competing needs across units within an institution to achieve the best outcomes for the institution as a whole. This often requires the CAO to act as negotiator and mediator, attempting to balance and accurately represent the interests of faculty and deans to the president and board of trustees—and vice versa.

In maintaining a focus on an institution's educational mission, the CAO is responsible for creating the principal connection between student progress and overall implementation of new programs. The CAO influences college values and outcomes, such as student progress through personnel, program, and budgetary decisions. Through a selective distribution of resources, the CAO may choose to reward or sanction programs that either meet or defy expectations. For instance, the CAO may provide increased funds for those departments with proven success or growing student enrollments, while paring down funds or faculty lines for those departments that show lower levels of educational outcomes or that no longer contribute strongly enough to the institutional mission. By hiring faculty who meet certain qualifications or supporting specific budget initiatives, the CAO may also seek to shape consensus or realize a vision for the institution's educational attainment.

The future of the CAO role is clouded in complexity. While CAOs may retain an inward focus and

target the educational outcomes of an institution, the role of the CAO may be changing. As institutions continue to grow in complexity, the role of the CAO may shift from managing the academic enterprise directly to supervising and facilitating the actions of deans, who will begin to exercise greater control on the direction of academic issues within an institution.

*See also:* BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY SENATES, COLLEGE AND UNIVERSITY; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; PRESIDENCY, COLLEGE AND UNIVERSITY.

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NATHANIEL J. BRAY

## CHILD ABUSE AND NEGLECT

The concept of child abuse and neglect is relatively new to American society. Although children have been neglected, beaten, exploited, and even murdered by their parents and caregivers for hundreds of years, it is only since the mid-twentieth century that legislation requiring the reporting and prosecution of child abuse has been enacted. In 1974 Public Law 93-247, known as the Child Abuse Prevention and Treatment Act (CAPTA) was passed by Congress. Under this statute, only parents or caregivers can be perpetrators of child abuse or neglect. CAPTA provides minimum standards for the definition of child abuse and neglect for states that receive federal funds, and each state is left to define more specifically what constitutes maltreatment and to develop public policy that will guide courts, law enforcement, health care, and social services in the protection and care of children who are neglected or abused.

All fifty states and the District of Columbia have enacted laws that require that child abuse and maltreatment be reported to a designated agency or official. The purpose of these laws are to specify the conditions under which a state may intervene in family life; define abuse and neglect; encourage a therapeutic treatment approach to child abuse and neglect—rather than a punitive approach; and encourage coordination and cooperation among all disciplines that deal with abused and neglected children.

A number of terms are used to refer to the maltreatment of children, including the following:

- *Neglect*. An act of omission by a parent or caregiver that involves refusal or delay in providing health care, education, or basic needs such as food, clothes, shelter, affection, and attention. Neglect also includes inadequate supervision and abandonment.
- *Emotional abuse*. An act or omission by a parent or caregiver that involves rejecting, isolating, terrorizing, ignoring, or corrupting a child. Examples include, but are not limited to, verbal abuse; withholding food, sleep, or shelter; exposing a child to domestic violence; refusing to provide psychological care; and confinement. An important component of emotional abuse is that it must be sustained and repetitive.
- *Physical abuse*. An act of commission by a parent or caregiver that results in, or is likely to result in, physical harm to the child—including death. Examples include hitting, kicking, biting, shaking, burning, and punching the child. Spanking a child is usually considered a form of discipline, unless the child is bruised or injured.
- *Sexual abuse*. An act of commission by a parent or caregiver of sexual intrusion or penetration, molestation with genital contact, sodomy, rape, exhibitionism, or other forms of sexual acts in which the child is used to provide sexual gratification to the perpetrator. This type of abuse can also include child pornography.

Discussions of the number of children who are abused or neglected involve the use of two terms: *prevalence*, which describes the number of children who have suffered from a specific type of abuse at least once in their lifetime; and *incidence*, which describes the number of specific cases that are reported in a given time period. Obviously, incidents of physical abuse or extreme neglect are somewhat easier to identify and report than are other types of abuse. These are the cases that most frequently appear in child welfare offices and court cases. Actual reports of sexual abuse, emotional abuse, and neglect are generally thought to be grossly underrepresentative of the number of children affected by abuse.

Efforts to quantify the number of abuse cases in the United States include self-report surveys, in which parents are asked to report their own behavior toward their children; surveys of cases of abuse that were observed by someone outside the family and reported to community and public-agency professionals; and the collection of statistical information

from child protective agencies. In 1990, the National Child Abuse and Neglect Data System was established. Information from this database indicates a growing trend in child abuse and neglect during the 1990s. In general, neglect is the most common form of child abuse reported, accounting for more than half of all reported cases. According to national statistics, approximately 2.8 million referrals for abuse and neglect are made annually. Less than half of these (approximately 1 million) are found to be substantiated cases. Of those that are substantiated, over half are for neglect, about 25 percent are for physical abuse, and slightly more than 10 percent are for sexual abuse. Approximately three children die each day of abuse or neglect in the United States.

### Causes of Abuse and Neglect

According to the Child Welfare League of America, children whose parents abuse drugs and alcohol are almost three times more likely to be abused and four times more likely to be neglected than children of parents who are not substance abusers. Eighty-five percent of states that report statistics for child abuse and neglect cite parental substance abuse and poverty as the top two issues related to child abuse and neglect. Additionally, studies have shown that the most consistent finding in substantiated child abuse cases is that the abusive parents often report having been physically, sexually, or emotionally abused or neglected as children.

Certain children are at increased risk for abuse. Younger children are particularly vulnerable to certain types of abuse, such as *shaken baby syndrome* and *battered child syndrome*. Shaken baby syndrome is a severe form of head injury that occurs when a baby is shaken hard enough to cause the baby's brain to bounce against its skull. This causes bruising, swelling, and bleeding in the brain that can lead to permanent, severe brain damage or death. Even with immediate medical treatment, the prognosis for a victim of this syndrome is very poor. Most babies will be left with significant damage to their brain that can cause mental retardation or cerebral palsy. One of the difficulties in identifying this type of abuse is that there are usually no outward physical signs of trauma, which often creates a delay in the child receiving treatment.

Battered child syndrome is characterized by a group of physical and mental symptoms caused by long-term physical violence against the child. The abuse takes the form of cuts, bruises, broken bones,

burns, and internal injuries from hitting, punching, or kicking. Nearly half of the victims of this type of abuse are under the age of one. Parents who bring their abused children to an emergency room frequently offer complicated and vague explanations of the child's injuries. Medical personnel must be trained and knowledgeable of the causes of various types of injuries. For example, medical professionals have learned to recognize a spiral pattern on X-rays of broken bones, particularly in the arms and legs, that indicate an injury is the result of the twisting of a child's limb. Trained professionals also look for evidence of old injuries, such as a bruise that is several days old and bones that have broken and healed, in addition to the presenting injuries. Such a pattern of injuries helps constitute the diagnosis of battered child syndrome.

### Effects of Abuse on Children

By its very nature, child abuse is threatening and disruptive to normal child development. The very persons charged with the care and nurturing of a child, and to whom the child turns for food, love, and safety, can cause the child pain and injury. The child then learns to distrust adults. Children who are neglected and abused exhibit a wide array of characteristics and behaviors. Most common among these are anger, acting out, depression, anxiety, aggression, social withdrawal, low self-esteem, and sleep difficulties. At the extreme end, abuse can cause a child to dissociate and develop disorders such as schizophrenia, amnesia, and personality disorder. Personality disorder is a mental disorder that affects a person's ability to function in everyday activities such as work, school, and interpersonal relationships. Borderline personality disorder is a frequent diagnosis for children who are victims of abuse or neglect. Symptoms can include paranoia, lack of impulse control, limited range of emotions, and inability to form close and lasting relationships.

### Prevention of Child Abuse

Prevention is generally categorized as primary, secondary, or tertiary. Primary prevention includes the general distribution of information related to child abuse, including how to recognize and report abuse and what resources are available for the prevention, intervention, and treatment of child abuse. Secondary prevention combines information with services and interventions targeted to families identified at high risk for child abuse. Tertiary prevention is di-

rected to families where abuse has already occurred, with the goal of decreasing the possibility of recurrence.

Health care–related prevention programs typically focus on encouraging pregnant women to receive prenatal care, teaching child care techniques, providing home health visits for newborns, and assisting parents of children with special needs in obtaining support and services. Community-based organizations such as YMCAs and YWCAs, Boys and Girls Clubs; community centers, food banks, shelter programs, and a wide array of advocacy and faith-based organizations target their efforts toward high-risk families and youth. These programs address the lack of resources such as adequate shelter, child care for working parents, appropriate nutrition, health and mental care, transportation, and education. Organizations providing tertiary prevention include crisis and emergency services, parent education, domestic violence shelters, and health and mental health treatment for victims.

In 1993 Public Law 103-66, also known as the Family Preservation and Support Initiative, was passed, providing federal funds for family support services and family preservation services with the intention of keeping families intact. This was followed by Public Law 105-89, also known as the Adoption and Safe Families Act of 1997. This second act clarified the congressional intent of Public Law 103-66 by changing the name of the funding program from *Family Support and Family Preservation Services* to *Promoting Safe and Stable Families*. This was a significant change in focus. Under the 1993 legislation, the goal of the program had been to keep families intact by providing services in the home. But service providers came to the realization that not every family can, or should be, kept together. Sometimes children must be removed for their own safety. Thus the 1997 legislation focused on two key outcomes for children and families: safety and stability. The Adoption and Safe Families Act recognizes the importance of timely, goal-directed, family-centered services within the larger context of assuring the safety of children and promoting their stability and permanence.

Schools play an important role in the identification, reporting, and treatment of child abuse. Neglect and abuse perpetrated on school-age children frequently first come to the attention of school officials in the form of truancy. Parents who neglect their children often fail to get their children to school, fail to provide the needed health screenings

and immunizations necessary for admission to school, and fail to provide school supplies. Children who are physically abused often show similar patterns of truancy because parents are reluctant to send children with obvious bruises or injuries to school. When children are at school, signs of neglect and abuse may include children in dirty clothing, children who appear very fatigued and fall asleep during class, and children who appear malnourished, depressed, withdrawn, aggressive, angry, or sad. Obviously, a child who is frequently absent from school, tired, hungry, angry, worried, depressed, and scared is not able to learn as effectively as other children. School personnel also need to be trained to look for signs of learning difficulties due to brain damage, hidden wounds or bruises (a child may be reluctant to dress for physical education class for fear of showing hidden injuries), hearing loss, untreated dental caries, and a wide variety of learning disabilities due to malnutrition, medical neglect, and physical abuse.

School personnel who are trained to observe these and other signs of abuse, and who know how and to whom to report abuse, can be very helpful to law enforcement and child protective services officials in providing documented patterns of neglect and abuse. Schools can also be helpful in cooperating with community-based agencies in the treatment plans for families, and in assuring that children are receiving school-based health, mental health, tutoring, food, and social services.

Child Protective Services (CPS) comprises a highly specialized set of laws, funding streams, agencies, lawyers, partnerships, and collaborations that together form the government's response to reports of child abuse and neglect. Criticisms of this system have led professionals to consider ways to reform the system to better identify, prevent, and treat child abuse. The criticisms include:

- *Overinclusion.* Many referrals for abuse and neglect are not substantiated. This exposes some families and their children to unnecessary investigations and intrusions and overburdens the system with investigations that cause delays in getting help to the families that really need it.
- *Capacity.* The number of referrals to the CPS system exceeds the system's ability to respond effectively. Both federal and state laws require CPS agencies to accept and respond to all reports of child abuse, but the resources dedicated

to these activities have not kept pace with the demand. Most professionals agree that the system is significantly overloaded.

- *Underinclusion.* Some cases of abuse and neglect are not identified and reported. In both very rural areas and high-density cities, many cases of child abuse and neglect go unrecognized and unreported.
- *Service orientation.* The two basic service orientations of the CPS system are family preservation (keeping the child at home with services); and child safety and rescue (removing the child from the home for the protection of the child). These orientations are in direct conflict with each other and frequently do not serve families well.
- *Service Delivery.* Many suitable services are not always available, service delivery is unequal across communities and states, there is a shortage of culturally appropriate services, and services are often fragmented.

Those who propose to reform the CPS system see two changes as fundamental: (1) improvement of identification and reporting systems to focus on high-risk cases that need immediate intervention, and (2) the creation of community partnerships to provide services in more culturally appropriate ways. A third element is an emphasis on tailoring interventions to fit the needs of each family. Although these reforms do not necessarily cost additional dollars, they do require a significant shift in thinking and planning, and the reformers must develop new ways to track accountability. CPS is a very high-risk business, and by creating community partnerships the risk will be shared with other agencies. The challenge in reform is to create a system that manages the risk in a way that assures the safety of the children who depend upon it.

*See also:* CHILD PROTECTIVE SERVICES; VIOLENCE, CHILDREN'S EXPOSURE TO.

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DEBBIE MILLER

## CHILD CARE

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#### AVAILABILITY AND QUALITY

Amy Harris-Solomon

#### COST AND FINANCING

Amy Harris-Solomon

#### AVAILABILITY AND QUALITY

*Child care* is a broad term used to describe any number of arrangements or settings where the primary responsibility is caring for young children. There are as many different settings as there are definitions of quality in child care. The number of young children under the age of five who are cared for during part of the day by adults other than their custodial parents has increased dramatically since 1980, due in large part to an increase in mothers joining the workforce.

According to the 2002 Quality Counts survey conducted by *Education Week*, approximately six out

of every ten children, or almost 12 million children, age five and younger, are being jointly cared for by parents and early childhood educators, relatives, or other child-care providers.

While many parents may prefer to stay home with their infants or young children, this is not a financial option for most. The United States, unlike many other nations, does not have a paid parental leave plan for employees after the birth of a baby. This forces many families to return to work immediately and necessitates the need for weighing child-care options. Parents are forced to make child-care choices based on family financial resources, the availability or location of child care, hours of operation, or other factors not necessarily associated with quality. It is not uncommon to hear of a mother calling child-care centers to get on waiting lists before calling family members to share the joyful news that she is expecting. Waiting lists for quality programs can be years long, and some families may never gain entry despite all their prior planning. Many parents pay application fees at multiple centers in hopes of getting in somewhere. This can be costly, with application fees ranging from \$25 to \$150 or more annually.

### Types of Care

There are several types of child care available to families of young children, and there are quality indicators associated with each. *In-home care* is one type of arrangement that allows the child or children to remain in their home environment. In this model of care, the provider either comes to the home or lives part- or full-time in the family's home. Frequently, a relative is the person providing the care, and in this situation it is not required that a child-care license be obtained. Families with low to moderate income levels often choose in-home care, with grandparents caring for multiple children of varying ages at one time.

Higher-income families may have the option of hiring an au pair or a nanny to provide in-home care. While there are no licensing requirements for being an au pair or a nanny, there are interview processes and agencies that can assist with this process. Typically, au pairs or nannies provide more than routine child care, often assisting with daily household activities, including running errands, shopping, doing laundry, fixing meals, and cleaning house.

The care of the child or children is the responsibility of the provider in much the same way as that

of a parent. Quality-of-care indicators might include a child's overall development, health, and happiness, as defined and measured by the parent and provider. There are no overall standards related to fee structure, roles, and responsibilities, especially in the case of relative caregivers. Payment for services is dependant on factors such as whether the person providing care is receiving room and board and/or other benefits, and whether the person is a family member doing child care as a favor or as a family obligation.

*Family day homes* offer group care to young children in another person's home. This is often a choice families make based on either the desire to keep their child in a more typical family-friendly environment (compared to a child-care center), or on finances, since a family day home may not be as costly as a center-based program. The adult-to-child ratio may be the same, but the environment more closely resembles that of a family's home.

Each state has standards for family day homes and regulations regarding licensing. Unlike in-home care, which allows an unlimited number of related children, family care requires licensing if children from more than one family are present. Individual states set their own system for monitoring these day homes, and assessment scales are available for measuring quality of care and facilities. One commonly used tool is the Family Day Care Rating Scale, devised by Thelma Harms and Richard Clifford in 1989. This rating scale assesses the quality of care related to organization of space, interactions between adults and children (as well as adults with other adults, such as other professionals or parents), schedules for young children's activities, and provisions for children and adults.

Child-care centers offer another option for working parents or primary caregivers of young children. There is great disparity in child-care centers, ranging from where they are located to the fees they charge. Centers may be located in churches, at universities, in corporate settings, or in independent child-care buildings. These settings may be in urban, suburban, or rural communities. Fees are based on sliding scales determined by a family's income, and scholarships may be available if a family meets certain income criteria established by the agency providing care. Requirements vary from center to center in regard to the qualifications of staff and the program director.

## Choosing Child Care

One of the greatest ways that centers differ is in their philosophies of child care. Many child-care centers follow what is considered developmentally appropriate practice for young children, or best practices, as established by the organizations and professionals in the field of early childhood, while some centers do not. While licensing standards are required for child-care centers, these standards are often minimal, and are generally focused on health and safety issues rather than good-quality practices with young children. These are only a few of the challenges a family encounters when seeking child-care services outside the home.

Families will weigh all the options for care when considering what works best for their individual child, children, or family. Every family seeking child care has its own unique set of circumstances and needs, priorities, and concerns regarding its children. Quality child care that is available everywhere and is standardly priced would serve a larger community, rather than being a luxury for only those who can afford it. Money does not necessarily translate into quality care. There are several high priced centers or child-care providers that provide less than high quality services for young children. So how does one determine quality standards of care when family situations are so unique, and when there is such disparity in need?

## Indicators of Quality Care

The importance of the first three years of life in a child's development is clear. Brain research from the last decade of the twentieth century shows that children are learning from the moment of birth, and that the early years provide the essential building blocks for later learning. It is imperative that these early experiences are of high quality, and that children are given every opportunity to succeed. Early childhood specialists, organizations, and researchers have focused much attention on what constitutes quality care for infants and young children.

Defining high quality care is challenging, though there is a general consensus among early-childhood professional organizations and child-care licensing agencies regarding the categories to be included when evaluating quality. There are a multitude of child-care checklists available to assist families in seeking quality-care choices, as well as a multitude of provider checklists to assess the quality within their own programs.

The following issues may be considered when assessing quality of care: (1) the physical setting or environment; (2) learning activities or daily routines; (3) interactions; (4) staff, including ratios of adults to children, qualifications, and training; (5) health and safety issues; and (6) parental involvement. Quality is addressed here as it may be measured in a child-care center, as opposed to in-home or family group child-care settings.

**Physical environment.** The physical environment should be appealing, bright, and cheerful for young children. There should be plenty of space for children to move around, and areas should be designed to separate quiet play from active play, including in outdoor play areas. Inadequate space for the number of children creates difficulties for following the routines or does not allow enough open space for play. Child-care regulations stipulate the minimum space allowable based on the number of children enrolled. Space should be suitable for the activity or materials to be used. For example, if children are playing in a dramatic play center, there should be ample space available to carry out the activities or routines of the center, such as pretend shopping with counter space for a toy register, groceries on shelves, and room to move around and pretend shop without children bumping into each other. If space is not available to freely move about, the environment is not properly arranged to allow children to express themselves and play safely. It is important for materials to be available on a child's level, to promote independence in play. A variety of learning centers (i.e., home living, manipulative play, block area, book corner, and other age-appropriate centers) offer children opportunities to engage in a wide range of learning opportunities.

**Daily activities and routines.** Children learn to predict what comes next through consistent routines. Daily activities that allow children to be engaged in meaningful activities and to have some control over their environment will foster a child's choice-making and problem-solving skills. Adults should actively arrange the environment to allow for independence in young children, and activities should be designed to stimulate children in all areas of development, including social, emotional, physical, adaptive, cognitive, and communication domains.

Activities and routines must be appropriate for the age and developmental levels of the children being cared for, and individual needs of children should be considered in program and planning deci-

sions. High quality child-care centers will employ adults that are respectful of children's interests and supportive, as well as actively involved in helping children resolve conflicts and problems without utilizing punitive behavior strategies.

**Interactions.** Positive interactions—those that indicate a healthy respect for children and adults—are another indicator of high quality in child care. Adults in a high-quality program listen to and talk to young children and their families. They are available and responsive to the children's wants and needs, and understand the importance of development and how it impacts children at different stages. It is important that they genuinely like young children and strive to help them learn skills such as cooperative play and to foster positive peer interactions. They also understand how relationships develop, and take responsibility for the part they play in making positive partnerships with families of children in their care.

**Staff qualifications, training, adult-to-child ratios.** State child-care licensing agencies offer minimum guidelines regarding appropriate ratios of child-care providers to children. National licensing organizations, such as the National Association for Education of Young Children (NAEYC), and professional organizations, such as Zero to Three, are generally more conservative in the numbers they recommend as best practice for group size and adult-to-child ratios, and offer good rationales for using smaller numbers. High-quality relationships between teachers and young children have been directly linked to better classroom social and thinking skills in subsequent grades.

The Cost, Quality, and Outcome research project, conducted by the University of North Carolina at Chapel Hill, the University of Colorado Health Sciences Center, the University of California, and Yale University, produced an executive summary in June 1999 that evaluated the effects of child care on a child's later performance in school. The overall results indicate that: (1) the quality of child care is an important element for preparing young children for school readiness; (2) high-quality care early in life continues to have an impact on children as they move on in school; (3) children who are traditionally considered at risk for developmental delays due to low income or other environments show more positive gains from quality child-care experiences than other children; and (4) early relationships with

teachers continue to influence children's social development as they move through elementary school.

Programs vary in the qualifications required for employing staff. Child-care providers have a variety of experiences and training related to working with young children. Quality indicators include individualized training or staff development for caregivers, support available for in-service training, benefits packages that support employees, CPR and first aid training requirements, formal and informal observations of adult caregivers, and caregivers knowledgeable in child development, both typical and atypical.

**Health and safety.** High-quality health and safety practices require ongoing evaluation and assessment. It is important to keep a facility or environment clean and free of hazards. Materials should be routinely cleaned and checked for safety. Safety precautions must be established, and policies regarding medication, hand washing, diapering or potty training, and storing cleaning materials out of reach must be adhered to. High-quality programs have emergency plans in place for any medical emergency, weather-related emergency, or unplanned for situations. Parents should be informed and knowledgeable about these plans.

**Parent involvement.** Parents are a child's first teachers, and generally, parents know their children best. High quality programs recognize the value of including parents, who are made to feel welcome and are encouraged to be involved on whatever level they are comfortable. Parents give input to the child-care program, and they are allowed to visit whenever they choose. Positive relationships between caregivers and parents are an indicator of quality in child care. Communication is open, respectful, and non-discriminative. Parents feel comfortable sharing information because they understand they are in a partnership with the provider. Additionally, parents are linked to other service providers or programs in the community that may benefit their family.

A 1994 Carnegie Corporation report refers to the problems of the nation's youngest children and their families as "the quiet crisis." The report states that approximately half of America's young children start life at a disadvantage due to risk factors that include substandard child care. In the early twenty-first century, the well-being of many children is still in jeopardy due to inadequate child care.

*See also:* EARLY CHILDHOOD EDUCATION; LITERACY, *subentry on* EMERGENT LITERACY; PARENTAL INVOLVEMENT IN EDUCATION.

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## COST AND FINANCING

The need for child care in the United States increased dramatically in the last two decades of the twentieth century—a direct result of a large increase in the percentage of mothers in the workforce. In 1965 only 17 percent of mothers who had children under the age of one were in the labor force. By 1991, however, 53 percent of this group were working outside the home.

The Quality Counts 2002 report, published in *Education Week*, estimated that 11.9 million children, or six in ten children under the age of five,

were enrolled in some form of child care during the previous year. In the United States, families are not offered extensive parental leave following the birth of a child, and often, due to financial constraints, mothers or both parents must return to work soon after a new baby is born, generally within six to eight weeks. More than half of all mothers return to work within the first year after a baby's birth.

### The Cost of Care

Many of the families who need child care also require some financial assistance. Child care comes in many forms, and there is not a standard arrangement or fee based on the age of a child or a family's circumstance. The cost of care may be associated with the type of care provided, such as infant care, toddler care, preschool care, or care for children who have special needs or those who are considered at risk due to environmental or other factors.

Infant care and toddler care are usually more expensive than care for a preschooler or a school-age child, due to the number of adults required per child. In general, younger children require more adults to provide care. Rates may also vary from provider to provider based on location (rural or urban), reputation, hours of operation, population served, and requirements for teachers. However, there is no way to equate the quality of care a child receives with the costs associated with that care.

The expenses of child care can impact a budget significantly, regardless of who is paying for the service. A 1994 Carnegie Corporation report states that \$120 billion to \$240 billion are spent annually on goods and services devoted to the care and education of young children. The average cost for care for one child can range from \$40 to \$200 per week, not counting application fees, activity fees, transportation fees, late pickup fees, care for special holidays, or days a program is closed and alternate care must be arranged.

The Carnegie Corporation report further states that families who have incomes below \$15,000 annually spend 23 percent of their income on child care, while families who have incomes of around \$50,000 spend approximately 6 percent of their income on care. It is obvious that the lower-income family is affected more significantly when funding child care. In the United States, nearly one-quarter of the families who have children under the age of three live in poverty, and many are single-parent families. For these

families, quality child care at an affordable cost is difficult to find.

The burden of the costs of child care is primarily the responsibility of families. Overall, families pay approximately 60 percent of child care, with the government paying 39 percent and the private sector 1 percent, according to statistics from the Quality Counts 2002 report.

### Effects of Quality Child Care

There is ample research available in the field of early childhood education and child development that supports the importance of enriching and stimulating early experiences in promoting healthy development. The first three years of life are considered crucial, with brain development occurring most rapidly during this period. Parents are often left scrambling to make decisions on what environment is best for their child, and struggling to meet the high price of programs that claim to support these positive early developmental experiences. While there are a growing number of pre-K programs for preschoolers paid for by state dollars, most of the costs are funded by parents. It is not uncommon for a more elite academic preschool to cost between \$3,000 and \$10,000 annually.

Research from the Carolina Abecedarian Project underlines the need for high-quality preschool experiences for young children from low-income environments. Of the 100 children studied, half attended preschool and half did not. The children were studied until they reached the age of twenty-one. The children who attended preschool from infancy to age five scored higher on reading measures at age eight, and consistently until age twenty-one, than those children who did not attend preschool. The summary from a 1999 cost, quality, and outcome study conducted by researchers from four major universities confirms the benefits of high-quality early child care for children. In this study, high quality child care was directly linked to later school performance and success in social development throughout the early school years, especially for low-income children.

### Funding Options

With more emphasis on quality child-care experiences coupled with the growing need for child care due to the increase in working mothers, options for funding child care are expanding, and creative ways to support the growing need are being explored. The Quality Counts 2002 report discusses how states are

seeking new sources of funding for child-care initiatives, including taxing beer and cigarettes or utilizing proceeds from state lotteries.

Some businesses offer employees a form of corporate child care or a flexible work plan to accommodate child-care issues. Benefits are being extended for fathers of newborns, so leave is not exclusively for mothers. This allows families more flexibility in how they coordinate the first few months after a baby is born. Corporations are discovering that on-site child care gives employees peace of mind, allowing for more satisfaction in the work environment and more long-term retention of employees.

In 1996 welfare reform legislation was passed, providing almost \$3 billion annually in the form of block grants to the states for low-income families. This money is designed to provide some financial support to single parents in the welfare-to-work program. Single parents (generally mothers) who are enrolled in a full-time work or school program are eligible to apply for these funds to help supplement their income for child-care costs.

Federal welfare funds distributed through the Child Care and Development Fund (CCDF) exceeded \$4 billion in 2001. Additionally, \$5 billion was utilized for child-care assistance through the Temporary Assistance for Needy Families program in 2000. As stated in the Quality Counts 2002 report, the subsidy from the federal welfare monies has had the biggest impact in the growth of state programs. Other programs supported through the federal government include Head Start, Title I, and the Individuals with Disabilities Education Act. These programs offer financial assistance for child care to children from low-income homes or to children who have special needs.

Many states are offering state-funded preschool programs in the early twenty-first century. While these programs are not accessible to every child, they are targeting the population that is most in need of state-funded school-based programs. Some states are moving toward the concept of universal preschool. Every state provides at least some funding for kindergarten.

States struggle to piece together systems of funding that will at least support the neediest populations—those who would not be able to afford preschool experiences without subsidies. Individual programs scramble to compete for available funding

sources, often supplementing the cost of child care through grants from agencies (such as United Way), private corporations, or foundations.

Some agencies, due to budgetary constraints, are not capable of offering sliding fee scales or accepting state child-care certificates or scholarships for children who meet income eligibility. Many agencies work with the U.S. Department of Agriculture to procure reimbursement for children who meet income eligibility for free or reduced meals. At best, this is a patchwork system for parents, providers, government, and unfortunately all too often, for the children.

The benefits of high-quality care have been proven. In analyzing the system of child care and the funding associated with it, there is a need to further equate quality with expectations for qualified persons caring for young children. People who work in this field in the early twenty-first century are compensated at rates equivalent to people who work in fast-food restaurants and other nonprofessional positions. Teachers are responsible for helping shape the future and enhancing a child's early development. The quality of the environments young children are placed in, and the quality of the people caring for them, can influence their future. If quality is equated to dollars, quality care will only be accessible to the wealthy. Because child care is not locally accessible to all, some children will not receive the advantage of high-quality care. Families and other stakeholders that understand both the need and value of high-quality care will seek these programs for their children.

*See also:* EARLY CHILDHOOD EDUCATION; WELFARE REFORM.

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## CHILD DEVELOPMENT, STAGES OF GROWTH

Definitions of stages of growth in childhood come from many sources. Theorists such as Jean Piaget, Lev Vygotsky, Lawrence Kohlberg, and Erik Erikson have provided ways to understand development, and recent research has provided important information regarding the nature of development. In addition, stages of childhood are defined culturally by the social institutions, customs, and laws that make up a society. For example, while researchers and professionals usually define the period of early childhood as birth to eight years of age, others in the United States might consider age five a better end point because it coincides with entry into the cultural practice of formal schooling.

There are three broad stages of development: early childhood, middle childhood, and adolescence. The definitions of these stages are organized around the primary tasks of development in each stage, though the boundaries of these stages are malleable. Society's ideas about childhood shift over time, and research has led to new understandings of the development that takes place in each stage.

### Early Childhood (Birth to Eight Years)

Early childhood is a time of tremendous growth across all areas of development. The dependent newborn grows into a young person who can take care of his or her own body and interact effectively with others. For these reasons, the primary developmental task of this stage is *skill development*.

Physically, between birth and age three a child typically doubles in height and quadruples in weight. Bodily proportions also shift, so that the infant, whose head accounts for almost one-fourth of total body length, becomes a toddler with a more balanced, adult-like appearance. Despite these rapid physical changes, the typical three-year-old has mastered many skills, including sitting, walking, toilet training, using a spoon, scribbling, and sufficient hand-eye coordination to catch and throw a ball.

Between three and five years of age, children continue to grow rapidly and begin to develop fine-motor skills. By age five most children demonstrate fairly good control of pencils, crayons, and scissors. Gross motor accomplishments may include the ability to skip and balance on one foot. Physical growth slows down between five and eight years of age, while body proportions and motor skills become more refined.

Physical changes in early childhood are accompanied by rapid changes in the child's cognitive and language development. From the moment they are born, children use all their senses to attend to their environment, and they begin to develop a sense of cause and effect from their actions and the responses of caregivers.

Over the first three years of life, children develop a spoken vocabulary of between 300 and 1,000 words, and they are able to use language to learn about and describe the world around them. By age five, a child's vocabulary will grow to approximately 1,500 words. Five-year-olds are also able to produce five- to seven-word sentences, learn to use the past tense, and tell familiar stories using pictures as cues.

Language is a powerful tool to enhance cognitive development. Using language allows the child to communicate with others and solve problems. By age eight, children are able to demonstrate some basic understanding of less concrete concepts, including time and money. However, the eight-year-old still reasons in concrete ways and has difficulty understanding abstract ideas.

A key moment in early childhood socioemotional development occurs around one year of age. This is the time when attachment formation becomes critical. Attachment theory suggests that individual differences in later life functioning and personality are shaped by a child's early experiences with their caregivers. The quality of emotional attachment, or lack of attachment, formed early in life may serve as a model for later relationships.

From ages three to five, growth in socioemotional skills includes the formation of peer relationships, gender identification, and the development of a sense of right and wrong. Taking the perspective of another individual is difficult for young children, and events are often interpreted in all-or-nothing terms, with the impact on the child being the foremost concern. For example, at age five a child may expect others to share their possessions freely but

still be extremely possessive of a favorite toy. This creates no conflict of conscience, because *fairness* is determined relative to the child's own interests. Between ages five and eight, children enter into a broader peer context and develop enduring friendships. Social comparison is heightened at this time, and taking other people's perspective begins to play a role in how children relate to people, including peers.

**Implications for in-school learning.** The time from birth to eight years is a critical period in the development of many foundational skills in all areas of development. Increased awareness of, and ability to detect, developmental delays in very young children has led to the creation of early intervention services that can reduce the need for special education placements when children reach school age. For example, earlier detection of hearing deficits sometimes leads to correction of problems before serious language impairments occur. Also, developmental delays caused by premature birth can be addressed through appropriate therapies to help children function at the level of their typically developing peers before they begin school.

An increased emphasis on early learning has also created pressure to prepare young children to enter school with as many prerequisite skills as possible. In 1994 federal legislation was passed in the United States creating Goals 2000, the first of which states that "All children will enter school ready to learn" (U.S. Department of Education, 1998). While the validity of this goal has been debated, the consequences have already been felt. One consequence is the use of standardized readiness assessments to determine class placement or retention in kindergarten. Another is the creation of transition classes (an extra year of schooling before either kindergarten or first grade). Finally, the increased attention on early childhood has led to renewed interest in preschool programs as a means to narrow the readiness gap between children whose families can provide quality early learning environments for them and those whose families cannot.

### **Middle Childhood (Eight to Twelve Years)**

Historically, middle childhood has not been considered an important stage in human development. Sigmund Freud's psychoanalytic theory labeled this period of life the *latency* stage, a time when sexual and aggressive urges are repressed. Freud suggested that no significant contributions to personality de-

velopment were made during this period. However, more recent theorists have recognized the importance of middle childhood for the development of cognitive skills, personality, motivation, and interpersonal relationships. During middle childhood children learn the values of their societies. Thus, the primary developmental task of middle childhood could be called *integration*, both in terms of development within the individual and of the individual within the social context.

Perhaps supporting the image of middle childhood as a latency stage, physical development during middle childhood is less dramatic than in early childhood or adolescence. Growth is slow and steady until the onset of puberty, when individuals begin to develop at a much quicker pace. The age at which individuals enter puberty varies, but there is evidence of a secular trend—the age at which puberty begins has been decreasing over time. In some individuals, puberty may start as early as age eight or nine. Onset of puberty differs across gender and begins earlier in females.

As with physical development, the cognitive development of middle childhood is slow and steady. Children in this stage are building upon skills gained in early childhood and preparing for the next phase of their cognitive development. Children's reasoning is very rule based. Children are learning skills such as classification and forming hypotheses. While they are cognitively more mature now than a few years ago, children in this stage still require concrete, hands-on learning activities. Middle childhood is a time when children can gain enthusiasm for learning and work, for achievement can become a motivating factor as children work toward building competence and self-esteem.

Middle childhood is also a time when children develop competence in interpersonal and social relationships. Children have a growing peer orientation, yet they are strongly influenced by their family. The social skills learned through peer and family relationships, and children's increasing ability to participate in meaningful interpersonal communication, provide a necessary foundation for the challenges of adolescence. Best friends are important at this age, and the skills gained in these relationships may provide the building blocks for healthy adult relationships.

**Implications for in-school learning.** For many children, middle childhood is a joyful time of increased

independence, broader friendships, and developing interests, such as sports, art, or music. However, a widely recognized shift in school performance begins for many children in third or fourth grade (age eight or nine). The skills required for academic success become more complex. Those students who successfully meet the academic challenges during this period go on to do well, while those who fail to build the necessary skills may fall further behind in later grades.

Recent social trends, including the increased prevalence of school violence, eating disorders, drug use, and depression, affect many upper elementary school students. Thus, there is more pressure on schools to recognize problems in eight- to eleven-year-olds, and to teach children the social and life skills that will help them continue to develop into healthy adolescents.

### **Adolescence (Twelve to Eighteen Years)**

Adolescence can be defined in a variety of ways: physiologically, culturally, cognitively; each way suggests a slightly different definition. For the purpose of this discussion adolescence is defined as a culturally constructed period that generally begins as individuals reach sexual maturity and ends when the individual has established an identity as an adult within his or her social context. In many cultures adolescence may not exist, or may be very short, because the attainment of sexual maturity coincides with entry into the adult world. In the current culture of the United States, however, adolescence may last well into the early twenties. The primary developmental task of adolescence is *identity formation*.

The adolescent years are another period of accelerated growth. Individuals can grow up to four inches and gain eight to ten pounds per year. This growth spurt is most often characterized by two years of fast growth, followed by three or more years of slow, steady growth. By the end of adolescence, individuals may gain a total of seven to nine inches in height and as much as forty or fifty pounds in weight. The timing of this growth spurt is not highly predictable; it varies across both individuals and gender. In general, females begin to develop earlier than do males.

Sexual maturation is one of the most significant developments during this time. Like physical development, there is significant variability in the age at which individuals attain sexual maturity. Females

tend to mature at about age thirteen, and males at about fifteen. Development during this period is governed by the pituitary gland through the release of the hormones testosterone (males) and estrogen (females). There has been increasing evidence of a trend toward earlier sexual development in developed countries—the average age at which females reach menarche dropped three to four months every ten years between 1900 and 2000.

Adolescence is an important period for cognitive development as well, as it marks a transition in the way in which individuals think and reason about problems and ideas. In early adolescence, individuals can classify and order objects, reverse processes, think logically about concrete objects, and consider more than one perspective at a time. However, at this level of development, adolescents benefit more from direct experiences than from abstract ideas and principles. As adolescents develop more complex cognitive skills, they gain the ability to solve more abstract and hypothetical problems. Elements of this type of thinking may include an increased ability to think in hypothetical ways about abstract ideas, the ability to generate and test hypotheses systematically, the ability to think and plan about the future, and meta-cognition (the ability to reflect on one's thoughts).

As individuals enter adolescence, they are confronted by a diverse number of changes all at one time. Not only are they undergoing significant physical and cognitive growth, but they are also encountering new situations, responsibilities, and people.

Entry into middle school and high school thrusts students into environments with many new people, responsibilities, and expectations. While this transition can be frightening, it also represents an exciting step toward independence. Adolescents are trying on new roles, new ways of thinking and behaving, and they are exploring different ideas and values. Erikson addresses the search for identity and independence in his framework of *life-span development*. Adolescence is characterized by a conflict between identity and role confusion. During this period, individuals evolve their own self-concepts within the peer context. In their attempts to become more independent adolescents often rely on their peer group for direction regarding what is normal and accepted. They begin to pull away from reliance on their family as a source of identity and may encounter conflicts between their family and their growing peer-group affiliation.

With so many intense experiences, adolescence is also an important time in emotional development. Mood swings are a characteristic of adolescence. While often attributed to hormones, mood swings can also be understood as a logical reaction to the social, physical, and cognitive changes facing adolescents, and there is often a struggle with issues of self-esteem. As individuals search for identity, they confront the challenge of matching who they want to become with what is socially desirable. In this context, adolescents often exhibit bizarre and/or contradictory behaviors. The search for identity, the concern adolescents have about whether they are normal, and variable moods and low self-esteem all work together to produce wildly fluctuating behavior.

The impact of the media and societal expectations on adolescent development has been far-reaching. Young people are bombarded by images of violence, sex, and unattainable standards of beauty. This exposure, combined with the social, emotional, and physical changes facing adolescents, has contributed to an increase in school violence, teen sexuality, and eating disorders. The onset of many psychological disorders, such as depression, other mood disorders, and schizophrenia, is also common at this time of life.

**Implications for in-school learning.** The implications of development during this period for education are numerous. Teachers must be aware of the shifts in cognitive development that are occurring and provide appropriate learning opportunities to support individual students and facilitate growth. Teachers must also be aware of the challenges facing their students in order to identify and help to correct problems if they arise. Teachers often play an important role in identifying behaviors that could become problematic, and they can be mentors to students in need.

## Conclusion

The definitions of the three stages of development are based on both research and cultural influences. Implications for schooling are drawn from what is known about how children develop, but it should be emphasized that growth is influenced by context, and schooling is a primary context of childhood. Just as educators and others should be aware of the ways in which a five-year-old's reasoning is different from a fifteen-year-old's, it is also important to be aware

that the structure and expectations of schooling influence the ways in which children grow and learn.

*See also:* DEVELOPMENTAL THEORY; ERIKSON, ERIK; KOHLBERG, LAWRENCE; PIAGET, JEAN; VYGOTSKY, LEV.

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## CHILD PROTECTIVE SERVICES

#### HISTORICAL OVERVIEW

William Wesley Patton

#### CURRENT SYSTEM

William Wesley Patton

### HISTORICAL OVERVIEW

No ancient civilization considered child protection to be a governmental function. In ancient Rome, for instance, fathers were vested with an almost unlimited natural right to determine the welfare of their children. The welfare of minors was a family matter, not a governmental interest or obligation. Most other governments of the ancient world provided no limits to a father's right to inflict corporal punishment, including infanticide.

#### English Common Law

Experts disagree regarding the genesis of formalized state child protection under English common law. Litigation in England in the late fourteenth and early fifteenth centuries involved the king seeking vindication of his feudal incidents (powers and benefits of the King and Lords in relation to land and inheritance) regarding tenants' infant heirs. This governmental intervention indirectly protected children's estates from being depleted by opportunistic adults. By the late seventeenth century, the chancery court exercised its jurisdiction in determining the interest of minors subject to guardianships, though court jurisdiction was limited to issues of children's inheritance and real property interests. However, in *Corcellis v. Corcellis No. 1* (1673) and *Shaftsbury v. Hannam* (1677) the chancery court viewed the question of guardianship to be broad enough to include

issues involving the proper education of wards. Legal historians disagree whether these early common-law inheritance cases were the basis for the government's general jurisdiction over the welfare of children through the doctrine of *parens patriae* ("father of the country," a term used in law to denote the government's power to protect its citizens).

In addition to the case-by-case determinations by the chancery court regarding children's property and guardianships, Parliament, in 1601, promulgated the Poor Law Act, which, among other provisions, provided the government jurisdiction to separate children from pauper parents and to place poor children in apprenticeships until the age of majority (21 for males and 16 for females). In 1660 Parliament passed the Tenures Abolition Act, which presaged the end of feudalism, including guardianships in chivalry that had formed the basis for the earlier Court of Wards and Court of Chancery over the guardianship of both children's and the Crown's inheritance and property interests. ("Guardianships in chivalry" provided that when a tenant on a lord's land died leaving an heir under the age of majority, the lord could control the minor heir's inheritance until the child became an adult.) The Tenures Abolition Act was revolutionary because it vested in the father the right to appoint a guardian for his child heir, which was previously forbidden under the feudal inheritance laws.

From 1660 until 1873 the Court of Chancery administered equity jurisdiction in conflicts between private parties over testamentary guardianships. It was during these equity determinations that the Court of Chancery expanded the substantive scope of child protection to include, in addition to inheritance and property, concerns over a ward's rights to marry, to a particular type of education or school, to the choice of religious training, and to child custody arrangements. In 1839 Parliament dramatically expanded the court's jurisdiction to determine the best interest of children through the Custody of Infants Act, which provided court jurisdiction to override a father's parental rights, including rights to custody and visitation. Most historians would agree that by the nineteenth century governmental concern in the child's best interest were perfected directly through the doctrine of *parens patriae*, rather than indirectly through legal contests over property and guardianships.

## The American Colonies

The child protection policies of the early American colonists closely mirrored those of seventeenth- and eighteenth-century Britain. The colonists emphasized two aspects of English child protection theory: "the common law rules of family government; and the traditions and child-care practices of the Elizabethan Poor Laws of 1601" (Thomas, p. 299). Although colonial remedies of placing pauper children into involuntary apprenticeships or into poorhouses initially followed English legal customs, soon colonial theorists expanded court jurisdiction over juveniles to include contexts beyond poverty. For instance, in eighteenth-century Virginia, courts separated children not just from poor parents, but also from parents who were not providing "'good breeding,' neglecting their formal education, not teaching a trade, or were idle, dissolute, unchristian or 'unable'" (Rendleman, p. 210). Calvinist notions of poverty as idleness and sin permitted court expansion into the normative definitions of the "best interest" of children.

Until the mid-1800s, child protection laws did not differentiate among different classes of children; so that dependent children, status offenders, and juvenile delinquents were either housed together in poorhouses with adults or involuntarily apprenticed. However, by 1830, "an embryonic reform movement had begun," which removed dependent children from the teeming poorhouses and placed them in large orphan asylums. (Thomas, pp. 302–303). Due to the refuge movement (1824–1857), private corporations such as the New York House of Refuge (founded in 1824) received public funds and cared for both neglected and delinquent children in large institutions that separated juveniles from adult criminals and paupers. However, by the mid-1850s an anti-institution movement had developed, with the goal of placing poor city children in country foster placements rather than in large city institutions. Even though numerous state statutes were promulgated in the nineteenth century to care for abused and neglected children, government machinery was inadequate to implement sufficient protection.

In 1875 in New York, the first Society for the Prevention of Cruelty to Children (SPCC) was founded to help enforce child protection laws. However, since the SPCC was composed primarily of "wealthy, white men, almost all of them Protestant," who hired middle-class men as family investigators, the families that were targeted were largely poor im-

migrant families, who were judged by middle-class mores and vague standards such as “without proper parental guardianship” (Schiff, p. 413). The numerous competing reform movements and children’s aid societies of the mid- to late 1800s focused on the child as a member of a family group, not as an autonomous individual, and most emphasized removing children from their own families and placing them into a different home environment. By 1879 the New York Children’s Aid Society had sent 48,000 children out of New York to live with other families. After its first fourteen years, the New York Society for the Prevention of Cruelty to Children “investigated nearly 70,000 complaints of ill-treatment of 209,000 children. Prosecutions were pursued in 24,500 of these cases, resulting in almost 24,000 convictions and the removal of 36,300 children” (Schiff, pp. 413–414).

By the beginning of the twentieth century the tide had turned away from family separation and toward family preservation. At the 1909 White House Conference on the Care of Dependent Children, it was declared that “[h]ome life is the highest and finest product of civilization. It is the great molding force of mind and of character” (Tanenhaus, p. 550). The twentieth century ushered in a dramatic shift away from private child protective services in favor of governmental control by public agencies authorized under both federal and state child protection statutory schemes. In 1899 Illinois promulgated the first juvenile court, whose stated purpose was to provide for the care and custody of children in a manner that was an alternative equivalent to that of their parents. By 1920 all but three states had a juvenile court system.

But the goal of family reunification was rarely realized by the early juvenile courts, because few services were made available to assist poor uneducated parents in curing the conditions that led to state intervention. Instead, children remained in out-of-home placements for considerable periods of time. For instance, in Chicago, the city with the nation’s first juvenile court, the rate of family reunification in 1921 was about the same as in 1912 (70%), but in 1921 more children were staying in institutions for longer periods than in 1912.

### The Constitution and Child Protection Laws

Between 1875 and 1900 numerous challenges to the vague legal definitions of child dependency and the informal legal proceedings leading to the separation

of parents and children were denied. Early court decisions did not speak in terms of parents’ constitutional rights to rear their children, did not closely circumscribe the state’s *parens patriae* power to protect children, rejected arguments based upon criminal law analogies, and failed to articulate procedural due process protections for families caught in the child protection legal maelstrom.

Although state and county juvenile courts continued to evolve and to provide different levels of due process in child protection proceedings, the modern child dependency court development was shaped by several decisions of the U.S. Supreme Court, which formalized the court process. In *Meyers v. Nebraska* (1923) the Court held that parents have a fundamental constitutional liberty interest in rearing their children. Based upon that liberty interest, the Court held in *Lassiter v. Department of Social Services* (1981) that, under certain circumstances, parents are entitled to court-appointed attorneys when they face involuntary termination of their parental rights in child protection proceedings. And in *Santosky v. Kramer* (1982) the Court held that the state has the burden of demonstrating, by clear and convincing evidence, that termination of parental rights is necessary to protect children. Local juvenile courts no longer had unbridled discretion to informally and permanently separate parents and children. However, the U.S. Constitution became the sounding board only in cases involving permanent severance of parental rights. States are still free to provide fewer due-process procedural rights in temporary child protection cases.

### Federal Statutory Policy

In the 1980s and 1990s the autonomy of state child protection schemes was further compromised and homogenized by a series of federal statutes. In 1980, Congress passed the first comprehensive federal child protective services act, the Adoption Assistance and Child Welfare Act of 1980 (Pub. L. 96-272), which focused on state economic incentives to substantially decrease the length and number of foster care placements. This act also required specific family reunification services, reflecting the goals of the 1909 White House Conference. However, in 1997, in order to cure many of the defects in the 1980 act, Congress passed the Adoption and Safe Families Act, which shifted the focus from family reunification to expeditious permanency for children in adoptive placements. All state child protection systems adopt-

ed the federal guidelines as a requirement for receiving federal subsidies. Thus, because of constitutional and federal statutory requirements, the genesis of America's child protection system has led to great uniformity among state programs.

*See also:* CHILD ABUSE AND NEGLECT; CHILD PROTECTIVE SERVICES, *subentry on* CURRENT SYSTEM; VIOLENCE, CHILDREN'S EXPOSURE TO.

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#### CURRENT SYSTEM

In the United States, methods for protecting abused and neglected children have progressed over the years. During the colonial era, the policy was to house pauper children in poorhouses or assign them to apprenticeships, while in the early nineteenth century the preference was to place these children in orphanages and industrial schools run by private societies. During the late nineteenth century and the twentieth century, state child-dependency statutory schemes became prominent, based upon the state's jurisdiction, through *parens patriae* ("father of the country," used in law to denote the government's power to protect its citizens), to intervene in family affairs for the protection of at-risk children. Contemporary children's services are characterized by a shift in power from state to federal policy control, with a resultant structural uniformity among state child-protection models.

#### Federal Policy

Federal child-protection policy has historically favored family preservation over the institutionalization of dependent minors. As early as 1909, through the White House Conference on the Care of Dependent Children, the federal government identified the importance of the home as the central forum for child development. Until recently, the history of child protection in America has reflected this presumption of family preservation being preferable to moving an at-risk child to a possibly better or safer environment. However, it was not until 1980 that Congress passed the first comprehensive federal

child protective services act, the Adoption Assistance and Child Welfare Act (Pub. L. 96-272), which focused on state economic incentives to substantially decrease the length and number of foster care placements. This law also required specific family reunification services, reflecting the goals of the 1909 White House Conference.

In 1997, however, in order to cure many of the defects in the 1980 act, Congress passed the Adoption and Safe Families Act, which shifted the focus from family reunification to the best interests of children in expeditious permanency, which aims to rapidly finalize a permanent custodial home for minors rather than placing them temporarily in a series of different foster homes. Unlike the lengthy reunification services under the 1980 act, which often resulted in the termination of parental rights after two or three years of juvenile court intervention, the 1997 act required states to engage in “concurrent planning” at case intake. The federal goal of child protection had substantially shifted toward the child’s individual needs, rather than primarily attempting family reunification through state services. In fact, in cases involving allegations of serious abuse, the 1997 act deleted the prior requirement of state reunification services and permitted states to immediately seek to sever parental rights and place children into the new preferred placement, adoption. The 1997 act created adoption subsidies and incentives to states. This federal adoption preference soon resulted in unprecedented increases in the number of dependent children being adopted.

### **Problems with the 1997 Act**

Even though the 1997 act reduced the time within which dependent children placed outside the home would remain in temporary placements and increased the number of adoptions, it has also created new problems. First, the federal adoption subsidy program has convinced many potential foster parents to become adoptive parents, thus reducing the number of temporary placements for abused children. The adoption subsidy has also driven social service agencies toward decisions to sever parental rights in close cases, rather than continuing family reunification and temporary foster placements.

The greatest impact of this new rush to permanent adoption has been on sibling relationships. Most state statutory schemes do not recognize that significant sibling bonds are a sufficient reason to continue temporary placements, rather than split-

ting siblings into different adoptive homes. Child welfare theorists argue that the speedy adoption permanency requirement of the 1997 act is having a significant deleterious cultural impact on poor and minority families. “Black families, who dominate foster care caseloads, are the main casualties of this shift away from a service provision toward coercive state intervention, which includes the requirement to relinquish custody of children as a condition of financial assistance” (Roberts, pp. 1641–1642).

### **Educational Implications**

Prior to the 1997 act, dependent children often lived with many different foster families in different neighborhoods, and they therefore lacked any continuity in their formal education, either with teachers or with curricula. For instance, in 1993 California foster children “attend[ed] an average of 9 different schools by the age of 18 . . . [and] demonstrate[d] significantly lower achievement and lower performance in school” (Kelly, pp. 759–760).

This educational discontinuity results in a continuing introduction and departure of new and different friends and teachers, inadequate transfer of educational records, and lost academic credit. Even though “60% of children in foster care have measurable behavior or mental health problems . . . [and] [a]pproximately 35–45% . . . have developmental problems,” most do not receive appropriate diagnosis for special education classes or psychological treatment (Practicing Law Institute, p. 115). It is clear that children with disabilities trapped in this legal maelstrom are not receiving the education promised by the Individuals with Disabilities Education Act, which established legal means “to ensure that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique needs and prepare them for employment and independent living.”

### **The Decline in Child Dependency Cases**

Child neglect and abuse reports increased an average of 6 percent annually from 1985 to 1991, when the number of reports reached 2.9 million. However, since 1991 there has been a continual decrease in the number sexual abuse reports, with a 26 percent decline from 1991 to 1998 in the number of reports and an average decline for all states of 37 percent in substantiated cases. In Los Angeles County, which has more foster children than any other county in

America, the number of foster care children dropped from 18.7 per thousand in 1997 to 13.1 per thousand in 2001, and the number of reported child abuse cases dropped from 71.2 reports per thousand in 1996 to 53.1 per thousand in 2000.

In 1990 the United States Advisory Board on Child Abuse and Neglect determined that the most significant factor in failing to provide dependent children with adequate services was the overload of cases. If the decline in the number of reported child abuse cases continues, and if social services agencies do not respond by a corresponding reduction of current staff, it may become possible to provide dependent children the social services and educational services commensurate with their needs.

*See also:* CHILD ABUSE AND NEGLECT; CHILD PROTECTIVE SERVICES, *subentry on* HISTORICAL OVERVIEW; VIOLENCE, CHILDREN'S EXPOSURE TO.

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## CHILDREN'S LITERATURE

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Children's literature is any literature that is enjoyed by children. More specifically, children's literature comprises those books written and published for young people who are not yet interested in adult literature or who may not possess the reading skills or developmental understandings necessary for its perusal. In addition to books, children's literature also includes magazines intended for pre-adult audiences.

The age range for children's literature is from infancy through the stage of early adolescence, which roughly coincides with the chronological ages of twelve through fourteen. Between that literature most appropriate for children and that most appropriate for adults lies young adult literature. Usually young adult literature is more mature in content and more complex in literary structure than children's literature.

Most of the literary genres of adult literature appear in children's literature as well. Fiction in its various forms—contemporary realism, fantasy and historical fiction, poetry, folk tales, legends, myths, and epics—all have their counterparts in children's literature. Nonfiction for children includes books about the arts and humanities; the social, physical, biological, and earth sciences; and biography and

autobiography. In addition, children's books may take the form of picture books in which visual and verbal texts form an interconnected whole. Picture books for children include storybooks, alphabet books, counting books, wordless books, and concept books.

### History

Literature written specifically for an audience of children began to be published on a wide scale in the seventeenth century. Most of the early books for children were didactic rather than artistic, meant to teach letter sounds and words or to improve the child's moral and spiritual life. In the mid-1700s, however, British publisher John Newbery (1713–1767), influenced by John Locke's ideas that children should enjoy reading, began publishing books for children's amusement. Since that time there has been a gradual transition from the deliberate use of purely didactic literature to inculcate moral, spiritual, and ethical values in children to the provision of literature to entertain and inform. This does not imply that suitable literature for children is either immoral or amoral. On the contrary, suitable literature for today's children is influenced by the cultural and ethical values of its authors. These values are frequently revealed as the literary work unfolds, but they are a means to an end, not an end in themselves. Authors assume a degree of intelligence on the part of their audience that was not assumed in the past. In this respect, children's literature has changed dramatically since its earliest days.

Another dramatic development in children's literature in the twentieth century has been the picture book. Presenting an idea or story in which pictures and words work together to create an aesthetic whole, the picture book traces its origin to the nineteenth century, when such outstanding artists as Randolph Caldecott, Kate Greenaway, and Walter Crane were at work. In the 1930s and 1940s such great illustrators as Wanda Gag, Marguerite de Angeli, James Daugherty, Robert Lawson, Dorothy Lathrop, Ludwig Bemelmans, Maud and Miska Petersham, and Ingri and Edgar Parin d'Aulaire began their work. Many of these and other equally illustrious artists helped to bring picture books to their present position of prominence. Since 1945 many highly talented illustrators have entered this field.

With the advent of computer-based reproduction techniques in the latter part of the twentieth

century, the once tedious and expensive process of full color reproduction was revolutionized, and now almost any original media can be successfully translated into picture book form. Although many artists continue to work with traditional media such as printmaking, pen and ink, photography, and paint, they have been joined by artists who work with paper sculpture, mixed media constructions, and computer graphics.

The changes in literature for older children have been equally important. Among the early and lasting contributions to literature for children were works by Jack London, Mark Twain, Rudyard Kipling, Edgar Allan Poe, Robert Louis Stevenson, and Hans Christian Andersen. These writers, however, considered adults their major audience; therefore, they directed only some of their literary efforts toward young readers. Today, large numbers of highly talented authors have turned to younger readers for an audience and direct most, if not all, of their writings to them.

Another major change in publishing for children has been the rise in multicultural children's literature. Prior to the mid-twentieth century the world depicted in children's books was largely a white world. If characters from a nonwhite culture appeared in children's books they were almost always badly stereotyped. The civil rights movement alerted publishers and the reading public to the need for books that depicted the America of all children, not just a white majority. Although the percentage of children's books by and about people of color does not equate with their actual population numbers, authors of color such as Virginia Hamilton, Mildred Taylor, Alma Flor Ada, Walter Dean Myers, Gary Soto, and Laurence Yep, and illustrators such as Allen Say, Ed Young, John Steptoe, Jerry Pinkney, and Brian Pinkney have made major contributions to a more multiculturally balanced world of children's books.

Not only are there larger numbers of talented writers and artists from many cultures at work for children, but the range of subject matter discussed in children's fiction has also been extended remarkably. Topics that were considered taboo only a short time ago are being presented in good taste. Young readers from ten to fourteen can read well-written fiction that deals with death, child abuse, economic deprivation, alternative life styles, illegitimate pregnancy, juvenile gang warfare, and rejected children. By the early twenty-first century it had become more

nearly true than ever before that children may explore life through literature.

### Literature in the Lives of Children

Literature serves children in four major ways: it helps them to better understand themselves, others, their world, and the aesthetic values of written language. When children read fiction, narrative poetry, or biography, they often assume the role of one of the characters. Through that character's thoughts, words, and actions the child develops insight into his or her own character and values. Frequently, because of experiences with literature, the child's modes of behavior and value structures are changed, modified, or extended.

When children assume the role of a book's character as they read, they interact vicariously with the other characters portrayed in that particular selection. In the process they learn something about the nature of behavior and the consequences of personal interaction. In one sense they become aware of the similarities and differences among people.

Because literature is not subject to temporal or spatial limitations, books can figuratively transport readers across time and space. Other places in times past, present, or future invite children's exploration. Because of that exploration, children come to better understand the world in which they live and their own relationship to it.

Written language in its literary uses is an instrument of artistic expression. Through prose and poetry children explore the versatility of the written word and learn to master its depth of meaning. Through literature, too, children can move beyond the outer edges of reality and place themselves in worlds of make-believe, unfettered by the constraints of everyday life.

### Environment

The three principal settings in which children's literature functions are the home, the public library, and the school. In each of these settings, the functions of literature are somewhat different, but each function supports the others and interacts with them.

**Home.** Irrefutable evidence indicates that those children who have had an early and continuing chance to interact with good literature are more apt to succeed in school than those who have not. Parents who begin to read aloud to their children, often from birth, are communicating the importance of litera-

ture by providing an enjoyable experience. The young child makes a lasting connection between books, which provide pleasure, and the undisputed attention from the parent who takes time to do the reading. During the preschool years, books contribute to children's language structures and to their vocabulary. Children acquire a sense of language pattern and rhythm from the literary usage of language that is not found in everyday conversational speech. Then, too, children discover that print has meaning, and as they acquire the ability to read print as well as understand pictures, children find further pleasure in books. In finding that reading has its own intrinsic reward, children acquire the most important motivation for learning to master reading skills.

**Public library.** Public libraries have taken on an increasingly important role in serving children. Children's rooms, which were once the domain of a few select children, are inviting places for all children, whether or not they are inveterate readers. Libraries organize story hours, present films, and provide computers and quiet places to do homework as well as present special book-related events and sponsor book clubs and summer reading programs. Children's librarians guide the reading interests of children and act as consultants to parents. Full exploitation of the public library in the broader education of children has not yet been achieved, but growing acceptance by the public of the library as a community necessity rather than a luxury will help it to continue to play an increasingly important role in the lives of children.

**School.** Literature did not begin to make broad inroads into the reading curriculum until the 1950s. Before that time many schools had no library, and a good number of these schools did not even feel the need for one. Many schools relied almost exclusively on textbooks for instruction. By the end of the twentieth century, however, nearly every curriculum authority had come to recognize the importance of trade books (books other than textbooks) in the in-school education of children. In the early twenty-first century most schools have central libraries staffed by trained librarians and some schools provide financial support for classroom libraries as well. When this is not the case, teachers, recognizing the value of good literature, often reach into their own pockets to provide trade books for their classrooms. A 1998 survey of school library media programs by the Center of Education Statistics of the U.S. Department of Education found a mean of twenty-eight

volumes per elementary school child in both public and private schools.

**Function in the school curriculum.** Literature plays an increasingly large role in the formal education of children in three related but rather discrete areas: the instructional reading program, the subject matter areas, and the literature program.

Most instructional reading programs recognize the importance of literature. Basal reading textbook programs generally recommend that trade books be used from the beginning of formal reading instruction in order to motivate readers through the long, and sometimes frustrating, efforts that learning to read usually demands. Through trade books the reader finds those efforts are rewarded by the pleasure gained from reading. In many schools the teaching of reading has been centered on trade books rather than textbooks. But in literature-based programs, teachers plan instruction around experiences with "real" books, experiences that include helping students make their own reading choices and giving children time to share responses to reading with their peer group. Schools with such literature-based programs recognize the importance of creating a classroom community of readers that will not only help children learn how to read but will also encourage them to become lifelong readers.

Subject matter areas, such as social studies and the sciences, have depended to a large extent upon textbooks to provide common learning for entire classes. However, there are limitations inherent in the nature of textbooks that require supplementation by trade books. Because textbooks survey broad areas of knowledge, space limitations prevent in-depth explorations of particular topics. Recent discoveries and events cannot always be included because textbook series require long periods of preparation. Content area textbooks are often subject to review by state committees that limit potentially controversial material. Trade books are widely used to offset these limitations. Nonfiction books provide opportunities for in-depth consideration of particular topics. Furthermore, the comparatively short time needed for the preparation and publication of trade books makes recent discoveries and occurrences available to the reader.

Elementary school literature programs vary widely. As state and national standards and testing drive curriculum some schools reflect the attitude that literature is a luxury, if not an undesirable frill.

In such schools little, if any, in-school time is devoted either to reading for pleasure or to the formal study of literature. Most schools, however, recognize children's need for some pleasurable experiences with literature that enable them to return to books to think more deeply about the characters, themes, and other literary elements. In such schools the study of literature is grounded in reader response theory that grew out of Louise Rosenblatt's contention in *Literature as Exploration* that "the literary work exists in a live circuit set up between reader and text" (p. 25). Thus the reader is seen as a co-constructor of meaning with the author. Any plan for the direct study of literary form, structure, and content as a means of heightening the pleasure of reading includes, at a minimum, teachers reading aloud from works of literature, and the formation of book circles where small groups of students regularly meet together to discuss books. In addition teachers should plan time for children to respond to books through writing, creative dramatics, and other art forms.

### Awards

There are a number of awards made to authors and illustrators of children's books, and these awards frequently aid readers in the selection of books. The most prestigious American awards are the Newbery Medal and the Caldecott Medal. The Newbery Medal is presented each year to the author of the "most distinguished contribution to American literature for children" published in the previous year. To be eligible for the award, the author must be a U.S. citizen or a permanent resident of the United States. The winner is chosen by a committee of the Association of Library Services to Children (ALSC) of the American Library Association (ALA). The Caldecott Medal is given each year to "the artist of the most distinguished American picture book for children." The winner is selected by the same committee that chooses the Newbery winner. In addition to the Newbery and Caldecott medals, other prominent awards given under the auspices of the ALSC include the Laura Ingalls Wilder Award, which is given to an author or illustrator who has "made a substantial contribution to literature for children" over a period of years; the Robert F. Sibert Informational Book Award, which honors the author whose work of nonfiction has made a significant contribution to the field of children's literature in a given year; and the Batchelder Award, given to the pub-

lisher of the most outstanding book of the year that is a translation, published in the United States, of a book that was first published in another country. Other notable American book awards include the Coretta Scott King Awards given by the Social Responsibilities Round Table of the American Library Association to an African-American author and an African-American illustrator for outstanding inspirational and educational contributions to literature for children, and the Pura Belpré Award, which is sponsored by ALSC and REFORMA (the National Association to Promote Library Service to the Spanish Speaking). This award is presented annually to a Latino/Latina writer and illustrator whose work best portrays, affirms, and celebrates the Latino cultural experience in an outstanding book for children. The Hans Christian Andersen prize, the first international children's book award, was established in 1956 by the International Board on Books for Young People. Given every two years, the award was expanded in 1966 to honor an illustrator as well as an author. A committee composed of members from different countries judges the selections recommended by the board or library associations in each country.

The following list of outstanding children's books was selected from award winners of the twentieth century and is meant to mark important milestones in children's literature.

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See also: ENGLISH EDUCATION, *subentry on* TEACHING OF; LANGUAGE ARTS, TEACHING OF; READING.

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## CHILDREN'S PHYSICAL HEALTH

See: HEALTH EDUCATION, SCHOOL; IMMUNIZATION AND CHILDREN'S PHYSICAL HEALTH; NUTRITION AND CHILDREN'S PHYSICAL HEALTH; SLEEP AND CHILDREN'S PHYSICAL HEALTH.

### CHILDS, JOHN L. (1889-1985)

Professor of education at Teachers College, Columbia University, John Lawrence Childs was a leading

member of the New York Progressives from the 1930s to 1960. Childs was born in Eau Claire, Wisconsin, where he learned the value of hard work, which was for him both a moral and social obligation. Raised as a Methodist, he spent four years at the University of Wisconsin, Madison, graduating in 1911 with a degree in journalism. While at Madison he began working for the Young Men's Christian Association (YMCA). For three years he headed its Midwest chapter in Kankakee, Illinois, where he met and married his wife, Grace Mary Fowler, in 1915. The following year he sailed for China as a YMCA missionary working for most of the time in Peking (Beijing). During John Dewey's visit to China (1919–1920), he stayed for a short while with the Childses, and John Childs was impressed. Early in 1922 Childs returned to the United States, and in February 1923 began graduate work at Union Theological Seminary, which included two courses at Teachers College given by W. H. Kilpatrick. Childs returned to China eighteen months later. On his visit to China in 1927 Kilpatrick persuaded Childs to obtain his doctorate, and Childs moved back to New York.

Childs joined the faculty of Teachers College following the publication of his dissertation, "Education and the Philosophy of Experimentalism," in July 1931. In correspondence to Robert Miller, Kilpatrick described the book as "one of the very best pieces of thinking yet done in the field of the exploitation and criticism of Professor Dewey's ideas." Thus began Childs's close identification with the work of Dewey.

Almost immediately, Childs and Dewey coauthored two chapters in *The Educational Frontier*, edited by Kilpatrick. Several scholars noted that Dewey seemed to have flirted with social reconstructionism in these chapters. In a telling memorandum to Dewey, Childs wrote, "educational reconstruction and social reconstruction are correlatives, and, therefore, the two must develop together. Any attempt to work through the school problem—to say nothing of the educational problem as a whole—inevitably leads into a consideration of the prevailing economic and social situation." Dewey stepped back somewhat from this position; Childs was committed to social reconstruction, and in 1937 joined the board of directors of the *Social Frontier*, having been a regular contributor to the journal almost at its inception in 1934.

Dean William Russell was not altogether pleased with Childs's radical position, but promoted him to associate professor in 1935 and to professor in 1938. In 1935 Childs joined the American Federation of Teachers, in which he became an important player. Russell put him in charge of a select committee looking into the demands of striking cafeteria workers at Teachers College. The report exonerated the strikers, and it received some publicity in both the New York and the national press. Childs resigned from the union in 1937 on account of its takeover by communist sympathizers. He later rejoined and took a leadership role in its postwar activities. He achieved greater prominence when he was elected state chair of the Liberal party, a position he held from 1944 until early 1947. Childs's political activities were an extension of his philosophical ideals; they were moral necessities. This missionary had in effect changed his allegiance from the work of the gospel, albeit a social gospel, to the work of educational and social reconstruction. In his writings he made apparent his commitment to a morality based not in the supernatural or transcendent, but one embedded in human experience.

In 1950 Childs published his most significant work, *Education and Morals*. Perhaps the major point of the book is that morality always exists in the making of choices in genuine life alternatives. If there is no choice there is no morality involved. (He never engaged in discussion of the existential notion of choice.) Thus the educational enterprise is at root a moral enterprise because it involves constant choices on behalf of students. For Childs, moral goods existed in the context of democratic values and aims. In this view he was at odds with Boyd Bode, with whom at this time he began an extended correspondence. Bode felt that the pragmatic educational agenda related to method and the reliance on intelligence; Childs believed that it also required a democratic outcome. He did not, as did George S. Counts, call for indoctrination, but he felt as strongly. Bode only went as far as to say that the schools should promote the processes of democracy but not expressly its aims.

In his last major book, *American Pragmatism and Education*, Childs devoted a chapter to Bode. The book is a delineation of the principles of pragmatism, and in the opening of the book he outlines its major tenets.

Thought is intrinsically connected with action; theories and doctrines are working hy-

potheses and are to be tested by the consequences they produce in actual life-situations; moral ideas are empty and sterile apart from attention to the means that are required to achieve them; reality is not a static, completed system, but a process of unending change and transformation; man is not a mere puppet of external forces, but through the use of intelligence can reshape the conditions that mold his own experience. (pp. 3–4)

If this statement sounds somewhat academic and remote from contemporary education, it is nonetheless an accurate and perceptive summary of pragmatic theory, and quite in line with Dewey's own views.

Childs's career was very much based on his interpretation and commentary of Dewey's work, and he was highly praised for both. He was a major speaker at Dewey's eightieth and ninetieth birthday festivities, and as well as the centenary celebrations; he wrote a chapter on education in Paul A. Schilpp's volume on *Dewey in the Library of Living Philosophers*; he was the recipient of the John Dewey Society medal in 1965, as well as many other awards. Childs retired from Teachers College in 1955 and spent much of the next decade as a visiting professor at several universities. Upon his final retirement he moved to Rockford, Illinois, where he died in 1985.

*See also:* CURRICULUM, SCHOOL; PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION.

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LAWRENCE J. DENNIS

## CITIZENSHIP EDUCATION

*See:* CIVICS AND CITIZENSHIP EDUCATION.

### CIVICS AND CITIZENSHIP EDUCATION

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For more than 200 years—from the time of the country's founding to the early twenty-first century—Americans have believed that the primary purpose of U.S. schools is to educate young people for responsible citizenship.

Thomas Jefferson, James Madison, and others of the nation's founders realized that the establishment of well-constructed political institutions was not in itself a sufficiently strong foundation to maintain constitutional democracy. They knew that a free society must ultimately depend on its citizens—on their knowledge, skills, and civic virtue. They believed that schools must foster the qualities of mind and heart required for successful government within a constitutional democracy.

Americans continue to believe that schools have a civic mission. The 32nd Annual Phi Delta Kappa/Gallup Poll, conducted in the year 2000, asked respondents what they considered the most important purpose of the nation's schools. They ranked "preparing people to become responsible citizens" as number one. Other purposes such as "helping people become economically self sufficient," "promoting cultural unity," and "improving social condition" were mentioned but were considered of lesser importance.

Since the first Phi Delta Kappa/Gallup Poll in 1968, the public has not wavered in its conviction that the central mission of schools is educating young people for citizenship. This conviction exists whether or not respondents have children in school, and whether or not their children are in public or private school.

#### A National Education Goal

When the U.S. Congress passed the Goals 2000: Educate America Act (Pub. L. 103-227), it established eight national goals for education. Two of those goals dealt specifically with civic education. The law specifies that students will "leave grades four, eight, and twelve having demonstrated competency over challenging subject matter including . . . civics and

government . . . so that they may be prepared for responsible citizenship.” The Educate America Act also charges schools with seeing that all students are “involved in activities that promote and demonstrate . . . good citizenship, community service and personal responsibility.” To achieve these goals, schools address citizenship in both the formal and informal curriculum.

### Formal Instruction

All states require instruction in civics and government, but the amount and rigor of that instruction varies. Three-fourths of all states have statutes mandating instruction in specific civic topics. More than half of all states currently require students to take a government or civics course in high school.

The formal curriculum has three major tasks: providing students with civic knowledge, developing their civic skills, and fostering those dispositions or traits of private and public character essential for citizens in a constitutional democracy.

**Civic knowledge.** *Civic knowledge* can be defined as the range of factual information and understandings about civics stored in long-term memory. Formal instruction in civics and government seeks to provide a basic and realistic understanding of civic life, politics, and government. It familiarizes students with the constitutions of the United States and the state in which they live, because these and other core documents (e.g., the Declaration of Independence, the Federalist Papers, and landmark Supreme Court decisions) provide criteria that citizens can use to judge the means and ends of government. Formal instruction also emphasizes the rights and the responsibilities of citizens.

An additional purpose of the formal curriculum is to promote an understanding of world affairs. This includes awareness of how and why one’s own security, quality of life, and economic well-being are connected to that of other countries, as well as to major regional, international, or transnational organizations.

**Civic skills.** If citizens are to exercise their rights and discharge their responsibilities they not only need to acquire a body of knowledge, they also need to develop intellectual and participatory skills. Intellectual skills essential for citizenship sometimes are called *critical thinking* skills. The *National Standards for Civics and Government* and the National Assessment of Educational Progress (NAEP) Civics Assessment

categorize these intellectual skills as: identifying and describing; explaining and analyzing; and evaluating, taking, and defending positions on public issues. The National Standards identify three participatory skills: interacting, monitoring, and influencing. These are skills that enable citizens to affect the outcomes of political processes.

**Civic dispositions.** *Civic dispositions* are the traits of public and private character essential to democracy. Through instruction and experiences that schools provide, students develop traits of private character such as moral responsibility, self-discipline, and respect for the worth and dignity of every individual. Schools are also concerned with developing traits of public character such as public spiritedness, civility, respect for the rule of law, critical-mindedness, and a willingness to listen, negotiate, and compromise.

### The Informal Curriculum

Civic education is part of the informal, as well as the formal, curriculum. The informal curriculum encompasses the governance of the school community, the relationships among those within it, and extra-curricular or cocurricular activities.

Research has consistently demonstrated the positive effects of students participating in the governance of their classrooms and school, as well as in cocurricular activities. The National Longitudinal Study of Adolescent Health has found that school engagement is a critical protective factor against a variety of risky behaviors—influenced in good measure by perceived caring from teachers and high expectations for student performance.

Students who serve as officers of student organizations are more motivated to learn, more self-confident, and exhibit greater leadership capabilities. Research also confirms that involvement in school activities increases civic engagement in later life. Cocurricular activities that enhance students’ civic knowledge, skills, and dispositions include elections, debates, discussions, mock trials, and simulated legislative hearings. Students’ understanding of how democracy works is also furthered by observing government agencies in action, as well as by interacting with government officials who visit their classrooms.

Community service is another cocurricular dimension of civic education. Community service learning has goals beyond motivating personal kindness in the society; service is viewed as a means of connecting what is learned in the classroom with

“the real world” and with a better understanding of public policy. The National Center for Education Statistics estimates that 83 percent of high schools and 77 percent of middle schools have students participating in community service activities in the early twenty-first century.

### Concerns and Issues

If Americans are agreed that the primary purpose of schools is to “educate people for responsible citizenship,” then one would expect civic education to have a prominent place in the curriculum, but this is not the case. Reading and mathematics are the primary focus in elementary schools. Civic education is neglected at the secondary level as well, as a plethora of recent studies reveal:

- The NAEP Civics Assessment, also known as the “Civics Report for the Nation,” found in 1998 that more than 30 percent of all students tested at grades four, eight, and twelve scored below a Basic level of understanding of civics and government. Another 39 to 48 percent scored at the Basic level, defined as a “partial mastery of the knowledge and skills that are fundamental to proficient work at a given grade.” The National Assessment Governing Board, however, has said that the Basic level should not be considered an acceptable goal; rather, all students should attain the Proficient level. Even so, only 21 to 22 percent scored at the Proficient level. A mere 2 to 4 percent achieved the Advanced level signifying superior performance.
- A National Assessment of Educational Progress (NAEP) Trend Report found a trend toward less frequent social studies classes in grade four. In 1988, almost half of fourth grade nationwide reported daily classes, but in 1998 daily classes for fourth graders had dropped to 39 percent.
- A Council of Chief State School Officers survey found that almost all states regularly assess mathematics and reading, while about two-thirds assess writing. However, not even half of the states assess social studies, which includes civics and government.

### Improving Civic Education

The need to improve civic education is recognized not only in the United States, but in other countries as well. Review and rethinking is underway in well-developed and long-standing democracies, as well as

in some postcommunist countries. Studies conducted in twenty-four countries by the International Association for the Evaluation of Educational Achievement (IEA), confirm a universal or near-universal commitment to certain goals or themes. There is agreement that civic education should be cross-disciplinary, participative, interactive, related to life, conducted in a nonauthoritarian environment, cognizant of social diversity, and co-constructed with parents and the community, including nongovernmental organizations.

While there is general agreement with the goals enunciated in the IEA study, Americans are voicing some additional needs. The American Political Science Association, the National Alliance for Civic Education, and the Center for Civic Education have all called for an increase in the amount, quality, and visibility of civic education. These organizations want to dramatically increase high-quality pre-service and in-service training for teachers of civics and government. An additional goal that these organizations seek is to encourage the federal government to administer the NAEP Civics Assessment more frequently and with state-level results to make it more useful for improving state and local civic education programs. Two national commissions, the National Commission of Civic Renewal and the United States Commission on Immigration Reform, have urged that every state require all students to demonstrate a mastery of basic civic knowledge and concepts as a condition of high school graduation.

*See also:* GEOGRAPHY, TEACHING OF; HISTORY, *sub-entry on* TEACHING OF; NATIONAL COUNCIL FOR THE SOCIAL STUDIES; SOCIAL STUDIES EDUCATION.

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MARGARET STIMMANN BRANSON

## **CLAPP, ELSIE RIPLEY (1879–1965)**

An expert in rural Progressive education in Kentucky and West Virginia, Elsie Ripley Clapp was director at the Arthurdale School in West Virginia; she documented her experiences in *The Use of Resources in Education* (1952) and *Community Schools in Action* (1939).

Elsie Clapp was born in the exclusive area of Brooklyn Heights, New York. Her father, William Gamwell Clapp, was a stockbroker and her mother, Sally Ripley Clapp, a gifted pianist. Clapp's life was shaped by the panic of 1893 (which destroyed her family's finances), by her rejection of the role of the Victorian woman, and by health problems.

She was educated at the Packer Collegiate Institute (1894–1899), Vassar College (1899–1903), and Barnard College, Columbia University (1908). She received a bachelor of arts degree in English from Barnard and a master's degree in philosophy from Columbia. Following graduation, Clapp began an extensive teaching career, having had previous experience at the Brooklyn Heights Seminary in Brooklyn, New York (1903–1907). She spent a short time at the Horace Mann School of Teachers College

(1908–1909), and served as an editorial assistant for the *Journal of Philosophy, Psychology and Scientific Method* from 1910 to 1913, where she met the American educator and philosopher John Dewey. Clapp took numerous courses with Dewey at Columbia, serving as a teaching/graduate assistant for him on occasion. It was John Dewey who suggested that she explore work in rural Progressive education because he knew that Progressive education had been largely centered in university lab schools, private schools, and urban public schools.

Beginning work with a committee assigned to help the children of strikers in the Patterson Silk Workers Strike, her first job was to locate day care for the children. Through her work she met social activists Margaret Sanger, Elizabeth Gurley Flynn, Carla Tresca, and John Reed. Clapp's social consciousness was awakened to the plight of the worker. Resuming her teaching career, she moved to Charleston, South Carolina, to teach at Ashley Hall (1913–1914), and from there, Jersey City High School (1914–1915); Brooklyn Heights Seminary (1915–1916); the Milton Academy for Girls (1921–1922); the City and Country School in New York (1923–1924); and the Rosemary Junior School in Greenwich, Connecticut (1924–1929). Through work at the City and Country School and the Rosemary School, Clapp was able to begin serious implementation of Progressive education ideas. This was followed by the highlights of her career, the Ballard Memorial School (1929–1934) and Arthurdale (1934–1936). After leaving Arthurdale, Clapp edited the journal *Progressive Education* from 1937–1939. She spent the war years researching in the University of North Carolina libraries and Teachers College in preparation for writing *The Use of Resources in Education*. She also assisted in teaching a seminar on rural education at Teachers College in 1946. Clapp's later years are difficult to document, particularly after the publication of *The Use of Resources in Education*. Clapp wrote the book to inspire teachers to learn from her experiences in rural education; the book is best recognized for Dewey's foreword, one of his last published writings. The later years of Clapp's life are characterized by the health problems that began in her youth. She spent her final years in Exeter, New Hampshire.

Clapp considered her most important contribution to education the linking of the school with the community. This was a complex undertaking at Arthurdale, the first federal subsistence project of Pres-

ident Franklin Roosevelt's New Deal. A pet project of Eleanor Roosevelt, Arthurdale was designed to improve the lives of displaced coal mining families in north central West Virginia. Eleanor Roosevelt believed a school modeled on the lines of Progressive education would best suit this community, and Elsie Clapp was recommended to become the director of school and community affairs. One of the first steps included integrating recreation and health concerns with the goals of the school. Clearly evident in her approach to education in the Arthurdale community is a central focus on Appalachian culture as the basis for creating self-identity and understanding. This embodied Dewey's belief that community was the starting point for democracy—for Clapp the school served as the tool for bringing together shared interests and talent to benefit the entire community. Unfortunately, no people of color were selected to be a part of this new community due to politics, prejudice, and Jim Crow laws. Clapp and her cadre of progressive educators left Arthurdale in 1936 because of declining private support. Their departure ended one of the most interesting and intriguing progressive experiments in rural education.

*See also:* COMMUNITY-BASED AGENCIES, ORGANIZATIONS, AND GROUPS; PROGRESSIVE EDUCATION.

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SAM STACK

## CLARK, SEPTIMA POINSETTE (1898–1987)

An educator and civil rights activist, Septima Poinsette Clark was born in Charleston, South Carolina. Her father was Peter Poinsette, a former slave, and her mother was Victoria Warren Anderson Poinsette, a free woman who had spent her early years in

Haiti. Although better known for her civil rights activism, Clark used her experiences as an educator as the basis for much of her activism, especially issues dealing with equity in teaching salaries, literacy, and citizenship.

In 1916, Clark completed the twelfth grade at Charleston's Avery Institute, a liberal arts school founded in 1865 by Charles Avery and the American Missionary Association. After passing the state examination, Clark accepted her first teaching position at the age of eighteen on Johns Island, South Carolina. She taught on Johns Island from 1916 until 1919 when she accepted a position teaching the sixth grade at the Avery Institute. In May 1920, Septima Poinsette married Nerie Clark, and shortly after a son, Nerie Clark Jr., was born. When Clark's husband died in December 1925, Clark sent her son to live with his grandparents in Hickory, North Carolina, so she could teach. Teaching did not pay her enough money to support her son, and most boarding houses did not allow children.

Clark's experience as a teacher provided firsthand knowledge of an oppressive system as well as possible solutions to problems of inequality, illiteracy, and poverty. Clark, like most African-American teachers in the South, faced inadequate schoolhouses, lack of transportation for students, short school terms, and overcrowded classrooms, as well as low wages. For the school year of 1915–1916, the value of schoolhouses in South Carolina for whites was more than \$5 million compared to a little over \$600,000 for blacks. The average expenditure according to enrollment was \$17.02 per white child and \$1.90 per black child (1916 State Superintendent Report, pp. 140, 146). Out of 1,176 school buildings for African Americans, most were made of logs and only two were brick buildings; 778 were in churches or lodge halls. In 1916, Clark received \$35 per month as principal and teacher and her associate received \$25 for teaching a class of more than sixty students each. In comparison, white teachers taught classes with no more than eighteen students. One teacher taught only three students. They were paid \$85 per month.

Clark became an advocate for a teachers' salary equalization campaign as early as 1928. Later she worked on the issue with principal J. Andrew Simmons of Booker T. Washington High School (Columbia), NAACP lawyer Thurgood Marshall, and Harold R. Boulware, a South Carolina civil rights lawyer. Clark spent long nights convincing white

and black teachers to show records of their pay. In 1945, Federal District Judge J. Waties Waring of South Carolina ruled that black teachers with equal education should receive pay equal to their white counterparts.

In 1935, Clark helped Wil Lou Gray, head of the South Carolina Adult Education Program, establish a program to help educate illiterate soldiers at Fort Jackson. Her experiences training soldiers to sign their checks, to read bus routes, and to learn to count were inspired in part by the citizenship schools Clark had designed at the Highlander Folk School and later Southern Christian Leadership Council. At Highlander in Monteagle, Tennessee, in 1956, Clark accepted a position of liaison between Highlander and Johns Islands residents to combat illiteracy and to teach skills necessary for true citizenship. Clark worked with Esau Jenkins, a Johns Island native, and community activist Bernice Robinson, of Charleston, South Carolina, to develop plans for the citizenship school classes. The Highlander loaned funding for the purchase of a building. Setting the front of the building up as a cooperative store, they used the back room of the building for Robinson to teach classes so as not to risk attracting attention from whites. In 1961, Clark accepted a position with the Southern Christian Leadership Council as director of education and teaching, focusing her attention on citizenship training, voting, and literacy. The program reached eleven states in the Deep South.

In 1956, forty years after her first teaching assignment, the South Carolina legislature passed a law that barred city and state employees from affiliating themselves with any civil rights organization. Clark was fired; she had openly confronted an unequal system, becoming an agitator for civil rights, requesting equal salaries for black teachers, and refusing to dissociate herself from the NAACP. When Clark lost her job at 58 years of age, she also lost her state retirement benefits. She spent two decades fighting for her benefits, which she finally received in 1976.

As an educator within an oppressive Jim Crow system, Clark's understanding of the connections among illiteracy, poverty, and power allowed her to link social reform and educational advancement. These were issues she spent her entire life addressing both as a teacher and a private citizen. In her autobiography, *Echo in My Soul*, Clark wrote: "In teaching [the poor and underprivileged] and thereby helping them raise themselves to a better status in life, I felt

then that I would [also] be serving my state and nation, too, all of the people, affluent and poor, white and black. For in my later years I am more convinced than ever that in lifting the lowly we lift likewise the entire citizenship" (p. 51).

*See also* EDUCATION REFORM; MULTICULTURAL EDUCATION.

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VALINDA LITTLEFIELD

## CLASSROOM MANAGEMENT

Classroom management is the orchestration of the learning environment of a group of individuals within a classroom setting. In the early 1970s classroom management was seen as separate from classroom instruction. Teachers' management decisions were viewed as precursors to instruction, and were treated in the literature as if they were content-free. The image was of a teacher first attending to classroom management, and then beginning instruction without further reference to management decisions. Research in the 1980s, however, demonstrated that management and instruction are not separate, but are inextricably interwoven and complex.

A teacher's classroom-management system communicates information about the teacher's beliefs on content and the learning process. It also circumscribes the kinds of instruction that will take place in a particular classroom. A classroom in which the teacher takes complete responsibility for guiding students' actions constitutes a different learning environment than one in which students are encouraged and taught to assume responsibility for their own behaviors. Content will be approached

and understood differently in each of these settings. Furthermore, more intellectually demanding academic work and activities in which students create products or encounter novel problems require complex management decisions. This correlation between instructional activity and management complexity further reinforces the interrelated nature of classroom management and curriculum.

The interwoven nature of classroom management and classroom instruction is especially easy to see from a student perspective. Students have at least two cognitive demands on them at all times: academic task demands (understanding and working with content) and social task demands (interacting with others concerning that content). This means that students must simultaneously work at understanding the content and finding appropriate and effective ways to participate in order to demonstrate that understanding. The teacher must facilitate the learning of these academic and social tasks. Thus from the perspective of what students need to know in order to be successful, management and instruction cannot be separated.

As a result of this broadened definition of classroom management, research has moved away from a focus on controlling behavior and looks instead at teacher actions to create, implement, and maintain a learning environment within the classroom. Everything a teacher does has implications for classroom management, including creating the setting, decorating the room, arranging the chairs, speaking to children and handling their responses, putting routines in place (and then executing, modifying, and reinstituting them), developing rules, and communicating those rules to the students. These are all aspects of classroom management.

### **Creating a Learning Environment**

Creating and implementing a learning environment means careful planning for the start of the school year. The learning environment must be envisioned in both a physical space and a cognitive space. The physical space of the classroom is managed as the teacher prepares the classroom for the students. Is the space warm and inviting? Does the room arrangement match the teacher's philosophy of learning? Do the students have access to necessary materials? Are the distracting features of a room eliminated? Attending to these and similar questions aids a teacher in managing the physical space of the classroom.

Teachers must also consider the cognitive space necessary for a learning environment. This cognitive space is based upon the expectations teachers set for students in the classroom and the process of creating a motivational climate. Effective teachers create and implement classroom management practices that cultivate an engaging classroom environment for their students. Two specific areas of cognitive space that teachers include in their plans are setting expectations (i.e., rules and procedures) and creating a motivational climate.

### **Setting Expectations**

In both elementary and secondary classrooms, the start of the school year is crucial to effective management. A significant aspect of this beginning is the teacher's establishment of expectations for student behavior, which are expressed through rules and procedures. Rules indicate the expectations for behavior in the classroom, and for how one interacts with one's peers and the teacher. Procedures have to do with how things get done. Rules can be, and frequently are, developed with the students' help, which increases the likelihood of compliance.

Ultimately, with or without student input, the teacher must have a picture of what code of behavior is essential for the classroom to function as desired. Both rules and procedures must be taught, practiced, and enforced consistently. Included with the development of rules and procedures is the accountability system of the classroom, which must communicate to students how they are held responsible for the academic work that they do.

Researchers have confirmed that effective classroom managers begin the year by setting expectations. At the elementary school level better managers also consistently analyze classroom tasks, teach going-to-school skills, see the classroom through students' eyes, and monitor student behavior from the beginning of the year. These characteristics are similar at the middle school and junior high level, where better managers also explain rules and procedures, monitor student behavior, develop student accountability for work, communicate information, and organize instruction from the first day of school. Research has shown that teachers whose students demonstrated high task engagement and academic achievement implement a systematic approach toward classroom management at the beginning of the school year. Therefore, one of the critical aspects of managing classrooms effectively, or managing class-

rooms in ways to enhance student learning, is setting expectations.

### **Motivational Climate**

An essential part of organizing the classroom involves developing a climate in which teachers encourage students to do their best and to be excited about what they are learning. There are two factors that are critical in creating such a motivational climate: value and effort. To be motivated, students must see the worth of the work that they are doing and the work others do. A teacher's demonstration of *value* shows students how their work is worthwhile and is connected to things that are important for them, including other learning and interests. *Effort* ties the time, energy, and creativity a student uses to develop the "work," to the value that the work holds. One way that teachers encourage effort is through specific praise, telling students specifically what it is that they are doing that is worthwhile and good. In combination an understanding of the value of academic tasks and the effort necessary to complete these tasks motivate students to learn.

It is possible to create a setting that appears to be well managed, where room arrangement, rules, and procedures are operating well, but where little actual learning takes place. However, when a teacher creates structure and order, as well as a learning environment in which students feel the excitement of learning and success, then the classroom can truly be said to be well managed. At the beginning of the year, teachers must set expectations and create a motivational climate for learning and combine this with orchestrating the physical space in order to both create and implement a successful classroom management system.

### **Maintaining a Learning Environment**

A teacher's classroom management decisions do not stop after the planning and establishment that is crucial to beginning the school year. As the school year progresses, classroom management involves maintaining the learning environment through conscientious decision-making concerning students and the classroom.

Teachers in a classroom teach groups of children. Maintaining the learning environment, therefore, requires teachers to focus on group processes. Jacob Kounin's landmark findings from the late 1960s on the management of classroom groups identified that the means by which teachers prevent

problems from occurring in the first place differentiated them as more effective managers. Kounin, whose work was reaffirmed by Paul Gump, a noted ecological psychologist in Kansas in the 1980s, identified several strategies that teachers use to elicit high levels of work involvement and low levels of misbehavior. These strategies are: (1) with-it-ness (communicating awareness of student behavior), (2) overlapping (doing more than one thing at once), (3) smoothness and momentum (moving in and out of activities smoothly, with appropriately paced and sequenced instruction), and (4) group alerting (keeping all students attentive in a whole-group focus). These tools help teachers to maintain the flow of instruction. A significant stumbling block to the flow of instruction is in attention to transitions between activities, lessons, subjects, or class periods. It is here that teachers are likely to feel that they are less effective in maintaining the flow of instruction. Effective transitions are structured to move students from one activity to another, both physically and cognitively. The goal of smooth transitions is to ensure that all students have the materials and mind-sets they need for a new activity.

While effective managers work with groups of students, they also are attentive to students' individual behaviors and learning needs. Maintaining a learning environment requires teachers to actively monitor their students. According to classroom management research, active monitoring includes watching student behavior closely, intervening to correct inappropriate behavior before it escalates, dealing consistently with misbehavior, and attending to student learning. In terms of monitoring both student behavior and learning, effective managers regularly survey their class or group and watch for signs of student confusion or inattention. Maintaining effective management involves keeping an eye out for when students appear to be stuck, when they need help, when they need redirection, when they need correction, and when they need encouragement.

Teachers must also check for understanding, both publicly and privately. Maintaining a classroom management system requires the teacher to anticipate student actions and responses in order to be preventive rather than reactive. Excellent classroom managers mentally walk through classroom activities, anticipating areas where students are likely to have difficulty and planning to minimize confusion and maximize the likelihood of success.

Activities planned for these classrooms are paced to ensure that students have enough to do, that assignments reflect an awareness of student attention spans and interests, and that downtime is minimized between assignments or activities. The orientation of the classroom must be purposeful, with a variety of things to be done and ways to get those things done.

### When Problems Occur

Though effective managers anticipate and monitor student behavior and learning, misbehavior and misunderstanding do occur. When inappropriate behavior occurs, effective managers handle it promptly to keep it from continuing and spreading. Though teachers can handle most misbehavior unobtrusively with techniques such as physical proximity or eye contact, more serious misbehavior requires more direct intervention. The success of intervention depends on orderly structures having been created and implemented at the beginning of the school year.

When students have misunderstandings about academic content or instruction effective managers look for ways to reteach content and to improve the clarity of their communication. In research studies teachers in classrooms that run smoothly score high on measures of instructional clarity. That is, they describe their objectives clearly, give precise instructions for assignments, and respond to student questions with understandable explanations. Classroom communication, teachers' clarity of instructions and understanding of students' needs, is particularly important in maintaining the interconnectedness of management and instruction. This communication is central as teacher and students make visible all of the aspects of the classroom that build a community. Maintenance of a learning environment combines a teacher's careful attention to group dynamics, individual student needs, and clear communication.

In order to create and support a learning-centered environment where teaching for understanding and the construction of meaning are valued, students must be very comfortable and feel that their contributions are valued. In addition, students must value the contributions of others, value the diversity within the classroom, and give their best effort because they see it as the right thing to do or something that they want to do. The uniqueness of each classroom and the variety and complexity of

tasks that teachers face make it impossible to prescribe specific techniques for every situation. In each classroom there will be a variety of skills, backgrounds, languages, and inclinations to cooperate. Teachers, particularly beginning teachers who may not have the repertoire of experiences and skills they need to be able to teach diverse classes, require administrative support to identify and nurture the interconnectedness of instruction and classroom management.

A close look at how class activities evolve reveals the need for a classroom management system that is visible, established, monitored, modified, refined, and reestablished. While teachers work with students who have different dispositions and abilities, they must be prepared to create, implement, and maintain an environment in which learning is the center.

Research-based programs have been developed that aid teachers in coming to an understanding of what it means to be an effective classroom manager. Evertson and Harris, based upon the research of Evertson and others, have created one such educational program aimed at the professional development of teachers. Their program encourages teachers to create a conceptual and practical understanding of management and organization through exploration of teachers' expectations, student accountability systems, and instructional strategies. Freiberg and colleagues have developed another such program, which also creates a preventive approach to classroom management through attention to school-wide perspectives and student responsibility. Both programs have demonstrated their effectiveness in improving teachers' practice and students' academic achievement and behavior. Teachers empowered with an understanding of the complexity and multidimensionality of classroom management make a difference in the lives of their students.

*See also:* CURRICULUM SCHOOL; GROUP PROCESSES IN THE CLASSROOM; INSTRUCTIONAL STRATEGIES; MOTIVATION, *subentry on* INSTRUCTION; SCHOOL CLIMATE; SOCIAL ORGANIZATION OF SCHOOLS; TEACHING, *subentry on* LEARNING TO TEACH.

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CAROLYN M. EVERTSON

## CLASSROOM OBSERVATION

Systematic classroom observation is a quantitative method of measuring classroom behaviors from direct observations that specifies both the events or behaviors that are to be observed and how they are to be recorded. Generally, the data that is collected from this procedure focuses on the frequency with which specific behaviors or types of behavior occurred in the classroom and measures their duration. There are several elements that are common to most observational systems.

- a purpose for the observation
- operational definitions of all the observed behaviors
- training procedures for observers

- a specific observational focus
- a setting
- a unit of time
- an observation schedule
- a method to record the data
- a method to process and analyze data (Stallings and Mohlman, pp. 469–471)

Prior to the use of systematic observational methods, research on effective teaching typically consisted of subjective data based on personal and anecdotal accounts of effective teaching. In order to develop a scientific basis for teaching, researchers began to use the more objective and reliable measures of systematic classroom observation. In the last quarter of the twentieth century, several hundred different observational systems have been developed and used in classrooms. There have similarly been hundreds of studies that have used classroom observation systems since the 1970s.

Although there are several types of observational procedures or techniques that have been used to examine effective teaching (e.g., charts, rating scales, checklists, and narrative descriptions), the most widely used procedure or research method has been systematic classroom observation based on interactive coding systems. These interactive coding systems allow the observer to record nearly everything that students and teachers do during a given time interval. These interaction systems are very objective and typically do not require the observer to make any high inferences or judgments about the behaviors they observe in the classroom. In other words, these low-inference observational systems provide specific and easy identifiable behaviors that observers can easily code. Some of the more commonly used observation instruments are the Brophy-Good Dyadic Interaction System, Stallings Observation System, and the Classroom Observation Schedule. They all have been widely used in research studies and in teacher development projects designed to improve classroom instruction.

Some of the major strengths of using classroom observation allow educators to do the following: (1) permit researchers to study the processes of education in naturalistic settings; (2) provide more detailed and precise evidence than other data sources; and (3) stimulate change and verify that the change occurred. The descriptions of instructional events that are provided by this method have also been found to lead to improved understanding and better models for improving teaching.

A final strength of this research method is that the findings from these observational studies have provided a coherent, well-substantiated knowledge base about effective instruction. Many of the reviews and summaries of the classroom observation research, such as that of Herb Walberg (1991, 1995), have consistently found that a number of classroom behaviors significantly relate to students' academic achievement. Several aspects of classroom instruction such as conducting daily reviews, presenting new material, conducting guided practice, providing feedback and correctives, conducting independent practice, and conducting weekly and monthly reviews have been found to be significantly related to students' academic achievement. In other words, research using systematic classroom observation has provided us with a substantial knowledge base that has helped us understand effective teaching.

### Purposes of Classroom Observation

Classroom observation has many valid and important educational purposes. This section summarizes three important purposes or areas where systematic classroom observation has been widely used: (1) description of instructional practices; (2) investigation of instructional inequities for different groups of students; and (3) improvement of teachers' classroom instruction based on feedback from individual classroom or school profiles.

**Description of instructional processes.** One of the fundamental purposes of classroom observation research is describing the current status of instructional practices and identifying instructional problems. As Tom Good puts it, "one role of observational research is to describe what takes place in classrooms in order to delineate the complex practical issues that confront practitioners" (p. 337). There have been many observational studies that have been specifically designed to describe specific educational phenomena. Large-scale observational studies such as Ken Sirotnik and Hersh Waxman, Shwu-Yong Huang, and Yolanda Padrón, for example, have examined instructional practices in elementary and secondary schools. Sirotnik examined 1,000 elementary and secondary classrooms and found that there was very little variety in teaching practices across subjects and grades. He found that the majority of class time was spent either with the teacher lecturing to the class or students working on written assignments. Waxman, Huang, and Padrón observed ninety sixth-grade and eighth-grade classrooms from

sixteen inner-city middle level schools and found similar results to those of Sirotnik. Students were typically involved in whole-class instruction and not interacting with either their teacher or other students. Students rarely selected their own instructional activities, and they were generally very passive in the classroom, often just watching or listening to the teacher, even though they were found to be on task about 94 percent of the time. The teacher observation results revealed that teachers typically focused on the content of the task or assignment, responded to students' signals, communicated the task's procedures, and checked students' work. Teachers were observed spending very little time interacting with students regarding personal issues, encouraging students to succeed, showing personal regard for students, and showing interest in students' work.

Another example of descriptive, observational studies involves the extent to which technology is used in the classroom. Although there have been a large number of studies that have examined technology use in schools, most of these studies have relied on self-report data from administrators, teachers, or students. These types of data, however, are often unreliable and tend to be upwardly biased in the direction of over-reporting the actual amount of technology use. Therefore, it is important to observe the actual extent to which technology is used in classrooms and to look specifically at the technology used in classroom and used by individual students. In one such study, Waxman and Huang (1995) used systematic classroom observation to examine the extent to which computer technology was integrated into the curriculum of 200 elementary and secondary school inner-city classrooms. They found that there was no integration (i.e., use) of computer technology in the elementary school classrooms, and that students were observed working with computers only 2 percent of class time in middle school classrooms. Huang and Waxman (1996) also conducted systematic observations of 1315 middle school students from 220 mathematics classrooms in order to examine the amount of technology used. The descriptive results revealed that students were observed using calculators about 25 percent of class time, but they used computers less than 1 percent of class time in their mathematics classes.

Some other uses of descriptive observational studies have been to evaluate programs and more specifically, to evaluate the fidelity or degree of implementation of programs; to examine the extent to

which higher-level thought processes are emphasized in schools; and to investigate the extent to which multicultural education is emphasized in urban classrooms. A final important use involves school effectiveness studies, such as Waxman and colleagues 1997 study, where classroom observation data have been used to investigate observable differences between effective and ineffective schools. Waxman and Huang (1997), for example, observed more than 700 students from four effective and four ineffective urban elementary schools that served predominantly African-American students and found that significantly more students from the effective schools were observed working in an individualized setting, interacting with their teacher, and working on written assignments. On the other hand, students from the ineffective schools observed in whole-class settings were found interacting with their teacher, interacting with others, reading, and working with manipulative materials significantly less than students from the effective schools.

**Investigation of instructional inequities.** Several studies, such as that of Elizabeth Fennema and Penelope Peterson, have found that some groups or types of students are treated differently by teachers in classrooms, and that these inequitable patterns of teacher–student interaction in classrooms result in differential learning outcomes for students. There have been many studies, for example, that have found gender imbalances in teachers' interaction patterns in the classroom. Jere Brophy and Tom Good's 1974 review of the research found that consistent sex-related differences exist in the classroom in teachers' interaction patterns. Boys, for example, typically have been found to receive more praise and criticism in the classroom than girls. They also found that teachers have more behavioral, procedural, and academic interactions with boys than girls. Boys have also been found to ask more questions in the classroom, and teachers have been found to ask boys more questions. Good and his colleagues (1987, 1988) have also conducted several observational studies that examined why low-achieving students in secondary schools ask fewer questions than high-achieving students. They also found that students from an upper-middle-class elementary school asked more questions than students from lower-middle-class schools.

Other studies have looked at both sex- and ethnic-related differences in the classroom. Hart examined the relationship between teacher–student

interaction and mathematics achievement by race and sex. She found the following differences: (1) white and black male students had more classroom interactions than students from other groups; (2) a disparity in the type of interaction between white and black students; and (3) boys were involved in more public interactions with teachers than girls. In other words, it appears that patterns of teacher–student interaction may not only be influenced by the sex of the student, but also by the ethnicity of the student.

Padrón, Waxman, and Huang observed student behavior differences between resilient (i.e., successful) and nonresilient (i.e., less successful) elementary school students from low socioeconomic backgrounds. They found resilient students spent significantly more time interacting with teachers for instructional purposes, whereas nonresilient students spent more time interacting with other students for social or personal purposes. Resilient students were also observed watching or listening significantly more often than nonresilient students, whereas the latter were observed more often not attending to task. The percentage of time that resilient students were observed on task (85%) was much higher than that of nonresilient students (61%). The magnitude of these differences was both statistically and educationally significant and illustrates the instructional inequities that exist within classrooms.

**Improvement of teaching practices.** Research using observational methods has yielded important information that has practical implications for the improvement of teaching practices. One of the traditional problems hindering teachers' classroom instruction has been the lack of valid and accurate information that teachers could use in order to facilitate their professional growth. Many teachers, even experienced ones, are not always aware of the nature of their interactions with individual students. Consequently, one of the most important purposes of systematic classroom observation is to improve teachers' classroom instruction. Feedback from individual classroom profiles derived from systematic observations has been found to help teachers understand their own strengths and weaknesses, and have consequently enabled them to significantly improve their instruction. Through feedback, teachers can become aware of how their classroom functions and thus bring about changes they desire. This process typically involves having trained observers systematically observe teachers and their students in their

classrooms and later providing teachers with information about their instruction in clinical sessions. This approach is based on the assumption that teachers value accurate information that they can use to improve their instruction.

There is growing evidence that feedback from systematic observations can be used to improve teaching. Several studies, such as that of Jane Stallings, have found that teachers could positively change their attitude and behaviors toward pupils after receiving feedback from classroom observations. Good and Brophy's 1974 "treatment study" exemplifies this type of research. In that study, teachers were given feedback based on forty hours of classroom observation. As a result of this "one-shot" interview where feedback was given, teachers' interaction patterns changed, and their attitudes toward individual students changed, too. Stallings, Howard Ebmeier, Good, and Good and Douglas Grouws have utilized similar strategies in other projects. In those studies, teachers were presented with individual feedback regarding their classroom instruction and then were found to change their behavior in desirable ways. All these studies have found that teachers can improve their classroom instruction given appropriate feedback and suggestions for improvement.

The overall findings from these studies suggest that feedback from classroom observations is a viable and effective mechanism for providing teachers with the information they need about their classroom behavior. This feedback is intended to create an "imbalance" in teachers' perceptions of their own behaviors. This imbalance exists whenever teachers find out that their attitudes or perceptions of their teaching differ from that of trained observers. Teachers in such a state of "imbalance" are motivated to do something about their behavior in order to restore themselves to a balanced condition. A similar notion is that self-awareness increases teachers' control of their actions and the possibility that they will modify them. In 1995 Waxman, Huang, and Padrón provided schoolwide feedback to middle school teachers that compared their school profile on classroom instructional behaviors to an overall districtwide average of these same behaviors. Feedback from these profiles was used to stimulate dialogue and discussion about instructional strengths and weaknesses in the school. The profiles also helped initiate discussion about specific instructional areas that needed to be improved in the school. It should

be pointed out that these profiles provided some guidelines for practice, and they were not attempts to tell teachers what to do. These profiles provide teachers with concepts and criteria that they can use to reflect about their own teaching. The feedback session was not viewed as one where research findings should be applied into specific rules or guidelines for teachers to follow. Rather, the observational feedback was intended to be used as a guide for teachers with which they and their colleagues could reflect about their practices on their own and decide what action to take. Professional services and university courses are some of the possibilities that teachers could choose if they wanted to continue to collaborate with the researchers in order to help them improve their instruction. In summary, the use of feedback from classroom observations appears to be a potent strategy that can improve instructional behaviors in specific classrooms and schools.

### Limitations of Classroom Observation

There have also been several criticisms and cautions related to the use of structured observation techniques, according to Sara Delamont and David Hamilton. The criticisms and limitations of using structured observation techniques are categorized into three subsections: (1) theoretical and epistemological criticisms; (2) methodological concerns; and (3) pragmatic concerns. This section also includes a brief discussion of the implications of classroom observation and some new directions.

**Theoretical and epistemological criticisms.** Although observational research has produced a substantial body of important findings that can lead to improved teaching practices, there is still a lack of consensus or lack of confidence regarding the research. There have been many theoretical and epistemological criticisms of classroom observational, process-product research such as that of Maurice Galton in 1988. Several critics, for example, have argued that this research is devoid of theory and consequently cannot explain why some instructional behaviors impact student outcomes. There are also related concerns about why some variables are selected to be observed at the exclusion of other variables. Because there is no model or theory behind the research, the critics argue that there is no justification for the selection of variables or meaningfulness associated with the interpretation of results. They further argue that the selection of events or behaviors may not be clear to anyone except the ob-

server or instrument developer. In other words, classroom observation research has not dealt with the theoretical assumptions of why a particular style of teaching or set of instructional variables influences student learning.

Tom Popkewitz, Robert Tabachnick, and Kenneth Zeichner (1979) state that this research approach has a behaviorist orientation that maintains “it is possible to identify, control, and manipulate specific outcomes of teaching by altering selected aspects of a teacher’s overt behavior” (p. 52). They further contend that teaching is viewed, “as the sum of discrete behaviors and a change in one or several of these behaviors is assumed to affect the quality of teaching as a whole” (p. 52). Their most strenuous argument, however, concerns the notion that these teaching behaviors “are often viewed independent of the curricular context with which the techniques are associated” (p. 52). They are concerned that observers generally focus on isolated behaviors, without concern for the preceding and subsequent behaviors that they feel provide the context and meaning of the behavior. Another concern is that most observational systems are generally limited—they can be used only to observe covert behavior that can be quantitatively measured. Furthermore, these observational systems make it difficult to record complex instructional behaviors.

**Methodological concerns.** Most observational techniques have limitations. Some of these concerns or limitations are related to methodological issues that can interfere with the drawing of valid conclusions. One of the primary methodological concerns or source of invalidity that needs to be addressed regarding the use of systematic observational techniques relates to the obtrusiveness of the technique. Observer effects may occur because teachers and students are aware that their behaviors are being observed. The presence of an observer may change teacher or student behaviors, perhaps resulting in reactive effects. Teacher anxiety or teachers performing less well than usual can interfere with the drawing of valid inferences about what normally occurs in the classroom. On the other hand, there is also some evidence that indicates that teachers’ instruction may be slightly better than usual when they are being observed. Although some researchers like Donald Medley, Homer Coker, and Robert Soar maintain that observer effects are not serious concerns, the possibility that this threatens the validity and reliability of data collected exists.

There are a number of methodological concerns that similarly need to be addressed. The reliability and validity of observational systems is a primary concern. Although many systems report inter-rater agreement or observer accuracy, they do not specify the reliability as it pertains to stability of teacher behavior or on the internal consistency of the scale. Validity is another important concern that needs to be addressed. Construct validity, for example, which focuses on the “theoretical integrity” of the behaviors, is particularly important. Criterion-related validity, or the extent to which the observational measures relate to a criterion measure, is rarely reported, and concurrent validity or the extent to which a particular instrument is related to other instruments is generally missing too.

There are other methodological concerns that are related to the actual amount of time that is necessary to obtain a valid observation period, as well as the appropriate number of observations that are required in order to obtain reliable and valid measures of instruction. Similarly, there are a number of methodological concerns related to the analyses of data. Most of these concerns address the issue of what the appropriate level of analysis (e.g., student, the class, or students within class) should be used when analyzing the observation data. Students are nested within classrooms, while classrooms are nested within schools. Prior teacher effectiveness research has often aggregated data to classroom-level analyses that may underestimate the importance of processes within classes because all the within-class variation is lost. Recent analytic developments, such as hierarchical linear modeling (HLM), allow researchers to disentangle these nested effects and investigate hypotheses about the effects of within- and between-school or class factors on classroom instruction or students’ perceptions of their learning environments. Advanced statistical models, such as HLM, allow researchers to identify and separate individual effects from group effects, after statistically controlling for other explanatory variables. Such multilevel models can estimate how group-level variables (e.g., characteristics of the classroom or school) influence the way in which individual-level variables (e.g., students’ classroom behavior) affect students’ achievement.

Another concern related to prior classroom observation research is that it has typically been generic (i.e., generalizing across grade levels and content areas), rather than focusing on a given grade level

and/or subject area. Similarly, the content of the lesson is often neglected as has the quality of the interaction that is being recorded.

**Pragmatic concerns.** A final category of limitations related to classroom observation are pragmatic concerns that focus on the practicality of conducting observational research. One of the primary pragmatic concerns of observation research is that it is costly to do because it requires extensive training and time. Some training programs for observers, for example, require as much as seven full days of intensive training before the observations are conducted in classrooms. Gaining access to schools and classrooms to conduct observations is another serious concern. Many school districts are reluctant to allow observation of teachers in their schools because they feel it would be too disruptive to the learning environment. Teachers have also been known to dramatically alter their instruction when observers are present in the classroom.

Another pragmatic concern relates to the misuse of classroom observation data. Classroom observations can be very useful as a formative evaluation procedure, but should not be used to provide summative decisions, such as those regarding a teacher’s dismissal or rehiring. Similarly, classroom observations should not be tied to summative decisions like salary increases. Unfortunately, several school districts and state departments of education have misused observational research and translated findings into specific rules or standards that they have used in developing evaluation instruments. These misuses are more “accidents” of the research, however, rather than problems associated with the “essence” of the research.

The previously mentioned criticisms and limitations, however, do not necessarily detract from the value and utility of the observational method. Many of these criticisms are incidental aspects of some observational research. Nate Gage and Margaret Needels and others, for example, have refuted many of these criticisms and have provided several examples of how observation research has contributed to instructional theories. Medley has also argued that the previous methodological limitations of observational research were greatly reduced in the 1990s. He points out, for example, the impact that the laptop computer will have on classroom observation research. In addition to replacing traditional clipboards and stopwatches, the laptop computer will aid the precision and accuracy of researchers in re-

coding events, as well as provide a detailed account of contextual items that occur during the observation.

### New Directions

It is important to point out again that no one data source or methodology will sufficiently answer all critical educational questions. Multiple measures or indicators of instruction are needed to help capture a more comprehensive picture of what goes on in classrooms. Some of the new directions for classroom observation research include the following: (1) combining both qualitative and quantitative methods in observation systems; (2) developing observation instruments that are based on "standards" of pedagogy; (3) using student-centered observation instruments that allow for comparisons between groups of students within the class; and (4) using instruments that assess authentic, interactive instructional practices that have been found to relate to student gains on higher-level cognitive outcomes.

*See also:* ASSESSMENT, *subentry on* CLASSROOM ASSESSMENT; TEACHER EVALUATION, *subentries on* METHODS, OVERVIEW; TEACHING, *subentry on* METHODS FOR STUDYING.

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## CLASSROOM QUESTIONS

When people really want to learn something, they ask questions. They ask questions to become skilled in using new software, or to figure out the norms of courtesy in another culture, or to master the fine art of parking a car. It is not surprising that for many, questioning is at the very heart of learning, the central skill in the teaching-learning process. Teachers have been described as “professional question-askers,” and history records great teachers such as the Greek philosopher Socrates in terms of their unique questioning skill.

Questions can and have been used for a wide variety of educational purposes: reviewing previously read or studied material; diagnosing student abilities, preferences, and attitudes; stimulating critical thinking; managing student behavior; probing student thought process; stirring creative thinking; personalizing the curriculum; motivating students; and assessing student knowledge. The many uses of questions as described by Sari Rose and John Litcher, as well as the relative ease in recording and analyzing their use in the classroom, has led to extensive research of classroom questions. In 1912 Rommiett Stevens observed classroom life and the use of questions. She unearthed the fact that teachers were involved in a high frequency of question asking, asking approximately 395 questions each day. The majority of these questions, about two out of three, were asked at a low intellectual level, usually requiring little more than rote memory and recall. And they were asked not by the student, the person at the center of learning, but by the teacher. Reviews of research in the United States, the United Kingdom, Germany, and Australia, as well as in many de-

veloping nations, have shown similar results. To a great extent, teaching means talking and asking questions, and learning means following directions and answering questions. Much of the current research and teacher education has focused on altering these findings, and creating more challenging and meaningful classroom questions.

### Types of Questions

One of the first directions for improving the quality of classroom questions was determining the intellectual level of teacher questions. Broadly conceived, content- or subject-related questions were grouped into two cognitive categories: lower order, for memory, rote, and simple recall; higher order, for more demanding and exacting thinking. The preponderance of lower-order questions was troublesome to educators, for it contradicted the notion of a thoughtful classroom, promoting important if not profound student insights. As a result, educators developed a number of classification systems to categorize question levels, the first step in promoting the use of more demanding questions in the classroom. Mary Jane Aschner and James Gallagher developed a widely used system that created four divisions, ranging from simple recall to more difficult thought, to creative thinking, and finally to evaluative thinking. In fact, numerous such systems have been devised, but none more influential than Benjamin Bloom's taxonomy.

In 1956 Benjamin Bloom headed a group of educational psychologists engaged in identifying the levels of intellectual behavior important in learning. The taxonomies they developed included three overlapping domains: the cognitive (intellectual), psychomotor (physical), and affective (attitudes and emotions). Each taxonomy is an organizational strategy in which lower categories are subsumed in higher ones. In the cognitive domain, knowledge, the lowest level in Bloom's taxonomy, must be mastered before comprehension, the second level, can be attempted. In fact, comprehension is an intellectual process that uses knowledge. These six levels have been adapted in formulating school goals, assessing learner progress, and developing questions. Bloom's six cognitive levels range from simple recall or recognition of facts through increasingly more complex and abstract intellectual tasks. The following brief definitions are followed by several sample verbs that reflect the appropriate intellectual activity:

1. Knowledge: Requires that students recognize

or recall information. Remembering is the key intellectual activity. (define, recall, memorize, name, duplicate, label, review, list, order, recognize, repeat, reproduce, state)

2. Comprehension: Requires that students demonstrate sufficient understanding to organize and arrange material mentally; demands a personal grasp of the material. (translate, explain, classify, compare, contrast, describe, discuss, express, restate in other words, review, select)
3. Application: Requires that students apply information, demonstrate principles or rules, and use what was learned. Many, but not all, educators believe that this is the first of the higher-level thought processes. (apply, classify, solve, use, show, diagram, demonstrate, record, translate, illustrate, choose, dramatize, employ, operate, practice, schedule, sketch, write)
4. Analysis: Educators agree that this and all the following categories require higher-level thinking skills. Analysis requires students to identify reasons, uncover evidence, and reach conclusions. (identify motives and causes, draw conclusions, determine evidence, support, analyze, deduce, categorize, compare, contrast, criticize, differentiate, justify, distinguish, examine, experiment)
5. Synthesis: Requires that students perform original and creative thinking. Often many potential answers are possible. (write or arrange an original composition, essay or story, make predictions, solve problems in an original way, design a new invention, arrange, assemble, collect, compose, construct, create, design, develop, formulate, manage, organize, plan)
6. Evaluation: Requires that students judge the merit of an idea, solution to a problem, or an aesthetic work. These questions might also solicit an informed opinion on an issue. (judge, value, evaluate, appraise, argue, assess, attach, choose, compare, defend, estimate, rate, select)

While Bloom's taxonomy has facilitated gauging the level of teacher questions, sorting out the significance of these levels is more problematic. A meta-analysis of higher-order questions by Gordon Samson, Bernadette Strykowski, Thomas Weinstein, and

Herbert Walberg, among others, demonstrated only a weak link between higher-order question asking and higher-order thinking. Other researchers have discovered that lower-order questions can be as effective as higher-order ones. Factors such as student background, curricular goals, and the skill of the teacher can be influential in determining which level of question is most effective. Studies suggest that teachers may be more skilled in asking lower-order questions, that curricular goals stressing mastery and memory of content may be achieved more efficiently with lower-level questions, and that many lower-socioeconomic class students seemed to perform better with lower-level questions than higher-order ones. Other studies indicate that even when a teacher asks a higher-order question, students may answer at a lower level. The clarity and specificity of the teacher's question and the background knowledge of students are two reasons why higher-order questions may elicit lower-level responses. Determining what steps educators can take to promote more sophisticated and challenging student thought processes is a central concern of future research.

Beyond the taxonomy, William Wilen and other researchers have categorized several types of questions. Probing questions are follow-up questions asked after a student responds to the initial question. Probing questions require a student to think deeper than the original response, and to integrate new material. One type of probing is the Socratic question, which originated with the Greek philosopher whose skillful inquiry helped students recognize gaps and contradictions in their understanding. Teachers sometimes structure questions specifically for the purpose of diagnosing a student's needs and for bridging a learning gap, a questioning strategy called *scaffolding*. The term derives from the construction industry, where scaffolding is used to support a not-yet-completed building. Divergent questions often provide unique student insights, encourage the exploration of many possibilities, and do not produce a single correct answer. Affective questions concern attitudes, values and feelings of students, and although they reside in another domain, they are related to the levels described in the cognitive taxonomy. Defining and categorizing types of questions will likely continue in the years ahead.

### Feedback

Teacher responses to student answers, often termed *feedback*, represent another rich area of educational

research and training. The most common teacher response is neutral acknowledgement, simply accepting a student response in silence or with minimal recognition. Educators John Goodlad, Theodore Sizer, and others have characterized the typical classroom intellectual climate as bland and unchallenging, and the preponderance of both lower-order questions and simple acceptance reactions from teachers undoubtedly contribute to this lackluster atmosphere. While teachers sometimes provide active help correcting and improving student responses, praise and criticism occur infrequently.

The silent time before feedback is given, a period called *wait-time*, has also been an important topic of investigation. Thomas Good and Jere Brophy have reported on the research of Mary Budd Rowe and others concerning two wait times in the questioning cycle. Wait-time I is the silent period that follows a teacher question but precedes the next utterance, typically a student answer or an additional teacher comment. Wait-time I can be thought of as "think" time, and if wait-time I is long enough, students have adequate time to volunteer to answer a question, as well as to think about the answer that they will give. Wait-time II, the second critical silent period, follows a student answer but precedes a teacher reaction. If wait-time II is long enough, both students and the teacher can carefully consider student responses. Unfortunately, research shows that wait-times I and II are rarely long enough for thoughtful classroom interactions, each typically less than one second in duration. Studies show that if wait-time I is increased to three to five seconds following a higher-order question, a number of positive results follow. Longer wait-time I leads to a higher rate of student participation, longer, more correct and more complete answers, higher achievement, and more on-task student talk. In addition, longer wait-time can attract low-participating learners into class interactions. Students with limited English proficiency, minority students, lower-achieving students, and females are typically among those who benefit from a longer wait-time. While wait-time II is less well known to educators, it is also important. By extending the silent period after a student response, teachers give students the opportunity to complete their answers and to build on each other's ideas. A longer wait-time II also gives teachers time to carefully consider student answers, and to formulate a more precise and helpful reaction to those answers.

Increased wait-time has also been linked to an increase in student-initiated questions. When children are young, their vocabulary is characterized by a high number of questions. In schools, however, children rarely formulate content-related questions on their own. It is ironic that although one typically links learning with asking questions, it is the teacher, not the learner, who is doing the asking. When students ask questions, they are typically procedural (“Will this be on the test?”) or express confusion or lack of understanding of content. Research indicates that when students generate their own questions, their comprehension of a topic is enhanced. Although Barak Rosenshine, Carla Meister, and Saul Chapman have described several successful strategies in promoting student initiated questions, most classrooms have a dearth of such questions.

### Effective Questioning Practices

William Wilen, Margaret Ishler, and Janice Hutchinson, among others, have synthesized the research on effective questioning techniques and suggested several helpful directions for teachers:

1. Effective questions are clearly phrased, reducing the possibility of student confusion and frustration. A major problem occurs when a teacher asks a series of run-on questions, while attempting to sharpen the focus of the original question.
2. Teachers should wait at least three to five seconds after asking a question that requires higher-order thinking (wait-time I), and three to five seconds after a student response to provide precise feedback (wait-time II).
3. Effective teachers encourage all students to respond, rather than depending on volunteers, or answering the question themselves. Longer wait time, probing questions, and a pattern of expectation for student responses are all helpful strategies in promoting student responses.
4. The research on student call-outs suggests that although call-outs need to be controlled, their response can be a helpful technique in promoting student participation among reticent and low-socioeconomic students.
5. The research on the effectiveness of higher-level teacher questions, those questions on Bloom’s taxonomy that require analysis, synthesis or evaluation, is mixed. However, the consensus is that higher-level questions encourage higher-level student thinking.
6. Teacher feedback should be specific and discriminating. Students should be acknowledged for their contribution, praise should underscore genuine accomplishment, while criticism and remediation should point out areas in need of improvement (focusing on the behavior, skills, and knowledge, rather than the individual).
7. While researchers consider the frequency of teacher questions (well into the hundreds a day) as too high, there is an increasing emphasis on the need to encourage more student-initiated questions—an indication of student involvement and increased student comprehension.

*See also:* DISCOURSE; INSTRUCTIONAL DESIGN; INSTRUCTIONAL STRATEGIES.

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## CLASS SIZE AND STUDENT LEARNING

The class unit is the basic unit of organization for instruction; therefore class-size information should be foundational knowledge for educators. Yet between the first edition of the *Encyclopedia of Education* in 1971 (see John Reiser's entry on class size, pp. 157–160) and its second edition in 2002, understanding of class size and its actual use have arguably seen both the greatest and the least change among the fundamentals of education.

Class size and pupil-teacher ratio (PTR) are defined, computed, conceptualized, and used differently. Class size, the number of students in a class for whom the teacher is responsible and accountable, is determined by addition. A PTR is derived by dividing the number of students at a site, such as a school, by some representation of educators (e.g., teachers, administrators, specialists) serving that site. In a classroom with 30 students and one teacher, the class size is 30 and the PTR is 30:1. If two teachers serve those 30 students, the class size is 30, but the PTR is 15:1. Class size and PTR have changed much in thirty years but the terms are still used imprecisely as synonyms in research, critiques, policy, and in practice. Yet the distinctly different concepts provide far different outcomes.

Changes in the delivery of education initiated by the 1965 Elementary and Secondary Education Act (ESEA, or Pub. L. 89-10) influenced PTR greatly and class size only minimally. Among other things, ESEA targeted categorical funds to special audiences, such as students at risk of school failure. Title I teachers

and aides (named after ESEA's major initiative) provided special services such as reading remediation in pull-out programs where students left regular classrooms for small-group instruction. Later legislation (e.g., the Education of the Handicapped Act, Pub. L. 94-142 [1975] and its extensions [the Individuals with Disabilities Education Act or IDEA] in 1990 and 1997) followed similar formats. According to the U.S. Department of Education's statistics for 1999, the spate of special teachers changed the overall kindergarten to grade 12 (K-12) PTR from 24.7 (1965) to 16.8 (1999). This change is readily seen in elementary grades (the area of most class-size research), where the average PTR decreased from 27.6 in 1965 to 18.6 in 1999.

### Class-Size Research (1978–2002)

Interest in class size blossomed in the late 1970s. Gene Glass and Mary Lee Smith consolidated prior years of class-size research using meta-analysis to calculate the effects of many studies and pool the results. Indiana's statewide Prime Time project (1981) initially reduced class size in grades 1 and 2, and later expanded to include reductions in kindergarten and grade 3 reductions that could involve teacher aides, a PTR intervention. Texas passed House Bill (H.B.) 72 in 1984 to limit class size in grades K-2 to 22 and added grades 3 and 4 and a 20 student limit in 1986. The reasons for reducing class sizes include providing better instruction, more individual attention to students, and accommodating the growing diversity in public schooling.

In Tennessee, Project STAR (Student Teacher Achievement Ratio) was a statewide, large-scale longitudinal (1985–1989) experiment of small-class effects on the achievement and development of pupils in grades K–3. STAR expanded into the Lasting Benefits Study, Project Challenge, the Enduring Effects Study, and STAR Follow-up Studies to track students through the grades. By 2001, analyses had been conducted on STAR students who graduated from high school in 1998, including college admissions test results analyzed by the size of the K–3 class that the students had attended.

STAR involved 11,600 students and 340 teachers in 79 schools. Students were assigned at random to small classes (13–17 students), regular classes (approximately 22–25 students), and regular classes with a full-time teacher aide. The in-school design whereby each participating school had at least one of all three class types ruled out school-level vari-

ables. Random replacements for students who moved or were retained in grade maintained the cohorts in grades K–3. Grade-appropriate teachers were randomly assigned each year. Data were collected on pupil cognitive (e.g., test scores) and noncognitive (e.g., behavior, participation, attendance, self-concept) measures and teachers and aides were interviewed each year. Each year the small-class students exceeded the large-class students on all cognitive and most noncognitive measures. Gains were cumulative and were especially strong for students who had spent more years in small classes. Frederick Mosteller concluded: “The Tennessee class size project, a controlled experiment . . . is one of the most important educational investigations ever carried out.” (p. 113).

Wisconsin began SAGE (Student Achievement Guarantee in Education) primarily in urban areas in 1996. SAGE later expanded to any district that met eligibility criteria. As in the early Glass and Smith works, Prime Time, and STAR results, SAGE evaluators found both cognitive and noncognitive gains. Like STAR, SAGE began in kindergarten and proceeded one grade per year, phasing in small classes, and results were similar. Compared to students in larger classes, small-class students achieved higher test scores and better behavior and discipline, and teachers felt that they were more effective and able to provide more individual attention. Minority and difficult-to-teach youngsters received greater benefits than did other students, echoing reviews of class-size research such as Harold Wenglinsky’s 1997 findings that “fourth graders in smaller-than-average classes are about half a year ahead of fourth graders in larger-than average classes. . . . The largest effects seem to be for poor students in high-cost areas” (pp. 24–25).

In 1996 California began a massive voluntary class-size reduction (CSR) in grades 1 through 3 that included incentives to participate. Brian Stecher et al. (2001) found unanticipated consequences, including large-scale movement from poor and urban districts of certified teachers who were replaced by new, uncertified, or emergency-credentialed teachers. Modest student gains did not include the differential benefits for minority students found in other class-size studies. It remains to be seen if teacher mobility influenced this.

**TABLE 1**

### Research and theory bases for small-class effects in early grades

The following lead to short- and long-range achievement benefits.

- |  |  |
|--|--|
| <p><b>I. Learning</b></p> <ul style="list-style-type: none"> <li>A. Task induction, students learn schooling expectations, and are socialized to school</li> <li>B. Time on task, focused work</li> <li>C. Engagement, participation, identification with school</li> <li>D. Appropriate homework</li> </ul> <p><b>II. Teaching</b></p> <ul style="list-style-type: none"> <li>A. Individual accommodation</li> <li>B. Early diagnosis and remediation of learning difficulty</li> <li>C. Teach to mastery</li> <li>D. Immediate reinforcement</li> <li>E. Assessment (in-class)</li> <li>F. Use of effective teaching methods</li> <li>G. Cooperative learning</li> </ul> | <p><b>III. Classroom</b></p> <ul style="list-style-type: none"> <li>A. Classroom environment (e.g. air quality, materials, crowding), space for learning centers</li> <li>B. Family-like community</li> <li>C. Inclusion, special needs, teachers can work with each student</li> <li>D. Group dynamics</li> <li>E. Opportunity for peer interaction</li> <li>F. Classroom management</li> <li>G. Less commotion</li> <li>H. Controlled noise levels, seamless transitions</li> </ul> <p><b>IV. Other</b></p> <ul style="list-style-type: none"> <li>A. Increased parent interest</li> <li>B. Teacher/student morale</li> <li>C. Accountability and responsibility</li> <li>D. Assessment (outcome)</li> </ul> |
|--|--|

SOURCE: Courtesy of author.

### Translating Class-size Research to Practice

Many class-size studies collectively told educators much about schooling and identified that there were right ways to use small classes. On tests given in grades 3 and higher, studies showed that one year (grade 3) in a small class, and even two years (grades 2 and 3) yielded negligible test-score gains. For short-term and long-term results, students had to start small classes when they entered school (kindergarten or grade one). The treatment had to be intense (all day, every day) and for sufficient duration (at least three and preferably four years). Small classes are more preventive than remedial, as they help teach young students what is expected in schooling. By 2001 researchers had identified some two dozen research- and theory-based reasons why small classes provide superior student opportunities and outcomes (see Table 1).

The longer a student has small classes the better the outcomes, not just while in small classes, but through high school and beyond. Small-class K–3 students gained about a year’s growth in all subjects tested over randomly assigned peers in larger classes. Small-class students had significantly higher graduation rates, lower retention in grade, and higher percentage of honors diplomas. Early small-class

attendance reduced the college admissions testing gap between white and minority students significantly. In contrast classes with teacher aides (which reduced PTR but not class size) were particularly ineffective for minority male students, a finding that helps explain the mixed outcomes in Prime Time after aides were allowed as a small-class alternative.

### Consideration of Critical Comments about Class Size

Small-class critics typically build on the comments of Eric Hanushek, whose work is typical of production function studies that use large, nonspecific databases not established for or from class-size research. Hanushek made two points: First, “pupil teacher ratios are not the same as class sizes,” and second “the only data . . . available over long periods refer to teacher-pupil ratios” (p. 145). Thus, Hanushek’s criticisms rely on PTR estimates and not on class-size work. His comments that small classes do not yield better student outcomes simply ignore class-size research findings such as early intervention, intensity, and duration. He also excluded Project STAR’s results. Scholars criticized Hanushek’s vote-counting methods and actually reanalyzed his data, obtaining different results. For example Rob Greenwald, Richard Lane, and Larry Hedges (1996) and Alan Krueger (2000) found that careful treatment of Hanushek’s data and excluding “double counting” actually showed that small classes were associated with increased student outcomes.

Educators who use small classes for young students must balance costs against benefits and implement small classes in accordance with the research. The difference between class size and PTR in the United States in 1998 was about ten pupils. If a school had a PTR of 17:1, a teacher faced about twenty-seven students in elementary grades. Redeployment of personnel based on small-class benefits is one way to find personnel and space for the small classes sizes that support improved student achievement, behavior, and school participation.

John Reisert’s 1971 plea to understand and use differences between class size and PTR remains. However, by 2001 there was experimental and anecdotal evidence that class sizes of about 14 to 16 in grades K–3 improve education outcomes of students, and the gains grow throughout the grades. There is no evidence that small classes in later grades are harmful. Much of the discussion is ideological

and not research-based. Glass (1992) said that “the controversy over class size has not subsided . . . educational research may . . . replace ordinary language with numbers . . . but it is not likely to reduce or eliminate the conflicts of interest and political positions that are played out in the school system” (p. 165).

*See also:* ELEMENTARY EDUCATION; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## CLUBS

Many schools and community organizations sponsor clubs for children and adolescents. These clubs provide opportunities for youth to participate in activities, interact with peers in a supervised setting, and form relationships with adults. Some clubs focus on a specific area, thus allowing members to develop their skills and interests in that area. Other clubs provide an array of activities from which children and adolescents can choose.

### Club Participation

Researchers have described how often children and adolescents participate in clubs, as well as the characteristics of young people that tend to join clubs. In 2001 Sandra Hofferth and Zita Jankuniene published the results of a study on how elementary school students spent their time after school. Using data from a longitudinal nationally representative random sample of U.S. residents, they found that although quite a few children reported belonging to youth organizations, only about 20 percent of the children actually attended clubs and youth organizations after school. On average, on any given day, these students spent between thirty minutes and one hour and twenty minutes at youth organizations engaged in supervised extracurricular activities.

Studies of high school students show that about 25 percent of adolescents join music-oriented clubs, such as choir or band, and 20 percent join academic or career-related clubs, such as a science club, a Spanish club, or Future Farmers of America. More children from middle-class families than from lower-class families report participating in school clubs. Participation is also higher in rural or small schools. One study found that club participants tended to be females from two-parent families with high socioeconomic status.

### Why Participation Is Expected to Benefit Youth

There are a number of reasons that both scholars and parents expect young people to benefit from

participation in clubs and youth organizations. These reasons have to do with the activities, roles, and relationships available to children and adolescents when they participate in clubs. Activities are important in several ways. For one, participation in a supervised constructive activity limits the time that is available for less constructive activity, such as television watching, or for getting involved in risky behaviors. For another, activities offered by clubs or youth organizations enable members to learn valuable skills. Many of the activities offered by clubs help students to extend and elaborate on the more formal knowledge learned in school.

Club membership provides an opportunity to participate in new roles. The leadership roles that are available in clubs provide a valuable experience that is not generally available to young people. Other roles, such as being a helper in a service club, a soloist in a music club, or an artist making scenery in a drama club, enable identity exploration.

Finally, relationships formed with adult leaders and with peers at the clubs are important. Adults and peers at these organizations can serve as models and as sources of social support, friendship, and caring. Several developmental theories point to the importance of adult mentoring for child and adolescent development. Mentoring relationships are important characteristics of clubs and youth programs. Adolescents who have an after-school relationship with a mentor are far less likely to use drugs or alcohol than adolescents who do not have such relationships. Peer relations might also benefit from participation in clubs. "Hanging out" unsupervised with peers contributes negatively to child and adolescent development. However, participation in supervised constructive activities provides adolescents with opportunities to gain social skills from positive interactions with peers.

Shirley Brice Heath has elaborated on the importance of extracurricular activities in the arts. She points out how arts groups offer young people activities, roles, and relationships that can contribute positively to their development. According to Heath, many youth art programs design environments that prepare youth for problem solving, conflict resolution, and productivity in work, family, and other community settings. Heath highlights the critical thinking, identity exploration, collaboration, organization, and pursuit of excellence that transpires when youth participate in artistic groups. Community arts organizations often help older youths to

elaborate their knowledge and skill by bringing younger participants into the group. By dedicating themselves to long-term projects, young people learn to stick with and complete projects, and they have the opportunity to produce creative works for audiences by putting on shows and plays. The racial and socioeconomic barriers that are breached by the work of such organizations is likely to benefit both youth and communities.

### **Benefits of Participation in Clubs**

Researchers and club sponsors have been eager to learn how participation in clubs influences youth development. However, studies of the impact of clubs have been conducted mostly on small, local, and nonrepresentative samples of children and adolescents. Furthermore, many studies that have found differences between participants and nonparticipants in clubs and youth organizations have not examined whether such differences existed before the children and youths joined. It might be that joiners have preexisting differences that lead them to become involved in clubs and participate in youth organizations. Students who are drawn to participate in a science club, for instance, are likely to have been more successful academically prior to joining than nonparticipants. For these reasons, the studies must be evaluated carefully.

Studies of students' participation in extracurricular activities during high school have tended to focus on athletics. However, several studies have examined outcomes by type of extracurricular activity. One conclusion is that participation in fine arts programs appears to contribute to better academic performance and psychological well-being, even when taking prior academic performance and psychological functioning into account. Another conclusion is that young people can derive developmental benefits from participating in well-run organizations.

Jacquelynne Eccles and Bonnie Barber investigated the contributions of participation in school and community clubs to the development of approximately 1,200 adolescents from ten school districts serving working and middle-class families in or near Detroit. The researchers identified how much each adolescent participated in academic clubs (science, debate, math, computer, chess, foreign language) and performing arts organizations (drama, art, band, dance), whether at, or outside of, school. Church groups accounted for most of the activities that were grouped together with community service

clubs in the social activity category, so any contributions of these activities are confounded with religious belief and practice and cannot be discerned. Although students who participated in the arts were less likely to use alcohol than other students, arts involvement did not change their drinking behavior during high school. Art participants also liked school more, had higher grade point averages during their senior year in high school, and were more likely to attend college full-time. However, only grade point averages actually improved as a result of participation. Art program participants liked school and intended to go to college before participating, and their levels of liking school and scholastic ambition did not change. Adolescents who participated in academic clubs were more academically skilled than other students before participating; however, the club activities also appeared to contribute to increases in the grade point averages of these students.

In a different longitudinal study, McLaughlin concluded that participation in effective programs provided multiple benefits. The National Educational Longitudinal Survey (NELS) followed a nationally representative sample of youths from 1988, when they were in eighth grade, through 1994. McLaughlin and her colleagues used NELS data to estimate general levels of self-esteem, academic achievement, future aspirations, self-efficacy, and civic responsibility of American youth. McLaughlin also gave youths participating in community organizations identified as effective a set of questions from NELS. Participants in effective programs were found to be more likely than nonparticipants to aspire to graduate from high school and to pursue further education. They also did better academically, compared to the national estimate. Adolescents who participated were more optimistic, had higher self-esteem, and expressed greater self-confidence than the national average, and they were more oriented toward serving their communities in the future. A longitudinal follow-up investigation found that the majority of participants in effective community programs were employed and active in their local communities during their twenties.

One study found that there was less juvenile delinquency and less alcohol and drug use among adolescents and adults in ten public housing sites that had Boys and Girls Clubs, compared to five public housing sites with no clubs. Adolescents who resided in public housing developments with Boys and Girls Clubs spent more time in activities that were healthy

and constructive than did adolescents from housing developments without Boys and Girls Clubs. A study of two different girls-only programs at four Boys and Girls Clubs in Chicago supported the idea that relationships at the clubs are important contributors to participants' development. The fifty girls who participated in the study felt that the club provided a place for positive peer relationships and for working cooperatively with other girls to achieve goals.

Adult volunteer leaders or mentors at clubs might also benefit. Adult leaders of youth groups such as the Girl Scouts have expressed satisfaction with the experience because of positive youth responsiveness, as well as the usefulness and effectiveness of the programs.

### **Why Children and Adolescents Participate in Clubs**

If clubs are beneficial developmentally, then it is important to understand why children and adolescents want to participate in them. Some researchers have examined the characteristics of clubs that children and adolescents identify as important and that motivate them to want to participate. One reason that clubs succeed is that they are familial—participants feel that they belong and are cared for at the club. Another reason that young people participate is that the available activities are rewarding—participants learn through participating and performing in the activities. Participants also have a sense of ownership, as they are expected to contribute to the planning, maintenance, and success of the organization. Adults at the clubs empower, support, and set high expectations for the participants, and the clubs are responsive to the needs and circumstances of their members.

Another study, using observations, surveys, and interviews, found that most (74%) of the 300 minority adolescents who participated in four affiliates of the Boys and Girls Clubs of America referred to the club as a home and mentioned relationships with the staff as important. Many of the adolescents felt cared for at the club and reported receiving both support and advice. Adolescents mentioned psychosocial benefits far more often than physical characteristics of the clubs.

Milbrey McLaughlin and Heath studied young people in thirty-four locations in low-income urban and rural areas over a twelve-year period from 1987 through 1999. Study participants were interviewed

about what motivates them to participate in clubs and organizations. McLaughlin and Heath found that the effective organizations noticed the interests and strengths of participants and saw young people as resources. Effective programs were more than safe places to go—they were focused on activities like sports, arts, or community service. The programs offered adolescents opportunities to develop skills and interests, as well as to learn, plan, perform, or create products. Adolescents were also able to lead activities and to have some sense of ownership of, and responsibility for, the club. Adolescents also formed relationships with adults and peers centered on learning and developing skills. Effective programs provided participants with opportunities to improve through adult feedback, peer feedback, and self-evaluations; and they had safe nurturing environments that helped the adolescents to develop trust and security. These programs were also sensitive to community needs and circumstances in offerings and structure.

Emmalou Norland and Melissa Bennet studied a random sample of adolescent participants in Ohio 4-H programs. Using theory and previous research, they argue that program satisfaction is the best way to determine which adolescents will continue participating in a voluntary extracurricular activity such as 4-H. They found that a participant report of high-quality 4-H club meetings was the most important predictor of participant satisfaction. Other predictors of satisfaction that program planners can influence included opportunities to work with younger members and an ability to assume some level of responsibility. Parental support, but not direct parental involvement, was also found to be important to the adolescents.

Other studies of 4-H participants have underscored other program qualities that influence participation. For example, adolescents strongly value encouragement of leadership, community service, honesty, a strong work ethic, a healthful lifestyle, and the importance of family. Adolescents also valued organizations that met their needs to have fun, develop mature peer relationships, and learn about society. Some 4-H members were most satisfied when their leaders provided a balance between autonomy support (allowing for independence) and control.

*See also:* YOUTH ORGANIZATIONS: *subentries on* BOYS AND GIRLS CLUBS OF AMERICA, BOY SCOUTS OF AMERICA, CAMP FIRE USA, FOUR-H PROGRAMS, GIRL SCOUTS OF THE USA.

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LEE SHUMOW

## COALITION OF ESSENTIAL SCHOOLS

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The Coalition of Essential Schools (CES) is a grass-roots network of approximately 1,000 schools and twenty regional centers around the country that seek to enact a set of ideas put forth by the American educator Theodore R.Sizer in *Horace’s Compromise* (1984). Sizer found that, despite their differences in location and demography, American high schools, by and large, were remarkably similar and, quite simply, inadequate. He concluded that the typical American high school—with a huge array of unrelated courses taught in short, fragmented periods by teachers who face 150 students a day—promoted apathy and intellectual lethargy, and that the lesson such schools succeeded in teaching best, perhaps, was that school is deadly dull and has little to do with becoming a productive citizen or an educated human being.

Sizer considered how schools might be more wisely designed. Given the dismal historical record of major “top-down” reform initiatives over the previous fifty years, Sizer chose to approach reform not with a new and improved model to be imposed, but rather with a set of ideas that a school could employ in ways that suited its community. These ideas, referred to as the coalition’s Common Principles, fall into four key program areas: school design, classroom practice, leadership, and community connections. In the area of school design, CES schools strive to structure schedules and staffing arrangements so that teacher–student ratios are low, teachers have significant time to collaborate, and all students participate in a rigorous intellectual program. In their classrooms, coalition teachers seek to emphasize depth of understanding rather than mere coverage of material, and they see their role more as a facilitator or coach than a deliverer of information. Coalition schools work to create democratic leadership structures, enlisting the active engagement of community members both in the governance of the school and in the education of students.

To aid K–12 schools seeking to adopt these ideas, CES has a two-tiered system of services. The

regional centers support schools in the process of change by facilitating learning among schools in the region, providing carefully targeted opportunities for professional development, and offering technical assistance. Though CES regional centers vary in their particular program offerings, all are guided by the Common Principles and share similar strategies. Many CES centers, for example, set up one-to-one coaching relationships with the schools in their region; many sponsor meetings of teachers from different schools to serve as “critical friends” to one another; and many run an intensive summer institute for school faculty on whole school change, known as the “Trek.”

The CES national office administers CES University, a series of professional development institutes offered around the country by and for educators from the CES network and beyond. The national office also organizes an annual Fall Forum, where thousands of teachers and administrators come together to learn and to share strategies and experiences. The CES national website serves as a repository of ideas and information and includes many active online discussion groups. *Horace*, the CES journal, seeks out important work and helps keep the network abreast of new findings in educational research. CES also conducts a program of research to track the results of CES schools and operates an advocacy program, to help inform educators and the public about the coalition’s approach to schooling.

Several coalition schools have received national prominence. Perhaps best known is Central Park East Secondary School in East Harlem, New York, founded in 1985, and one of the charter members of the coalition. Many schools that joined the coalition more recently are showing equally impressive results, graduating and sending students to college at very high rates, and creating school communities with high levels of safety and trust.

The impact of the coalition’s work can also be gauged by its effect on the school reform movement. Its ideas—creating small schools where students can be known well; graduating students on the basis of demanding, public exhibitions in which students present the results of their research to panels of community members; and insisting that curriculum must teach students how to learn rather than teaching disconnected facts—have become part of the language of school improvement. Such coalition phrases as “critical friends,” “school coaches,” “ex-

hibitions of mastery," "less is more," and "teacher as coach" have become key components of many school reform efforts and state curriculum frameworks.

*See also:* INSTRUCTIONAL STRATEGIES; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## COALITION OF ESSENTIAL SCHOOLS' COMMON PRINCIPLES

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The Coalition of Essential Schools (CES) was founded in 1984 with the financial support of several national foundations as a secondary school reform organization. It built on the research conducted during the preceding five years by Theodore R.Sizer, Arthur G. Powell, and their colleagues in *A Study of High Schools*, research that was cosponsored by the National Association of Secondary School Principals (NASSP) and the National Association of Independent Schools (NAIS). The study's findings appeared in three volumes, *Horace's Compromise* (1984), *The Shopping Mall High School* (1985), and *The Last Little Citadel* (1986). The coalition was based at Brown University where Sizer was a professor and served as its chairman. NASSP and NAIS continued as cosponsors.

In light of the research, which had reflected the necessarily local character of effective secondary schools, CES avoided creating a "model" school design to be "implemented." Rather, CES set out nine "common principles," drafted by Sizer, that ap-

peared to be essential in the functioning of a worthy high school. While each CES school accepts responsibility to address the practical implications of all of the principles, the shape of the expression of those ideas is developed with the character and strengths of that particular locality in mind. CES would assist with the process of adapting the principles to immediate situations by gathering all the schools into a "coalition" from which each school could systematically learn from others. The staff at Brown chronicled and assisted these associated local efforts; regularly issued a newsletter, *Horace*, which recounted good practices as they took form in individual schools; and authorized and obtained the funding of an independent ethnographic study, which focused on the process in which schools engaged in this effort at rethinking and restructuring, and of several field studies directed by Patricia A. Wasley.

In summary, the nine common principles are:

1. The school should focus on helping adolescents learn to use their minds well. The schools should not attempt to be "comprehensive."
2. The school's goals shall be simple: that each student master a limited number of essential skills and areas of knowledge. . . . "Less Is More" should dominate.
3. The school's goals should apply to all students.
4. Teaching and learning should be personalized to the maximum feasible extent . . . no teacher (should) have direct responsibility for more than 80 students . . . decisions (about) the use of students' and teachers' time and the choice of teaching materials . . . must be unreservedly placed in the hands of the principal and staff.
5. The governing practical metaphor of the school should be student-as-worker.
6. The diploma shall be awarded upon a successful demonstration of mastery—an "Exhibition" . . . that may be jointly administered by the faculty and higher authorities. . . . As the diploma is awarded when earned, the school's program proceeds with no age grading.
7. The tone of the school should explicitly and self-consciously stress values of unanxious expectation . . . of trust . . . and of decency . . . . Parents should be treated as essential collaborators.

8. The principal and teachers should perceive themselves as generalists first and specialists second.
9. Ultimate administrative and budget targets should include . . . substantial time for collective planning by teachers, competitive salaries for staff and an ultimate per pupil cost . . . not [to] exceed those at traditional schools by more than ten percent.

In 1998 a tenth common principle was added: “the school should demonstrate . . . inclusive policies (and) model democratic practices . . . explicitly challenging all forms of inequity and discrimination” (Coalition of Essential Schools pamphlet, *The Ten Common Principles*, 1998).

The initial group of twelve schools included several that have gained substantial public visibility, such as Central Park East Secondary School in East Harlem, New York, designed and launched by Deborah Meier; and Thayer High School in Winchester, New Hampshire, “redesigned” by Dennis Littky. Others such as the R. L. Paschal Essential School in Fort Worth, Texas, a small, autonomous unit embedded within the larger Paschal High School, survived and flourished by keeping a very low profile. As others joined, many had difficulty with what emerged as the two hardest principles to put into effect, the diploma based on a public “Exhibition” and the “no more than 80-1 student-teacher ratio.” The Brown-based staff observed and reported on these matters, for example, in the former case with workshops, pamphlets, and books by Grant Wiggins and Joseph McDonald; and in the latter with Sizer’s *Horace’s School* (the chronicle of a fictional school, drawn with CES experience in mind, in employing the common principles) and *Horace’s Hope* (the author’s take on what he had seen and what independent evidence arising from the work suggested). Overall, the instability of leadership and of the “system’s” own directions made the prospect of quick, uncontroversial, and sustained reform difficult.

From 1988 to 1993 CES engaged in a major joint effort with the Education Commission of the States and several of its member states in the Re:Learning project, an effort to connect the grassroots work of Essential Schools with policy reform consistent with CES and CES-like efforts. A substantive and positive residue of Re:Learning was the creation of state-based “centers,” usually funded by a mix of private and public money, to forward the work. Political in-

stability, however, made major, highly visible, coordinated restructuring “from the schoolhouse to the state house” largely unsuccessful. In 1990 CES joined the ATLAS Communities Project, one of the New American School efforts, joining with Yale University’s School Development Project, directed by James Comer; Harvard Project Zero, directed by Howard Gardner; and the Education Development Center, led by Janet Whitla. ATLAS activities have been funded largely at the federal and district levels.

In 1997 and on the retirement of Sizer from Brown University, CES, now numbering more than 1,000 members, established itself as a not-for-profit organization based in Oakland, California. Much of the close-in work earlier carried out by the Brown staff was shifted to state and regional “centers,” these being themselves not-for-profit entities. An executive board, drawn from the member schools and the centers, directs CES’s national voice, coordination, and program assessment efforts. A major independent study of “fully articulated” Essential schools (that is, those that have been able to actualize all the common principles) was underway in the early twenty-first century.

*See also:* COALITION OF ESSENTIAL SCHOOLS; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS; SCHOOL REFORM.

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THEODORE R. SIZER

## COGNITIVE AND INFORMATION PROCESSING

See: DEVELOPMENTAL THEORY, *subentry on* COGNITIVE AND INFORMATION PROCESSING.

### COLEMAN, JAMES S. (1926–1995)

A major twentieth-century figure in the sociology of education, James S. Coleman was a social theorist and an empirical researcher with a prevailing interest in social problems in education—tackling issues that were sometimes unpopular. Richard Elmore describes Coleman as a “person who said what he thought and what the evidence said, regardless of whether he felt it was the right thing to say, or the socially acceptable thing to say, in other people’s eyes. Even those who disagreed with him were always stimulated to think differently about the issues” (Schmidt, p. 11).

#### Career

Coleman was born in Bedford, Indiana, in 1926 and attended Purdue University, earning a B.S. in chemical engineering in 1949. Switching to sociology, he received his Ph.D. in 1955 from Columbia University, where his thesis, published in 1961, was a study

of adolescent society. His major work was done as professor in the Johns Hopkins University Department of Sociology (1960–1972) and at the University of Chicago in Sociology and the National Opinion Research Center (NORC) as a research director (1956–1959 and 1973–1995). He published more than thirty books and many articles. Besides being president of the American Sociological Association (1993–1997), he worked on the creation of the National Educational Longitudinal Study database, which he used extensively in his research.

Coleman made many important contributions to the sociology of education. First, in the mid-1960s, the so-called Coleman Report (1966) examined the effects of differentiated resources on student achievement, with the intention of showing that children attending impoverished schools (a disproportionate number of whom were African American) would perform badly. Second, in the 1970s, he analyzed the effects of forced racial integration (busing) on “white flight,” becoming an advocate of school choice for impoverished families. Third, in the 1980s, he explored (with Sally Kilgore and Thomas Hoffer) the differential achievement of poor children attending private, Catholic, and public schools. Before his death in 1995, he treated schools as “output-driven systems,” becoming a critic of the popular “portfolio analysis,” which he believed produced inadequate measures of student performance and weakened incentives for teachers to improve their performance.

#### Contributions and Controversies

In 1964 Congress ordered the U.S. Commissioner of Education to investigate “the lack of availability of equal education opportunities for individuals by reason of race, color, religion, or national origin.” The Coleman Report, the result of a national study of 600,000 students, 60,000 teachers, and 4,000 public schools, attempted to relate family background (including race and socioeconomic status) and school equity variables (including the integration of white and African-American children) to students’ test results and their attitudes toward attending higher education.

Coleman found, surprisingly, that students’ test outcomes were unrelated to the usual characteristics of schools (e.g., the quality of school facilities, programs, and teachers). Instead, the improvement in academic results among minority children was significantly linked to the quality of the student body—

as measured by the proportion of students with encyclopedias in their home and the proportion with high aspirations. He wrote, “These minority children have a serious educational deficiency at the start of school, which is obviously not a result of school; and they have an even more serious deficiency at the end of school, which is obviously in part a result of [a segregated] school” (1966, p. 22). Racial integration was, according to this study, the key social factor in improving student outcomes.

As for the policy effects of Coleman’s research, Hallinan noted in 2000 that the findings of the landmark study “were among the most influential factors leading to the desegregation of the American public school system” (p. 76). Nevertheless, the study’s heavy emphasis on the effects of family background on children’s education lies in sharp contrast to prevailing opinion. Critics (e.g., Adam Gamoran, Walter Secada, and Cora Marrett in 2000), while admitting the significance of the Coleman Report, reproached it as “the most spectacular failure to connect the collective with the individual in an educational setting. Variation in school conditions [beyond racial integration] was largely unrelated to differences in student outcomes, as school-level effects were dwarfed by the powerful influence of home environment for student learning” (p. 37).

Although the Coleman Report was used extensively by integrationists, by the mid-1970s Coleman’s research showed that forced busing of students for “racial balance” was actually compromising the education of bused students by the loss of middle-class (and largely white) students in urban schools. In a study of school choice, Coleman and colleagues (1977) explained that the equalizing effects of the common school are greatest when students from diverse backgrounds—who live in the same locality—attend school together. In his view, forced busing tends to “increase the gap in educational opportunity between those with money and those without” because affluent parents can “buy their way out” of bad schools either by moving to better neighborhoods, to the suburbs, or by enrolling offspring in a private school (p. 6).

Although the location of the school that students attend is largely determined by where they live, the same cannot be said for their parents’ place of work. Coleman pointed out that technological and economic changes (e.g., access to automobiles, better commuter routes, and greater affluence) tend to

make residential neighborhoods more racially and socioeconomically homogeneous.

Convinced that the quality of an educational experience is associated with the composition of the student body, Coleman asked whether parents, who could choose to live far from their place of employment, might also choose where their children attend school. He describes two methods for bringing about educational equality: court-imposed efforts to achieve racial balance (e.g., busing) and policies to remove economic restraints that decrease the ability of parents to make educational choices, by providing vouchers or through competition within the public school system (e.g., magnet schools, charter schools, and open enrollment/transfer plans). Coleman traced both approaches to the “egalitarian” impulse of achieving racial integration in schools, although he favored measures that expand rather than diminish parental options.

By the 1980s, Coleman (along with Kilgore and Hoffer, 1982a) analyzed the High School and Beyond (HSB) data set—the nation’s largest longitudinal study of schools effects, involving 28,000 sample students attending 1,015 public and private schools. In 1980, sophomore and senior students from public and private high schools were tested in language arts, science, social studies, and mathematics. Using the data as a synthetic cohort, Coleman and colleagues found that Catholic schools upheld the “common school ideal”; that is, the effects of family background on achievement were lower in the Catholic schools. “Average” students were more likely to take rigorous academic courses, thereby producing better results. Thus, Catholic schools avoided the “stratifying” practices, in Coleman’s words, of a “‘public’ school system that no longer integrates the various segments of the population of students, but appears no more egalitarian than private education, and considerably less egalitarian in outcome than the major portion of the private sector in America—the Catholic schools” (1982a, p. 196).

Social capital was defined by Coleman as “the set of resources that inhere in family relations and in community social organization and that are useful for the cognitive or social development of a child or young person” (1990, p. 300). He thus found an empirical referent for his social theory, based on a large-scale national survey: that the Catholic parish, which supported the parish school, united to improve the education of children: the corollary of the phrase, “it takes a village to raise a child.” Coleman and Hoffer

discovered that since Catholic high schools possessed more “social capital,” their students tended to outperform public school pupils from similar backgrounds and neighborhoods. He further explained the importance of social cohesion that has diminished with social progress.

Primordial social organization has depended on a vast supply of social capital, on a normative structure which enforced obligations, guaranteed trustworthiness, induced efforts on behalf of others, and on behalf of the primordial corporate bodies themselves, and suppressed free riding. The social capital has been eroded, leaving many lacunas. Perhaps the most important area in which erosion has occurred is in the regeneration of society through the nurturing of the next generation [e.g., education]. (1990, p. 651)

Coleman’s research managed to stir up considerable controversy when he applied his theories and methods to the field of educational sociology. The work *Public and Private High Schools* (1987) written with Hoffer was perceived to threaten the hegemony of public schools and to elevate the effectiveness of faith-based (Roman Catholic) schools in the authors’ attempt to help inner-city students. Its release brought negative reactions from the more liberal, public school establishment, as well as many of the radical equalitarians who had supported his earlier research on school integration. And a number of researchers, such as Jay Noel in 1982 and Karl Alexander and Aaron Palls in 1985, attacked Coleman’s study of differing achievement in Catholic and public high schools. J. Douglas Willms, for example, re-analyzed the High School and Beyond data set and published the results in 1985, having studied 21,772 public and Catholic school students and using longitudinal data (sophomores and seniors). He determined that “no pervasive Catholic-school effect,” was present although “we cannot be certain that the tests were sensitive enough to detect differences between Catholic and public school effects on students’ achievement” (p. 113).

### Redefining American Education

Coleman’s work shows a pattern in which the process of social progress depends, to a large extent, on the extension of rights, choice, and resources to disenfranchised groups. He argues that any new “allocation of rights” results not simply from new

information but from a multistage process including: “information changes beliefs; the new beliefs show a conflict of rights; [and] the conflict of rights comes to be resolved by a change in one or the other right.” (1990, p. 56)

For example, Coleman interpreted the 1954 *Brown v. Board of Education* court decision as vindicating the right of African-American parents not to have their children assigned to distant schools when schools attended by white children were closer. The findings from the Coleman Report suggested that children from poor backgrounds perform better academically when they attend school with children from more affluent families. In this case, African-American children benefit when they are bused to distant (integrated) schools. Thus, new information “brought into conflict the right to equal educational opportunity and the right of parents not to have their children assigned to a distant school on the basis of an arbitrary ground such as race” (Coleman et al. 1966, p. 56). Coleman thought a final resolution to the busing and integration issue had yet to occur.

Toward the end of his life, Coleman asked how educational systems might be more accountable, especially when evaluating students’ academic achievement. In an essay published posthumously (1997), he advocated the principle of “output-driven” systems “in which the rewards and punishments for performance in productive activity come from the recipient of the product” (p. 25). He noted that educators sought alternatives to standardized testing, especially avoiding multiple-choice tests, for both good reasons (because there are more accurate methods of assessment) and bad reasons (such as the supposed stigma connected with poor scores or grades).

For instance, Coleman examined the increasingly popular method of alternative performance assessment, the use of portfolios. He contended that portfolio analysis, based on the idea that academic achievement is analogous to artistic or athletic performance, is attractive to many educators. In Coleman’s judgment, however, the use of portfolios was subjective in nature, lacking in external standards, determined by teachers’ vested interests, and without a stimulus for improvement. Coleman objected to such “soft” measures, stating that “the strongest drive toward performance assessment comes from the leveling impulse: i.e., from the aim of eliminating comparative evaluation in schools” (1997, p. 37).

### Contribution to Education

Thus, in his last publications, as in his earlier ones, Coleman grounded his theoretical ideas in rigorous empirical data and an insistence on being able to measure academic results. Portfolios were to Coleman just another mushy example of educational predeterminism, rather than realistic, hard-nosed, data-based outcomes. To Coleman, nothing in social life was easy. For as he explained, “the threat [portfolios] pose is not inherent in performance assessment, but lies in the ease with which performance assessment can be made compatible with reduced performance levels by those who would eliminate competition in schools” (1997, p. 37). Even in death, Coleman managed to capture attention and stir controversy.

*See also:* GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF; POVERTY AND EDUCATION; RACE, ETHNICITY, AND CULTURE.

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## COLLEGE ADMISSIONS

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Applying for admission to colleges and universities has evolved from a relatively straightforward process to a complex rite of passage that causes anxiety for many high school students. Increased media attention about college admissions during the late 1980s and 1990s facilitated the growth of a booming college admissions industry. Commercial test-preparation courses, independent counselors, annual college rankings by news magazines, and a wide range of guidebooks are now a routine part of the college admissions landscape.

Despite this plethora of advice on how to “beat” the admissions process, institutions of higher education vary greatly in their selectivity. Many communi-

ty colleges, for example, have an open-access policy and admit any applicant with a high school diploma or its equivalent. On the other hand, the most competitive universities admit as few as 10 to 20 percent of their applicants.

Colleges establish enrollment goals based on considerations such as tuition revenue projections, financial aid budgets, housing availability, and the number of currently enrolled students. Since many applicants apply to more than one institution, not every offer of admission that a college extends will result in a student enrolling there. Colleges therefore admit more students than they hope to enroll. The percentage of students who accept an institution's offer of admission is known as a college's *yield rate*. Because this number is difficult to predict from year to year, some institutions maintain a wait list for applicants. If a college has not reached its target enrollment after regularly admitted applicants accept or decline their offers of admission, it may admit students on its wait list.

### The Admissions Process

The admissions process is based on the submission of written applications and supporting credentials. In the late 1990s many colleges began offering the option of online applications, available through institutions' websites or through commercial third parties. While most students use application forms specific to a particular institution, a form called the Common Application reduces the volume of paperwork for students applying to participating institutions. Most institutions require an application fee, although students with severe financial hardships sometimes obtain fee waivers with the support of their guidance counselors.

Applications usually require submission of an official high school transcript, an official college transcript if the student has completed previous college coursework, a guidance counselor recommendation, teacher recommendations, and official results from either the SAT I or the ACT Assessment. Some selective colleges require the SAT II subject tests, which they sometimes use for placement purposes. In addition, many applications require one or more essays, and some colleges require interviews with admissions staff, alumni, or current students. Additional information may be required for transfer or international students.

### Application Options

Many institutions have a strict admissions timetable to which applicants must adhere. Application deadlines can range from early fall of the senior year in high school to the summer before desired enrollment. The following are among colleges' most common application options, and an institution may offer one or more of these:

- **Regular decision.** Deadlines for submitting applications and supporting credentials for fall semester admission typically fall between December and March. Most institutions that follow this traditional schedule mail admissions decisions in late March or early April and ask students to notify them of their enrollment decisions by May 1.
- **Rolling admissions.** Some colleges offer a rolling admissions process, in which applications are reviewed and evaluated as they are received. These institutions notify students of their admissions status as decisions are made.
- **Early action.** Some colleges have a fall application deadline for students who wish to receive notification of their admissions status in December or January. Colleges may admit or deny these applicants, or they may opt to reconsider them under the regular decision process. Receiving an early offer of admission can be a relief for students, and students who are denied admission usually still have time to apply to other colleges. Some institutions ask that applicants apply for early action at only one college, while others do not have this restriction.
- **Early decision.** This process differs from early action in that students agree to attend the institution if offered admission. In addition, they must withdraw their applications from all other institutions if admitted. As students may apply to only one institution using this option, it is appropriate only for students who are certain about their first-choice college. In some cases, applying for early decision can have ramifications for financial aid.

Counselors generally recommend the early action and early decision options only for students with strong academic records through the junior year. Weaker applicants may improve their applications by retaking a standardized test or improving their grades during the fall of their senior year.

Some variations exist in the above timetable. In special cases, for example, highly qualified students

may be permitted to enroll after their junior year in high school. Some colleges will agree to defer an offer of admission for students who wish to work or travel for a year between high school and college. Accepting a position on a college's wait list may prolong the college admissions process well into the summer before desired enrollment. Some institutions may admit a student with provisions (e.g., asking that he or she take a summer remedial skills course prior to being fully admitted to the college).

Offers of admission to high school seniors usually include the stipulation that the student must maintain satisfactory academic performance. Colleges may revoke offers of admission to students whose grades decline significantly during their second semester.

Application review procedures vary widely by institution. Some colleges have admissions officers independently rate applications, while others utilize committees comprising admissions personnel, faculty, or current students. Institutions are legally bound to adhere to their publicized admissions standards, honor their admissions decisions, and refrain from unjustifiably discriminating on the basis of race, sex, age, disability, or citizenship. At the end of the twentieth century, however, the legality of affirmative action, one of the most controversial practices in college admissions, began to be challenged in the courts.

### **Weight of Credentials**

No particular set of credentials guarantees admission to the most selective institutions, as these colleges receive many more qualified applicants than they are able to admit. The process is subjective, and often several individuals will review each application.

Colleges usually identify the high school transcript as the most important credential. They consider rigor of coursework, grade point average (GPA), and sometimes class rank. Institutions typically publish their minimum expectations for applicants' high school curriculum. In evaluating the transcript, most colleges highly regard honors, Advanced Placement (AP), and International Baccalaureate (IB) courses. Some colleges look primarily at the number of years a student has studied each subject (e.g., three years of foreign language); others look to see that a certain course level has been attained (e.g., completion of Algebra II). Many col-

leges view applicants' coursework in the context of what their high schools offer. Most high schools send colleges a profile that includes information about grading practices, curriculum, extracurricular opportunities, and the socioeconomic environment of the school. This gives admissions officers a way to judge the work of students at high schools with which they are unfamiliar. Institutions vary as to whether they will consider GPAs and class ranks that are weighted for honors, AP, or IB courses; some recalculate GPAs to be consistent across applications. Likewise, institutions differ as to whether they include nonacademic courses, such as physical education or fine arts, as part of the applicant's GPA.

Standardized tests, especially the SAT and ACT Assessment, continue to play an important role in the admissions process at most colleges, despite concerns about the differential performance of disadvantaged students on these tests. Some institutions, especially public universities, use admissions formulas that combine standardized test scores and grade point average. Most institutions, however, consider standardized tests as only one aspect of a student's application. Standardized tests provide a uniform yardstick against which all applicants are measured—unlike grades, which may reflect differences in high schools' academic rigor.

Institutions look to counselor and teacher recommendations to better understand an applicant. While an outstanding counselor recommendation can hold great weight with an admissions committee, admissions officers recognize that guidance counselors may not know each individual applicant well. Teacher recommendations help with this situation, as teachers tend to have more face-to-face contact with individual students. Recommendations can help colleges to understand the challenges that applicants have faced and the extent to which students have contributed to their high school communities.

Good essays also help admissions officers better understand applicants or see a side of the applicant not evident in the rest of the application. Admissions officers judge essays with an eye toward content and quality of writing. Colleges expect essays to be the applicant's own work.

Applications usually include space for students to list their extracurricular activities. Some institutions allow applicants to submit videos, slides, or other materials that document special talents in areas such as sports or the arts, and many colleges

give special consideration to applicants with extraordinary talents.

*See also:* ADVANCED PLACEMENT COURSES/EXAMS; COLLEGE ADMISSIONS TESTS; COLLEGE FINANCIAL AID; COLLEGE RECRUITMENT PRACTICES; COLLEGE SEARCH AND SELECTION.

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## COLLEGE ADMISSIONS TESTS

The ACT Assessment and SAT are the most popular college entrance tests administered in the United States.

### The ACT

The ACT Assessment, formerly called the American College Test, is a standardized examination required by many colleges and universities in the United States for admission to their undergraduate degree programs. The test was developed in 1959 to measure the academic abilities of prospective college students and provided an alternative to the SAT. The ACT is a two-hour and fifty-five-minute multiple-choice exam that measures English, mathematics, reading, and science reasoning skills. Students are also required to complete two questionnaires that cover the courses they have taken, their grades and activities, and a standardized interest inventory. The test battery includes four parts: (1) a 45-minute, 75-item English test; (2) a 60-minute, 60-item mathematics test; (3) a 35-minute, 40-item reading test; and (4) a 35-minute, 40-item science reasoning test. Each of the tests is scored on a scale from one to thirty-six; the four scores are combined into a composite score of one to thirty-six. Most students who take the test score within the range of seventeen to twenty-three.

Most students take the ACT during the spring of their junior year or at the beginning of their senior year. Students are allowed to take the test more than once, and most colleges and universities count the highest score reported. Students may designate the colleges and universities to which their scores should be reported.

### The SAT

The SAT, formerly called the Scholastic Aptitude Test and later the Scholastic Assessment Test, is an examination that is required by some of the higher education institutions within the United States for admission to their undergraduate degree programs. The SAT dates to the early 1900s when Ivy League schools formed the College Entrance Examination Board (College Board). The purpose of the board was to simplify the application process for students who were required to take a different entrance exam for each college they applied to. The SAT was designed as a standardized entrance exam for the College Board that required students to write out answers and compose essays.

In the early 1990s the test was redesigned to measure verbal and mathematical reasoning through multiple-choice questions. The revised SAT includes two separate divisions of the exam: the SAT I, which

is a general test of verbal and math ability, and the SAT II, which tests knowledge in specialized subjects chosen by the student. The verbal and math portion of the test devotes seventy-five minutes to the verbal section and sixty minutes to the mathematics section. The verbal portion comprises three kinds of questions, as noted by Alexandra Beatty and colleagues in 1998: (1) analogy questions, which assess “knowledge of the meaning of words,” ability to see a relationship in a pair of words, and the ability to recognize a similar or parallel relationship; (2) sentence completion questions, which assess “knowledge of the meaning of words” and “ability to understand how the different parts of a sentence fit logically together”; and (3) critical reading questions, which assess “ability to read and think carefully about several reading passages” (p. 18).

The mathematics section of the test assesses how well the students understand mathematics, how well they can apply what is known to new situations, and how well they are able to use the knowledge they have acquired to solve difficult mathematical problems. Each of the sections generates a score on a scale of 200 to 800, with the combined scores ranging from 400 to 1,600. Nationwide, average scores on both the verbal and math sections of the test are approximately 500.

### Test Scores and Their Relationship to Admissions Selectivity

There is some misunderstanding pertaining to the validity and importance of college entrance test scores. While test scores weigh heavily in admissions decisions, they are not the only variable that is considered in admitting a student to even the most selective institution of higher learning. Most colleges and universities use the test scores as a means of assessing a candidate for admission. Other criteria included in this assessment are the high school grade point average (GPA), rank in class, record of extracurricular and service activities, letters of recommendation, applicant’s essay, evidence of persistence, and interviews, which assist the college or university in determining the applicant’s maturity, determination, personality, and character. High school GPAs are considered a “soft” measure because grading standards range as widely as they do in college. Nevertheless, GPAs are considered more important than test scores because they are inclusive of several years of performance, not just a few hours of testing.

The combination of high school GPAs and ACT or SAT test scores is very useful in determining admissions because it provides different kinds of information about the academic performance of students. Test scores and GPAs provide reliable and efficient information that is very useful to many admissions counselors. Test scores were not designed, however, to be a comprehensive approach to all factors that influence success in college. Admissions personnel rely as much on high school GPAs or class rank as they do on test scores, and the predictor of college success is higher for both numbers together than for either one alone.

The ACT and the SAT can be very helpful in assisting colleges in admissions selectivity when there are more applicants than the college can accept. The colleges believe that the tests are one excellent means of helping them to make a better selection of the candidates who apply. For instance, colleges that specialize in the liberal arts and humanities would seek students with higher scores in verbal aptitude and lower scores in mathematics aptitude, whereas engineering colleges would seek students with high scores in mathematics aptitude and lower scores in verbal aptitude.

Over the years, college entrance tests have improved considerably. Colleges and universities have determined that students who do well on the tests have the ability to succeed in college. These tests, however, are indicators only of a student’s ability to do college work; they cannot measure perseverance and interest in learning.

**See also:** COLLEGE ADMISSIONS; COLLEGE ENTRANCE EXAMINATION BOARD, THE; COLLEGE FINANCIAL AID; COLLEGE SEARCH AND SELECTION.

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SUSAN WEST

## COLLEGE AND ITS EFFECT ON STUDENTS

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Among the earliest systematic analyses of college outcomes are those of C. Robert Pace (1941, 1979); James Trent and Leland Medsker (1968); and Kenneth Feldman and Theodore Newcomb (1969). Focusing on both longitudinal changes and cross-sectional differences, this body of research generated some of the first significant impressions of the efficacy of college attendance. By and large, these studies explored basic distinctions between those who attended college and those who did not. Beginning with analyses of standardized achievement-test data and alumni surveys from single institutions, and progressing to syntheses of multi-institutional assessments, this early literature was quite convincing, albeit preliminarily, in its conclusion that postsecondary education made a significant positive difference in the lives of students, both during and following college attendance.

### Early Work on the Impact of College

C. Robert Pace, whose pioneering work ranged from *They Went to College* (1941) to *Measuring Outcomes of College* (1979), concluded, after reviewing some fifty years of findings on college outcomes, that “college graduates as a group, of all ages and in all periods, more frequently possess knowledge about public affairs, people in the news, geography, history, humanities, sciences, and popular culture than do adults who had lesser amounts of schooling” (1979, p. 168). In addition to these gains in general education knowledge, the benefits beyond college, Pace observed, are apparent from reports of alumni who typically “have good jobs and good incomes, like their jobs, think their college experience was relevant and useful in their work, look back on their college years with considerable satisfaction, participate to a considerable extent in a variety of civic and cultural activities, and believe that college contributed to their breadth of knowledge, interpersonal skills, values, and critical thinking” (1979, p. 168).

Between 1959 and 1963 James Trent and Leland Medsker followed the paths of 10,000 high school graduates who either pursued postsecondary education or moved directly into the work force. Of these two groups, those who completed college following high school showed greater gains in autonomy and intellectual disposition. More specifically, college graduates were “less stereotyped and prejudiced in their judgments, more critical in their thinking, and more tolerant, flexible, and autonomous in attitude” (pp. 129–130). These outcomes were most evident, regardless of the type of institution attended, among those who graduated, followed by those who withdrew, those who sought employment immediately following high school, and those identified as “homemakers.” *Exceptional changers*, that is, those who had experienced unusually high gains on these outcome measures, in comparison to *average changers* and *negative changers*, those who had experienced average gains or losses on these measures, were represented proportionately by more males than females and by students with higher levels of parental education and occupation. Exceptional change on a measure of social maturity was found to be related to “openness to ideas, tolerance of different points of view, and self direction” (p. 197).

Factors associated with negative change were “limited ability, limited education, a constricted socioeconomic background, over-dependence on a dogmatic or fundamentalistic religion, and an unenlightened, unstimulating, and autocratic family background” (p. 212). College graduates “emphasized general education as the most important purpose of education,” in comparison to those who withdrew, who “placed more importance on vocational training” (p. 227). Trent and Medsker concluded that, “rather than effecting the changes, the college may facilitate change for many predisposed to it. But whether the process is facilitation or reinforcement, the specific catalysts for change have yet to be identified” (pp. 195–196).

Kenneth Feldman and Theodore Newcomb were the first to comprehensively catalog and analyze extant research on college impact. Their 1969 review attempted “to integrate a wide variety of studies of the effects of colleges on students over a forty-year period from the middle twenties to the middle sixties” (p. 2), with a particular focus on data relative to six value domains: theoretical, economic, aesthetic, social, political, and religious. They found the most consistent freshman-to-senior changes

were that a higher relative importance was placed on aesthetics and a lower importance was placed on religious values.

Feldman and Newcomb's analysis is particularly instructive of the challenge in measuring attitude changes, especially in considering their extensity, intensity, and direction. Reliance on freshman-to-senior group differences to chart changes can mask any number of dynamics in the data that may implicate significant impacts. Group averages are influenced by the number of individuals who change (extensity) and the degree to which each of them changes (intensity). The largest changes would entail both high extensity and high intensity of effect, just as small changes would indicate low degrees of these factors. In between are intermediate changes, reflecting potential combinations of high intensity changes among few individuals or lower intensity changes among many.

Direction of change must also be considered, as six potential patterns may be apparent. First is the *accentuation* of an attitude, from a moderately favorable or unfavorable form to one that is strongly held. Second is the *regression* of an attitude, as indicated by movement to a more neutral position from a previously held favorable or unfavorable attitude. Third is the *conversion* of an attitude from a favorable to an unfavorable form, or vice versa. Fourth is the *maintenance* of an attitude, evident in the reinforcement or retention of an attitude in its current form (favorable or unfavorable). Fifth is the *neutralization* of an attitude when a favorable or unfavorable attitude dissipates toward a neutral form. Sixth and final is the *formation* of an attitude from a neutral position to one that is either favorable or unfavorable.

### Nine Generalizations

Feldman and Newcomb concluded their analysis with nine generalizations regarding college impacts and the various experiences and factors associated with them. First, the authors state, "freshman-to-senior changes in several characteristics have been occurring with considerable uniformity in most American colleges and universities," namely "declining 'authoritarianism,' dogmatism, and prejudice, together with decreasingly conservative attitudes toward public issues and growing sensitivity to aesthetic experiences" (p. 326).

Second, they found that "the degree and nature of different colleges' impacts vary with their student

inputs, . . . those characteristics in which freshman-to-senior change is distinctive for a given college will also have been distinctive for its entering freshmen" (pp. 327–328). In other words, the most prominent changes among students owe much to an accentuation or reinforcement effect of their initial characteristics.

Third, the same accentuation effect that operates to distinguish one institution from another also differentiates students in one major from those in another. "Whatever characteristics distinguish entrants into different majors tend, especially if relevant to the academic field chosen, to become still more distinctive of those groups following the pursuit of the major" (p. 329).

Fourth, "the maintenance of existing values or attitudes which, apart from certain kinds of college experience, might have been weakened or reversed, is an important kind of impact" (p. 329). This insight underscores the potential effect an absence of "reinforcing or consolidating experiences" might have, such as the case of students who bid unsuccessfully to join an on-campus group (e.g., fraternity or service club) and subsequently develop "attitudes more closely resembling those of students with whom they continued to live" (p. 330).

Fifth, Feldman and Newcomb claim, "though faculty members are often individually influential, particularly in respect to career decisions, college faculties do not appear to be responsible for campus-wide impact except in settings where the influence of student peers and of faculty complement and reinforce one another" more on a professional than a personal level (p. 330).

Sixth, "the conditions for campus-wide impacts appear to have been most frequently provided in small, residential, four-year colleges . . . [where there is a] relative homogeneity of both faculty and student body together with opportunity for continuing interaction, not exclusively formal, among students and between students and faculty" (p. 331). Having human-scale opportunities for interacting around shared interests and characteristics is an apparent requisite for such outcomes.

Seventh, "college impacts are conditioned by the background and personality of the student" (p. 332). In terms of background characteristics, "the more incongruent a student is with the overall environment of his [sic] college the more likely he is to withdraw from that college or from higher education

in general” (p. 332). However, personal characteristics, such as openness to change and a willingness to be influenced by others, can enhance the impact potential of the college experience.

Eighth, “attitudes held by students on leaving college tend to persist thereafter, particularly as a consequence of living in post-college environments that support those attitudes” (p. 332). This is particularly the case when students’ habits of being open to new information and being influenced persist as new opportunities arise.

Ninth, “whatever the characteristics of an individual that selectively propel him [sic] toward particular educational settings—such as going to college, selecting a particular one, choosing a certain academic major, or acquiring membership in a particular group of peers—those same characteristics are apt to be reinforced and extended by the experiences incurred in those selected settings” (p. 333). This *accentuation hypothesis* asserts that “if students initially having certain characteristics choose a certain setting (a college, a major, a peer group) in which those characteristics are prized and nurtured, accentuation of such characteristics is likely to occur” (p. 335). From this point of view, the impact of college is related to the fit between a student and an institution.

### Later Studies

Constituting a second wave of notable literature on the impact of college are the works of Howard Bowen (1977), Alexander Astin (1977, 1993), and Ernest Pascarella and Patrick Terenzini (1991). These more recent analyses are characterized by their more comprehensive scope, their attention to the myriad factors that contribute qualitatively to the college experience, and the depth of their synthesis of extant data. They also draw from theories that attempt to integrate the various components that contribute to college outcomes.

Howard Bowen, in *Investment in Learning* (1977), constructed a framework of higher-education goals related to outcomes for individual students. First, *cognitive learning outcomes* include verbal skills, quantitative skills, substantive knowledge, rationality, intellectual tolerance, aesthetic sensibility, creativeness, intellectual integrity, wisdom, and lifelong learning. Second are outcomes related to *emotional and moral development*, which include personal self-discovery, psychological well-being,

human understanding, values and morals, religious interest, and refinement of taste, conduct, and manner. Third is *practical competence*, including traits of value in practical affairs (such as need for achievement, future orientation, adaptability, and leadership), citizenship, economic productivity, sound family life, consumer efficiency, fruitful leisure, and health.

Reviewing the cumulative weight of evidence, Bowen concluded that “higher education, taken as a whole, is enormously effective” (p. 431) in terms of its contributions to positive individual and societal changes. On average, a college education “produces a large increase in substantive knowledge; moderate increases in verbal skills, intellectual tolerance, esthetic [sic] sensibility, and lifelong cognitive development; and small increases in mathematical skills, rationality, and creativity” (p. 432). In regards to affective outcomes, for example, college “helps students a great deal in finding their personal identity and in making lifetime choices congruent with this identity. It increases moderately their psychological well-being as well as their understanding, human sympathy, and tolerance toward ethnic and national groups and toward people who hold differing opinions” (p. 433). It also “greatly enhances the practical competence of its students as citizens, workers, family members, and consumers,” in addition to influencing, in positive ways, “their leisure activities, their health, and their general ability to cope with life’s problems” (p. 434). Significant positive changes in personality structures are also evident, namely in the “liberation of the personality as the most distinctive and important outcome” (p. 435), in becoming “more independent and self-sufficient” (p. 436), and in gaining a range of intrinsic values and interests.

Alexander Astin’s two research compendiums stand as additional landmarks during this period in the study of college and its effect on students. First, in *Four Critical Years* (1977), and subsequently in *What Matters in College* (1993), Astin synthesized data gathered through the Cooperative Institutional Research Program (CIRP), surveying some 200,000 students from 300 postsecondary institutions of all types. Both of these volumes are rich in detail in their framing of the *inputs* (or characteristics of students at the point of entry to college), *environments* (various programs, policies, faculty, peers, and educational experiences to which students are exposed), and *outcomes* (students’ characteristics after expo-

sure to the environment) that figure into the mix of college-impact research. These three sources of data are placed within a taxonomy comprised of *outcomes* (cognitive versus affective), *data types* (psychological versus behavioral), and *timeframes* (during college versus after college).

Among the types of outcomes in this model are *cognitive measures*, including knowledge, critical thinking ability, basic skills, and academic achievement. These outcomes are reflected in both psychological data, relating to the “internal states or traits of the individual” and behavioral data, relating to “directly observable activities” (p. 9), such as certain aspects of career development, level of educational attainment, and vocational achievements (e.g., level of responsibility, income, and awards or special recognition). *Affective outcomes* incorporate those of a psychological nature, such as self-concept, values, attitudes, beliefs, drive for achievement, and satisfaction with college, as well as behavioral factors, such as personal habits, avocations, mental health, citizenship, and interpersonal relations. A temporal dimension considers that colleges and universities are interested in both short-term (during college) and long-term (after college) effects.

Overall, two decades of CIRP data show that, in the affective realm, “students change in many ways after they enter college,” developing a “more positive self image, . . . substantial increases in Social Activism, Feminism, alcohol consumption, and support for legal abortions,” as well as “increases in their commitment to participate in programs to clean up the environment, to promote racial understanding, and to develop a meaningful philosophy of life” (Astin, pp. 396–397). Cognitively, students report “substantial growth in most areas of knowledge and skills, especially in knowledge of a field or discipline” (p. 397).

Regarding factors that contribute to such changes, Astin tenders several general conclusions. First, “the student’s *peer group* is the single most potent source of influence on growth and development during the undergraduate years.” That is, “students’ values, beliefs, and aspirations tend to change in the direction of the dominant values, beliefs, and aspirations of the peer group” (p. 398). Following the peer group, “the *faculty* represents the most significant aspect of the student’s undergraduate development” (p. 410). Underlying all of this is the dynamic of student involvement and its potential “for enhancing most aspects of the undergraduate student’s cogni-

tive and affective development” (p. 394). More specifically, “learning, academic performance, and retention are positively associated [proportionately] with academic involvement, involvement with faculty, and involvement with student peer groups” (p. 394). In addition, “living at home, commuting, being employed off-campus, being employed full-time, and watching television” (p. 395) tend to negatively affect these same outcomes. Last, it appears clear that “most effects of institutional type [e.g., public versus private, four-year college versus university, small versus large] are indirect; that is, they are mediated by faculty, peer group, and involvement variables” (p. 413).

### Pascarella and Terenzini

The most comprehensive, systematic review to date on the question of college impact is found in Ernest Pascarella and Patrick Terenzini’s tome, *How College Affects Students* (1991). Examining more than 2,600 empirical studies completed over a period of fifty years, the authors considered college outcomes in reference to: (1) verbal, quantitative, and subject matter competence; (2) cognitive skills and intellectual growth; (3) changes of identity, self-concept, and self-esteem; (4) changes in relating to others and the external world; (5) attitudes and values; (6) moral development; (7) educational attainment; (8) career choice and development; (9) economic benefits; and (10) quality of life after college.

Guiding their “narrative explanatory synthesis” of evidence regarding these outcomes were six fundamental questions. First, what evidence is there that individuals change during the time in which they are attending college? This question lies at the base of any comparisons between college attenders and nonattenders and is designed to ferret out data implicating outcomes or changes during the college experience. Second is the question: What evidence is there that change or development during college is the result of college attendance? In other words, can changes be attributed to the college experience itself, rather than other potential influences (e.g., maturation). Such changes are referred to as *net effects of college*.

The third question is: What evidence is there that different kinds of postsecondary institutions have a differential influence on student change or development during college? This query concerns whether different types of institutions (e.g., public, academically selective, small, or financially resource-

ful institutions) exert differential influences on certain outcomes. These are referred to as *between-college effects*. Fourth is the question: What evidence exists on effects of different experiences within the same institution? For example, do students who live in on-campus residences, select particular majors, interact frequently with faculty, or become involved in extracurricular activities change along these various dimensions to a greater extent than those who don't engage in such experiences. These changes are referred to as *within-college effects*.

Fifth is the question: What evidence is there that the collegiate experience produces conditional, as opposed to general, effects on student change or development? In other words, do different experiences affect different students in different ways? For example, are the outcomes apparent for men as well as for women? For majority students versus minorities? For first generation students? Such outcomes are identified as *conditional effects of college*.

The sixth question guiding Pascarella and Terenzini's synthesis is: What are the *long-term effects* of college? In this final probe, consideration for the durability or permanence of the collegiate experience is paramount. Are the effects of college attendance direct or indirect? That is, are they evident in the lives of students beyond the point of degree completion?

**Subject-matter competence.** Regarding verbal, quantitative, and subject-matter competence, the evidence for change during college is consistent and compelling. Accordingly, "students make statistically significant gains in general and more specific subject matter knowledge during their undergraduate years" (p. 107), with apparent changes in general verbal skills, general mathematical or quantitative skills, and specific subject-matter knowledge. However, the "net effect of college on verbal skills may be somewhat smaller and the effect on mathematical skills may be somewhat larger than that indicated by typical freshman-to-senior gains" (p. 108). Any evidence for between-college effects on these outcomes suggests that "measures of institutional 'quality' or environmental characteristics have [little] more than a small, perhaps trivial, net influence on how much a student learns during four years of college" (p. 108).

Research related to within-college effects on these outcomes has demonstrated that neither academic major nor small discussion-oriented class-

rooms make any appreciable difference in mastery of factual subject matter, although well-sequenced, modular, and individualized strategies, when combined with frequent feedback and student involvement, do make a difference. Furthermore, greater degrees of teacher effort (in terms of command of subject matter, enthusiasm, clarity, organization and structure, and rapport), complemented by student effort, seem to enhance subject-matter learning. Concerning conditional effects, "there is little consistent evidence to suggest that either postsecondary education in general or the type of institution attended in particular has a differential effect on knowledge acquisition for different kinds of students" (p. 110). More consistent, however, is the evidence "that certain kinds of students learn more from one instructional approach than from another" (p. 110). With regard to long-term effects on these outcomes it seems rather clear that "college graduates have a more substantial factual knowledge base" and are more inclined to "engage in activities that are likely to add to their knowledge" (p. 111) than those whose formal education ends with the completion of secondary school.

**Cognitive skills.** The data in regard to cognitive skills and intellectual growth suggest that "students make statistically significant gains during the college years on a number of dimensions of general cognitive capabilities and skills" (p. 155), including oral and written communication, formal abstract reasoning, critical thinking, the use of reason and evidence to address ill-structured problems, and the ability to deal with conceptual complexity. Most of these gains seem to occur during the first two years of college. Research on the net effects of these outcomes suggests that college has a "net positive influence on diverse measures of critical thinking" (p. 156), reflective judgment, and intellectual flexibility, above and beyond the effects of normal maturation. Perhaps "college is the one [experience] that most typically provides an overall environment where the potential for intellectual growth is maximized" (p. 156).

Between-college effects on intellectual growth are sparsely documented and support the impact of institutional characteristics on general cognitive skills in only limited ways. Some evidence exists, however, to suggest that institutional selectivity and a "strong and balanced curricular commitment to general education" may make a positive difference on these measures. On the other hand, a "strong em-

phasis on fraternity or sorority life” may inhibit critical thinking (p. 157). Research on within-college effects suggests that various curricular emphases (as reflected in different majors) can influence reasoning processes differentially, as can varying emphases on teaching strategies (e.g., discussion-oriented problem solving), and specially structured interventions. The dynamics of such changes suggest that “cognitive development may be a gradual process characterized by a period of rapid advancement followed by a period of consolidation” (p. 159). Furthermore, such effects also appear to be partially a function of the social and academic integration of students. Evidence of conditional effects on the development of general cognitive skills is inconsistent and sparse, suggesting only limited influence attributed to differences in students or institutional characteristics. Finally, self-reports of impact suggest that college has important long-term effects on cognitive development and thinking skills, as do “intellectually and stimulating work environments” (p. 160), perhaps the kind that are more accessible to college graduates.

**Identity.** Changes on measures of identity, self-concept, and self-esteem during the college years consistently support a significant positive effect, although not dramatic, for students. The evidence tends to support generally linear gains in academic and social self-concepts, as well as “students’ beliefs about themselves in such areas as their popularity in general and with the opposite sex, their leadership abilities, their social self-confidence, and their understanding of others” (p. 203). In addition, they gain in self-esteem. With the caveat that much of the research on the net effects of college on these particular outcomes is too often confounded by age and normal maturation, and absent controls for family background or other relevant characteristics, Pascarella and Terenzini concluded that “postsecondary educational attainment appears to be related positively to changes in students’ ratings of themselves relative to their peers” (p. 204), in terms of both academic self-concept and social self-concept. Such effects, however, appear to be small, mostly indirect, and interrelated with other characteristics.

Concerning any between-college effects on these measures, it seems that “what happens to students after they enroll has greater influence on them than where they enroll” (p. 205). Although characteristics such as institutional size and selectivity may exert limited indirect effects, it appears that “there are few

changes in students’ self-images and self-esteem associated with attending various kinds of colleges or universities” (p. 205). Research on within-college effects on these measures is even more scant, if not methodologically flawed. Despite other inconsistencies, the data do suggest that “levels of academic and social integration, particularly the degree of involvement with peers and faculty members, are positively related to gains in students’ academic and social self-concepts” with peers being “particularly influential” (p. 206).

Support for any conditional effect of college on these measures is quite limited, although there seems to be evidence of a few sex- and race-related differences. All in all, the “effects of educational attainment on academic and social self-concepts are general rather than conditional” (p. 207). Concerning the long-term effects on these outcomes, the benefits of college seem to persist for at least seven to ten years, and probably longer. However, the authors caution educators to withhold confidence in the research in this domain, since the literature is novel and subject to many methodological constraints that warrant a more limited conclusion.

**Relating to others.** Focusing on changes in relating to others and the external world, Pascarella and Terenzini concluded that, with remarkable consistency, “students’ relational systems change during the college years,” including increases in “students’ freedom from the influences of others, . . . in non-authoritarian thinking and tolerance for other people and their views, in intellectual orientation to problem solving and their own world view in general, in the maturity of their interpersonal relations, in their personal adjustment skills and general sense of psychological well-being, and in their more globally measured levels of maturity and personal development” (p. 257). It is thought that “the early college years may be somewhat more influential than the later ones” in their effect on these outcomes, although a paucity of research on such questions precludes any firm conclusions in that regard. That these changes are reflective of net gains during college, however, can be claimed only about select but important areas. The authors state that “the weight of evidence therefore fairly clearly supports popular beliefs about the effects of college in helping to reduce students’ authoritarianism, dogmatism, and (perhaps) ethnocentrism and in increasing their intellectual orientation, personal psychological adjust-

ment, and sense of psychological well-being” (p. 259).

Evidence for between-college effects in this domain is mixed but suggestive of the claim that “where a student goes to college may make a difference in the kinds of change that are likely to occur in the relational facets of that student’s psychosocial makeup. That difference, however, is likely to be slight.” Furthermore, it appears that any “institutional effects [are] more likely to follow from differences in institutional context, such as the organizational policies, practices, and interpersonal climate—that students find on campus” (p. 261).

Research on potential within-college effects supports the positive influences of departmental environments, living-learning centers, and interpersonal contacts and relations with peers and faculty on these outcomes, but not necessarily academic majors. With regard to any conditional effects of college on these measures, the data are so limited as to warrant a conclusion only that “nothing can be said with confidence about college effects in any of the six areas reviewed that might be dependent on students’ individual characteristics” (p. 262). Lastly, a review of the research on the long-term effects of college on graduates’ relational systems offers only a few select influences in that regard.

**Attitudes and values.** One of the more voluminous agendas for research on college students over the decades has focused on charting changes in student attitudes and values in five general areas: (1) cultural, aesthetic, and intellectual; (2) educational and occupational; (3) social and political; (4) religious; and (5) sex and gender roles. Pascarella and Terenzini found that the evidence for change during the college years is both plentiful and consistent, in that “colleges, as their founders and supporters might hope, appear to have a generally liberating influence on students’ attitudes and values. Without exception, the nature and direction of the observed changes involve greater breadth, expansion, inclusiveness, complexity, and appreciation for the new and different. In all cases, the movement is toward greater individual freedom: artistic and cultural, intellectual, political, social, racial, educational, occupational, personal, and behavioral” (p. 326). Research on the net effects of college in that regard support a consistent but modest influence “above and beyond the characteristics students bring with them to college,” as well as independent of “changes that have occurred in the larger society” (p. 326).

While consistent evidence suggests that value changes are relatively independent of institutional structural characteristics, implicating few between-college effects, moderate evidence supports the observation that “selective, frequently private institutions . . . exert a relatively greater influence . . . on changes in students’ aesthetic and cultural values and interests, their political and social values, and their religiousness” (p. 327).

Within-college effects on values and attitudes seem to be related more to “interpersonal associations students have with faculty members and peers, often in the departmental context, [but] more frequently in the residence halls.” However, whether “these influences are exerted through the frequency of contact, . . . the nature of the contact, or the more contextual generalized presence of faculty members and other students who hold a certain set of . . . attitudes and values toward which new students gravitate over time” remains unclear (p. 328). In regard to the conditional influences on these changes, the “literature has little to say about the differential effects of college on values and attitudes for different kinds of students” (p. 329), although what changes do occur seem to persist into adulthood as long-term effects.

**Moral development.** Long considered an important goal of American higher education, the character education and moral development of students has only recently gained the systematic attention of researchers. Evidence to date suggests that “college is linked with statistically significant increases in the use of principled reasoning to judge moral issues,” and that the college experience itself has a unique positive net influence on such development and may be accentuated differentially, from one institution to another, through the student peer context. Furthermore, the key to within-college effects in fostering moral reasoning may “lie in providing a range of intellectual, cultural, and social experiences from which a range of different students might potentially benefit” (p. 366), such as certain curricular or course interventions. Conditional effects in that regard are, in particular, more positive for those of high levels of cognitive development. Nevertheless, any influence in that direction seems to be long-term and consistent, and may even be linked ultimately to “a range of principled behaviors, including resisting cheating, social activism, keeping contractual promises, and helping those in need” (p. 367).

**Educational attainment.** The benefits of completing formal schooling, or educational attainment, have long been associated with occupational status and social mobility. Between-college effects are apparent in attending a four-year institution, rather than a two-year college; a private or small college, rather than a large one; and, for black students and females, institutions that enroll predominantly black and predominantly women students. College environmental factors, such as a “cohesive peer environment, . . . frequent participation in college-sponsored activities, and a perception that the institution has a high level of personal involvement with and concern for the individual student” (p. 417), also seem to contribute to such an outcome. So too does a strong institutional emphasis on supportive student personnel services, inasmuch as this contributes to higher persistence rates among students. In addition to successful academic achievement, significant within-college effects on educational attainment include “one’s level of involvement or integration in an institution’s social system” (p. 418), “social interaction with significant others during college, and the encouragement received therefrom,” and living on campus, particularly in “living-learning residences that attempt programmatically to integrate the student’s academic and social life” (p. 419).

In addition to part-time employment on campus, also linked to educational attainment are various first-year programs “designed to orient the student to the institution and to teach important academic survival skills” (p. 419). Research on conditional effects suggest that varying levels of social and academic integration may compensate for shortcomings in either, especially for “the persistence of students who either enter college with individual traits predictive of withdrawal or who have low commitment to the institution or the goal of graduation from college” (pp. 420–421). Ultimately, existing evidence offers strong support for the long-term generational effects of having obtained a college degree.

**Career choice.** “It is clear that students frequently change their career plans during college,” and that they “become significantly more mature, knowledgeable, and focused during college in thinking about planning for a career” (pp. 487–488). In terms of net influence, one of the “most pronounced and unequivocal effects of college on career is its impact on the type of job one obtains” (p. 488), offering an advantage primarily through occupational status

and prestige. Whether by socialization or certification a college education offers access to better-positioned, and potentially more satisfactory, employment. Included among between-college effects are the advantages to occupational status of a four-year degree, an elite institution experience, and to a lesser extent, enrollment in a large institution. Selective colleges also have modest effects on women choosing sex-atypical majors (e.g., engineering). Regardless of where students begin, their selection of a major/occupation tends to reflect the most popular choice at a given institution.

Within-college effects have included varying influences of academic major and achievement, extra-curricular accomplishments, interaction with faculty, and work experience. Conditional effects on career choice and development have highlighted varying degrees of positive influence afforded to non-white men and women with regard to occupational status in the professions. Last, existing data on long-term effects have detected little direct intergenerational influence on career development, although it is quite clear that “attending and graduating from college is perhaps the single most important determinant of the kind of work an individual does; and the nature of one’s work has implications for an array of outcomes that shape one’s life” (p. 495).

**Economic benefits.** Study of the economic benefits has also attracted the attention of higher education researchers, particularly as this factor “probably underlies the motivation of many students who choose to attend college rather than enter the work force immediately after high school graduation” (p. 500). In terms of net effects, it appears that a bachelor’s degree “provides somewhere between a 20 and 40 percent advantage in earnings over a high school diploma” and an estimate of financial return on such an investment is “somewhere between 9.3 and 10.9 percent” (p. 529).

Evidence of between-college effects supports the small positive influence on earnings of institutional quality and size, with larger and research-oriented schools having a modest effect. Major field of study and academic achievement have both demonstrated a positive within-college effect on early career earnings. Conditional effects have supported greater economic benefits of postsecondary education for women, especially blacks and other nonwhites.

Influences of institutional selectivity seem to be most pronounced for men from a high socioeco-

conomic background in the private employment sector. Regardless, it appears that college may exert an indirect, positive intergenerational effect on early career earnings, through its influence on parental resources, type of institution attended, and educational attainment.

**Quality of life.** The final line of inquiry in Pascarella and Terenzini's synthesis focuses on indexes of quality of life after college, including effects of college on subjective well-being, health, committed relationships, family size, parenting, consumer and investment behavior, and leisure. In general, completion of a college education is associated in varying degrees with positive effects on each of these indicators. However, most of these effects seem to be indirect rather than direct, suggesting that a college education probably contributes to a number of intervening outcomes that, in turn, lead to a long-term or enduring positive effect on quality of life.

In summary, two generations of researchers have established the finding that positive individual effects of higher education are related directly to a myriad of factors, such as peer group involvement, interaction with faculty, and time devoted to learning, and indirectly related to a range of institutional characteristics, such as size and mission, inasmuch as they encourage or mitigate such dimensions of engagement. Overall, the impact of college depends much on student-institution fit and the kinds of learning experiences encountered along the way that serve to reinforce compatible characteristics. Cognitive, affective, and practical educational gains are a function, not so much of where a student goes to college, but rather what a student does once enrolled in an institution. In general, the literature appears conclusive in its observation that the greater the involvement, the greater the gain.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; COLLEGE EXTRACURRICULAR ACTIVITIES; COLLEGE STUDENT RETENTION; COLLEGE AND UNIVERSITY RESIDENCE HALLS; MORAL DEVELOPMENT.

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C. CARNEY STRANGE

## COLLEGE AND UNIVERSITY RESIDENCE HALLS

When the English colonized North America, they brought with them the educational traditions and concepts of England. In 1636 the Congregationalists founded Harvard University, using Oxford and Cambridge Universities as their model. With the exception of the Philadelphia Academy and the College of William and Mary, the original nine colonial colleges were founded by graduates of either Oxford or Cambridge. Although the original purpose of residence halls was to help build character and intellect, they also served the practical function of providing basic housing for students, who were as young as thirteen and fourteen years old and frequently traveled great distances to attend college. Living and boarding at a college was a necessity for many students.

Residential facilities on college campuses expanded greatly following World War II with the enrollment of veterans, and in the mid-1960s when the baby boomers began arriving on campuses. Today, more than 60 percent of all traditional-age college students attending a four-year college or university live in a residence hall for at least their first year of college.

*Dormitory*, or *dorm*, is the popular term used by students to refer to a residence hall. The term comes

from the word *dormant*, meaning to sleep. Because these are places where students live, study, learn, and sleep, most student-affairs educators use the more inclusive term *residence hall*.

### **Purpose of Residence Halls**

Although the need to house students is an important function of residence halls, it is not the most important reason for investing institutional resources in these facilities. If the only purpose of residence halls was to house students, off-campus apartment owners could do it equally well and with less cost. Organizing the peer environment in residence halls as a means of facilitating various aspects of students' cognitive and psychosocial growth and development is the principal reason for investing institutional resources in college residence halls.

The residential learning environment is an important vehicle for student learning. It focuses the students' time and energy on college, increases informal interaction with other students, and offers multiple opportunities for students to explore values, lifestyles, and interests in a supportive environment under the administration of student affairs administrators trained in the experiential education of students. Research has clearly demonstrated that living in a college residence hall during the first year of college adds significantly to a student's likelihood of remaining in college and graduating. Compared with students who live at home, students who live in residence halls have more interaction with faculty, participate in more campus activities, have a higher aspiration for graduate education, are more satisfied with college, and generally move beyond their peers who have not lived in residence halls in a range of psychosocial development areas.

### **Organization and Administration**

The administration of college residence halls is usually organized into three major units: residence life programs, housing operations, and room assignments. The purpose of residence life programs is to provide educational programming, nonclinical counseling, and support for student learning. Educators who work in this area are primarily focused on improving the quality of student life, increasing student learning, and building community among students in the residence hall. Professionals who work in housing operations are principally concerned with the daily management, maintenance, construction, and cleanliness of residence halls. This is a

complex responsibility because of the number of residence halls, the varying ages of the facilities, and the demands placed on the facilities by college-age students. Professionals who work in the area of room assignments are responsible for assigning students to the rooms, matching roommates, making room changes, and monitoring the occupancy of various facilities. Normally these three functions—residence life, housing, and assignments—are managed by a director of housing and residence life, under the supervision of the division of student affairs.

### **Residence Hall Staffing**

Students spend approximately 80 percent of their time outside the classroom, and much of this time is spent in their residence. A wide range of social and behavioral issues arise in residence halls that demand the attention of college and university administrators. To assist students, and to maintain an educationally rich environment that supports the educational mission of the university, residence halls are usually well staffed by people trained to assist students. On every floor, students are likely to find an undergraduate student who serves as a resident assistant or resident adviser (RA). Students who serve in this role are trained in basic helping skills, have a wide range of information about institutional resources, have responsibility for providing educational programs on their floor, and assist with the enforcement of institutional policies designed to maintain a positive living environment. The most usual organization is one RA per floor, which most often consists of between forty and fifty students.

Also usually living within a residence hall is a hall director or resident director. This person may be a student affairs professional holding a master's degree in college student affairs administration, counseling, or a closely related field; or this person could be a graduate student. Hall directors receive more advanced training and are responsible for the RAs in the building and for the residents of the building. Their responsibilities usually include staff development of their RAs, student counseling, educational programming, enforcement of institutional policies in the residence halls, and may also include other functions such as academic advising, intramural sports adviser, and facilities management. In large residence hall systems, hall directors often report to an area coordinator. This person is a student affairs professional who has several years of experience in residence life and housing and who has

responsibility for several residence halls. Responsibilities of area coordinators vary, but usually include hall director and RA selection, staff training, educational programming, community building, enforcement of university policies, crisis intervention, and student counseling. Sometimes these positions also include supervision of maintenance and security personnel. Area coordinators generally report to the director of housing and residence life.

Student affairs professionals who work in residence halls have strong affiliations with a number of professional associations. The Association of College and University Housing Officers-International (ACUHO-I) represents housing and residence life professionals. There are both regional and state divisions of ACCHO-I. Professionals in this field also are involved in national associations that represent student affairs administrators, such as the American College Personnel Association (ACPA) and the National Association of Student Personnel Administrators (NASPA).

### **Residence Hall Student Government**

Most colleges have organized a system of student representation within the residence hall system. Common names for these representational bodies include residence hall government, resident hall council, and campus resident/student associations. These student associations usually have student representatives from every floor in a residence hall, which forms the hall government for that particular building. Representatives from each residence hall on campus form a campus-wide student association of residence hall students. Functions for these student associations vary, but they commonly include some responsibility for educational programming and social events, student input on residence hall policies, and mediation of grievances by residence hall students. Student judicial functions, such as hearing allegations of minor residence hall violations such as noise violations, guest hour violations, or other minor social policies, might also be run by student associations. The national association of students in residence hall government is called the National Association of College and University Residence Halls (NACURH). State and regional groups affiliated with this national association are active in most parts of the United States.

### **Types of Residence Halls**

Residence halls are organized by the sex of the residents living in the facility and by the programmatic

function of the residence hall. The most common is a traditional residence hall, which houses undergraduate men separate from undergraduate women. Coeducational residence halls house both men and women. Usually, men live on some floors of the building and women live on other floors, but other arrangements, such as men and women living on the same floor in separate rooms are not uncommon.

Living and learning centers, residential colleges, and learning communities are common forms of special assignment programs in which students live in a residence hall and take one or more of their classes with the other students with whom they live. These programs often require some type of application and selection process and are considered to be a combined academic and residential program with increased faculty involvement and increased student/faculty contact.

Residence hall programs are sometimes organized around a particular academic theme, such as engineering or nursing. Other theme residence halls include freshmen residence halls, honors residence halls, substance-free residence halls, or special lifestyle units based on racial or cultural similarities such as international living units, African-American living units, or Native American living units. The homogeneous assignment of students with common interests or characteristics forms the basis for the programming in that area and for the support services offered to students in the building. The effect of these special lifestyle units is generally to draw a closer relationship between the students' living environment and their learning and studying in the classroom.

### **Roommate Assignments**

The most common form of residence-hall assignment is two students to the same room. Because many college students today come from homes where they did not share a room, the residence hall may provide the first occasion where students are asked to have a roommate. Positive roommate relationships are important for both the emotional and intellectual well-being of students. A number of schemes have been organized to increase roommate compatibility. Among these are assigning rooms on the basis of similar personal habits, such as smoking, neatness, or sleep habits, and matching students on responses to specially designed tests of personal habits and room use activities. Other systems for roommate assignments have included using the Meyers-

Briggs Personality Type Indicator, matching by birth order, and matching by demographic similarities. These systems are based on the premise that the more homogeneous the roommates, the greater the likelihood they will be compatible. Generally the research shows that the most successful form of roommate matching is self-selection where students have identified the person with whom they wish to live. Other forms, such as assignment by similar behavioral traits or by the Meyers-Briggs Type Indicator have also been shown to have some success in increasing roommate compatibility.

### Facilities

The architectural design of a college residence hall has an influence on the students' patterns of interaction, on student satisfaction, and on the sense of community in a building. Research in this area shows that student satisfaction and similar outcome measures are inversely related to the size of a residence hall. Students who live in buildings with more students are generally less satisfied than students who live in buildings with a fewer number of students, and students who live in low-rise residence halls (five floors or less) are generally more satisfied than students who live in high-rise residence halls. This same relationship is true for students who live in residence halls with long uninterrupted corridors compared to students who live in residence halls with shorter corridors, suite-style living arrangements, or other architectural designs that break the living unit up into smaller, more manageable, functional areas. Large high-rise buildings are frequently credited with increasing feelings of alienation, hostility, and rootlessness in students, and they tend to inhibit students from establishing a sense of community. Architectural designs that organize students into smaller living units minimize these alienating factors and increase the likelihood that students will develop a greater sense of control over their living environment.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE STUDENT RETENTION; LIVING AND LEARNING CENTER RESIDENCE HALLS.

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## COLLEGE ATHLETICS

THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES  
Bradley James Bates

HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES  
John R. Thelin  
Jason R. Edwards

ACADEMIC SUPPORT SYSTEMS FOR ATHLETES  
Robert E. Stammer Jr.

ATHLETIC SCHOLARSHIPS  
Bradley James Bates

COLLEGE STUDENTS AS ATHLETES  
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INTRAMURAL ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES  
Rachel M. Madsen

THE NATIONAL COLLEGIATE ATHLETIC ASSOCIATION  
Thomas Paskus

NCAA RULES AND REGULATIONS  
Suzanne E. Estler

## THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES

As entities of a university, athletic departments are visible representatives of higher education and should represent the same ideals that are facilitated throughout an institution. Athletic scandals negatively impact institutional reputations because a conflict in academic and athletic curricular aims becomes apparent. Athletic curricula should be educational in nature and, as such, should facilitate similar values to academic curricula within a diverse context. In this way, the aims of athletic curricula are compatible with academic aims. The integration of athletics and academics should, therefore, create an environment conducive to student-athlete growth.

The American educator and philosopher John Dewey defined growth as the “constant expansion of horizons and consequent formation of new purposes and new responses” (Dewey, p. 175). When values in one environment contradict those in another, growth is limited by confusion and inconsistency. Current trends in intercollegiate athletics often create conflicting curricular aims that deviate from the educational nature of intercollegiate athletics and the educational mission of universities. The infusion of commercialism, rising expenses, increasing salaries for coaches and administrators, and admissions exceptions and poor academic performance of student athletes are indicative of a shift from athletics as a diverse educational entity toward a professional model. Without being rooted in the educational mission of the university, intercollegiate athletics is difficult to justify.

Given the assumption that athletics can only be justified in higher education if inherently educational, the primary role of the athletic curriculum is to maximize the development of people—students become the focus of development, with coaches being the educators and designers of the athletic curriculum. As with academic programs, athletics has curricula, text, and pedagogy, and aims for student-athlete growth. A distinguishing difference, however, between the academic and athletic curricula is measures of student development. Whereas the academic curriculum has various levels of achievement and reward, typically illustrated by grades and degrees, athletics offers a very narrow definition of achievement: winning. Thus, athletic excellence is necessary to maximize the development of students. Athletics

provides one of the few enterprises in academia where a group of individuals can strive together through adversity toward a shared vision while facing daily public scrutiny and accountability. If the vision is never achieved, development is limited. Without success, the athletic curriculum does not provide a significant reward, which is critical in maximizing the development of students.

The term *intercollegiate athletics* is defined as athletic contests between colleges. Colleges grant academic degrees upon completion of designed curricula. As college students, student athletes must attend classes; they must work to complete specific requirements in order to earn a degree; and they must have minimal academic success as determined and sanctioned by the NCAA if they are to continue participating in athletics. As their admission to college is based, at least in part, on academic credentials, athletes must be students. Thus, academic departments are directly involved in the application of athletics within a university: Student athletes must take academic courses. Subsequently, academic curricula influence student athletes. When academic and athletic departments have conflicting aims, problems arise that affect the entire institution. If the values facilitated by academic and athletic curricula were consistent, problems would be diminished.

American society values the elitism of academics and athletics in a manner that provokes conflict for participants in both domains. In essence, athletic elitism is a metaphor for academic elitism: Athletic teams aspire to be national champions, while their affiliate academic institutions seek national rankings. However, the means by which coaches and faculty achieve national reputations can create conflict for student athletes attempting to exist in both environments. Although both aspire to excel, the different measures of excellence for academics and athletics necessitates compromise by those who are placed in both settings.

### **NCAA Championships**

The National Collegiate Athletic Association (NCAA) administers national championship contests annually. There are national collegiate championships in gymnastics, volleyball, water polo, indoor track and field, outdoor track and field, wrestling (men), fencing, rifle, skiing (men and women), gymnastics, ice hockey, rowing, water polo, and outdoor track and field and volleyball (women), among others. Division I championships include baseball, bas-

ketball, cross country, I-AA football, golf, ice hockey, lacrosse, soccer, swimming and diving, and tennis (men). Women compete for national championships in basketball, cross country, field hockey, golf, lacrosse, soccer, softball, swimming and diving, tennis, and indoor track and field. In addition to those sports in which the NCAA sponsors championships, NCAA sports also include archery, badminton, bowling, squash, synchronized swimming, and team handball. In order to participate, member institutions and their students must adhere to eligibility rules as established by the NCAA.

### **The Economics of Education**

Although universities are educational organizations, they must be economically healthy in order to exist. Each department on a campus contributes to the profit or deficit of the university. Departments that operate with a deficit survive only because they are valued programs that the university is willing to subsidize. As a noneducational, extracurricular activity, it is difficult to justify underwriting an athletic department operating at a deficit. When viewed as a unique curricular experience for students, however, it becomes easier to justify the expense.

To remain economically healthy, institutions must continually reevaluate the worth of departments operating at a deficit. The result is an institutional hierarchy of financial worth that creates conflict between departments considered either curricular or extracurricular. For example, a French department was eliminated at a western U.S. university. Faculty within the department suggested that the athletic department, which also operated at a deficit, should be eliminated instead of the French department. They argued that French has an educational mission, and is therefore of greater value to the university than athletics. The business of education thus creates a context of departmental worth.

When viewed exclusively as an entertainment business, it is difficult to justify the economics of an athletic department within higher education. A former executive director of the NCAA has acknowledged that few athletic departments generate revenue, and most athletic departments are economic burdens on their institution. Universities are becoming more reluctant to economically support athletic departments because athletics are not financially productive businesses. Thus, the business of athletics can affect a university's business of educating—athletic departments operate at substantial def-

icits while being treated as extracurricular, noneducational programs. It is only when athletics are viewed as diverse educational experiences for students that athletics can be rationalized as a curriculum worthy of subsidy.

In a survey involving the NCAA's 298 Division I member institutions, Clarence Crawford examined the revenues and expenses of the NCAA and affiliate universities. Existing data from the NCAA were used for the study. Crawford found that "the NCAA had revenues of \$152.5 million and expenses of \$151.3 million for the year ending August 31, 1991. With an NCAA membership of over 800 four-year colleges and universities, this study utilized 298. Within these 298 schools exist 106 Division IA member schools—forty percent of which reported budget deficits" (Crawford, p. 3).

During the 1980s, athletic department expenses grew at a rate three times greater than inflation: a rate far surpassing revenues. A significant influence on these expenses was escalating tuition costs. "Between 1981–82 and 1986–87, tuitions rose between 20 and 37 percent in different types of higher education institutions" (Sherman, Tikoff, and Masten, p. 16). Thus, academic tuition revenues adversely affect athletic department expenses.

To offset deficits, many athletic departments are creatively recruiting corporate sponsors. These arrangements have raised questions regarding regulation, tax exposure, and the commercialism of intercollegiate athletics. In a study conducted by the National Association of College and University Business Officers, concern was expressed with respect to the potential "corrupting influence" (Lederman 1993, p. A27) of corporate relations with athletic departments. As athletic departments attempt to balance budgets, television networks and corporate sponsors are acquiring greater influence over athletic decisions. For example, men's basketball contests are played before televised audiences each weeknight. Was the decision to play during school nights made in the interest of economics or student athletes? It appears that the economics of sports are establishing a context for prostituting higher education and ultimately exploiting student athletes.

Member institutions reported in 1992 that "salaries and wages were the largest single expense for Division IA schools, accounting for 23 percent of operating expenses" (Crawford, p. 5). Grants-in-aid accounted for 17 percent of department expenses;

however, this figure changes significantly at private institutions. The economic emphasis on revenue-producing sports is reflected in the distribution of salaries among the most influential people in athletic departments. In 1992 the average base salary for the revenue-producing head coaches was \$77,511 for football and \$71,151 for men's basketball. Women's basketball head coaches were the highest paid coaches in non-revenue-producing sports. The average base salary for a women's head basketball coach was \$40,482. These differences are exacerbated by additional income sources. Football and men's basketball head coaches averaged \$25,568 and \$20,162, respectively, from additional school benefits, while women's basketball head coaches averaged \$4,943 in additional school benefits. Men's basketball head coaches averaged \$39,338 and football head coaches averaged \$32,835 from outside income, whereas women's basketball head coaches averaged \$6,651. The total compensation averages for coaches were: football head coaches, \$120,258; men's basketball head coaches, \$114,993; and women's basketball head coaches, \$46,005. Although these figures are substantial, coaches at prestigious programs are compensated with significantly greater salaries and benefits. During the 2000–2001 academic year, three football coaches received more than one million dollars in total compensation, and during the 2001–2002 academic year twenty-two football coaches will receive more than one million dollars for coaching at the Division IA level. The economic significance of revenue-producing sports begins with the athletic faculty.

Base salaries of academic faculty are comparable to athletic coaches. In 1993 the average salary for full professors at public and private doctoral institutions was \$66,250, while the average salary for full professors at private institutions was \$80,280. These figures are substantial, and compare to athletic faculty salaries. Similarly, faculty in prestigious programs are compensated with significantly greater salaries and benefits—particularly at institutions with medical schools. The economic significance of the elite athletic programs parallels elite academic departments.

There appears to be a cyclical perpetuation of status, reputation, and financial resources in athletics that is analogous to academia. The most reputable athletic programs have the greatest resources and attract the most athletically talented student athletes. For example, the difference in annual operating

budget expenditures between the highest and lowest member schools in a Division IA conference was more than \$16 million. It is obvious which athletic department had the more successful teams. Similarly, “the most prestigious institutions attract the best-prepared students from the most affluent and highly educated families, spend the most on their educational programs, pay their faculties the highest salaries, and charge the highest tuition and fees” (Astin, p. 11). The universities with the greatest reputations and resources annually garner the highest rankings, just as the same football and basketball programs are traditionally rated by pollsters in the top twenty. Resources foster success and success breeds resources.

*See also:* COLLEGE ATHLETICS, *subentries on* ATHLETIC SCHOLARSHIPS, COLLEGE STUDENTS AS ATHLETES, HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES, INTRAMURAL ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES, NCAA RULES AND REGULATIONS.

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BRADLEY JAMES BATES

#### HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES

Intercollegiate athletics in the United States has come to be regarded as higher education’s “peculiar institution.” This somewhat critical characterization results from the fact that although intercollegiate athletics is seldom listed as part of the central mission of a college or university, athletics have come to command inordinate visibility, resources, influence, and attention both inside and outside many campuses. Analyzing, explaining, and dealing with this disparity between official philosophy and actual practice presents a complex analytic task. To truly understand the present situation requires a reconstruction of college athletics’ unique historical evolution.

Visitors to an American campus cannot help but be struck by the physical presence of the intercollegiate athletics enterprise. In the twenty-first century, it is not unusual for a major university campus to contain both a football stadium that seats 70,000 spectators and a basketball arena that accommodates audiences of 20,000. In the year 2000 many universi-

ties had annual operating budgets for athletics ranging between \$30 million and \$60 million. The success and pervasiveness of college sports described was not inevitable, but is the result of particular innovations and episodes over the past 150 years.

### The Violent Birth of Intercollegiate Sports

Prior to 1850 intercollegiate sports played a marginal role in collegiate life. If there was a need for physical activity in the student regimen, college presidents and deans thought manual labor in the form of farming or clearing boulders from college lands fit the bill perfectly. Though admittedly both economical and expedient, students, not surprisingly, remained unconvinced that this was the type of physical release that their souls craved. Instead, collegiate student bodies increasingly devised their own elaborate (and often brutal) intramural contests known as “class rushes.” These “rushes” usually involved some variation of football, which actually provided a pretext for a ritualistic and violent hazing of the incoming freshman by the sophomore class.

College officials struggled to curb these violent student traditions, but intramural sports persisted within the campus and eventually took a decisive turn toward sanctioned and refereed events in which a team representing one institution competed against its counterpart from another. Despite the increase in organization, administrators initially were not eager, generally speaking, to embrace such contests that they viewed as inappropriate distractions from serious scholarly work. Indicative of the administrative outrage at such elaborate contests was the telegram that the president of Cornell sent to officials at the University of Michigan in 1873 when he learned that student teams from the two institutions were planning to meet in Cleveland for a football game: “I will not permit thirty men to travel four hundred miles merely to agitate a bag of wind” (Rudolph, p. 374–375).

Whether or not Cornell’s president won this particular battle, he and college presidents elsewhere lost the war of curbing intercollegiate athletic contests. With or without administrative blessings, college students formed athletic associations that included mechanisms for raising money, charging fees, sponsoring events, and selling tickets. And, by the 1890s, at many colleges, alumni groups joined with the student organizations to create formidable programs over which the college presidents and faculty exercised relatively little control.

Though college athletics would quickly be dominated by certain sports and by powerful institutions, the outstanding feature of college athletics in the late nineteenth and early twentieth centuries was its pervasiveness and diversity across American institutions. Although the oldest and largest institutions—Harvard and Yale—quickly gained the most attention in newspaper coverage and provided the largest athletic budgets, numerous other campuses made significant contributions as well. For instance, Springfield College in western Massachusetts, originally known as the International YMCA Training School, was where James Naismith invented basketball in 1891. Nearby, Amherst College initiated varsity baseball and incorporated calisthenics and physical fitness into the collegiate curriculum. By 1900 the popularity of collegiate sports was reflected by its adoption in even all-girls schools. Wellesley College, for example, acquired renown for having developed a distinctively female approach to such sports as crew, basketball, and physical fitness. Other examples of innovations in American college sports before the turn of the twentieth century include:

- First intercollegiate crew regatta (Harvard vs. Yale): 1852
- First intercollegiate baseball game (Williams vs. Amherst): 1859
- First intercollegiate football association (Harvard-Yale-Princeton): 1872
- First intercollegiate track and field association (Intercollegiate Association of Amateur Athletics of America, or IC4A): 1875
- First intercollegiate tennis match: 1883
- First intercollegiate ice hockey game (Harvard vs. Brown): 1895
- First intercollegiate gymnastics competition: 1899

### The Maturing of a Collegiate Way of Life

As American higher education itself was largely nurtured in the Northeast, likewise in sports, this region also led the way in developing the intercollegiate sports that now seem so familiar. Heading into a new century, Yale dominated football and also came to be known as the “cradle of coaches” as it spread the Yale football gospel of strategy and sportsmanship across the nation. By 1910 Harvard obtained the national championship in football and asserted itself in numerous other sports. Harvard would also set

the pace in terms of spectator facilities with the construction, in 1904, of Soldiers' Field—considered the finest, largest example of reinforced concrete architecture in the period. This regional predilection for architectural and spectator expansion continued when the Yale Bowl opened in 1914 with a grand design and a seating capacity of more than 70,000.

Although the eastern seaboard colleges initiated college sports, their models and lessons soon were emulated in regions across the country. In the mid-nineteenth century, faculty representatives from Midwestern universities formed the *Western Conference*—a formal group popularly known then and now as the *Big Ten Conference*. Within that conference, the universities of Michigan and Chicago set the pace with spectator appeal and winning teams.

The young University of Chicago was especially important as a leader in the structure and control of a high powered varsity sports program. Whereas many presidents had resisted and resented the ascent of intercollegiate athletics, the University of Chicago's administration embraced college sports. Chicago's young, brash president, William Rainey Harper, saw the athletic contests as an opportunity to connect the campus to the greater community and thereby generate goodwill, revenue, and attention for his model institution. The creation of a large stadium combined with a mass marketing effort that succeeded in generating popular appeal and large ticket sales. Harper found the ideal partner to help him carry out his brave new vision of commercialized collegiate athletics in Amos Alonzo Stagg. As coach and athletic director, Stagg, a Yale graduate and storied football hero, oversaw the University of Chicago's athletic department for forty years.

The importance of Stagg's tenure in athletics at Chicago lies in the fact that he (with the president and board's support) created a structure that gave substantial autonomy and influence to the athletic department within the normally complex and Byzantine university administrative structure. Though holding faculty status, Stagg's program budget was exempted from conventional bureaucratic procedures. He reported directly to the president and the board of trustees, with no oversight from academic deans or faculty budget committees. In addition, Stagg generated extra income for himself and his program by being allowed to use the university facilities to sponsor promotional events, host state high school track meets, and hold instructional camps. Such a situation made Stagg and his department the

envy of other athletic leaders who in turn pushed their own institutions to adopt similar procedures in order to create the winning programs that alumni and donors demanded.

New England colleges also played a crucial role in the evolution of administration and control of college sports. Harvard's hiring of Bill Reid as a well-paid, full-time football coach in 1901 represented a major escalation of professionalizing college coaches. After Reid's hiring, coaches across the country realized that if they won they too could demand the high salary and substantial benefits enjoyed by Harvard's head coach. During his long tenure at Yale as athletic director, Walter Camp seemingly perfected the financial and political control of an entire athletic program with little accountability to students, faculty, or academic administration. Camp also used his Yale position as the base from which to create an enterprising network of syndicated newspaper columns, annual guides, endorsements, and other lucrative, influential college sports publications.

The turn of the century did not mark simply heady days for the burgeoning athletic programs. Many students and some alumni resented that the emerging organizational scheme tended to give inordinate and enduring support to a few selected spectator (and hence revenue-generating) sports—namely, football—with relatively few resources being dedicated to numerous other varsity squads. Additionally, the power and popularity of intercollegiate athletics led directly to conspicuous abuse. Even at this early juncture, a lack of regulation and fair play both on and off the field left college athletics indelibly marked by corruption and a reputation that has plagued “big-time” college sports to this day. More significantly, as the games “professionalized,” brutality often increased. At times, it seemed that the days of Roman crowds chanting for gladiatorial blood were returning.

At the turn of the century, the situation had deteriorated to the point that President Theodore Roosevelt summoned university presidents to the White House with an ultimatum that they eliminate brutality from the playing field or risk federal intervention. The violence did decrease, and the development of better protective equipment also aided in safeguarding the athletes, but the problems were far from solved. No standards were set in areas such as eligibility and scholarships, thereby blurring the line of definition for supposedly amateur contests between students. In an attempt to bring order to these in-

creasingly popular competitions, the National Collegiate Athletic Association was formed in the early 1900s. This could only be considered a Pyrrhic victory, however, for the historic East Coast universities, which had the strongest athletic programs in the country, refused to cooperate and boycotted the organizational meeting with institutions from the Midwest and West. Consequently, intercollegiate athletics lacked any semblance of meaningful nation-wide coordination over the next half century.

### Athletics Out West

As Frederick Jackson Turner postulated for the entire nation: Though born and raised in the East, Americans and their institutions are ultimately defined and refined in the West. Collegiate athletics certainly followed Turner's thesis as the rise of spectator and student interest in college sports spread to the Pacific Coast. Between World War I and World War II the geographical balance of power in dominance of college sports shifted. The June 1937 issue of *Life* magazine devoted to "going to college in America" included a feature article titled, "Sports Records Move West." The emergence of top caliber intercollegiate teams in the Midwest and on the Pacific Coast "left Eastern collegians clinging to a steadily dwindling share of athletic supremacy." This led the editors to observe that: "In the past two decades, athletic reputation has largely moved West and South" (*Life*, p. 72–73).

Increasingly, college sports became a symbolic litmus test of regional and/or ethnic esteem and assimilation. For example, in the 1920s in South Bend, Indiana, the University of Notre Dame gained national visibility by becoming a rallying point for American Catholic pride and affiliation. Its victories over established East Coast football teams and national symbols such as West Point provided American Catholics with a sense of accomplishment and belonging. This trend continued well into the 1960s, for example, when African Americans used sports to break color barriers, particularly in southern universities. The national basketball championship won by Texas Western in 1966 with an all-black starting five—over the perennially powerful University of Kentucky and its all-white squad—marked an important shift in recruitment and acceptance of black players.

Various regions of the country have also rallied around school sports programs. Since 1926 the annual intersectional contests between Notre Dame

and the University of Southern California regularly attracted crowds of over 100,000, whether played in Los Angeles or Chicago, and provided victorious regions the enjoyment of martial bragging rights without the sacrifice of actual military battle. Starting in 1946 the annual New Year's Day Rose Bowl Game matched the champion of the Midwest's Big Ten Conference against the championship team from the Pacific Coast Conference—and thus provided victorious regions the enjoyment of martial bragging rights without the sacrifice of actual military battle. Tiny schools and forgotten regions could gain instant, if fleeting, national attention by successfully competing with national powers, such as when unheralded Centre College of Kentucky gained national headlines in the 1920s for spirited play—and an eventual victory—over Harvard's football squad in 1921. Finally, as with anything that has mass appeal, politicians endeared themselves to the electorate by associating with and supporting local schools. Perhaps the grandest example of such activities occurred when Huey Long, the indefatigable governor of Louisiana, pronounced in 1928 that Louisiana State University was the "People's University," and called on the people of the state to share in its wealth of championship teams and its magnificent football stadium.

### From Chaos to Concern

Colleges and universities paid a dear price for the popularity of intercollegiate athletics. The strong, pervasive, and enduring appeal of varsity teams, combined with the quest by alumni, local boosters, and college officials for championship squads, meant that even by the 1920s the activities associated with recruiting and compensating college student athletes were largely unregulated chaos. This was most dramatically exposed in 1929 when the Carnegie Foundation for the Advancement of Teaching released its comprehensive study *American College Athletics*, written by Howard Savage. According to this report, meaningful reform in American collegiate sports could take place only if campus presidents replaced the "downtown crowd," comprising a city's businessmen, alumni boosters, and commercial interests, as the source of leadership and responsibility. The initial response of university presidents was outrage and denial, but when the Carnegie Foundation stood by its allegations and released more documentation, academic leaders showed some public signs of interest in reform. Shoring up

conferences by adding regulations and a commissioner was one gesture. Ironically, conference reforms were often counterproductive because they merely gave official approval to such practices as training tables that provided college players with free meals daily, along with subsidies for athletes, and alliances with booster clubs that previously had been cited as the problems of unregulated college sports.

Immediately after World War II, the unresolved excesses of intercollegiate athletics gained unprecedented publicity. Returning armed-service veterans swelled the ranks of varsity athletics squads. Many presidents and athletic directors placed no restrictions on the number of athletic scholarships allowed, and some football squads included three hundred players for opening practice, with more than one hundred athletes on scholarship. Excesses were accompanied by illegalities. Between 1948 and 1952 exposés and successful prosecutions of student-athletes, coaches, and alumni boosters involved in point-shaving schemes and gambling cartels led to congressional hearings and a call for nationwide oversight by academic leaders. When organizations led by college presidents, such as the American Council on Education, failed to present a coherent plan, regulatory power was given to the National Collegiate Athletics Association—an organization whose primary charge had previously been to simply promote championship tournaments. Meanwhile, at the conference level, presidents and faculty delegates attempted to introduce standards of student conduct and eligibility into policies and practices. If New England colleges had been pioneers in the creation and expansion of college sports in the first half of the century, after World War II they again assumed a leadership role in the reform and removal of excess. Most noticeable were the codes and restraints demonstrated by the “Little Three”—Amherst, Williams, and Wesleyan. In 1956 the formal creation of the Ivy Group (League) provided a model of presidential and faculty oversight of college sports.

The economics of intercollegiate athletics was slowly but persistently altered in the 1950s due to the simultaneous appearance of two phenomena: (1) professional sports teams in football and basketball, and (2) the availability of radio and television for live broadcasts of sporting events. All college teams, ranging from the established powerful university squads to the small college teams, feared that the popularity of the National Football League and the

National Basketball Association would cause declining attendance at college games. Small college squads faced a second threat: national and regional broadcasts of a few selected “big-time” college games prompted many long-time fans to stay at home rather than buy a stadium ticket on Saturday afternoons. The result was a shake-out in college sports programs over two decades in which a substantial number of institutions opted, or were financially forced, to drop football.

### College Sports in the Age of Aquarius

In the late 1960s shifting cultural values forced widespread changes in sports policies and emphases. As other athletes demanded equality, granting athletic scholarships ceased to be confined to a handful of traditional revenue sports—namely, football and basketball. By 1970 athletic grants-in-aid were increasingly prevalent for such sports as track, soccer, lacrosse, hockey, wrestling, baseball, and swimming. Expanding the excellence and the number of squads tended to swell athletic department operating expenses, but the small fan base of these sports failed to cover the increased costs. Consequently, institutes of higher learning faced growing philosophical and economic problems within their athletic programs. The financial brinkmanship would be subjected to even greater—and unexpected—stress in the 1970s.

Much more vocally and powerfully than “minor” sports athletes, females increasingly sought equal treatment from institutions in regards to athletics. Their actions would lead to a dramatic change in intercollegiate sports: the inclusion of women as bona fide participants in varsity athletics. The Association for Intercollegiate Athletics for Women (AIAW), created in the 1950s, led the way in increasing financial support of female athletic programs and scholarships for women. This too placed institutions and athletic departments in dire financial straits, for female sports did not generate enough fan interest to be self-supporting. This largely became a moot point in 1972, however, due to the landmark Title IX legislation that prohibited, with some exceptions, discrimination by gender in provision of educational programs. Consequently, college athletics in many ways moved from the playing fields to the court rooms as individuals challenged institutional compliance with this federal mandate. Between 1972 and 1990 colleges and courts groped for a clear interpretation of precisely what was intended and required in terms of social justice and institutional

compliance for women as student-athletes. In 1997 the Supreme Court upheld lower court rulings requiring Brown University to comply with Title IX guidelines on proportionality.

Originally, a school could demonstrate compliance in athletics in one of four ways: have a proportional number of male and female participants; have a proportional relationship between female athletes and female students; demonstrate increasing opportunity for females to participate in athletics; or show that female participation in athletics matched their interest and ability to participate. However, most subsequent court rulings have demanded that the most stringent of the four tests be met, insisting that schools have a proportional number of participants in men's and women's athletics and thereby a proportional number of scholarships for each gender. This rigorous interpretation of directives for compliance with Title IX legislation has proven difficult for institutions due to the disparity of income and male and female sports generate. For instance, many athletic departments rely on football to fund their entire operating budgets, but fielding a football team requires providing scholarships for more than sixty male students. Therefore, under Title IX directives, more than sixty female students must also be given athletic scholarships, which then requires athletic departments to create enough female sports to field sixty participants with the knowledge that these activities will not garner enough fan support to pay for their existence. Consequently, athletic directors nationwide have eliminated many non-revenue male sports, with the claim that athletics programs can no longer afford to fund them. The corollary is that athletic directors have viable alternatives to eliminating men's teams such as wrestling and swimming. The net result of these conflicting interpretations is that many intercollegiate athletics programs are held in suspense on their character and composition. Though difficult, failure to comply with Title IX directives can bring harsh and far-reaching repercussions; therefore academic leaders and athletic directors continue to review their intercollegiate athletic enterprise to ensure that women are equally represented.

### **Competing in a Brave New Century of Sport**

The most conspicuous example of the problems of success and popularity that faced intercollegiate athletics in the late twentieth century can be seen in the 1991 and 2001 reform reports of the Knight Founda-

tion Commission on the Future of Intercollegiate Athletics. The absence of a government agency, combined with the limits of such voluntary associations as the National Collegiate Athletic Association to bring integrity to the governance of college sports, has prompted foundations to take the lead in promoting public discussion of the issues and problems. In 1991 the Knight Foundation panel, dominated by university presidents along with some executives and legislators, proposed that strong presidential involvement was the key to protecting the interests of student-athletes. A decade later, the emphasis was on cost containment as the essential ingredient in curbing the commercialism of intercollegiate sports. Whether or not such reforms have a widespread and enduring influence, intercollegiate athletics persist, for better or worse (or both), as a distinctive part of American higher education.

By the 1990s discussions about student-athletes had shifted from the question, "Are college athletics being paid?" to the proposition, "How much should college athletes be paid?" Such debates followed logically from research by economists who concluded that the National Collegiate Athletic Association had become a highly lucrative cartel, and that athletes participating in big-time programs were, in essence, often being exploited by their institutions and associations as "unpaid professionals." Furthermore, coaches in high profile sports enhanced their stature as celebrities rather than as educators, complete with endorsements and special contracts to supplement their base salaries. To increase the seriousness of these concerns, athletic programs at all institutions, including the most conspicuous ones, faced a paradox of prosperity: despite unprecedented revenues, most teams and programs were not financially self-supporting. Even at the Division IA level of NCAA competition, future funding of intercollegiate athletics faced a situation of dubious fiscal fitness.

The conventional wisdom was that overemphasis on intercollegiate athletics was most prevalent in the relatively small number of big-time programs at large universities. Yet significant, systematic research sponsored by the Mellon Foundation in 2000 suggested otherwise. William G. Bowen and James Shulman's study, *The Game of Life: College Sports and Educational Values*, complicated the profile with their finding that even at—or, perhaps, especially at—academically selective and relatively small-sized colleges and universities, the demands on student-athletes' time were substantial. Furthermore, at these

institutions, usually regarded as apart from athletic excess, commitment to strong varsity sports programs tended to exert inordinate influence on such decisions as admissions and allocation of campus resources. Academic and public concern over the proper place of athletics in American colleges and universities remained problematic at most institutions at the start of the twenty-first century.

*See also:* COLLEGE ATHLETICS, *subentries on* ACADEMIC SUPPORT SYSTEMS FOR ATHLETES, ATHLETIC SCHOLARSHIPS, COLLEGE STUDENTS AS ATHLETES, NCAA RULES AND REGULATIONS, THE NATIONAL COLLEGIATE ATHLETIC ASSOCIATION, THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES.

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#### ACADEMIC SUPPORT SYSTEMS FOR ATHLETES

College athletics are associated with many benefits for student athletes. Besides the thrill of actually competing and learning how both wins and losses parallel many of life's lessons, the single largest associated benefit of athletic competition for scholarship athletes is the opportunity of earning a valuable degree. Academic support systems for student athletes can improve academic success and graduation potential.

##### Components and Resources

Although the following components of an academic support system are certainly not inclusive, the items listed are fundamental and essential to the development of a good academic support system.

**Student athletes.** The better the academic quality of the students involved, the easier the job of academic support. But standardized test scores and high school grades cannot measure a student's desire or maturity. A poor high-school grade point average and low standardized test scores can be transformed into good college grades through dedication and an athlete's naturally competitive spirit. However, student athletes can also be somewhat pampered or sheltered before college, and the rigors of athletic demands and poor time management can contribute to academic underachievement.

**Faculty.** Faculty members are the true first line of communication regarding a student-athlete's aca-

demetic performance. If communication and trust are fostered, everyone benefits. Faculty advisers must be the first source of academic advice.

**Athletic counselors.** Roles of athletic counselors vary, often involving eligibility issues, personal counseling and academic advice, and simply being a friend and cheerleader. Listening skills, trust, and respect are key ingredients to a successful relationship between a student athlete and a counselor.

**Tutors.** Tutors can play a part in the academic success of student athletes. Careful screening, knowledge of subject, clear and concise tutoring rules, a system of checks and balances that can be enforced and monitored, and regular evaluations are critical elements for success.

**Computer resources.** Maximizing a student's academic success without adequate computer support is difficult. The ready availability of computers for student athletes to use to complete academic assignments can be critical. Either the university or the athletic department can provide the computers. Dedicated machines for exclusive student-athlete use tend to be the growing trend. Having enough computers is essential. Many excellent academic support centers tend to have exclusive-use, desktop computers in an academic center laboratory, with additional laptops for use during team travel for competitions.

**Nurturing study environment.** Successful academic support centers tend to have a dedicated study area where student athletes can study in a quiet environment with easy access to both computers and tutors. Such a place becomes the defacto location to study for student athletes. Fostering the identity of this facility and insuring that disruptive behavior is not tolerated are essential.

### Action Items

Many of the following action items are techniques and policies that can enhance the success of an student-athlete support center.

**Good faculty contacts and relationships.** Having 100 percent faculty support is a rarity, and in actuality probably is an impossibility. Some schools have close to 100 percent faculty support, while other athletic departments have few friends in the faculty ranks for a variety of reasons. Regardless of the current situation, athletic departments should work diligently to mend damaged relationships—and look to foster new ones. Simply stated, the student-faculty

relationship is fundamental because it is where academics and athletics meet. If communication lines are strong, initial problems can be recognized and improved before small problems become large ones. Regular telephone conversations, e-mail exchanges, early-semester warnings of academic shortcomings, mid-semester deficiency reports, and various surveys are all means that can be helpful in gathering information. It is important to recognize how critical this type of early-warning information is, and that it is available only from the student athlete or the professor. Appeals for this information should stress the value of recognizing any concerns and problems early. Faculty should be reminded that student athletes have routinely waived the rights to information privacy granted them under the Buckley Amendment (the Family Educational Rights and Privacy Act, or FERPA). The student-authorized waiver allows the release of valuable academic information to NCAA, conference, and university officials. Thus, a student athlete has generally accepted that professors can release this type of academic information to academic support staff.

**Student-athlete stratification.** Most academic support centers have limited resources, as well as student-counselor ratios that they consider too large. In a situation where resources are limited and maximizing staff efforts is important, stratifying the student-athlete population can be very useful and necessary. For example, upperclass students who have proven themselves to be responsible students will need less attention and effort than first-year students whose academic status is unknown. Devoting the most time and resources to those populations where these resources can result in the most benefits is only reasonable.

**Regular counselor meetings.** Athletic counselors should meet regularly with all students. Established, conscientious upperclass students may require only one or two meetings per semester or quarter. Freshmen and others on a so-called watchlist, and those deemed to be at risk by whatever criteria are used, should meet with their athletic counselors at least once a week, and preferably more often. Counselors can stand outside classes and count students attending class, or even attend random classes themselves, but the best way to monitor *knowledge intake* is to check a student's class notes regularly. Everyone has been in a class or a meeting in body only, with the mind wandering elsewhere. By checking a student's notes weekly (or more frequently), and by quizzing

them from their notes, confidence levels about a student being both present and engaged in a class are increased. Making students understand that notes must be taken—on what is being done in class, and not only for test purposes—is a proven way to maximize both attendance and engagement. Even a crafty student will soon recognize that notes cannot be copied or created if they are going to be quizzed routinely, and anything less than attending class and taking notes requires more effort. Once this is recognized, a great academic leap will be achieved.

**Study-hour incentives.** Many college students view required study hours as being part of a high school mentality. Establishing a system with incentives so that a student athlete earns his or her way out of organized study hour requirements is essential. The conscientious student will recognize the relationship between performance and responsibility and will work to earn more freedom. Others will take longer and, unfortunately, some never learn.

The final aspect of study-hall hours is to insure productivity. These hours are not for socializing, sleeping, or playing computer games. Academic productivity (e.g., required note-taking from textbooks, homework inspection, and other techniques) must be monitored.

**Subdivision of large assignments.** Poor time management, competing assignments, or a feeling of simply being overwhelmed can lead to poor performance on a critical assignment, whether it be an English paper or a major project. Taking a larger assignment and dividing it into smaller, incremental, and more manageable assignments over a longer time period will enhance the final product and reduce student stress. The key is to start early and to require incremental progress reports.

**Time management skills.** Time management sessions that are developed internally or that rely on university personnel and resources are encouraged. The National Collegiate Athletic Association (NCAA) allows the preparation and distribution of free planners (a.k.a. *day timers*) by an institution, as long as it is fully generated in-house without any product endorsements or commercialization. These planners can aid time management and provide a good document that both student and counselor can inspect and use collectively. Finally, the distribution of the coming semester's planner coincides nicely with the return of a student's textbooks at the end of a semester. Thus, the student athlete has a plan-

ning document early to begin preparing and recording tasks for the upcoming semester.

**Tutoring sessions.** Because of the importance of good tutorial support, completion of tutor session forms by each tutor and end-of-semester evaluations by students of their tutors are recommended. The tutor-completed form can be a simple checklist with minimal narrative. If a completed tutoring session becomes part of the payment process for the tutor, then they become expected and routine. The tutor session form can also indicate other aspects of the session, such as punctuality, student preparation, attentiveness, and tutor recommendations for further work. They can also be used later to summarize the number of sessions by semester, subject, course, individual student, team, or student classification (e.g., freshmen).

**Policy and procedures manual.** Personnel change and ambiguity in policies and procedures can exist. A policy and procedure manual (PPM) cannot assure total elimination of possible confusion or differing interpretations, but "putting it in writing" will reduce the possibilities of confusion. The PPM is also a sensible way to document how an academic support center should function.

**Opportunities to exchange ideas.** Regularly scheduled meetings between students and counselors have already been mentioned. Other meetings, such as regular staff meetings, retreats, and student-athlete evaluations of their counselors, are critical. Facilitating communication downward, upward, and laterally is critical for all parties to remain informed and functioning cohesively.

## Conclusion

Communication and trust are critical ingredients in the successful operation of any academic support center. These two attributes have been mentioned both explicitly and implicitly. But communication and trust at all levels leads to a more successful academic support system. However, no one action or series of actions can insure success. The ideas presented here will be beneficial when considered and implemented. An athletic counselor's fundamental responsibility is to provide the guidance and resources that will help each student athlete maximize his or her academic accomplishments.

*See also:* COLLEGE ATHLETICS, *subentries on* ATHLETIC SCHOLARSHIPS, COLLEGE STUDENTS AS ATHLETES, HISTORY OF ATHLETICS IN U.S. COLLEGES

AND UNIVERSITIES, NCAA RULES AND REGULATIONS, THE NATIONAL COLLEGIATE ATHLETIC ASSOCIATION, THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES.

ROBERT E. STAMMER JR.

## ATHLETIC SCHOLARSHIPS

The benefits of receiving an athletic scholarship from a university or college have evolved significantly since the origins of athletic grants-in-aid. National Collegiate Athletic Association (NCAA) guidelines provide member institutions with the autonomy to offer athletic scholarships to prospective student-athletes based on their athletic and academic abilities. The NCAA has minimum academic guidelines that categorize students as certified for participation as “qualifiers.” Two other categories limit participation and financial assistance—“partial qualifiers” and “nonqualifiers.” In an effort to create a competitively equitable financial context, the NCAA establishes specific limits as to the total number of grants-in-aid institutions are allowed to provide to prospective student-athletes. In addition to receiving financial aid, qualifiers receiving an athletic scholarship are certified through the NCAA to have access to numerous resources such as scholarships and academic support through both NCAA member institutions and the NCAA itself. Certification is required by an NCAA-approved certification agency that reviews coursework completed by high school prospects. The agency approves core units earned to ensure students meet NCAA minimum performance guidelines for qualification to participate in athletic competition.

### Financial Support

Institutional financial aid is administered by each member institution and begins with “the cost of attendance (which is) an amount calculated by an institutional financial aid office, using federal regulations, that includes the total cost of tuition and fees, room and board, books and supplies, transportation, and other expenses related to attendance at the institution” (NCAA, p. 176). The NCAA categorizes sports into two areas of financial aid: head-count sports and equivalency sports. Head-count sports are those in which each student who receives financial aid is provided with the actual cost of atten-

dance as determined by the institution. Equivalency sports allow coaches to allocate different combinations of financial aid in various forms such as tuition, books, fees, housing costs, or meals. In addition to financial assistance provided by an athletic scholarship, the NCAA has alternative means of financial assistance accessible by student athletes in the form of its Special Assistance Fund. This fund ranges from providing expenses for family emergencies to a clothing allowance for need-based students. Student athletes receiving athletic aid are also allowed to work during academic semesters, earning up to a specified amount of money, and to work outside the normal academic calendar (summers and vacations).

### Education

An athletic scholarship provides the means for students who compete athletically to attend an institution of higher education and ultimately earn a degree. The value of this education varies greatly, from the approximately \$37,000 annual cost of attendance at private universities (in 2001) to less expensive tuition expenses at public institutions. The inherent value of a formal education in a postsecondary institution has been debated relative to the revenues generated by major collegiate sports and the ever-increasing salaries of head coaches. When viewed as a preparatory system for aspiring professional athletes, student athletes can be perceived as semiprofessionals who receive an athletic education of not insignificant value from skilled coaches. Additionally, if higher education sustains a pragmatic and philosophical justification for intercollegiate athletics as an inherently educational endeavor, then the value of the curriculum, both academic and athletic, provides satisfactory compensation for participation. Participation in a sport should be approached by the university as inherently developmental: the values acquired through engaging in athletic activities should be consistent with values learned in the academic curriculum and should primarily be aimed at maximizing the development of students. Thus, participation in athletics is itself the reward, as people grow through the experience.

### Academic Support

Admissions advantages for student athletes have increased significantly over time. With the evolving weight given to athletic ability in the admissions process, institutions have been increasing their re-

sources for supporting at-risk students. Most member institutions now provide an academic support center that focuses on the retention of student athletes through academic eligibility guidelines established by member institutions and the NCAA. Academic counselors, typically employed by the department of athletics, serve as guides to the academic curriculum for student athletes, while also assisting students in time management, class registration, tutorial sessions, satisfactory progress requirements, and graduate school opportunities. In many ways, these counselors mentor student athletes in ways in which coaches are unable to because they have a weaker power relationship with student athletes. Academic counselors do not determine student athletes' playing time, and thus, as guardians of student-athlete retention via academic eligibility, they often develop stronger relationships with students than faculty and can influence their academic decisions.

Academic counselors will typically establish a comprehensive system of monitoring for freshmen. Daily class checks and accountability for assignments make up much of the academic center's function. Once student athletes demonstrate that they have adapted to the curriculum, counselors will wean the students off their structure and allow more independence in terms of class preparation and registration.

### **CHAMPS/Life Skills**

The NCAA, in an effort to encourage a holistic approach to educating student athletes, developed the CHAMPS/Life Skills program in conjunction with the National Association of Collegiate Directors of Athletics. This program, adapted by most members of the NCAA, attempts to maximize the total development of student athletes through engagement in career development, the academic curriculum, community service, counseling, leadership development, diversity training, and athletic development. This program utilizes campus resources while incorporating the unique challenges of intercollegiate athletics. Ultimately, the goal is to develop student athletes in every facet of their higher education experience. Perhaps the most utilized aspect of the Life Skills format is career development. Working with the university career center, most student athletes prepare for interviews and career fairs by capitalizing on career counselors and software programs made available to them through the program. Some institutions circu-

late booklets to alumni which contain senior student-athlete resumes in an effort to place them in productive and satisfying positions of employment.

### **Residential Affairs**

An athletic scholarship for head-count sports allows the institution to cover the cost of residence during the student athletes' years of eligibility. Residential requirements vary significantly throughout higher education and range from mandatory dormitory requirements to off-campus housing subsidies. Each institution has a philosophical approach to residential education that ranges from significant emphasis (mandatory residency requirements) to commuter campuses. In the early 1980s, the NCAA eliminated athletic dormitories that were exclusively used by student athletes. The result is a more integrated campus community in terms of student athletes and their peers.

### **Coaching**

An athletic scholarship provides student athletes with access to those who are experts in developing students in their sport-specific curriculum: namely, coaches. When viewed as educators, coaches utilize a diverse educational entity (athletics) to maximize the development of students. The athletic curriculum should not only facilitate improved athletic skill, but should encompass values such as leadership, discipline, competitiveness, and other holistic qualities that serve students outside the athletic domain. A significant component necessary to maximizing the development of student athletes is success. Without success, student athletes do not have the opportunity to work together toward a shared vision and actually experience the attainment of that vision. In athletics, success is narrowly defined: winning. Thus, winning is an essential part of the athletic curriculum.

As educators, coaches need to develop students not only in the skills of their specific sport, but must also utilize sport development to facilitate holistic growth in their students. Very few aspects of the academic curriculum introduce public competition and scrutiny in a way that invites adversity. Experiencing the dynamics of the athletic curriculum, including the intense competition within a narrow definition of success while facing scrutiny through various media outlets (talk radio, chat lines, newspapers, electronic media) offers a unique experience with the potential of elevating the student athletes' expe-

riences in ways the academic curriculum cannot usually replicate. Thus, as creators of the athletic curriculum within higher education, coaches have a responsibility to their student athletes to facilitate their development.

### Dining Services

Perhaps the greatest difference between students and student athletes is in their respective nutritional needs. Some athletes expend great quantities of calories, and therefore require replacement fluids for hydration and calories for physical development. Student athletes in sports where additional body weight presents a competitive disadvantage (gymnastics, cross country) are often placed in a situation where students predisposed to eating disorders struggle with their physical maturation and caloric expenditures. The NCAA allows each institution to provide, as part of an athletic scholarship, sufficient funds to cover three meals each day including one meal served by the athletic department training table to student-athletes receiving aid.

### Sports Medicine

Student athletes participating on intercollegiate teams are entitled to institutionally provided medical resources. Typical of sports medicine and athletic training departments are team doctors and certified athletic trainers. The range of available resources extends from surgery to taping ankles. The nature of the sports medicine focus is injury prevention and rehabilitation.

### Other Benefits

In addition to the previously mentioned provisions of athletic scholarships, student athletes receive equipment for competition and practice, coaches who specialize in strength development and cardiovascular conditioning, athletic department staff who market teams and individuals, and media relations staff who work with local, national, and sometimes international media. In addition, students may earn various achievement awards presented by their institution, conference, or the NCAA. Finally, the implicit value of team travel and experiencing the cultures of different institutions and regions provides student athletes with opportunities to grow socially as well as intellectually and athletically.

*See also:* COLLEGE ATHLETICS, *subentries on ACADEMIC SUPPORT SYSTEMS FOR ATHLETES, COLLEGE*

*STUDENTS AS ATHLETES, HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES, NCAA RULES AND REGULATIONS, THE NATIONAL COLLEGIATE ATHLETIC ASSOCIATION, THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES.*

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BRADLEY JAMES BATES

### COLLEGE STUDENTS AS ATHLETES

Current thought regarding academics and athletics in higher education focuses on the academic perfor-

mances of student athletes. The emphasis of the research literature concerning intercollegiate athletics is on the compromised admissions and subsequent inferior academic performance of student athletes in the revenue-producing sports of football and men's basketball. Consequently, the nucleus of research literature centers on the academic integrity of higher education institutions that participate in NCAA Division IA intercollegiate athletics.

In gauging academic outcomes of student athletes, most research relies on traditional scholastic measures. Empirical research objectifies student athletes by focusing on board scores, grade point averages (GPAs), and graduation rates, and depicts student athletes participating in revenue-producing sports as weaker students in high school, poorer students in college, and graduating at lower rates than other students. University graduation rates have emerged as the prevailing assessment tool of student athletes' academic engagement and as a measure of performance outcomes.

### Graduation Rates

The most comprehensive research of academic performance of student athletes is conducted by the National Collegiate Athletic Association. The annual *Graduation Rates Report* utilizes institutionally submitted information detailing student-athlete graduation rates, undergraduate enrollment data, university grade point averages, and admissions data. This report describes in quantitative terms the academic performance differences between student athletes and other students, between student athletes in revenue-producing sports and non-revenue-producing sports, between students and student athletes in Division I schools, and between student athletes and other students by ethnicity. Although the findings show few significant deviations from year to year within each institution, differences between institutions are startling. For example, in the twelve-member Southeastern Conference, six institutions graduated less than 53 percent of their student athletes in 1999. Several NCAA institutions graduated less than 20 percent of the student athletes that entered their university during the 1986–1987 academic years.

The percentages become more alarming when students are separated by ethnicity and sport. For example, while Division I student athletes graduate at an average rate of 58 percent rate, only 51 percent of football players and 43 percent of men's basket-

ball players graduate. Sixty-three percent of Division I Caucasian student athletes graduate from college while Division I African-American student athletes graduate at a rate of 45 percent. Sixty percent of Division I Caucasian student athletes that participate in football, and 53 percent that participate in men's basketball, graduate, while only 43 percent of Division I African-American student athletes that participate in football, and 37 percent that participate in men's basketball, graduate from college. These data demonstrate that student athletes in revenue-producing sports (football and men's basketball), especially African-American student athletes, graduate at lower rates than other students (including other student athletes), raising serious cultural concerns and questions regarding the support systems and admissions policies for student athletes participating in revenue sports.

These data are not surprising given the criterion by which football and basketball student athletes are admitted to universities (see Table 1). Football and men's basketball student athletes have lower entering board scores and lower core high school GPAs than other student athletes. Thus, NCAA data supports the contention that student athletes participating in football and men's basketball are given preferential admissions treatment by institutions of higher learning—a substantial statistical advantage that has increased over time. Once admitted, student athletes underperform academically and concentrate in certain fields of study. However, despite lower entering board scores and underperformance, student athletes, overall, fare as well as other students in terms of graduation rates. Additionally, viewing student athletes collectively portrays a universal characterization that is not applicable to all sports. Student athletes in non-revenue-producing sports elevate the academic means for student athletes in football and men's basketball. In other words, student athletes participating in non-revenue-producing sports have vastly different academic profiles than football players and men's basketball players.

The NCAA reports include the graduation rates for all students as a gauge of institutional academic integrity. Although the focus of the report is on student-athletes graduation rates, student athletes are measured against the graduation rates of their peers. The literature contains a consistent theme of discontent toward the graduation rates of student athletes, yet student athletes collectively graduate at rates consistent with their classmates. The 1999 NCAA

TABLE 1

**Student-athlete admissions data: Four-year average, entering freshmen, 1990–1991 through 1993–1994**

N is the number of students; SAT is total (verbal plus math) score.

Sport	N	GPA	N	SAT	N	ACT
<b>Men</b>						
Baseball	4,625	2.90	2,872	930	1,814	21
Basketball	3,062	2.66	1,936	840	1,209	19
Cross Country/Track	3,848	2.86	2,376	929	1,726	21
Football	12,935	2.67	7,433	862	5,681	19
Other	8,962	2.91	7,159	958	4,198	21
<b>Women</b>						
Basketball	3,496	3.11	1,964	890	1,595	20
Cross Country/Track	4,062	3.11	2,354	912	1,890	21
Other	11,611	3.13	8,091	946	4,198	21

SOURCE: Based on National Collegiate Athletic Association, 1994. *Official NCAA 1994 Graduation Rates Report*. Overland Park, KS. Page 615.

Graduation Rates Report shows that over a four-year period, student athletes actually graduated at a higher rate (58%) than their peers (56%). In Division IA, the most competitive level of the NCAA, student athletes graduated at a rate of 58 percent, compared to a rate of 59 percent for all students at Division IA institutions. In Division I-AAA, the least competitive level of Division I intercollegiate athletics, student athletes graduated at a 58 percent rate, compared to 50 percent of all students at those institutions, and Division I-AA student athletes graduated at a rate of 57 percent, compared to 54 percent of all students at those institutions. Collectively, then, student athletes do better than their peers in terms of graduation rates. However, the data reveal two distinct groupings of student athletes when assessing academic success: students who participate in revenue sports and those who participate in non-revenue-producing sports.

Focusing on football and men's basketball student athletes illustrates significant differences compared to other students. There is a distinct difference between the graduation rates, core high school GPAs, and board scores of student athletes who participate in revenue-producing sports and non-revenue-producing sports. Football and men's basketball student athletes not only graduate at lower rates than other students, they are poorer students than other student athletes.

Several empirical studies have examined the differences in academic performance between football and men's basketball student athletes and nonathlete

students. The intent of these studies was to identify disparities in academic performance. As previously discussed, the primary source of data was collected by the NCAA from institutionally submitted student academic records. Mean scores are subsequently compared between independent groups. The scope of these studies was extensive. For example, data collected for the NCAA reports include all Division IA student athletes.

In a year-long study conducted by the President's Commission of the NCAA, student athletes were found to "spend more time on sports than on studies" (Lederman 1988, p. A33). Comparisons were made between student athletes and nonparticipating students in time-consuming extracurricular activities. This study involved forty-two institutions in Division IA and it found that "Football and basketball players spend approximately thirty hours per week in the sports when they are in season—more time than they spend preparing for and attending class combined. They also report missing about two classes per week" (Lederman 1988, p. A34). The result of admissions exceptions and athletic demands is that student athletes in revenue-producing sports graduate at a significantly lower rate than other students. At many universities, faculty are tolerating the continuation of academic programs "in which, for every student who graduated, nine others did not" (Weistart, p. 17).

The question investigated by Michael Maloney and Robert McCormick in 1993 was, "To what extent does intercollegiate athletic participation affect

academic success?" (p. 556). Utilizing data collected on all students at a Division IA university, Maloney and McCormick discovered that the average grade for student athletes was 2.379, which was significantly lower than the average grade for the student body, which was 2.681. Using regression equations for grade estimates by semester, Maloney and McCormick found that "there is a negative season effect in the revenue sports" (p. 566). Football players received significantly lower grades during the fall season than other students. Student-athlete grades during the off-season improve significantly and are slightly better than nonathletes. However, the increase during the off-season is not sufficient "to recoup the losses during participation" (Maloney and McCormick, p. 566).

### Conclusion

Universities are willing to compromise admissions criteria for athletic ability. The result has been institutional acceptance of lower graduation rates of student athletes who participate in revenue-producing sports. However, student athletes collectively graduate at rates comparable to their peers. The academic concession for athletic purposes amplifies an implicit institutional value on winning athletic contests in football and men's basketball, which are the primary users of "special admits" (students admitted with profiles significantly lower than the university average) and the teams with the lowest graduation rates.

*See also:* COLLEGE ATHLETICS, *subentries on* ACADEMIC SUPPORT SYSTEMS FOR ATHLETES, ATHLETIC SCHOLARSHIPS, HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES, NCAA RULES AND REGULATIONS, THE NATIONAL COLLEGIATE ATHLETIC ASSOCIATION, THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES.

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BRADLEY JAMES BATES

### INTRAMURAL ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES

The term *intramural* comes from the Latin *intra* (within) and *murus* (wall). In a collegiate setting, in-

tramural usually refers to a formally organized program of activities, games, and sports designed to meet the needs of the entire college community. Campus intramural and recreational programs normally provide an opportunity for voluntary participation and/or competition among members of the same institution, and also for occasional competition between intramural groups at other institutions. Because participation is voluntary and open to all, intramural activities allow all students to experience the positive outcomes normally reserved for varsity athletes.

The intramural motto reads, “An activity for everyone and everyone in an activity” (Hyatt, p. 10), and the main purpose is student enjoyment. Intramural programs exist simply because students enjoy the activities and want them to continue. While there is no other necessary justification for the existence of intramural programs, there are many varied benefits, which have led to the secondary goal of providing educational experiences through physical activity. Several objectives related to this goal are:

- Physical development—personal fitness programs can help produce happier, healthier individuals.
- Mental development—many sports provide stress relief and require and enhance quick decision-making, interpretation, and concentration.
- Social development—being part of a team requires and fosters teamwork, cooperation, and sportsmanship.
- Skill development—intramural activities provide an opportunity to refine specific physical skills, an opportunity that may not have been available previously.
- Leisure-time development—these activities encourage a positive choice for filling free time, which may carry over to healthful life decisions.

## History

There are a few early records of intramural events that eventually gave rise to formalized intramural offices and organizations, including an 1852 boat race between Harvard and Yale students, an 1857 Princeton University baseball game between freshmen and sophomores, and an 1859 baseball game between students at Williams and Amherst.

In 1913 the term *intramural* was first used at the University of Michigan, at which time the first for-

mal intramural departments were formed at Michigan and Ohio State. Many large state institutions soon followed, and in 1920 the Big Ten Intercollegiate Athletic Conference began holding annual intramural director’s meetings. The first book on the topic, Elmer Mitchell’s *Intramural Athletics*, was published in 1925. Mitchell was later a main force in developing Ph.D. and Ed.D. programs for physical educators. He also initiated *Research Quarterly* and was the first author of the *Journal of Health and Physical Education*. The first building dedicated solely to intramural activities was constructed in 1928 at the University of Michigan. The creation of the federal work-study program in 1933 established jobs for students in intramural departments and allowed many institutions to further develop their intramural programs.

The year 1948 marked the beginning of the first professional organization related to college intramurals. William Wasson, from Dillard University in New Orleans, toured twenty-five black colleges, studying their intramural departments. He then produced *A Comparative Study of Intramural Programs in Negro Colleges*. Wasson concluded that it would be very helpful to form a national organization to serve as a reference and resource for those involved in collegiate intramural programs. In 1950 there was a meeting of eleven black-college intramural directors, who named themselves the National Intramural Association (NIA). They later invited intramural directors from other institutions to join their group and eventually changed the organization’s name to the National Intramural-Recreational Sports Association (NIRSA). In 1955 the first international conference was held, and in 1971 women were invited to join NIRSA.

## Structure

Within an intramural department, each activity or team needs to be a separate program and function as a whole. Programs and activities do have relationships with each other, but they are not dependent upon each other for their existence, and no activity is more important than any other. A cooperative balance between intramural activities and varsity athletics is crucial, and it is important to recognize that both programs are meeting the needs of students, though of different populations and in different activities. The only pre-requisite for intramurals is a desire to participate, which often includes a broad range of duties, such as playing, coaching, managing,

supervising, and officiating. The intramural office is typically responsible for the following:

- Organizing separate leagues for men and women.
- Creating opportunities for unstructured recreation (pick-up games).
- Providing structured and unstructured opportunities for coed recreation.
- Club teams (intercollegiate competition, but not selective the way varsity programs are).
- Special event planning.
- Extramurals (contests with another institution's club team or intramural team).
- Outdoor recreation.
- Recreational opportunities for faculty, staff, and families, including programs to integrate the entire campus.
- Cultural, creative activities.
- Special programs over the summer.

The intramural director is typically responsible for publicizing events, as well as coordinating activities, making policies governing participation, scheduling and supervising activities, ensuring that officials are trained, arbitrating any disputes between participants, purchasing and managing equipment, and overseeing and balancing the budget.

### Typical Programs

The programs and activities offered at an institution are largely based on the size and type of the college and the diversity and needs of the college community. Intramural and recreation programs at large universities are much more standardized than those at smaller, private colleges. For the basis of comparison, examples are provided of current offerings at two very different types of institutions. Table 1 lists the intramural/recreation offerings at the University of Massachusetts, a large, public, East Coast university. Table 2 shows the intramural/recreation offerings at the California Institute of Technology, a small, private, West Coast college.

### Benefits of Intramural Programs

Participation in intramurals has been found to have a positive effect on a student's self-esteem. As a student's recreation participation increases, his or her confidence also increases. College students are constantly required to cope with stress related to their

**TABLE 1**

#### Intramural/recreation programs at the University of Massachusetts

Intramurals	Season	Men, Women, Coed
Flag football	Fall/spring	M,W,C
Soccer	Fall/spring	M,W,C
Softball	Fall/spring	M,W,C
Field hockey	Fall	W
Cross country	Fall	M,W
Ice hockey	Fall	M,W
Volleyball	Fall/spring	M,W,C
Tennis	Fall/spring	M,W,C
Ultimate Frisbee	Fall	M,W
Foul shooting	Fall	M,W,C
3-point shoot-out	Fall	M,W,C
3-on-3 basketball	Fall	M,W,C
Holiday basketball	Fall	M,W
Quickball	Fall	M,W
Basketball	Fall	M,W,C
Wallyball	Spring	M,W,C
Swimming	Spring	M,W
Lacrosse	Spring	W
Wrestling	Spring	M,W,C

#### Club Sports

Bicycle racing  
Fencing  
Women's ice hockey  
Rowing  
Lacrosse  
Women's rugby  
Volleyball  
Equestrian  
Sailing  
Wrestling

SOURCE: Courtesy of author.

academic life, and participating in intramurals can help balance a student's life and improve the quality of life. For some students, intramural activities can be the single common bond they feel with other students, and intramurals thus becomes the basis for developing a social network, which is crucial for persistence—an important goal of most institutions. Student participants also develop a sense of accomplishment when they become more adept at physical skills.

An intramural program is perhaps the most ideal location to foster moral development education, and this focus is the responsibility of the intramural administration. The overall atmosphere of a college intramural program should be fair, just, and geared toward moral growth. Participants should be clear that the focus is participation, teamwork, sportsmanship, and a sense of belonging. Any complaints or disputes should be handled by the administration with fairness and moral considerations in mind.

TABLE 2

**Intramural/recreation programs at the California Institute of Technology**

Intramurals	Season	Men, Women, Coed
Volleyball	Fall/spring	C
Flag football	Fall/spring	C
Soccer	Fall/spring	C
Basketball	Spring	C
Softball	Fall/summer	C
Swimming/diving	Fall	C
Ultimate Frisbee	Spring	C
Track and field	Spring	C
Tennis	Spring	C

**Club Sports**

Badminton  
Ballroom dance  
Cheerleading  
Cycling  
Cricket  
Dance troupe  
Fencing  
Floorball  
Ice hockey  
Racquetball  
Rugby  
Shorinji kempo  
Shotokan karate  
Soccer  
Surf/windsurf  
Table tennis  
Triathlon  
Ultimate Frisbee  
Volleyball  
Water polo

SOURCE: Courtesy of author.

A campus intramural and recreation program has a unique opportunity to bring together all of the different members of the community, including students, faculty, staff, alumni, and families, for the pursuit of a common goal. The recreation center is often open up to eighteen hours per day and attracts a more diverse population than other facilities on campus. While students tend to be measured by their grade point average and the type of degree they earn, they are far more likely to value and remember the life skills and relationships they develop in college. An intramural office that values the education and development of the whole person has endless opportunities to meet the needs of the entire college community.

See also: COLLEGE ATHLETICS, *subentry on* HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES; RESIDENTIAL COLLEGES.

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RACHEL M. MADSEN

**THE NATIONAL COLLEGIATE ATHLETIC ASSOCIATION**

The National Collegiate Athletic Association (NCAA) is a membership organization of colleges and universities whose fundamental charge is to “maintain intercollegiate athletics as an integral part of the educational program and the athlete as an integral part of the student body” (NCAA 2002). This governing body of intercollegiate athletics was initially constituted as the Intercollegiate Athletic Association of the United States (IAAUS) in 1906, following a call from President Theodore Roosevelt to eliminate the high numbers of deaths and injuries common to college football at that time. The first

constitution of the IAAUS (which became the NCAA in 1910) was ratified by thirty-five colleges and universities in 1906. In 2002 NCAA membership included 1,036 colleges and universities and a number of other affiliates. Approximately 360,000 students participate in intercollegiate athletics at these member institutions each year.

### **Organization of the NCAA**

Since 1973 NCAA colleges and universities have been organized into three divisions, each having separate championship events, legislative autonomy, and a distinctive governance structure. Division I (324 institutions in 2002) has the most stringent requirements for membership. These requirements involve minimum numbers of sports offered for men and women, minimum numbers of participants and events for each sport, scheduling criteria, and minimum and maximum financial aid awards for student athletes. Institutions with men's football teams are further subdivided within Division I into Division I-A and I-AA, based upon team competitiveness and attendance figures.

NCAA Division II (290 institutions in 2002) typically includes those schools with fewer financial resources devoted to athletics. Membership criteria for Division II are generally less strict than for Division I, especially in terms of minimum number of sports offered and minimum numbers of financial awards for student athletes. Division III members (422 institutions in 2002) do not offer any athletically related financial aid, but emphasize participation in intercollegiate athletics as an integral part of student life on campus.

Across divisions, the NCAA governance structure includes member institution presidents and chancellors, faculty, coaches, athletic department personnel, athletic conference personnel, and student athletes who work in conjunction with a national staff of more than 300 (based in Indianapolis, Indiana) to carry out the mission and functions of each division and of the NCAA as a whole. Many NCAA rules and policies are set by one or more of 120 NCAA committees that include approximately 1,000 representatives from member institutions. The NCAA Executive Committee, consisting of a small number of college presidents and chancellors from each of the three divisions, is the overarching NCAA governance body. Its responsibilities include dealing with key association-wide issues (including all legal issues) and strategic plans, ensuring that each divi-

sion is meeting its mission and the general mission of the NCAA, and overseeing the association's budget.

Each of the three divisions governs via its own committee structure, with a board of presidents and chancellors from institutions within that division serving as the highest-ranking committee and reporting directly to the NCAA Executive Committee. This board is called the Presidents Council in Divisions II and III and the Board of Directors in Division I. Many policy issues are first tackled within each division by a Management Council that reports directly to the division's board of presidents and includes athletics administrators, faculty, and student-athlete representatives. These governing bodies oversee a number of committees that each deal with a division-specific issue, such as championship events, academic standards, budget, legislation, membership criteria, student-athlete voice, and rules infractions. Additionally, there are a number of association-wide committees that focus on topics relevant to all member institutions, including competitive safeguards and injury surveillance, sport rules, opportunities for minority students and athletics personnel, sportsmanship and ethical conduct, research, and postgraduate scholarships.

Although the committee structures are similar across the three NCAA divisions, the methods for creating legislative policy have evolved differently within each division. In Divisions II and III, legislation is considered at each annual NCAA convention using a one vote per school process. Division I eliminated such a system in 1997, with all legislative policy subsequently decided upon by the institution presidents and chancellors constituting the eighteen-member Division I Board of Directors. This form of governance allows Division I to consider new legislation twice each year, as opposed to the once-per-year process used in Divisions II and III. NCAA staff members, led by the NCAA president, maintain the association's governance structure and carry out the policies set forth within each division.

### **Role and Function of the NCAA**

The original 1906 constitution of the NCAA (IAAUS at that time) reflected a desire of the first delegates (primarily college professors) to regulate college athletics and ensure that athletic contests reflect the "dignity and high purpose of education" (Falla, p. 21). During the early years of the NCAA, this was carried out by assuming a role as the chief rules-

making body for many sports, promoting ethical sporting behavior, suggesting that athletic departments be recognized as units of instruction within each university, and debating issues such as amateurism and eligibility for competition. Many of these functions and issues are still foci for the NCAA. However, the organization's role has expanded substantially over the years to include administration of national championships, education and outreach initiatives, marketing, licensing and promotion, communications and public affairs, membership/legislative services, and rules enforcement.

Although the first NCAA-sponsored championship competition (the 1921 National Collegiate Track and Field Championship) did not occur until fifteen years after the organization's conception, administration of national championship competitions certainly constitutes the most visible modern NCAA function. As of 2002 more than eighty national championships for men and women were being administered each year across twenty-two sports. These championship events include an estimated 44,000 participants each year.

As the national popularity of many of these competitions has grown, NCAA championship contests have become the focus of substantial media interest and merchandising efforts. By far, the most popular of these championships has been the Division I Men's Basketball Tournament. The television broadcast rights for this tournament were sold to CBS in 1999 for an average of \$545 million per year over eleven years. Much of the money made on NCAA championship events (and their broadcast rights) is returned directly to member institutions to support athletic programs, with the remainder used to run the championship events and support other association-wide initiatives. The NCAA national staff includes a marketing, licensing, and promotions division that deals specifically with the promotion of the NCAA brand and NCAA championships.

Early in the NCAA's history, it was expected that member institutions would police themselves on adherence to constitutional principles—a policy known as the home-rule philosophy. In time, the need to provide some form of national oversight in the face of the growth of the business side of college sports forced a shift in NCAA ideals. The 1946 “Sanity Code” was a first attempt at establishing the NCAA as a body to deal with explication of rules to member schools and enforcement of those rules. Generally, the primary areas for oversight since that

time have included institutional control and responsibility, the amateur status of student athletes, academic standards, financial aid, and recruiting of student athletes. As the numbers of institutions in NCAA Divisions I, II, and III have grown and the governance structure and specific rules of each division have become more complex, the need to provide assistance to member schools in understanding and complying with national legislation has become a priority.

### **Membership Services**

The Membership Services division of the NCAA national office has primary responsibility for assisting member colleges and universities in understanding and complying with NCAA and division-specific legislation. One function of Membership Services is to provide institutions and the general public with ready access to staff knowledgeable in NCAA rules and their interpretations. Numerous seminars and other educational initiatives are conducted each year to keep member institutions and other organizations (e.g., high schools) aware of rules and compliance issues. Membership Services (often in conjunction with NCAA counsel and federal relations liaisons) also assists NCAA governance bodies in evaluating current legislation and assessing ramifications of potential legislative changes.

The staff from this division also administers the NCAA's athletics certification and self-study program. This initiative requires that member schools maintain NCAA accreditation based on adherence to association principles and institutional control over athletic programs. In Division I, the certification program requires each institution to undergo a peer review of their athletic program at specified intervals.

Membership Services also coordinates the certification of individual student athletes as academically eligible for competition, based initially upon academic performance in high school and later on academic progress toward a degree at their college or university. Independent national assessment of whether athletes competing in NCAA-sponsored events are achieving reasonable academic performances has been a major association-wide initiative since the early 1980s.

### **Enforcement**

In 1952, subsequent to the “Sanity Code,” a rules enforcement mechanism was put in place that re-

mains to this day. Member institutions, coaches, or athletes in violation of NCAA legislation or principles must face NCAA committees and staff charged with investigating and punishing transgressions. At the institution level, the NCAA reviews approximately fifteen to twenty major infractions cases and 1,500 secondary (much less serious and often self-reported) violations each year. Secondary violations often result in minor penalties that may be determined by the offending institution itself. Major infractions may lead to substantial penalties for a college or university, including recruiting limitations, loss of athletic scholarships, banishment of teams from competition in championship events, or even disbandment of a team and loss of some NCAA membership privileges. Violations involving individual prospective or enrolled student athletes are handled through similar mechanisms.

### Education Services

Often lost amidst the substantial media attention afforded to the championship events, the big money aspect of college sports, and the rules violations is the substantial amount of education, outreach, and development initiatives undertaken by the NCAA through its Education Services division. This group is most directly charged with maintaining and enhancing the overall welfare of student athletes at NCAA member institutions. The division includes a sports sciences program that closely monitors trends in competition and practice injuries, informs rules committees of relevant injury data, administers drug education and drug testing programs, and promotes various wellness initiatives at the national level and through grants to member institutions.

Education Services also maintains the NCAA research staff whose mission is to collect, interpret, and disseminate data of interest to NCAA policy-makers and member institutions. For example, the research staff collects data used by the NCAA to evaluate such diverse topics as the financial health of athletic programs, effects of academic reform legislation on member institution graduation rates for student athletes, and trends in minority hiring in athletic departments.

In conjunction with many of its championship events, NCAA Education Services staff organizes large-scale youth clinics that include sport instruction and life-skills discussions. The NCAA also is involved with the National Youth Sports Program (NYSP), which provides thousands of disadvantaged

youths with education and enrichment activities each summer. Student athletes at member institutions are given opportunities to participate in NCAA life-skills programming and an annual NCAA-sponsored leadership conference. Other outreach activities involve promotion of athletic administration opportunities for women and members of racial/ethnic minority groups, and the administration of numerous scholarship programs for student athletes needing funding to complete an undergraduate degree or pursue graduate training.

As in its infancy, the NCAA is still involved in establishing competition rules for each sport, and in collecting and maintaining collegiate sports records and other historical data. Many of the issues that the NCAA deals with have been around since the advent of college athletics (e.g., recruiting violations, academic performance of athletes, competitive equity). However, there are also many issues that have come to the fore more recently, such as gender equity, the financial and commercial milieu of college athletics, and diversity issues. The one certainty is that the NCAA, in conjunction with its member institutions, will continue to evolve in scope and responsibility in response to the continued growth in popularity of intercollegiate athletics in the United States.

*See also:* COLLEGE ATHLETICS, *subentries on* ATHLETIC SCHOLARSHIPS, COLLEGE STUDENTS AS ATHLETES, HISTORY OF ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES, THE ROLE AND SCOPE OF INTERCOLLEGIATE ATHLETICS IN U.S. COLLEGES AND UNIVERSITIES.

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THOMAS PASKUS

## NCAA RULES AND REGULATIONS

The National Collegiate Athletic Association (NCAA) began with a meeting called by U.S. President Theodore Roosevelt in October 1905. In attendance were the presidents and football coaches of Harvard, Yale, and Princeton Universities. Roosevelt sought, among other things, effective regulation of college football, which in 1905 had seen eighteen deaths on the gridirons of the relatively few institutions fielding teams to play the still new and already popular sport. The meeting resulted in rules changes in football and a meeting of a group of college presidents that would become the thirty-eight-member NCAA in 1906. By 2002 the voluntary association of more than 1,000 U.S. colleges and universities governed intercollegiate athletics competition in more than fifty sports for both men and women.

The NCAA rules govern specific games, the conditions for institutional participation in the NCAA and its sanctioned leagues and championships, the recruitment and participation of individual student athletes, and the consequences for breaching NCAA rules. The *NCAA Manual*, which is updated for each of the three divisions annually (and four times per year online), encompasses the rules for which member institutions and individuals are accountable. By 2002 the manual had expanded to more than 500 pages as new rules continue to be legislated and old ones revised or reinterpreted.

As of February 2002 the NCAA had thirty institutions on probation for major rules infractions (those providing an extensive recruiting or competitive advantage, reflecting a general disregard for the governing rules, or for recurring violations). In

2000, when twelve institutions were sanctioned for major infractions, the NCAA processed to completion a total of 2,024 cases involving secondary infractions, an infraction defined as "isolated or inadvertent in nature, provides or is intended to provide only a minimal recruiting, competitive or other advantage, and does not include any significant recruiting inducement or extra benefit" (p. 311).

The number and complexity of NCAA rules, and the possible consequences associated with their violation, have led most Division I institutions to employ at least one full-time professional staff member and to establish an institution-wide infrastructure solely devoted to assuring up-to-date knowledge and compliance with NCAA rules. Further, the aspiring student athlete must attend to the rules as early as the ninth grade to be sure to achieve the necessary high school course work required to meet NCAA eligibility requirements.

### Source, Structure, and Scope of NCAA Rules

The regulations for the governance of NCAA-sponsored intercollegiate athletics are encompassed in the *NCAA Manual* within thirty-three articles, which are organized in three sections: (1) the "Constitution," which covers the principles for the conduct of intercollegiate athletics that provide the framework within which all subsequent rules must fit; (2) "Operating Bylaws," which consist of principles and specific rules promoting the principles defined in the constitution; and (3) "Administrative Bylaws," which define policies and procedures to implement legislative actions of the association, NCAA championships, association business, the enforcement program, and the athletics certification program. Most rules and rule changes originate with recommendations from a number of internal committees, including the committee on infractions and the management council—a representative group of institutional and league athletics and faculty representatives of the specific division for revisions to the bylaws. However, depending on the nature of the proposed rule or revision, authority for rules and amendments may be delegated to the committee or may require approval beyond the management council.

The constitution provides a framework and defines limits for all subsequent regulations and future legislation. At its base is a two-part fundamental policy addressing the principle of amateurism, which is

meant to assure that athletics is an integral part of the educational program, and the athlete is an integral part of the student body, thus establishing a “clear line of demarcation between intercollegiate athletics and professional sports” (NCAA, p. 1). The second part of the policy addresses the individual and collective responsibilities of member institutions to apply and enforce legislation to assure competitive equity, including “basic athletics issues such as admissions, financial aid, eligibility and recruiting” (NCAA, p. 1). Beyond the fundamental policy and purpose of the organization, the constitution includes five additional articles addressing the conduct of intercollegiate athletics, NCAA membership, organizational structure, legislative authority and process, and institutional control of intercollegiate athletics. The constitution designates the chief executive officer of the institution (rather than the athletic director) as ultimately responsible “for the conduct of the intercollegiate athletics program and the actions of any board in control of that program” (NCAA, p. 49). This responsibility is reinforced in the requirement that budgetary control falls to the institution within the realm of its normal budgetary procedures. The Constitution also spells out procedures for self-study and analysis to occur as part of a regular athletic certification process. Perhaps most important, this section of the constitution spells out the institution’s responsibility for the acts of its staff members and any other individuals or agencies promoting the interests of the institution’s intercollegiate athletics program.

The second article of the constitution contains principles for conduct of intercollegiate athletics, which anchor rules affecting prospective and current student athletes and institutions. The principle of student-athlete welfare, for example, requires athletic programs to protect and enhance the physical and educational welfare of student athletes. It requires an environment for the student athlete that: (1) is well integrated with the overall educational experience, (2) values cultural diversity and gender equity, (3) is healthy and safe, (4) fosters a positive relationship between the student athlete and coach, (5) exhibits fair, open, and honest relationships on the part of coaches and administrators towards student athletes, and (6) involves student athletes in matters affecting their lives. Other principles for the conduct of intercollegiate athletics include gender equity, sportsmanship and ethical conduct, sound academic standards, nondiscrimination, diversity within gov-

ernance, rules compliance, amateurism, competitive equity, recruiting, eligibility, financial aid, playing and practice seasons, postseason competition and contests sponsored by noncollegiate organizations, and the economy of athletic program operations. Each principle, briefly defined in the constitution, provides the philosophical basis for extensive and often complex subsequent rules in the operating and administrative bylaws.

The operating bylaws address ethical conduct (including gambling and the use of banned substances), conduct and employment of athletics personnel, amateurism, recruiting of student athletes, academic and general eligibility requirements, financial aid, conditions affecting awards, benefits and expenses for enrolled student athletes, the conditions and limitations of playing and practice seasons, championships and postseason football, enforcement, division membership, committees, and certification for institutional athletic programs. The administrative bylaws address rules in the governance of athletic programs, executive regulations, enforcement policies and procedures, and the policies and procedures governing the NCAA athletics certification program.

### NCAA Eligibility Requirements

Imagine Sally Jones, a ninth grader who loves basketball. She knows that she wants to play college basketball, and therefore will try to do whatever is required to meet the admission requirements of her state university. In addition, perhaps unknown to Sally and her parents, she must also satisfy NCAA requirements and procedures in order to be eligible to compete in her first year in college.

The NCAA constitutional principle regarding eligibility specifies that “eligibility requirements shall be designed to assure proper emphasis on educational objectives, to promote competitive equity among institutions and to prevent exploitation of student-athletes” (NCAA, p. 5). It is designed to assure that when Sally gets to college she will be treated as a student first, and not simply as a commodity.

The subsequent bylaw related to eligibility, however, consists of thirty-seven pages in the *Division I Manual* detailing the conditions a student athlete must meet in order to be eligible to compete in athletics competition at a given institution. The rules related to initial eligibility are sufficiently complex that Sally and all other applicants must use an initial-

eligibility clearinghouse contracted by the NCAA (in 2002 the contract was held by the American College Testing Service) to validate the information on which the initial eligibility determination is based. First, in order to qualify for eligibility, Sally will need to meet minimum grade point average (GPA) requirements in a set of thirteen designated core academic courses taken in high school. An index based on varying combinations of GPA and test scores on either the SAT or the ACT will determine the minimum that must be satisfied in each area. For example, if the core GPA is 2.0 (the lowest permissible for a qualifier), then the combined verbal/math score on the SAT would need to be at least 1010. If Sally's GPA in the academic core courses is 2.5 or higher, she will be allowed an SAT score as low as 820 to qualify for athletics financial aid, practice, and competition. If she is unable to meet these criteria, she might be able to be a *partial qualifier*,—a student who meets an index involving GPAs starting at 2.525 and going to 2.750 and above to balance SAT scores as low as 720. Partial qualifiers and nonqualifiers may attend the institution if accepted through normal channels, but they may not participate in the first year in intercollegiate athletics practice or competition (including club sports).

NCAA rules will dictate the maximum number of official campus visits Sally may make; when, how often, and under what conditions she may be contacted by coaching staff; conditions for campus visits, including where she may eat and under what conditions costs will be covered for her parents if they accompany her. If admitted, there will be conditions on summer school attendance and summer sport participation, when she must declare a major, the number of courses she must take to remain eligible, and permissible sources of financial support as she pursues her degree. Once on campus, her coaches will be responsible for certain rules, including when, how often, and for how long the team practices, and the number of contests in which she will participate. Violations of the rules could adversely affect both individuals and the institution.

### Sanctions

Institutions typically self-report to the NCAA in the event they have reason to believe a violation of an NCAA rule has occurred. Information may also come through other channels such as opposing coaches or members of the public. In the case of a secondary violation, the institution prepares a report

on the situation, including corrective or disciplinary actions taken, if any. The *NCAA Secondary Violation Penalty Schedule* provides guidance for penalties for inadvertent secondary violations. For example, if basketball, football, or women's volleyball coaching staff members attended an opponent's contest, violating the regulation generally prohibiting in-person scouting of an opponent in these sports, the employing institution should issue a letter of reprimand to the involved coaching staff members. Many recruiting violations would necessitate the institution to issue a letter of admonishment to involved staff members, with notice that repeat violations will be forwarded to the NCAA for evaluation and imposition of appropriate recruiting restrictions on the institution. Examples of such violations include sending video materials to a prospect, placing institutional advertising in a high school game program or recruiting publication, failure to notify a prospect in writing of the five-visit limitation prior to a visit, providing a campus visit prior to receiving the prospect's test scores and/or transcript, allowing a media representative to be present during a recruiting contact by a coach, publicizing a prospect's campus visit, and putting a prospect's name on the scoreboard.

Major infractions involve an in-depth investigation process in cooperation with the institution. Major infractions may warrant penalties such as forfeiture of games involving ineligible players, probation, limiting television coverage, termination of responsible staff, dissociation of representatives of athletic interests, reduction of allowable grants-in-aid, financial penalties, and, in the worst case, effectively suspending an athletic program for a given period of time. Some examples of major infractions include providing extra benefits to student athletes or recruits, falsification of recruiting records, unethical conduct (including academic fraud), impermissible recruiting inducements, lack of institutional control and failure to monitor its athletic programs, provision of false and misleading information, hiring irregularities, fraudulent entrance examinations, impermissible observation of preseason activities, and impermissible tryouts.

### Conclusions

The NCAA compliance effort is a well-intended attempt to respond to concerns related to ethics, commercialism, academic integrity, amateurism, exploitation of student athletes, racial equity and gender equity, disability accommodation, and other

issues. An approach to ethical concerns based in legislated rules has perhaps created a structure so complex that it loses sight of the initial objective, and has, in turn, generated new concerns. The structure of NCAA rules continues to be challenged through the NCAA. The rules have also been challenged in the courts, including, for example, cases related to alleged racial discrimination in the use of test scores in initial eligibility determination, disability discrimination in disallowing test scores taken with accommodation for students with disabilities, anti-trust questions for denying access to prospective student-athletes, and for limiting salaries for restricted earnings coaches. Such coaches, prior to the court's prohibition as a result of this case, were limited by NCAA rules to a specific salary cap usually equivalent to a part-time salary even though they were employees of the hiring college or university. Others raise concerns about an athletic association determining academic policy at both the high school and college level. Time, however, will tell whether NCAA and member efforts to revise the rules structure will allow benefits from the order and ethical foundation provided by NCAA rules, while also simplifying the rules to reduce the volume of unintended violations. As the NCAA seeks to liberalize rules related to amateurism, it is useful to consider historian John Thelin's observation that "the initial impulse in each era was to deplore the illegal and unethical activities in college sports, then to proceed to make them legal. If there is an epitaph for the demise of educationally sound athletic programs on the American campus, it will read: 'the rules were unenforceable'" (Thelin, p. 222).

*See also:* COLLEGE ATHLETICS, *subentry on* NATIONAL COLLEGIATE ATHLETIC ASSOCIATION; TITLE IX, *subentry on* INTERCOLLEGIATE ATHLETICS.

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## COLLEGE ENTRANCE EXAMINATION BOARD, THE

The College Entrance Examination Board, or College Board, is a national, nonprofit membership association with a mission of preparing, inspiring, and connecting students to college and opportunity. The College Board assists students in the school-to-college transition by helping them prepare academically for, and enter, colleges and universities. It also endeavors to aid international students in their transition to U.S. colleges; provide information on financial aid; help colleges identify, recruit, and place students; and assist educators in public policy development and advocacy. In addition, the organization sponsors educational research.

At its founding in 1900 the College Board had a membership of twelve institutions of higher education. The goal was to provide a common set of entrance examinations to be used by colleges to make admissions decisions. The first fifty secondary schools were admitted to membership in 1959. As of the beginning of the twenty-first century the association comprised more than 3,900 schools, colleges, universities, and other educational organizations.

### Members and Governance

The College Board has three types of members. The first type, institutions, includes schools, colleges, and universities. Secondary and higher education systems are the second type. Finally, the third type of member, nonprofit organizations, encompasses agencies, associations, and education departments. Membership requirements differ according to type. Institutions of higher education, for example, must be accredited and document regular and substantial use of College Board programs and services such as the Advanced Placement (AP) Program, SAT, or College-Level Examination Program (CLEP). Members are elected annually at the College Board's membership meeting.

The College Board is governed by an elected board of trustees, officers appointed by that board, and staff appointed by the College Board president. The board of trustees includes faculty and administrators of secondary schools, colleges, universities, and other educational organizations. Appointed officers include the president, a president emeritus, secretary of the corporation, senior vice president for operation and finance, senior vice president for development, and vice presidents for government

relations, research and development, communications/public affairs, academic initiatives, regions, chief of staff, teaching and learning, higher education services and international services, and human resources.

### Programs and Services

While provision of national, uniform entrance examinations has always been an important function of the College Board, programs and services have expanded considerably throughout the years. The organization provides major programs and services in (1) college admission and enrollment (e.g., Admitted Class Evaluation Service, Preliminary SAT/National Merit Scholarship Qualifying Test [PSAT/NMSQT]); (2) guidance (e.g., Career Search); (3) financial aid (e.g., College Scholarship Service and Institutional Need Analysis System); (4) placement and advising (e.g., CLEP); and (5) teaching and learning (e.g., EQUITY 2000 and Pacesetter). These programs and services are described, and most are made available, on the College Board website.

Perhaps its best-known program, the Scholastic Aptitude Test was first administered in 1926, was renamed the Scholastic Assessment Test in 1992, and then became known simply as the SAT. Taken by more than 1 million students annually throughout fall, winter, and spring, the SAT is a standardized test required for admission by many colleges and universities. The College Board owns the SAT and contracts with the Educational Testing Service (ETS) to develop and administer the SAT and other standardized tests. There is no "passing score" on the SAT. Instead, individual institutions determine how to weight the SAT among other admissions factors including high school rank and grade point average, essays, and interviews. In 1929 the test was divided into verbal and math subtests. The three-hour SAT I: Reasoning Tests and one-hour SAT II: Subject Tests were developed in 1990. Subjects in the SAT II include writing, literature, U.S. history, world history, math, biology, chemistry, physics, and languages.

The PSAT was first administered in 1959 and was combined with the NMSQT in 1971. The PSAT/NMSQT is designed to measure critical reading, math problem solving, and writing skills. In addition to practicing for the SAT, students may also qualify for scholarships and other recognition based on their test scores. The PSAT/NMSQT is typically taken by high school juniors.

The AP Program, through which high school students can take college-level courses and earn college credit or advanced placement in over thirty subject areas, is among the College Board's other well-known programs. The first AP exams were administered in 1956.

The College Scholarship Service provides programs and services to help colleges, universities, and scholarship programs distribute student financial aid in an equitable way. Financial aid profiles and computer software programs are among the service's offerings.

### Newer Ventures and Future Outlook

Former West Virginia Governor Gaston Caperton was named president of the College Board in 1999. Caperton launched the College Board website, a for-profit Internet venture that offers online SAT registration, practice tests, college searches, online college applications, career exploration tools, and information on college costs and financial aid. ETS has made a significant financial investment in the venture. Rival organizations contend that the site can provide only limited information because the College Board comprises member colleges and universities and would not, for instance, recommend that students and parents negotiate a financial aid package.

Caperton and the College Board will play an important role in the future of college admissions. Women and some minority groups have lower average SAT scores, and some claim the test is culturally biased. Furthermore, legal challenges to and the elimination of affirmative action programs in admissions on many campuses are changing the role of the SAT in admissions and therefore the role of the College Board as well. In several states and systems, including California, Texas, and Florida, some colleges and universities are reducing their reliance on the SAT and guaranteeing admission to students finishing in a set percentage near the top of their high school classes. In 2000 the president of the University of California system made a controversial proposal to the faculty there that applicants no longer be required to take the SAT. He proposed a set of admissions criteria that would provide a more holistic assessment of students, be less quantitative, and recognize a broad spectrum of achievement. If the plan is approved, California would be the first system with competitive admissions to drop the SAT requirement. Other states grappling with the same issues will likely pay close attention to what happens

there. Undoubtedly, the College Board intends to play an important role in any changes that take place. Its programs and services will continue to adapt to the growing diversity of its clientele.

*See also:* ADVANCED PLACEMENT COURSES/EXAMS; COLLEGE ADMISSIONS; COLLEGE ADMISSIONS TESTS; COLLEGE RECRUITMENT PRACTICES.

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MAUREEN E. WILSON

## COLLEGE EXTRACURRICULAR ACTIVITIES

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At the beginning of the twenty-first century, many colleges and universities have a broad educational mission: to develop the "whole student." On college campuses, extracurricular involvement is a key tool in this personal development. For the majority of college and university students, involvement in extracurricular activities plays an integral role in the collegiate experience. Students become involved in extracurricular activities not only for entertainment, social, and enjoyment purposes, but most important, to gain and improve skills. A wide and diversified range of extracurricular activities exists on U.S. campuses, meeting a variety of student interests.

### Impact on Students

The importance of extracurricular activities on college campuses is well established. The primary goals of extracurricular activities focus on the individual

student level, the institutional level, and the broader community level. These activities exist to complement the university's academic curriculum and to augment the student's educational experience. According to a 1993 article by Alexander Astin, almost any type of student involvement in college positively affects student learning and development. Extracurricular activities provide a setting to become involved and to interact with other students, thus leading to increased learning and enhanced development. Specifically, a student's peer group is the most important source of influence on a student's academic and personal development. By identifying with a peer group, that group may influence a student's affective and cognitive development as well as his or her behavior.

As the development of the well-rounded individual is a principal goal of extracurricular activities on college and university campuses, the numerous experiences these activities afford positively impact students' emotional, intellectual, social, and interpersonal development. By working together with other individuals, students learn to negotiate, communicate, manage conflict, and lead others. Taking part in these out-of-the-classroom activities helps students to understand the importance of critical thinking skills, time management, and academic and intellectual competence. Involvement in activities helps students mature socially by providing a setting for student interaction, relationship formation, and discussion. Working outside of the classroom with diverse groups of individuals allows for students to gain more self-confidence, autonomy, and appreciation for others' differences and similarities.

Students also develop skills specific to their career path and imperative for future job success. Students have opportunities to improve their leadership and interpersonal skills while also increasing their self-confidence. Extracurricular involvement allows students to link academic knowledge with practical experience, thereby leading to a better understanding of their own abilities, talents, and career goals. Future employers seek individuals with these increased skill levels, making these involved students more viable in the job market. Specifically, participation in extracurricular activities and leadership roles in these activities are positively linked to attainment of one's first job and to managerial potential.

Student involvement in extracurricular activities also positively impacts educational attainment. Ernest T. Pascarella and Patrick T. Terenzini's 1991

research indicates that extracurricular involvement has a positive impact on attaining a bachelor's degree and on educational aspirations. Students who are actively engaged are more likely to have higher educational ambitions than uninvolved students.

Finally, extracurricular activities focus on institutional goals, such as building and sustaining community on campus as well as student retention. As campuses become more diverse, students desire an environment in which they feel connected to others and to the university. Extracurricular activities provide a place for students to come together, discuss pertinent ideas and issues, and accomplish common goals. Within this community, where students feel comfortable with one another, learning and development are enhanced and student retention is positively impacted. According to Vincent Tinto's 1987 research, students will be more likely to persist in college if they feel they have had rewarding encounters with a college's social and academic systems. Through extracurricular participation, students frequently interact with peers who have similar interests, providing social integration into the college environment. As a result, involved students view their college years as a positive experience and feel they are a vital part of the university, resulting in higher retention rates.

### **Types of Extracurricular Activities**

Because of the diverse interests of college students, the range of extracurricular activity offerings varies extensively, depending upon the size and type of college or university. Extracurricular activities range from primarily social organizations to governance organizations to intercollegiate athletic programs. Each activity offers students an opportunity to work with others and to gain essential life skills. Though numerous extracurricular activities exist, the following activities are those that are most commonly found on college campuses.

**Student government.** One of the most widespread types of extracurricular experience available on college campuses is student government. Students involved in governance organizations, such as student government and residence hall government, are typically elected by their peers to function as the "official voice" of students to university administration. These government participants often serve on campus-wide committees in an effort to represent the ideas and concerns of their fellow students. Student government functions include allocating funds to

other organizations, planning programs related to student interests, providing forums for student issue discussion, and helping to build and sustain a successful campus community. Additional examples of campus governance organizations include honor councils, which seek to enforce a university's honor code, and judiciary boards, where students hear disciplinary cases and render verdicts.

**Athletics.** Almost every college and university in the United States offers some type of intercollegiate and intramural athletics. Student athletes may "try out" for intercollegiate sports teams such as volleyball, basketball, or lacrosse. Being a varsity athlete requires a great commitment of time and energy for practicing, conditioning, and competing. Intramural sports provide an opportunity for all nonvarsity student athletes to play a sport they enjoy, while competing against their peers. Typically, colleges and universities offer several intramural options including flag football, soccer, and tennis. Players at all skill levels are invited to participate, and often these activities may be quite competitive. For those students who particularly enjoy watching collegiate sports, many schools have student spirit organizations that allow students to attend sporting events, sit in a special student cheering section, and applaud the home team.

**Academic and professional organizations.** Academic major and professional organizations assist their members in acquiring experience in their chosen occupational field and in aiding in the job search. Students convene to discuss pertinent issues related to their field of interest and to learn job-related skills in an effort to be fully prepared for future success. Such professional organizations typically focus on one career area of interest. Examples of professional organizations include the American Marketing Association, Student Education Association, and the Mathematics Society.

**Volunteer and service-related activities.** Volunteer and service-related activities exist to help improve the local and worldwide community, an important goal of extracurricular activities. In the Alternative Spring Break program, students engage in community service projects, such as rebuilding homes, planting trees, or tutoring students during their college spring break. Additional service projects and organizations function throughout the year, including Alpha Phi Omega, Habitat for Humanity, and Circle K, which promote service and volunteerism during the college years. Service-learning programs offer

students an opportunity to contribute to their community and, most important, to critically reflect upon their service experiences.

**Multicultural activities.** Multicultural activities focus on increasing awareness and understanding of various cultures and ethnic and racial backgrounds. Many schools sponsor festivals, concerts, lectures, and discussions that promote multicultural awareness on campus in which students may participate. In addition, involvement in these activities may be an important step toward positive racial, ethnic, or sexual-identity development. Examples of multicultural organizations include Black Student Union, Lambda (a gay, lesbian, bisexual, and transgender student organization), Muslim Student Association, and Russian Club.

**The arts.** Students interested in fine arts have a plethora of extracurricular opportunities in which they can actively participate. Activities including plays, musicals, and dance concerts offer a chance for students to demonstrate their dramatic abilities. Marching band, jazz band, orchestra, and singing groups allow students to pursue their musical interests at the college level. Pottery, sculpture, and mosaic classes and workshops are also offered for students to learn and enjoy.

**Other activities.** In addition to the specific extracurricular activities previously mentioned, other activities exist on many college campuses. Honorary organizations recognize student scholars, often in a certain academic discipline, who maintain a specific grade point average. Religious organizations offer students an opportunity to gather in fellowship with students of similar religious backgrounds. Media organizations on campus consist of print, television, and radio venues, and these activities may include writing or taking pictures for the school newspaper, serving on the yearbook staff, or working as a disc jockey for the campus radio station. Individuals interested in politics may join the College Republicans or College Democrats. Students who enjoy planning campus-wide events may participate in the Homecoming or Parents' Weekend committees. Greek organizations (fraternities and sororities) offer many social opportunities while also promoting service and leadership.

*See also:* COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE STUDENT RETENTION; LIVING AND LEARNING CENTER RESIDENCE HALLS; RESIDENTIAL COLLEGES.

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## COLLEGE FINANCIAL AID

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Despite the fact that college tuition rose much more rapidly than either consumer prices or family incomes during the 1980s and 1990s, few college students paid the full cost of higher education during this period. Those who attended public colleges and universities paid relatively low tuition, with state taxpayers funding much of the cost of running these institutions. Students enrolled in private colleges and universities generally paid significantly higher tuition, but that tuition was rarely high enough to cover costs, which have traditionally been subsidized by private donors.

Over half of all undergraduate students—and over 70 percent of those who attend full-time—receive financial aid to help pay their tuition. Most of this aid, which adds up to almost \$70 billion a year, comes from federal or state governments or di-

rectly from the institutions. It may be in the form of grants (which do not have to be repaid), loans, or work. Some aid is based on financial need, while other aid is awarded on the basis of academic qualifications, athletic ability, or other personal characteristics.

### Need-Based Aid

Historically, the driving force behind student financial aid has been the goal of providing access to higher education regardless of a student's ability to pay. The value placed on equal opportunity in American society, combined with the role of education in determining occupational and financial success, has created strong support for devoting both public and private funds to subsidizing students who would otherwise not have the means to continue education beyond high school. Although a decreasing proportion of student aid is based purely on financial circumstances, need-based aid remains the core of the financial aid system.

"Ability to pay" and "financial need" are not precise concepts, but an elaborate system has developed to direct funds toward those who need them most. The current approach to measuring need dates back to the mid-1950s, when a group of colleges established the College Scholarship Service of the College Board. They developed a standardized system of measuring family ability to pay, which allowed them to distribute their funds more equitably. This system has evolved over time and continues to guide the financial aid systems of many private nonprofit colleges and universities. Since 1986, Congress has legislated a formula for determining eligibility for federal need-based aid funds. This formula also provides the basis for aid allocation in many states.

Under both the congressionally mandated *Federal Methodology* (FM) and the formulas used by most colleges and universities, need is defined as the cost of attending college less the Expected Family Contribution (EFC)—which is determined by the need-analysis formula—a federal methodology that determines how much families/students can afford to pay and is used to allocate federal funds. (For students who are not dependent on their parents, only the student's financial resources are considered.) Students apply for aid by filling out the federal government's Free Application for Federal Student Aid (FAFSA), as well as any additional forms required by the schools to which they are applying. FM focuses on current income levels, family size, and the num-

ber of family members in college, though many institutions collect additional information from applicants and measure financial strength using a formula that, like the College Board's, relies on both income and assets in addition to relevant family circumstances.

### **Federal Aid**

The federal government provides about three-quarters of its \$48 billion of student aid in the form of loans. Half of this amount is in the form of subsidized loans to students. Students determined through the Federal Methodology to be eligible for need-based aid either borrow directly from the government (William D. Ford Direct Loans, usually called simply Ford Direct Loans) or take federally guaranteed loans from banks or other private lenders (Federal Family Education Loans, or FFELs). The government pays the interest on these subsidized loans while the student is in school.

In the 1990s, non-need-based loans became an important component of the federal student aid system. Forty percent of federal education loans are now in the form of unsubsidized student loans. Introduced in 1992, these loans are available without regard to financial need, and interest accrues on them during the college years. The federal government also provides non-need-based loans to parents of undergraduate students.

The largest federal grant aid program, the Pell Grant, is the main source of aid targeted directly at the most economically disadvantaged students. By the year 2000, almost 4 million students a year received an average of about \$2,000 a year under the Pell program, which provided maximum grants of over \$3,000. Funding for Pell Grants increased about 15 percent in real terms during the 1990s, but the growth was almost entirely in the number of recipients, not in the size of the average grant. In 2000, the maximum grant covered less than half as much of the cost of attending both public and private four-year institutions as was the case in the mid-1970s.

In addition to a variety of other smaller grant programs, the federal government provides about \$1 billion in work-study aid, which subsidizes student employment during the academic year. Like Pell Grants and subsidized student loans, work-study funds are need-based and are distributed on the basis of eligibility as determined by the Federal Methodology.

Since 1998, the federal government has supplemented these explicit student aid programs with tax-based subsidies to college students. The Hope Scholarship and Lifetime Learning Tax Credits are nonrefundable tax credits that reduce the federal income taxes of students or their parents who are paying tuition. These credits benefit those who earn enough income to pay income taxes, but whose income falls below the legislated maximum. In other words, they are directed primarily toward middle-income students. The subsidies provided by these tax credits exceed the amount of federal grant aid to students.

### **State Aid**

State subsidies for higher education come in the form of the relatively low tuition levels enjoyed by all students at public colleges and universities. However, states also have grant programs to assist students in covering their college costs. State grant aid grew much more rapidly than federal grant aid during the 1990s. By the year 2000, nine states spent less than \$2 billion a year on student aid, but South Dakota was the only state with no program in place. At the other end of the spectrum, five states provided more than \$200 billion a year to their students.

As is the case with federal student aid, the proportion of state aid that is based on financial need was smaller in 2000 than it was in 1990. Georgia has set a national example with its merit-based program and many states appear to be following suit. Nonetheless, more than 80 percent of state aid is dedicated to undergraduate need-based programs, and many states still have only need-based grant programs.

### **Institutional Aid**

Financial aid funded directly by institutions grew very rapidly in the 1990s, particularly in private non-profit colleges and universities, but also in the public sector. By 2000, about 20 percent of total student aid and almost half of total grant aid came from institutions. Financial aid, which used to be viewed only as a subsidy to students, is now frequently seen as serving multiple purposes. In addition to using it to make college affordable for more students, many colleges and universities are devising strategies to use aid dollars to attract particular types of students by influencing students' choices among institutions. Many schools have increased the proportion of their grants and scholarships they award to students based on academic or other personal qualifications. On

public campuses, over half of the student aid is now based on criteria other than need. However, at private colleges and universities, about 80 percent of the student aid is still based on financial need as determined by a need analysis formula.

### Financial Aid and Affordability

Student aid covers more of the cost of college for full-time students than for part-time students, and it covers more for lower-income students than for higher-income students. Grant aid reduces the amount students have to pay for education, while loans reduce liquidity constraints but impose repayment burdens after college. In other words, because of financial aid, different students pay very different amounts for the same educational experience. The student aid system is complicated, with aid coming from a variety of different sources and allocated based on a variety of different criteria. While it is difficult to measure precisely the impact of the aid system, it is clear that the availability of student aid has significantly increased the number of students who have the opportunity to continue education after high school, and also broadened the choice of institutions available to many students. Nonetheless, there is considerable evidence that financial aid has not succeeded in making higher education affordable for all qualified low-income students.

*See also:* COLLEGE ADMISSIONS; COLLEGE RECRUITMENT PRACTICES; COLLEGE SEARCH AND SELECTION.

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SANDY BAUM

## COLLEGE RANKINGS

David Webster stated in 1986 that there are two elements that define college rankings. The first is that academic quality can be measured by selected criteria. For example, in many studies the reputation of the faculty and the selectivity of students are used as measures of an institution's quality. The second element is that using these measurements leads to an ordering of institutions. In other words, since quality is in short supply, there can be only one number-one school. Therefore, unlike classifications (e.g., Carnegie classifications), which group institutions by type, or guides, which give information on individual colleges (e.g., *Peterson's Guide to Four Year Colleges*), rankings order institutions from best to worst.

### History of Rankings

This notion of ranking the academic excellence of U.S. colleges and universities is not new. For nearly 100 years various organizations have attempted to rank postsecondary institutions. In 1910 James Cattell from Columbia University offered rankings in *American Men of Science* that assessed the "scientific strength" of elite institutions by looking at the reputations of their science and social science faculty. Most early efforts applied the ranking to the college as a whole, rather than to individual departments. The rankings also tended to be based on what happened to the students after graduation instead of the accomplishments of the school's faculty. Cattell's work is an early exception.

E. Grady Bogue and Robert L. Saunders offered a brief history of graduate school rankings in 1992. They reported that the first graduate school study was conducted in 1925 by Raymond Hughes. He called on his fellow faculty members at Miami University in Ohio to draw up a list of quality universities and to identify national scholars in specific fields of study to serve as raters. Ultimately, in *A Study of Graduate Schools of America*, Hughes relied on forty to sixty raters to assess twenty disciplines for graduate study at thirty-six universities. He followed up this ranking with another in 1934 for the American Council on Education. In this report, he assessed fifty disciplines and increased the number of raters to 100. Graduate programs were not ranked again until 1959, when Hayward Keniston conducted his assessment of them. The list of schools was surprisingly similar to the work done by Hughes in 1925.

Two other well-known graduate school studies were done by Allan Cartter in 1966 and Kenneth D. Roose and Charles J. Anderson in 1970.

Since that time, there have been several other notable studies that assessed graduate education. One major study was conducted in 1982 for the Conference Board of Associated Research Councils. It was far more comprehensive than the earlier efforts—covering thirty-two disciplines at 228 institutions. Then, in 1995, the National Research Council's Committee for the Study of Research-Doctoral Programs assessed forty-one disciplines and 274 institutions using over 7,500 raters. These 1995 rankings included both reputational ratings based on the opinions of faculty and objective data that focused on student–faculty ratios, number of programs, and faculty publications and awards. In 1990 *U.S. News and World Report* began to offer their rankings of graduate and professional programs, focusing on business, law, medicine, and engineering.

In general, the early rankings efforts were not distributed widely. Most of these attempts were viewed only by “academic administrators, federal agencies, state legislators, graduate student applicants, and higher education researchers” (Stuart, p. 16). The audience, however, grew substantially when *U.S. News and World Report* began publishing rankings of undergraduate institutions in 1983. By the late 1990s, *U.S. News and World Report*, *Time* partnering with the *Princeton Review*, *Newsweek* partnering with Kaplan Testing Service, and *Money* magazine were selling an estimated 6.7 million copies of their special rankings issues annually. As Patricia M. McDonough and her associates illustrated in 1998, rankings have become big business. It should be noted that there are all kinds of college rankings besides those that look at academic quality. For instance, *Money* magazine determines the “Best College Buys” and the *Princeton Review* names the top party schools.

In spite of the numerous methods employed over the years, academic rankings have been amazingly stable (see Table 1). Curiously, there is just enough change to give the listings credibility. The number-one school may change from year to year, but, in general, schools near the top of the list decades ago are generally seen near the top of the list in the early twenty-first century. In 1991 Alexander Astin contended that the stability could be explained by “the fact that beliefs about the institutional hierarchy in American higher education affect our per-

ceptions of both graduate and undergraduate programs and are highly resistant to change” (p. 37), and that this “folklore” regarding an institution's quality affects students' college choices as well as the perceptions of institutional raters. Therefore, according to Astin, rankings reflect the myth of quality, rather than the reality of it.

### The Pros and Cons of Rankings

Proponents of rankings contend that the main advantage to rankings is that they provide a way for families to make “sound economic decisions” regarding the education of their children. Rankings serve as a type of consumer report for families wishing to compare colleges and universities. Webster claimed that rankings bring to the attention of some families little-known schools that may be good choices for their children. Also, he found that ranking approaches have become more standardized, because *U.S. News and World Report* publishes its ranking methods.

McDonough and her colleagues offered several additional reasons for the public's interest in these publications. First, ever since the Watergate scandal, the American public has developed a skeptical attitude toward the country's national institutions. Therefore, as college admissions grow more chaotic, the public turns to these seemingly unbiased resources for help in their college searches. Thus, rankings help reduce the risk in a student's college choice. Second, the highly competitive race for places at the university further encourages families to seek objective, comparative data. Families believe the higher the ranking, the better the reputation of a college or university. According to Charles J. Fombrun, the college's “reputation is a cue to consumers of what they can expect; a reputation acts as a guarantee of quality” (McDonough, Antonio, Walpole, and Perez, p. 515). Third, students and families eager to bask in the glow of attending a highly ranked institution rely on these published reports to inform their college-going decisions.

In spite of these attributes, rankings are not without critics. Since the beginning, colleges have cried foul at the publication of rankings. For example, in 1986 Webster reported that the 1911 effort by the U.S. Bureau of Education was withheld by two U.S. presidents because of the outcry against it from college administrators. Today, the complaints are just as vociferous. Steven Sample, the president of the University of Southern California, called the

TABLE 1

**U.S. News and World Report's top three liberal arts colleges for selected years between 1985 and 2002**

1985	1987	1988	1990	2002
1. Williams	Williams	Swarthmore	Amherst	Amherst (1)
2. Swarthmore	Swarthmore	Amherst	Swarthmore	Swarthmore (1)
3. Amherst	Carleton	Williams	Williams	Williams

SOURCE: Based on Webster, David S. 1992. *Change* 24(2):19 for 1985–1990 results and <www.usnews.com> for 2002 results.

rankings “silly” and “bordering on fraud” (Trounson and Gottlieb, p. A12). Theodore Mitchell, president of Occidental College, contended that “the rankings are ‘a distortion of an institution’s character and, at worst, a kind of tyrannical tool to get institutions to chase after a single vision of what good higher education is’” (Trounson and Gottlieb, p. A12). William Massy, director of the Stanford Institute for Higher Education Research, and Robert Zemsky, director of the Institute for Research on Higher Education at the University of Pennsylvania, went so far as to say that rankings encourage “the kind of competition that puts higher education at risk” (Webster 1992, p. 19). The criticisms even come from within the *U.S. News and World Report* organization. Amy Graham, an economist who was responsible for the list for two years in the late 1990s, stated that the methods for data collection are “misleading” and “produce invalid results” (Trounson and Gottlieb, p. A12).

Debra Stuart in 1995 offered a number of other common criticisms of rankings. First, “there is no consensus about how to measure academic quality” (Stuart, p. 18). Therefore, how does one make sense of the various rankings efforts? Additionally, Astin’s concern regarding the stability of rankings suggests that myth and institutional perceptions may have as much to do with the rankings as the methods used to determine them. In fact, the methods for assessing quality reflect a bias toward institutional size, student test scores, and the number of “star” faculty. Astin and others question this definition of quality, because it has nothing to do with the student’s college experience or learning.

Second, Stuart stated that raters are biased depending on their own affiliations and knowledge of institutions. Would the rankings be the same with different raters? Third, she suggested that there is a halo effect. For example, one highly ranked department at a college or university may provide suffi-

cient glow to allow other departments at that institution to be more highly ranked than is warranted. Fourth, the timing of assessments may affect the outcome. If studies are conducted close on each other’s heels, then the results of one may affect the raters’ views for the second. Also, if the studies are not done regularly, then the standing ranking may not reflect changes in the department, good or bad. And finally, the use of different sorts of methodologies makes comparisons between reports impossible.

Another criticism leveled at rankings is that colleges change their own processes and procedures to attempt to better their rankings. They do this because it is believed that high rankings positively affect admissions. Highly ranked schools have seen an increase in the number of student applications, a rise in the average SAT scores of entering students, and less need for financial aid offers to attract students. So, for example, the practice of early acceptance, which commits early applicants—who tend to be high achievers—to attend an institution if accepted, distorts selectivity and yield figures (i.e., the percentage of admitted students who actually accept admission offers).

The effects of rankings, however, are not limited to admissions. College administrators use the data to make decisions regarding resource allocations. Therefore the pressure is on for programs to do well, so departments may manipulate their reporting in a way to improve their placement on the list. For example, administrators at Cornell University removed students who had never graduated from their alumni lists “before computing the fraction of alumni who contributed to the university. This change . . . improved Cornell’s reported alumni giving rate, a factor used by *U.S. News*” to assess quality (Monks and Ehrenberg, p. 44).

Yet, not all adaptations are seen as a negative. Webster in 1992 noted it is a virtue when institutions

improve their facilities in their effort to improve their rankings. For example, the administrators at Texas A&M University acknowledge they use the rankings to spur changes, such as class size, with a goal of being ranked a top-ten university.

Central to much of the criticism is that the current rankings do not look at student learning in their assessment of an institution. As a result, an alternative to the *U.S. News and World Report* rankings has been developed. This National Survey of Student Engagement attempts to measure student learning and satisfaction. It hopes to create “national benchmarks of effective educational practices” (Reisberg, p. A67). Still in its infancy, it is unclear if this survey will usurp the *U.S. News and World Report* rankings or offer valuable supplemental information for prospective students, their families, and researchers.

Nevertheless, “academic quality rankings, despite all their faults, have . . . been useful, from their beginnings, in providing more accurate information about the comparative quality of American colleges, universities, and individual departments and professional fields of study than any other source” (Webster 1986, p. 9). Families have come to rely on these studies to make their college-choice decisions, so rankings are most likely here to stay.

**See also:** COLLEGE SEARCH AND SELECTION; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* SYSTEM.

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## COLLEGE RECRUITMENT PRACTICES

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College recruitment practices are as distinctive as the scope and breath of the more than 3,200 accredited colleges and universities in the United States. With more than 2.5 million students matriculating to a college campus for the first time each year, the role and responsibility of admission and enrollment personnel in higher education has become increasingly critical to the success of the institutions and the experience of the student.

Historical and demographic influences have allowed admission and recruitment practices to evolve and develop over the past 400 years of American higher education. During the first 300 years, admission duties were performed by a variety of college personnel and were primarily an orientation function, absent of any screening or recruitment. College presidents of the eighteenth and nineteenth centuries performed a dual role as recruiter and fundraiser. From the Civil War to World War II, America witnessed an increase in the number and variety of colleges. Enrollment growth ensued and denominational colleges were founded across the continent, while land-grant and state-supported universities brought a college education closer to the people. These actions translated into enrollment growth and recruitment efforts settled into an admissions role of screening and seeking a strong instructional fit for the student and college.

Origins of modern recruitment practices can be found in the mass expansion of higher education since World War II, emerging directly from the Servicemen's Readjustment Act of 1944 and the baby boom that followed. The rise in applications during the 1960s and early 1970s led many colleges to increase enrollments and concurrently expand capacity. The abundance of college enrollees reversed during the 1980s leaving colleges with increased capacity and a declining applicant pool. The prospects of declining enrollments prompted colleges and universities to adopt marketing practices used in business that centered around Phillip Kotler's emphasis on product, price, place, and promotion. College recruiting practices became reliant on market principles for success and matured into providing more information and increased attention to the prospective student.

### Recruitment Theory and Practices

The recruitment funnel, where a high number of inquiries of prospective students from numerous entry points narrows to and moves toward application and ultimately a smaller number of matriculated students, is at the foundation of the college-recruiting theory. This funneling process is aided by recruitment efforts designed to move the prospect from casual interest to enrolling. The process is starting earlier and lasting longer. The inputs of a large number of inquiries result in a less but measurable number of applications, which ultimately yields a smaller number of enrollees. Database management, programmed marketing, and audience segmentation are designed to keep prospects engaged and moving through the funnel. Recruiting activities and market research allow enrollment managers to target prospective students at various stages of interest. Each contact should have a specific action-oriented, measurable task. A goal early in the funnel may be to encourage a visit, while a later goal may be to have an applicant commit to attend. Mail, telephone, electronic media, and personal contact are used to move the student from initial contact to matriculation. Publications are added at strategic times to inform and persuade. Analyzing demographic data, constructing surveys to measure attitude and preferences, use of geodemographic tools, and evaluating the efficacy of recruitment practices have allowed institutions to focus more personal attention on the prospective student.

Contemporary college recruiting practices are centered in the metaphoric recruiting funnel. Acknowledging that no one communication strategy will work with prospective students, college recruitment practices in the early twenty-first century seek to individualize the process. By segmenting the market, enrollment managers target prospects utilizing data that explains how students make college choice decisions. Students have become sophisticated consumers: they comb through massive quantities of direct mail, explore Internet websites, visit colleges, and even hire private counselors.

The most effective recruiting practices and strategies employed by enrollment professionals are visits to high schools in primary markets by a member of the admissions office, interaction on the Internet, hosting campus visits with prospective students, and offering merit-based scholarships. Live presentations by college personnel for prospective students at high schools and on-campus visits at colleges are

practices that are considered strong inducements in choosing a college. The presence of friendliness, accessibility of faculty members, and attitude of administrative officials during the campus visit are highly valued. These are used regularly and are considered very effective strategies.

Secondary and less effective college recruitment practices are visits to secondary or test markets; college fairs and nights; using alumni to recruit; hosting off-campus meetings or social events for high school counselors; multimedia presentations; billboard, print, or broadcast advertising; and school promotional videos.

Use of direct mail has continued to increase as written communication continues to increase. Many colleges use mailing lists that contain information compiled by national testing agencies. Names are purchased that fit criteria selected by the college, such as geographical location and size of the college. Many private four-year colleges send eight or more written communications to prospective students. Analytical techniques and market research tools allow institutions to effectively target direct mail, off-campus visits and receptions, telemarketing, and financial aid awards.

Telephone contact is also used as a practice in student recruitment to augment existing correspondence and as a cost-effective method to track students through the funnel. Telephone recruitment calls made by students, admissions staff, faculty members, and alumni are effective. Institutions are increasingly using commercial vendors for prospect identification.

The use of technology to market institutions and counsel students adds new dimensions to college recruitment practices. The Internet, World Wide Web, and CD-ROMs have played a major role in recruiting students while reducing costs for their institutions. Significant elements of college recruitment practices are moving to the Internet and it is common for students to apply online. The Internet affords a prospective student unlimited and uncontrolled access to formal and informal information about any institution.

### **Nontraditional Enrollees**

Many colleges that experienced growth since the late 1970s have expanded their markets to include adult, international, and transfer students. An institution that has recognized the growing importance of the

transfer student market and has recruited transfer students successfully realizes that two out of five newly matriculated students nationally are transfer students. Publications and recruitment techniques targeted for adult or international students should portray the campus from the nontraditional student vantage point. Effective institutional recruiting activities aimed at attracting international students indicates that academic reputation and costs are the most influential factors in choosing to apply and enroll. Recruitment efforts abroad made by college representatives and the development of personal relationships are effective practices. Recruitment strategies should include simplified application forms and brochures specifically targeted to international students.

### **Ethics**

The National Association of College Admission Counseling (NACAC) Statement of Principles of Good Practice defines ethical and accepted methods of student recruitment; institutional promotional techniques and admissions methods were adapted from the NACAC Code of Ethics and are clearly endorsed throughout higher education. Ethical issues are reviewed and revised annually. Joint statements, sharing the ethical values of the NACAC, have been issued and are recognized by all associations that govern the recruitment process in American higher and secondary education. Ethical standards include accuracy in the articulation of information and admission requirements and financial aid opportunities. Standards insist that admissions personnel are viewed as professionals and that their compensation take the form of a fixed salary rather than derive from any formula based on the number of students recruited.

### **Financial Aid as a Recruiting Tool**

Financial aid has been increasingly used as a recruiting and marketing tool, especially for private institutions forced to compete with public institutions. Merit scholarships and non-endowed institutional funds are increasingly used to discount tuition and to make the college choice affordable. Enrollment managers are interested in net tuition income as well as in the number of students, and the use of leveraging financial aid awards has become important tool to increase enrollments. Although discussions continue over the appropriate mix between need-based and merit-based financial aid, colleges and universi-

ties use institutional funds to augment federal and state grant and loan programs. Private colleges are providing financial aid to a larger share of their students, and list in their view books the price of tuition before financial aid; public tuition continues to increase, not as the result of increased costs but because of changes in state fiscal policy. Institutional financial aid is used to increase enrollment goals and to change readily measurable student body characteristics.

### The Future

Marketing and recruitment are likely to become even more sophisticated. Colleges will depend on a recruitment funnel that is tied to integrated marketing efforts and creates relevance long before the first contact is made. College recruitment practices will be increasingly integrated and coordinated throughout the campus to maximize recruiting initiatives. Traditional recruitment practices, augmented by Internet-based enhancements, will continue. The campus visit will remain a key component in the recruitment process. Mobilizing the total institution toward an integrated marketing enrollment program that fosters ethical, sound, and efficient recruitment practices will effectively serve prospective students and colleges.

*See also:* COLLEGE ADMISSIONS; COLLEGE ADMISSIONS TESTS, COLLEGE FINANCIAL AID; COLLEGE SEARCH AND SELECTION.

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MICHAEL A. GRANDILLO

## COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF

The organizational structures of American colleges and universities vary distinctly, depending on institutional type, culture, and history, yet they also share much in common. While a private liberal arts college may have a large board of trustees, and a public research university nested in a state system no trustees of its own, the vast majority of public and private universities are overseen by an institutional or system-wide governing board. This somewhat paradoxical combination of distinctiveness and uniformity reflects the unique characteristics of individual colleges and universities, and the shared-task environment (including strategic planning, fiscal oversight, curriculum planning, and student affairs) common to American postsecondary institutions. Scholars of higher education view many aspects of private colleges and universities as significantly different than public universities. Yet the reliance on bureaucratic organizational structures and the belief in research, advanced instruction, and service at both types of institutions shape many aspects of public and private university governance structures in a fairly uniform manner.

The organizational structure of colleges and universities is an important guide to institutional activity, but not the only one. Scholars of higher education have developed a variety of multi-dimensional models of organizational behavior that also shed considerable light on college and university structure and process. Multi-dimensional models seek to explain organizational behavior across institutional types, and in various institutional activities. The models vary somewhat in the number of dimensions incorporated, from J. Victor Baldrige's three

dimensions (bureaucratic, collegial, and political) and Lee Bolman and Terrence Deal's four-cornered frame (structural, human resource, political, and symbolic) to Robert Birnbaum's five dimensions (bureaucratic, collegial, political, anarchical, and cybernetic). These models are quite helpful in thinking about organizational structure and process within colleges and universities. The same institution may evidence a bureaucratic, hierarchical decision-making process in its central administration, and a collegial process in its academic senate. It is a combination of organizational structure and process that shapes college and university behavior.

Public and private colleges and universities of all types incorporate key authority structures, including a governing board, a president or chancellor, a cohort of administrative leaders, and an academic senate. In public institutions these core organizational entities collaborate with such external authorities as state and federal political leaders, community organizations, and members of the public, as well as business interests and philanthropic foundations. These external organizations routinely interact with and shape the policies and procedures of the university's internal organizational structures.

The degree of uniformity in private and public college and university organizational structures has been shaped by the nature of demands on the postsecondary system since the mid-twentieth century. Although the key governance structures of colleges and universities were present prior to the turn of the twentieth century, the full scope of the university's multifaceted organizational structure, most scholars agree, was not realized until after the rise of the research university, in the wake of World War II. In 1963 then-president of the University of California system, Clark Kerr, described the postwar American university as a *multiversity*. The term captured the increasingly complex organizational and governance structures required to negotiate its ever-expanding task environment.

### Governing Boards

A university's governing board, also known as the trustees, regents, or board of visitors, possesses fundamental legal authority over the university. The authority of the governing board is vested in it by the state wherein the school resides or, particularly in the case of older, private institutions, by legally binding royal or colonial charters. Both public and private governing boards are generally constituted of

citizen trustees. In the public case those trustees are often political appointees who serve as a fundamental link between the institution and state and national political structures.

In the United States the tradition of lay oversight of colleges and universities can be traced to the founding of Harvard College in 1636. Subsequent private colleges adopted this form of governance, which the U.S. Supreme Court deemed constitutional in its Dartmouth College decision of 1819. Public colleges and universities followed suit, although on the public side the role of governors in trustee appointments and the key role of legislative funding in institutional development has meant that the states play a central role in the governance of the institutions. The federal government has influenced the organization of higher education primarily through legislation—the Morrill Acts, the Higher Education Acts, and the G.I. Bill, for instance—that reinforced decentralized governance and, hence, the authority of institutional governing boards at both public and private institutions. As John Millet noted, "It has long been evident that it is the state governments rather than the federal government that carry the primary authority and responsibility for higher education in the United States" (p. 1).

Governing board members at public institutions typically arrive at the trustee table by one of four paths: direct appointment by the governor; ex-officio appointment; gubernatorial appointment subject to approval of the state legislature; and less frequently, election by popular vote. Public university board members represent the citizens of the state and the terms and conditions of their service are often defined by institutional charter or state constitution. Private boards are generally self-perpetuating, with new trustees chosen by the membership of the standing board. While private colleges and universities benefit considerably from public subsidies and support, private boards are not subject to the same degree of external scrutiny or intervention as are public boards.

The formal responsibilities of university governing boards are significant even as they are few in number. They include preservation of the university charter; institutional performance evaluations; fundraising; liaison with external agencies and political bodies; budget approval; oversight of campus policies and investment strategies; and, perhaps most important, hiring and evaluating the ongoing performance of the university president.

Because of their visibility, symbolic importance, and control over policies with significant political salience, public university boards became subject to increasing challenges from a variety of interests in the last two decades of the twentieth century. These challenges were accompanied by demands for non-partisan board appointments and trustees that are more representative of the broader society, as well as calls for increased scrutiny of potential conflicts of interest. Boards were also challenged by governors and legislators concerned about issues ranging from rising costs to faculty ideology. A response to the heightened pressures on governing boards was a push for improved trustee education programs in several states in the pursuit of more open and effective governance processes. Given its myriad responsibilities and powers, a strong argument can be made that the board is the most powerful governing agent of the modern university.

### The President

The liaison between a postsecondary institution and its governing board is the highest ranking executive officer, a president or chancellor. The president provides overall leadership to the institution and presides over its academic and administrative bureaus. The president generally works closely with a provost, who is responsible for academic affairs, and a chief financial officer, who oversees the institution's fiduciary operations. The president serves as the lead fundraiser, and as a key representative of the university and its academic community to external agencies and actors. Presidential duties include fostering a positive public image of the institution as a site of higher learning, maintaining a close relationship with the institutional governing board to further the president's agenda, and forging points of common cause and agreement with the entire university community and its constituents.

Since World War II the job of university president has become considerably more complex, and in many ways more constrained. Presidential authority has been eroded as boards and external actors have gained more legitimate roles in university governance. Presidential satisfaction has declined, and the average presidential tenure is shorter than before World War II.

No responsibility consumes the modern-day president's time and energy more than his or her role as the institution's principal fundraiser, a task made especially difficult because it requires extensive

time away from the institution. While presidential fundraising has been a function of private universities for centuries, the emergence of significant public university fundraising in the 1980s and 1990s is a major development. Fueled by decreasing state and federal support in recent years, public universities have been forced to take on a more significant share of their own funding, with development playing a major role in this process.

### Faculty

The formal governing body of the faculty at the institutional level is the academic senate, a body generally comprised of tenured and tenure-track faculty from the various disciplines and professional schools. The faculty senate and its attendant committees provide elected faculty liaisons to the university board and president. A primary function of the senate is to represent the voice of the faculty in matters of university governance.

Each school or college within a university is under the direction of a dean. A chairperson or department head supervises individual departments of instruction. Faculty members are ranked, in descending order, as professor, associate professor, assistant professor, and instructor. Faculty of various ranks may or may not be tenured, depending on the institution. Faculty members can be dismissed from their posts unless and until they have been granted tenure, a term denoting a measure of academic job security that is earned through a combination of demonstrated teaching, research, and service contributions. The faculty generally has significant influence over the hiring of new faculty members, tenure and promotion procedures, the university curriculum and graduation requirements, and admissions criteria.

While the role of the faculty in governance was at one time largely advisory, over time the faculty has become increasingly engaged in policy formation. In many cases the faculty possesses significant authority over academic affairs. Faculty representatives are often found on governing boards, in formal or informal (non-voting) positions. The formal authority of the faculty may be codified in institutional charters or in the standing rules of institutional governing boards.

A number of other factors and informal agreements shape the degree to which faculty are involved in institutional affairs. Many colleges and universi-

ties have a commitment to a process of shared governance that incorporates the faculty in various aspects of institutional decision-making. A collegial relationship between the faculty senate and the college or university president is a key component of shared governance, as is the relationship between the faculty senate and the institutional governing board. Faculty authority is also shaped by the strength and reputation of the institution's academic departments and departmental leadership, as well as the faculty's symbolic importance as teachers and producers of knowledge, and the legitimacy provided by individual faculty member's professional expertise.

National organizations also contribute to the legitimacy and organizational standing of the American professorate. Among these, the most prominent is the American Association of University Professors (AAUP). Established in 1915 to advance the collective interests, ideals, and standards of the fledgling university professorate, the AAUP has since that time become best known for its role in the defense of academic freedom and tenure. The AAUP's clearest articulation of this role can be found in its declaration, *Statement of Principles on Academic Freedom and Tenure* (1995). Over time the AAUP has developed initiatives on other aspects of faculty life, including shared university governance. In the last two decades of the twentieth century research on faculty turned attention to the rapid growth in the percentage of non-tenured and non-tenure track faculty in colleges and universities, a shift with significant implications for the organizational structure and governance of those institutions.

### Administration and Staff

Internal university administration is composed of two interrelated administrative cohorts: one is responsible for the oversight and administration of academic affairs; the other is charged with institutional administration. The academic and institutional administrations are often in conflict with one another. The growth of the institutional administrative cohort after World War II has led to what some researchers perceive as disproportionate influence on the part of the institutional administration. The increasing growth and autonomy of the institutional administrative cohort also challenges the traditional perception of the overall mission of the university's administration as one of academic support and facilitation. As Amitai Etzioni (1964) has noted, there is an essential tension in organizations such as colleges

and universities that are driven by professional expertise but led by administrators. This has produced demands for a cohort of administrative leaders who can bring professional education and credentials to institutional managerial practice.

Within the academic administration, the president presides over a hierarchy that generally consists of a number of senior officers, including a university provost, and the deans of individual colleges and professional programs. Academic administrators are traditionally drawn from the faculty ranks, where departmental leadership positions serve as preparation for university-wide academic leadership roles.

The managerial cohort of the institutional administration is led by a chief financial officer and various senior executives. The chief financial officer provides leadership and direction to a host of administrative functions that generally includes student services, institutional support, maintenance and operation of the physical plant, and auxiliary enterprises. These individual units in turn encompass smaller departments responsible for more specialized services. The latter part of the twentieth century witnessed increased demands for greater efficiency, productivity, and entrepreneurial management at colleges and universities. Efficiency initiatives in particular, including outsourcing of institutional functions and the hiring of adjunct faculty, engendered significant internal conflict between the managerial and academic administrations.

### Students

Historically students have not had a significant role in the organizational structure or governance of colleges and universities. During most of the nineteenth century, college administrations followed a practice of *in loco parentis*, an educational philosophy that led university administrators and faculty members to oversee the academic advancement and personal conduct of their students very closely. Over time a gradual loosening of the institutional academic and social oversight occurred, a result of the university's incorporation of the German university model that emphasized greater student and faculty freedom. The heightened social and intellectual autonomy available to undergraduates encouraged students to seek greater involvement in university governance and administrative affairs.

Student interest in university organization and governance increased significantly in the 1960s. In

the aftermath of student unrest and demands for increased student involvement in campus affairs, a degree of student participation on university boards, search committees, and faculty senates has become commonplace. Many colleges and universities include a student representative in either an advisory or voting position on the board of trustees. In addition, students often have their own network of parallel undergraduate and graduate governance organizations headed by a student body president and elected representatives that have contact with university officials, such as the president and the board.

### Future Prospects

As the American university moves into the twenty-first century, a number of factors, including the increased complexity of institutional functions, changing student demographics, demands for entrepreneurial behavior, technological innovations, and increases in external interest group interventions will significantly challenge existing organizational structures and processes. The rapid growth in demand for continuing education and the provision of distance programs by colleges and universities in particular has challenged traditional notions of the content and delivery of postsecondary education. A number of key political shifts, including a growing retreat from public funding of colleges and universities, demands for privatization of college and university services, and the use of the university as an instrument in broader national political struggles, will further complicate organizational arrangements. These political shifts entail considerably more institutional outreach to legislatures, governors, and key interest groups at the state and national levels, as well as additional staff in governmental and public relations. Finally, the rise of what Richard T. Ingram terms “activist trusteeship” and increasingly interventionist stances taken by public and private institutional governing boards may require increased collective action by internal cohorts. In order to preserve institutional autonomy and shared governance in a time of increasing political conflict, effort will also need to be directed to creating more effective organizational bridges between colleges and university leaders and institutional governing boards.

*See also:* ACADEMIC DEAN, THE; BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; CHIEF ACADEMIC AFFAIRS OFFICERS, COLLEGE AND UNIVERSITY; DE-

PARTMENT CHAIRPERSON, THE; FACULTY SENATES, COLLEGE AND UNIVERSITY; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; INSTITUTIONAL RESEARCH IN HIGHER EDUCATION; PRESIDENCY, COLLEGE AND UNIVERSITY.

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## **COLLEGES AND UNIVERSITIES WITH RELIGIOUS AFFILIATIONS**

The landscape of higher education in North America first began to take shape at the start of the colonial period as religious communities and individual religious leaders realized the need to bring Western education to what was for them a newly discovered land. The motivation for the education varied. Some communities began schools as a means for training religious leaders. The first college, founded in Massachusetts Bay Colony, was Harvard. Evolving from a Puritan tradition now incorporated into the United Church of Christ, Harvard published a brochure in 1643, explaining the college's purpose as "to advance learning and perpetuate it to posterity; dreading to leave an illiterate ministry to the churches."

Religiously affiliated schools and colleges expressed their missions in different manners as they developed in the colonies and across the frontier; all pursued their work with energetic mission. For some, the educational mission was to assure that "children of the faith" had the opportunity to grow intellectually in remote locations across the frontier. For others, the mission was to create educational opportunity for all persons in order that they might develop their God-given intellect. Often the two approaches were combined, as noted in the challenge Methodist Episcopal Bishop Francis Asbury presented to every Methodist congregation in Amer-

ica in 1791: "give the key of knowledge in a general way to your children, and those of the poor in the vicinity of your small towns and villages" (Michael et al., p. 13).

Religiously affiliated colleges often combined the mission of education with the desire to train individuals in religious practice and to evangelize others. This mission is reflected in words by Disciples of Christ educator Alexander Campbell (1788–1866), "Colleges and churches go hand in hand in the progress of Christian civilization" (p. 61).

Religiously affiliated educational institutions often developed in response to social changes. For example, the world's first college chartered to grant degrees to women was Wesleyan College in Macon, Georgia (1836). At the conclusion of the Civil War, the Freedman's Aid Society responded to absence of educational opportunity for newly freed slaves by creating institutes and colleges throughout the South. Many of these institutions continue their critical role in education in the early twenty-first century. Often church-related colleges began as academies or seminaries and then grew to college or university status. Many had short lives, closing as the result of social, demographic, political, and—quite often—financial reasons. Some colleges severed their relationship with the religious communities and continue in the twenty-first century as quality independent institutions. Among these are Vanderbilt University, Auburn University, University of Southern California, Oberlin College, and Princeton University. In 1881, 80 percent of the colleges in the United States were church related and private. In 2001, 20 percent of the colleges—approximately 980 institutions—had connection to a religious tradition. The "Digest of Educational Statistics, 2000," indicates that sixty-six religious groups in the United States currently sponsor colleges or universities. These institutions enroll more than 1.5 million students.

### **Characteristics**

Religiously affiliated colleges and universities defy a monolithic description. They are as diverse as their religious traditions and the higher education scene in the United States. Although most are liberal arts colleges with enrollments between 800 and 2,000 students, church-related higher education also includes large research universities (Boston University, Notre Dame, for example), medical colleges, professional schools, two-year colleges, theological seminaries, and Bible colleges. Many religiously affiliated

colleges regularly are highly ranked in various “best colleges” ratings in the United States.

Among the nearly 1,000 colleges and universities with religious affiliation are 65 institutions affiliated with the Jewish faith. Although most of these institutions are rabbinic and talmudic colleges and institutes, some are major well-known universities and colleges in the United States. Yeshiva University, founded in 1886 in New York City, is recognized as the oldest and most comprehensive educational institution under Jewish auspices in America. Yeshiva and Brandeis University, founded in 1948, regularly are listed among the top universities in the United States. Jewish educational institutions in the United States reflect a centuries-long commitment to learning. Like most religiously affiliated colleges and universities, Jewish colleges and universities offer degrees in several fields of study. Many Jewish colleges and universities have joined in partnership through the Association of Colleges of Jewish Studies, an organization committed to serving the educational and religious needs of the North American Jewish community.

While related to and supported by specific religious traditions, most colleges welcome students from a variety of faith traditions—or no faith tradition. The student bodies include representation from ethnic and international communities. The institutions’ student-centered focus generally assures most students will graduate in four years.

The typical religiously affiliated college is residential, although some colleges have developed satellite learning and evening programs to meet the needs of nontraditional students. The residential approach is characterized by a commitment to a student-centered learning and living community where curricular and cocurricular programs combine to emphasize a holistic approach to human development and understanding. The colleges invest significant financial and personnel resources to foster personal worth and dignity within a diverse and just community, leading to an emphasis on lifelong learning, social responsibility, and service. Community service is an integral part of the colleges’ philosophies.

The curricular focus on the liberal arts and a solid commitment to general education challenges students to integrate learning from a variety of disciplines. Most colleges require students to enroll in a prescribed number of hours of academic study in re-

ligion, philosophy, or ethics. For other institutions, the study of religion is optional. Cocurricular religious activities are present on all campuses. These include worship, fellowship, study of the sacred texts of the religious tradition, service, and religious support. At one time nearly all colleges related to the Christian tradition required weekly or daily attendance at chapel; such a requirement now is the rare exception rather than the rule. Campus religious programming is coordinated by a chaplain, usually a clergy or lay minister in the affiliated religious tradition. As a staff member of the institution, the chaplain participates in various administrative and programmatic aspects of the college’s or university’s life, thereby helping to infuse the concerns and perspective of the affiliated religious community into the greater life of the college. Although the institution and the chaplain may be from a particular religious tradition, cocurricular religious programs at most religiously affiliated institutions support programming reflecting the diverse religious needs of the student population. Many colleges arrange for representatives of other faith traditions to offer programs on campus.

### Relationships

The nature and expression of the educational institution’s relationship with religious bodies vary greatly. A few institutions are controlled by the denomination; others share only a nominal relationship. Some traditions have provisions for colleges to acknowledge an “historical” relationship, acknowledging the college’s founding by a religious tradition while declaring there is no current, direct relationship with the religious tradition. Most religiously affiliated colleges regularly and actively engage in shaping a dynamic relationship reflecting on changing needs in society, the church, and education.

At least two religious traditions, United Methodist and Seventh Day Adventist, conduct regular reviews of their related institutions to assess their vitality and their expression of church relatedness. The University Senate, the United Methodist review agency, was founded in 1892, and is one of the oldest review agencies in the United States. The Association of Advanced Rabbinical and Talmudic Schools, although not part of a denominational structure, reviews and accredits several schools within the Jewish tradition.

The quality of the relationship between the religious community and the college is in constant rede-

finition. James Tunstead Burtchaell claims colleges and universities are disengaging from their religious foundations, becoming more secular in their approach to education. George M. Marsden characterizes colleges and universities as moving from a perspective of “Protestant establishment” to one of “established nonbelief,” a move toward embracing secularization and diminishing religious tradition. Not all individuals agree fully with those perspectives. Merrimon Cuninggim describes relationships between Christian denominations and their colleges as being in a time when both church officials and college leaders are reassessing the nature of the relationship in light of trends in churches, in colleges, and in society. Conversations among church and academic leaders can lead to renewed understanding of what it means to be religiously affiliated. Cuninggim distinguishes three phases of the relationship between the college and the church traditions that founded them: (1) church as senior partner, college as junior partner, recognizing the college’s need for the church’s direct support; (2) a time of equality, when neither college nor church groups has an upper hand of the other in normal situations; and, (3) the college as senior partner, more in control of its own destiny. Most institutions fall in this final category and are no longer dependent on the church for financial resources and leadership.

Critical to discussions regarding the church–college relationship is understanding common and distinctive missions. Although each share a common genesis regarding their sense of mission and service, the primary mission of the church is addressing spiritual and communal needs and responsibilities; within that same call to service is the college’s primary responsibility to provide quality education reflective of the sponsoring religious community’s values. Churches and their colleges must respect and appreciate the distinctive mission of each partner. Understanding and expressing that relationship is an issue of constant concern.

Since the 1970s, Southern Baptists have engaged with their colleges, universities, and seminaries in often contentious discussions regarding relationship and control. Several institutions have opted to withdraw from formal relationships with the Southern Baptists in order to reduce control of the institutions. Catholic colleges and universities are engaged in discussion with the church’s bishops regarding Pope John Paul II’s *Ex Corde Ecclesiae*, a document outlining the church’s position on the relationship

between the church and the teaching activity of its universities and colleges. The Presbyterian, United Methodist, United Church of Christ, and Nazarene churches are engaged in conversations with church judicatories and college and university leaders to clarify and affirm statements reflecting a partnership appropriate to the twenty-first century.

Since 1996 the Lilly Foundation-supported Rhodes Consultation on the Future of the Church-Related College has involved ninety church-related institutions in ongoing discussion regarding the church’s higher education mission in the postmodern world. Faculty, chaplains, and administrators are engaged in critical reflection regarding how church-relatedness is expressed in the life of colleges and universities.

### Leadership and Control

Nearly all religiously affiliated colleges and universities are legally independent institutions. Sponsoring bodies usually have representatives on the institution’s board of trustees. This tradition assures there is representation from the religious body and the perspective of the religious tradition is heard. The number of seats specified for faith community representatives varies. In some situations, all trustees must be members of the sponsoring tradition; a few institutions have no specified spaces. In most instances, the percentage of representatives ranges from 2 to 60 percent. Often the regional judicatory leader and the local pastor from the area are *ex officio* representatives on trustee boards. In most cases trustees are elected by the college’s board of trustees, however, the by-laws of some colleges require trustees to be confirmed by the sponsoring denominational body.

Although many presidents of the 980 religiously affiliated colleges and universities are members of the sponsoring religious tradition, such membership is not required at all colleges. Such latitude may seem contrary to religiously affiliated higher education. Colleges seek the best presidential candidate, based on a variety of capabilities. The vitality of a college’s religious affiliation, however, depends significantly on the support and encouragement that its “faith tradition” receives from the college president and other senior leaders at the institution.

Some traditions require a higher degree of staff relationship with the sponsoring religious body or association. The Council for Christian Colleges and

Universities requires its ninety-five member colleges and universities to fulfill specific criteria. Among them is the requirement for a publicly stated mission based upon the centrality of Christ as well as a hiring policy requiring all faculty and administrators have a personal faith in Jesus Christ. Similarly, the Accrediting Association of Bible Colleges requires each member college to annually subscribe to a statement of faith.

Religiously affiliated colleges and universities also receive expressions of partnerships and support from their sponsoring tradition. Financial support for the institutions usually represents less than 1 percent of their budgets; this is a radical decrease from the 1980s. Several faith traditions also manage scholarship and loan programs for students of the tradition to attend an affiliated college. Occasionally funds are designated to support the college's outreach to previously underserved ethnic and economic populations. This assistance supports the colleges and their commitment to educational access.

Many religious groups provide structural and programmatic support for the colleges, offering consultative services, sponsoring workshops, and facilitating programmatic initiatives. Among the churches supporting their colleges in this manner are the Mennonites, Lutherans, Presbyterians, Nazarenes, United Church of Christ, Southern Baptists, Disciples, Catholics, and United Methodists. Associations of presidents in various religious traditions provide a network of support for these leaders.

### Issues for the Future

Religiously affiliated colleges continue to have a significant role in the education life of the United States and the world. Their commitment to a just and value-centered living and learning community, with a commitment to the liberal arts and civic leadership, is a valuable alternative to other approaches to education. The clarification of the relationship between the college and their religious tradition will continue to be an issue. Some colleges will opt out of a relationship with the religious bodies. Many others will understand the relationship as a central part of their identity, giving the college a unique role as the provider of value-centered education, personal integrity, and social responsibility.

Other religiously affiliated institutions may disappear from the scene for another reason: financial resources. The smaller size of these institutions, the

dwindling financial support from their denominations, and the absence of state subsidies afforded state institutions, places some of the colleges in precarious financial situations. The challenge will be for the colleges and the sponsoring religious groups to join together to secure the resources necessary to continue their significant educational role, reflected by the invitation of Saint Augustine, *Intellege ut credas; crede ut intellegas* (understand so that you may believe; believe so that you may understand), an invitation to unite the endeavor of intelligence and faith.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentries on* HISTORICAL DEVELOPMENT OF, SYSTEM.

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## COLLEGE SEARCH AND SELECTION

The decision to attend a college or university and admission to an institution of higher education has im-

portant outcomes for individuals and for society. Most of the attention given to these decisions by researchers and by public policymakers has focused on how high school graduates (often referred to as traditional-age students) make their decisions. Attention has also been given to how the institutions make their decisions about the applicants they admit. There are many good reasons for the attention that has been given to these decision-making processes. It is clear that individuals, society, and colleges and universities benefit when more students choose to continue their formal education after high school. Economists have demonstrated that individuals who graduate from two-year and four-year colleges and universities typically have better jobs and incomes. College graduates are healthier and their quality of life is usually better. Society also benefits in a number of ways. Citizens with college degrees pay more taxes, vote more often, and contribute more to the civic life of a democratic society. Colleges and universities also benefit from students who enroll, namely, the contributions that students make to the intellectual and social life of each campus and the tuition dollars students and their parents pay to both public and private institutions. Public colleges and universities also benefit from the public funds that states provide to educate their citizens.

Beginning in the 1970s and continuing into the 1990s, there was a precipitous decline in the number of high school graduates. As a result, colleges and universities became more interested in understanding the factors that influence college choice. During the same time period, public policymakers focused more of their attention on encouraging lower-income and moderate-income high school graduates to pursue additional education after high school. These developments have stimulated a significant increase in the amount of research conducted on the college search and selection process.

### **Defining the College Selection Process**

Since the 1980s the college selection process has become known as the student college choice, or the college choice process. The college choice process is complex and evolves over several years. During this longitudinal process individuals develop aspirations to attend a two-year or four-year college or university. After developing post-high school educational plans, individuals begin to gather information about the kinds of colleges or universities in which they might be interested, and finally they decide which institution to attend.

The college selection process for traditional-age students is often described as a three-stage process. The first stage is predisposition, which refers to the development of formal educational plans after high school. The second step is the search stage: the process of gathering information about colleges and universities as well as developing a list of colleges or universities to seriously consider. The final stage is called choice and refers to the final decision regarding which institution to attend.

Several researchers, such as Don Hossler and colleagues (1999), have devoted considerable attention to the college choice process. A number of factors and experiences can influence the predisposition stage of college choice. Most high school students have formulated their plans to continue their formal education after high school by the eighth or ninth grade. The most important factor that influences the decisions of students is extent to which parents consistently encourage their children to continue their formal education after high school. In addition, for children of parents who have attended college there is an increased likelihood of college or university attendance after high school graduation. High school students who earn better grades and who have friends who are planning to attend a college or university are also more likely to aspire to continue their formal education after they graduate. Finally, community norms and values also influence the development of postsecondary educational aspirations. Some communities value education more than others and these values are transmitted in subtle and complex ways to youth.

The search stage involves two simultaneous processes. One of these processes involves students learning more about the characteristics of different types of colleges and universities. The other part of this phase involves learning more about which specific institutions to seriously consider attending. Most students who are college bound enter the search stage during their junior year in high school. Some students start earlier and some wait until their senior year. This stage of the college decision-making process is complex. Not surprisingly, the students who spend more time investigating college options are more certain and confident about their deliberations during the search stage. Students from more affluent families and who earn better grades spend more time searching for college alternatives. It is also true, however, that students who earn better grades and who have parents who attended college

are less certain about the kind of college or university they will eventually attend—more choices can create more uncertainty.

Most traditional-age students complete their choice stage during their senior year in high school. Typically seniors make their matriculation decisions in the spring or early summer. Making the final decision tends to bring a good deal more realism into the decision-making process. Students frequently drop more expensive, more distant, or more selective schools from their list. During the choice stage, peers and teachers, rather than parents, exert greater influence on the decisions of students. High school students who have consistently planned to attend college over long periods of time are more likely to follow through on their plans. Increased parental education, greater family income, and higher student grades increase the probabilities that high school graduates will attend colleges and universities that are more expensive, selective, and farther from home. Patricia McDonough's work on college choice also reveals that the norms and values of individual high schools influence the college destination of high school graduates. The attitudes and values of the faculty and other students within individual high schools can make a difference in determining the types of colleges and universities students are encouraged to consider. High school teachers and counselors can even help to channel students to specific colleges and universities. Informal and formal communication networks consisting of peers, teachers, counselors, and members of the local community influence which institutions are deemed to be good choices for graduates of individual high schools.

In addition, the marketing tactics of colleges and universities also have an influence on both the search and the choice stages. Colleges and universities that are more timely and personalized in all of their interactions with prospective students are more likely to exert a positive influence upon enrollment decisions.

### **Influencing College Search**

In the last quarter of the twentieth century, public policymakers and college administrators have influenced the college choice process. Many public policymakers believe that the economic and political health and vitality of nations will be influenced by the number of its citizens who are well educated. The increasingly technological nature of many countries

rests upon a foundation of well-educated citizens. In addition, public policymakers often measure the health of society by the extent to which all citizens, regardless of family background or ethnicity, have an equal opportunity to earn a college degree.

Irrespective of family background, parents can play an important role in the development of their children's plans for additional formal education after high school by providing consistent encouragement to their children over many years. Indeed, parental encouragement is one of the best predictors of college attendance. Parents exert another kind of influence on their children: More affluent parents view the college destinations of their children as an indicator of family status. For an increasing number of upper-middle-class and upper-class families, getting into a prestigious college has become an important outcome of the college choice process.

High schools can also play an important role in college choice. The kind of encouragement and college counseling provided in high schools has an impact upon student's decisions. High school teachers and counselors, as well as local community norms associated with issues like the value of higher education or the extent to which high school students are encouraged to leave the local area to attend a residential college or university can channel high school students toward or away from institutions of higher education as well as toward specific types of two-year and four-year colleges and universities.

State and federal governments can also play an important role in the college choice process. The amount of state revenue that is used to create and fund public colleges and universities influences college attendance rates in states. Generally, states with a higher concentration of colleges and universities have higher college attendance rates. In addition, lower tuition at public two-year and four-year institutions produces higher college attendance rates. The amount of state and federal financial aid programs also exerts an influence on college choice. Proportionately fewer state residents attend colleges and universities in states with smaller state financial aid programs.

It is also worth noting that the federal government, as well as several states and many local community groups, plays an increasingly important role in the college decision-making process. Federal and some state governments, in addition to local community foundations, have started programs to pro-

vide academic and personal support to encourage lower-income and moderate-income students to earn two-year and four-year college degrees. Programs ranging from the federally funded Gear Up program to the Twenty-First Century Scholar program in the state of Indiana to locally funded programs modeled after the Eugene Lang “I Have a Dream” program provide tutoring, social support, and financial aid to low-income students who focus upon academic goals, are admitted to one or more institutions of higher education, and enroll. These initiatives are attempting to expand educational opportunities for low-income youth.

The marketing, financial aid, and admissions policies of colleges and universities also influence the college choice process. Many four-year colleges and universities, both public and private, aggressively recruit students. They spend millions of dollars on publications, e-mail, CD-ROMs, and websites to attract and enroll students. Many campuses use financial aid, both need-based and merit-based, as tools to induce students to enroll. There is growing evidence that these tactics do influence which colleges and universities students consider and their final choice.

In 1999 Hossler, Jack Schmit, and Nick Vesper summarized the results of a nine-year longitudinal study of the college choice process and offered the following recommendations to families, educators, college enrollment professionals, and educational policymakers.

1. Parents should provide consistent encouragement to their children to continue their education after high school.
2. Parents should regularly ask questions about their children’s plans, take them to visit campuses, and save for college.
3. Teachers and counselors should link college planning with curricular choices students make as early as eighth or ninth grade.
4. Teachers and counselors should plan group and/or individual college exploration and advising sessions for high school juniors.
5. Teachers and counselors should plan financial aid information sessions for students and parents.
6. Teachers and counselors should be well informed about postsecondary educational options so that they can offer good advice to their students.

7. Educational policymakers should encourage academic support programs and fund early college awareness programs.
8. Policymakers should try to constrain college costs.
9. Admissions professionals should provide information to prospective students at the times they are ready to receive the information—not when their institutions are ready to send it.
10. Most students are not ready for detailed information about postsecondary education until their junior year in high school.
11. College choice is a complex, longitudinal process: Parents, peers, teachers, counselors, and admissions recruitment activities influence college choice. Also, the amount of financial aid students are offered can influence their enrollment decisions.

### Selecting Students

There are a wide variety of criteria used to decide who will be admitted to a college or university. At highly selective institutions only a small percentage of all applicants who apply are admitted. In highly selective public institutions the admissions criteria are usually very clear because freedom of information laws require them to disclose their admissions criteria. The selection criteria at highly selective private institutions are often less well known to students and their parents. At universities that are highly selective, admissions decisions are strongly influenced either by the academic performance of students at the secondary level and/or scores on either the SAT or the ACT Assessment exam. In some instances a composite score that combines these two academic indicators is used. More selective institutions require higher grades and/or test scores. At the other end of the continuum are institutions such as community colleges that have virtually open admissions. Students who are admitted may not even have to be high school graduates to enroll. Institutions that fall between these highly selective institutions and open admissions institutions call for an array of admissions selection criteria. Performance at the secondary level and/or standardized test scores are used, but students would not have to have been outstanding or even necessarily strong students to be admitted to some four-year institutions. It is important to note that at many colleges and universities

additional nonacademic factors are used as selection criteria. These additional criteria might include such factors as special talents (athletics, music, and leadership abilities) and factors like socioeconomic status or ethnicity.

### **Important Issues Related to College Search and Selection**

Since the 1980s several important public policy issues have emerged that are related to college search and selection. These issues include affirmative action, the tension between excellence and equity, merit-based and need-based financial aid, and the impact of prestige rankings on college choice. The most contentious are related to equality of opportunity. A continual strand of debate has focused upon the role of higher education in promoting equality. Some policymakers and scholars have argued that higher education should primarily be concerned with merit and excellence. Others have articulated a strong role for equity and access for all citizens. The debates in this arena often focus on admissions selectivity, affirmative action, and the appropriate role of standardized tests such as the ACT and SAT. Many institutions of higher education, as well as policymakers, educators, and families infer the quality of a college or university by the average of the standardized test scores of the enrolled undergraduate student body. Some ethnic minorities and many low-income students do not score as well on college admission standardized tests. For more selective colleges and universities that rely heavily on standardized tests to make admissions decisions, this means that fewer low-income and ethnic minority students will be admitted. This in turn leads to concerns about equal opportunity and access for students of all backgrounds. These issues are of special importance at public colleges and universities, where public funds are used to provide higher education for all citizens of the state.

In response, many institutions have developed affirmative action policies. These policies use locally developed standardized formulas that might include factors such as parental income, graduation from a secondary school with high concentrations of poverty (or low college attendance rates), or other more subjective criteria to make sure that all applicants have a more equal possibility of being admitted. In many states, however, legal challenges that dispute the legality of affirmative action policies have been mounted in state and federal courts. In *Hopwood v.*

*State of Texas* (1996), the court decreed affirmative action admissions policies to be unconstitutional. In two legal opinions involving the University of Michigan, one judge ruled the affirmative action admissions policies used at the undergraduate level to be legal (*Gratz and Hamacher v. Bollinger et al.*, 2001) and another judge ruled the affirmative action admissions policies used at the law school to be illegal (*Grutter v. Bollinger et al.*, 2001). Thus far, the outcome of these legal battles over affirmative action is mixed and contradictory. A final legal resolution for affirmative action admissions policies is unlikely in the near future.

Since the early 1990s there has been a growing public focus on the status and quality of different colleges and universities. Publications such as *U.S. News and World Report's America's Best Colleges* have ranked the quality of colleges and universities in the United States. This focus may result in more social and economic stratification among colleges and among the students who enroll in them. Wealthy and well-educated parents are increasingly using rankings publications as reliable indicators of institutional quality and prestige. These parents and their children believe that the colleges or universities that the children attend will determine their future prospects for good paying jobs in high-status occupations. Although research on college outcomes does not support these beliefs, societal pressures continue to reinforce the belief among many prospective college students that institutional selectivity, prestige, and rankings will exert a pervasive impact on the jobs they can get and their lifetime income. In this context, McDonough and colleagues have noted that the search and choice stages of college choice involve a series of high-stakes decisions. Parental pressures from some wealthy parents accentuate these concerns.

Concerns about student enrollment and institutional prestige have also had an impact upon colleges and universities. In the 1970s and 1980s the number of traditional-age students declined. As a result some colleges had to compete aggressively to attract enough students to survive this downturn in the number of traditional high school graduates. One of the methods employed to successfully compete was to offer campus-based financial aid to induce students to enroll. Later, more campuses started to use financial aid offers to compete for top students in order to enhance their prestige. Not surprisingly, many prospective students have demonstrated that

they are responsive to financial aid offers. If some students are offered enough financial aid they will choose one college over another. Such financial aid competition has altered the college choice process. Many traditional-age students, and their parents, have become accustomed to the idea that they should receive financial aid, even if their families are wealthy and can afford to pay the full costs of going to college. There is a growing sense on the part of all parents that some sort of financial aid is an entitlement. This places ever greater pressure on colleges and universities to offer merit-based financial aid to prospective students.

As colleges and universities have invested more and more money in merit-based financial aid, the amount of need-based financial aid available to low-income students has not kept up with rising costs of college attendance. As a result of these trends, financial aid trends have also become part of the debate about access, equity, and excellence. Some educators and public policymakers assert that students who earn good grades should be rewarded with scholarships. Others point out that more students from more affluent families are more likely to earn good grades and as a result get more scholarships, while lower-income students who lack many societal and educational advantages receive fewer scholarships. Critics of merit aid trends argue that these developments only accentuate inequities existing in American society.

*See also:* COLLEGE ADMISSIONS; COLLEGE ADMISSIONS TESTS; COLLEGE FINANCIAL AID; COLLEGE RECRUITMENT PRACTICES.

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DON HOSSLER

## COLLEGE SEMINARS FOR FIRST-YEAR STUDENTS

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The successful transition from secondary school to the collegiate environment for students has been the topic of much research, many articles and books, international conferences, and a plethora of newspaper articles at the beginning of each new academic year. First-year seminars have become a common approach adopted by higher education institutions in their efforts to ease the transition to college for new students, and to systematically address unacceptable rates of student attrition.

The popularity of first-year seminars as a programmatic and curricular approach is grounded in the fact that a credit-bearing course offers a traditional and appropriate structure through which orientation efforts extend beyond the first week of

classes. They also offer a way for student development and retention theories to be put into practice, and they provide a logical structure for encouraging (and intrusively demanding) active student involvement in learning and in the life and activities of the institution; for examining and discussing student/institutional fit; and for facilitating social and academic integration. First-year seminars are thus designed to meet both institutional and student needs.

Successful first-year seminars have been defined as those with long life and strong, broad-based campus support. They are likely to carry academic credit, be centered in the first-year curriculum, involve both faculty and student affairs professionals in program design and instruction. Instructor training and development is an integral part of the program, and instructors are paid, or otherwise rewarded, for teaching the seminar. In addition, upper-level students are involved in course delivery and conduct program assessment and disseminate the results to the campus community.

### Types of First-Year Seminars

Most first-year seminars fall into one of five categories: extended orientation seminars, academic seminars with generally uniform content across sections, academic seminars on various topics across sections, professional or discipline-linked seminars, or basic study skills seminars. In addition, there are other types that do not fit neatly into any of these established categories, often combining elements from these five.

Regardless of type, first-year seminars are courses that, at their core, focus on the individual needs of new students. A seminar, by definition, is a small discussion-based course in which students and their instructors exchange ideas and information. While there are many variations among first-year seminars, they all aim to assist students in their academic and social development and in their transition to college. In most cases, there is a strong emphasis on creating community within the classroom.

### Course Objectives and Content

More than half of all institutions with first-year seminars list the fostering of academic skills and a commitment to easing the transition to college as objectives of the seminars. More specific course goals include orienting students to campus resources and organizations; fostering personal development in students; developing critical thinking and writing

skills; introducing general education requirements and/or specific disciplines; encouraging career planning; developing a sense of community on campus; increasing student interactions with faculty and staff; and developing support networks and friendships among classmates.

Course topics include study skills and time management, both of which are central to fostering good academic habits. Personal development and self-concept are also common course topics, as are career exploration, campus resources, transition to college, diversity issues, academic advising and planning, and wellness issues.

### **Pedagogy and Staffing**

Instruction in first-year seminars differs from that of most first-year courses. Unlike many survey courses in traditional disciplines, most first-year seminars are taught in small classes of eighteen to twenty-five students per section. Seminar content also differs from most other freshman-level courses in that there is no set universal content. Because most first-year seminars are institution-specific, content will vary from campus to campus. Content is also dynamic in that it changes and evolves to meet the changing needs of both the students and the institution. Instruction in first-year seminars requires instructors who are interested in intense student content, and who both understand and embrace the unique goals, content, and processes inherent in first-year seminars.

Staffing for first-year seminar instruction varies from campus to campus. Very few seminar programs have a full-time cadre of faculty. More typically, instructors of first-year seminars are drawn from across the campus and may include faculty, administrative and student affairs staff, and undergraduate or graduate peer instructors. Frequently, a team approach is used, involving a pair, or small group, of individuals teaching a single section of the seminar.

Due to the fact that content for first-year seminars includes a focus on student success and transition, effective instruction in first-year seminars departs from the traditional lecture format. Students are expected to actively engage in discussion, share in the teaching as well as the learning in the seminar, and in some cases participate in the creation of the course syllabus. Instructors must therefore give up some of the traditional power associated with teach-

ing. Active-learning techniques are frequently employed, including experiential learning, collaborative projects, discussions, role play, cooperative learning, and oral presentation.

A common goal among many seminar programs is the development of a community of learners. Engaging in activities that establish and develop friendships and significant relationships within the class contribute to the development of powerful communities. Substantial two-way communication between instructor and student is widespread in first-year seminars and is often achieved through employing formal and informal feedback techniques, the incorporation of formative assessment measures, and including opportunities for significant reflection through journals and student writing.

### **Instructor Development**

Instructors for first-year seminars are very likely to have access to development or training experiences to prepare them for this special type of instruction. Outcomes of effective instructor-training efforts include campus-wide faculty development, professional and personal development, the development of community among faculty and staff, development of faculty/student-affairs partnerships, improvements in teaching and learning, quality and consistency across seminar sections, and employee orientation, assimilation, and education.

First-year seminars provide fertile ground for the development of innovative teaching strategies. Teaching the first-year seminar encourages a rethinking of both teaching and the entire higher education enterprise. Many faculty who participate in a first-year seminar faculty-development workshop and then teach a seminar bring new teaching techniques to their discipline-based courses. Furthermore, attending a faculty-development workshop and teaching a seminar can boost faculty morale, help faculty better meet the academic and non-academic needs of students, and improve teaching in many other courses across campus.

### **Campus Collaboration**

Many first-year seminar programs that were originally stand-alone courses are now linking with other campus initiatives. As new seminars are created, they are more likely to be part of a general education-reform effort. When seminars are linked with other campus programs, their institutionalization is more solid, and they are more likely to facilitate partner-

ships among various campus constituents. When both faculty and staff are involved in seminar design and instruction, the traditional gaps between faculty and staff are frequently ameliorated, or at least lessened.

### Assessment

First-year seminars are, perhaps, the most assessed and measured of all undergraduate courses. Proving the value and worth of any educational innovation is key to sustaining the life of the innovation, especially in times of budget reductions and curricular reform. Assessment can document the effectiveness of a program, and also be used to continually improve the program. Institutional efforts examining first-year seminar programs have included a variety of assessment approaches. Through assessment efforts, first-year seminars have been proven to positively affect retention, grade point average, number of credit hours attempted and completed, graduation rates, student involvement in campus activities, student attitudes and perceptions of higher education, as well as faculty development and methods of instruction. They have also been shown to increase institutional engagement. Students enrolled in a first-year seminar are more likely to use campus resources, get involved in campus activities, and interact with faculty outside of class.

The modern first-year seminar is perhaps one of the most dynamic curricular innovations of the twentieth century. These courses have evolved to meet the changing needs of students and institutions, and they have the potential to continue to be one of the most adaptable and useful curricular staples during the twenty-first century.

*See also:* CURRICULUM, HIGHER EDUCATION, *subentries on* INNOVATIONS IN THE UNDERGRADUATE CURRICULUM, TRADITIONAL AND CONTEMPORARY PERSPECTIVES; GENERAL EDUCATION IN HIGHER EDUCATION.

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## COLLEGE STUDENT RETENTION

Why do students leave college before completing a degree? This question is of interest not only to scholars, but also to employers, institutions, students, parents of students, and spouses. A student who leaves college before graduating paid tuition that will probably not be made up for through employment, for a person who lacks a college degree will have diminished lifetime earnings (compared to college graduates). In addition, there is a loss of tuition for the institution, a loss of a major in some department, and a loss of human capital—that is, the loss of highly trained individuals to enter the workforce or perform civic duties.

Retaining a student is fundamental to the ability of an institution to carry out its mission. A high rate

of attrition (the opposite of retention) is not only a fiscal problem for schools, but a symbolic failure of an institution to achieve its purpose.

### Defining Student Retention

There are two extremes of student retention. *Normal progression*, typical of a *stayer*, or *retained student*, occurs when a student enrolls each semester until graduation, studies full-time, and graduates in about four years. A *dropout*, or *leaver*, is a student who enters college but leaves before graduating and never returns to that or any other school. Between these two extremes are *transfers*, students who begin studies at one institution and then transfer to another. From the student's perspective, transferring is normal progress. From the perspective of the institution where the student first enrolled, the student has dropped out.

While it is easy to identify a stayer, a student who has left college could return at any time. Students who re-enroll after quitting school are called *stopouts*. Students often quit school due to a financial shortfall or a family crisis and return a year later. Other students might start school, drop out to work or to raise a family, and return years, or even decades, later. Someone defined as a dropout could become redefined as a stopout at any time. Other students become *slowdowns*, going from full-time attendance to taking just a few courses.

The previous definitions are from the perspective of a single institution. An important distinction must be made between students who meet their educational goals before graduating but do not receive a degree and students who enrolled intending to graduate but do not do so. For instance, a student might enter a college with the intention of taking three accounting courses to upgrade his or her status at work. When this is done, neither the institution nor the student fails, yet the institution would likely count the student as a dropout. Institutions that enroll large numbers of part-time students have to be very careful in understanding whether a low graduation rate represents institutional failure or institutional success. While a simple definition of retention or attrition may not be possible, an accurate description needs to consider the goals of the student upon entry.

Institutions often speak of *retention rates* or *graduation rates*. Institutions can calculate a meaningful retention rate only if they know the intentions

of their students. Students who are not seeking a degree and leave school before graduation should not be counted as dropouts. Furthermore, overall retention or graduation rates are of little use to institutional planners. What is important is the retention rates for identifiable groups of students. When an institution has an overall graduation rate of 75 percent but only 15 percent of its Native American students graduate, the success of the majority masks problems in specific populations.

The following definition captures the essence of the problem of students leaving college prior to graduation: "A leaver or dropout is a student who enters a college or university with the intention of graduating, and, due to personal or institutional shortcomings, leaves school and, for an extended period of time, does not return to the original, or any other, school." In considering any definition, it is important to identify if the definition is from the perspective of the individual student, the institution, or from the economic or labor force perspective.

### A Profile of Successful Institutions and Students

Students that have economic, social, or educational advantages are the least likely to leave college, while students lacking these advantages are the most likely to leave. Advantaged students are also likely to attend the most elite schools, and since these students are least likely to leave school before graduating, these schools have the highest retention rates. The reverse is also true. Community colleges, regardless of their quality or value, are the lowest status institutions and have the lowest rates of retention. To say that the most elite schools have the highest retention rates is partly a tautology, because one part of the definition of eliteness is the rate of retention. Nevertheless, eliteness and student retention run hand in hand.

The highest institutional retention rates in the country are above 95 percent, while the lowest may be only 10 percent. Typical graduation rates for elite schools may be 85 percent or higher; for average schools about 50 percent; and for non-elite schools 15 to 25 percent. Freshmen are most likely to drop out of school, while seniors are least likely to leave. For an average institution, freshman to sophomore year attrition is about 25 percent; sophomore to junior year attrition is about 12 percent; junior to senior year attrition is about 8 percent; and about 4 percent of seniors might leave school. Roughly half of an incoming class graduates in four to five years.

While there may be exceptionally high or low rates of retention for individual institutions, and individual students may defy expectations, retention generally follows these patterns:

1. The higher the degree offered, the higher the retention rates; the exception to this rule is that elite private liberal arts colleges have higher retention rates than many institutions offering masters or doctoral degrees.
2. The higher the quality of the institution and the more elite it is, the higher the retention rates.
3. Older institutions with longer traditions and larger endowments have higher retention rates.
4. Institutions where the majority of the students attend classes full-time, are of a traditional age (18–23), and reside on campus have higher retention rates than institutions where the majority of students attend part-time, are older or commuter students, and work full-time.
5. Predominantly white institutions that enroll a relatively high percentage of African-American, Hispanic, or Native American students will likely have lower retention rates than similar institutions enrolling fewer students from these groups; however, at many institutions minority students have higher graduation rates than majority students.

The characteristic profile of a student likely to remain in college and graduate in four to five years is implicit in this description of institutional retention rates. A typical retained student will enroll in college directly after high school (at age eighteen or nineteen); will attend, full-time, a selective four-year residential private college or university seeking a bachelor's degree; will come from a white or Asian family with educated parents with relatively high incomes (high socioeconomic status); and will have attended a high quality high school, taken college preparatory courses, received high grades in high school, and scored well on standardized tests. In addition, the student will intend to graduate, have a major and career goals clearly in mind, participate in numerous campus activities, enjoy being a student, feel that he or she fits in at school, and will have a positive attitude toward the school, the faculty, the courses taken, and the academic and social life of the college. The effects of these characteristics

or circumstances are cumulative. The fewer of these attributes a student has, the greater the chances of the student withdrawing from college.

### Theories of Student Departure

Scholars have long held an interest in student departure, partly because it is a complex human behavior; partly because it is related to other factors like status attainment, self-development, and the development of human capital; and partly because it is a place where theory can have an impact on practice. Retention studies are important to institutions because if institutions can maintain or increase their retention rates, they can survive, and possibly prosper.

Since student retention is by definition a process that occurs over time, theoretical models tend to be longitudinal, complex, and contain several categories of variables that reflect both student and institutional characteristics. *Theories of departure* provide an explanation of why students leave college. *Theoretical models* of departure are models based on theories, while *models of departure* identify factors assumed to be related to retention without providing an explanation of why the factors act the way they do. Theories, theoretical models, and models are used somewhat interchangeably in the literature.

Student retention models are complex because they contain a large number of variables, often set in a causal pattern. A variable could either affect retention directly, or it could affect some other variable that has a direct effect on retention. For example, high school grades could directly affect rates of retention (e.g., the higher the high school grades, the higher the rate of retention). High school grades could also be thought to affect retention indirectly; that is, the higher the high school grades, the higher the college grades—and the higher the college grades, the higher the rate of retention.

Since 1970, the main theoretical tradition in the study of student retention has been sociological, involving a search for commonalities of behavior that distinguish groups of students who stay from groups of students who leave. Psychological and sociopsychological approaches, concerned with how individuals assess themselves in an educational context, began to develop after 1980. In the decade of the 1990s there was an increasing interest in how economic factors affect retention and in how the cultural factors typical of subgroups of students affect retention decisions, particularly in terms of minority

student retention. Other theoretical approaches have been taken, but have had little empirical study. Ernest Pascarella and Patrick Terenzini (1991) offer a summary of the literature on student retention and other associated outcomes from college.

Vincent Tinto's model of student departure has had the greatest influence on our understanding of student retention. His theory helped guide a large number of dissertations and empirical studies of student retention. The model posits that students enter college with family and individual attributes as well as precollege schooling. They enter with certain commitments, both to finishing college and to staying at their college. They enter an academic system that is characterized by grade performance and intellectual development, which together lead to academic integration, and they enter a social system where peer group interactions and faculty interactions lead to social integration. Academic and social integration work together to influence ongoing goal and institutional commitments, which, in turn, lead to the decision to remain in, or to leave, college. This model was later revised through the addition of commitments outside the institution and intentions to remain enrolled.

The explanatory theory underlying Tinto's model came most immediately from the research of William Spady (1971), who saw an analogy between committing suicide and dropping out of school. In both instances, according to Spady, a person leaves a social system. The French philosopher and sociologist Émile Durkheim had found that some people committed suicide because they lacked the values of the social system in which they participated, and because they were not supported by a group of friends. At the core of his model, Tinto borrowed Spady's use of Durkheim's two postulates to identify the concepts of academic and social integration. Academic integration was thought to be the result of sharing academic values, and social integration was viewed as the result of developing friendships with other students and faculty members. In Tinto's model, a student who does not achieve some level of academic or social integration is likely to leave school.

While Tinto's later model (1993) is similar in structure to his earlier ones, it offers another explanation of student departure: failure to negotiate the rites of passage. According to this theory, students would remain enrolled if they separated themselves from their family and high school friends, engaged

in processes by which they identified with and took on the values of other students and faculty, and committed themselves to pursuing those values and behaviors.

A second theoretical thrust came from John Bean, based on empirical and theoretical studies published in the 1980s, an explanatory model of student retention (Bean 1990), and a psychological model of student retention developed by John Bean and Shevawn Eaton (2000). Originally based on a model of turnover in work organizations, Bean's model evolved into one where the overall structure was based on a psychological model that linked any given behavior (in this case, retention) with similar past behavior, normative values, attitudes, and intentions. While based on psychological processes, the model was similar to Tinto's in that it was complex and longitudinal. The model differed from Tinto's original model in two important ways, however: It included environmental variables (or factors outside of the college that might affect retention) and a student's intentions, a factor found to be the best predictor of student retention. These factors were subsequently incorporated into Tinto's model in 1993.

Bean's model, describing traditional-age students, posits that background variables, particularly a student's high school educational experiences, educational goals, and family support, influence the way a student interacts with the college or university that the student chose to attend. After matriculation (as in Tinto's model) the student interacts with institutional members in the academic and social arena. According to Bean, the student also interacts in the organizational (bureaucratic) area, and is simultaneously influenced by environmental factors, such as wanting to be with a significant other at another school or running out of money. A student's interaction with the institution leads the student to develop a set of attitudes toward himself or herself as a student and toward the school. Academic capabilities (as indicated by grade point average), feeling one fits in at an institution, and loyalty to the institution are a secondary set of outcomes that are extremely important in determining a student's intentions to remain enrolled, as well as actually continuing enrollment. Bean and Barbara Metzner (1985) also developed a model of student retention for nontraditional students which reduced the emphasis on social integration factors since nontraditional (older, working, commuting) students have less interaction

with others on campus than do traditional, residential students.

Bean and Eaton's (2000) model describes how three psychological processes affect academic and social integration. While attitude-behavior theory provides an overall structure for the model, self-efficacy theory, coping behavioral (approach-avoidance) theory, and attribution (locus of control) theory are used to explain how students develop academic and social integration.

These grand theories of student retention of the 1990s, which attempt to simplify a very complex action into a series of identifiable steps, are inadequate to deal with either specific populations or individual decisions. Because of this inadequacy, a series of articles was written to provide increased explanations of certain aspects of student retention. A collection of these partial theories, which provide a closer look at a certain aspects of student retention decisions, was published by John Braxton in 2000. This volume contains explanations of retention behavior based on economic factors, psychological processes, campus climate, student learning, campus cultures, ethnic differences, college choice, social reproduction, and power (critical theory).

Of these theoretical approaches, a number of studies of the economic influences on retention have been conducted, particularly by Edward St. John. Based on cost-benefit analyses, these studies examine how retention decisions are affected by ability to pay, family resources, student aid, perceptions of aid, and tuition.

Regardless of the particular approaches taken in a model, the general process of student retention remains the same: Both experiences before entering college and academic abilities are important; the way students interact in the social and academic environment once at college are important, as are factors from outside of the institution, particularly the cost of attending the college; and the attitudes a student forms about the institution and about his or her role of being a student at a particular institution (Do I fit in? Am I developing? Am I validated?) are also important aspects of a student's decision to remain enrolled.

### Specific Factors Affecting Retention Decisions

There are literally hundreds, if not thousands, of specific reasons a student might leave college before graduation. Theoretical models classify groups of

variables that are assumed to relate to some general underlying causes. For example, a general feeling of fitting in might be related to fitting in in the classroom, with one's roommates, with a team member or members of a club, with faculty members, with other students in one's major, with sports fans, and so on. Any list of factors associated with student retention will only be a partial list. The specific factors affecting retention decisions at colleges and universities vary from institution to institution and according to gender, age, and ethnicity. The following groupings are selected factors that are often looked at when doing retention studies of traditional residential students. When these factors are viewed positively by students they enhance retention, and when viewed negatively they decrease retention. Some of the factors that seem particularly important for minority and nontraditional students are noted here.

**Background variables.** These include parental support, parents' education, parents' income, educational goals, precollege academic success (high class rank, grade point average, standardized test scores), college preparatory curriculum, and friends attending college. For minority students, background variables include extended family support, church and community support, and previous positive interracial/intercultural contact, and for nontraditional students they include spouse support and employer support.

**Organizational factors.** These include financial aid, orientation programs, rules and regulations, memberships in campus organizations, involvement in decision-making, housing policies, counseling, the bursars office, ease of registration, and staff attitudes toward students. For minority students, organizational factors include role models in staff and faculty, a supportive environment, at least 20 percent minority enrollment, and not viewing rules as oppressive. For nontraditional students, parking, child care, campus safety, availability of services after hours, evening/weekend scheduling, and cost per credit hour are factors.

**Academic factors.** These include courses offered, positive faculty interaction (both in class and out of class), advising, general skills programs (e.g., basic skills, study skills, math, and English tutoring/help centers), campus resources (e.g., computer, library, athletic, college union), absenteeism, certainty of major, and academic integration. Factors affecting minority students include warm classroom climate and faculty role models, and those affecting nontra-

ditional students include the expectation for individual faculty member attention.

**Social factors.** Among the social factors affecting retention are close friends on campus, peer culture, social involvement (e.g., service learning, Greek organizations), informal contact with faculty, identification with a group on campus, and social integration. For minority students, social factors also include a positive intercultural/interracial environment and at least 20 percent minority enrollment.

**Environmental factors.** These include continued parental support, little opportunity to transfer, financial resources, significant other elsewhere, family responsibilities, getting married, and a job off campus more than twenty hours per week. Factors affecting minority students also include the availability of grants.

**Attitudes, intentions, and psychological processes.** These include self-efficacy as a student, sense of self-development and self-confidence, internal locus of control, strategies of approach, motivation to study, need for achievement, satisfaction, practical value of one's education, stress, alienation, loyalty, sense of fitting it, and intention to stay enrolled. For minority students, self-validation is also a factor.

### **Enrollment Management and Programs to Increase Retention**

Student retention is valuable to institutions because it assures a continued flow of revenues into the institution through the payment of tuition. It is also important for public institutions because institutional support is based on the size of the student body. *Enrollment management* provides continuity to the policies and programs that result in student retention. Enrollment management activities include attracting the right students, providing financial aid, easing the transition to college through orientation programs, using institutional research to gather and analyze data about students, using appropriate interventions for students lacking skills or needing guidance, conducting research to identify the factors associated with student retention, helping with job placement, and enlisting the support of alumni.

*The Strategic Management of College Enrollments* (1990), by Don Hossler and John Bean, describes the enrollment management process in some detail. Before the term was coined, however, programs to enhance student retention were already in place. Some of the more common ones are:

- Early outreach programs (into high school or junior high) to develop students' academic competencies.
- Bridge programs that provide study on campus between high school and college.
- Orientation programs to ease the transition to college that contain academic strategies, social support, and information about campus life.
- Programs for parents so they understand student life.
- First-semester courses that continue orientation and provide support and information about campus and freshmen interest groups.
- Advising and psychological or social counseling.
- Academic skills development (basic skills, time management, tutoring, course-specific skills).
- Monitoring students for early warning signs and intrusive counseling/advising.
- Social programming for informal socializing (parties, dances, mixers, community programs), and physical places for socializing (unions, lounges, places to eat, study areas that allow talking in libraries).
- Campus development (students interacting with administrators, faculty, and staff to improve the campus environment).
- Participation in campus organizations and activities.
- Programs celebrating cultural diversity, including events of particular interest to diverse groups.
- Sensitivity to ethnic and racial issues.
- Exit interviews.

### **Reentry Made Easy**

It is unlikely that an institution can find a single, simple program that increases student retention, or that a single identifiable group is responsible for low retention rates. The application of resources to any student retention program has ethical implications because it favors one student or group of students over another. To be fair to all students, institutions must engage in ethical analysis before applying resources to any retention program. A central part of this analysis is that all groups of students be identified and included.

*See also:* COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE SEARCH AND SELECTION.

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## COLLEGE STUDENTS WITH DISABILITIES

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**ACCOMMODATING**

Troy R. Justesen

**SPECIAL LEARNING NEEDS**

Frances K. Stage

Magdalena H. de la Teja

**ACCOMMODATING**

Before the 1970s, more than half of the children with disabilities in the United States did not receive appropriate educational services that would enable them to have full equality of opportunity. More than one million of these children were excluded from the public school system and did not go through the educational process with their nondisabled peers. However, with the passage of the first federal eligibility program providing funding for special education and related services, more children with disabilities were integrated into regular classroom environments. This federal program, now entitled the Individuals with Disabilities Education Act (IDEA), ensures educational opportunities for children with disabilities in public elementary and secondary schools.

In the early twenty-first century, the numbers of students with disabilities successfully completing elementary and secondary school (among other improvements for this population) is largely due to the implementation of the IDEA, which increased access

for many students with disabilities to the regular education classroom with the necessary special education and related services supports these children need to prepare for postsecondary education. The success of children with disabilities in primary education inevitably led to their desire to attend colleges and universities.

### **Postsecondary Students with Disabilities**

Increasing numbers of children with disabilities are, in fact, entering postsecondary educational institutions. In 1999 the American Council on Education found that higher proportions of students with disabilities were enrolling in four-year colleges and universities than ever before. One in eleven first-time, full-time freshmen entering college in 1998 reported having a disability. Also in 1999, the U.S. Department of Education's National Center for Education Statistics (NCES) reported that an estimated 428,280 students with disabilities were enrolled at two-year and four-year postsecondary educational institutions. The numbers of students with disabilities transitioning from high school to higher education is expected to increase even more in the decades to come because of increased implementation of federal laws.

### **Federal Disability Laws Applicable to Higher Education**

The protections and considerable modifications and services available under the IDEA to children with disabilities in primary education do not extend to education beyond the secondary level. The IDEA only applies to children with disabilities determined eligible for special education and related services from birth through their twenty-first birthday, and its protections and services end when the child leaves secondary school—either through aging-out or graduating with a regular high school diploma. The IDEA is not, however, a basic civil rights statute, but rather an educational eligibility program for children with disabilities who are determined eligible for services under the IDEA. The protections and services afforded to children with disabilities do not cross over to higher education. However, two federal civil rights laws specifically apply to colleges and universities; these are the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA).

### **The Rehabilitation Act**

Before the end of the 1970s, there were only a small number of colleges and universities that provided

access for students with disabilities. Many of these institutions were segregated colleges and universities that specialized in serving students with a particular type of disability, such as Gallaudet University, which focuses on educating students who are deaf. The benefits of the civil rights movement for African Americans, and the growing assertion by women for equality, directly influenced people with disabilities to advocate for their rights to equality and opportunity to participate in society, including access to higher education. Many of these early advocates for access to higher education were disabled war veterans and others with disabilities who were highly assertive in forcing federal attention to physical and academic access to colleges and universities. The efforts of these individuals with disabilities led to the passage of the Rehabilitation Act.

The Rehabilitation Act applies to any entity that chooses to accept federal financial assistance for any program or service, including higher education institutions. The specific provision of the Rehab Act that applies in higher education, with respect to otherwise qualified students with disabilities, is section 504. Subpart E of section 504 specifically applies to postsecondary education settings.

In basic terms, Subpart E requires any public or private college or university that accepts federal funds for any activity to provide “program accessibility” to campus programs and services. *Program accessibility* is a concept that allows recipients of federal funds, in this case colleges and universities, to make their programs and activities available to individuals with disabilities without extensive retrofitting of their existing buildings and facilities by offering those programs through alternative methods. In practical terms this means that campus buildings are not required to be made accessible to, and usable by, students or others with disabilities as long as the “program” is made accessible to individuals with disabilities. For example, if the second floor of a campus science building has no elevator and a course is offered on that floor that a student who uses a wheelchair wants to take, then the course must be relocated to a classroom that is accessible for the student. Under section 504, a campus is not required to make each of its existing facilities accessible to students with disabilities, though newly constructed campus buildings and facilities are required to be usable by all individuals with disabilities.

Congress intended the section 504 program-access requirement to enable individuals with dis-

abilities to participate in and benefit from the services, programs, or activities of public entities in all but the most unusual cases. However, section 504 only applies to colleges and universities that accept federal financial assistance of some sort, and does not apply to those institutions that do not accept federal dollars. Moreover, section 504 was not adequately enforced and, therefore, did not increase the number of students with disabilities attending postsecondary education. A more comprehensive civil rights law was needed to implement access for people with disabilities in all facets of society, including higher education. Thus, the foundation for the Americans with Disabilities Act was developed, leading to its passage in Congress by an overwhelming majority and its enactment into law on July 26, 1990.

### The Americans with Disabilities Act

The Americans with Disabilities Act (ADA) is the most comprehensive civil rights law protecting people with disabilities in history. In terms of higher education for students, the ADA applies to every public college and university and nearly every private college or university in America, with the exception of those institutions affiliated with religious entities or organizations. Examples of exempt institutions include Notre Dame University in Indiana and Brigham Young University in Utah. All public colleges and universities are covered under Title II of the ADA, and private colleges and universities are covered under Title III of the ADA. How the ADA applies to public institutions is very different than how private institutions are covered. Understanding these specific provisions of the ADA is critical to correctly implementing the act.

Basically, the section 504 and the Title II concepts of program accessibility are the same. However, Title II of the ADA extends the program accessibility concept to all public campuses regardless of the source of funding for any campus programs, meaning that existing buildings do not need to be altered to be accessible to students with disabilities as long as the program is accessible. This may mean simply relocating courses or offering services such as retrieving books from inaccessible areas of the campus for students with disabilities. Conversely, covered private campuses, under Title III, must actively remove architectural barriers in existing buildings and facilities where such removal is “readily achievable,” or provide goods and services

through alternative methods where those methods are “readily achievable.” In other words, a major distinction between public and private campuses is that private campuses must remove existing physical barriers whenever and wherever it is readily achievable to do so. This is a higher standard of access for private than public campuses. However, all public and private campus construction since January 26, 1992, must meet minimum federal standards for accessibility to incrementally add to accessible buildings over time.

Public and private campuses are also required to provide the necessary services and supports for students with disabilities to participate in campus activities, both academic and social. Services such as braille materials; providing sign language interpreters and readers; and allowing students with learning disabilities to take course exams in quiet environments may also be required, with certain technical stipulations, to the extent necessary for students with disabilities to participate in campus activities. However, students with disabilities must notify, and in some cases provide documentation of disability, prior to asserting the need for modifications, and they must not wait until the last minute. Furthermore, the level and extent of services that must be provided depend on whether the campus is public or private.

*See also:* PEOPLE WITH DISABILITIES, FEDERAL PROGRAMS TO ASSIST; SPECIAL EDUCATION.

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## SPECIAL LEARNING NEEDS

Students with mental or physical disabilities increasingly contribute to diverse populations on college campuses. According to Cathy Henderson (1999), the number of full-time freshmen with a disability increased from 2.6 percent in 1978 to 9 percent in 1998. *Learning disability* is the fastest growing category of disability, and the most commonly cited in 1998 by freshmen (41%). Other disabilities cited included visual impairment (13%); orthopedic-related impairments (9%); speech impairments (5.3%); health-related disabilities, such as those resulting from cystic fibrosis, cancer, and multiple sclerosis (19%); and “other” disabilities (22%). This last category includes attention deficit disorder (ADD), attention deficit hyperactivity disorder (ADHD), and psychiatric disabilities. Twelve percent of freshmen reported hearing impairments in 1996.

Despite this wide array, students with disabilities are increasingly accessing, persisting in, and benefiting from higher education experiences. After examining National Center for Education Statistics (NCES) data, Laura Horn and Jennifer Berkold reported in 1999 that individuals with disabilities enrolled in postsecondary institutions are likely to be men, older, white, and pursuing an associate’s degree at a two-year college (although four-year college enrollments are rapidly increasing). Faced with numerous challenges to being successful in higher education, students with disabilities are more likely than other students to leave college before attaining a degree. However, the Horn and Berkold study indicates that individuals with a disability who do attain a degree are just as likely to obtain employment, to be paid at a similar rate, and to enroll in graduate school as those without disabilities.

Most colleges and universities provide general learning assistance to increase student success. Since 1990, many campuses have focused on becoming learning-centered campuses that emphasize broad approaches to learning designed to create positive academic outcomes for increasingly diverse student populations. These new approaches, designed to improve students’ views of themselves as learners, their motivation to learn, and their self-sufficiency as scholars, are especially important for students with special learning needs. (The term *students with special learning needs* is used to refer to students with learning disabilities, ADD, or mental health problems that interfere with their ability to function fully without assistance in the academic setting.)

The Rehabilitation Act of 1973 (Section 504) and the Americans with Disabilities Act (ADA) of 1990 prohibit institutions receiving federal funds from discriminating based on disability and are key to the success of students with special learning needs. These pieces of legislation define individuals considered to have a mental or physical disability and describe accommodations and modifications required by law. Case law over the years has also been instrumental in ensuring access and creating an environment geared toward success in higher education and in employment for individuals with disabilities. College campuses are required to recognize the federal imperative to provide equal access to learning for all students they admit and matriculate.

Most colleges and universities provide special support services as accommodations for students with disabilities. In 1998, 72 percent of two-year and four-year colleges and universities enroll students with disabilities (American Council on Education, 2000). Accommodations and modifications include removing architectural barriers; extended-time or alternative exam formats; and providing textbooks on tape, sign language interpreters, tutors, readers, note-takers or scribes, assisted or priority registration, and adaptive furniture, equipment, and technology. Colleges and universities continue to improve physical accommodation as they upgrade facilities and erect new structures. However, students with visual and mobility impairments may still find architectural barriers to easy access to campus, especially in older facilities. As innovative resources designed specifically for accommodation come on the market, particularly those geared toward computer accessibility, colleges and universities are required to continue to conduct accessibility audits and plan for needed modifications to provide access to learning for all college students.

### Student Issues

Many students come to college unaware that they have ADD or a learning disability. After a semester or two of difficulties or placement on academic probation, they begin to recognize their particular learning needs. Sometimes they seek and receive formal diagnoses of their disabilities, while others conduct self-diagnoses. Even when students recognize their needs, they are often reluctant to seek help or disclose their needs to others. In 1998, Bradford Kruse, Tina Elacqua, and Ross Rapaport conducted

a study of students with disabilities at a Midwestern university, but 79 percent of students declined to participate. The number of students with learning and mental health disabilities is growing, and these students face numerous obstacles in their efforts to become successful college students. The most problematic of these include:

1. A lack of diagnosis for many students with learning disabilities that would alert them to their own particular learning needs
2. A general lack of awareness of strategies and services that could be used by students with special learning needs
3. A reluctance on the part of students with special learning challenges to communicate their needs to others; this is especially true for students with invisible disabilities (e.g., ADD, ADHD, brain injury, dyslexia, mental illness)
4. A tendency of parents to attempt to intervene for their students, even though the most effective intervention is student self-advocacy
5. A lack of classmate acceptance of students with special learning needs
6. A lack of campus staff, equipment, and services to adequately serve this growing campus need
7. A faculty perceived by students with disabilities as having a general lack of awareness or even skepticism about the realities of learning challenges for college students and a reluctance by faculty to provide classroom accommodations
8. A general suspicion that students with a mental disability are being deceptive about their needs in order to secure accommodations related to classroom work

To overcome these difficulties and barriers, students must take responsibility for their own success, advocate for their own academic needs, provide documentation from a qualified professional about their disability to the designated office on campus responsible for services to students with disabilities, educate themselves about accommodations that are particularly helpful to them, and identify themselves to campus career centers and counseling centers and be ready to discuss their needs based on the disability and follow the advice given.

Additionally, if students inform faculty immediately about their special accommodation needs, fac-

ulty skepticism may dissipate. If students wait until academic problems arise, faculty may be suspicious of the students' veracity or motives. A useful strategy may be to give skeptical faculty the names of staff and other faculty who are knowledgeable and accommodating.

Students can use resources in the community to assist them in accessing and benefiting from a college education, including Vocational Rehabilitation Program offices, public agencies for a specific disability, Centers for Independent Living, special transit, mental health agencies, and high school counseling offices.

### Campus Response

According to Bradford Kruse et al. (1998), students who receive accommodations report greater confidence and self-esteem, lowered anxiety and stress, greater ability to understand course material, and improved academic performance. On the other hand, students who do not receive needed accommodations are more likely to experience anxiety, stress, and academic failure. Actions colleges can take to empower students as learners include:

1. Educate academic advisors and counselors to the range of challenges faced by college students with special learning needs
2. Develop a network of successful upperclass students with special learning needs who can help facilitate workshops and informational meetings for faculty, staff, and students
3. Educate faculty regarding indicators of learning disabilities and mental health disabilities
4. Proactively educate faculty about reasonable accommodations they are required to provide in college courses
5. Widely publicize campus resources and referral procedures
6. Identify staff who can be contacted for advice regarding particular student challenges
7. Encourage faculty, academic advisors, and other staff to proactively respond when they identify students who might benefit from counseling, disability services, or other special campus services
8. Take full advantage of campus resources such as web-based courses to provide students access to learning services

In addition, campuses can keep advocacy groups for students with disabilities informed about distance-learning options and other campus resources known to promote learning to a broad range of students. Personnel in service offices for students with disabilities, student affairs offices, and others who work with students' special learning needs should be knowledgeable and able to advise students about assistive technology.

### Future Issues

As colleges continue to recruit growing numbers of students with special learning needs, many outstanding issues need to be addressed, including:

- Students who had disability services in their pre-college education will come to expect and even demand them at college
- Adult students with disabilities who reached college age in the years before campuses were fully accessible will increasingly return to earn the college degrees once thought beyond their reach
- As diversity increases on campus, diverse learners with special needs will increasingly become a part of the student population
- More rural students with physical and mental disabilities will seek a college education; barriers to access for these students may include lack of adequate information about higher education opportunities, family resistance to their leaving home, and inadequate academic preparation.

Finally, the greater awareness that exists regarding disabilities, the more likely it is that campuses will meet students' needs. Steps taken by campuses to highlight the successes of upperclass students who have recognized and successfully worked with their learning needs, to develop and articulate the means of identifying other students' possible needs, and to provide widely publicized campus services can ensure that all students have the opportunity to learn.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE STUDENT RETENTION; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS; SPECIAL EDUCATION.

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FRANCES K. STAGE  
MAGDALENA H. DE LA TEJA

## COLLEGE TEACHING

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College teaching is a very complex activity that cannot easily be defined or measured. Part of the reason is that teaching at any level cannot be divorced from the context in which it takes place and particularly from the teachers and learners who are involved. Good teaching in a graduate seminar in physics is

not necessarily the same as good teaching in a large, introductory physics course, and it is certainly different from teaching in music or philosophy, or languages or medicine or business, whether in college or elsewhere. Another issue is that there is no single definition of good teaching. A major criterion of good teaching is, of course, the learning that results, but teachers cannot be held entirely responsible for student learning, and often, learning is as difficult to define and measure as teaching. Research on college teaching and learning has identified several factors that contribute to successful outcomes, but the presence or absence of these factors (often called dimensions, behaviors, practices, conditions, or principles) does not automatically mean that teaching is good or bad.

What is clear is that even though there are established general relationships between teaching and learning, each teaching and learning situation possesses unique characteristics and success is largely dependent on being able to capitalize on the conditions that promote learning and to avoid those factors that may impede it. The direct responsibility for success is shared by teachers and students, but this does not exempt institutions and academic units from some degree of responsibility for providing the tools, resources, and environments that allow teachers and students to maximize the benefits that result from their efforts. Indeed, the research shows how critical it is to create environments that promote and support success whether these are in traditional classrooms where teachers and students regularly meet face-to-face, or in new, virtual classrooms where teachers and students interact via the Internet and may never have such meetings.

### A Short History

Since the 1950s there has been a tremendous amount of research on college teaching, and this work has become more comprehensive and productive, particularly since the early 1970s. Part of the impetus for this work came from faculty who were interested in understanding and improving teaching and learning in their classrooms. These faculty, however, were from all disciplines, and they did not have an organized body of research and theory upon which to base their investigations, experience in educational research, or criteria to guide their investigative methods and practices. Those with more specific training and experiences, for example psychologists and educational researchers, had a dual interest be-

cause research on teaching and learning not only served their own teaching but also contributed to the literature in their own disciplines. After World War II, the rapid growth of federal, state, and private funding in support of teaching and learning allowed these researchers to carry out large and comprehensive studies that formed the basis of research for the next half-century.

From another quarter, the social activism and student unrest during the 1960s fueled demands that a college education should be more relevant to students' interests and needs and more connected to real-world issues both in the personal realm of career preparation and the broad sociopolitical arena.

A third force was the growing interest in determining the extent to which higher education was fulfilling its roles. Institutional boards of trustees, state and federal governments, accrediting agencies, and others became more actively interested in the outcomes of a college education, and the matter of *accountability* became a more and more pressing issue as time went on. It was necessary to have ways of determining both what was happening (the instruments or processes of education) as well as what resulted (the consequences or outcomes of education). In the mid-to-late 1960s, landmark work began in the field of evaluation. Michael Scriven (1967) coined the terms *formative* and *summative* evaluation, with the former meaning evaluation for purposes of revision and improvement and the latter meaning evaluation for purposes of making decisions about the merit or worth of individuals, programs, units, or institutions. The evaluation of faculty performance and specifically of college teaching grew exponentially with early, major books on the topic contributed by Kenneth O. Doyle (1975) and John A. Centra (1979). The primary source of information for evaluating teaching was student-provided data from teacher/course evaluation questionnaires commonly referred to as *student ratings of teaching*. In a series of reports, Peter Seldin documented the growth of the use of student ratings, and by the mid-1990s well over 90 percent of higher education institutions in the United States were using student ratings as part of the evaluation of college teaching.

By the mid-1980s, it became apparent that typical classroom testing was not providing sufficiently detailed information about the nature and outcomes of teaching. More specific investigation was required to truly measure learning, and the *assessment move-*

*ment* gained momentum. In their 1993 study, Thomas A. Angelo and K. Patricia Cross provided widely used guidelines for practice, and the quality of institutional assessment has become a primary criterion used by accreditation agencies not only to determine the extent to which student learning outcomes have been achieved but also as a mechanism to help teachers and programs develop better, more measurable objectives. Without clear specification of the intended outcomes, measurement becomes difficult. As the common paraphrase notes, "If you don't know where you're going, you won't know if you get there."

### The Professional Roles and Responsibilities of College Teachers

Yet another factor has strongly influenced contemporary college teaching: the definition of the roles and responsibilities of college faculty. Ironically, the same postwar support for research that promoted more thorough exploration of college teaching also had a negative impact on college teaching. As early as the 1950s, the tradition of the faculty's equal responsibility for teaching, research, and service was called into question, and the discussion was not so much about teaching and research as it was about teaching versus research. In *The American University* (1968), Jacques Barzun decried the dichotomy, noting that universities recognized and rewarded even mediocre researchers more than great teachers. The prestige of institutions came more from their research and funding activities than from the quality of their teaching, with the result that promotion, tenure, and merit were determined more by one's scholarship than one's teaching. The Carnegie Foundation even made special classifications, separating *research universities* from other institutional types.

Nonetheless, there was motion in the direction of better balance. Books on teaching such as Wilbert J. McKeachie's *Teaching Tips* (in ten editions between 1951 and 1999) were widely disseminated, and in 1986, Lee Shulman proposed that expert teachers combined knowledge of their content with knowledge of pedagogy and developed repertoires of *curricular knowledge* that allowed them to most effectively teach in their disciplines. This conceptualization helped to establish the importance of pedagogical expertise in company with content knowledge. Another development was the creation in 1980 of the *teaching dossier* by the Canadian Association of University Teachers (revised in 1986) and

the subsequent rise of interest in the *teaching portfolio* in U.S. institutions. The dossier or portfolio is a document that provides the opportunity for the teacher not only to present quantitative evidence of effectiveness such as student ratings but also to include a teaching philosophy, discussions and evidence of instructional innovations, assessment efforts, teaching-related service activities such as mentoring, classroom research, and related work.

The discussion of faculty roles and rewards leapt into general view with the 1990 publication of Ernest Boyer's *Scholarship Revisited: The Priorities of the Professoriate*. Boyer defined four kinds of scholarship: *discovery* (conducting traditional research), *integration* (making connections across disciplines), *application* (solving real-world problems), and *teaching* (transferring knowledge about both content and teaching to students and peers). The most widely discussed aspect of the *scholarship of teaching* is its emphasis on the formal and informal exploration of classroom processes and outcomes by faculty in all disciplines—in other words, the extension of the three other types of scholarship into the realm of teaching and the legitimizing of research on teaching. The American Association for Higher Education and the Carnegie Foundation have strongly supported developments in this area with efforts such as the Carnegie Academy for the Scholarship of Teaching and Learning and the Campus Conversations Program, initiatives designed to engage college teachers in dialogue and in projects that explore teaching and learning across the disciplines. Discussions of the scholarship of teaching promoted the importance of investigating college teaching, but it also added another criterion to the list of responsibilities of the expert teacher.

In a different conceptualization, James Bess and associates (2000) proposed that college teaching is so complex that its various roles cannot be expected to be filled by only one person. The authors identified seven *teacher subroles*—content research, instructional design, instructional delivery, discussion leading, content/activity integration, assessment, and mentoring—and argued that collaborating teams can provide more comprehensive service to students than can individual teachers. On an even broader scale, Raoul Arreola described the college teacher as a *meta-professional*, one who not only has expertise in a base profession within a given discipline but also is held responsible for myriad other skills, knowledge, and activities beyond pedagogy. These include

advising, curriculum development, assessment, service, administration, leadership, team membership, strategic planning, communication, and entrepreneurship.

The contemporary college teaching profession thus involves much more than maintaining one's disciplinary expertise and delivering lectures. The responsibilities of the faculty member as a teacher are embedded in the context of a dynamic and multifaceted profession, but research on college teaching has not considered this kind of complexity in its investigations of the teaching role. In the following section, this complexity is reduced with the focus only on the findings of research that has explored what college teachers do, how they do it, and how it relates to various outcomes.

### Principles of Good Practice, Dimensions of College Teaching, and Behaviors of Teachers

Despite the complexity of the profession, a good deal is known about generally successful practice, about the dimensions of college teaching, and about the specific behaviors of teachers. In 1987 Arthur Chickering and Zelda Gamson introduced “seven principles for good practice in undergraduate education.” These were that good practice: (1) encourages student-faculty contact, (2) encourages cooperation among students, (3) encourages active learning, (4) gives prompt feedback, (5) emphasizes time on task, (6) communicates high expectations, and (7) respects diverse talents and ways of learning. These principles were drawn from a broad review of the higher education literature and were an attempt to provide general guidelines about effective practice. Classroom teachers, however, needed more specific information in order to be able to translate these principles into practice.

Early work on college teaching began by observing and recording teaching and by asking teachers and students about the characteristics of effective and ineffective teachers. The responses were generally similar and were categorized into smaller lists, and teachers and students were then asked to rank these characteristics or dimensions of instruction in terms of their importance.

At the same time, two other avenues of research were active. One area was in measurement and assessment, where ongoing efforts to more accurately determine the nature and amount of student learning provided new data about how students learn as

well as about student achievement. Another was widespread research on student ratings of teaching. Because these student ratings were met with some resistance, they were the subject of intensive scrutiny. Numerous studies (over 2,000 studies on teaching and its evaluation by 1990) were conducted with an emphasis on examining technical and measurement characteristics such as their validity (the extent to which they measured teaching effectiveness as opposed to factors not associated with that effectiveness) and reliability (the extent to which they could consistently provide usable data). Herbert W. Marsh summarized these studies in a 1987 article. Marsh demonstrated that student ratings were reliable, valid, and useful indicators that both established college teaching as a complex and multi-dimensional activity and could provide useful data for formative and summative decision-making.

The obvious question was: How do the dimensions of teaching, student achievement, and student ratings relate to each other? Several studies correlated the dimensions with ratings or achievement measures such as tests or grades. Kenneth A. Feldman conducted an extensive review and meta-analysis (the reanalysis of data from other studies, compiled to provide a large set of results from a variety of similar situations), publishing the results in a 1989 *Research in Higher Education* article. He identified seventeen principal dimensions and ranked them with respect to the strength of their correlations with achievement and student ratings. There was a good deal of consistency in the findings. Teacher organization, presentation skills, the perceived outcome of instruction (i.e., learning or its results), and stimulation of interest in course content were the most strongly correlated with achievement and were also strongly correlated with ratings. Several other dimensions had similar rankings with respect to achievement and ratings and only three items had quite different rankings. Teacher helpfulness and teacher encouragement/openness were tied at fifth/sixth rank with respect to achievement but were only sixteenth and eleventh with respect to ratings. Intellectual challenge was ranked thirteenth with respect to achievement but fourth with respect to ratings. Feldman also arrayed the student and teacher rankings of the importance of the dimensions. The rankings were generally similar to each other with two exceptions: Students ranked stimulation of interest in course content in third position while faculty ranked it only twelfth, and students ranked intellectual

challenge sixteenth while faculty ranked it sixth. The importance rankings were generally similar to the correlational rankings. Feldman attributed differences to the variety of the subdimensions that comprised the general dimensions and acknowledged that knowing the general dimensions did not identify specific ways in which teachers could develop and provide instruction that would be most effective.

Attempts to isolate specific behaviors were made by Harry G. Murray and Robert D. Renaud. Murray and Renaud broke down general dimensions such as clarity and organization into lists of *low-inference behaviors*—behaviors that could be directly observed and recorded. For example, rather than having an observer infer the teacher's degree of preparation based on other factors such as the use of class time, Murray and Renaud identified observable behaviors such as reviewing the topics of previous meetings; providing outlines; giving overviews of material to come; using headings, diagrams, and other organizing features; and summarizing frequently. Such behaviors could be learned and practiced by teachers in order to enhance organization and improve student learning.

### The Future of College Teaching

No discussion of college teaching can omit the major changes brought about by two factors: the changes in the student population and the tremendous growth of distance and technology-based teaching and learning. The obvious differences between traditional, face-to-face instruction for young residential students and distance, computer-based, and other instructional formats for older learners are dramatic and have major implications for college teaching. Many of the methods and strategies for on-campus teaching simply do not transfer to older, off-campus learners. In effect, a major new agenda for research is necessary to test the extent to which what is currently known can inform teaching and learning in these new situations. If the premise of such differences is accepted, then another issue is raised: the extent to which current methods of measuring teaching effectiveness are usable. The best response at the moment is that simple replication of current methods of evaluation is not sufficient. New methods and instruments must be devised that take the changes into account and provide accurate information that can be fairly interpreted and used.

## Summary

From the various avenues of research, it has been possible to develop useful guidelines for teachers, but these are not guaranteed techniques for successful teaching. No such list has yet been devised, and it would be foolish to presume that it will be, for no single technique will work in every situation, and even carefully developed sets of strategies may be more or less effective depending upon the context in which they are used. If anything is understood about college teaching, it is that to succeed it must be flexible and responsive to the teachers, students, and situations in which it takes place. In the future it is safe to assume that the combination of existing findings and what is learned in investigating new teaching and learning situations and tools will be required knowledge for all college teachers. This increased responsibility, in union with other expanding roles and responsibilities of faculty and ongoing changes in higher education, may drastically alter the profession of college teaching and the way it is practiced.

*See also:* FACULTY ROLES AND RESPONSIBILITIES; GRADUATE SCHOOL TRAINING.

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MICHAEL THEALL

## COLLIER, JOHN, JR. (1913–1992)

A founder of and one of the most significant contributors to the discipline of visual anthropology, John Collier Jr. applied still photography and film to cross-cultural understanding and analysis. He used photography for education in two ways. First, his principle work, *Visual Anthropology: Photography as*

a *Research Method* (with Malcolm Collier, 1986 [1967]), defined the discipline for many years, and stimulated the creation of visual foci in anthropology departments nationally and internationally. The work offered methods by which photographs may sensitize students to cross-cultural nuance and allow them to find correlations between visual behavior, material culture, and cultural and psychological values. Collier's second key work, *Alaskan Eskimo Education: A Film Analysis of Cultural Confrontation in the Schools* (1973), applied visual analysis to a critique of "white-centered" education in Native American schools. Collier showed that irrespective of lesson content, teaching styles were ineffective if they were insensitive to indigenous cultural modes of learning.

### Disabilities and Early Education

Collier's life-long commitment to visual communication and cross-cultural education was born in the unique circumstances of his youth. His father was John Collier Sr., indigenous-rights activist and commissioner of the Bureau of Indian Affairs under Franklin Roosevelt. As a boy, Collier Jr. spent many years living in and near pueblos of New Mexico, surrounded by Indian elders and the Western literary and political luminaries in his father's circle. A motor vehicle accident left Collier at the age of ten with a profound hearing impairment as well as motor and cognitive disabilities. He was thereafter unable to perform adequately in school, and he lost much of his father's regard. Both parents had been active in the home schooling movement, however, and Collier's mother Lucy took on the boy's personal education. Equally important were the Taos Indian elders who treated young Collier as one of their own and guided him in the ways of the Pueblo until he reached the age of puberty.

The near uselessness of formal, Western education for Collier contrasted starkly with his mother's tutelage and the silent life lessons he gained from Taos elders. Collier's subsequent training in painting and his mastery of still photography were achieved through apprenticeships, experiences of the type he would later call true education, not mere schooling.

### Visual Anthropology and Cultural Blindness

Collier's complex disabilities, particularly with hearing, made him intensely sensitive to the visual world. The disabilities made it necessary for him to seek beyond words to alternative bases of knowledge. They

made it possible for him to appreciate radical differences between Western worldviews and those of the pueblos. The "Indian experience," Collier wrote, "was in essence a pure nonverbal sensibility, and coming from a constantly talking intellectual society, [one might be] overwhelmed by this quietude" (1986, p. xix). Largely divorced from the words spun in his father's literary circles, Collier came to distrust theoretical constructs. Instead of seeing, he concluded, Westerners only learned to read. Collier's goal for training Western anthropologists and educators, then, was to liberate them from their cultural blinders, an inhibited dependence on print-based understanding. In its place he offered means to read cultural values visually. Visual messages are more reliable than those that people know how to express in words.

### Photographs as Records and Elicitation Tools

Collier proposed two fundamental uses of photography with which nonverbal, cross-cultural meanings can be interpreted. First of all, the camera is an eye with a memory. Used systematically, photographs can track movement and change, can allow accurate counts and measurements, and can offer viable comparisons within and across cultures. Without principled method, the cross-cultural photographer will easily lapse into idiosyncratic or ethnocentric impressionism. In contrast, though, methodical documentation—time and motion studies, material culture inventories, and the recording of cultural processes—produces photographs that are researchable. In them, statistically representative data can provide reliable bases for understanding.

Collier's faith in the possibility that photos may disclose their visual memories in untroubled ways was shared by important contemporaries, including Gregory Bateson, Margaret Mead, Edward T. Hall, and Ray Birdwhistell. Collier expressed a modernist optimism about the possibility of photographic cross-cultural education. Later scholars, however, have rejoined that photographs, like all forms of representation in social science, are problematic. Statistical method may strengthen ethnocentrism by disguising it with the appearance of objectivity. Further, photographic depiction is rife with inequalitarian power relations.

Collier did not answer these criticisms directly, but dedicated enormous energy to disclosing inequality of power, particularly with respect to Native Americans. His second crucial application of pho-

tography to cross-cultural education scuttled the idea that pictures might somehow represent the world objectively or become neutral politically. In collaboration with psychiatric-anthropologist Alexander Leighton, Collier used culture-specific photographs in the place of Rorschach and Thematic Apperception Tests. Informants from different ethnic and class groups, shown the same collection of photographs, systematically identified different culture elements and projected different values on them. By comparing these contrasting responses, Collier could give a composite of how diversified communities interpret their visual world.

### Cultural Vitality and Identity

Collier understood education in a very broad sense, as that which developed a child's well-being in the round. His study of Alaskan Eskimos (Inuit) weighed the emotional and psychological effects of Western-styled education on children, and concluded that most of it provided "humiliation instead of a stimulating fulfillment" (1973, p. 114). Credentialing, too, the "White backlash of conventional teacher training," could destroy the effectiveness of Eskimo educators (1973, p. 119).

Collier feared that despite its benefits, Western education undermined the cultural energy that is the greatest strength of Native American identity, and the greatest potential lesson for word-obsessed students. This energy is spiritual, something beyond the visible and audible. Yet, Collier felt, photography can help recover the pure intelligence that all may possess before onset of adult inhibition. Much of this energy and intelligence may be found in the enormous collection of photographs taken by John Collier Jr., stored in the Maxwell Museum of Anthropology at the University of New Mexico.

*See also:* MULTICULTURAL EDUCATION.

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PETER BIELLA

## COMENIUS, JOHANN (1592–1670)

A prolific scholar on pedagogical, spiritual, and social reform, Johann Amos Comenius was born in the village of Nivnice in southeast Moravia (now part of the Czech Republic), and became a minister in the Unity of Brethren church, a Protestant sect. Political and religious persecution during the Thirty Years' War (1618–1648) drove Comenius from his homeland in 1628, and despite his earnest hopes for repatriation, Comenius never returned. He found refuge in Poland, England, Prussia, Hungary, and the Netherlands as a scholar and bishop of his church until his death in Amsterdam. Pained by the political and religious strife that plagued seventeenth-century Europe, Comenius authored more than 200 works as he searched for a method to alleviate human suffering while uniting all people and religions through a common appreciation of God.

### Contributions

Comenius is best known for his innovations in pedagogy, but one cannot gain an adequate appreciation of his educational ideas without recognizing his religious and metaphysical convictions. Despite the prevalent human suffering of his day, Comenius remained optimistic about the future of mankind, as he believed in the immanence of God and the imminence of God's kingdom on Earth. As God's creations, humans were necessarily good, not corrupt. Comenius also felt that Christ's Second Coming would end human strife but that people themselves could act in ushering the new millennium by engaging in *pansophy*, or the lifelong study of an encyclopedic system of human knowledge. By seeing the harmony among everything in the universe, all human beings would come to acknowledge God's glory and presence in themselves and in nature.

Specifically, Comenius characterized human life—from the mother's womb to grave—as a series

of educational stages in which objects from nature would serve as the basis of learning. In this, he was influenced by the writings of the English statesman Sir Francis Bacon, an early advocate of the inductive method of scientific inquiry. Comenius believed that true knowledge could be found in things as they existed in reality and when one came to understand how they came about. As a result, Comenius urged all people to recognize the interconnections and harmony among philosophical, theological, scientific, social, and political facts and ideas. That way, one could reconcile three seemingly distinct worlds: the natural, the human, and the divine. Comenius felt that disagreements among religious, scientific, and philosophic enterprises arose because each held only a partial understanding of universal truth—but that all could exist harmoniously through pansophic awareness. Viewing the human mind as infinite in its capacity (as the benevolent gift of God), Comenius advocated universal education so that the souls of all people would be enlightened in this fashion. Through universal education and pedagogy, pansophy would eliminate human prejudice and lead to human perfection—a state of being that God had intended for man.

Comenius found fault with many of the educational practices of his day. In particular, he disapproved of the scholastic tradition of studying grammar and memorizing texts. He lamented the haphazard and severe teaching methods in European schools, which tended to diminish student interest in learning. Finally, Comenius felt that all children—whether male or female, rich or poor, gifted or mentally challenged—were entitled to a full education, and he regretted that only a privileged few received formal schooling. For Comenius, all of these educational shortcomings were especially urgent, as they hindered mankind's progress to the new millennium. As a result, he attempted to remedy these problems by authoring a number of textbooks and educational treatises.

### Works

Perhaps Comenius's most familiar work is the *Great Didactic*, which he originally wrote in 1632. As Comenius held the conviction that pansophy was necessary for the spiritual salvation of humankind, he reasoned that a good man (a rational being who understood God through nature), and ultimately a good society, could only be created if all people acquired encyclopedic knowledge. In order to guaran-

tee that this would occur, Comenius delineated a universal teaching method or standard set of pedagogical postulates that would facilitate an effective communication of knowledge between the teacher and student. Delineating four levels of schools lasting six years each, Comenius was one of the first educators to recommend a coherent and standard system of instruction. Indeed, Comenius suggested that the universality of nature dictated that all people shared common stages of intellectual development. As a result, he reasoned, teachers needed to identify their students' stages of development and match the level of instruction accordingly. Lessons should proceed from easy to complex at a slow and deliberate pace. Furthermore, Comenius argued that the acquisition of new material began through the senses—an idea that reflected the rise of empiricism in the seventeenth century.

Ultimately, Comenius believed that the purpose of learning was eminently practical: not for ostentatious displays of rhetorical acumen, but for preparing for the Second Coming of Christ. Comenius derided the educational legacy of the Renaissance with its focus on classical grammar and even the Reformation with its mechanical teaching of the catechism. By employing the methods presented in the *Great Didactic*, however, Comenius argued that teachers could ensure that they produced knowledgeable and virtuous students who would continue to learn throughout their lives. In this way, he viewed teaching as a technical skill; if performed correctly, one could guarantee the results.

In 1631, Comenius published *The Gate of Languages Unlocked*, a Latin textbook. In it, he recommended that teachers employ the students' native language as a necessary frame of reference for unfamiliar words to become meaningful. Comenius also advocated that teachers begin with simple lessons for students to master before proceeding to more complex exercises. It became the standard Latin textbook in Europe and America throughout the seventeenth and much of the eighteenth centuries. One contemporary scholar has suggested that the incremental organization and explicit goals of the text anticipated the principles of mastery learning.

In 1658, Comenius wrote another Latin textbook, *The World in Pictures*, one of the first reading books to incorporate illustrations. Enormously popular in Europe and America, it was printed in the United States until 1887. Again, reflecting Comenius's belief that all learning began with the senses, *The*

*World in Pictures* included numbered parts of illustrations, each of which corresponded to a word. It also presented a simplified vocabulary and specific examples to help students understand the relevant concept or rule. And like the *Gate of Languages Unlocked*, Comenius attempted to present lessons in a way that reflected the order of nature, although some scholars have noted that Comenius manipulated perspectives and exaggerated proportions to facilitate the lesson at hand. Some educators consider the *World in Pictures* a pivotal text in pedagogical innovation that opened the way for modern-day teaching instruments such as audiovisual aids and electronic media.

Frustrated by the fragmentation of European institutions of higher education, along with their tendency to impose knowledge authoritatively and discourage critical thinking, Comenius advocated the creation of a universal college. In *Way of Light*, which he wrote while visiting England in 1641 and 1642, Comenius outlined his vision for establishing universal textbooks and schools, a common language, and a pansophic college. Comenius believed that a pansophic college would contribute to the establishment of an intellectual and spiritual consensus in the world by propelling, steering, and coordinating the research of all scholars. This “college of light” would be located in a prominent and accessible locale and utilize a common language in order to facilitate the inclusion of all European scholars of prominence. It would also govern an ideal world and disseminate knowledge so that an understanding of God’s creations and glory would not become the exclusive possession of the privileged. Such an institution would therefore unite all human beings in the world both culturally and religiously. Although the pansophic college never came about, Comenius’s treatise inspired the establishment of the Royal Society in England (founded in 1662) and the Berlin Royal Academy of Sciences (founded in 1700).

Comenius’s belief that knowledge and wisdom could be merged into a single pan-science drew the criticism of the French philosopher René Descartes, who sought to free science from theology in a quest to gain knowledge objectively. Indeed, Comenius’s pansophic ideas fell out of favor by the late seventeenth century, as they became incongruous with the prevailing epistemological sensibilities of the Enlightenment.

In the past century, however, a number of educators revived the pedagogical elements of Comenius’s legacy. They cited his emphasis on early childhood education and his aversion to corporal punishment as precursors to the German educator Friedrich Froebel’s kindergarten idea. They lauded Comenius’s call for universal education and a carefully graded system of schools. They noted his innovative use of learning aids such as the illustrations in the *World in Pictures* and his preference for focusing on actual things rather than rhetoric in education. Finally, they praised Comenius’s desire to make learning enjoyable and more meaningful through the use of dramatic productions and other innovative methods.

Still, one must remember that these pedagogical innovations derived from Comenius’s urgent desire for the alleviation of human suffering, the mending of political, epistemological, and spiritual divisions, and ultimately, man’s gradual comprehension of God’s will and glory.

*See also:* PHILOSOPHY OF EDUCATION.

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SEVAN G. TERZIAN

## COMMENCEMENT

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The culmination of education for the high school student, the commencement ceremony, or graduation, is a major event and transition point for students, parents, and teachers. It is a time for students, parents, and teachers to celebrate their hard work and accomplishments. Students take pride in having met the graduation requirements that were established by their state and local board of education; parents celebrate the accomplishments of their children; and teachers and school administrators commemorate the fruits of their labors. Commencement exercises serve as a transition point for the individual members of the graduating class who will follow diverse paths into futures that may include higher education, the military, and the world of work.

The purpose for the commencement exercise is to acknowledge the students who have successfully met the requirements for high school graduation, usually with the presentation of a diploma. Graduation requirements differ from state to state and from school district to school district within a state. The accountability movement that took place during the 1990s resulted in more stringent requirements for high school graduation, leading to the creation of state tests that students must pass in order to earn a traditional diploma. States have responded to demands that high school graduates must be able to demonstrate mathematical and language skills needed for success in higher education and the workplace by creating a series of diplomas. The traditional diploma that was once awarded to all students who participated in the commencement exercise has been replaced in some states by differentiated diplomas and certificates. The new diplomas include the traditional diploma, diplomas for exceptional students

whose handicapping conditions prevent them from meeting all graduation requirements, and certificates of attendance for students who have attended classes without passing all graduation requirements. By replacing the traditional diploma with awards that differentiate between students based on their achievement, high schools attempt to clearly designate the knowledge and skills of students who have completed study.

The typical commencement ceremony takes place in the school auditorium, gymnasium, or football stadium. Parents, friends, and teachers are usually seated in designated areas prior to the time scheduled for the ceremony to begin. School officials are typically assembled on a stage in front of the assembled guests, and special seating is reserved for the graduates between the stage and the audience. At the appointed time, the graduates march into the arena as music is played by the school band or over the public address system. Students may be dressed in matching caps and gowns; some students may wear special insignia that denotes membership in honor societies or other significant accomplishment. The ceremony usually includes speeches by the senior class president, the valedictorian, and a guest speaker. Instrumental or choral music may be included in the program. The culminating event is the presentation of graduates and the presentation of diplomas and certificates. Students are often called to the stage to receive their diplomas from the principal.

At some schools students are given responsibility for the program. At these commencement programs, students may talk briefly about their studies, discuss their accomplishments, or present a short play to dramatize some school experience. They may also recognize honor students or students whose accomplishments have been outstanding. The commencement program can include weeklong demonstrations and exhibits of student work prior to the ceremony.

Commencement planners encountered a number of challenges during the last two decades of the twentieth century. One of these challenges was finding a facility large enough to accommodate the families and friends of graduates who wanted to attend the celebration. Schools often use their school football stadium if one is available. This decision often solves one problem only to create another if weather conditions are not conducive to an outdoor ceremony. Since commencement programs typically occur in the spring, rain and lightning may force the pro-

gram indoors. If weather does force the program indoors, the number of parents and guests who can attend may be limited.

Another potential problem for school officials is graduate behavior at commencement. Some students choose to celebrate by engaging in minor pranks at their commencement, such as throwing a beach ball around during speeches to handing the principal a marble as the diploma is presented. Students may also decorate their caps with decorations or a message. Educators who believe that commencement should be a formal ceremony have tried a number of strategies to prevent pranks from occurring and have enjoyed varying degrees of success.

During the second half of the twentieth century, United States courts handed down a number of rulings that defined the constitutional relationship between public schools and religion. None of those rulings directly addressed the constitutionality of prayer at public school commencement. The rulings did, however, limit prayer initiated by school officials in the classroom and at school events such as football games. Prior to these rulings, it was common practice for schools to invite a local clergy member to pray as a part of the commencement program. As schools wait for the United States Supreme Court to rule on prayer at commencement, some high schools are content to allow students to pray if they so choose while others expressly forbid students who make presentations from praying.

Some elementary and middle schools conduct an end-of-year ceremony that is similar to the high school commencement. These ceremonies typically include the presentation of awards and recognition of student accomplishments. They do not include the presentation of a diploma. Elementary and middle school ceremonies that closely parallel the high school commencement have been criticized as being inappropriate for students who may be tempted to drop out of school before high school graduation.

*See also:* SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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KERMIT BUCKNER

## COMMERCE OF EDUCATION

By the end of the twentieth century, the world economy had shifted in two important ways. First, the free flow of capital had created a high level of global interdependency. Second, production and distribution were no longer regionally bound within the nation-state. Trade agreements provide evidence of these trends. Educational commodities in the global marketplace are evident as services and goods. Though increasingly evident, however, the effects of a growing global economic interdependence are not well understood theoretically or empirically.

Reactions to these changes range from an acceptance of democratic and economic possibilities to a resistance to open-market trends. Proponents embrace the economic order because these initiatives move their country toward the free flow of information and capital. Opponents recognize a power imbalance, and fear a loss in national identity. The arguments rest on the standardization processes couched within trade agreements.

Trade agreements encourage countries to participate in international standards organizations with a view toward harmonizing the technical regulations of individual countries. Organizations engaged in standards development call for increased certification, accreditation, and rigorous assessment of these standards. Adherence effectively allows labor to move freely across national boundaries. More subtly, it seems that nonelected governance bodies (e.g., a trade agreement) can become imbued within the architecture of a country's educational system.

### Trade Agreements and the U.S. Economy

Trade agreements typically deal with the commodification of raw materials and manufactured goods. There are few systematic studies that address the practical impact of trade agreements on education. This is because the notion of treating services as tradable commodities is new, both internationally and nationally. The General Agreement on Trade in

Services (GATS), concluded in April 1994, was the first broadly based international agreement on trade in services. In the 1980s the U.S. services sector moved into the competitive market, driven by the deregulation of telecommunications, financial services, banking, and transportation.

Trade agreements rarely address service sectors broadly, nor is education as a service generally addressed. For example, consider three ways in which education has been introduced in these agreements:

1. Global agreements, such as the General Agreement on Tariffs and Trade and the World Trade Organization (GATT/WTO), generally mention education, but only as a low priority service item.
2. Regional agreements, such as the European Community, the North American Free Trade Agreement (NAFTA), and the Association of Southeast Asian Nations (ASEAN), provide inconsistent structural recognition of education. For example, the Single European Act dealt with education issues only at the national level. However, when polled, a majority of Europeans felt that “testing, certification, technical standards, and science and research” should be handled at the European level.
3. Bilateral agreements, such as those between Japan and United States, open up markets for provisional time periods.

The dominant trend in every facet of the United States economy is the shift from the production of goods to services. In 2000 the U.S. export of private services totaled \$278.6 billion, exceeding imports by \$78 billion.

Educational services encompass both programs and ancillary services. Programs are defined as sets of curricular activities that may lead to a certificate or degree. These may include aspects of the following: elementary, secondary, postsecondary, university, vocational, and technical education; child care; special education; adult and continuing education; corporate training; distributed learning; and technology-based training. Ancillary services are a necessary component to managing the needs of individuals and the logistics of servicing equipment. Activities include: the design, marketing, and sales of testing, certification, test preparation, tutoring, and other enhancement programs; management consulting; and administrative and human resources.

Educational goods include the design, manufacture, and sale of textbooks, teaching materials, vocational and scientific equipment, software, videos, multimedia, school supplies, and furniture.

In 2000 U.S. exports of educational services totaled \$10,287 million, which exceeded imports by \$8,144 million and doubled the amount of exports in 1990 (\$5,126 million). Asia and the Pacific Rim accounted for 55 percent of the 2000 export volume; Europe for 17 percent; and South America for 13 percent. In 1997 exports of educational goods included \$11,600 million worth of textbooks and supplementary materials; \$4,800 million in technology; and \$3,000 million in testing and test preparation.

### **Educational Changes**

Changes to educational systems are neither monolithic nor consistent. Changes in the content and form of educational services and goods occur at all levels and across cultures. The changes can roughly be categorized as being technological, organizational, social, or adaptive. These are not mutually exclusive categories, but provide a way to understand the complex interplay between global trade, the free-flow of information and labor, and the impact of trade on education. The role of technology in education can illustrate this complex interplay.

Information technology is one of the fastest-growing economic sectors in the global economy almost without exception in every country. That is, countries at all different phases of development recognize the importance of being technologically connected. This may include funding projects for telecommunications infrastructure, buying hardware and software, or any type of technology training. Countries like South Africa or the twelve newly independent states of the former Soviet Union represent countries in transition to a market economy. Examining the telecommunications trade occurring in these countries can provide a helpful framework for imagining how to de-commodify education in these countries. Telecommunications in Sub-Saharan Africa has grown to 8 percent of the total market of goods and services. In Botswana the leading sector for U.S. exports and investment is in telecommunications; in Cote d'Ivoire telecommunications is the third leading export sector; in Guinea telecommunications is the sixth leading export sector and in Namibia it ranks fourth. In all cases, telecommunications follows agriculture or civil infrastructure sectors; i.e., it is ranked more im-

portant than household goods. Advanced computer technologies in multimedia, real-time delivery and e-mail through Internet connections, and the ease of use of interface of personal computer systems can drastically alter the traditional form and content of education. U.S. educational technology funding went from \$23 million in 1994 to \$766 million in 2000. In 1996 the Technology Literacy Challenge was issued in order to provide a major commitment of resources to connect every classroom to the Internet, expand access to modern, multimedia computers; make high-quality educational software an integral part of the curriculum; and enable teachers to effectively integrate technology into their instruction. Some argue, however, that access to computers does not improve reading scores, but that access to books does, and that money spent on computers is therefore better spent on libraries and reading programs.

At the postsecondary level, the impact of technology on education is illustrated by the growth in distance education, which is perceived to overcome geographic barriers to access, and may reduce costs. On the one hand, the challenges involved in implementing distance education include the need to handle organizational, management, and educational changes over the short and long term; limited access to quality programming among certain populations defined by race, social class, or geography; the need for teachers to learn new approaches to teaching, monitoring, and mentoring to adequately serve their students; and the need for standards of quality for new programs. On the other hand, the move to commercialize and digitize curriculum delivery is dismissed as an attempt to de-skill and get rid of teachers with little consideration toward the pedagogical impact. This viewpoint sees automation as a strategy for reducing the need for highly skilled tasks that are expensive to maintain; in the field of education teachers are highly skilled at educational tasks. When their tasks become automated then the need for teachers with those skills is reduced, thus the expectation of what is wanted from a teacher, a teachers' skills bank, is that one can get by with or pay less for teachers who are less skilled. The general caveat is to warn against addressing people as information processors or to redefine complex human issues such as trust as simply information.

The digital classroom gives rise to new teaching and learning styles that can be more flexible and adaptable, yet it raises issues of equity and access that

are not fully understood. Curricular changes are extrapolated to the entire university level with the creation of virtual universities. Western Governors University (WGU) illustrates the move from a *bricks and mortar* to a *clicks and mortar*, virtual institution. WGU is a collaborative effort of eighteen western states to create a fundamentally online higher-education program. The WGU plan ensures that it be "market-oriented, independent, client-centered, degree-granting, accredited, competency-based, non-teaching, high quality, cost-effective, regional, and quickly initiated."

In general, commercialism and privatization are advocated as organizational mechanisms to address controversies around how best to improve educational efficiency, cater to pluralistic preferences, make institutions more accountable, and reduce government spending. The phrase *school/business relationship* can be misleading, since such partnerships encompass everything from genuine altruism to cynical exploitation of the youth market. For example, at the K-12 level, a school may receive computer equipment in exchange for electronic marketing to students; or a school may receive free pizza from a specific pizza franchise if students read so many books. At the university level, partnerships include university connections to science parks that impact the processes of invention, innovation, technology transfer, commercialization, and enterprise. Many universities encourage faculty entrepreneurship, provide support systems, and promote university-industry links. These changes in the university environment effected by the increasing roles of knowledge and technological innovation can lead to healthy economic benefits, but excessive commercialization may undercut the mission of public universities. Knowledge generation no longer in the public domain becomes owned by or proprietary to corporations and individuals connected to technology transfer license agreements. The ability to advance scientific knowledge can be restricted by access to proprietary knowledge.

### Theory

Globalism can be examined from several angles. In a general sense, globalism can refer to the process in which events in distant locales make a difference in the lives of people in a local area. Global processes have heavily influenced changes in technology, changes in capital, and changes in the mobility of labor. No one theory of globalization that tries to ac-

count for its effects can capture the inherent ambiguity of the multitude of ongoing processes. Some theories of globalization say it has a homogenizing effect, resulting from the imposition of capitalist logic. Other theories say it creates heterogeneity by circulating goods, ideas, and culture, thus creating new hybrid cultures that emerge from processes of globalization, e.g., youth subcultures. Others claim that globalism is functionally equivalent to modernity, but is a more neutral term.

However, globalization can be construed as a cover word for what used to be called *imperialism*. This is a Marxist formulation, describing capitalism as having reached the imperialist stage, though rather than imposing its will through force and colonization, it does so through the force of advertising and commodification.

It is not a question of whether or not the global economy will happen, but a question of the global economy on whose terms. What is at stake is both how globalization is theorized and how technologies are used to better understand the complex interdependencies between commerce and education.

*See also:* GLOBALIZATION OF EDUCATION; INTERNATIONAL TRADE IN EDUCATION PROGRAMS, GOODS, AND SERVICES.

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LESLIE HENRICKSON

# C

CONTINUED

## COMMON SCHOOL MOVEMENT

The ubiquity of “common” schools in the United States belies both the long effort to establish a system of publicly supported elementary and secondary schools and the many controversies that have attended public schools before and since their creation. The belief that *public*, or *free*, schools and *pauper* schools were synonymous terms, and that such schools were only for children of the poor, long hampered the acceptance of the idea that publicly supported schools could and should exist for all children, regardless of social class, gender, religion, ethnicity, or country of origin. Moreover, the European and colonial insistence that responsible parents need concern themselves only with the education of their own children through the avenues of the family, church, or the voluntary efforts of like-minded citizens only slowly gave way to the conviction that publicly supported common schools might serve all children equally, and in so doing advance the moral, social, and economic interests so vital to the nation.

The common school movement took hold in the 1830s, and by the time of the Civil War organized systems of common schools had become commonplace throughout most of northern and midwestern states. Expansion of common school systems into the southern and far-western states progressed at a slower rate, but by the opening years of the twentieth century publicly supported systems of common schools had become a cornerstone of the American way of life. However, the emergence of a system of public schools across the nation was neither an inevitable nor an uncontested movement. Moreover, its survival into the future may prove to be as problematic as was its development in the past.

## **Colonial and Republican Schooling**

From the earliest days of American settlement, education has been a concern. Colonists up and down the Atlantic seaboard established local varieties of both *fee* and *free* schools as community conditions, benevolence, and population increase seemed to warrant. However, the Puritans who established the New England colonies displayed a special eagerness to provide for education and literacy as bulwarks against religious and cultural decline. In 1635 Boston town officials saw the need to hire a schoolmaster “for the teaching and nurturing of children with us” (Cremin 1970, p. 180). The Boston Latin Grammar School opened the next year, along with the founding of Harvard College.

Other New England towns moved haltingly toward providing support and encouragement for formal schooling in the same period. The famous Old Deluder Satan Act of 1647 reflected the urgency felt by some Puritan leaders. While not requiring school attendance, this pronouncement by the Massachusetts General Court mandated that towns with fifty or more families were to make provision for instruction in reading and writing, and that in communities of a hundred households or more, grammar schools should be established that would prepare boys for entry into Harvard College. Although noncompliance could result in a fine levied against a town, not all towns adhered to the requirements of the enactment. Throughout the colonial period, provisions for schooling remained very much a matter of local, and somewhat haphazard, arrangements.

Town schools in New England had their parallel in the form of local schools set up by transient schoolmasters and various denominational groups who filtered into the Middle Atlantic colonies and

the southern regions of the country. The general attitude in many parts of the American colonies was framed by Virginia's governor, Sir William Berkeley, who in 1671 wrote that in his colony, education was basically a private matter. Virginians, he said, were following "the same course that is taken in England out of towns; every man according to his own ability in instructing his children" (Urban and Wagoner, p. 22–23).

The coming of the American Revolution and the influence of Enlightenment ideas began to challenge the laissez-faire doctrines of the colonial period, however. Recognizing that the dictum of "every man according to his own ability" might work rather nicely for the economic elite but not for the mass of the population (or for the health and survival of the emerging nation), another Virginia governor, Thomas Jefferson, took the lead in setting forth plans calling for more systematic and encompassing educational arrangements in his native state. As part of a massive reform package, In 1779 Jefferson proposed *A Bill for the More General Diffusion of Knowledge*. Jefferson's general plan envisioned public support for secondary schools and scholarships for the best and brightest students to attend the College of William and Mary. But the foundation of his system was basic education for the mass of the population.

Jefferson called for the division of each county into wards, or "little republics," and the creation therein of elementary schools into which "all the free children, male and female," would be admitted without charge. These publicly supported elementary schools would equip all citizens with the basic literacy and computational skills they would need in order to manage their own affairs.

Civic literacy was an essential component of Jefferson's plan. He recommended the study of history as a means of improving citizens' moral and civic virtues and enabling them to know and exercise their rights and duties. Projecting a theme that would echo throughout the common school movement in the next century, Jefferson conceived of elementary schooling as basic education for citizenship; it was to be a public investment in the possibility of self-government and human happiness at both the individual and social levels. In the words of Jefferson: "If a nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be" (Ford, pp. 1–4). In a letter to George Washington in 1786, Jefferson declared: "It is an axiom in my

mind that our liberty can never be safe but in the hands of the people themselves. This it is the business of the state to effect, and on a general plan" (Boyd, pp. 150–152).

Jefferson was by no means alone in his concern over the educational requirements of the new nation. A number of other prominent Americans, some of whom differed quite sharply with Jefferson (and each other) on certain political, religious, and educational particulars, nonetheless shared his general sense of urgency regarding the necessity of new approaches to education for the new nation. A decade after Benjamin Rush signed his name to the Declaration of Independence, he declared that the war for independence was only "the first act of the great drama. We have changed our forms of government, but it yet remains to effect a revolution in principles, opinions, and manners so as to accommodate them to the forms of government we have adopted" (Butterfield, pp. 388–389). Rush called for a system of schools in his native state of Pennsylvania, and he then expanded his plan into one for a national system of education. Directly attacking the argument that any system of publicly supported schools would require a repressive taxation system, Rush set forth an argument that, like Jefferson's political rationale, would become a vital part of the movement that led to the establishment of common schools. Rush argued that the schools he was advocating were "designed to *lessen* our taxes." His argument merits quotation:

But, shall the estates of orphans, bachelors, and persons who have no children be taxed to pay for the support of schools from which they can derive no benefit? I answer in the affirmative to the first part of the objection, and I deny the truth of the latter part of it. . . . The bachelor will in time save his tax for this purpose by being able to sleep with fewer bolts and locks on his doors, the estates of orphans will in time be benefited by being protected from the vanities of unprincipled and idle boys, and the children of wealthy parents will be less tempted, by bad company, to extravagance. Fewer pillories and whipping posts and smaller jails, with their usual expenses and taxes, will be necessary when our youth are more properly educated than at present. (Rudolph, p. 6–7)

Noah Webster, whose “blue-backed” *American Spelling Book* and *American Dictionary of the English Language* did much to help define the new nation, agreed with Jefferson and Rush on the educational needs of the fragile American republic. A schoolmaster and later a founder of Amherst College, Webster considered the role of education so central to the working of a free government that he flatly asserted it to be the most important business of civil society.

However, in spite of the pleas and schemes of these and other “founding fathers,” the new nation ended the eighteenth century with a patchwork pattern of schools, most of which were conducted under the auspices of private schoolmasters or sectarian religious groups. Schools essentially served private purposes and educational attainment reflected the religious, racial, class, and gender differences in society. Even so, the educational requirements for work and a productive life for most people in the latter half of the eighteenth century and the early nineteenth century were modest, regardless of one’s background. Skills and knowledge were often learned through one’s labor within the family or through apprenticeship. However, the economic realities and social conditions that ushered in the nineteenth century prompted renewed calls for expanded and better organized approaches to the education of the public.

### Changes in the Antebellum Era

Although the American mode of education in 1800 bore remarkable resemblance to that of the pre-Revolutionary era, by 1900 public education was so radically different and far-reaching that the common school movement of the 1800s is widely regarded as the most significant change or reform in nineteenth century American education. This dramatic change was precipitated by a number of factors, including industrialization and the rise of the factory system; labor unrest; the spread of merchant capitalism; the expansion and economic influence of banks and insurance companies; transportation advances brought on by steam travel on inland and coastal waterways and by railroad; burgeoning population growth (including the arrival of large numbers of Roman Catholic immigrants who challenged the social and cultural norms of the mostly Protestant citizenry); and the westward migration of settlers, many of whom sought to establish the eastern tradition of town schools on the frontier.

To a large extent, the spread of common schools was an institutional response to the threat of social fragmentation and to a fear of moral and cultural decay. Reformers of various types—ministers, politicians, Utopians, Transcendentalists, workingmen, and early feminists—saw in schools, or at least in education, a way to ameliorate the disturbing social vices that were increasingly associated with swelling urban centers. Schools were seen as a means of turning Americans—whether “native” or “foreign born,” rural or urban—into patriotic and law-abiding citizens, thereby achieving the Jeffersonian goal of securing the republic.

Protestant denominations began putting some of their sectarian differences aside and joined forces to establish charitable schools for poor children in cities like Philadelphia and New York. These charity schools were precursors of nonsectarian public common schools in the sense that they became organized into centralized bureaucracies that received public subsidies. Interdenominational cooperation among Protestant denominations became a key ingredient in, and an essential feature of, the gradual acceptance of the common school ideal.

### The Rise of the Common School

The common school movement began in earnest in the 1830s in New England as reformers, often from the Whig party (which promoted greater public endeavors than the comparatively laissez-faire Democrats), began to argue successfully for a greater government role in the schooling of all children. Horace Mann, often referred to as the Father of the Common School, left his career as a Massachusetts lawyer and legislator to assume the mantle and duties of secretary to the newly established state board of education in 1837.

Mann’s commitment to common schools stemmed from his belief that political stability and social harmony depended on universal education. He stumped the state arguing for common schools that would be open to all children, and he preached that support for nonsectarian common schools was a religious as well as a civic duty. His message to the working classes was the promise that “education . . . is the great equalizer of the conditions of men, the balance wheel of the social machinery” (Cremin 1957, p. 65). To men of property he asserted that their security and prosperity depended upon having literate and law-abiding neighbors who were competent workers and who would,

via the common school, learn of the sanctity of private property. To all he proclaimed that Providence had decreed that education was the “*absolute right* of every human being that comes into the world” (Cremin 1957, p. 87).

Mann was joined in his crusade for common schools by like-minded reformers in other states. In his own state, James G. Carter played an important role in pushing Massachusetts to establish normal schools to prepare teachers for the emerging “profession” of education. Henry Barnard played a leading role in Connecticut and Rhode Island, as did Samuel Lewis and Calvin Stowe in Ohio, along with numerous others across the country. Catharine Beecher, sister of abolitionist author Harriet Beecher Stowe, is noteworthy among the women who took up the cause of educational reform and the promotion of women as teachers and exemplars of self-improvement. Graduates of Beecher’s Hartford Female Seminary, founded in 1823, were in the forefront of generations of “schoolmarms” who staffed the nation’s rapidly growing supply of public schools.

### Resistance to Common Schools

Historian Carl Kaestle has maintained that the eventual acceptance of state common school systems was based upon American’s commitment to republican government, the dominance of native Protestant culture, and the development of capitalism. While the convergence of these forces can be credited with the emergence and endurance of America’s common schools, the arguments and fears of opponents of public education were not easily overcome. The hegemonic Pan-Protestant common school system may have had general popular support, but many Roman Catholics (and some Protestant sects) strenuously objected to the supposedly “nonsectarian” schools. Many Catholics agreed with New York City Bishop John Hughes, who argued that the public schools were anti-Catholic and unacceptable to his flock. When repeated pleas for a share of public funds dedicated to the support of religious schools failed to win legislative approval in New York and elsewhere, many Catholics rejected the nondenominational public school compromise, a situation that eventually led to the creation of a separate and parallel system of parochial schools.

Religious division was not the only obstacle to universal acceptance of the doctrine of universal public education. A desire to maintain strict local

control over schools put many advocates of state-wide organization on the defensive. Intermixed with class, race, and ethnic tensions, demands for local control of schools was—and remains—a hotly contested issue. Opposition to taxation, raised as an objection to publicly financed schemes of education during the colonial period, continued to provoke resistance. Related to issues of control and taxation were charges that government involvement in education was a repudiation of liberalism and parental rights. Advocates of this position championed the right of individuals to be left alone and responsible for their own lives.

Finally, if some of the more conservative members of society feared that public schools and democratic rhetoric might unsettle relations between capital and labor and lead to increased clamoring over “rights” on the part of the working classes, some of the more radical labor leaders contended that public day schools, while useful, did not go far enough toward creating a society of equals. Among the most extreme positions was that put forward by the workingmen’s party in New York, of which Robert Dale Owen, social reformer and son of Robert Owen (founder of the utopian New Harmony Community in Indiana) was a member. In 1830 that body called for public support of common *boarding schools* in which all children would not only live together and study the same subjects, but would dress in the same manner and eschew all reminders of “the pride of riches, or the contempt of poverty” (Carlton, p. 58). Few reformers were willing to endorse so radical a proposal, however.

### The Survival and Spread of Common Schools

Political consensus and compromise led state after state to adopt systems of common or public schools by the latter half of the nineteenth century. Although a few southern states had made progress in this direction before the Civil War, it was not until after that conflict that the states that had been in rebellion adopted legally mandated—but racially segregated—systems of public education. In 1855 Massachusetts had become the first state to abolish legal segregation; it took yet another full century for the United States Supreme Court to extend that practice to the entire nation by declaring in the famous *Brown v. Board of Education* decision of 1954 that the practice of “separate but equal” was unconstitutional. Other twentieth-century court decisions ended religious practices such as Bible reading and prayer in public schools.

Competing educational philosophies, as well as political and social divisions in society, have made the issue of what should be “common” about common schooling one that is continually under review. If, as one historian has observed, the “the American public school is a gigantic standardized compromise most of us have learned to live with” (Kaestle 1976, p. 396), it is a compromise that has been, and must continue to be, constantly renegotiated.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; MANN, HORACE.

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## COMMUNITY-BASED ORGANIZATIONS, AGENCIES, AND GROUPS

Child and youth development are influenced not only by families and schools, but by a wide variety

of formal and informal community organizations; some of which involve youth directly, while others effect neighborhood changes that affect youth and families.

### **Community Organization versus Community Organizing**

It is important to distinguish community organization from community organizing. *Community organization* may be thought of from a broader, community perspective. Such a structural orientation considers a community's social ecology (the number and variety of organizations throughout a community, and the relationships among these organizations). Community organizations are most often nonprofit organizations—particularly service agencies—that are located in, and provide services to, neighborhoods and communities. Community organizations include parent-teacher organizations, sports clubs, church groups, block or neighborhood associations, 4-H clubs, and many others.

In contrast, *community organizing* is conceptualized more as a process aimed at creating change. This may be done either through developing leadership among individuals or by building power for collectives. Community organizing is best described as seeking empowerment, both as a process and an outcome. Community organizing, as a process, is practiced in community organizations, though not all community organizations practice community organizing. However, many community organizations whose main function is service provision have expanded the services they provide to include community organizing. So, while some organizations exist exclusively to practice the process of organizing, other organizations engage in some organizing, and still others practice no organizing.

The distinction between community organization and community organizing is made because the terms are sometimes used interchangeably. While the junction of these terms is sometimes appropriate and sometimes not, it is important to understand the historical relationship between these two terms, the fact that this relationship has changed dramatically over time, and that both have relevance for children and teenagers.

### **The History of Community Organization**

Following the American Civil War, there was a rapid rise in the number of charitable agencies designed to lend assistance to those displaced, disabled, or im-

poverished by the war. Many of these organizations were progressive in philosophy, even by the standards of the early twenty-first century, and they provided services to, or activities for, children and teens. The late 1800s also saw an expansion of the public school system, along with the creation of hundreds of orphanages, hospitals, settlement houses, and other charity services. Due to the rapid rise of such organizations, and a lack of government oversight, the distribution and coordination of services soon became problematic. The term *community organization* was coined by social workers in this era to address the problem of coordinating charity-based services, thus reflecting the structural perspective of community.

The next phase in the evolution of community organization stressed cooperative planning among privately run community-service agencies. Efforts were geared toward specialization of services and centralization of decisions regarding these services. By the late 1940s, community organization became professionalized in the field of social work. Community organization theory stressed organizing as a process where a professional organizer worked with communities to help develop leadership within a community.

In the 1960s, new realizations about the context of American communities—particularly the vast social and economic underclass and the inability of the welfare bureaucracy to adequately address the needs of the poor—influenced the orientation of community organization efforts to deal more closely with community organizing. It was during this period that the concepts of community organization and community organizing became more interconnected. The emphasis on organizing, rather than organization, led to an emphasis on citizen participation and empowerment.

During the 1980s and 1990s, community organizations expanded to the point of being referred to as a movement, and the process of community organizing expanded into many community organizations. One struggle that emerged in this period was the awareness of power shifting from local communities to regions, nations, and international corporations. The process of globalization has raised new questions about the efficacy of local organizations in addressing problems caused by large-scale economic forces.

## Types of Community Organization

Categorizing community organizations is difficult, because they may range from voluntary organizations to professional service agencies to informal groups. These organizations are often considered to include churches, unions, schools, health care agencies, social-service groups, fraternities, and clubs. Community organizations are predominantly conceptualized as nonprofit, but broader conceptions of community sometimes include all organizations, including for-profit enterprises. Service agencies are frequently termed *community-based* agencies because their service has shifted from centralized institutional settings to dispersed geographical locations providing greater access to residents. Social-service agencies have received criticism because, although their geographic placement has improved resident access, their hierarchical social practices retain social- and cultural-access barriers.

There is a further distinction to be made, between volunteer and professional organizations. Volunteer organizations often have professional or paid staff, but volunteers perform the vast majority of these organizations' efforts. These organizations are frequently advocacy-oriented, and they apply community-organizing strategies to accomplish their goals. In contrast, professional organizations are usually staffed by experts who provide services with little or no volunteer input. These service-oriented organizations usually have greater resources than volunteer organizations, and they interface with residents based on professional norms and standards, whereas volunteer organizations have a more egalitarian orientation.

Another type of community organization is the informal group. These groups are represented by informal networks of friends and neighbors that exist throughout communities. The growth or decline in the number of these groups has been debated. While some argue that informal groups, such as bowling leagues, are declining, there is also evidence that other groups, such as self-help groups or small support groups, have proliferated.

## Ecological Perspectives on Community Organizations

To understand the role of community organization in the lives of children and teens, it is important to understand these organizations from the perspective of the ecology of community life. There are numer-

ous perspectives that may be considered ecological or structural, and a number of these will be looked at here.

Sociologist Robert Park, working in the 1960s in Chicago, was among the first to study ecological aspects of community. His ecological orientation viewed community not as a collection of streets and buildings, but as a psychological and sociological orientation based on customs, traditions, and organized attitudes. Park understood that community organizations, agencies, and groups are critical in the shaping of this psychological and sociological orientation.

Extending this work to the functional patterns of community, sociologist Norton Long viewed community as the product of interactions among powerful entities. For Long, community functioning is the result of competing and complementary interactions by those with power—usually groups and organizations operating in their own self-interest. He conceptualized this dynamic pattern of interactions as an ecology of games. The community's social structure is a by-product of sets of "players" who compete to achieve their goals and "win." Each "player" (a group or organization with power), defines their own "game" (the goals and objectives of that particular entity). A community's social structure, then, is composed of multiple groups and organizations geared toward reaching their organizational objectives. As different issues arise for "players" in the community, different allies and enemies are generated among the "players." Alliances and oppositions are based on the objectives of each player regarding that particular issue. From this perspective, patterns of community functioning are the product of powerful entities interacting, not the result of functional necessity or rational decisions.

In an application of this ecological orientation to the life of children, the psychologist Roger Barker (also in the 1960s) studied the diverse settings embedded in communities, and the constraints and opportunities those settings provide for children's development. His research established that different children in the same place behaved more similarly than the same children in different places. He concluded that settings exert a great deal of control over behavior—more so than personality or intrapsychic variables.

Barker's subsequent research focused more on settings, organizations, and schools, and less on indi-

viduals in those settings. He came to scrutinize *behavior settings* as units of analysis. Behavior settings are small-scale social systems composed of individuals and their immediate environments, which are configured such that they shape a pattern of behaviors, or what is called a *routine program of actions*, including specific time and place boundaries. Barker delineated three components to a behavior setting: (1) physical properties (e.g., size of a room, arrangement of chairs); (2) human components (roles or niches within an environment that individuals can fill, such as chairperson or observer); and (3) the setting program (the patterned sequence of transactions among actors in a specific environment).

In a 1964 study of two high schools, one large and one small, Roger Barker and Paul Gump compared the number of behavioral settings and the number of students in the each school. They found that the ratio of settings to students was much higher in the small school than in the big school. The result was that students in small high schools participated in a broader range of settings. They were also more likely to be involved participants than passive spectators and they had greater competence and cooperation when working with peers.

An explicit examination of the role of a community's ecology on human development was made by developmental psychologist Urie Bronfenbrenner in the 1970s. His work examined the successive ecologies that youth are embedded in, and the influence of these ecologies on development. At the most minute level, *microsystems* are the settings in which an individual participates (they are comparable to Barker's behavior settings). *Mesosystems* are the interactions and relations between microsystems. For example, the relationship between the education and law enforcement systems will impact the opportunities and constraints an individual encounters, which will have an impact on both the individual's behavior and personal safety. These two ecologies, the microsystem and mesosystem, play an important role in the development of children and teens. Bronfenbrenner articulates other ecologies, but these two are the most relevant in a discussion of community organizations.

The organizations that are part of a community have been termed *mediating structures*. Local community organizations provide a common ground for residents to share problems and resources. Organizations thus serve to mediate between seemingly powerless individuals or families and the large insti-

tutions of mass society. They include PTAs, school-community partnerships, churches, and voluntary associations. Mediating structures are *people-sized*; that is, they are small enough to reflect the values and realities of individual life, yet large enough to empower individuals to influence the broader social structures (e.g., large schools or school systems, government bureaucracies, large local corporations or chain enterprises, mass media) that may be the target of social-change efforts. Additionally, mediating structures represent contexts through which an empowerment process unfolds for individuals, organizations, and communities. Community organizations are one type of mediating structure. They function as mechanisms through which individuals can express their collective self-interests, particularly regarding the issues and problems affecting their families and communities.

As a field, community psychology has been at the forefront of research on supportive and empowering community settings for human development, and on the prevention of social and mental health problems. Much of this work has been done in religious, self-help/mutual aid, or block and neighborhood organizations. However, small-scale voluntary associations such as these are often suspicious of professionals and researchers, and therefore are difficult to study or evaluate, despite their importance.

The literature suggests that the assemblage of local organizations, agencies, and groups serve as a critical determinant of behavior and development. The implication for children and teens is that they will be assisted in their development to the extent that the organizational landscape is composed of numerous settings that involve and engage youth in healthy and appropriate developmental challenges.

Finally, *social capital* is a concept that has become very popular in discussions about community organization. Social capital is most commonly understood as the accumulation of trust embedded in the norms and networks that exist in a community. Some authors have emphasized informal networks, whether inside or outside organizations. Others have emphasized formally organized networks, or both formal and informal ones. Yet community organizations are, by definition, networks of civic engagement. Agencies that serve residents without developing relationships or building enduring activity and participation are not accumulating social capital. Community organizations, however, such as block groups, neighborhood associations, sports

clubs, and school-based organizations, often embody the associational glue that creates social capital. When the norms and dynamics of these organizations include trust and reciprocity, the capacity for individuals within such groups to act for mutual benefit is great. Social capital may be therefore be understood as the norms of trust and reciprocity that exist both within and between the organizations, agencies, and groups that form the social ecology of a community.

### Approaches to Community Organizing

It is important to examine community organizing—the process of empowering individuals and collectives. As noted previously, some community organizations exist to exclusively conduct community organizing, while some engage only partially in organizing, and some do no community organizing at all.

**Bases of organizing.** Community and labor organizer Si Kahn has identified four bases, or origins, of organizing: union, community, constituency, and issue organizing. Union organizing is based in the workplace; community organizing is based on location or geography; constituency organizing is based on common individual characteristics (e.g., gender, language, ethnic background); and issue organizing is based on issues rather than common individual characteristics (e.g., taxes, schools, war, health care). These bases of organization, like all typologies of organizations, are not mutually exclusive, and there is no common agreement about dividing typologies.

**Types of organizing.** There is a great diversity in community organizing typology. The most commonly cited approaches are social-planning, social-action, community-development, civic-agency, electoral, and pressure-group organizing. Again, this typology is not composed of mutually exclusive categories, and the differences between types are often minimal. Political scientist Janice Perlman reduces these multiple categories into three types: self-help or alternative institutions, electoral groups, and pressure groups.

Self-help community organizing includes three specific classifications of organizing: social planning, civic agency, and community development. Social planning is geared toward technical problem solving, especially with regard to the delivery of goods and services to people in need. Civic agency is a process characterized as providing services for those in need. Social change is not an issue for a civic agen-

cy—in fact, the civic agency approach sometimes must avoid social change, as change is politically difficult due to the support for this approach that exists within the existing social structure. Community development organizations most often emphasize the development of the built environment, and only secondarily stress social change. This approach uses consensus-building techniques to achieve improved community environments, and conflict is avoided. All three classifications of organizing incorporate professionals or experts in a variety of fields who work together to develop ideas and plans for specific programs. Historically, these approaches have involved very little community input, but the engagement and participation of citizens has increased throughout the 1990s.

Electoral organizing, often called *political participation*, involves the attainment of power through the electoral process. The activities of the electoral approach include voting, campaigning for candidates, and supporting or opposing specific issues. Involvement in the political process, while requiring the participation of many people, reflects the value of leadership in that the social problem or issue being campaigned for is ultimately placed in the hands of the elected official. From the perspective of this approach, the elected official, it is believed, can quickly and effectively deal with the issue.

Pressure groups are referred to by many names, including social-action organizations, social-influence associations, instrumental voluntary associations, power-transfer organizations, and empowerment-based organizations. The goal of social-action organizations is to develop power in an effort to pressure social systems and institutions to respond to the needs of disadvantaged communities. Any differences among pressure-group typologies are more a matter of degree than substance; all share the value of citizen participation. Inherent in the pressure-group approach is the belief that citizens are best able to know what their communities need, and that the community organization is a mechanism that enables citizens to address those needs.

The key issue in community organizing is the development of power in both individuals and organizations. Different approaches vary in the directness with which they address issues of power. For example, some organizing efforts settle for the empowerment of individual members and do not seek to build a power base capable of creating community change. Nevertheless, the power issue is usually at

the base of any understanding in community organizing efforts.

### Process of Community Organization

The process of building a community capable of acting to improve its circumstances is called *community organizing*. Organizing involves building relationships across networks of people who identify with common values and ideals, and who can participate in sustained social action on the basis of those values. Community organizing represents the entire process of organizing relationships, identifying issues, moving to action on identified issues, evaluating the efficacy of those actions, and maintaining a sustained organization capable of continuing to act on issues and concerns.

Tension can arise between the process of empowering individuals who participate in organizing and the process of building power for organizations where organizing is practiced. This tension is, in effect, between organizing as a process and as an outcome. For some organizations, efforts that develop the skills, consciousness, knowledge, and confidence of individuals are sufficient to be labeled *empowerment*. Others emphasize the need to address the causes of human suffering in the broader community and society through empowering communities of people capable of changing their circumstances.

### Applications for Children and Teens

Community organizations that focus on youth have existed for a long time. Church-based activities for youth have existed at least since the mid-nineteenth century, and the early-twentieth century saw the creation of the Boy Scouts, Girl Scouts, 4-H clubs, Junior Achievement, and the Junior Red Cross. By the middle of the twentieth century, education became more dominant than work as the major activity for young people. As school operated for a shorter duration than work, this resulted in more time after school and, relatedly, more organizations to serve youth.

Of the many community organizations that provide services and activities for youth, few have worked to engage youth in active, participatory ways. Service-oriented efforts, such as traditional recreation and education efforts, rather than the participatory and empowering activities represented in the principles of community organizing, have been the norm. However, this interest in altering the standard or traditional pattern of interacting with

youth is changing. Increasingly, organizations and agencies are incorporating organizing principles and strategies into youth work. Additionally, youth organizations are considering ways to alter the community ecology to be more supportive of youth.

Historically, organizations that involved youth in participatory activities consistent with organizing emerged in the 1960s. One such example is the Mobilization for Youth (MFY) Program in New York City. This program, run in a settlement house on the Lower East Side of Manhattan, was funded by the National Institute for Mental Health and has been acknowledged as a precursor to community action programs in the War on Poverty. MFY is an important effort historically because it demonstrated many of the challenges in bringing organizing processes to youth in settings that had traditionally provided only services such as education, recreation, or job training.

MFY was designed as a program to address juvenile delinquency and was based on the premise that the lack of constructive opportunities in a young person's environment can lead to delinquency. Specific delinquency prevention efforts targeted jobs for teenagers, local neighborhood service centers, employment programs for neighborhood residents, and mobilizing residents to take action on issues of common concern. Mobilizing residents for organizing activities became the locus of bitter controversy when groups organized by MFY attempted to alter their local ecology by protesting against the police, schools, and welfare department. Local politicians and established institutions retaliated against MFY, but because MFY had federal funding it was able to survive organizationally. However, the tremendous pressure applied by the local establishment caused MFY to abandon its organizing efforts and return to the service-oriented agency it had been prior to their organizing efforts.

This experience parallels that of many organizations throughout the United States that have attempted to bring community-organizing processes to traditional service-oriented agencies. Despite these experiences, both organizing processes and the ecological understandings of community have been accepted by many organizations as guides in working to improve outcomes for youth.

## Current Trends in Community Organizing for Youth

Since about 1980, there has been an increased interest in bringing community-organizing principles and understandings of community ecology to organizations and agencies that work with youth. Often, the links to community organizing and community ecology are implicit, but the emphasis on the active participation of youth and the attempts to reshape the community ecology to be supportive of youth are the hallmarks of many current efforts.

Many of the efforts linking children and teens to communities stems from concerns about the quality of public education. These approaches use schools as the base of community support for youth. Most popular among these approaches are collaborations between community agencies and schools that bring agency services to the schools. However, some have argued against service provision in schools, urging instead an integration of community services in multiple neighborhood locations. While school-based services make the location of service delivery centralized and easy for providers, the school as locus of service provision is often removed from the context of community problems and controlled by the professionals recognized in school settings. The placement of integrated services in diverse locations throughout a community is believed to allow for greater resident involvement in shaping service planning and tailoring service delivery to diverse population needs.

The most popular framework around which these activities take place is called *youth development*. Youth development programs are guided by several principles. First, the emphasis is on assets or strengths inherent in all youth, rather than a traditional approach that focuses on deficits. Second, the level of intervention is often the community rather than individuals. With this orientation, youth development is aligned with a community organization or ecological approach—it emphasizes the breadth of organizations and the connections between organizations that compose a community. Third, youth development approaches seek the active participation of youth in program design and implementation. This participatory element parallels the process of community organizing.

Organizations and agencies that apply a youth development approach are numerous. They include, for example, the National Crime Prevention Coun-

cil, 4-H clubs, the United Way, and federal agencies such as the Office of Juvenile Justice and Delinquency Prevention.

As noted, youth development efforts incorporate both community organization and community organizing approaches. However, other activities also fall under the rubric of youth development, including community service, mentoring, and social services.

**Learning in community settings.** Since the 1990s, there has been special attention paid to learning that occurs in communities and community organizations. The formal and informal networks of community, in all their social and organizational complexity, are essential, yet often overlooked, vehicles of learning. Such learning includes intergroup and intragroup learning of cultural norms and displays; civic learning and the adaptation of people and populations; information, referral, and mutual assistance within groups and organizations; and social change in individuals, families, organizations, and society. These processes are part and parcel of what may be called *learning communities*.

Community service-learning, which is the testing and illumination of curriculum through participatory student projects that address local needs, has become an extremely popular pedagogy. Service-learning is more than simply experiential or vocational learning. By explicitly focusing on a local community's social problems and getting involved in their solution, it links classroom learning to the development of a sense of community, civic responsibility, and greater understanding and awareness of political, economic, and other root causes of the problems observed. Service-learning takes the idea of a *learning community* literally in exploring concrete ways to bring students, local government officials, community-development practitioners and researchers, and community residents and leaders together to learn and benefit from each other. It adds reality and relevance to the curriculum by bringing to life dry classroom materials; by showing how social processes really work; by giving students the skills, experience, and connections that often lead to employment opportunities; and by providing tangible effects of students' efforts (whether planting trees, cleaning a park, building a playground or house, or simply seeing improvement and joy in a tutored child).

Service-learning is thought to be a "win-win-win" situation. The winners are: (1) the instruc-

tor, whose teaching is brought to life and made more relevant through application to the “real world”; (2) the students, who almost unanimously report getting more out of the course, not only in terms of practical skills and experience, but also in terms of theory application and testing; (3) the community residents or clients of the host community or organization, who usually get more personal attention and energetic bodies to help with their problems; and (4) the host organizations, who get unskilled, semi-skilled, and even skilled labor—and a chance to test the performance of possible future workers, both at little to no cost.

How effective is service-learning? Its salutary effect on students’ social development is well established, but its impact on learning and cognitive development has been debated for years. Similar to many of the community programs in which they volunteer, service-learning tends to be very popular among the students, instructors, and agency staff who participate. What may be least known about service-learning is its actual impact on community organizations and conditions.

**Strengths-based youth interventions.** This attention to the role of community organizations in child and youth development is consistent with several national trends, many of which are loosely coalescing into a growing movement to promote a *strengths-based* approach to psychological theory, educational and social-service practice, and public policy, rather than more traditional deficit and victim-blaming models. This movement favors a variety of positive psychological and intervention concepts that are thought to operate on both the individual and community levels (and often the family and organizational levels as well). These include empowerment, development, resilience, competency-based prevention, health (and mental health) promotion, community psychology, positive psychology, ecological theory, asset-based community development, social capital, networks, diversity, and multiculturalism. The American Psychological Association (APA) has commissioned a group of scholars to explore the implications of this strengths orientation for policies affecting children, youth, families, and communities.

The APA volume compiles a range of policy recommendations, many of which aim to support particular strengths-based youth and community-development programs. These community-based programs address such adversities as divorce, child

or adult domestic violence, parents’ alcoholism or mental illness, pediatric illnesses, teen pregnancy and parenthood, school transitions, school failure, negative peer influences, minority status, community violence, and other community-level economic, social, environmental, and political adversities. (Ironically, it is testament to the pull of deficit thinking that even this volume on strengths approaches was organized around problems.) Most of the recommended programs may be locally planned to be culture and context specific. Some are necessarily government run, some are nonprofit, more and more represent public-private partnerships, and all recognize the key role of both public support and community involvement.

Four strategic goals, in line with the APA group, appear fundamental to strengths-based research and social policy: (1) to recognize and build upon existing strengths in individuals, families, and communities; (2) to build new strengths at each level; (3) to strengthen the larger social environments in which individuals, families, and communities are embedded; and (4) to engage individuals, families, and communities in a strengths-based process of designing, implementing, and evaluating interventions that are collaborative, participatory, and empowering.

## Conclusion

These examples make it clear that education and human development do not stop at the schoolhouse door or the end of the family driveway. The integration of community organizing and community organization approaches, along with community learning and more traditional service-oriented activities, appears to hold promise for children and teens. Fundamental to the movement toward community organizing and community organization has been a shift away from viewing youths as objects to be served, and toward a view of youths as participants with assets and skills. In addition to a new perspective on youths themselves, a broader analysis entailing an ecological understanding of community has altered the nature of many youth-focused organizations to develop new partnerships and innovations that seek to modify communities to become youth-enhancing environments.

*See also:* COMMUNITY EDUCATION; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; NEIGHBORHOODS; SERVICE LEARNING.

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## COMMUNITY COLLEGES

The community college is largely a phenomenon of twentieth-century American higher education. The label applies to an array of institutions that offer six-month vocational diplomas; one- and two-year vocational, technical, and pre-professional certificates; and two-year programs of general and liberal education leading to an associate degree. Two-year colleges may be public, private, proprietary, or special purpose, although public institutions represent the majority of community colleges in the twentieth-first century. States, counties, municipalities, school districts, universities, and religious denominations have all organized community colleges. Some were designed for specific racial and ethnic groups, for women, or for specific purposes such as business, art, or military training. At the close of the twentieth century, two-year colleges enrolled 5,743,000 students, 96 percent of whom attended public community colleges. Nearly 40 percent of all undergraduate students attended community and junior colleges. Between 1900 and 2000 the significance of this sector of higher education grew enormously as its predominantly public character evolved from a much wider variety of origins.

The multiple forces fueling community college development contributed to confusion over the name and mission of these institutions. The terms *community college*, *junior college*, *technical college*, and *technical institute* encompass a wide array of institutions.

*Two-year college* refers to all institutions where the highest degree awarded is a two-year degree (i.e., associate of arts, associate of science, associate of general studies, associate of applied arts, associate of applied science). Generally, community colleges are comprehensive institutions that provide: (a) general and liberal education, (b) career and vocational education, and (c) adult and continuing education. Yet many two-year colleges do not offer the comprehensive curriculum just outlined, and therefore are not

truly community colleges in this comprehensive use of the term.

*Junior college* refers to an institution whose primary mission is to provide a general and liberal education leading to transfer and completion of the baccalaureate degree. Junior colleges often also provide applied science and adult and continuing education programs as well.

*Technical college* and *technical institute* refer only to those institutions awarding no higher than a two-year degree or diploma in a vocational, technical, or career field. Technical colleges often offer degrees in applied sciences and in adult and continuing education. Also, there are technical institutes with curricula that extend to the baccalaureate, master's, and doctorate (i.e., Massachusetts Institute of Technology, Rensselaer Polytechnic Institute), but these are not community colleges. There are also proprietary (for-profit) two-year colleges that refer to themselves as technical colleges, technical institutes, or community colleges. Adding to the confusion of labeling is the fact that *community college* has become used generically in higher-education literature to refer to all colleges awarding no higher than a two-year degree.

The United States has been able to adapt and capitalize on its diversity of peoples, regions, and economics, in part due to the pragmatic and adaptive nature of its educational system. At the post-secondary level, the comprehensive community college has made a singular contribution to this adaptiveness and pragmatism. While many countries possess binary divisions of their higher-education system (universities and polytechnic colleges or institutes), these are accessible only to individuals with an acceptable performance on government-sponsored high-school graduation examinations. In contrast, American postsecondary education has remained steadfastly committed to inventing courses of study, educational programs, or even whole institutions dedicated to the needs and expectations of its society, peoples, and cultures.

As a distinctively American invention, the comprehensive community college stands between secondary and higher education, between adult and higher education, and between industrial training and formal technical education. Community colleges have provided educational programs and services to people who otherwise would not have enrolled in a college or university. For the most part

community colleges offer admission to all who possess a high school education; in addition, many provide assistance to adults in completing their secondary education. They attract students who live in geographic proximity and who seek low-cost postsecondary education.

### The History of Community Colleges

The community college evolved from at least seven sources of educational innovation. Two began in the 1880s and 1890s: (1) community boosterism and (2) the rise of the research university. Three came from the educational reforms of the Progressive Era (1900–1916): (3) the advent of universal secondary education, (4) the professionalization of teacher education, and (5) the vocational education movement. The final two, (6) open access to higher education, and (7) the rise of adult and continuing education and community services, were primarily post–World War II phenomena. The seeds of all seven of these innovations can be found even in the earliest junior colleges.

**Boosterism.** The development of community colleges generally mirrored that of American higher education in that it was not guided by national controls or policy. In colonial times, while colleges required a charter from the king of England to operate, many began in the absence of one. Similarly, many towns, groups, and denominations began early junior colleges without legal authority, and enabling legislation often followed, rather than preceded, a college's founding.

Along with the museum, library, opera house, and symphony band shell, municipalities established colleges to provide evidence of their cultural stature relative to neighboring towns and cities. Religious denominations that favored a lay ministry established their own colleges as well. In the nineteenth century the distinction between public and private colleges was not so marked as it is at the beginning of the twenty-first. Communities would band together to found the local college, with the citizens laying the bricks and mortar and raising funds through bake sales. If the community was predominantly Lutheran, then the college might well be affiliated with area Lutheran congregations. If the community had no prevailing religious denomination, then the college might be public. Whether public or private, communities generally had more enthusiasm for founding colleges than providing ongoing support for them, and many of these nine-

teenth-century colleges failed. With no clear sources of students or finance, economic downturns were particularly difficult to survive. These booster colleges offered programs of varying duration and purpose, but those that survived into the twentieth century became junior colleges.

The Panic of 1893—a major economic downturn in the late nineteenth century—led to the first formal thinking about two-year colleges. Reverend J. M. Carroll, president of Baylor University, convened the Baptist colleges in Texas and Louisiana the next year. The assembly recognized that there were insufficient finances and students to support the numerous small Baptist institutions in the two states. Carroll pragmatically proposed that the smaller colleges reduce their curriculum to the first two years of study and rely on Baylor to provide their students with the third and fourth years of the baccalaureate degree. Thus, the two-year college was born. By limiting the curriculum to the first two years, the colleges required fewer teachers, fewer resources, and fewer students to operate.

### The junior college and the research university.

Two years after Carroll proposed the two-year Baptist college as a solution to the financial and enrollment crises in Texas and Louisiana, two northern Baptists gave this invention a name and a place within the broader context of higher education. William Rainey Harper, president of the University of Chicago, believed that the American liberal arts college provided inadequate rigor and quality, thinking their programs akin to the German gymnasium (or high school) rather than true university-grade work. He isolated and strengthened the first two years of undergraduate study in an organizational unit of the university labeled *The Junior College*. Further, he urged denominational colleges in the area to reduce their curriculum to two years and send their students on to the university, indicating that formal arrangements could be made for the acceptance of their students' work toward the baccalaureate degree. He also advocated that high schools extend their curriculum to include the first two years of college. Two fellow members of Harper's congregation, S. V. Hedgepeth and J. Stanley Brown, were superintendents of local high schools (Goshen, Indiana and Joliet, Illinois respectively). Accepting Harper's offer, they developed junior colleges within their high schools. Joliet Junior College, established in 1901, is generally recognized as the oldest continuously operating community college.

During the latter half of the nineteenth century, American university presidents educated in Germany advocated greater purpose, organization, and eminence for higher education. Leaders like Henry Tappan of the University of Michigan, Alexis Lange of the University of California, David Starr Jordan of Stanford University, William Watts Folwell of the University of Minnesota, and Harper distinguished between university and collegiate grades of work. Collegiate work provided breadth of education in the arts and sciences, and also developed the student's abilities to study and inquire. Junior colleges offered collegiate study, while a university education was devoted to the advancement of knowledge and scientific inquiry. These leaders believed that the general education of undergraduates could be supplied by high schools or small liberal arts colleges and should be limited to the first two years of the baccalaureate program.

National associations were founded and grew around the debate regarding the role of the junior college, the research university, and the liberal arts college, and the organization and sequence of the American baccalaureate degree. The Association of American Universities (AAU), founded in 1900, advanced the agenda of the research institutions. The Association of American Colleges (AAC), founded in 1914, defended the role of the small four-year college and advanced the cause of liberal learning as the primary aim for higher education. The American Association of Junior Colleges (AAJC), begun in 1921, provided a forum for the motley assemblage of emerging institutions, including high schools providing two-year collegiate programs, women's colleges, military institutes, private junior colleges, and technical institutes.

The advancement of the research university and the junior college was abetted by the growth of high schools and compulsory secondary education. In 1907 legislation was passed in California permitting high schools to offer the thirteenth and fourteenth grades—at the time, the state had less than one high school per county. Also that year, President Jordan of Stanford urged the university to abandon teaching the first two years, arguing they were the proper concern of liberal arts colleges; he made no mention then of the upward extension of the high school. Once the 1907 legislation passed and the Los Angeles Polytechnic High School began a two-year post-high school curriculum, Jordan also advocated high schools as providers of collegiate studies. For Jordan,

Harper, and other prominent university presidents of the era, the municipal junior college fit their plans for the reform of the university.

**Junior colleges and educational reform.** The first great growth period of junior colleges—1910 to 1920—coincided with the growth of kindergartens and junior high schools. Many school districts constructed junior high schools to relieve the overcrowding in elementary and high schools. Junior highs, like junior colleges, often began as pragmatic solutions. When junior highs opened, the four-year high school became a three-year institution. The restructuring of K–12 education freed high school facilities for the operation of junior colleges. This school expansion and restructuring, along with the passage of mandatory secondary education, also created a shortage of teachers. Teacher-training programs provided through normal schools and junior colleges alleviated staffing shortages in the elementary and secondary grades. Educational leaders of the Progressive Era came to portray these reforms holistically as a system stemming from kindergarten and continuing through high school to “terminal” vocational and general education, or continuing on to the baccalaureate degree, and perhaps to graduate and professional education conferred by the research universities.

Contemporary community colleges hold the collegiate function central to their mission. In addition to the traditional-age student seeking the first years of a baccalaureate degree, collegiate (also known as *transfer*) courses enroll (1) career preparation students, such as nursing students seeking knowledge in the basic life sciences; (2) reverse transfer students (who begin at a university and later choose to continue at a community college); and (3) part-time casual students (who enroll for personal rather than degree-completion reasons). Collegiate courses may involve core courses or distribution requirements in general education, articulated technical programs in the sciences and mathematics, dual-credit programs in high schools where talented juniors and seniors can earn college credits, and alternative delivery programs—such as evening and weekend courses, televised courses, and courses delivered over the Internet.

**Junior colleges and the normal school movement.** Many junior colleges first began as normal schools. The professional preparation of teachers began in three normal schools of Massachusetts (the first in the nation) that were founded on the pedagogical

principles of Horace Greeley. During the 1880s normal schools were a form of alternative secondary education for those students (mostly women) who wished to teach as a profession. As the number of high schools grew, pedagogy became a post-high school subject. As states adopted compulsory secondary education laws and teacher certification standards, the demand for qualified teachers grew.

Local high schools developed normal-school programs for their graduates, employing teachers with master's degrees as instructors of pedagogy. For example, the Joplin (Missouri) Central High School added a normal-school program in 1913 to meet the need for qualified teachers in the area. Local citizens interested in collegiate level education urged the school superintendent to inquire of the University of Missouri as to whether general and liberal education courses taken in the postgraduate high school program could be applied to the baccalaureate degree. University president Albert Ross Hill had been one of the university leaders within the AAU calling for the establishment of junior colleges to provide the first two years of college.

In several ways, the last two decades of the twentieth century mirror the first two in terms of public policy issues. In the 1980s and 1990s the quality of elementary and secondary educational programs re-emerged in public discourse. As part of their efforts to reform education, lawmakers in various states proposed that community colleges help to prepare qualified teachers and provide teachers with continuing education and professional development. Similar trends occurred in workforce development. The American Association of Community and Junior Colleges (AACJC—formerly the AAJC, and now the American Association of Community Colleges [AACC]), advocated that community colleges work with area high schools to develop new, intensive, technical-education programs. These programs consisted of two years of science and technology preparatory work in the high school, followed by specialized technical training in the community college. The focus on student performance resulting from the educational reforms of the 1980s and 1990s stimulated examination of the transparency of programs among higher education institutions. The American Association for Higher Education (AAHE) promoted the creation of two-year and four-year college partnerships with high schools to strengthen the articulation of curriculum and students between the cultures of secondary and higher

education. During the 1910s and 1920s, and again in the 1980s and 1990s, community colleges advanced as an integral part of the rethinking and restructuring of elementary, secondary, and higher education.

**The vocational education movement.** Many of the first two-year colleges were primarily or exclusively technical institutes. Lewis Institute, established in 1896, and Bradley Polytechnic Institute (now Bradley University), established in 1897, were founded with the guiding influence of William Rainey Harper. Frederick Pratt converted the Pratt Institute, a vocational high school, into a two-year curriculum for adults “age thirty or so” (Ratcliff 1986, p. 16). In 1891 the Detroit Young Men's Christian Association (YMCA) consolidated the evening and day classes it offered adults with the professional curricula of the Detroit College of Pharmacy to form the Detroit Institute of Technology. Chartered in 1909, it provided collegiate instruction in mechanical, technical, industrial, professional, and semiprofessional fields, and in the literary and musical arts. The vocational education movement of the late nineteenth century, the emphasis on technical education during the years of the Great Depression and World War II, the career education initiatives of the 1970s and 1980s, and contemporary workforce-development programs of states and the federal government have insured that vocational, technical, pre-professional, and para-professional programs are mainstays of the community college.

Students pursuing vocational and career-education programs include: (1) traditional-age students preparing for their first job, (2) working adults seeking the upgrading and retraining of knowledge and skills, (3) students employed by local business or industry in internship or cooperative-education programs, (4) members of labor organizations, (5) the underemployed and unemployed, and (6) older adults and retirees seeking to develop a skill or technical knowledge for personal reasons. The programs they select may include specialized degree programs (such as accounting or occupational therapy), career-ladder programs (e.g., moving from engineering technology to engineering), contract training provided to workers of a local company, apprenticeship training programs operated in cooperation with trade organizations, *two-plus-two* programs articulating high-school and college vocational education, and international training programs. Certain states have separate systems of two-year vocational institutions, such as the Wisconsin Area Vocational Tech-

nical Institutes, while other states, such as Iowa, converted their vocational-technical institutes to comprehensive community colleges in the 1990s.

**Open access to higher education.** In the United States many colleges and universities were established before a system of secondary education was developed. Harvard, America's first college, was founded much earlier than college preparatory programs. Land-grant colleges and universities were established many years prior to the provision of secondary education in rural areas—in their first years, more than half of their students enrolled in precollegiate studies. Women's colleges, colleges and institutes for American Indians, and historically black colleges and universities were established before there were secondary educational programs to prepare these groups for collegiate level studies. This curious American phenomenon required higher education to judge the merits of the students admitted, rather than relying on secondary diplomas and exit exams, as was the case in many countries at the time. Inadvertently, this placed higher education in the position of articulating academic standards for college preparatory and secondary education.

The flood of immigrants coming to the United States between 1900 and 1920 also fueled the growth of community colleges. The educational needs and backgrounds of junior college students diversified as enrollments grew. The suffrage movement and women's educational expectations augmented enrollment as well. In 1920 less than 4 percent of the American population (238,000 students) went to college. By the end of the 1920s, 12 percent of high school graduates were attending college.

A new wave of immigration began in the 1980s, a wave that continued into the twenty-first century. Once again the United States is expanding and extending higher education to new segments of the population. Some come with little or no formal education or language skills, others come with extensive education but few language skills, while a third group consist of those with English language skills but little formal education. English-as-a-second-language instruction represents as much as one-third of all humanities instruction at community colleges.

Community colleges, as open admissions institutions, hold a unique position in this juxtaposition of secondary and postsecondary education. For not only did higher education assume the role of setting

college preparatory standards, but also of providing precollegiate instruction for those able but insufficiently educated to succeed in the rigors of a regular collegiate program. Community colleges increasingly have been called upon to provide remedial and developmental programs and services to those students without adequate levels of academic preparation to succeed in college. Several states and higher education systems, including Colorado, Florida, and California, have prescribed or sought to place developmental and remedial courses in the community colleges.

Community colleges play a significant role in meeting immediate and short-cycle needs of the immigrant, the disabled, and the unemployed with a wide range of courses and programs. Community colleges expanded the scope of higher-education offerings by adding to the curriculum practical and pragmatic courses of study that meet the educational needs of an advanced, complex, and technological society. The federal government has encouraged this expansion through incentives to colleges that serve such groups as displaced homemakers, students with disabilities, those needing adult basic education, and the unemployed seeking job retraining. Programs targeted for these students have broadened the curriculum, subsidized enrollment growth, and provided access to college for those who otherwise could not afford it, thereby widening the demographic profile of students served. The demand for higher education has risen as the value of a high school education has declined in the marketplace of jobs and careers.

**Adult and continuing education and community services.** Programs and services for adults, for the continuing education of workers in the skilled trades, technical occupations, and the allied professions, and courses and programs of general interest and value to personal and corporate development in the local community have always been a distinguishing feature of community and junior colleges. Early junior and technical colleges (e.g., Pratt Institute, St. Joseph Junior College, Oklahoma Institute of Technology) also provided adult education and community services programs. After World War II, and particularly during the presidency of Edmund Gleazer at the AACJC, this function grew in prominence. Gleazer's vision was that community colleges would render educational services to the entire local community, not just to traditional college-age groups.

Providing credit and noncredit courses and nonacademic educational services (e.g., films, lecture series, fine art exhibits, musical performances) to the area served became a priority for community colleges in the 1970s and 1980s. Nevertheless, adult and continuing education and community services have been regarded in two ways. One holds them ancillary to general and liberal education and vocational and technical education in the community college. The second views community services not so much as a separate function of the college, but as an intrinsic quality that distinguishes community colleges from the rest of higher education. From this perspective, the role of service to the surrounding community has become fundamental to the definition of the public community college mission.

### The Community College Mission

Contemporary discussions regarding the mission, role, and function of the community college rely on historical notions of the evolution of the institution. If one chooses to emphasize the vocational education stream, one may reach the conclusion that community colleges are post-high school, but not higher education. If one examines the success of students who otherwise would not have attended college, then one may conclude that community colleges track students into certain social strata or advance their station in society. Examining the adult education and community services function leads one to conclude that the institutions' roots are to be found there. In short, a comprehensive community college incorporates an eclectic set of educational philosophies and purposes into its mission.

The contemporary and prevalent normative view of the American community college is as a local, public institution understood by its commitment and connection to the community it serves. While exceptions and variations abound, the evolution of this view from that of junior college, booster college, normal school, technical institute, or private preparatory college was galvanized largely by the 1947 President's Commission on Higher Education (the Truman Commission), which suggested "the name 'community college' to be applied to the institution designed to serve chiefly local community educational needs. It may have various forms of organization and may have curricula of various lengths. Its dominant feature is its intimate relations to the life of the community its serves" (President's Commission, p. 3). Also significant in its develop-

ment was the advocacy of the Carnegie Commission on Higher Education (1970) for the establishment of community colleges within commuting distance of every adult. These commissions, together with the Higher Education Act of 1964 (and the Educational Amendments of 1972 to the act that promoted state-wide planning and provision of higher education throughout the nation), enabled community colleges to be rapidly established to meet the swelling demand for higher education among the World War II generation—and among their sons and daughters.

The mission of the community college, like that of other institutions, has evolved in relation to social context. In many cases, the community, junior, or technical college was but one phase in the development of a particular institution. This was especially true of those with origins connected to educating teachers. Brigham Young University, Millersville University, Wayne State University, and Midwestern State University all began as two-year colleges with teacher education programs. As the profession matured, these institutions expanded their programs horizontally, to other fields of study, and vertically, becoming baccalaureate-granting institutions. Liberal arts colleges, comprehensive colleges, and doctorate granting universities, such as Mills College, Bradley University, and the Susquehanna University, also evolved from private junior colleges and technical institutes.

This tendency of two-year colleges to become baccalaureate-granting institutions did not erase from their host communities the need for a community college. California State University-Fresno, the University of Texas at El Paso, and the University of Southern Colorado all began as two-year colleges. When these institutions became baccalaureate-granting institutions, they adopted more selective admissions and broadened their curriculum—both vertically and horizontally. They also left an educational vacuum due to the lack of open admissions, adult education and community services, and two-year vocational and technical programs. A growing social need for an urban regional university did not alleviate local need for a community college, and public demand in these cities led to the establishment of new community colleges: Wayne County Community College, El Paso Community College, and Pueblo Community College. In 2002 the Gates Foundation provided support for seventy small high schools to develop associate degree programs, setting in motion changes similar to those in the 1920s

and 1930s that brought about many new two-year colleges. As society changes, so will its institutions of higher learning.

### Conclusions

The distinctive contribution of community colleges to American higher education is their adaptive, transmutable mission. They represent education's local, front-line interface with society. To fulfill this transmutable mission, comprehensive community colleges provide (1) general and liberal education, (2) vocational and technical education, (3) adult, continuing, and community education, (4) developmental, remedial, and college-preparatory education, and (5) counseling, placement, and student development services.

In individual institutions, one or more of these five functions may have grown to predominate in response to local needs and expectations. When the small Baptist colleges faced financial exigency in 1894, they restricted their curriculum to two years and sent their students on to Baylor University. In the 1960s and 1970s, when the focus of public educational policy was on accessibility and affordable higher education, community colleges developed outreach programs, personal development and adult education programs grew, and the community dimension of the institution was promoted. In the 1980s and 1990s, when taxpayers sought to curb public spending and to promote economic growth and competitiveness, community colleges dropped personal development courses, and instead defined the needs of adults in terms of employment and economic development. Thus, the demand for the specific functions, programs, and services of community colleges ebb and swell with the social and economic conditions of the municipality, the region, and the nation—and they often may do so more rapidly than at their four-year college and university counterparts.

The community college, in all its various manifestations, is a truly unique component of American higher education. It provides a flexible and adaptive form of higher education tailored to local needs. It helps a complex industrialized society have a full range of education and training—from bookkeepers to accountants to those with an associate degree in business administration—depending on the demands and needs of society and the workplace. Community colleges train the legal aid and legal assistant with general and specialized knowledge to

support and complement the work of the lawyer. Community colleges educate numerous allied health professionals who work in support of physicians and surgeons. Career and transfer programs are open largely to all, because the community college also provides the development and remedial coursework necessary for individuals with the capacities, but not the formal education prerequisite, for entry into postsecondary education. These adaptive, flexible, and accessible characteristics are what give community, junior, and technical colleges their unique and singularly important role in American society.

*See also:* AMERICAN ASSOCIATION OF COMMUNITY COLLEGES; HIGHER EDUCATION IN THE UNITED STATES; STUDENT SERVICES, *subentry on* COMMUNITY COLLEGES.

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JAMES L. RATCLIFF

## COMMUNITY EDUCATION

In numerous polls and surveys, Americans identify education as one of the leading domestic challenges of the twenty-first century. Specifically, the challenge is not just to reform public schools but also to achieve the goal of academic success for all students. Many educational experts agree that reaching that goal will require increased cooperation among the schools themselves and a new kind of collaboration with the families and communities served by the schools.

Community education offers a structured, effective way to respond to the challenge to improve public education because it expands the school's traditional role and creates a mutually interdependent relationship among home, school, and community. Community education has three basic components—lifelong learning opportunities, community involvement in schools, and efficient use of resources—and is based on a set of ten broad principles:

- *Lifelong learning*. Education is a birth-to-death process, and everyone in the community shares in the responsibility of educating all members of the community. Formal and informal learning opportunities should be available to residents of all ages in a wide variety of community settings.
- *Self-determination*. Community residents have a right and a responsibility to be involved in assessing community needs and identifying community resources that can be used to address those needs.
- *Self-help*. People are best served by their leaders when their capacity to help themselves is acknowledged and developed. When people assume responsibility for their own well-being, they achieve some degree of independence.
- *Leadership development*. Training local leaders in problem solving, decision-making, and group-process skills is essential to community improvement efforts.
- *Institutional responsiveness*. Because public institutions exist to serve the public, they are obligated to develop programs and services that address constantly changing public needs and interests.
- *Integrated delivery of services*. Organizations and agencies that operate for the public good can best use their limited resources, meet their own goals, and serve the public by collaborating with organizations and agencies with similar goals and purposes.
- *Localization*. Community services, programs, and volunteer opportunities close to people's homes have the greatest potential for high levels of public participation.
- *Maximum use of resources*. The physical, financial, and human resources of every community should be fully available and rationally interconnected if the diverse needs and interests of the community are to be met.

- *Inclusiveness.* Community programs, activities, and services should involve the broadest possible cross-section of community residents without segregation by age, income, sex, race, ethnicity, religion, or other characteristics.
- *Access to public information.* Public information should be shared across agency and organization lines because an effective community not only has “the facts,” but it also knows what those facts mean in the lives of the diverse people who make up the community.

### A Comprehensive Plan

The current lack of confidence in public education has been more pervasive and prolonged than the crisis in confidence that followed the launch of *Sputnik* in 1957 by the Soviet Union. Community education has become the approach of choice of many educators who are determined to improve the public confidence in schools and to build partnerships in support of public education.

Community education is a way of looking at public education as a total community enterprise. A community education program is a comprehensive and coordinated plan for providing educational, recreational, social, and cultural services for all people in the community. The following strategies provide a framework for developing such a program. The strategies have overlapping characteristics and functions, but taken together, they outline a comprehensive action plan.

**Strategy 1. Encourage increased use of community resources and volunteers to augment the basic educational program.** Every community has human, physical, and financial resources that can be used to enrich and expand traditional education programs. Community resources and volunteers have been used to expand curricular options, conduct field and study trips, offer various kinds of tutoring, sponsor student-based enterprises, and support experiential learning.

**Strategy 2. Develop educational partnerships between schools and public and private service providers, business and industry, and civic and social service organizations.** Complex, often interrelated, social and economic problems create a broad array of service needs in many communities, and meeting them effectively is likely to require more resources than any single agency or organization can provide. The development of partnerships for cooperative use

of available resources will help prevent unnecessary duplication in the delivery of such services as child care, after-school programs, drug education and treatment, literacy and remedial programs, internships and work-study programs, and career awareness activities.

**Strategy 3. Use public education facilities as community service centers for meeting the educational, social, health, cultural, and recreational needs of all ages and sectors of the community.** Since community attitudes and support affect the schools' ability to carry out their mission to educate all children, educators must consider the needs and concerns of nonparents in the community. This strategy encourages keeping school buildings open on a planned, organized basis at hours beyond the regular school day. It takes advantage of the strong support community centers generally receive, as well as the economic benefits to the community of more efficient use of public facilities.

**Strategy 4. Develop an environment that fosters lifelong learning.** This strategy acknowledges learning as a lifelong process. It recognizes that learning takes place, both inside and outside the school setting, without formal instruction. It encourages the development of education programs to meet learning needs that change over a lifetime, including the need for new skills and knowledge. Lifelong learning programs and activities may include early childhood education, extended-day and enrichment programs for school-age children, adult education, vocational training and retraining programs, leisure activities, and intergenerational programs.

**Strategy 5. Establish a process for involving the community in educational planning and decision-making.** The total community has a stake in the mission of educating community members. Individual community members, therefore, have a right and a responsibility to participate in determining community needs, setting priorities, and allocating resources. The cyclical process of planning, evaluating, and changing takes advantage of a basic fact of human behavior: Those who participate in planning and decision-making develop feelings of ownership. Encouraging the broadest possible involvement capitalizes on another fact: The greater the number and diversity of people involved, the greater the likelihood that diverse needs will be met. Involvement opportunities should range from participation in ongoing advisory councils to membership on ad hoc task forces and committees.

**Strategy 6. Provide a responsive, community-based system for collective action by all educational and community agencies to address community issues.** Many community problems are so complex that resolving them requires cooperative use of a broad range of resources. Seeking the involvement of nonschool agencies can help schools address such social, health, and economic issues as substance abuse, housing, child abuse, mental illness, violence, crime, vandalism, teen pregnancy, and various kinds of discrimination.

**Strategy 7. Develop a system that facilitates home-school-community communication.** Research shows that schools that involve all their publics and keep them well informed have community support, and that those that fail to reach beyond the parents of current students do not. Effective home-school-community communication goes beyond news releases, speeches, newsletters, and open houses; it includes use of the media, home visitations by teachers and administrators, school displays throughout the community, and special community outreach programs conducted both in the schools and at other sites in the community.

### Community School

The term *community school* designates a school site where the concept of community education is put into practice. Community education may also be implemented in community agencies and organizations, but the most common site is a public school.

A community school departs from a traditional public school's schedule and curriculum. A community school is open year-round, eighteen hours or more a day, often seven days a week. The school thus becomes not just a place to teach children but a community learning center with multiple uses.

In a community school, the concept of public education is extended beyond the traditional K–12 program to include the provision of learning opportunities for the entire community. The traditional schedule is expanded through extended day programs (including before- and after-school activities and care), and recreational, social, and educational programs for community residents of all ages. Activities and programs may not be limited to the school building, itself, as the school extends itself into the community, turning agencies, factories, businesses, and the surrounding environment into learning laboratories.

By organizing programs and activities that serve all ages and populations, a community school encourages disparate elements of the community to come together to work toward common goals. It provides a physical setting as well as an organizational structure for school-community collaboration.

### Impact on Education and Communities

Because many community problems ultimately affect a community's ability to educate all children, educators in some communities are taking a leadership role in the search for solutions to community problems. From a problem-solving point of view, a community school can be a support center for a network of agencies and institutions committed to addressing broad community needs. Using schools as community centers is a cost-effective, practical way to use one of the community's largest investments—its school buildings. The community school reaches out to the community and works as a cooperative partner to address community needs, including educational needs.

The possible benefits to schools and communities from a well-designed and carefully implemented community education program have been described in a variety of studies, including the U.S. Department of Education's *Strong Families, Strong Schools* (1994) and *Safe and Smart*, from the U.S. Departments of Education and Justice (1998). Documented improvements include a better school learning climate, reduced violence and vandalism, more efficient energy use, increased family involvement, and broadened community-wide educational opportunities. Other studies show improved institutional responsiveness to the needs of parents and community members and increased public support for schools and other public agencies.

### Community Education in Action

Community education takes advantage of local resources and capabilities and responds to an individual community's particular needs and wishes. Just as no two communities have exactly the same program, no community retains exactly the same program over a period of years. As a community matures, its institutions, population, assets, and problems change, and its community education program must be modified to reflect those changes if it is to remain successful.

Because every community education program is designed to reflect the current needs of a specific

community and the resources available to meet those needs, there are literally hundreds of models of programs. The website of the National Center for Community Education has descriptions of exemplary models and case studies of community education programs in three model settings—school, district, or agency. The website of the Coalition for Community Schools profiles nine community schools (four elementary, two middle, two high schools, and one preschool).

*See also:* RECREATION PROGRAMS IN THE SCHOOLS; RURAL EDUCATION; YEAR-ROUND EDUCATION.

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## COMMUTER STUDENTS

According to Laura J. Horn and Jennifer Berktold, approximately 86 percent of college and university students are defined as *commuter students*, that is, students not living in university-owned housing. The commuter student population is a diverse group, which encompasses full-time students who live with their parents, part-time students who live in off-campus apartments, parents with children at home, and full-time workers. Commuters range in age from the traditional college student (eighteen to twenty-four years old) to the older adult. They attend every type of higher education institution, including two-year and four-year public universities or private colleges. Typically commuter students walk, ride bikes, take public transportation, or drive to campus to go to classes. They often attend classes and then go home or to work, rarely spending additional time outside of the classroom on campus.

Students commute to campus for several reasons. Unlike many full-time residential students, commuter students may have competing responsibilities outside the academic classroom, such as family, home, and work interests. For those students who are working full-time, raising a family, or caring for an elderly parent, campus residency is not a viable option. Also, commuting may be economically beneficial because many commuter students cannot afford to live on campus. Despite residing off-campus, most commuter students have high academic aspirations and a strong commitment to learning.

### Commuter Student Challenges

Commuter students encounter many challenges that residential students do not. Commuter students, particularly first-year students, often have a difficult time "fitting in" to the campus community. Commuters often find the task of meeting students challenging because their only point of contact with other students is in the classroom, a small part of the total college experience. Residential students live, eat, study, and socialize together in residence halls, thus having greater opportunities to make friends and to become socially integrated into the campus community. A great amount of socialization for college students also occurs in the cafeteria, student center, recreation center, through extracurricular activities, or during late-night study sessions. Alexander Astin, in his 1993 study, has shown that this peer

group interaction positively affects critical thinking skills, cultural awareness, leadership development, and academic development. As a result of not living in residence halls or spending a substantial amount of time on campus, commuter students miss out on these opportunities to “connect” to the university and other students and to enhance their learning and development.

Not only is frequent contact with students outside the classroom difficult to obtain, but commuters often face limited contact opportunities with faculty and staff members as well. Commuters must make additional trips to campus to meet with faculty members during their designated office hours. Unlike residential students, commuter students rarely have the opportunity to observe faculty and staff members on campus involved in nonclassroom activities, such as playing sports in the recreation center or interacting with students in the student center. These informal student-faculty interactions have been linked to academic performance and to personal and intellectual development for students, according to Ernest Pascarella and Patrick Terenzini’s 1991 report. The interaction time for commuters with faculty members is often limited to a few minutes between classes or briefly during office hours, leaving commuter students feeling disconnected from the academic system of the university. Commuters often find forming relationships with faculty and administrators difficult because of these limited interactions outside of the classroom.

Transportation issues are a large part of commuter concerns. First, because of limited parking availability on most campuses, commuters have difficulty finding parking spaces and must often allow extra time to do so. Further, commuters often re-adjust their course schedules to attend classes in large blocks of time, again reducing the hours spent on campus outside of the classroom and the opportunity to become socially and academically integrated into the college community. Some classes may be scheduled at difficult times for commuters to attend, such as early morning or midafternoon. Because of long commutes to school, these students may encounter difficulty attending such classes, which are easily accessible for residential students.

Because of the short amount of time spent on campus each day, commuter students have a limited knowledge of the university itself, including the location of buildings, functions of university departments, campus policies and procedures, and current

events. Residential students become familiar with the university by spending a substantial amount of time on campus, taking part in student forums, and discussing current campus events in the residence hall or in small groups. Therefore, residential students often have a better understanding of the status of the university, because commuter students must wait to receive pertinent information through mailings or newspaper articles. In addition, greater proximity gives residential students more frequent occasions to establish personal relationships with faculty and staff, who serve as resources and mentors. These mentors may provide assistance and information regarding new policies and procedures.

Finally, research indicates that commuter students have lower retention rates than those living on campus. A study by Vincent Tinto in 1987 indicates that students who have high interaction with their university’s academic and social systems are more likely to persist in college. Because commuter students spend limited time on campus and limited time creating relationships with other students, faculty, and staff, they have fewer opportunities to engage in quality interactions with these individuals. Therefore they are less likely to make a strong commitment to the university or its programs and are more likely to drop out of school than residential students.

*See also:* COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE AND UNIVERSITY RESIDENCE HALLS; COLLEGE STUDENT RETENTION.

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## COMPARATIVE EDUCATION

*See:* CANADA; EAST ASIA AND THE PACIFIC; EASTERN EUROPE AND CENTRAL ASIA; ISLAM; LATIN AMERICA AND THE CARIBBEAN; MIDDLE EAST AND NORTH AFRICA; SMALL NATIONS; SOUTH ASIA; SUB-SAHARAN AFRICA; WESTERN EUROPE.

## COMPENSATORY EDUCATION

UNITED STATES

Geoffrey D. Borman

POLICIES AND PROGRAMS IN LATIN AMERICA

Fernando Reimers

### UNITED STATES

The detrimental effects of poverty on children's academic outcomes and general well being are well documented. Children who grow up in poverty suffer higher incidences of adverse physical health, developmental delays, and emotional and behavioral problems than children from more affluent families. In school, children and adolescents living in poverty are more likely to repeat a grade, to be expelled or suspended, to achieve low test scores, and to drop out of high school. Though more research is needed to understand many of the dynamics and general effects of poverty, there is also evidence suggesting that the depth, duration, and timing of poverty are im-

portant considerations. Specifically, children who live in extreme poverty or who live below the poverty line for multiple years seem to suffer the worst outcomes. The impact of poverty during the preschool and early school years also appears to be more deleterious than the effects of poverty in later years.

About one in five children in the United States has the misfortune of living in a family whose income is below the official poverty threshold. In general, these families have trouble meeting basic needs for food, clothing, shelter, and health care. Household resources, including engaging toys, books, and computers—important for children's cognitive development—are also limited. Because of the tight connection between neighborhoods and schools in the United States, poor children tend to be served by schools that offer fewer resources for learning, provide fewer and less challenging opportunities to learn, and are less inviting and friendly places than schools serving children from more affluent communities. These individual, family, neighborhood, and school effects that are associated with poverty conspire to place children at considerable risk for failing in school and in life in general.

### Purpose

The idea behind compensatory education is to, in a sense, "compensate" for these disadvantages by expanding and improving the educational programs offered to children living in poverty. The largest and most celebrated compensatory education programs grew out of President Lyndon B. Johnson's "War on Poverty" in the early 1960s. During an era in which civil rights and desegregation were of profound national significance, the advent of compensatory education programs served as an unprecedented symbol of the federal commitment to equality of educational opportunity. In the nineteenth century, the educator Horace Mann had expressed the notion that one of the classic American ideals for education was that it be the "great equalizer," or "balance wheel of the social machinery." Similarly, President Johnson, a former school teacher, held the belief that if poor children were provided a higher quality education they could attain the same high levels of educational and occupational outcomes as their more advantaged counterparts and, ultimately, could escape the vicious cycle of poverty.

Although state governments have primary responsibility for elementary and secondary education in the United States, the federal government pro-

vides support in a few notable areas. Federal support for compensatory education grew out of two legislative acts: the Elementary and Secondary Education Act of 1965 and the Economic Opportunity Act of 1964. The Elementary and Secondary Education Act established Title I and the Economic Opportunity Act established the Head Start program. Of the total dollar amount spent nationwide on education at all levels, 93 percent comes from state, local, and private sources and about 7 percent comes from federal revenues. That federal investment represents only about 2 percent of the federal government's overall budget. Though this funding level seems slight, a substantial portion of these funds has continued to be targeted on a single mission: ensuring equal access to high-quality education across the nation. President Johnson's War on Poverty surely has lost some of its initial momentum. The federal concern for the education of poor children, though, has remained compelling enough to support the continued funding and commitment to compensatory education policies from the mid-1960s to the early twenty-first century.

### **Title I of the Elementary and Secondary Education Act of 1965**

The central educational component of President Johnson's "Great Society" programs was put into law by Congress as the Elementary and Secondary Education Act (ESEA) of 1965. Title I of the law provided approximately five-sixths of the total funds authorized under the ESEA legislation. Serving more than 10 million children in nearly 50,000 schools, and funded at nearly \$9 billion during fiscal year 2001, Title I has remained as the federal government's largest single investment in America's schools. Title I was mandated "to provide financial assistance to . . . local educational agencies serving areas with concentrations of children from low-income families to expand and improve their educational programs by various means . . . which contribute particularly to meeting the special educational needs of educationally deprived children" (Elementary and Secondary Education Act of 1965, 79 Stat. 27, 27). Title I funds may be used to upgrade the educational programs of children from preschool through high school, but most of the students served are from elementary schools. The overall goal of Title I is to help close the achievement gap separating economically disadvantaged children and their more advantaged peers.

In the early twenty-first century, Title I serves eligible schools and students in diverse ways. Indeed, Geoffrey Borman and Jerome D'Agostino pointed out that Title I is better thought of as a funding mechanism rather than a coherent educational program or set of educational practices. Throughout much of the history of Title I, it has operated as a supplemental targeted, or categorical, program. Specifically, the funds allocated under Title I are provided to schools in order to supplement the regular school program and to target the needs of a certain category of students. Although Title I funds are distributed to schools based on the percentage of poor children they serve, the services within schools traditionally have been targeted toward the most "educationally disadvantaged" students. That is, targeted Title I programs must be established to serve low-achieving students (e.g., more than one-half grade equivalent below grade level or below the thirty-fifth national percentile) attending schools with a significant percentage of children whose families are below the poverty line.

**Early years.** The early years of Title I, during the late 1960s, resulted in poor implementation and large-scale violations in the operation of the program. These outcomes were due to several factors. First, the original program mandates were ambiguous concerning the proper and improper uses of the federal money, and the guidelines and intent of the law were open to varying interpretations. Some local school system officials originally thought of Title I as a general aid fund, which was labeled as a program for the disadvantaged for diplomatic and political reasons only. Second, in 1965 the educational knowledge base for developing effective compensatory education programs was extremely limited. The vast majority of local administrators and teachers had no experience developing, implementing, or teaching compensatory programs. Third, although the federal money provided localities an incentive to improve education for the disadvantaged, a viable intergovernmental compliance system was not in place. Without effective regulation, the receipt of funds did not depend on meeting the letter or the spirit of the law. Responding to local self-interests, and utilizing Title I dollars for established general aid policies, was an easier option than the new and more complicated task of implementing effective educational programs for poor, low-achieving students.

Although federal policymakers were hesitant to restrict local control, these early results, combined with growing pressures exerted by local poverty and community action groups, prompted the U.S. Office of Education to reconsider the legislative and administrative structure of Title I. During the 1970s, Congress and the U.S. Office of Education established more prescriptive regulations related to how schools and students should be selected to receive services, the specific content of programs, and program evaluation, among other things. In addition, the Office of Education made efforts to recover misallocated funds from several states, and warned all states and localities that future mismanagement would not be tolerated. Funded in part by federal dollars, larger and more specialized state and district bureaucracies emerged to monitor local compliance. In turn, state and local compliance was confirmed through periodic site visits and program audits by the U.S. Office of Education and by the Department of Health, Education, and Welfare.

**Delivering Title I to local schools.** One of the most important regulations affecting program delivery has been the provision that the compensatory services provided through Title I must supplement, not supplant, the regular educational programs provided to eligible students. In case of program audits, and to clearly account for the federal money, educators and administrators must be able to show that the targeted Title I program is actually providing something “extra,” and that it is not merely replacing services that the students would have received through the regular school program. This regulation led to widespread use of the “pullout model” as a means for delivering supplemental compensatory services to eligible Title I students. Most often, the students who qualify for services are removed, or “pulled out,” from their regular classrooms for thirty to forty minutes of remedial instruction in reading and math. This arrangement has the advantage of making it clear that the funds are providing something separate from the regular school program, as special teachers, books, and other materials are clearly allocated only to the pulled-out Title I students and not their regular classroom peers. Through the 1970s, 1980s, and much of the 1990s, about three of four Title I schools used the pullout model to deliver supplemental services.

After the initial problems with implementation in the 1960s and early 1970s, the tighter regulations began to have their desired effect. As the 1970s prog-

ressed, the services were delivered to the children targeted by the law. The implementation of Title I became a cooperative concern and professional responsibility of local, state, and federal administrators. In addition, Paul Peterson and his colleagues noted that Title I had inspired greater local concern for, and attention to, the educational needs of the children of poverty. In marked contrast to the first decade of the program, during the later half of the 1970s and throughout the 1980s the specific legislative intents, and the desired hortatory effects, were achieved on a far more consistent basis.

After this basic standard of implementation was achieved, during the late 1980s and throughout the 1990s, new legislation contained in the Hawkins-Stafford Amendments of 1988, the Improving America’s Schools Act (IASA) of 1994, and other laws focused on reforming and improving the educational services offered in Title I schools. This new legislation granted schools greater freedom in designing and implementing effective programs, but also included new provisions that held them accountable for improved student outcomes and designated a program improvement process for those schools with poor or declining performance. Rather than the popular but fragmented pullout programs, the law encouraged educators to establish more frequent and regular coordination between the Title I program and the regular school program. Also, rather than targeting only low-achieving students, all schools serving very high proportions of poor children became eligible to use their Title I funds for schoolwide projects designed to upgrade the school as a whole. Instead of developing fiscal and procedural accountability, Title I policymakers have attempted to develop laws encouraging, and to some degree mandating, accountability for educational reform and improvement.

The Title I of the twenty-first century offers great promise for upgrading the educational opportunities of the nation’s poor children. The emphasis is on high academic standards with aligned curriculum, assessment, and professional development. Title I’s focus is on helping disadvantaged students meet the same high standards expected of all children. As part of its emphasis on high standards, the new law requires Title I funds to be used in new ways. For instance, schools are encouraged to extend learning time—before school, after school, and during the summer months—rather than pulling children out of their regular classrooms. Instructional

programs support higher-order thinking skills rather than rote learning, accelerated curricula rather than remediation, and the use of research-proven strategies rather than services designed to satisfy program audits. These new policies, along with the federal government's increasing support of whole-school reform, are designed to transform Title I from a separate system of remedial teachers, materials, and assessments to an integral component of standards-based, whole-school reform and improvement.

### Head Start

In 1964 the federal government convened a panel of child development experts to develop a program that would help communities meet the special needs of preschool children living in poverty. The recommendations of that panel became the blueprint for project Head Start. The Economic Opportunity Act of 1964 helped initiate the War on Poverty on three fronts by introducing: the Job Corps program to provide education and training for employment; Volunteers in Service to America (VISTA), a domestic Peace Corps program; and Community Action Programs to empower community planning and administration of their own assistance programs for the poor. As part of the Community Action Programs initiative, Head Start was born as an eight-week summer program in 1965, but was quickly converted to the more comprehensive nine-month program that it is in the early twenty-first century.

Recruiting preschoolers, primarily aged three and four, Head Start was designed to help break the "cycle of poverty" by providing young children of low-income families with a comprehensive program to meet their emotional, social, health, nutritional, and psychological needs. Similar to Title I, the educational services provided through Head Start are diverse. There is no single, standardized educational curriculum that every program uses. From the beginning, Head Start program providers have been granted considerable flexibility in planning educational offerings that meet the specific needs of the children and parents within the community. The curricula are designed to improve not only the cognitive abilities of young children, but also their physical well being, social skills, and self-image. In addition to services focused on education and early childhood development, Head Start grantee and delegate agencies offer a broad array of medical, dental, mental health, nutritional, and parent involvement programs.

**Goals.** As noted by Edward Zigler and Jeanette Valentine, the following seven goals set forth by the founders of Head Start in 1965 have remained as the basis for the program's mission and values.

- Improving the child's physical health and physical abilities
- Helping the emotional and social development of the child by encouraging self-confidence, spontaneity, curiosity, and self-discipline
- Improving the child's mental processes and skills, with particular attention to conceptual and verbal skills
- Establishing patterns and expectations of success for the child that will create a climate of confidence for future learning efforts
- Increasing the child's capacity to relate positively to family members and others, while at the same time strengthening the family's ability to relate positively to the child and his problems
- Developing in the child and his family a responsible attitude toward society, and encouraging society to work with the poor in solving their problems
- Increasing the sense of dignity and self-worth within the child and his family

In addition to the strong focus on comprehensive services for preschoolers, Head Start has served as a community empowerment initiative for the parents and community members who live in the impoverished areas that are served by programs. Believing that children develop in the context of their families, culture, and communities, Head Start services are family centered and community based. Rather than passive recipients of services, Head Start casts economically disadvantaged families as active, respected participants and decision makers who help plan and run their own programs. In contrast to Title I, which allocates nearly all of its resources to state and local school systems, Head Start programs are operated by a diverse collection of approximately 2,000 community-based organizations. Grantees include universities, community health centers, tribal governments, city and county governments, school districts, community action agencies, and other for-profit and nonprofit organizations.

During fiscal year 2000, the program served more than 800,000 low-income children and their families at over 18,000 centers with an average per-child cost of nearly \$6,000. During fiscal year 2001,

Head Start allocations exceeded \$6 billion. Although these funding levels still do not provide services for all eligible children and families, the level and quality of services clearly compare favorably to those offered during the hasty beginnings of Head Start in 1965.

**Performance Standards.** Starting the program so quickly and ambitiously may have led the program managers to ignore quality controls during Head Start's early years. Indeed, it was not until 1975 that the Head Start Program Performance Standards were fully implemented. During the 1970s and 1980s, funding cutbacks and inflation, combined with increasing demands for services, further exacerbated problems regarding the quality of services. In 1990 Congress passed the Head Start Expansion and Quality Improvement Act, which, for the first time in the program's history, made a significant commitment to addressing issues of program quality. The act mandated that 10 percent of all appropriations for 1991 be devoted to program improvement rather than expansion and that 25 percent of all new funding in subsequent years be set aside for the same purpose.

Since the 1990s, Head Start programs have placed more emphasis on helping children meet specific academic performance standards, employing well-prepared teachers, and improving the overall quality of the interactions between staff and children and parents. This progress is similar to the story of Title I. In both cases, during the early years of the program the primary concern was simply ensuring eligible children's access to the services. As the years have gone by, though, new legislation and new efforts by those who actually implement and operate the programs have stressed the overall reform and improvement of compensatory education.

### Evaluation of Effectiveness

The Title I and Head Start compensatory education programs have come a long way, but neither has reached its full potential. Title I has evolved from an ineffectual, poorly implemented program to one that is relatively well implemented, modestly effective, but in need of further improvement. Intergovernmental conflict, poor implementation, and a lack of an achievement effect marked the first stage of the program. A second stage, during the 1970s and 1980s, was marked by the development of increasingly specific program implementation and accountability standards, federal and local cooperation, improved implementation, and growing, but mod-

est, program effects. During the late 1980s and during the 1990s, changes in the Title I legislation stressed reform and improvement but, aside from some tinkering around the edges, the administration and operation of Title I remained fairly stable, and the program's effects remained essentially unchanged. In the twenty-first century, a new stage of the program's evolution has emerged; one in which widespread implementation of research-proven programs and practices is increasingly regarded as the key to improving the effectiveness of Title I.

Borman, Samuel Stringfield, and Robert Slavin pointed out that researchers, policymakers, and politicians have disagreed about the effectiveness and overall merits of Title I. Most seem to agree, though, that Title I has not fulfilled its original expectation: to close the achievement gap between disadvantaged students and their more advantaged peers. Given the rather modest level of funding the program provides, though, it may have been naive to have ever thought that Title I, alone, could close the gap. The results from Title I research also appear to show that without the program the children served since 1965 would have fallen further behind academically.

Some of the most exciting research evidence related to Head Start has suggested that if early childhood programs begin early enough, during the preschool years or even during infancy, children may realize lasting benefits through school and into adulthood. Indeed, a long-term experimental research project conducted by Lawrence Schweinhart and colleagues on the Perry Preschool program, which operated during the early 1960s in Ypsilanti, Michigan, has documented sustained effects on the participants through the age of 27 on diverse outcomes including: arrest rates; earnings and economic status; and educational performance. Though Perry Preschool was not a Head Start program, and was funded at a level that was approximately twice as high as a typical Head Start program, the results from this study have been held up as examples of the effects that high-quality early childhood programs can have on participants' outcomes.

The results from Head Start evaluations have been less compelling, but a review of the well-designed evaluations showed that the program has been successful in meeting many of its objectives, including strong short-term effects on participants' cognitive outcomes. Contrary to the findings for Perry Preschool, most long-term studies of Head Start participants have shown a "fade-out" of the

initial program effects. Craig Ramey and Sharon Ramey (1998) indicated, though, that no developmental theory is based on the assumption that positive early learning experiences are alone sufficient to ensure that children perform well throughout their lives. Despite the early optimism of some researchers and policymakers, it is not likely that Head Start, or any other preschool program, could be the educational equivalent to an early inoculation, which provides a child with protection for a lifetime all in one early dose.

Indeed, neither Title I or Head Start may ever serve as the “great equalizer” that President Johnson had envisioned. To compensate for poor schools, suboptimal health care, poverty, and a variety of other contextual conditions known to have adverse effects on students’ development, more of a commitment than one or two isolated federal compensatory educational programs is needed. In the history of both programs, neither has had sufficient funding to provide services to all eligible children. To the millions of children that Title I and Head Start have served, though, it has made important differences in their lives, their families’ lives, and in their schools.

*See also:* FEDERAL EDUCATION ACTIVITIES, *subentry on HISTORY*; FINANCIAL SUPPORT OF SCHOOLS, *subentry on HISTORY*; POVERTY AND EDUCATION.

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GEOFFREY D. BORMAN

## POLICIES AND PROGRAMS IN LATIN AMERICA

Questions that have puzzled education scholars, policymakers, and social reformers since the 1960s are the following: Do schools reproduce social stratification? Do they enable social mobility? Can schools help poor children learn at high levels? Do deliberate attempts to reform education policy influence school life?

### Theoretical and Historical Context

Whether education policy can change the distribution of educational opportunity depends on the context of schools and of the students they serve. Comparative analysis shows that school quality is more significant in helping disadvantaged children learn. More privileged children, whose parents have higher levels of schooling, often learn much from them. Hence, the potential of education policy to influence schools is greater in marginalized schools. This entry discusses the results of policies aimed at expanding the learning chances of poor and marginalized children in Latin America during the 1990s.

It is fitting to study the potential of policies aimed at improving educational opportunity for the poor in Latin America. During the twentieth century, Latin America experienced a dramatic educational expansion, as did most developing regions. This expansion allowed for intergenerational education mobility: social differences were no longer expressed in terms of access to only the lower levels of schooling, but rather as social differences in the quality of education, as most of the expansion was possible in

fragile institutions of insufficient quality to enable the newly incorporated groups to succeed academically. This in turn transferred preexisting social differences to differences in the likelihood to successfully complete the lower levels of education and therefore to access secondary and tertiary education. With the expansion of public education many of the dominant groups transferred their children to private institutions, hence contributing to further differentiation and stratification of schools.

In spite of the significant educational expansion of the twentieth century much inequality is still reproduced across generations in terms of the lower-education chances for the children of the poor. Low-income groups are the last to access education at any given level, are largely excluded from higher education, and also to a great extent from secondary education and preschool education. Most of those who are still excluded from primary education come from the poorest families. For children of a given education level, disparities exist among schools in per pupil expenditures, in the levels of education of their teachers, in the amount of instructional time they receive, and in the instructional resources to which they have access. These disparities also mirror the inequalities of origin between the children of the poor and the affluent. Low-income children are more likely to be assigned to poorly endowed schools, with less-experienced teachers who are in school fewer hours with the consequent less time on task than their higher-income counterparts.

During the 1980s the region faced a series of economic shocks resulting from a debt crisis and ensuing programs of economic adjustment that negatively affected the already fragile public education systems. These and related changes in the delivery of social services and in economic conditions increased poverty and inequality. In the early 1990s political elites focused on the need to reduce poverty as a way to reduce and prevent social conflict and violence, and to enhance the ability to govern increasingly unstable societies. One of the strategies to reduce poverty was to target resources to improve educational opportunity for the children of the poor.

### Three Types of Compensatory Policies in Latin America

Compensatory policies seek to close the gaps in learning opportunities between children of the poor and the affluent. According to the way compensation is interpreted, policies and programs that seek

to foster equal educational opportunity are of three kinds. A first group of compensatory policies includes those that aim to equalize the distribution of educational inputs financed publicly. The objective is to close the input gap between the school environments attended by the poor and the affluent. These include the following: (1) more equitable funding of schools such as the financing reforms implemented in the 1990s in Brazil that sought to close the gap in per pupil spending across schools; (2) those that aim to increase access to a given education level by building more schools, hiring more teachers, or developing alternative modalities to more effectively reach particular groups such as the use of TV-based secondary education in rural areas in Mexico (*telesecundaria*), the use of community-based modalities of education to offer education to multiage groups in remote rural communities in Mexico (*postprimaria rural*), or the program to expand access to preschool and primary education in rural areas in El Salvador (EDUCO); and (3) those that try to provide schools attended by low-income children with minimum instructional resources commonly available to the affluent such as textbooks, school libraries, and training for teachers. Examples include the program to overcome educational backwardness in Mexico (Pare); the Escuela Nueva program in Colombia to enhance the quality of rural schools; and the program to enhance the quality of the schools with lowest levels of student achievement, the P900 program in Chile (which took its name from targeting the 900 poorest primary schools, representing 10% of the total).

The policies to equalize the distribution of inputs followed in Chile included a new teaching statute that gave salary incentives to teachers working in marginalized areas; instituting programs to improve the quality of the most vulnerable schools at the primary and secondary level, and programs for at-risk children (e.g., the school health program and summer camp programs); and teacher incentives for after-school programs.

In Mexico compensatory programs expanded from a small program that targeted 100 schools in the early 1990s, to coverage of 46 percent of all public schools in 1999. The objective of the programs was to improve the quality of primary education and expand access to preprimary and primary education through the provision of infrastructure, training, materials, and incentives to teachers and supervi-

sors. Starting in 1998, coverage of the programs included lower secondary education.

A second group of compensatory policies includes those that aim to reorient the utilization of public resources to equalize the distribution of educational opportunities understood as outputs. Some call these policies positive discrimination. These policies recognize that the outcomes of schools reflect the contributions of school and family resources; therefore, the purpose of compensation is to offset the greater opportunities some children receive from home resources. For example, success in the first grade of primary school is a function both of what goes on during that year, but also of the conditions of health and nutrition of children prior to entering first grade, and of the cognitive, emotional, and social stimulation received in early childhood. Consequently equality of treatment in school during the first grade would most likely not lead to equality of learning outcomes for children from different social backgrounds. Equality of outcomes would require extra resources and attention to low-income children both during early childhood and in first grade. Similarly, the “opportunity cost” of staying in school varies for children of different social backgrounds; therefore, achieving equal opportunity to attain the same levels of schooling requires interventions that appropriately cover those opportunity costs (e.g., scholarships for low-income students that cover the direct and indirect costs of participation in school). An example of this policy is the scholarship program to support school attendance of low-income children in Mexico (Progresa) or a scholarship program for similar purposes in Brazil (Bolsa Escola). Programs of full-day school sessions for low-income children in Chile, Uruguay, and Venezuela (when the affluent attend half-day sessions) are examples of positive discrimination focused on enhancing the quality or intensity of inputs. Given the stark discrepancies between the conditions of the targeted schools and the nontargeted schools, and the relatively low level of funding of these policies, much of the so-called policies of positive discrimination in Latin America are in fact attempts to equalize the distribution of inputs. At best they are designed to close the resource gap—the levels of initial input inequality among schools—and not to endow schools of low-income children with greater resources to achieve equality of output. For example, the program of the 900 schools in Chile, and the Programa para Abatir el Rezago Educativo in Mexi-

co, target resources and attention to schools attended by disadvantaged children to try to redress previous neglect and gaps in resources between these schools and the schools of the affluent. The same is true of the Escuela Nueva program in Colombia, which attempts to improve the quality of rural multigrade schools through teacher training and provision of instructional materials.

A third group of compensatory policies are those that support differentiated forms of treatment for low-income children in recognition of their unique needs and characteristics. The main objective of these policies is to support opportunities for relevant and meaningful learning for low-income children. The goal is not to achieve equality of learning outputs, but equality of life chances. The assumption is that the school curriculum contributes only a fraction of the cultural and social capital that the affluent acquire in life; the rest attained as a result of experiences facilitated by family, neighbors, and community. In order for the poor to have comparable opportunities to live a life that is consistent with their choices, schools need to provide more cultural and social capital and be capable of associating and accessing vertical and horizontal social networks such as personal effectiveness, and political and negotiation skills. Although equality of inputs and equality of outputs assume the equivalency of the relevance of curricular objectives for all children, this particular group of efforts does not make that assumption, and attempts instead to support curricular goals and pedagogical approaches that specifically allow low-income children to move out of poverty through individual or collective action. The purpose of these policies is to help children learn skills whose significance is contextually situated, “preparing all students to live in and contribute to a diverse society but also preparing them to recognize and work to alter the economic and social inequities of that society” (Cochran-Smith, p. 931). Examples of this approach include various forms of popular education as described by Paulo Freire and his colleagues and followers, the various modalities of education designed and supported by Fe y Alegria, the network of publicly funded schools managed by the Society of Jesus in thirteen Latin American countries, and the early-twenty-first century modality of community-based post-primary education developed in Mexico.

### Effects of Compensatory Policies

Extant evaluations of compensatory policies tend to be descriptive, mostly emphasizing intended policy and short-term effects. When these reports are analytical, they focus on outcomes such as access or achievement on curriculum-based tests and adopt a “black box” approach to policy implementation, often assuming that policy output is implemented as intended. The designs employed rely on pre-post comparisons—often inappropriately disaggregating the effects of the policies being evaluated with those of other policies or changes—or on comparisons between target populations and some quasi-control groups—often assuming learning from differences between groups, inappropriately accounting for the nonrandom selection of students to treatment schools.

Limited studies indicate that some desired outcomes (more typically access, but also achievement levels) improve with the implementation of a compensatory policy, but say nothing about whether the distance separating the beneficiaries of the policy from the rest of the children shortens or widens as a result of the policy. It is unknown whether these policies, embedded in process of general education improvement, represent marginal improvements in the educational opportunities of the poor or real reductions in the equity gaps existing in each country. Most studies concentrate on the effects of the policies, rather than on their costs. Little is known about the practical consequence of some of the effects (many of which are discussed as a percentage increase in student achievement in a test or a percentage change in access). In particular almost nothing is known about the long term effects of compensatory policies, whether they are sustained or interact with further interventions and what kinds of other long-term outcomes they have, such as access to higher levels of schooling, acquisition of skills or life chances.

Education reforms in Brazil, which through a constitutional amendment reduced the gaps in per pupil spending across schools and regions and provided scholarships to children in low-income families to attend school at least 85 percent of the school year, contributed to making access to primary school universal. By 2002, 97 percent of the children in the relevant age group were enrolled in primary school; the gains in access were significantly greater for the children from the lower income families. For the poorest income quintile primary school attendance

increased from 75 percent in 1992 to 93 percent in 1999. Promotion and completion rates increased, as repetition rates declined. There is less conclusive evidence regarding the impact of these reforms on the learning outcomes of students.

Compensatory policies in Mexico expanded coverage significantly in disadvantaged areas, mostly as a result of concentrating the hiring of teachers in indigenous schools and in new modalities of primary and secondary schooling adaptable to small rural communities. Compensatory policies in Mexico have succeeded in distributing inputs (textbooks, pedagogical materials, improving infrastructure) and in providing opportunities for teacher professional development, hence improving the minimum resource base in marginalized schools.

With this improvement in basic conditions, completion rates have improved considerably more in areas targeted by compensatory policies than in other regions of the country. Teachers provide good reports of the training courses, but there is no evidence of impact of the training in teacher practice or on student achievement. Several studies consistently point out that implementation significantly transformed the programs, with negative consequences for learning opportunity.

To sum up, Mexico’s experience with compensatory programs during the 1990s shows that it is possible to provide basic inputs to the most disadvantaged schools, therefore reducing inequality in inputs. Because initial inequalities are so significant, this alone is an important accomplishment of policy. Important gains can be achieved in expanding access and primary school completion by supporting the basic functioning of schools in this way. Achieving changes in learning, and therefore contributing to reduce inequality in learning outcomes, is more complicated. In part this reflects the challenges of changing teacher capacity from very low initial levels. Helping teachers become effective is much harder than providing them or their students with textbooks and notebooks. The simple program theory underlying compensatory policies is more appropriate to achieve the latter than the former. Program theory aside, the implementation challenges to developing new teaching practices are greater than to providing financial incentives for teachers to show up to school or for parents to fix up schools.

Research on the impact of compensatory policies in Chile confirms the results of the few studies

available for Mexico. Most of the research follows a black box approach and fails to identify significant changes in learning outcomes, and there is limited information about program implementation. Only short-term effects are affected in a narrow set of cognitive domains, as measured by multiple option tests. Ernesto Schiefelbein and Paulina Schiefelbein question the predictive validity of these tests of the skills that matter to obtain high-paying jobs in the labor market. As in the case of Mexico the greatest challenge appears to be in documenting changes in teacher capabilities. Also as in Mexico, the existing studies document relatively short-term effects of these policies, spanning six to seven years.

A study of the impact of compensatory programs in Chile documented sustained improvement in levels of student achievement in mathematics and Spanish since 1990. The achievement gap between the highest-performing and lowest-performing schools has narrowed in fourth grade (but not in eighth grade), in line with the emphasis of the programs in the lower cycle of education. An external evaluation conducted by a Chilean center of educational research (CIDE) in 1991 confirmed the greater levels of learning for students in the program than in comparable schools (though the actual learning gains are small, only 3%). The evaluation also documented that for schools involved in the P900 program teachers became more active and provided more opportunities for student participation.

Chile's recent policies to improve equity in education, like Mexico's, suggest that it is possible to provide inputs to the most disadvantaged schools, hence reducing inequality. In spite of the emphasis of Chilean policy on positive discrimination, and its emphasis on assessing inequality in learning outcomes as a starting point for policy, there are conflicting accounts on whether the achievement gaps between the poor and the affluent had narrowed. The conflict stems in part from the kind of adjustment made to student achievement scores to make them comparable over time. It should be pointed out that these reforms were implemented in a context where total expenditures in education increased significantly, and other social policies and the results of significant economic growth resulted in reduction of the incidence of poverty, the existing studies do not discuss this context nor do they attempt to parcel out the contributions of compensatory policies from the effects of these other policy-induced changes. Judging from differences in raw student

achievement scores, the gains over time for all schools are greater than the reduction in the gap between the targeted schools and the non-targeted schools: Some potentially promising avenues to enhance student learning are left unexplored in this study.

The studies of this case, as the studies of the Mexican case, highlight the importance of basic school supplies and infrastructural conditions to enable school learning. Children do better when they have textbooks, when their schools are not in disrepair, when there are school libraries, and their teachers have instructional resources. These effects should not be surprising given that these policies are targeting schools and children in great need, where a simple pencil and notebook is a great addition to facilitate learning. What these studies do not answer is how far can the expansion of such basic provision of school inputs go? It is reasonable to expect that the effects of these strategies will level off after a point. None of the existing studies in Mexico, Chile, or elsewhere focus on the question of which skills are more relevant to facilitate intergenerational social mobility and the reduction of inequality.

Although there are other studies of the effects of compensatory and equity policies in Latin America, their results are consistent with those reviewed. Studies of the impact of these policies suggest that it is easier to distribute inputs than to educate teachers, and that changes in student achievement levels are modest. In Colombia the equity policies emphasized reorienting education expenditures towards rural areas and supporting *Escuela Nueva*, a program to strengthen the quality of rural schools. The reorientation of expenditures has effects in expanding access to different levels. *Escuela Nueva* has been assessed by various studies that document children's improved performance in rural multigrade schools where teachers are appropriately trained and where learning materials are available than those students in less-endowed rural schools. The basic story of these studies is similar: it is possible to improve the learning conditions of poor children through policies that enhance learning inputs. There are great challenges in implementation, particularly when the policies involve altering instructional practices. Although effects in terms of student achievement and completion rates can be documented, the social significance of those and the long-term correlates of those effects has not been assessed. Studies are biased toward short-term effects, probably because spon-

sors of research are more interested in recent policies than in assessing effects over fairly long periods.

On the whole more is known about policies that attempt to reduce disparities in inputs than about policies that aim true positive discrimination or enhancement of the social and cultural capital of poor students. Regarding whether education fosters social reproduction or mobility in a context of rapid expansion and deliberate affirmative policy, the studies of compensatory policies in Mexico and Chile pose more questions than they answer. What is the practical significance of student achievement in the tests used to measure curriculum coverage? How does performance on these tests relate to life chances? How well does performance on those tests predict performance in higher levels of education? What is the influence of the compensatory programs on other social and attitudinal outcomes? What is the impact of these programs in building social capital in the communities? What are the perspectives of the intended beneficiaries of these programs? What do they think they get out of them? What do they think about how these programs should be run? Existing evaluations document relatively the short-term impact of these programs, which does not describe how effects change as the inputs they support in schools consolidate.

The high levels of social exclusion characteristic of Latin America are indicative of politics and history that have produced and maintained such inequities. Compensatory policies are formulated and implemented in a context and through mechanisms that reflect the very inequalities of origin at the root of the problem they try to correct. In what they changed and in what they failed to alter they express the tensions between the role of schools as levers of social change and as mechanisms to reproduce social stratification.

*See also:* LATIN AMERICA AND THE CARIBBEAN.

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## COMPULSORY SCHOOL ATTENDANCE

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The term *compulsory attendance* refers to state legislative mandates for attendance in public schools (or authorized alternatives) by children within certain age ranges for specific periods of time within the year. Components of compulsory attendance laws include admission and exit ages, length of the school year, enrollment requirements, alternatives, waivers and exemptions, enforcement, and truancy provisions.

Compulsory age requirements vary by state. Data collected by the Education Commission of the States in March 2000 indicate that the earliest age for compulsory attendance is five, with a range to seven, and the upper age limit varies from sixteen to eighteen. Withdrawal from school prior to the age limit is permissible in some states, provided certain conditions are met. State policies setting the length of the school year differ as well. The 2000 Council of Chief State School Officers Policies and Practices Survey indicates that state requirements for the number of school days range from 175 to 186, with variations on exceptions, minimum hours, and start dates.

Enforcement of compulsory attendance laws is usually accomplished through local school attendance officers, superintendents, law enforcement officers, and municipal or juvenile domestic relations courts. Parents, or those persons with legal custody, are held responsible for school attendance in every state. Penalties for noncompliance can include fines and jail sentences, but these are not usually imposed until administrative measures prove unsuccessful. Consequences for students vary but include removal from regular classrooms and placement in alternative programs and denial of driving privileges. In some states, criminal penalties exist for contributing to truancy.

The authority for compulsory attendance laws has been defined through courts of law as a valid use of the police power of the state provided by the U.S. Constitution. The U.S. Supreme Court opinion in *Meyer v. Nebraska* (1923) describes the police power of states as "founded on the right of the State to protect its citizens, to provide for their welfare and progress and to insure the good of society" (Gee and Sperry, p. C-19).

## Development of Compulsory School Attendance Philosophy and Laws

The authority of a state to mandate that parents send children to school has not always been endorsed or recognized in the United States. Parental provision of instruction for children originated with the English poor laws of the sixteenth century, which required vocational training for destitute youth. Schools were organized in connection with poorhouses and workhouses for training the inhabitants' children.

In colonial America, the earliest educational laws required training in skills and trades through apprenticeships for orphans and needy children—a large population due to the immigration of youth as indentured servants. By the mid-eighteenth century, laws had been expanded to include training in reading and writing. Teaching children the fundamental skill of reading enabled religious instruction and reading of the Bible.

The first compulsory education law in America was enacted in 1642 by the Massachusetts Bay Colony. This law required parents to provide an understanding of the principles of religion to children under their care, as well as an education in reading, writing, and a trade. Other New England colonies adopted similar laws between 1642 and 1671, but the southern colonies did not enact laws for apprenticed children until 1705.

Early laws were driven by the need for individuals to understand religious principles and moral concepts and to meet the expectations of their station as citizens. They provided the foundation for governmental action to require education, even if it was seen as more of a private responsibility than a public one. The concept of freedom of children from work while attending school was not included, and would not be until the nineteenth century.

Interest and support for compulsory education declined during the seventeenth and eighteenth centuries due to several factors, including movement from towns into the frontier, the need for children to work at home, difficulty in enforcement, and less emphasis on religion. After the American Revolution, new reasons for interest in an educated citizenry appeared, based on democratic ideals, religious tolerance, and the integration of immigrants into the mainstream of American society.

In 1852 the state of Massachusetts passed a weak law to require attendance in schools. The Massachu-

setts School Attendance Act of 1852 specified that children between the ages of eight and fourteen had to attend school for twelve weeks per year, six of which had to be consecutive if the school remained open for that time. Although unclear and ill-defined, exemptions were included in the law, as were penalties for enforcement.

Early compulsory attendance laws provided for a minimum time that children had to attend school before they could be lawfully employed, usually three months, but enforcement was lax. The South lagged behind, and many of the laws of the southern states left enforcement and practice to localities. The early laws were vague, and parents who needed children at home to help earn a living resisted.

By 1900 court cases had affirmed state enforcement of compulsory attendance laws based on the benefit to the child and the welfare and safety of the state and community. In 1901 the authority to mandate school attendance was expressed in the Indiana Supreme Court opinion for *State v. Bailey*. The finding stated that “the welfare of the child and the best interests of society require that the state shall exert its sovereign authority to secure to the child the opportunity to acquire an education” (Hudgins and Vacca, p. 275). In the 1944 case of *Prince v. Massachusetts*, the U.S. Supreme Court declared: “Acting to guard the general interest in youth’s well being, the state as *parens patriae* may restrict the parent’s control by requiring school attendance, regulating or prohibiting the child’s labor, and in many other ways” (Gee and Sperry, p C-20).

Lawrence Kotin and William Aiken, in their book *Legal Foundations of Compulsory School Attendance* (1980), cite several conditions in the labor sector that reinforced the sentiment for compulsory attendance in schools. The need for a general education for children was reinforced by the need to protect children from abuse in the workplace (as expressed through child labor laws). In addition, the need for skilled and literate workers increased as the industrial age unfolded. Working children provided competition for employment in unskilled jobs that adults needed, providing another factor for wanting children to be in school. An alignment of labor leaders and advocates of self-sufficiency and improvement in the human condition created a demand for longer years in school and school attendance.

A National Bureau of Economic Research study found that school attendance rates in 1900 were sig-

nificantly raised in those states that combined compulsory school attendance with child labor laws. By the second decade of the twentieth century, a majority of states had specific child labor laws that set the minimum age for employment at fourteen and included specification of the completion of school grades and other educational requirements.

### Exemptions and Alternatives

The expansion of learning arrangements recognized by state law as alternatives to attendance in public schools has evolved through case law. According to Gee and Sperry, compulsory attendance laws must meet the demands of reasonableness. This term was defined in the U.S. Supreme Court case *Pierce v. Society of Sisters* (1925). In this case, the state of Oregon required that children within the age ranges of the compulsory attendance law attend public school only, or their parents would be guilty of a misdemeanor. The Court ruled in favor of the operators of a private school that challenged the state law, finding the statute unconstitutional on the basis of violating the fourteenth amendment rights of the parents and the property rights of schools. The court supported compulsory attendance but not the concept that compliance could only be achieved through public schools. Private schools were an alternative.

The right of parents to provide an alternative to public or private schooling to honor and preserve religious convictions was established through the case of *Wisconsin v. Yoder* (1972). Members of the Old Order Amish Religions objected to formal public schooling beyond the eighth grade because it presented and reinforced values that were in opposition to beliefs of the Amish community. The Amish had experienced conflict with state authorities over compulsory school attendance over the years, but, instead of litigation, would pay fines, be subjected to short-term jailings, or move.

Amish parents Jonas Yoder and Adin Yutzy appealed the decision of the Wisconsin Circuit Court that convicted them for violating Wisconsin's mandate for school attendance until the age of sixteen. The state of Wisconsin justified the conviction based on the need to preserve the political system, ensure economic survival, and provide for the socialization of children. A basic education, the state declared, included the ability to read and reason in order to evaluate issues and exercise citizens' rights such as voting. The Wisconsin Supreme Court, however, reversed the lower court ruling. The court found that

the Amish alternative to formal secondary school education could convey "the social and political responsibilities of citizenship without compelled attendance beyond the eighth grade at the price of jeopardizing their free exercise of religious belief" (Gee and Sperry, p. 23).

The United States Supreme Court upheld this decision in 1972, with Chief Justice Warren Burger ruling: "A State's interest in universal education is not totally free from a balancing process when it impinges on other fundamental rights and interests, such as those specifically protected by the Free Exercise clause of the First Amendment and the traditional interest of parents with respect to the religious upbringing of their children" (Keim, p. 98).

State compulsory attendance statutes have been amended to provide for students attending alternative education programs, as well as for various waivers and exemptions. For example, the Code of Virginia states that requirements for compulsory attendance may be satisfied by sending a child to an alternative program of study or work-study offered through a public, private, denominational, or parochial school, or by a public or private degree-granting institution of higher education. A local school board must excuse from school attendance any pupil who, with his or her parents, is conscientiously opposed to attendance due to religious training or belief. Also mandated is release from attendance by local school boards for verified medical reasons or for personal safety as determined by a juvenile and domestic-relations district court.

Virginia law recognizes home instruction by parents or instruction by tutors, provided that specified conditions are met, and provisions for some form of home schooling are provided in the majority of the fifty states. Other exemptions and delays for attendance are made for children with medical, physical, or emotional problems. Exceptions to compulsory attendance laws may be made if children within certain ages do not have public transportation provided within certain distances from their homes. Information provided by the Education Commission of the States in 2000 shows that, in several states, students sixteen years old may be eligible for withdrawal from the regular classroom if fully employed or enrolled in alternative education programs, with approval by parents and principals.

## Issues Associated with Compulsory Attendance

Despite the changes in state laws to increase flexibility, there are some critics who maintain that compulsory school attendance should be ended. The National Center for Policy Analysis provides some of the arguments to lower the compulsory school upper age limit, or to limit hours. Opponents claim that compulsory school attendance does not necessarily result in better education for students, but could subject them to social engineering. Others claim that compulsory attendance results in prolonged adolescence and suggest that forced attendance in high school could contribute to violence and discipline problems. Compulsory attendance laws have been said to limit innovation and be burdensome for parents who home-school their children. Yet the National Center for Policy Analysis cites statistics indicating that students who attend school a greater percentage of time than their counterparts with lesser attendance records score higher on state knowledge and skills tests.

Respondents to the thirty-third annual Phi Delta Kappa/Gallup Poll of the public's attitudes toward the public schools, conducted in January 2001, support reforming the existing public school system by almost two-to-one, rather than creating alternatives to the existing system. Seventy-five percent of the respondents prefer to improve the existing public school system rather than provide vouchers to pay for private or church-related schools.

Not only is an argument made for attendance at schools in order to prepare children for employment and economic success, but also for the development of values and the character traits needed for citizenship. The Center on Education Policy makes the case that public education is essential not only in teaching the principles of democracy and the role of government, but also in promoting civic values and the philosophy of tolerance for diversity and respect for differences in race and religion.

Whether the basis is economic self-sufficiency, educational reform, preparation for work or further study, character development, or promotion of the citizenry and the democratic way of life, the reasons for compulsory attendance of some kind reinforce the continued existence of state statutes. However, changing circumstances, flexibility for parents and students, and the needs of various student populations continue to shape these laws and contribute to their evolution.

*See also:* CONSTITUTIONAL REQUIREMENTS GOVERNING AMERICAN EDUCATION; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; SECONDARY EDUCATION, *subentry on* HISTORY OF.

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CYNTHIA A. CAVE

## COMPUTER-SUPPORTED COLLABORATIVE LEARNING

The traditional expansion for the acronym CSCL is *computer-supported collaborative learning*. However, many who work in the field find aspects of this title problematic; therefore a convention has developed to use the acronym as a free-standing designation in its own right. The traditional title is controversial in several ways.

As Pierre Dillenbourg points out, the term *collaborative learning* has been used in two different senses. On the one hand, some have treated collaborative learning as a distinctive form of socially based learning that is fundamentally different from prevailing psychological formulations. For example, Kenneth Bruffee defines collaborative learning as "a reculturative process that helps students become members of knowledge communities whose common property is different from the common property of the knowledge communities they already belong to" (p. 3). An alternative way to think about collaborative learning, however, is not as a type of learning at all, but rather as a theory of instruction. Stated simply, the theory of collaborative learning, as noted by Jeremy Roschelle and Stephanie Teasley, asserts that learning is enhanced when learners are placed in situations involving "coordinated, synchronous activity that is the result of a continued at-

tempt to construct and maintain a shared conception of a problem" (p. 70). It has been incorporated into a variety of well-known instructional methods, including problem-based learning, some versions of cooperative learning, and project-based learning. Collaborative learning is not limited to settings of formal instruction, however. Learning in the context of joint activity occurs in workplaces, homes, and informal learning settings as well as in schools.

Other terms have been suggested as replacements for *collaborative*. Roy Pea, for example, observes that what takes place in settings of joint activity is often anything but collaborative, and he has proposed that the word *collective* be used instead. There are also other possibilities to be considered. In 1987 Yrgö Engeström drew upon a set of distinctions originally proposed by Bernd Fictner in 1984 between coordination, cooperation, and reflective communication in learning. The difference between coordination and cooperation has to do with the degree to which a learning task involves a prescribed division of labor among participants. This same distinction, however, is employed by Dillenbourg, and by Roschelle and Teasley, to differentiate between cooperation and collaboration. The critical point is that there has been no consensus with respect to the basic terminology for describing interaction in these settings, and it is probably premature to try to establish definitive labels for the field.

There are also misunderstandings that arise from the first half (computer-supported) of CSCL. Not all uses of technology applied to learning in groups are necessarily representative of CSCL research, and not all CSCL research necessarily involves computer-based instruction. Though there is a lively interest within the CSCL community in the ways that new and emerging computer and telecommunications technologies might foster and transform collaborative learning, this is not the sole, or even the central, object of inquiry. There is, indeed, a widely held recognition that the fundamental processes by which learning takes place in settings of joint activity are not well understood. As a result, a good number of CSCL researchers are engaged in basic research designed to illuminate how mutual understanding is accomplished in collaborative settings, whether augmented with technology or not.

## A Brief History of CSCL Research

Precursors to what was to become the field of CSCL can be found in three influential projects, all initiated in the early 1980s. The first was a multi-university project known as ENFL, begun at Gallaudet University to support instruction in composition. Workers in this area developed a set of computer-based applications that have subsequently come to be referred to as CSCWriting programs. A second and highly influential project was undertaken by Marlene Scardamalia, Carl Bereiter, and colleagues at the Ontario Institute for Studies in Education (OISE) at the University of Toronto. This project had its origins in reading research and focused from the outset on student epistemologies and the development of skills for knowledge sharing. It led to the development of programs (CSILE, Knowledge Forum) that have been widely used in instructional settings around the world. A third early influence was the 5th Dimension Project organized by Mike Cole and other researchers at the Laboratory of Comparative Human Cognition (LCHC) at the University of California in San Diego. The 5th Dimension is an international multi-site network of after-school teaching programs initially developed as clinical training sites for pre-service teachers. It was less technologically oriented than the other early projects, but the 5th Dimension Project made considerable contributions toward the development of a theoretical framework for studying learning from a sociocultural perspective.

In 1983 a workshop on the topic of “joint problem solving and microcomputers” was held at LCHC. The organizers of this workshop, Mike Cole, Naomi Miyake, and Denis Newman, were all to assume prominent roles in the CSCL community as it developed. Six years later, a NATO-sponsored workshop was held in Maratea, Italy. Though there was some cross-fertilization between the groups (Denis Newman, for instance, participated in both workshops), the Maratea workshop largely involved participants from European research centers, while the San Diego workshop was attended by researchers from the United States and Japan. The Maratea workshop is considered by many to mark the birth of the field since it was the first public and international gathering to use the term *computer-supported collaborative learning* in its title.

The first full-fledged CSCL conference was organized at Indiana University in the fall of 1995. Subsequent international meetings have taken place

biennially, with conferences at the University of Toronto in 1997, Stanford University in 1999, and the University of Colorado in 2002. A European conference was held at the University of Maastricht in the Netherlands in 2001. The fifth international conference in the biennial series will be held in Norway at the University of Bergen in 2003. A specialized literature documenting theory and research in CSCL has developed since the NATO-sponsored workshop in Maratea. Four of the most influential monographs are Kenneth Bruffee’s *Collaborative Learning* (1993), Charles Crook’s *Computers and the Collaborative Experience of Learning* (1994), Newman, Griffin, and Cole’s *The Construction Zone* (1989), and Carl Bereiter’s *Education and Mind in the Knowledge Age* (2002). Additionally, there have been a number of edited collections specifically focusing on CSCL research.

## A Paradigmatic Example of CSCL Research

A paradigmatic example of CSCL research can be found in an early study reported by Jeremy Roschelle in 1992. Roschelle’s data consisted of videotapes of two students, Dana and Carol, working together with a program designed to enable users to visualize and experiment with the trajectories of Newtonian particles. For each of these exchanges he described the “conversation action,” capturing not only the lexical components, but also timing, prosodic features, and affiliated gestures; the “conceptual change” evidenced in the exchange; and finally the displayed “shared knowledge.”

Rather than attending exclusively to *what* was learned using some sort of outcome measure, Roschelle’s study focused instead on *how* learners achieve new conceptual understandings in the presence of computational artifacts. When one examines the actual interaction of learners engaged in such activities it is often unclear what is being accomplished through their discourse or how participants move from their initial levels of understanding to appreciations more closely approximating those of a physicist. Roschelle discussed how convergent change is possible using “only figurative, ambiguous, and imprecise language and physical interactions” (p. 239). He argued that conceptual convergence is made possible by four elements: “(a) the construction of a deep-featured situation at an intermediate level of abstraction from the literal features of the world; (b) the interplay of metaphors in relation to each other and to the constructed situation; (c) an iterative

cycle of displaying, confirming, and repairing situated actions; and (d) the applications of progressively higher standards of evidence for convergence” (p. 237).

Roschelle’s study illustrates three distinctive features of CSCL research. First, as noted by Shelly Goldman and James Greeno, because CSCL research concerns itself with learning in settings of joint activity, learning is treated not as hidden or occult, but rather as a visible and accountable form of social practice. Second, and closely related to the first point, CSCL research is centrally concerned with the process by which meaning is constructed within such settings. Finally, there is an orientation in CSCL research to learning as a form of mediated activity—mediated not only by designed artifacts such as computer programs, but also by the more basic resources of human concentration, such as language and gesture. It is these features that distinguish work in CSCL from other research on the application of instructional technology to learning in groups.

*See also:* COOPERATIVE AND COLLABORATIVE LEARNING; PEER RELATIONS AND LEARNING; TECHNOLOGY IN EDUCATION.

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TIMOTHY KOSCHMANN

## CONANT, J. B. (1893–1978)

Twenty-third president of Harvard University, James Bryant Conant witnessed many defining moments of twentieth-century American history. He was intimately involved with transformational events: World War I, as president of Harvard University, the initial formation of federal science policy, the development of the atomic bomb in World War II, the cold war and the postwar atomic energy policy (including opposition to the H-bomb), the reconstruction of Europe, and the reconsideration of public education in the United States. His autobiography is aptly titled *My Several Lives*, and he moved with remarkable ease through lives in academic, scientific, governmental, and diplomatic circles.

Conant was born in Dorchester (Suffolk County), Massachusetts, to James Scott Conant and Jennett Orr Bryant. His father had served the Union in the Civil War, owned an engraving and etching business, and speculated in real estate and residential construction. Conant could trace his lineage back to the ships immediately following the Mayflower on his mother's side and to the founding of Salem on his father's.

In his own words, Conant was raised by "a regiment of women," including his mother, several aunts and cousins, and his two elder sisters. Both parents were members of the Swedenborgian Church, an organization devoted to exploring the entwinement of religion, nature, and life. His mother's interest in the church waned, however, and Conant later referred to himself as a Unitarian.

### Education

Conant attended the Roxbury Latin School, a college preparatory school that required a rigorous entrance

examination for admission. At home, he nurtured his budding interest in science in general and chemistry in particular by practicing magic tricks and doing experiments in his small laboratory equipped by his father. At Roxbury, his career was solidified by his relationship with science teacher Newton Henry Black. Black guided Conant through the high school science curriculum, and then exposed him to more advanced texts and techniques, including college entrance exams. Conant's performance in high school earned him the Harvard Club Scholarship and graduation in 1910 near the top of his class of twenty-one students.

Conant graduated Phi Beta Kappa from Harvard in three years and managed to find enough time away from the classroom and laboratory to write for the Harvard *Crimson*, join Delta Upsilon, and develop a friendship with his rooming house neighbor, novelist J. P. Marquand. Conant's graduate school plans included study with physical chemist Theodore W. Richards, the first American-born winner of the Nobel Prize in chemistry. In his third year of undergraduate studies, he did some special research with organic chemist E. P. Kohler, a new arrival to Harvard from Johns Hopkins University. This project resulted in Conant's becoming Kohler's graduate assistant in advanced organic chemistry for two years. Ultimately, Conant wrote a double thesis in physical and organic chemistry for his Ph.D. degree in 1916.

### War Work

The outbreak of World War I in Europe prevented Conant from realizing his dream of postdoctoral study in Germany. However, in the summer of 1916 Roger Adams left the Harvard faculty, and Conant was selected to fill this vacancy in the chemistry department faculty. At the close of the 1916 through 1917 academic year, Conant joined the United States Bureau of Mines, which was soon absorbed by the Department of Defense as the Chemical Warfare Service. World War I would be remembered as the "chemist's war," primarily due to the use of poison gas warfare initiated by the German army against the French in 1915. Conant worked on gas warfare projects in laboratories at American University in Washington, D.C., the largest federally funded scientific research project to that date.

Newly commissioned Lieutenant Conant immediately went to work on mustard gas and then on a more toxic and easily deliverable gas, lewisite. In July

1918 the Army promoted Conant to the rank of major and placed him in charge of a lewisite production facility at an automobile factory in Cleveland. The gas was a weapon intended to be used offensively, but it was never employed. Significantly, the chemist's war connected chemistry to society through demonstration of its applied uses, and allowed Conant to associate with the leaders of government, the military, business, higher education, and administration who would shape the remainder of his career.

### Academic Career

In September 1919, following demobilization of the war effort, Conant returned to Harvard with an appointment as assistant professor of chemistry, and in 1921 married Grace T. (Patty) Richards, daughter of T. W. Richards, his department chair and mentor. Conant's early research focused on the areas of mechanisms of chemical reactions, equilibrium-rate studies, and free radical structure. His later research interests centered on respiratory pigments and the properties of hemoglobin and other natural products, especially chlorophyll. He was promoted to associate professor, granted tenure in 1924, and elevated to full professor in 1927. During this period, he and his wife had two sons.

In 1931, Conant was named the Shelden Emery Professor of Organic Chemistry and accepted the department chairmanship. Awards and honors accumulated as Conant was elected to the American Academy of Arts and Science and the National Academy of Science. His research won him the Nichols Medal of the American Chemical Society and the Chandler Medal of Columbia University, among others. Between 1919 and 1933 he wrote or coauthored five chemistry textbooks, including his first, *Practical Chemistry* (1920), written with his former Roxbury science teacher, Newton H. Black.

The Conants made three significant sabbatical trips, two to California and one to Germany. In 1924 they spent a semester at the University of California, Berkeley, and in 1927 a semester at the California Institute of Technology in Pasadena. There, contacts with western scientific leaders A. A. Noyes and Robert A. Millikan would not only prove valuable later during World War II, they resulted in a lucrative offer to move to Pasadena to join the faculty there. In 1925, Conant, Patty, and their son, Jimmy, spent nine months in Germany, where Conant was exposed to the fast-paced scientific competition

among individuals and institutions alike. Much of what he learned of science and scientific administration in Germany would be applied to his own administrative practices. He and his biographers characterized his persona as science itself, with all the characterization implied: the scientific method, increasing specialization, and reduction of a problem to its simplest elements.

In 1933 Harvard's president, Abbott Lowell Lawrence, announced his expected retirement amid much speculation on his successor's identity. Lowell was the administrative opposite of his predecessor, Charles W. Eliot. Lowell was a close supervisor of faculty, a harsh master of students, and a highly opinionated, socially conservative policymaker. It is said that a list of forty possible candidates existed at that time, and it did not include the name *Conant*. A difference of opinion among the Harvard corporate board led to a visit from a board member to Conant. His recommendation appears to have solidified the corporation; on May 8, 1933, Conant was selected as the twenty-third president of Harvard University and was formally installed on October 9, 1933.

### President of Harvard University

Conant was immediately forced to begin thinking not only about campus issues and politics, but also about contemporary world events: the Great Depression, the rise of Nazism in Germany, the eventual establishment of the Third Reich, and the foreboding threat of World War II. Conant's presidency would be broken into three distinct eras: 1933 to 1940 was a period of innovative policies at the institutional level and pleas for military and civilian preparedness at the national level; 1940 to 1946 was marked by long absences from Cambridge as Conant became closely involved with the organization and administration of scientific research funded by the federal government; and 1946 to 1953 as postwar equilibrium was achieved and the debates over atomic energy policy and the manufacture of thermonuclear devices heated up.

As president, Conant began to implement policies, some controversial, to improve faculty quality. Among these were the so-called up or out rule—an assistant professor who was not promoted at the end of the probationary term was terminated as a member of the faculty. In addition, university professorships were established to recognize and retain exceptional scholars. Conant put policies in place to

establish a more diversified student body; the Harvard National Scholarships were merit-based awards established with the intent of reducing financial and geographic barriers to a Harvard education. He was elected to the Carnegie Foundation for the Advancement of Teaching board of trustees in 1934 and was an early proponent of standardized testing, including nationwide administration of the Scholastic Aptitude Test as a reliable admissions tool.

As war in Europe seemed imminent, Conant supported the Roosevelt administration's quest for peacetime military conscription legislation, an action that was not warmly received by the undergraduates at Harvard. Following Germany's invasion of her European neighbors, Conant's attitude crystallized; he sought ways that scientists and scholars could mobilize to defeat Hitler.

Vannevar Bush, a contemporary of Conant, had been a professor of engineering at the Massachusetts Institute of Technology and, later, vice president of MIT. Bush moved to Washington, D.C. in 1939 to assume the presidency of the Carnegie Institution with its traditional role of science adviser to the government. Bush convinced President Franklin D. Roosevelt that the military needed to make rapid advances in technology and employ civilian scientists with the necessary expertise to do so. Thus, the new National Defense Research Committee (NDRC) was established almost eighteen months before United States entry into war, and Bush recruited Conant for the committee. The NDRC mobilized civilian scientists for war and let contracts, funded by the federal government, to academic and industrial laboratories.

As 1941 progressed, Conant became chair of the NDRC with direct responsibility for committee-supervised work on uranium fission, and, ultimately, the crash program to build the atomic bomb. He was present at Ground Zero, Alamogordo, New Mexico, for the Trinity atomic device test explosion.

Meanwhile Harvard went about its business without the physical presence of Conant, who took a voluntary twenty-five percent salary reduction from 1942 to 1946. One seminal bit of policymaking that did occur during the war years was the agreement reached with Radcliffe College to merge classroom instruction. As a result of a wartime shortage of faculty, 310 years of all-male Harvard education came to an end.

## Presidential Appointments

When Dwight D. Eisenhower, former president of Columbia University, was inaugurated as president of the United States in 1953, one of his first appointments was the choice of Conant to become the U.S. high commissioner to Germany. Conant took this opportunity to return to Germany to aid reconstruction as the ideal time to retire from Harvard following twenty years as president. Following the ratification of the treaty establishing the Federal Republic of Germany, Conant became the U.S. ambassador to Germany.

## Publications

Conant served in Germany for Eisenhower's first term, then retired from the diplomatic corps in 1957 to undertake a study of American secondary education for the Carnegie Corporation. Several influential books arose from his research, including the *American High School Today* (1959), an on-site examination of the critical problems facing the public "comprehensive" high school. Although the fieldwork began before the launch of the Soviet satellite *Sputnik*, the timing of the publication to coincide with national fears that the country was falling behind the Soviets in secondary education triggered sales of nearly 200,000 copies and Conant's third *Time* magazine cover story. The book outlines twenty-one recommendations, ranging from an increase in the number of guidance counselors to a call for a twelfth-grade capstone course in American democracy. The volume received much attention from parents, educators, and critics, but little substantive reform resulted.

The controversial look at urban schools, *Slums and Suburbs* (1961) presents a contrasting picture of high schools within "half an hour's drive" of one another in the cities of Philadelphia, New York, Detroit, Chicago, and St. Louis. Conant argued that "we are allowing social dynamite to accumulate in our large cities" (p. 2) as evidenced by racial discrimination, poverty, and violence. Contending that a school is a product of the socioeconomic status of the families it serves, he concluded that, "More money is needed in slum schools" (p. 146) rather than busing pupils to other schools. This opinion was not well received among civil rights leaders, thus dooming the rest of Conant's recommendations to obscurity.

Moving to higher levels of the education system, the final two volumes to emerge from this study

were *The Education of American Teachers* (1963), a critique of the curricula and teacher certification of schools of education, and *Shaping Educational Policy* (1964), an examination of state and federal education policy.

### Contribution

Conant's career and his life-long educational philosophy should be remembered as one of service—to education, to science, and to the interests of his country. He took a “hands on” approach to his supervisory duties in the laboratory, the president's office, and his national study of secondary education. Upon assuming the Harvard presidency, he undertook the daunting task of attending and presiding over every faculty meeting of every college in the university.

Conant's admiration for the German university system fueled his belief that Harvard could be transformed from a New England university with a national reputation to a world-level institution. He initiated graduate degrees in education, public policy, and history of science. His innovations included faculty appointments unattached to any specific department so as to strongly encourage interdisciplinary thinking and collaboration. At Harvard, as at other institutions, the budgetary effects of the depression were felt, and Conant found it necessary to keep the faculty ranks spare. He managed to do this without sacrificing quality by eliminating many of Harvard's inbred hiring policies and instituting the practice of opening position vacancies internationally.

Student enrollment reforms accompanied those of the faculty. Conant purposefully directed the admissions office to scrutinize legacies more closely, open the doors to more first-generation and ethnic immigrant applicants, and scour the country for the most brilliant students. The goal of a more diverse student body was pursued through these directives and the addition of standardized admission testing. Conant strongly believed that the American system of higher education allowed for sorting by ability, and, therefore, students need not reach beyond their grasp in the choice of a college.

In the introduction to the *American High School Today*, Conant wrote of his regret over the talent wasted in the European system of early preselection of students for the university. He clearly understood that the diversity of American institutions of higher

education and their ability to absorb all those who wish to go to college are foundational American ideals that promote equality of opportunity and equality of standing. The public benefits of all forms of education were foremost in Conant's pursuit of excellence in science technology education and federal policy. He wrote in his freshman diary at Harvard, “Education is what is left after all that has been learned is forgotten” (Hershberg, p. 20).

In 1963 Conant was awarded the Presidential Medal of Freedom by President John F. Kennedy. An arrhythmic heart condition that was discovered in 1965 caused Conant to curtail drastically his public life. He and his wife spent most subsequent winters in their Manhattan apartment and summers in the hills and mountains of New Hampshire until his death in Hanover, New Hampshire.

*See also:* CURRICULUM, SCHOOL; EDUCATION REFORM; GENERAL EDUCATION IN HIGHER EDUCATION; HARVARD UNIVERSITY; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; PHILOSOPHY OF EDUCATION.

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## CONSORTIA IN HIGHER EDUCATION

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A *consortium* is an association of institutions for the purpose of improved and expanded economic collaboration to achieve mutually beneficial goals. In higher education, this organizational form was originally designed to foster interinstitutional cooperation among a group of colleges and universities for the purpose of enhancing services within a geographic region. More recently, as information and communication technologies have increased the availability of resources for research and development purposes, universities have joined with corporations and government agencies to form national and international consortia.

The parameters of academic cooperation may vary in scope by level of control (public-private), discipline (computer science, engineering, medicine), service provider (libraries, universities, science laboratories), or institutional level (research institute, government agency, corporation). Originating initially in the 1960s at a time of unprecedented expansion in higher education, consortia enabled institutions to share abundant resources. These consortia were voluntary, multi-institutional, multipurpose, and designed to serve their member institutions. By the mid-1970s, as institutions became more dependent on external sources of support, universities and colleges established consortia to sustain high-cost programs and facilities, strengthen constituent services, and penetrate new markets beyond their service area. In some instances, governing boards and funding agencies encouraged consortia development as evidence of economic collaboration among local and regional institutions to eliminate superfluous expenditures and achieve economies of scale and cost savings. Contemporary academic consortia may also be structured as school-university partnerships, business-university alliances, community-university coalitions, and multisystem networks. The current status of the academic consortium as an organizational form demonstrates its potential significance as a manifestation of the entrepreneurial university in a consumerist society.

### Types of Consortia

The initial consortium structure consisted of three or more colleges and universities signing an agreement to cooperate in providing joint ventures, such as tuition waivers for cross-registration, faculty ex-

changes and professional development, interuniversity library privileges, joint purchasing of goods and services, and outreach projects. The success of these activities was heightened by comparability in missions, goals, laws, regulations, resources, and sources of support. More sophisticated and complex structural arrangements are now conceptualized around specialized purposes such as supercomputing, scientific research and development, medical school-teaching hospital collaboration, and cooperative degree programs in low-enrollment, specialized fields. In these cases, consortium objectives may be to reduce duplication and redundancy, gain access to federal agency funding, recruit international students, engage in advanced research, and utilize high-cost facilities.

Since the 1990s increased institutional investments in information and communication technology, with support from business and industry, have added important dimensions to consortia design. This growth has been most evident in multisystems and research universities as well as across national and international boundaries. Factors contributing to their longevity include the leadership and commitment of senior executives; formal agreements on resource sharing; collaboration in agenda setting, issue definition, and problem solving; realistic timelines for project development; continuity in personnel; and complementary strategies for overcoming inequities and cultural differences among disparate partners.

**Multipurpose academic consortia.** The Association for Consortium Leadership (ACL) has identified 125 member consortia in the United States; these vary in size from 3 to 100 institutions engaged in a variety of collaborative projects. Two successful multipurpose academic consortia are Five Colleges, Inc. (Amherst, Smith, Mount Holyoke, and Hampshire Colleges and the University of Massachusetts-Amherst) and the Claremont Colleges, Inc., in California. Five Colleges is an independent, not-for-profit entity coordinated by an executive director and staff, drawing financial support from its member institutions and foundation grants, and operating collaborative faculty and student projects, including free transit throughout its service area. The Claremont Colleges in California, founded in 1925, brings together five independent but contiguous liberal arts colleges and two graduate institutions for collaborative business and academic services, most recently involving the development of

an online cross-registration module in the five undergraduate colleges and better utilization of information technology across all seven institutions. The Western Interstate Commission on Higher Education (WICHE) works with fifteen member states in devising cooperative programs and conducting policy research that addresses the needs of students in its service area. These include a student exchange program at the undergraduate, graduate, and professional levels, a cooperative for educational telecommunications, and the Consortium for North American Higher Education Collaboration (CONAHEC).

**Technology-planning consortia.** Other examples of consortia engaged in strategic technology planning across entire regions are the Colleges of Worcester (Massachusetts) Consortium, the New Hampshire College and University Council, and the Consortium of Universities in the Washington Metropolitan Area. The Internet2 Project, a consortium of more than 100 universities, has as its mission cooperative development, operation, and technology transfer of advanced, network-based applications and network services in its member universities as well as internationally. A technology initiative in the greater Chicago area brings together public and private colleges and universities in the North Suburban Higher Education Consortium with museums, school districts, and historical societies. A faculty initiative of twelve of the Pennsylvania State University's academic colleges and its library system, and two historically black institutions, Cheyney and Lincoln Universities, are also engaged in designing and developing standards for quality distance education. Its guiding principles address learning goals and content presentation, teaching-learning interactions, assessment and evaluation criteria, instructional media and software tools, and the development of learner support systems and services. A national initiative, the Community of Agile Partners in Education (CAPE), includes 125 colleges, universities, school districts, medical schools and hospitals, and community-based organizations throughout the United States and abroad, providing training in pedagogical applications of videoconferencing, Internet use, and other technologies, and the sponsorship of interinstitutional cooperative faculty teaching and research projects.

**Local business- and industry-linked consortia.** Multinational as well as local businesses and industries are another catalyst for consortia development,

often providing resources and expertise to influence university participation. One of the earliest examples is the Alliance for Higher Education, a Dallas, Texas-based consortium of thirty two-year and four-year colleges and research universities, corporations, hospitals, and other nonprofit organizations that link business and higher education through distance-education initiatives. Formed in 1965 as the Association for Graduate Education and Research (TAGER) by the cofounder of Texas Instruments, for the purpose of workforce training and economic development in the Dallas-Fort Worth region, it has enabled several thousand area engineers and other professionals to earn advanced degrees on-site through distance education. An education and information network facilitates interactive audio, video, and high-speed data transmission among member institutions and area employers, also fostering faculty consulting, workshops and seminars on corporate training needs and services, and, in 1994, a state-accredited multi-institutional teaching facility, the Universities Center of Dallas.

**Research and academic library consortia.** Research and academic libraries constitute another significant growth area in consortia development as library directors seek mechanisms for meeting user demand in gaining access to electronic databases and other sources of information. These consortia now engage in joint purchasing and referral services, online borrowing, high-speed delivery, the digitization of library holdings, and staff development. Evidence of this growth may be seen in the advent of the International Coalition of Library Consortia (ICOLC) in 1997, an informal, self-organized group comprising nearly 150 library consortia worldwide. ICOLC informs consortia about electronic resources and pricing practices of electronic providers and vendors, also providing guidelines for web-based resources and other services. Examples of library consortia include such statewide links as GALILEO in Georgia, PALCI in Pennsylvania, VIVA in Virginia, MIRACL in Missouri, and CLICNet in Minnesota. Multistate networks include SOLINET in the southeastern United States, CIC Virtual Electronic Network in the Midwest, CIRLA in the mid-Atlantic states, and the New England Land-Grant University Libraries. The transformation of library science academic degree programs into information sciences is accelerating with the introduction of high-speed retrieval of online documents, electronic books and journals, specialized databases in all academic fields, digitized

manuscripts and photographs, interactive video transmission, and other such advances. As informational boundaries become more porous, libraries find it practical and trouble free to pool information, resources, and materials. Such issues as insurance, space, personnel, network compatibility, and cost sharing play important roles in determining the success of library and related consortia.

**Scientific research and development consortia.** Consortia for the purpose of scientific research and development bring together universities, research centers, government agencies, and multinational corporations engaged in supercomputing, geoscience, medical research, and other sophisticated research projects. Numerous examples may be found on the U.S. Department of Defense, Department of Energy, National Science Foundation, and National Aeronautic and Space Administration websites. A recent Department of Defense initiative is the Maui High Performance Computing Center, developed and managed by a consortium led by the University of New Mexico under a cooperative agreement with the U.S. Air Force's Phillips Laboratory. Its mission is "to create a world-class, national, high performance computing center, to foster technology exchange among the governmental, academic, and industrial communities . . ." Its partner organizations include Carnegie Mellon University's Imaging Group, the Cornell Theory Center, the Maui Economic Development Board, and the IBM Corporation. A Coalition of Academic Supercomputing Centers provides another level of cooperation and resource sharing among university-based and autonomous centers for research and development in high-performance communications, enabling businesses and universities to be more cost effective in the allocation of resources and the development of new computer applications.

### Conclusions

The consortium can be likened to an interorganizational network in which environmental conditions affect its activities. Numerous examples of informal partnerships and coalitions can be given, but in practice the formalized agreements of consortia offer structural opportunities of another dimension. A basic problem is the inconsistency between cooperation evolving from the inability to compete that runs counter to the free market model it seeks to protect. A study by Judith S. Glazer of consortia development in 1978 to 1980 showed that unrealistic expectations

could make it difficult to sustain cooperative agreements despite presidential support and large infusions of foundation resources. Issues arising in efforts to establish a doctoral-level consortium in New York City included a lack of clarity in goal setting, perceived differences in the quality and commitment of participating programs, faculty resistance to cooperate in planning their own retrenchment, inadequate incentives for developing substantive agreements, and, above all, the fact that informal collegial networks of presidents, deans, or faculty are not easily transformed into a cohesive working group. The experiences of consortia directors and others engaged in the collaborative process indicate that policymakers and planners need to address the following: (1) the conflict between institutional autonomy and interdependence at a time when state regulatory agencies advocate greater accountability in the deployment of resources; (2) the need for incremental long-range planning rather than grandiose or large-scale schemes; (3) the central role of the full-time executive director and staff in administering consortia projects; (4) the need to distinguish between consortia, partnerships, networks, and other interinstitutional alliances; and (5) the importance of cooperating in areas of strength rather than weakness and in addressing the fundamental differences between government-sponsored and independent institutions. Among all else, the ideal consortium will be based on an understanding that organizational change in response to market shifts necessitates flexibility, long-range planning, and adequate resources among equal partners.

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JUDITH GLAZER-RAYMO

## CONSTITUTIONAL REQUIREMENTS GOVERNING AMERICAN EDUCATION

The right to a free public education is found in the various state constitutions and not in the federal constitution. Every state has a provision in its constitution, commonly called the "education article," that guarantees some form of free public education, usually through the twelfth grade. The federal constitution, on the other hand, contains no such guarantee. In *San Antonio Independent School District v. Rodriguez*, the U.S. Supreme Court in 1973 held that education is not a "fundamental right" under the U.S. Constitution. Thus, as a matter of constitutional law, the founding fathers left it to the states to decide whether to provide an education or not and, if deciding to provide one, determine at what level of quality.

Not only does the federal constitution confer no right to education, it does not even explicitly em-

power the U.S. Congress to legislate on the subject. Most federal education legislation is therefore enacted under the "spending clause" of the Constitution, which gives Congress the authority to tax and spend for the general welfare. Since federal grants to the states may be conditioned upon the state's adoption of certain legal and regulatory structures, the federal government has been able to exercise substantial authority over K-12 education policy. For example, in *South Dakota v. Dole*, the Supreme Court in 1987 upheld a federal law withholding a percentage of federal highway funds from any state that declined to raise its minimum drinking age to twenty-one. This kind of carrot-and-stick approach underlies much federal education law, from the setting of nationwide achievement standards to the education of students with disabilities to Title I and other federal grants relating to education. That other great source of federal regulatory authority, the Constitution's "commerce clause," however, has not been used to justify federal legislation in these areas. In *United States v. Lopez*, the Supreme Court in 1995 held that a law making it a crime to possess a firearm within a certain distance of a school was an impermissible overextension of Congress's commerce power. Even the justices dissenting in *Lopez* agreed that the content of education was a classic area of state, not federal, authority.

Nevertheless, once a state decides to provide an education to its children, as every state has, the provision of such education must be consistent with other federally guaranteed constitutional rights, such as the Fourteenth Amendment's right to equal protection under the law and the First Amendment's right to the free exercise of, and the nonestablishment of, religion. Therefore, even though the U.S. Constitution does not, in the first instance, require that an education be provided, it nevertheless has had a significant effect on American education.

Any treatment of education and constitutional rights must begin with the Fourteenth Amendment, which guarantees every citizen equal protection under the law. Application of this doctrine has been most profound in the area of school desegregation. In 1954 the U.S. Supreme Court struck down state-sponsored racial segregation of schools in the famous case of *Brown v. Board of Education of Topeka, Kansas*. This decision and hundreds of later court decisions applying it to individual school districts all over the United States have had major ramifications on virtually every facet of school district operations

from the mid-1950s into the twenty-first century. This has been true not only in the South, but throughout the rest of the country, as school districts and courts struggled with how to effectively desegregate the nation's schools. In the decades since *Brown*, most school districts have eliminated "vestiges" of state-sponsored segregation, have been declared to be a "unitary" school district (as opposed to a former dual-race system), and have been released from federal court supervision.

Nevertheless, many unitary school districts, now concerned that their schools will become resegregated, are seeking to take steps to preserve racial diversity at their schools. In one of the supreme ironies of American jurisprudence, such efforts may now be illegal under the same Fourteenth Amendment that previously required school districts to employ race-conscious student assignments as a remedial measure but forbids such measures as a means of preserving integrated schools in school districts no longer under court supervision.

Another major constitutional issue facing American education involves public funding of vouchers for private schools. Although several states have enacted limited voucher programs, their legality and continued existence remains in doubt under the First Amendment of the Constitution, which requires the separation of church and state. In June 2002 the Supreme Court ruled that students in the Cleveland, Ohio, area may use state-funded vouchers to pay tuition at private schools, including schools with a religious affiliation. The decision in this case is likely to have a significant impact for decades to come.

As desegregation lawsuits in federal courts wind down, the most important constitutional litigation involving education is increasingly taking place in state courts, as plaintiffs' groups seek to enforce state constitutional guarantees. Beginning in the early 1970s plaintiffs' groups began to make constitutional challenges to the heavy use of local property tax revenues in most states to finance public schools. This system of funding public schools often resulted in large disparities in per-pupil expenditures between property-rich and property-poor districts. As a result of a series of these "equity" suits, which were based on state constitutional guarantees of equal protection and uniformity, most states in the years since the early 1980s have reformed their state education funding formulas to provide a greater degree of equity (although not complete equality) in fund-

ing between school districts. This has been accomplished in many states by providing more state-level funding to property-poor districts to offset their lower local revenues, and less state funding to property-rich districts.

During the same period, plaintiffs' groups also began to challenge the adequacy of state education systems, including the sufficiency of funding of public schools, under the "education articles" of state constitutions. These cases are quite different from "equity" cases, which are based on disparities in funding; "adequacy" cases challenge the sufficiency of the funding to provide the level of educational opportunities required by the particular state constitution, regardless of how such funding is allocated among a state's school districts. It is these state court "adequacy" cases that are likely to be the main source of constitutional litigation in the early twenty-first century.

### Federal Constitutional Requirements

Below are discussed the evolution of school desegregation since the landmark 1954 *Brown* decision and the racial diversity in U.S. schools in the post-desegregation era. This section also reviews the status of school vouchers and their constitutionality under the First Amendment.

**School desegregation.** There is no question that since the early 1960s school desegregation suits under the Fourteenth Amendment have had a greater impact on American schools than almost any other factor. In its 1954 *Brown v. Board of Education* decision, the Supreme Court declared state-mandated racial segregation of schools illegal. A year later, in *Brown II*, the Court ordered that segregated schools be eliminated with "all deliberate speed." The Court, however, gave little practical guidance as to how school districts and the lower courts were to carry out this major transformation in the social fabric of many regions of the country. As a result, the process of desegregating formerly dual-race school systems lasted for decades and in the early twenty-first century had still not been completed in some school districts.

After *Brown*, little happened until the mid-1960s as many southern states waged a program of massive resistance to school desegregation. In *Stanley v. Darlington School District*, the federal court in South Carolina described the different forms of such resistance. In the mid- to late 1960s, token desegre-

gation occurred, but that was due more to the passage of the Civil Rights Act of 1964, which forced school districts to desegregate as a precondition to receiving federal funds, than it was to court enforcement of constitutional guarantees. In 1968 the situation dramatically changed with the Supreme Court decision of *Green v. School Board of New Kent County*. In *Green*, the Court required that school districts promptly take steps to effectively desegregate the operations of their schools in the areas of student assignments, faculty and staff assignments, facilities, extracurricular activities, and transportation. Ineffective plans that resulted in only token desegregation were no longer permitted. *Green* was followed by the Court's 1971 *Swann v. Charlotte-Mecklenburg Board of Education* decision, which approved the use of mandatory busing as a desegregation tool. Thus began the real process of desegregating the schools. Mandatory busing, however, was extremely controversial, especially among white parents, and the effect of such desegregation plans was often undermined by what became known as "white flight" (i.e., white parents moving out of the district or placing their children in private schools). Therefore, in the 1980s, the courts began to rely more and more on voluntary desegregation plans that centered on magnet schools and other measures designed to encourage, but not require, students to transfer to racially mixed schools. One of the first such plans was approved by the federal court in 1989 in *Stell v. Savannah-Chatham County Board of Education*, which involved the school district in Savannah, Georgia.

By the 1990s most school districts had accomplished as much faculty and student desegregation as was practical, given "white flight" and the persistence of de facto segregation in housing patterns. Consequently, the courts began to release more and more school districts from court supervision on the grounds that they had eliminated the vestiges of the former segregated school systems "to the extent practicable." Nevertheless, although not discussed in *Green*, some courts also began to examine whether the "achievement gap" between minority and white students in many school districts was also a "vestige" of the former segregated system. Consequently, in deciding whether to dismiss desegregation cases, courts in the 1990s did not focus as much on student or faculty assignments (the main issues from 1954 through the 1980s), but rather on whether poor academic performance of minority pupils is a "vestige"

of the former segregated system that must be eliminated before court supervision is terminated. In 1995 in *Jenkins v. Missouri*, the Supreme Court held that such low performance had to be causally linked to the prior dual school system. Because this is difficult to establish, plaintiffs have had only limited success in convincing courts that low minority performance is sufficiently related to the prior dual school system to serve as a basis for continued court supervision.

Therefore, as the nation entered the new millennium, the constitutional obligation to desegregate, which greatly influenced operations and planning in many school districts for more than forty years, had been satisfied in most districts and was becoming less and less of a factor in those relatively few districts that remained under active federal court supervision.

**Diversity.** The closing of the desegregation era does not mean, however, that issues of race have disappeared in public education. Many school districts, which successfully desegregated the student populations of their schools and have therefore been declared unitary and released from court supervision, continue the struggle to maintain racial integration or, as it is now more often called, "diversity," in their schools. Nevertheless, the Fourteenth Amendment, which once required race-based student assignments and admissions as a remedial measure, may now prohibit school districts from continuing to use race-conscious plans once such school districts have completed remedial proceedings and been declared unitary. Once the effects of past discrimination have been remedied, as in the case of a school district declared unitary, it is argued that there is no longer a remedial justification for taking student race into account in making student assignments or deciding upon admissions to special programs, such as magnet schools. For example, if student race is considered in admitting students to a magnet school, a student denied admission because her race did not contribute to racial diversity may claim that she was denied admission based on race and that such a decision is discriminatory and a denial of equal protection. School districts often respond that maintaining racial diversity is a compelling governmental interest, and that some use of race in the decision-making process regarding assignment of students should therefore be permitted. The lower courts are split on the issue, although the majority view tends to prohibit race-based admissions and assignment policies

unless they serve a remedial purpose. Until the Supreme Court decides the issue, the lower courts are likely to carefully scrutinize and in most regions of the country prohibit any consideration of student race in the student assignment and admissions process.

**School vouchers.** Many school reform advocates believe that public schools suffer from a lack of competition and that states or school districts should provide vouchers to students, especially poor and minority students attending substandard inner-city schools, to enable them to attend a private school. At least three states (Florida, Wisconsin, and Ohio) have passed legislation funding such vouchers. Until spring 2002 one huge unknown factor in the debate over using public funds to support private, parochial schools was whether such use of public funds violates the First Amendment of the Constitution, which prohibits government from unduly supporting religion or favoring one religion over another. In June 2002 the Supreme Court held in the case *Zelman v. Simmons-Harris* that the use of public funds to pay for religious school tuition is constitutional. Under this program, the State of Ohio provides vouchers to some 4,000 students from low-income families. The vouchers can be used to pay tuition at participating private schools, including religiously affiliated schools. Although the Supreme Court's ruling resolved the constitutionality of school vouchers, the policy debates about the vouchers are likely to continue in the years to come.

### State Constitutional Issues

As school desegregation issues, which have dominated public education for decades, are finally resolved, lawsuits based on state constitutional requirements have moved to the forefront. These lawsuits have become known as either "equity" or "adequacy" cases.

**Equity cases.** These cases began with the unsuccessful efforts of plaintiffs in *San Antonio Independent School District v. Rodriguez*, a case brought in the early 1970s in federal court to challenge the method of funding public education in Texas. At the time, Texas, like most states, financed its schools primarily through local property taxes. Because property values differed greatly between districts, this method of funding resulted in significant spending disparities between school districts, with the wealthier districts in Texas spending more than two to three times as much as the poorest districts on a per-pupil basis. In rejecting plaintiffs' equal protection claim under the Fourteenth Amendment, the Supreme Court held

that education was not a fundamental right under the Constitution. It therefore held that disparities in the provision of education services and facilities did not have to be justified by a showing that they served a compelling governmental interest, but could be justified merely by showing that a rational basis existed for such a taxing mechanism. Because the local property tax system had a rational basis, in the view of the Court, it was not unconstitutional.

Notwithstanding this initial defeat in the federal courts, proponents of equity among school districts in education funding continued their fight in the state courts, and they won victories in the mid-1970s in California (*Serrano v. Priest*) and New Jersey (*Robinson v. Cahill*). In these decisions, the courts struck down property tax-based systems based on state constitutional provisions requiring equal protection and uniformity, and they ordered the use of more equitable funding systems in which the resources provided for a child's education did not depend nearly as much on the property wealth in the community in which a child lived and attended school. Since then, "equity cases," as they are often called, have been brought in almost every state, and plaintiffs have been successful in many of them. While local property taxes remain a major source of school revenues, states have modified their education financing formulas to provide more state aid to property-poor districts to offset lower local property tax revenues in such districts and to provide less state aid to property-rich districts. While complete equality in funding has rarely, if ever, been realized, and is not required under most state court decisions, large disparities in funding between school districts have been greatly reduced in many states.

**Adequacy cases.** Equity cases, while successful in reducing funding disparities between school districts in many states, have fallen short of being the panacea that many school finance reformers believed they would be, for several reasons. First, attaining equity does not necessarily mean increases in education spending. Indeed, while the result of *Serrano v. Priest* was to insure equity in spending among California's school districts, it has at the same time moved California from one of the highest spending states on education to one of the lowest. Moreover, the equity cases did not, in the minds of many plaintiffs' groups, address the claims of many urban school systems. Such school districts and their supporters contend that they need additional funding to address the educational needs of the large numbers of

their students who are at risk of academic failure because of the effects of poverty and other socioeconomic problems. Simply obtaining funding equal to other school districts is not sufficient, it is argued, given the extraordinary needs of such districts.

Since the 1970s plaintiffs have brought “adequacy” suits in more than twenty states, alleging that the state has failed to provide an “adequate” education, a right guaranteed by many state constitutions. Generally, such suits allege that educational “inputs,” such as facilities, curriculum, textbooks and other instructional materials and equipment, and number and quality of teachers, are insufficient to enable schools and school districts to provide an “adequate” education for their students. Plaintiffs also rely on substandard “outcomes,” as evidenced by low scores on standardized tests, low graduation rates, and high dropout rates as proof that the state has failed to provide an adequate education for substantial numbers of its children.

Such suits are normally based on the “education article” contained in most state constitutions that requires the state legislature to provide for some type of a “system” of free public schools. Generally, the education articles are couched in fairly vague terms, such as requiring “a thorough and efficient system of education” or a “system of free common schools.” Although the constitutional language rarely gets any more specific than the foregoing examples, the highest courts of many states have interpreted such language to require an “adequate” or “sound, basic” education.

In several states, adequacy suits have been dismissed on the grounds that they involve political questions reserved by the state constitution to the legislature, and therefore that they violate the separation of powers doctrine. In essence, because the terms used both by the courts (e.g., “adequate”) and the constitution (e.g., “thorough,” “efficient”) are ambiguous and capable of many meanings, these courts have held that if the courts decided such cases, they would in effect be substituting themselves for the legislature in determining important policy questions normally reserved by the state constitution to the legislative branch (e.g., what level of education to provide and how much of the state’s resources to devote to education).

Notwithstanding pretrial dismissals in several states, plaintiffs have enjoyed success in increasing numbers of states, including most notably New Jer-

sey, Ohio, Kentucky, and Wyoming. The highest courts of these states have struck down the state system for financing public schools and required the legislatures to appropriate significantly increased spending for public education. Other important cases, such as those in Arkansas, New York, and North Carolina, have been decided at the trial court level in plaintiffs’ favor, but they have not yet been reviewed by the state’s highest court. In still other states, such as Florida, cases have been filed but not yet decided.

In states where plaintiffs have been successful, often after many years or decades of litigation, such lawsuits have led to higher spending for education, including expenditures for school facilities, teacher’s salaries, special programs, and technology. Whether these lawsuits have resulted or will result in improved student achievement, however, is another oft-debated question that is beyond the scope of this entry.

### Conclusion

Both federal and state constitutional requirements have heavily influenced the organization, funding, and operation of America’s schools in the past and are likely to continue to do so in the future.

*See also:* SUPREME COURT OF THE UNITED STATES AND EDUCATION.

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ALFRED A. LINDSETH

## CONTINUING PROFESSIONAL EDUCATION

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Continuing professional education (CPE) may be thought of as the planned and systematic attempt to introduce, review, or alter the competencies and thereby the professional performance of professionals. Cyril Houle refers to CPE in observing that “whether it designates the improvement of professional competence or any other goal, (it) implies some form of learning that advances from a previously established level of accomplishment to extend and amplify knowledge, sensitiveness or skill” (p. 77). The term *continuing professional education* contains three separate concepts, each worthy of definition as a means to understand the overall concept.

*Education* is a systematic process that seeks to alter knowledge and skill by engaging learners interactively with teachers or other knowledge resources, using a considered strategy to achieve an effect in the altered knowledge, skill, or attitudes of the learner.

*Professional* refers to people who engage in work based on a large, complex body of knowledge usually gained in professional schools. Professions include

law, medicine, architecture, engineering, education, and other disciplines that codify practice. Professionals are thoughtfully engaged in the development and ongoing review of a body of applied knowledge, control over practices and the practice environment, membership criteria, ethics, and the economics of the delivery of services to clients. Although autonomy is an issue for all professions, it exists on a continuum from those with little self-control to those with expansive self-regulatory authority and autonomy.

In this three-part term, *continuing* refers to the post-preparatory phase of professional development. In this phase the professional is engaged in practice on a regular basis and is learning in ways that adjust practice to correct errors, expand or adjust performance, and introduce new or reformed practices and perspectives on practices. This process is continuous in that learning new or better ways of fulfilling professional roles is an everyday occurrence. Self-directed learning is used by professionals to manage their practice performance, therefore it is also considered to be part of the system of ongoing development that is the object of continuing professional education.

When all who participate in the CPE enterprise are considered, the costs are high. It is estimated that CPE costs approximately \$60 billion per year and that when indirect costs are included the annual total may exceed \$210 billion. The degree to which society is likely to invest in CPE is based on the extent to which people depend upon the performance of professionals to solve problems and improve the quality of life. As professional services expand, costs for ongoing development and education will likely follow.

### Constituents of Continuing Professional Education

Although it would seem self-evident that continuing professional education systems direct their energies to professionals, CPE also serves the needs of a variety of groups and organizations that are concerned with the performance of professionals. For example, some professionals practice in partnership organizations, like clinics or firms. Others practice in large and small businesses where an employer may see CPE as means to alter services and therefore improve the prospects for profit. The quality of CPE may also be a high priority for organizations that do not employ professionals but depend on them and their

performance to achieve their organizations' purposes. These organizations are concerned with quality control and coordination of resources. They sponsor or offer CPE in an attempt to influence the performance of the professional in a specific manner. Often these purposes are contrary to the interests of a given profession or reflect an influence that does not necessarily reflect the priorities of the profession in terms of the problems or solutions that are endorsed by the community of practitioners as a whole. This cataract of forces on professional performance creates conflicts that have led to a variety of regulatory and quality control systems to insure that CPE programs sanctioned by a profession are appropriate for the purposes and needs of the practice community.

### **Sources of Continuing Professional Education**

Continuing professional education programs are offered by a variety of organizations, each with a particular set of purposes, some shared and some discreet. Universities, as the homes of most professional training programs, are a major provider of CPE. Often these programs are within the control of the faculty. They may be broadly based updates of an area of practice, or the programs may be designed to introduce new knowledge and skill emanating from research or scholarship in the discipline base of the profession.

Professional associations are also engaged in the planning and delivery of CPE, most often at annual meetings offered over several days at one location or at special sessions, topical in nature, offered nationally or at regional sites. These programs focus on issues the profession has identified as important to the well-being of the profession and the success of its practitioners, or useful in securing desirable outcomes for the profession's client systems.

Practice organizations are the firms, groups, hospitals, or other collections of practitioners who offer professional services in a specific field. Examples of practice organizations include a law office, an architecture or engineering firm, a managed health care organization, or a hospital. The CPE programs offered by these organizations often reflect the problems they encounter in the delivery of services to clients.

There are also private companies that offer CPE as a primary product in an effort to make a profit. These companies are engaged in the production of

CPE programs directed toward the perceived needs of the marketplace. Often they work in concert with an industry that supports a particular profession or its client systems. These companies contract with other CPE organizations or directly offer CPE to address the educational needs and interests of the profession when these interests are congruent with the business interests of the industry and the corporation.

Government agencies are also important sponsors and providers of CPE, offering a variety of continuing professional development programs. These programs may be embedded in other initiatives, such as attempts to improve access to services for indigent populations by educating social workers or teachers in the screening and recruitment of clients. They may be offered for the direct purpose of introducing new techniques and methods, such as the efforts of the National Institutes of Health to improve health care worker practices in the area of HIV infections. Or they may be developed in support of new regulations that have changed the nature of professional practices in a particular area, such as new requirements for documentation or delivery of services to a new clientele.

### **Forms of Continuing Professional Education**

Continuing professional education takes a variety of forms, some more common than others and some that are used often in one profession but almost never in another. One of the most common forms of CPE is in-service or on-the-job training. This may be very formal or almost undetectable to the observer but it is always directed toward introducing, updating, or modifying the way the profession is practiced in the work setting. It is characterized by an emphasis on practice and coaching. It may be loosely organized and episodic, arising as practice problems arise and disappearing as the need disappears. It is an important part of the learning community in any profession.

A more common form of CPE is a formal organized program built around definite objectives such as conferences, institutes, workshops, and lectures. Collectively, these methods represent only a small portion of the learning that occurs continuously for professionals. They are usually short-term in duration and may be focused on a general refresher of professional competencies, an overview of a new issue or collection of practices, or an effort to introduce new technique, skill, or practice protocols.

Short courses are similar to these methods of educating professionals but occur over several meetings with time for preparation or practice between sessions.

Distance education has made a serious impact in most professions, but its success has varied according to the way the profession is practiced. In technical and scientific professions, computer assisted and web-based CPE has grown more rapidly than in fields like teaching and social work, where the practice setting is not as friendly to the insertion of computers and technological solutions. Nevertheless, the notion that education can be delivered at the time and in the setting where the work occurs promises a wider application of distance education in most professions.

The most effective strategies at changing professional performance are those that involve multiple methods of CPE and account for the needs of learners. Emphasis on motivation and needs in successful CPE reflects the role of experience in learning and the belief that the acquisition of new knowledge, skills, and professional practices is facilitated and enhanced when learning efforts are based on existing knowledge and skills and existing practices. This emphasis on knowledge of real and perceived needs as a basis for the design of education is widely accepted as essential for success in CPE.

An emphasis on complex strategies for facilitating learning in the professions is based on the complexities of adopting or modifying practices. Professionals develop means of performing their work based on extensive training and the ongoing evaluation of these practices in their work with clients. They grow confident in these practices and are reluctant to change them without evidence that different practices are better. Professionals desire a sense that new ideas are compatible with overall practice patterns and client needs, and sometimes they want to observe new practices before they incorporate them into their own work. They depend on consistency of information from many different sources, including colleagues, literature from their disciplines, and CPE programs. They often need to solicit feedback on their proficiency before they actually incorporate new knowledge or skill in the performance of their professional duties. A professional may require multiple learning opportunities and multiple methods of education to satisfy these expectations for information, practice, and feedback.

By far the most frequent means employed by professionals to enhance their professional growth is self-directed learning. Self-directed learning refers to the projects that professionals engage in to learn without the formal direction or organization of materials, methods, and educational strategies of a formal program of CPE. In this method of learning, the learner identifies his or her needs, sets objectives, develops strategies, and evaluates success. It is self-education and it is at the heart of the concept of the "learned" professional.

### **Foundations of Continuing Professional Education Practice**

The practice of providing CPE programs and services depends on research and scholarship in several areas of adult education. It includes a focus on the theories and principles of planned change, adult learning and development, program and curricular design, applied research, consultation, and of course, the methods and materials of education. Masters and doctoral level programs of study are available to those who want to develop a concentrated knowledge of adult education and curriculum development. However, the majority of practitioners of CPE develop their areas of competency while "on the job" and have little formal preparation in adult education. Nevertheless, the literature and scholarship of CPE in each of the professions is connected to the literature and scholarship of adult education.

### **Accreditation of Continuing Professional Education Programs**

In some fields there is a high level of interest in quality control over the professional educational process. This is manifest in complex systems that have developed for awarding credit to learners and extensive efforts to ensure the quality of CPE through systems of accreditation. In the United States, Canada, and Australia, the American Medical Association, the American Academy of Family Physicians, and the Royal Colleges of Physicians and Surgeons of Canada and Australia are among the many organizations that allow physicians and surgeons to receive documentation of learning from programs intensively reviewed for compliance with minimum standards for assuring quality. These organizations also record and certify participation by physicians in these programs.

Systems for quality assurance apply standards that focus on such attributes as qualifications of fac-

ulty, relevance to practice needs, adequacy of educational strategy, and documentation of outcomes. They may certify programs individually, or they may certify the organizations that offer the programs. Many professional practitioners depend on receiving career education credits as evidence of their continuing competence to their professional associations, licensing bodies, or client systems.

### Issues and Trends

One of the most important recent trends in CPE has been the growing emphasis on developing a body of knowledge about how professionals learn and how they change their performance. Books and research articles in medicine have focused heavily on this topic as this and other professions struggle with how to make education a more effective tool for influencing the practice of the professions. Related to the need for more research and more effective procedures is the problem of how knowledge is handled across professions. Each profession has developed and implemented a system of CPE without tapping the experience or expertise of other professions. Some have annual research conferences and research journals that report the studies in their field. Most devote attention to the issues of CPE at annual meetings or conferences. It is rare that one profession will cite, or in other ways refer to, the knowledge and experience related to CPE that is gained in another profession. This gap in communication and collaboration on the issues of CPE has resulted in redundancy where coordination of the development of general knowledge and principles of CPE may have been beneficial. This may change as professionals are asked to work in teams more often to solve interdisciplinary societal problems.

Another issue important for the ongoing development of CPE is the growing pressure from society to document and certify professional competence. Two primary approaches have been taken to solve this problem: test on a regular basis or document participation in CPE. Different professions, different political jurisdictions, and even different specialties within professions have adopted one or both of these approaches to assure competence. Both approaches depend upon the continued growth of a competent system of CPE. This encourages research and development of the field as well and accountability from the providers of CPE to clients and client systems.

Continuing professional education is a requirement for professional competence as professionals

encounter new problems and professional schools develop new knowledge and new ways of performing professional roles to meet the problems of practice. The practices of disseminating information, correcting errors in professional performance, and renewing the fund of knowledge and skills of professionals are essential if professionals are to maintain a high level of proficiency over thirty or forty years of practice beyond their formal, pre-professional education programs. For CPE to succeed it must continue to focus on providing learning opportunities that meet professional needs and practice problems while promoting the adoption of new knowledge and skills.

*See also:* CORPORATE COLLEGES; DISTANCE LEARNING IN HIGHER EDUCATION; LIFELONG LEARNING.

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### INTERNATIONAL CORPORATIONS

The United States, western Europe, and Japan all face a common set of economic restructuring and

demographic changes. Each is in transition away from a manufacturing and industrial-sector base, and moving toward a postindustrial, information-based economy. Each is also encountering labor-market population changes as the overall population is aging and birth rates remain relatively low. The effects of these changes have been felt in labor shortages in some sectors. Yet for all the similarities among America, Europe, and Japan, there are striking differences in the coordination of labor markets for private companies to train employees. To explain why these differences exist, it is helpful to look at the history and structure of workforce training efforts in Europe (particularly Britain and Germany) and Japan designed to bring about public-private cooperation for skills development and human capital investment.

### Workforce Training in Britain

Britain has been marked by a more voluntary connection between the public and private sector in workforce development policy. Initially, training policy until 1963 was characterized by a limited state intervention in labor markets—except for occasional efforts during the interwar years and the first decade after World War II to provide training as a means of remedying unemployment. The establishment of industrial training boards (ITBs) in 1963 was the first government recognition that economic growth was slipping in Britain, as compared to other European countries. The ITBs, while developing a compulsory levy/grant system to finance training efforts, did little to raise awareness of the linkage between economic growth and investments in human capital.

The ITBs were weakened by the 1973 Employment and Training Act, which set up the Manpower Services Commission (MSC). Unlike the ITBs, the MSC's main focus (until the rise of Thatcherism in 1981) was on job creation programs, although the legislative intent was to develop a comprehensive manpower strategy. The New Training Initiative (NTI), which was introduced in a 1981 white paper, returned MSC to its adult-training mission and moved to integrate youth into the workforce. The NTI again promoted a volunteer connection between employer training needs and the public sector, but shifted focus to stress portable skills for identified labor shortages and as a bridge for school-to-work connections. But the MSC failed to change the paradigm of employer involvement in training, and

the National Audit Office was critical of the MSC's fiscal accountability and its failure to address the high-level course needs of employers.

Borrowing from the American model of private industry councils, the MSC was replaced by Training and Enterprise Councils (TECs) in 1988. While still being a more voluntarist model of cooperation between the public and private sectors, TECs are designed to be locally based and include private employer representation to set policy direction, although they are publicly funded through the Department of Employment. The charge of TECs, announced in the 1990 white paper *Employment for the 1990s*, was not to deliver training, but rather to transfer responsibility for skills-development investment to employers, who would identify needs and administer public funds. In so doing, Britain embarked on the creation of a true training market, compatible with a limited government role in industrial policy.

### Germany

By contrast, the mark of the German training system is the role of strong financial incentives that promote and enhance the coordination of the public and private sectors, primarily through the apprenticeship training initiatives for younger workers. As early as 1908, industrial employers in Germany recognized the need for a systematic training process to meet their shortage of skilled workers. In response to these problems, a committee called DATSCH (*Deutschen Ausschuss für Technisches Schulwesen*) was formed. In 1909 DATSCH recommended that all apprentices in the areas of industry and commerce be trained at an equivalent level. Following World War I, DATSCH worked with companies such as AEG and Siemens to design an apprenticeship program for these employers, and by 1925 a working committee set out to define industrial trades and distinguish between skill requirements in the labor force.

During the 1930s, before the rise to power of the Nazis, the apprenticeship content developed by DATSCH was recognized more globally by industry and chambers of commerce, and the principles of apprenticeship were refined by industry associations. Accordingly, training was geared toward, and reflected the needs of, employers. Following the war, there was concern that industrial apprenticeships would become fragmented and disorganized, and by 1953 the ABB (*Arbeitsstelle für Betriebliche Berufsausbildung*) had been organized to carry out similar

functions as DATSCH. In the 1960s apprenticeship training met with criticism, as it was viewed as not meeting the needs of employers, and as being neglectful of an organized, tailored curriculum for industry.

The discontent behind the apprenticeship system eventually led to an expansion of the government's role in training. Passage of the 1969 Vocational Training Act shifted the orientation of the apprenticeship system from macroeconomic concerns, such as reducing unemployment, to a set of standards for testing procedures that would ensure that apprenticeships met employer needs. In fact, the law set up the contemporary vertical system of secondary school education with the design of the *Hauptschule* (general secondary school) and *Realschule* (intermediate secondary school) system. Following the passage of the law, any person age eighteen or younger who completes *Hauptschule*, *Realschule*, or level one of *Gymnasium* and does not pursue an *Abitur* (a university education track) is required to attend the apprenticeship system, which combines part-time vocational education with work experience. Accordingly, the German approach is far more interventionist and has been able to achieve higher labor participation rates. These higher labor-force participation rates allow employers to have a stronger labor force with diminished turnover.

### Japan

As a hybrid of both the British and German models, the Japanese tradition of hierarchical mentoring is a pattern that seems to have been replicated in industrial and skills training, although with less formal government support. In Japan, two unique features are present in the implementation of workforce preparation. First, there is an extensive level of on-the-job training that is required to be conducted between senior workers and new, less-experienced workers. Indeed, it has been documented that the ability to teach one's coworkers is a key criterion for promotion within a Japanese firm. These new workers are recruited from schools, where employers have established relationships for identifying and selecting high-performing students. New hires receive orientation sessions in safety and corporate culture (*fudo*) and informal on-the-job-training led by a senior worker.

The second critical element of Japan's investment in human capital is that employers engage their workers in a rotation system over their lifetime

in employment. By engaging in the rotation system, the employee gains firm-specific skills that are commensurate with a career-ladder approach. Accordingly, the employee is trained in both technical skills and employment relations, and the employer is able to provide some measure of lifetime job security. But while job training is conducted formally in classroom settings to complement existing knowledge, the homogeneity of Japanese labor markets within firms encourages private employers to tailor programs that are more firm-specific than industry-specific in focus.

### United States

On the federal government level, a sweeping set of workforce development reforms were implemented with the passage of the Workforce Investment Act (WIA) in 1998. WIA marked a radical departure from past federal workforce/employment policy for adult workers—a patchwork quilt of categorical, tailored responses—to the consolidation of some seventy separate programs under WIA into three funding streams.

In a significant development, policymakers made a conscious decision not to provide WIA with an open-ended authorization as was the case under the Job Training Partnership Act (JTPA). In repealing the JTPA, WIA sought to expand the role of the private sector with a more active voice to ensure that the workforce development system incorporates their input to prepare people for current and future jobs. In addition, WIA recognized that meeting individual needs in the workforce development system was paramount and resulted in a move toward greater decentralized delivery of training services.

Workforce Investment Boards (WIBs) under WIA replace the former Private Industry Councils (PICs) that existed under JTPA and implement the public-funded workforce development strategy of their geography. In so doing, the federal formula dollars are disbursed to WIBs to provide a comprehensive set of services at some 1,500 One Stops across the United States. These services include: a preliminary assessment of skills and support-service needs; information on a full array of employment-related services, including listings of training providers, job search and placement assistance, career counseling, access to up-to-date labor market information (which identifies job vacancies), and skills necessary for in-demand jobs; and information

about local, regional, and national employment trends.

By the same token, the American workforce development system is decentralized for employers. Yet there can be connections between employers and potential employees at the One Stop Centers. In fact, One Stops enable employers with a single point of contact to list job openings and to provide information about their particular company's hiring needs and requisite skills for occupational openings. This emphasis on using market forces to enable customers to get the skills and credentials required in their local economies makes accountability among training providers a paramount concern.

In sum, the differences among Britain, Germany, Japan, and the United States fall along a continuum between individual autonomy and compulsory codetermination for employers in the provision of workforce training. The design of a genuine training market that reflects both employer demands and the existing labor supply (or the potential labor supply) is evolving. However, to encourage employers' investment in their employees will require a set of financial incentives and strategic planning to ensure the connection between school, work, and lifelong learning, rather than a policy approach that solely addresses unemployment and job creation.

*See also:* CORPORATE COLLEGES; LIFELONG LEARNING.

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BRIAN HOLLAND

## COOPERATIVE AND COLLABORATIVE LEARNING

Cooperative and collaborative learning are instructional contexts in which peers work together on a learning task, with the goal of all participants benefiting from the interaction. Cooperation and collaboration can be treated as synonymous, as a truly cooperative context is always collaborative. Varied perspectives on collaboration and their implications for classroom instruction will be described here, and a number of cooperative techniques involving dyads or larger groups will be outlined, including the costs and benefits associated with them in terms of cognitive or affective outcomes. Finally, the relationship between group and individual performance will be addressed.

#### Theoretical Perspectives on Collaboration

In 1996, Robert Slavin described a variety of perspectives on peer learning, including social-psychological, sociocultural, cognitive-developmental, and cognitive-elaboration approaches. Explanations of how and what peers can learn from one another differ. Angela O'Donnell and James O'Kelly note that classroom decisions a teacher makes in relation to cooperative or collaborative learning depend on the theoretical approach adopted. Social-psychological approaches suggest that the interdependence among group members is the underlying mechanism for effective cooperation. Interdependence is created by using group rewards or by encouraging social cohesion and a norm of caring and helpfulness. From a cognitive-developmental perspective, effective peer learning occurs as a result of processes of cognitive conflict and resolution, or through the modeling of skilled behavior.

A sociocultural perspective would suggest that the joint knowledge of the group members is greater

than the individual knowledge of any member and that the group operates as an interacting system. In contrast, a cognitive-elaboration approach suggests that collaboration enhances student learning by providing a context in which individual learning is promoted by the use of more effective learning processes. In other words, an individual learns better with a peer because the peer provides an audience, prompts more metacognition, or maintains an individual's focus on a task. In creating and using collaborative groups for instructional purposes, teachers' decisions about the size and composition of groups, the kinds of tasks on which students will work, whether or not they should use explicit rewards, and the particular stance to take in relation to the collaborative groups will be influenced by the theoretical perspective that the teachers adopt.

### Collaborative Learning in Dyads and Groups

Dyads have many advantages as a functional unit for collaborative learning. The likelihood of participation by all students is increased when there are only two individuals involved. The larger the group, the more opportunity there is for diffusion of responsibility among group members or for exclusion of some members. Active participation in the collaborative process is essential for learning to occur.

Among the cooperative techniques that can be used by dyads are *scripted cooperation*, devised by Angela O'Donnell and Donald Dansereau; *reciprocal peer tutoring*, devised by John Fantuzzo and colleagues; and *guided peer questioning*, as outlined by Alison King. In scripted cooperation, partners work together to learn text material. The text is broken down into sections and both partners read the first section. One partner summarizes the material for his or her partner, who in turn provides a critique of the summary. Both partners elaborate on the information, and they then alternate roles for the second section of the text, continuing in this way until they have completed the reading. They then review the material together. The activities in which students engage (oral summarization, elaboration, metacognition, elaboration, review) are known to promote effective learning. The technique works well for acquiring information, and students are typically positive about their learning experiences with their partners.

In reciprocal peer tutoring (RPT), students work together to teach one another, and they alternate between the roles of student and teacher. This

technique combines elements of both motivational and cognitive approaches to collaboration. Motivation is encouraged by the use of group rewards, such as choices of desired activities or acting as the teacher's helper or messenger, which are intended to create interdependence among group members. Rewards are based on team achievement. The technique also promotes cognitive processing by using a structured approach to teaching and learning within a tutoring context. RPT has been used successfully to promote achievement and is also associated with positive social outcomes including an increase in students' self-confidence and better scores on measures of behavior.

In contrast to scripted cooperation and reciprocal peer tutoring, King's guided peer questioning technique is explicitly intended to promote knowledge construction through higher-order thinking. This technique can be used in dyads and with larger groups. It involves a process of question asking and answering, which is guided by the provision of question starters, such as: "Why is . . . important?" Students pick a few of the question starters, generate questions that fit the form of the starter, and then ask questions of their peers and answer their peers' questions. The question starters serve as a scaffold for students' thinking. Different kinds of questions can be used that support comprehension or complex knowledge construction. The provision of starters supports students in constructing high-level questions to which their peers must provide explanations rather than simple responses of a terminal nature. In addition, the students must engage in self-monitoring. Because these questions require complex answers, peers must probe their own understanding of material in order to answer. Positive effects on achievement are associated with the use of guided peer questioning.

One of the advantages associated with the techniques described above is the increased participation in cognitive activities by more students in a classroom than would be possible in whole-group instruction. In whole-group instruction, for example, teachers typically ask questions (often low-level questions such as those that simply require the recall of factual information but do not probe understanding) and a small number of students have the opportunity to construct a response. With the focused activity of guided peer questioning, all students have the opportunity not only to respond to questions, but to generate them as well. The techniques previ-

ously described promote active processing of material using activities that are strongly linked to achievement. In all of these techniques, the interactions of students are very structured, and this structure is important to the success of the techniques.

A potential disadvantage to dyadic interaction may emerge on complex tasks, as there may be insufficient resources within a dyad to generate appropriate strategies to complete the task. As group size increases, the likelihood of having someone in the group who can satisfactorily complete a challenging task increases. Larger groups present their own difficulties, however. Although group members can help one another through explanations, reminders, and questions, they can also distract one another from the task at hand. In addition, some students may elect not to participate, while others may be precluded from doing so.

One solution to the problem of differential participation of students is to structure the group interaction to ensure equitable participation. This can be accomplished by assigning specific roles, alternating roles and activities, or requiring that consensus among group members be reached. These strategies can be effective. In a 1999 study, for example, Noreen Webb and Sydney Farivar trained students to both seek and give appropriate help. The collaborative technique used by groups is a more open-ended one than those previously described. By focusing the group norms on helping, Webb and Farivar were successful in ensuring participation by students. Elizabeth Cohen suggests that structuring the interaction of group members may also stifle the spontaneous interaction that may be necessary to effective problem solving in groups. Instead of tightly structuring tasks, Cohen believes that an interest in complex tasks will result in genuine collaboration. Students, however, need to be prepared to work with one another so that patterns of inclusion and exclusion associated with having high or low status in a group are minimized. Cohen and her colleagues have been very successful in promoting achievement among students in collaborative groups using tasks that are interesting, challenging, and that involve higher-order thinking.

Decisions about what size of group to use, whether members of that group should be heterogeneous or homogeneous with respect to ability, and what kind of support students will need to achieve the desired outcomes must be carefully considered. Such decisions will be influenced by the theoretical

perspective one adopts with respect to collaborative learning.

### Group and Individual Performance

The relationship between group and individual performance in cooperative or collaborative learning is not well understood. Slavin's work on cooperative learning emphasizes the role of individual accountability. His techniques depend on group rewards that are earned by each student in a team when performance is improved. In Slavin's work, therefore, there is continuity between individual and group performance. However, the question of the relationship between group and individual performance is often unexamined. The issue of what factors transfer from a group to subsequent individual performance is not well understood. Part of the difficulty in addressing this issue comes from the variability of approaches to peer learning, as the importance or relevance of this issue varies across approaches. Nevertheless, because of the prevalent use of cooperative and collaborative techniques in schools, the increases in high-stakes testing, and the concerns of parents in relation to their children's involvement in collaborative experiences, the relationship of individual and group performance warrants consideration.

Teachers who wish to use cooperative and collaborative learning to promote students' achievement need to be thoughtful in considering the implications of their decisions about group size, rewards, group composition, and their own role in the classroom. The variety of theoretical perspectives available to inform such decisions can be confusing. Fundamentally, cooperative learning that promotes student achievement depends on the quality of student interaction. Such interaction needs to be task oriented, helpful, characterized by deep processing of content that involves organization or restructuring of knowledge, and elaboration of that knowledge. Making decisions about group size, for example, becomes simpler if the teacher focuses on the expected quality of interaction among students. Large groups limit participation while smaller groups provide more opportunities for interaction. Other decisions such as the composition of the group will also be informed by a focus on the quality of interaction. If the group is of mixed ability, other interventions may be needed to maintain the quality of participation (such as the use of question stems or other ways of structuring the interaction to maxi-

mize quality) or to guarantee the inclusion of all participants.

*See also:* COMPUTER-SUPPORTED COLLABORATIVE LEARNING; INSTRUCTIONAL DESIGN; PEER RELATIONS AND LEARNING.

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ANGELA M. O'DONNELL

## CORPORATE COLLEGES

Dramatic changes have occurred in the scale of corporate investment in employee education since the end of World War II. Business and industry leaders have recognized that an educated workforce is essential to remaining competitive in a global economy.

It is estimated that organizations in the United States with 100 or more employees spend approximately \$60 billion annually for employee education. This estimate does not include the costs of informal on-the-job education, nor does it include indirect costs, such as the wages and benefits paid to employees while they are participating in educational programs.

Some corporations, such as Arthur D. Little and General Motors, have created and sustained their own in-house educational institutions that offer accredited academic degrees just like traditional universities. These are known as *corporate colleges*. Most of these institutions were created to offer accredited degree programs that were not available elsewhere. Indeed some were established because their parent corporations were unsuccessful in their efforts to forge partnerships with established universities and colleges to create programs that met their corporate needs.

How do corporate colleges compare with traditional universities? Corporate colleges offer degrees ranging from the associate to the doctoral levels with most offering graduate degrees. The curricula offered by corporate colleges varies widely, although each corporate college offers a limited range of programs. Examples of the curricula include insurance, architecture, financial services, business management, health sciences, textile technology, policy analysis, and various types of engineering. These institutions are fully accredited by state authorities and regional accrediting bodies. Their governance models, administrative structures, and academic and administrative titles are very similar to those of traditional postsecondary institutions. Tuition fees charged by corporate colleges are similar to those of traditional institutions, but in some cases, such as the New England College of Finance (NECF), the banks that are member institutions of the NECF may offer tuition reimbursement to their employees.

At the same time there are significant differences between corporate colleges and traditional universities. Corporate colleges make far greater use of part-time faculty, mostly practicing professionals, than is common at traditional postsecondary institutions. Even full-time faculty members do not have tenure; limited-term appointments are the norm. Corporate colleges offer a limited number of highly specialized programs and lack the diversity of programs of traditional universities and colleges. This is

not surprising since they have typically been established to respond to a particular need.

### The Evolution of Corporate Colleges

One of the earliest corporate colleges in the United States was the General Motors Institute (GMI), which was founded in Flint, Michigan, in 1919. In 1945 the Institute's Board of Regents approved a proposal for GMI to award degrees in engineering. Accreditation was received in 1962. GMI changed its name to Kettering University in 1998.

In the 1970s and 1980s there was a significant expansion in the number of corporate colleges. Their rapid growth prompted the prediction that hundreds of corporate colleges might be created in the years to come.

In 2000 a total of twenty-six institutions had been identified as corporate colleges. Their existence was found to be tenuous. A number of these institutions, such as the Wang Institute of Graduate Studies, closed after only a few years in operation: it was created in 1979 and ceased operation in 1987. Others, such as the Arthur D. Little School of Management and Kettering University, evolved into free-standing private institutions that were independent of their original corporate sponsor. Only five of the twenty-six met the definition of a corporate college and continued to exist in 2001 (Clarkson College, the Institute of Paper Science and Technology, the Institute of Textile Technology, the New England College of Finance, and the RAND Graduate School of Policy Studies). No corporate colleges were created in the 1990s. The impetus for corporations to create corporate colleges appears to have passed.

### The Decline of Corporate Colleges

The most likely causes of the lack of growth in the number of corporate colleges are corporate outsourcing of training, the demands of accreditation, and an increased willingness by traditional universities to cooperate in corporate education.

**Outsourcing.** One of the primary corporate strategies for successfully competing in the global economy involves focusing on the core business of the corporation and the core competencies supporting it. Accordingly, many corporations have chosen to rely heavily on outsourcing to meet their educational needs. It is estimated that approximately one-third of corporate training budgets is spent on training products and services supplied by outside providers.

These corporations prefer collaborative arrangements with universities and colleges to creating and sustaining their own corporate colleges.

**Accreditation.** This process involves at least two, and in some cases three, separate stages of evaluation and approval. The first stage requires state legislative approval to receive authority to grant degrees. The second stage requires acceptance by one of six regional accrediting associations in the United States. In order to be recognized as an accredited degree-granting institution approval must be obtained at both of these levels. Some specialized programs also have national accrediting bodies that constitute a third stage of evaluation. For example, business schools are accredited by the Association to Advance Collegiate Schools of Business (AACSB), and engineering schools are accredited by the Accreditation Board for Engineering and Technology (ABET). Each stage of the accreditation process requires an extensive application that must be thoroughly documented. Moreover, accreditation is not a one-time matter. Accredited institutions are periodically reviewed and reassessed. Applying for, receiving, and maintaining accreditation is costly and time-consuming. The expectations of accrediting bodies are quite demanding with extensive requirements regarding organization and governance, programs and instruction, faculty, student services, library and information resources, physical resources, and financial resources. Establishing a corporate college is a substantial, long-term commitment. Corporations must be prepared to relinquish a high degree of independence and autonomy of operation if they want their programs to be accredited. For many corporations these expectations are sufficient to dissuade them from such a course of action.

**Cooperation.** One of the primary reasons that led corporations to create corporate colleges was the unwillingness of universities and colleges to accommodate corporate training needs. A number of the corporations that sponsored the creation of corporate colleges did so after unsuccessfully attempting to cooperate with existing universities and colleges. Much has changed since the early 1980s as a growing number of corporations have established strategic partnerships with universities and colleges and jointly develop degree and certificate programs tailored to meet corporate needs.

In summary, the combined effects of these three factors have contributed to a greatly reduced inclination on the part of corporations to establish their

own corporate colleges. If universities and colleges continue to be willing partners in meeting corporate education needs there are likely to be few, if any, new corporate colleges created. A related, and relatively recent development, is the emergence of *corporate universities*.

### Corporate Universities

One of the major developments in corporate education that emerged in the 1980s and 1990s was the creation of corporate universities. Indeed, the concept of corporate universities may well have its roots in corporate colleges.

Corporate universities are distinguished from corporate colleges in that the latter are accredited degree-granting entities whereas the former are not themselves degree-granting but frequently partner with traditional degree-granting universities and colleges. Corporate universities are essentially re-fashioned corporate training departments that have adopted some of the superficial characteristics of traditional universities, such as terminology. For example, a “dean” usually administers a corporate university. Corporate universities are similar to traditional universities in that their mandate includes training and the dissemination of knowledge, but unlike traditional universities they are not dedicated to the creation of new knowledge.

Most corporate universities serve the training needs of employees of the parent company but some also provide training to employees of corporate suppliers and corporate clients. They are a rapidly expanding creation. It is estimated that in the United States, there were about 400 corporate universities in 1988 and ten years later their number was estimated to be more than 1,000.

A majority of these corporate universities have created partnerships with accredited universities and colleges that lead to degrees and certificates. Such partnerships are founded on a willingness by the educational institutions to design curricula appropriate to the training needs of the corporations and to continually update those curricula as needed. Typically, the corporate partner will pay some, if not all, of the costs associated with the development and delivery of the training program. While the corporate partner will expect to have some input to the curricula, the instruction is given and the degrees and certificates are awarded by the academic institution. This allows corporations to access training programs

relevant to corporate needs while coincidentally allowing their employees to earn university credentials. It also allows corporations interested in offering such training to their employees to avoid the complications associated with accreditation of “in-house” corporate colleges because the university partner is responsible for ensuring that the program is an accredited offering.

### Conclusion

Corporate colleges and corporate universities represent major investments by corporations to achieve corporate objectives through education. Corporate colleges evolved on a limited scale but were a highly visible development that peaked at the end of the twentieth century. Corporate universities are the emerging major development in corporate education at the start of the twenty-first century.

Finally, it is important to note the increasing presence of for-profit educational institutions in postsecondary education. These institutions may come to play an increased role as providers of corporate education.

*See also:* CONTINUING PROFESSIONAL EDUCATION, *subentry on* UNITED STATES; LIFELONG LEARNING.

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## COST EFFECTIVENESS IN EDUCATION

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Cost-effectiveness analysis is an evaluation tool that is designed to assist in choosing among alternative courses of action or policies when resources are limited. Most educational decisions face constraints in the availability of budgetary and other resources. Therefore, limiting evaluation to the educational consequences of alternatives, alone, without considering their costs provides an inadequate basis for decision-making. Some alternatives may be more costly than others for the same results, meaning that society must sacrifice more resources to obtain a given end. It is desirable to choose those alternatives that are least costly for reaching a particular objective or that have the largest impact per unit of cost. This is intuitively obvious because the most cost-effective solution will free up resources for other uses or allow a greater impact for any given investment in comparison to a less cost-effective solution.

Applying this to educational interventions, there are a host of options from which schools, school districts, and higher education institutions can choose to improve educational outcomes. Many have shown at least some evidence of effectiveness, although the standards of evidence vary considerably. Thus, at the very least, consistent standards of evidence are needed to compare the competing alternatives. But estimates of the costs of the alternatives are needed as well. Even if one alternative is 10 percent more effective than another, it will not be preferred if it is twice as costly. Thus, both costs and effectiveness must be known in order to make good public policy choices.

Before reviewing briefly the methodology of cost-effectiveness analysis, it is important to differentiate it from a closely related evaluation tool, cost-benefit analysis. The approach to measuring costs is similar for both techniques, but in contrast to cost-effectiveness analysis where the results are measured in educational terms, cost-benefit analysis uses monetary measures of outcomes. This approach has the advantage of being able to compare the costs and benefits in monetary values for each alternative to see if the benefits exceed the costs. It also enables a comparison among projects with very different goals as long as both costs and benefits can be placed in monetary terms. In education, cost-benefit analysis has been used in cases where the educational outcomes are market-oriented such as in vocational ed-

ucation or in consideration of the higher income produced by more or better education. It has also been used in cases where a variety of benefits can be converted into monetary values such as in the noted study of the Perry Preschool Program discussed in W. Steven Barnett's 1996 book. In most educational interventions, however, the results are measured in educational terms rather than in terms of their monetary values.

### Methodology

The method of doing cost-effectiveness can be summarized briefly, but it is best to refer to more extensive treatments of the subject if a study is being contemplated (for example, *Cost-Effectiveness Analysis*, by Henry M. Levin and Patrick J. McEwan). Cost-effectiveness begins with a clear goal and a set of alternatives for reaching that goal. Comparisons can be made only for alternatives that have similar goals such as improvement of achievement in a particular subject or reduction in absenteeism or in dropouts. A straightforward cost-effectiveness analysis cannot compare options with different goals and objectives, any more than a standard type of evaluation could compare results in mathematics with results in creative writing. Alternatives being assessed should be options for addressing a specific goal where attainment of the goal can be measured by a common criterion such as an achievement test. It should be noted that a more complex, but related, form of analysis, cost-utility, can be used to assess multiple objectives.

In almost all respects, measuring the effectiveness of alternatives for purposes of cost-effectiveness analysis is no different than for a traditional evaluation. Experimental or quasi-experimental designs can be used to ascertain effectiveness, and such studies should be of a quality adequate to justify reasonably valid conclusions. If a study of effectiveness does not meet reasonable standards in terms of its validity, there is nothing in the cost-effectiveness method that will rescue the result. What cost-effectiveness analysis adds is the ability to consider the results of different alternatives relative to the costs of achieving those results. It does not change the criteria for what is a good effectiveness study.

The concept of costs that is used in cost-effectiveness studies is one that is drawn from economics, namely, opportunity cost. When a resource is used for one purpose, individuals or society lose the opportunity to use that resource in some alterna-

tive use. In general, the concept of opportunity cost is viewed as the value of a resource in its best alternative use. This may differ from the everyday understanding of what a cost is. For example, many school districts will refer to an unused facility as having no cost to the district if it is used for a new program. That facility, however, has value in alternative use in the sense that it could be sold or leased in the market or used for other purposes that have value. In this sense it is not "free." If the school district uses it for a new program, it sacrifices the potential income that the facility could yield in the marketplace or the value to other programs that could use the facility.

There is a standard methodology for measuring the cost of an intervention in cost-effectiveness analysis. The ingredients required to replicate the interventions are specified for all alternatives. Most interventions require personnel, facilities, materials, equipment, and other inputs such as client time. Using these categories as organizing rubrics, the ingredients are listed in terms of both quality and quantity such as, for the personnel category, the number of full-time teachers and their qualifications as well as other staff. Information on ingredients is collected through interviews, reports, and direct observations.

When all of the ingredients are accounted for, their cost values are determined. There are a variety of ways to estimate these costs. In the case where ingredients are purchased in competitive marketplaces, the costs are readily obtainable. Of course, the total costs of personnel include both salaries and the employee benefits. Other approaches are often used to estimate the value of facilities and equipment. In general, the technique for measuring costs is to ascertain their annual value. Because facilities and equipment have a life that is greater than one year, the annual value is derived through determining annual depreciation and interest costs. There are standard methods for ascertaining the annualized value of costs for ingredients.

These costs are summed up to obtain total annual costs, and they are usually divided by the numbers of students to get an average cost per student that can be associated with the effectiveness of each intervention. The ratio of cost per unit of effectiveness can then be compared across projects by combining the effectiveness results with costs. Alternatives with the largest effectiveness relative to cost are usually given highest priority in decision-making, although other factors such as ease of im-

plementation or political resistance need to be considered. The cost analysis can also be used to determine the burden of cost among different government or private entities where each alternative has different possibilities in terms of who provides the ingredients. In this respect it should be noted that the total cost of an intervention must even include volunteers and donated resources, although the cost to the sponsor may be reduced by others sharing the cost burden through providing resources in-kind.

### Examples

The application of cost-effectiveness analysis can best be understood by providing examples of its use. In a 1984 study, Bill Quinn, Adrian Van Mondfrans, and Blaine R. Worthen examined the cost-effectiveness of two different mathematics curricula. One approach was based upon a traditional, textbook application. The other was a locally developed curriculum that emphasized highly individualized instruction with special methods for teaching mathematics concepts. With respect to effectiveness, the latter curriculum was found to be more effective in terms of mathematics achievement, on average, than the traditional program. It was also learned that the lower the socioeconomic status (SES) of the student, the greater were the achievement advantages of the innovative program.

But the innovative program had a cost that was about 50 percent higher per student than the traditional one. The question is whether the additional achievement justified the higher cost. The evaluators found that the cost per raw score point on the Iowa Tests of Basic Skills was about 15 percent less for the innovative program than for the traditional one, showing that the higher achievement more than compensated for the higher cost. For low SES students the cost per point of the innovative program was less than 40 percent that of the traditional program. For high SES students, however, the traditional program was slightly more cost-effective. This study demonstrates the value of cost-effectiveness and its usefulness as an evaluation technique among different types of students. In a low SES school or district the innovative program was far superior in terms of its cost-effectiveness. In a high SES school or district, the traditional program might be preferred on cost-effectiveness grounds.

One of the most comprehensive cost-effectiveness studies compared four potential inter-

ventions in the elementary grades: reductions in class size in a range between twenty and thirty-five students per class, peer tutoring, computer-assisted instruction, and longer school days. The measures of educational effectiveness included both mathematics and reading achievement. Tutoring costs per student were highest, followed by decreases in class size from thirty-five to twenty, computer-assisted instruction, and longer school days. The high costs for peer tutoring are a result of the cost of adult coordinators who must organize and supervise the tutoring activities of effective programs. Effectiveness measures were taken from evaluation studies that had focused on the achievement gains associated with each type of intervention. Although peer tutoring had a high cost, it also had very high effectiveness and the highest cost-effectiveness. In general, computer-assisted instruction was second in cost-effectiveness with class size and longer school days showing the lowest cost-effectiveness. Results differed somewhat between reading and mathematics, but the cost-effectiveness of reduced class size and of longer school days was consistently lower than those of peer tutoring and computer-assisted instruction.

A study in northeastern Brazil undertook a cost-effectiveness analysis of different approaches to school improvement. A range of potential school improvements was compared to ascertain effects on student achievement. These included teacher-training programs, higher salaries to attract better teaching talent, better facilities, and greater provision of student textbooks and other materials. The authors used statistical models to determine the apparent impact of changes in these inputs on Portuguese language achievement for second graders. Costs were estimated using the ingredients method outlined above. Effectiveness relative to cost was highest for the provision of more instructional materials and lowest for raising teacher salaries. Given the very tight economic resources available for improving schooling in Brazil, this type of study provides valuable guidance for those people making resource decisions.

### Use of Cost-Effectiveness Analysis

Studies of the effectiveness of educational interventions are very common. Studies of their cost-effectiveness are rare. What might account for this discrepancy? There may be many reasons. Evaluators of social programs rarely have background in cost analysis. Few programs or textbooks in educa-

tional evaluation provide training in cost-effectiveness analysis. That decision makers are often unfamiliar with cost-effectiveness analysis limits their ability to evaluate and use such studies. Yet, in the early 1980s, the field of health was also limited in terms of both the production and use of cost-effectiveness studies. By the early twenty-first century, the concept had been widely applied to health decisions in response to severe resource stringencies in health care. Because the field of education is pressed with similar resource constraints, there might be increased development and use of cost-effectiveness techniques in educational decision-making.

*See also:* DECISION-MAKING IN SCHOOLS, APPLYING ECONOMIC ANALYSIS TO; ECONOMIC BENEFITS OF EDUCATION INVESTMENT, MEASUREMENT; PUBLIC SCHOOL BUDGETING, ACCOUNTING, AND AUDITING.

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HENRY M. LEVIN

## COUNCIL FOR BASIC EDUCATION

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The Council for Basic Education (CBE) was founded in 1956 by a group of distinguished citizens alarmed at the shift in American education from intellectual development to an emphasis on social development. From its inception CBE set out, as it states in its by-laws, to ensure “that all students without exception receive adequate instruction in the basic intellectual disciplines, especially English, mathematics, science, history, and foreign languages.” CBE is a nonprofit educational organization whose primary purpose is to strengthen the teaching and learning of the basic liberal arts subjects in American undergraduate schools. A critical voice for education reform, CBE has complemented its strong advocacy by designing and administering practical programs to foster better teaching and learning.

### History

CBE, in the belief that there is an intimate relationship between a healthy democracy and the ideal of excellence in education, from its earliest days published monthly and quarterly periodicals to provide a platform for its advocacy, analysis, and programs. Among its early directors, board members, and supporters were Mortimer Smith, Mary Bingham, Admiral Hyman Rickover, Potter Stewart, and Jacques Barzun. In 1959 James D. Koerner’s *The Case for Basic Education* articulated CBE’s ideals about the goals in education and contained what has become a celebrated essay by one of its founding members, Clifton Fadiman, on what he defined as the “generative” power of what is contained in the basic liberal arts. In 1971 CBE published “Inner-City Children Can Be Taught to Read: Four Successful Schools,” an article by George Weber, then a director at CBE, which continues to be read by those who are alarmed at the number of illiterate students in the nation’s urban schools.

### Activities

In addition to speeches, publications, and conferences, CBE’s programmatic activities began when it was invited by the National Endowment for the Humanities to administer a program that would allow school teachers to engage in independent study in the humanities during the summertime. From 1983 until 1997, more than 3,000 teachers participated as CBE Fellows, and from 1985 until 1996, CBE conducted Writing to Learn, which taught effective writing across the curriculum, primarily in urban school districts.

Following the National Education Summit in 1989 in Charlottesville, Virginia, which called for strong national standards for education, CBE’s historic commitment for high standards established it as a national leader. CBE provided support for the development and implementation of academic standards in a number of states and school districts, including Alaska, Hawaii, Illinois, Kansas, Maryland, Mississippi, Chicago, Los Angeles, Cleveland (Ohio), Milwaukee (Wisconsin), Montgomery County (Maryland), and Sacramento and Santa Barbara (both California). In 1995, through its project known as Standards for Excellence in Education (SEE), CBE condensed, consolidated, and edited the national standards in the basic subjects to form a single volume, which continues to be used in many school systems. During that same period of time, CBE was asked to convene a panel to review the then controversial national history standards, which produced a report that became the basis for the revised national history standards.

In addition to its standards and fellowship programs, CBE developed a program, Standards-Based Teacher Education (STEP), to promote students’ deep understanding of the subjects they will eventually teach and encourage the colleges of the arts and sciences to join forces with the teacher preparation faculties in requiring a strong academic curriculum for future teachers. STEP is operational on campuses in Maryland, Indiana, Kentucky, Georgia, and Delaware. Schools around the World (SAW) is a program that engages teachers from eight nations to compare student work on common science and mathematics topics and trains teachers in the United States to improve instruction.

In 1997 CBE initiated the Humanities Scholars Fellowship program and the Charter School Fellowship program. In 1999 it collaborated with the Labo-

ratory for Student Success and the Maryland State Department of Education to launch the Mid-Atlantic Regional Teachers' Project (MARTP), a coalition of five states that looks at issues of teacher quality and demand in a regional area. CBE is a partner with the George Washington University and the Institute for Educational Leadership to develop a National Clearinghouse for Comprehensive School Reform. CBE also manages American Education Reaches Out (AERO), a project designed to develop a set of voluntary academic-content standards for the American schools overseas that are supported by the U.S. Department of State.

### Legal Status, Governance, and Publications

CBE is incorporated as a 501 (c)(3) organization and is governed by an independent board of directors. The council publishes *Basic Education* (monthly) and occasional special reports and books.

### Assessment of CBE's Influence and Significance

From its beginning, CBE has been known as an independent voice for educational reform, and it is frequently called upon and quoted in national newspapers, periodicals, and on television and radio. Its publications are read by a diverse audience, including professional educators, members of Congress, the U.S. Department of Education, state legislators, and the media, as well as by members of the general public who seek an understanding of educational policies and trends. Both national and international education officials confer regularly with CBE about education policy. As of 2001, CBE had worked in twenty-five states, twenty-eight districts, and eight countries.

*See also:* SCHOOL REFORM; STANDARDS FOR STUDENT LEARNING; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

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CHRISTOPHER T. CROSS  
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## COUNCIL FOR EXCEPTIONAL CHILDREN

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The Council for Exceptional Children (CEC) is a professional association dedicated to improving the educational success of children with disabilities and/or gifts and talents. Its members include special education teachers and administrators, professors, related service providers, paraprofessionals, and parents.

### Program

CEC focuses on improving the quality of special and general education. To achieve this goal, the council works with state and local education districts, the federal government, and other education organizations to find ways to better identify, teach, and care for children with exceptionalities.

In addition to encouraging the professional growth of its members and other special educators, CEC aids in recruiting personnel and promoting high professional standards. It encourages research in the education of children with exceptionalities and assists in the dissemination of research findings. And it engages in lobbying efforts at all levels of government to promote legislation that supports the education of children with special needs.

Disseminating information about the education of children with exceptionalities is one of CEC's major activities. CEC provides information to members and others who work with children with disabilities and/or gifts and talents through conventions, conferences, the CEC website, and publications. The council publishes two journals, *Teaching Exceptional Children*, a professional, practical-based journal, and

*Exceptional Children*, a research journal. CEC also publishes *CEC Today*, the organization's newsletter, which covers current trends in special education and CEC activities. In addition, CEC publishes books and videos on special education and instructional strategies, research monographs, reviews of research, and special bulletins.

Another significant aspect of the council's activities is developing standards for the field. To date, CEC has developed standards for what special education teachers, diagnosticians, administrators, and paraeducators must know to provide effective instruction and service. An important aspect of CEC's standards activities is providing recognition for outstanding special educators, which it accomplishes through its professional awards program.

CEC also engages in extensive advocacy activities. The council cooperates with other education organizations to promote legislation that supports education in general, and special and gifted education in particular. CEC focuses its legislative efforts on ensuring that gifted children and children with disabilities receive a high quality education and that special and gifted education programs are adequately funded. The council further works to inform legislators at all levels, as well as the general public, of the benefits society receives when children with exceptionalities reach their educational potential.

In addition, CEC operates four national information centers. The centers provide information on the education of children with disabilities and gifts and talents, the special education profession, and the Individuals with Disabilities Education Act (IDEA).

### **Organizational Structure**

CEC consists of state and provincial federations, which are made up of local chapters, branches, and affiliates, and the Student Council for Exceptional Children. Federations address statewide or provincial issues, hold conferences, publish newsletters, and coordinate the activities of the local chapters. The local chapters hold meetings, engage in projects to advance the education of children with exceptionalities, and publish newsletters. Students in full-time attendance at an accredited college or university are eligible for membership in the Student Council for Exceptional Children.

CEC has seventeen divisions, each of which specializes in a particular area of special education (such as learning disabilities, mental retardation, gifted ed-

ucation). Each division holds conferences on its particular area of special education and produces a journal, website, and newsletter. The divisions also provide networking opportunities and support for their members.

CEC's board of directors, the association's primary governing body, makes internal and external policy for the organization. A representative assembly serves as an advisory body to the board of directors. As such, it identifies, discusses, and makes recommendations to the board of directors on positions CEC should take on issues involving special education; advises CEC on public policy issues and initiatives; and oversees CEC internal governance policies and procedures.

### **Membership and Financial Support**

CEC's approximately 50,000 members are special education teachers, administrators, college professors, related service providers, paraprofessionals, and parents. Although CEC has an international membership, the majority of its members reside in the United States.

Financial support comes primarily from membership dues. Various special projects receive funds from the federal government and foundation grants.

### **History and Development**

CEC was organized in 1922 by a small group of administrators and faculty members at Teachers College, Columbia University. In 1941 it merged with the special education department of the National Education Association (NEA) and became a department of NEA. In 1977 CEC withdrew its affiliation with NEA and became its own association. During its history, CEC has grown substantially in membership, and it has become a leading national voice for special education. CEC's national headquarters are located in Arlington, Virginia.

*See also:* SPECIAL EDUCATION.

### **INTERNET RESOURCE**

COUNCIL FOR EXCEPTIONAL CHILDREN. 2002. <[www.cec.sped.org](http://www.cec.sped.org)>.

## COUNCIL OF CHIEF STATE SCHOOL OFFICERS

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The Council of Chief State School Officers (CCSSO) is a nationwide, nonprofit organization composed of the public officials who head the departments of elementary and secondary education in the states, five U.S. extra-state jurisdictions, the District of Columbia, and the Department of Defense Education Activity. The council serves these leaders and their state education agencies by:

- Advocating federal education policy that will most effectively increase student achievement before the U.S. Congress and the administration;
- Providing services and assistance to the chief school officers and members of their agencies to help them carry out their leadership responsibilities, including administration of federal programs; and
- Working in partnership with federal agencies and private foundations on research and statistical studies, such as surveys of mathematics and science programs, and managing projects such as the Wallace–Reader’s Digest Funds’ initiative, Leaders Count, which support state actions to strengthen leadership in schools and districts.

Membership in the council is voluntary. Dues are paid by the state education agencies; each state’s dues are based on the total expenditure for elementary and secondary education for that state related to the total expenditures for the nation. In 2001 council dues totaled \$1.6 million, which was less than 10 percent of the overall budget of \$17.5 million. More than 90 percent of the budget was in grants and contracts from federal agencies and private foundations. The council offices are in Washington, D.C.

### History

Council members first convened in Washington in 1908 at the invitation of the U.S. Congress, which was seeking advice on crafting federal policy for vocational education. In 1927 the council was incorporated as a private nonprofit organization. Since then members have conferred regularly with the Congress and representatives of federal agencies. The council has provided a forum for shaping state consensus on federal educational policy, for exchanging practices among states, and for organizing multistate consor-

tia to attain common objectives such as developing testing strategies and administering teacher licensing examinations.

During the 1960s, in addition to advocacy of federal policy on legislation such as the Elementary and Secondary Education Act of 1965, which relied on the states to administer the programs, the council began to link with the U.S. Office of Education, later the U.S. Department of Education (DoE), to help states administer the act. Similar connections have been made for administering other federal acts such as those for vocational education, education of disabled students, civil rights, telecommunications, and teacher education.

The growth of these supportive administrative activities, together with increased assistance to the DoE on data gathering and securing new foundation funds, expanded annual resources from \$2.5 million with fifteen staff members in 1986 to \$17.5 million and seventy-five staff members in 2001. Major grant projects included support for early childhood and parent education, teacher preparation and licensure, school leadership policies, arts education, and development of student standards and assessments.

### Governance and Operations

Because the total maximum membership is fifty-seven persons, the council operates with extensive direct decision-making by the full membership. The entire membership elects officers and board members, sets state dues, approves all position papers and federal legislative positions, and approves the creation of committees and their membership. The council is guided by a board of nine directors, three of whom are officers. The board approves the budget and receipt of all grants and contract funds, sets the council agenda, and appoints the executive director, who in turn appoints all staff. No board members or officers are paid for their services to the council.

The membership meets three times each year: a federal legislative conference in Washington each March; a Summer Institute for professional development on the priority topic of the year in July, each year in a different host state; and a business meeting held in a different host state each November, at which major policy votes are taken and council priorities set.

The board and membership take extensive time to select and prepare each year’s priority topic. One year is spent in development; the “priority” year is

used for research and preparation of a council policy statement and the design of state implementation activities to be carried out through at least the two following years. Examples of topics include early childhood education, learning technologies, use of standards and assessments in reform strategies, international education, and preparation for employment and leadership for learning.

In addition to providing a network of services to the chiefs, the council offers more than a dozen nationwide networks for specialists in state education agencies. Examples of the network memberships are the deputy leaders of the state education agencies, assessment directors, statistical experts, mathematics and science coordinators, teacher licensing specialists, health education directors, learning technology experts, school reform strategists, and federal legislative representatives. With these networks the council helps to strengthen capacity throughout the state agencies.

The council staff comprises experts in the priority areas as established by the members. Staff strengths are in equity of education opportunity, assessments, standards and improvement strategies, leadership, teacher education, arts education, and federal legislative advocacy.

### **Accomplishments and Influence**

The influence of CCSSO is illustrated by examples of federal legislative success, major policy statements, and significant innovative projects.

**Federal legislation.** The council is considered one of the top education lobbying forces in Washington. The provisions of the 2001 reauthorization of the Elementary and Secondary Education Act (ESEA) illustrate results on council-supported positions including strengthened emphasis on targeted aid to children of poverty; substantial increase of funding; increased state role in assessment and accountability; improved programs of learning technology, teacher preparation, 21st Century Schools, and accountability—with these programs featuring added flexibility in administration; and continued responsibility of state education agencies for state plans and administration. Proposals to transform targeted programs to federal revenue sharing, to establish vouchers for private school enrollment, and to transfer state administration to governors, which were considered by Congress, were omitted from the final legislation as advocated by the council.

Other major legislative successes in the 1990s include enactment of the Goals 2000: Educate America Act, which provided nearly \$2.5 billion for the development of state and local student standards, assessments, and reform strategies, and enactment of the “universal services” funding for learning technology under the Telecommunications Act of 1996, which has provided nearly \$2.2 billion of services to schools and libraries each year since enactment.

**Policy papers.** Among the most influential council statements is the 1984 paper calling for nationwide testing to provide state-by-state comparisons of student achievement. This position has been pivotal for enabling federal legislation authorizing state-by-state reporting of the National Assessment of Education Progress (NAEP), the measurement of progress on the National Goals of 1989, the establishment of state standards and assessments in the 1990s, and the key provisions for measuring progress of schools under the ESEA reauthorizations of 1994 and 2001. A second important CCSSO statement is the 1987 paper “Assuring Education Success for All,” which called for a national goal of virtually 100 percent student graduation from high school. A third is a paper on early childhood education advocating universal opportunity for three- and four-year-olds to attend pre-kindergarten without barrier of cost. A fourth is a set of papers advocating comprehensive education reform based on student standards. These papers provided the underpinning for major federal initiatives in the 1990s, including the Goals 2000 legislation and the ESEA reauthorizations of 1994 and 2001, and for the reform strategies of the states during this period.

**Exemplary projects.** Among the extensive projects of the council, several have made notably unique nationwide contributions. From 1987, the time of authorization for state-by-state NAEP, into the early twenty-first century, the council won the contracts to prepare nearly all of the content frameworks for the subjects of the NAEP. Second, since the early 1960s the council has administered the national and state Teacher of the Year programs, the nation’s most prestigious recognition of teaching.

Third, since 1995 the council, together with the National Association of State Arts Agencies, has provided leadership for the nation’s most extensive advocacy of arts education. Fourth, to anticipate the increasing pressures of the global economy, worldwide security, and communications and to improve American education and better understand educa-

tion in other nations, the council has assisted in shaping the system for international comparative studies of education. The council has served as the U.S. representative to the International Association for the Evaluation of Educational Achievement (IEA), which conducts the major studies of mathematics, science, reading, civics education, and technology. The council has assisted in enabling the major breakthrough of direct state participation in these international comparisons. The council has also organized a decade-long exchange of practices with the education leaders of Japan.

Fifth, CCSSO has led formation of several coalitions of public and private education leaders to promote mutual support for legislative initiatives and exchange of practice, rather than antagonism. Sixth, the council has led the creation of a consortium of the major organizations of state officials—governors, legislators, and state education boards and chiefs—as the major partner with the Wallace-Reader’s Digest Funds to assist states in strengthening policies and programs to improve school and district leadership. Through the Leaders Count program this project has been granted \$8.9 million to help states with policy changes.

### Concluding Note

Global communication, competition, and commerce are generating increasing pressures to nationalize education in the United States. In order to realize the advantages of pooling the nation’s resources for improving education, centralization of authority is occurring at the national level. To assure such centralization does not drive out diversity and options in education, CCSSO is in a unique position to provide a countervailing force. The organization serves both to organize the state partnership with the federal government and as an independent advocate for state and local authorities to craft policies and govern education according to the particular aspirations of their jurisdictions. Around the globe nations are struggling with the task of finding the best mix of centralized and decentralized power to assure the most effective performance of their students gauged by international benchmarks. In the United States the council is uniquely placed to help fashion the best balance between standardized improvement and experimentation toward realizing new goals of equity and excellence.

*See also:* STATE DEPARTMENTS OF EDUCATION.

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GORDON M. AMBACH

### COUNSELING, CAREER

*See:* CAREER COUNSELING IN HIGHER EDUCATION.

### COUNSELING, PSYCHOLOGICAL

*See:* PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES.

### COUNSELING, SCHOOL

*See:* GUIDANCE AND COUNSELING, SCHOOL.

### COUNTS, GEORGE S. (1889–1974)

Progressive educator, sociologist, and political activist, George S. Counts challenged teachers and teacher educators to use school as a means for critiquing and transforming the social order. Perhaps best known for his controversial pamphlet *Dare the School Build a New Social Order?* (1932), Counts authored scores of scholarly works that advanced the social study of education and emphasized teaching as a moral and political enterprise. His work on schooling and society continue to have relevance to contemporary dilemmas in education.

Counts was born and raised in Baldwin, Kansas. His family was Methodist and, by his own account, imparted strong ideals of fairness and brotherhood. Counts earned his B.A. from Baker University, the local Methodist school, in 1911 with a degree in clas-

sical studies. After graduating, he was employed as a high school math and science teacher, an athletic coach, and principal before beginning postgraduate studies in education at the University of Chicago in 1913, at the age of twenty-four. After receiving a Ph.D. degree with honors, Counts taught at Delaware College, now the University of Delaware (1916–1917) as head of the department of education. He taught educational sociology at Harris Teachers College in St. Louis, Missouri (1918–1919), secondary education at the University of Washington (1919–1920), and education at Yale University (1920–1926) and at the University of Chicago (1926–1927). For nearly thirty years, Counts taught at Teachers College, Columbia University in New York (1927–1956). After being required to retire at the age of 65 from Teachers College, Counts taught at the University of Pittsburgh (1959), Michigan State University (1960), and Southern Illinois University (1962–1971).

### Sociology and Education

Much of Counts's scholarship derives from his pioneering work in the sociology of education. His adviser as a doctoral student at the University of Chicago was the chairman of the department of education, psychologist Charles H. Judd. Significantly, Counts insisted on fashioning for himself a minor in sociology and social science at a time when professors of education wholly embraced psychology as the mediating discipline through which to study educational practice and problems. Although his contemporaries were fascinated with the "science of education" and its psychological underpinnings, Counts was interested in the study of social conditions and problems and their relationship to education. Heavily influenced by Albion Small and other Chicago sociologists, Counts saw in sociology the opportunity to examine and reshape schools by considering the impact of social forces and varied political and social interests on educational practice. For example, in the *Selective Character of American Secondary Education* (1922), Counts demonstrated a close relationship between students' perseverance in school and their parents' occupations. In the *Social Composition of Boards of Education: A Study in the Social Control of Public Education* (1927) and *School and Society in Chicago* (1928), he asserted that dominant social classes control American boards of education and school practices respectively. Because schools were run by the capitalist class who wielded

social and economic power, Counts argued, school practices tended towards the status quo, including the preservation of an unjust distribution of wealth and power.

Counts's educational philosophy was also an outgrowth of John Dewey's philosophy. Both men believed in the enormous potential of education to improve society and that schools should reflect life rather than be isolated from it. But unlike Dewey's *Public and Its Problems*, much of Counts's writing suggests a plan of action in the use of schools to fashion a new social order.

### Social Reform

From 1927 to the early 1930s Counts became fascinated with the Soviet Union precisely for its willingness to employ schools in the inculcation of a new social order. Although he later became disillusioned with mounting evidence of Soviet totalitarianism and an outspoken critic of the Communist Party (he was elected as president of the American Federation of Teachers in 1939 having run as the anti-Communist candidate), Counts—like twenty-first century criticalists—believed that schools always indoctrinated students. What interested Counts was the schools' orientation: what kind of society did the schools favor and to what degree. As he put it, the word *indoctrination* "does not frighten me" (1978, p. 263). This position, in particular, later brought Counts fierce critics like Franklin Bobbit, a leader of the social efficiency movement, who countered that the schools were not to be used as agents of social reform.

Counts was accordingly critical of the child-centered Progressives for their failure to articulate any conception of a good society. He chided their preoccupation with individual growth at the expense of democratic solidarity and social justice. In his speech to the Progressive Education Association (PEA), "Dare Progressive Education be Progressive?" which later became the pamphlet *Dare the School Build a New Social Order?*, he argued that Progressive education had "elaborated no theory of social welfare" (1978, p. 258), and that it must "emancipate itself from the influence of class" (p. 259).

### Political Activism

Counts was also a political activist. He was chairman of the American Labor Party (1942–1944), a founder of the Liberal Party, and a candidate for New York's

city council, lieutenant governor, and the U.S. Senate. He was president of the American Federation of Teachers (AFT) and a member of the Commission on the Social Studies of the American Historical Association. He was the first editor of the Progressive journal *Social Frontier* which, at its peak, boasted a circulation of 6,000, and advocated enlisting teachers in the reconstruction of society.

### Contribution

Counts's importance to and impact on American education remain a matter of debate. His contributions to the evolving discourse on democracy and education are evident in a great deal of his writing, specifically in his conviction that schools could be the lever of radical social change. Highly critical of economic and social norms of selfishness, individualism, and inattention to human suffering, Counts wanted educators to "engage in the positive task of creating a new tradition in American life" (1978, p. 262). He wanted teachers to go beyond abstract, philosophical conceptions of democracy and teach explicitly about power and injustice. He wanted teachers and students to count among their primary goals the building of a better social order.

*See also:* PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION.

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JOEL WESTHEIMER

## CREATIVITY

Creativity is the ability and disposition to produce novelty. Children's play and high accomplishments in art, science, and technology are traditionally called creative, but any type of activity or product, whether ideational, physical, or social, can be creative.

### Characteristics

Creativity has been associated with a wide range of behavioral and mental characteristics, including associations between semantically remote ideas and contexts, application of multiple perspectives, curiosity, flexibility in thought and action, rapid generation of multiple, qualitatively different solutions and answers to problems and questions, tolerance for ambiguity and uncertainty, and unusual uses of familiar objects.

Biographical studies of exceptionally creative individuals have uncovered recurring features. Creative individuals typically master a practice or tradition before they transform it. They organize their lives around a network of interrelated and mutually supporting enterprises. They are prolific. There is no evidence for an inverse relation between quantity and quality; instead, the two appear to be

correlated. Exceptionally creative accomplishments are complex, evolving outcomes of long-term efforts sustained by high levels of intrinsic motivation, often in the absence of societal rewards.

There are many examples of exceptionally creative individuals who led troubled and turbulent lives and there is widespread belief in a relation between creativity and mental disorder, but it has not been conclusively shown that the more frequent such disorders are, the higher the level of creativity.

The rate of professional productivity in art, science, and other creative endeavors increases rapidly at the beginning of a career, reaches a peak in midlife, and then slowly declines. It is not known whether the decline is necessary or a side effect of other factors, for example, health problems. That some individuals begin creative careers late in life is evidence against an inevitable decline.

### **Creativity as Ability**

All individuals with healthy brains have some degree of creative potential, but individuals vary in how much novelty they in fact produce. Psychometric measures of creativity are based on the hypothesis that the ability to create is general across domains of activity (art, business, music, technology, etc.) and stable over time. This view implies that a person whose creativity is above average in one domain can be expected to be above average in other domains also.

The Remote Associations Test (RAT) developed by Sarnoff A. Mednick measures how easily a person can find a link between semantically different concepts. E. Paul Torrance's Tests of Creative Thinking (TTCT) measures divergent production, that is, how many different answers to a question a person can provide within a time limit. For example, a person might be asked to propose alternative titles to a well-known movie. More recent tests developed by Robert J. Sternberg uses complex test items from realistic contexts. Creativity tests correlate modestly with each other. Critics point out that there are no objective criteria for scoring the responses and that test performance might not be indicative of a creative mind.

### **Relation to Intelligence**

Correlations between creativity tests and IQ tests vary in magnitude from study to study and depend on which tests are used. Some correlations are no

smaller than correlations among creativity tests, so they do not provide strong evidence that IQ and creativity are distinct dimensions. The findings can be understood in terms of a so-called triangular correlation (also known as the threshold hypothesis): Individuals in the lower half of the IQ distribution lack the requisite cognitive capacity to create and hence necessarily exhibit low creativity; individuals in the upper half of the IQ distribution have the requisite capacity but may or may not develop a disposition to create. Consequently, creativity and IQ are highly correlated at low IQ levels but weakly correlated at high IQ levels. Alternative interpretations of the relation between creativity and intelligence have been proposed, including that they are two aspects of the same ability, that they are unrelated, and that they are mutually exclusive.

### **Creativity as Process**

The fact that the human mind can generate novel concepts and ideas requires explanation. Cognitive psychologists aim to infer the relevant mental processes from observations of how individuals solve problems that require creativity. One hypothesis states that creation is a process of variation and selection, analogous to biological evolution. The mind of a creative person spontaneously generates a large number of random combinations of ideas, and a few chosen combinations become expressed in behavior. An alternative hypothesis is that a creative person is able to override the constraining influence of past experiences and hence consider a wide range of actions and possibilities. The moment at which a previously unheeded but promising option comes to mind is often referred to as insight. A closely related hypothesis is that creative individuals are more able to break free from mental ruts—trains of thought that recur over and over again even though they do not lead to the desired goal or solution. It has also been suggested that people create by making analogies between current and past problems and situations, and by applying abstractions—cognitive schemas—acquired in one domain to another domain.

These process hypotheses are not mutually exclusive. Each has received support in research studies. Due to the separation within psychology of the cognitive and psychometric traditions, there is little or no interaction between process hypotheses and test development.

### Relation to Imagery

There is widespread belief that highly creative individuals think holistically, in visual images, as opposed to the step-by-step process that supposedly characterizes logical thinking. Although consistent with often quoted autobiographical comments by Albert Einstein, Wolfgang Amadeus Mozart, F. A. Kekulé and others, systematic support for this belief is lacking. There is strong research support for a function for visual imagery in memory recall, but its relevance for creativity is unclear.

### Relation to Knowledge

Cognitive and biographical studies have shown that creative problem solutions require thorough knowledge of the relevant domain and domain-specific strategies. For example, scientific discovery depends, in part, on knowing what the current theory predicts, plus the strategy of paying close attention to data that deviate from those predictions; creativity in other domains requires other strategies. It is possible that creativity is not a general ability or process, but that creative behaviors and products emerge when a competent and knowledgeable person is motivated to engage in a cumulative effort over a long period of time. If so, a person who is unusually creative in one domain of activity is not necessarily unusually creative in other domains.

### Creativity and Education

It is not known to what extent an individual's ability to create can be enhanced. The popular press produces a steady stream of books that advocate particular techniques and training programs; most have not been evaluated, so it is not known whether they work. The small number of training techniques that have been evaluated systematically produce modest effects. It is possible that more effective training techniques exist but have yet to be invented. Most training programs implicitly assume that creativity is a general ability or process.

Although it is unclear whether the ability to create can be enhanced, there is consensus that the disposition to create can be suppressed. Creativity and discipline are not antithetical—creative individuals practice much and work hard—but extensive reliance on overly structured activities can thwart the impulse to create, with negative effects on students' well-being. Students with high ability will perform better than others in activities that require design, imagination, or invention, but participation

in such activities encourages the disposition to create in students at any level of ability.

Creative individuals often elicit negative reactions from others by violating social norms and expectations. In a school setting, care should be taken to distinguish creative students from students who cause disturbances due to emotional or social problems. Creative students who find ways to engage others in their projects are likely to become outgoing and adopt leadership roles. Creative students who experience difficulties in this regard are likely to engage in individual projects. In short, high creativity is compatible with both social and individualistic life styles; either outcome is healthy.

There is widespread concern among educators in Western countries that the trend to define the goals of schooling in terms of standardized tests forces teachers to prioritize fact learning and analytical ability over creativity. Participation in creative activities is emphasized in schools that implement particular pedagogical theories, for example, the Montessori and Waldorf schools.

### Broader View

Creativity is a historical force. Art and science transform people's ideas and worldviews, and technological innovation continuously transforms social practices. Toward the end of the twentieth century, the importance of innovation for economic production was widely recognized among business leaders.

*See also:* INTELLIGENCE, *subentry on* TRIARCHIC THEORY OF INTELLIGENCE; LEARNING THEORY, *subentries on* CONSTRUCTIVIST APPROACH, HISTORICAL OVERVIEW, SCHEMA THEORY.

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STELLAN OHLSSON  
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## CUBBERLEY, ELLWOOD (1868–1941)

An influential educator in the field of educational administration, Ellwood Patterson Cubberley helped

guide the teacher education curriculum in the early twentieth century through his edited textbook series. His account of educational history set the historiographical tone for the first half of the twentieth century.

### Education and Career

Cubberley was born in 1868 in Antioch (later to be named Andrews), Indiana. He graduated from Indiana University in 1891 and showed special promise in science and mathematics. His ambition was to become a geologist, but teaching eventually overcame that early goal. Before graduation, he spent a year teaching in a tiny country school in Rock Hill, Indiana. After graduation he taught briefly at Ridgeville College (Ridgeville, Indiana), before moving to Vincennes University (Vincennes, Indiana), where he soon became president. During this period, he married his second cousin Erla Little.

In 1896 he moved to California and became superintendent of the San Diego Board of Education. There he battled local politicians over the appointment of qualified applicants.

In 1898 he left San Diego and took a severe pay cut to accept a teaching position with Stanford University and its fledgling two-person Department of Education (which would later become the School of Education). He would spend the remainder of his career there. On leave from Stanford, he received his Ph.D. from Columbia University in 1905 and was named full professor at Stanford in 1908. He assumed leadership of Stanford's School of Education in 1917 and proceeded to expand vastly the scope of its activities. Throughout his career, Cubberley remained deeply involved in shaping national policy on issues from teacher certification to textbooks. He retired in 1933.

### Contribution

Cubberley was perhaps the most significant educational administrator of his day. At the outset of Cubberley's career, school administration was thought of as a set of general principles without any conception of theoretical or scientific plans. There were no formal textbooks from which to teach educational administration to students. Educational administrators had no place to learn better practices and, as such, learned solely from experience. Indeed, educational administration posts were often political plums requiring little, if any, formal training. Most universities lacked education departments.

In *Changing Concepts of Education* (1909), Cubberley laid the foundation for public schooling in America. He asserted that universal education was indispensable to democracy and was an appropriate exercise of state power. Cubberley refocused school policy to include not just teaching children but also to advance public welfare and democratic institutions. For educational policy to improve, Cubberley sought to free educational administration from technical ignorance and external political pressures. He advocated giving power to technically trained educators. He also urged improved teacher training.

In his landmark *Public School Administration* (1916, followed by second and third editions in 1929 and 1947), Cubberley called for increased social efficiency in schools. He extolled the use of tests and measurements as techniques to measure educational efficiency and to provide scientific accuracy to education. He analogized the educational process to industrial production, in that schools should strive to maximize efficiency and product. Tests and measurements could continually serve as efficiency indicators, providing a basis for reorganization, hiring and firing, and assessing student performance. He further advocated the reorganization of public schools and the appointment of experts as administrators.

Cubberley pioneered the use of the school survey as an instrument to improve education, in his reports on the Baltimore, Maryland; New York City; Oakland, California; Portland, Oregon; and Salt Lake City, Utah schools. In conducting surveys, he applied an integrated theory of organization, administration, and teaching, to assess the strengths and weaknesses of individual schools. He used the latest statistical and quantitative methods. His surveys were significant steps down a new road toward improving school functions.

Additionally, Cubberley edited a series of textbooks for Riverside Press that sold more than 3 million copies. This textbook series helped form education's knowledge base and included seminal works on such important concepts as I.Q. In his textbooks, he advocated autonomy for school administrators. Although school boards might set policy, they lacked expertise to run school systems and Cubberley believed they should give way to the administrator's expertise in day-to-day operations.

Cubberley's *Public Education in the United States* (1919), perhaps his greatest work, set the his-

toriographical tone for educational history for more than forty years. Adopting an instrumentalist approach to education, Cubberley portrayed education as the main tool of America's progress. He saw the rise of universal public schooling as a triumph of democratic forces. Cubberley saw educational systems as continually improving, and he associated the rise and refinement of education with America's continued progress.

Cubberley's legacy has been decidedly mixed. Since his death in 1941, Cubberley's celebrationist historical account has been attacked, perhaps most memorably by Lawrence Cremin's *The Wonderful World of Ellwood Patterson Cubberley* (1965). Historiographically, some academicians have used Cubberley's methodology as a cautionary tale and termed his approach anachronistic and evangelistic. In a similar vein, Cubberley's administration stances have been attacked as sexist and autocratic. Regardless, Cubberley's historical account was a Promethean achievement, in light of the then-existing state of knowledge. And, without a doubt, Cubberley's views on empirical research in education and increased efficiency in public schools have remained dominant paradigms in contemporary public education.

*See also:* SUPERVISION OF INSTRUCTION; TEACHER EDUCATION.

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## CULTURE AND ETHNICITY

*See:* AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; AFRICAN-AMERICAN STUDIES; BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; LANGUAGE MINORITY STUDENTS; LITERACY AND CULTURE; MULTICULTURALISM IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE.

## CURRICULUM, HIGHER EDUCATION

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INNOVATIONS IN THE UNDERGRADUATE CURRICULUM

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NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM

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## INNOVATIONS IN THE UNDERGRADUATE CURRICULUM

During the last decade of the twentieth century, significant changes occurred in American higher education generally and in the undergraduate curriculum in particular. These changes were propelled by several developments. Together they provided the momentum to enable higher education to make unprecedented strides. Educational leaders debate whether these changes are primarily additive and limited to small scale programmatic innovations or truly transformative for institutions and higher education. Nonetheless, there is widespread agreement that the academy and the undergraduate curriculum have evolved in significant ways.

### Defining Curriculum

An undergraduate curriculum is a formal academic plan for the learning experiences of students in pur-

suit of a college degree. The term *curriculum*, broadly defined, includes goals for student learning (skills, knowledge and attitudes); content (the subject matter in which learning experiences are embedded); sequence (the order in which concepts are presented); learners; instructional methods and activities; instructional resources (materials and settings); evaluation (methods used to assess student learning as a result of these experiences); and adjustments to teaching and learning processes, based on experience and evaluation. Although the term *curriculum* is variably used, this definition is sufficiently inclusive and dynamic to account for the many innovations in the undergraduate curriculum that involve instructional methods, sequencing, and assessments as well as instructional goals and content, all of which have been implemented in order to improve learning.

### Forces for Change

During the 1980s critiques of American higher education were increasing in frequency and stridence. Reports such as *A Nation at Risk* (1983) and *Integrity in the College Curriculum* (1985) underscored the need for reform, citing a lack of accessibility, quality, and coherence. Business and industry leaders decried the inadequate skills of graduates who were unable to problem-solve, communicate through writing and speaking, engage in ethical decision-making, work in teams, and interact effectively with diverse others. Citizen groups noted the disengagement from civic life of recent graduates, citing low voter participation.

Calls for increased accountability came from outside the academy, including government agencies, state boards, regional and professional accrediting bodies, and professional associations. Their concerns resulted in mandates for assessment of student learning outcomes and the growth of the assessment movement in higher education. Against a backdrop of fiscal constraints, competition for students from for-profit educational vendors was considered a threat to colleges and universities, further fueling the impetus for reform.

Demographic changes led to increased participation by students with varied academic preparation, declining student enrollments, and falling retention rates. The pool of students pursuing science and math was shrinking, and women and minorities were underrepresented. Scientific literacy was weak among non-science graduates, posing a

threat to the economy as well as the future of scientific and technological endeavors.

Concurrently, there were great strides in research on effective college teaching and learning, with shifts in emphasis from what teachers *do* to what students *learn*. New conceptions of learning that emphasize the social construction of knowledge gained advocates. New interdisciplinary fields were burgeoning (e.g., women's studies, ethnic studies). The publication of Ernest Boyer's *Scholarship Reconsidered* in 1990 promoted the re-conceptualization of faculty roles and rewards, giving legitimacy to the scholarship of teaching. From the mid-1980s, faculty development emerged as a field of practice to assist faculty in their instructional efforts; during this time, numerous institutions founded teaching and learning centers. Last but not least, new technologies had implications for new fields of study and their use in instruction and research. Taken together, these forces enabled significant reforms to develop and proliferate in higher education.

### Trends

Many of the curricular innovations and reforms during the last decade of the twentieth century reflect three shifts in emphasis: (1) from learning goals that focus on mastery of content and content coverage to demonstration of broad competencies; (2) from learning in disparate disciplines to integrative learning experiences across the curriculum; and (3) from changes in subject matter as the primary means to improve learning to innovations in instructional methods and assessments as integral to curricular reforms. Diversity and global competency have emerged as major undergraduate curriculum issues, as well.

**From content to competencies.** In the first years of the twenty-first century, the undergraduate curriculum continued to consist of general education or liberal studies (averaging 37.6% of bachelor of arts degree requirements), a major specialization, minors, and electives. The rationale for this configuration has been to ensure breadth through distribution requirements and depth through the major. At the structural level, this model is holding fast at most institutions. What has changed are the goals for learning—from emphasis on knowledge of disciplinary facts and concepts (what students know) to broadly defined competencies (what students are able to do with what they know) to ensure that graduates have

the skills needed by citizens in the twenty-first century.

The expanding list of proficiencies commonly identified by colleges and universities include: critical thinking and problem-solving; multiple modes of inquiry in the natural sciences and mathematics, social sciences, humanities, and arts; communication skills, including writing, speaking, and listening; technology and information literacy; sensitivity to diversity, including multicultural and intercultural competencies for participation in a pluralistic democracy; civic, global, and environmental responsibility and engagement; interpersonal skills, including teamwork and collaboration; self-awareness; moral and ethical reasoning, and integration of knowledge from diverse sources.

**Integration across the curriculum.** The majority of colleges and universities indicate that general education is a high priority among administrators and faculty, and their institutions are actively engaged in reviewing their general education programs. Given the difficulty of learning all the aforementioned competencies within a general education program, many institutions are blurring the boundaries between general education and the major by infusing these competencies throughout the collegiate experience. This can be seen in the adoption of upper division writing requirements and writing-intensive courses in the major; integrative capstone courses that require collaborative teamwork and projects; courses in the major that emphasize ethics and civic engagement; and the integration of technology, information literacy, and multiculturalism throughout the curriculum.

**Diversity learning.** Diversity learning is a high priority, including multicultural and intercultural understanding. Although variably defined, *diversity learning* often refers to sensitivity to difference, including race, gender, socioeconomic class, ethnicity, religion, sexual orientation, and disability. In Debra Humphreys's report of a national survey in 2000, 62 percent of reporting institutions had a diversity course requirement or were developing one; among these, 58 percent require one course and 42 percent require two or more courses. In the most common model among schools with requirements (68%), students select a course on diversity from a list of options. Increasingly multicultural perspectives are also infused throughout the curriculum, particularly in the humanities and social sciences.

**Internationalization.** Global competencies are often identified as a valued goal of liberal learning, but currently few American students develop intercultural competence during college. Four elements commonly associated with internationalization include foreign language study, study abroad, global studies, and the presence of international students. Foreign language enrollments comprise 8 percent of total enrollments, concentrated in a few languages (55% Spanish, 17% French, 8% German, 6% Asian languages, and less than 2% Middle Eastern). This is in sharp contrast to other developed countries where language study is emphasized.

Participation in study abroad is equally limited. Despite indications from incoming first-year students that they hope to study abroad, only 3 percent of American students study abroad, and increasingly they select programs shorter than a semester. Although global and intercultural courses are available, fewer than 7 percent of college students meet even basic standards for global competence. International students accounted for 3 percent of undergraduates and 11 percent of graduate students in the United States in 1998–1999. The United States enrolls more international students than any other country—most of them from Asia. American higher education is likely to increase its emphasis on global competencies in order to better prepare students to participate in global issues during the twenty-first century.

### Curriculum Coherence and Integration

In response to mounting criticism that the undergraduate curriculum is fragmented, burdened with too many isolated bits of information, and lacking coherence, institutions have developed strategies and structures to help students integrate the disparate elements of their college experiences. One strategy has been to clarify, tighten, and sequence requirements so they provide greater coherence. Requirements and prerequisites increased in the 1990s, reversing the trend toward reduced requirements during the 1970s and 1980s. A second strategy has been to provide educational experiences calibrated to the developmental learning needs of students at different stages of their collegiate lives. The most prevalent model is the first-year program, often comprising orientation programs, orientation courses, cocurricular offerings, developmental courses for underprepared students, access to academic support services, first-year seminars, courses of which many are interdisciplinary, and learning communities.

The goal of these offerings is to ease the transition from high school to college, to teach skills and attitudes to enable students to succeed in college, and to improve retention, particularly among at-risk students. K–16 collaborations also support the transition between high school and college by promoting curricular discussions between K–12 teachers and college faculty and by providing collegiate experiences to motivate younger students.

To ease the transition from college to the work world, institutions offer senior seminars and capstone experiences. These are designed to help students integrate intentionally what they have learned in their major specialization and to relate those insights to other disciplinary perspectives, the community, or the work world. Other variants include experiences designed for sophomores and keystone courses that mark the mid-collegiate transition from general education into the major, providing a supportive environment to assess student readiness to move forward.

**Learning communities.** Learning communities comprise curricular models that link courses or course work to reinforce their curricular connections, maximize opportunities for students to collaborate with each other and their instructors, and provide interpersonal support. Although often designed for first-year students, learning communities now appear throughout the curriculum. They are designed to build communities of learners, and in many cases, provide the structure to promote interdisciplinary study and integration.

**Interdisciplinarity.** Interdisciplinary studies, which are considered a major trend in teaching and research, have grown exponentially since 1990. Two widespread innovations are first-year interdisciplinary seminars and courses based on themes or problems, many of which are team-taught. Courses in new interdisciplinary fields are flourishing (e.g., neuroscience, bioengineering) as are courses in multiculturalism, often spurred by diversity requirements. Courses that apply ethics and environmentalism to professional areas, such as undergraduate nursing and engineering, reflect accreditation mandates. In addition, faculty across the disciplines use innovative pedagogies and course structures that promote integration and interdisciplinary perspectives, such as academic-service learning, multidisciplinary group work, internships, fieldwork, and study abroad.

## **Innovative Instructional Methods**

Innovative instructional methods are proliferating in higher education and are integral to curricular reform efforts. Supported by research on how students learn, instructional innovations emphasize active and experiential learning (i.e., learning by doing); inquiry, discovery, and problem-based learning; collaborative and cooperative learning in groups; writing to learn; undergraduate research; academic-service learning; and instructional technology. Although lecture and small group discussions are still the dominant instructional methods, active and collaborative learning is now commonplace in higher education. As reported by George D. Kuh in 2001, 90 percent of seniors polled in a national survey indicated that they had participated in group work in class during college.

Reform efforts in science, math, engineering, and technology (SMET) characterize the integral relationship between innovations in instructional methods and curricular reform in the last decade. In Workshop Physics, for example, lecture and lab sections are integrated. All class instruction is done through hands-on experiments and demonstrations that rely heavily on microcomputers to assist in data analysis. Students work in cooperative learning groups based on the principles of discovery-based learning, emphasizing problem-solving. Similarly, in Calculus Reform, a curricular innovation with roots in the 1980s, students work in groups to problem-solve, often using story problems that relate to the real world, geometric visualization, and instructional technology. A National Science Foundation study published in 1998 indicates that among the most important innovations in SMET since 1990 are (1) Calculus Reform; (2) undergraduate research in which students work on research projects with faculty; and (3) collaborations among institutions, business, industry, and research labs to promote student learning.

## **Assessment of Student Learning**

Widespread efforts to assess student learning are also having an impact on the undergraduate curriculum. While multiple choice tests are still widely used, new evaluation methods provide opportunities to assess and to promote higher-order critical thinking skills and the competencies now valued in higher education. Methods include self-assessments, student portfolios, student journals, case studies, simulations, poster sessions, group projects, and technolo-

gy-based innovations, among others—all of which reflect the shifts from content to competencies, from fragmentation to integration, and from passive to active modes of learning. Increasingly, assessment results are being used to improve programs and promote the ongoing process of curricular reform.

*See also:* ACADEMIC CALENDARS; ACADEMIC MAJOR, THE; CAPSTONE COURSES IN HIGHER EDUCATION; COLLEGE SEMINARS FOR FIRST-YEAR STUDENTS; GENERAL EDUCATION IN HIGHER EDUCATION.

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DEBORAH DEZURE

## NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM

During the 1980s and 1990s critics and advocates of U.S. higher education issued numerous reports calling for reform of the college and university curriculum. These reports—from individuals, panels of experts assembled by federal agencies, educational lobbying organizations, and private foundations—responded to changes in postsecondary curricula implemented in the 1960s as the baby boom generation swelled college and university enrollments; and as the civil rights movement, the women's liberation movement, and Vietnam War protests led to demands for more relevant and student-centered curricula.

As the era of economic prosperity that fueled the educational innovations of the 1960s ended, a number of social and political forces converged to produce a climate conducive to calls for reform of the undergraduate curriculum. Then the economic recession of the 1970s focused the attention of businesses, students, and parents on employment prospects for graduates and the marketability of a college degree. A downward trend in college admission test scores and related concerns about a decline in U.S. economic competitiveness resulted in calls for higher educational standards at elementary, secondary, and postsecondary levels. At the same time, a Republican administration decentralized responsibility for educational expenditures in an effort to hold the states more accountable for educational improvements, and legislators committed to cost-effectiveness trimmed allocations to higher education.

In 1983 concerns about the widespread public perception of problems in the U.S. educational sys-

tem were the impetus for the widely read report, *A Nation At Risk* (1983), issued by the National Commission on Excellence in Education. In 1981 Terrel Bell, then U.S. Secretary of Education, directed the commission to examine the quality of education in the United States. Although the commission focused primarily on high school education, selective attention was also paid to higher education, elementary education, and vocational and technical programs. The commission's findings regarding decreases in high school students' preparation for college, declines in standardized college admission test scores and college selectivity, and general concerns about the quality of elementary and secondary education raised concerns about the impact of these problems on undergraduate education. Secretary Bell, and his successor, William Bennett, encouraged further scrutiny of college and university education and prompted calls for accountability at the postsecondary level.

### An Emphasis on Curricular Content

The reports on higher education of the 1980s and 1990s often stressed the need to include specific courses or course content in postsecondary curricula, which had recently experienced a period of experimentation. Acceding to student demands for more choice of majors and elective courses, many colleges and universities in the 1960s and 1970s had relaxed requirements for the baccalaureate degree by reducing the number of required courses needed for graduation and permitting more elective courses—or by increasing the number and kinds of courses that would fulfill the requirements. Additional changes had occurred in major concentration programs, allowing students in many institutions to select from an array of courses to fulfill basic requirements or create majors based on their personal interests. Advances in knowledge and the creation of new disciplines, fields of study, and specializations also contributed significantly to changes in the college curriculum. Increased course options, increasing faculty commitment to advancing their disciplines, and growing departmental autonomy led to curricular fragmentation, while the combination of increased disciplinary specialization and student desire for degrees that would lead directly to employment created conditions conducive to the growth and diversification of postsecondary curricula.

In 1984 the National Endowment for the Humanities (NEH), under the leadership of William

Bennett, issued one of the first reports examining higher education. In *To Reclaim a Legacy: A Report on the Humanities in Higher Education*, Bennett, a former humanities professor, maintained that colleges and universities had lost a clear sense of the purpose of education. Defining the primary goal of education as learning about civilization and culture, he contended that students should study Western literature, history, and culture to obtain an understanding of the origins and development of their civilization and culture, as well as a sense of major trends in art, religion, politics, and society. Few college graduates, he argued, received adequate instruction in their own culture because faculty had succumbed to pressure for enrollments and to intellectual relativism, rather than assume “intellectual authority” for what students should learn (p. 20). Bennett also criticized faculty who taught the humanities in a “tendentious, ideological manner” that overtly valued or rejected particular social stances (p. 16). According to advocates of the Western canon such as Bennett, the push for student choice and relevance in the curriculum had backfired, leaving U.S. democracy and society in disarray.

Bennett believed that knowledge of Western civilization and culture should be fostered through careful reading of masterworks of English, American, and European literature. He also recommended that students become familiar with the history, literature, religion, and philosophy of at least one non-Western culture or civilization. Five years later, Bennett’s successor at NEH, Lynne Cheney, issued *50 Hours: A Core Curriculum for College Students*. Arguing, as did Bennett, that a common core curriculum was essential to a coherent education, Cheney proposed a required curriculum that stressed the study of Western civilization, but also included the study of additional civilizations, foreign languages, science, mathematics, and social sciences.

### **From Curricular Content to Educational Processes**

At the same time that Bennett issued *To Reclaim a Legacy*, a study group convened by the National Institute of Education (NIE) issued *Involvement in Learning: Realizing the Potential of American Higher Education* (1984). Rather than prescribe the content of the curriculum, the NIE group recommended that institutions emphasize three conditions of excellence in undergraduate education: (1) student involvement, which would result in improvements in stu-

dents’ knowledge, skills, capacity, and attitudes; (2) high expectations, which must be clearly established and communicated to students; and (3) assessment and feedback, defined as the efficient and cost-effective use of student and institutional resources to realize improvements.

Whereas the reports of Bennett and Cheney emphasized improvements in programs of study and the quality of teaching, *Involvement in Learning* focused primarily on students and their learning. The report urged faculty and chief academic officers to agree upon and disseminate a statement of the knowledge, skills, and attitudes required for graduation, and to systematically assess whether expectations for student learning were met. It contended that individualized and integrated education, learning communities, and the use of active rather than passive instructional processes would foster greater student involvement. Finally, *Involvement in Learning* called upon undergraduate colleges to expand liberal education requirements to two full years of study, and urged graduate schools to require applicants to have a broad undergraduate education to balance their specialized training.

Higher education associations and other concerned parties issued responses to these federally sponsored calls for reform. All accepted the need to improve liberal or general education and decried the perceived erosion of curricular quality. In 1985 the Association of American Colleges (AAC) published *Integrity in the College Curriculum: A Report to the Academic Community*, which described the work of the AAC Project on Redefining the Meaning and Purpose of a Baccalaureate Degree. The AAC committee responsible for the report argued that contemporary students were less well prepared for collegiate study, were more vocationally oriented, and were more materialistic than those in previous generations. The baccalaureate credential, the committee argued, had become more important than the course of study, and colleges and universities had surrendered to the demands of the marketplace rather than developing creative approaches to a changing environment. The report also chided faculty for abdicating their corporate responsibility for the undergraduate curriculum.

In *Integrity in the College Curriculum*, the AAC claimed that faculty were “more confident about the length of a college education than its content and purpose” and that the major in most institutions was little more than “a gathering of courses taken in

one department” (p. 2). The committee identified nine content-related experiences that constitute a “minimum required curriculum.” This set of experiences, intended to provide students with the general knowledge, behaviors, and attitudes needed by citizens and workers in the contemporary world, consists of: (1) inquiry (abstract logical thinking and critical analysis); (2) literacy (writing, reading, speaking, and listening skills); (3) understanding numerical data; (4) historical consciousness; (5) the sciences; (6) values; (7) art; (8) international and multicultural experiences; and (9) study in depth (one’s major specialization). The AAC urged faculty to take responsibility for designing educational experiences that provided students with a “vision of the good life, a life of responsible citizenship and human decency” (p. 6). The committee also recommended that educational programs help students see the connections among domains of knowledge as well as connections among areas of study, life, and work.

The critique and recommendations that Ernest Boyer, president of the Carnegie Foundation, offered in *College: The Undergraduate Experience in America* (1987), greatly resemble those of *Integrity in the College Curriculum*. Boyer noted eight points of tension in the curriculum, including the curriculum itself, the conditions of teaching and learning, and the priorities of the faculty. Boyer argued that vocationalism, intense departmentalism among faculty, the fragmentation of knowledge, and the loss of cultural commonalities and coherence in general, had weakened the undergraduate curriculum.

Boyer asserted that colleges should develop students’ proficiencies in reading, writing, and composition, as well as their capacity for social and civic engagement. He recommended a set of general education objectives that emphasized seven areas of inquiry: language, art, heritage, society, nature, ecology, work, and identity. Boyer urged educators to stress the connections among these discipline-driven areas of inquiry, to relate knowledge to life experiences, and to emphasize the application of knowledge beyond college. He discussed the undergraduate major as well, arguing that such specializations should have both an identifiable intellectual content and the capacity to enlarge students’ visions of the world. Boyer believed that a coherent educational experience would help students develop as individuals, and would also foster a community of learners.

An emphasis on the quality of student learning experiences in reports issued by AAC, the Carnegie Foundation, and others replaced the focus on programs and good teaching common to the NEH reports. In *College*, Boyer reasserted the NIE’s call for greater student involvement in learning and urged faculty to incorporate active learning techniques in their classrooms. Both Boyer and the AAC included discussions, small group and collaborative projects, out-of-class assignments, and undergraduate research among the active learning strategies that faculty should employ to engage students in the educational process and to convince them to take greater responsibility for their learning. In 1988, in *A New Vitality for General Education*, a second AAC task force summarized the increasingly shared sentiment that what was taught was likely less important than how it was taught.

The task force responsible for *A New Vitality* asked faculty to engage students not only as active learners, but to see them as co-inquirers who must become reflective about their own learning. The task group noted that rather than simply suggesting useful teaching techniques, it was redefining teaching: “We propose approaches that make it possible for us to find out not just what our students learn but how they learn it and what motivates them. Informing students about the purposes of our courses and program, obtaining sophisticated feedback from them, and collaborating with them are indispensable activities under this expanded definition of teaching” (p. 39).

### **Continuing Scrutiny of General Education and the Major**

Where *Integrity* spotlighted the undergraduate course of study in general, *A New Vitality* examined the rationale, purposes, and scope of general education, as well as issues of implementation. The report eschewed both normative proposals like those of the NEH and the typical distribution requirement system that “sidestepped” important debates about the content of the curriculum and instead offered “a conglomerate of courses conceived along specialized disciplinary lines” (p. 48). *A New Vitality* argued that general education programs should develop specific competencies and abilities in students, and that these competencies (e.g., critical thinking, problem solving, inquiry in writing) must be grounded in content. The question of what content was suitable for all students, the task group acknowledged,

was complicated by the diversity of the student body, which differed by “age, race, sex, social and economic background, abilities, attitudes, ambitions, and goals” (p. 6).

The task group proposed a broad plan for improving general education that included integrating general education throughout the undergraduate years, improving student advising, involving commuter students and improving residential life on campuses, expanding cross-cultural experiences, creating cross-disciplinary seminars for faculty and students, and organizing campus think tanks to explore the issues of undergraduate and general education. The report also called for student involvement in the assessment of general education, and of administrative support for creative efforts toward improvement of general education programs.

The AAC issued a second report on general education in 1994, titled *Strong Foundations: Twelve Principles for Effective General Education Programs*. This report was based on the experiences of seventeen institutions that had revised their general education curricula. Claiming that flawed conceptions of general education as breadth requirements that merely exposed students to different fields of study needed to be replaced with a new understanding, the report outlined twelve principles focused on communicating the value of general education and fostering support for it among students, faculty, and administration.

Concerns about course requirements and the proper content of general education curricula, however, continued. In 1996 the National Association of Scholars (NAS), a group known for conservative educational ideals, published *The Dissolution of General Education: 1914–1993*. Based on a study of fifty elite colleges and universities, the report claimed that since 1964, many of the required basic survey courses that taught students about the historical, cultural, political, and scientific foundations of their society had been purged from the curriculum. Course requirements in foreign languages, the sciences, mathematics, history, literature, and philosophy were reduced or virtually eliminated, and students now chose courses from broad and formless distribution categories. As a result of decreases in general education requirements, students were not learning a common core of knowledge.

Another AAC task force focused specifically on the undergraduate major (or study-in-depth). *The*

*Challenge of Connecting Learning* (1991) presented the results of a three-year review of liberal arts and sciences majors in the context of liberal education. Members of the AAC national advisory committee developed a set of organizing principles that guided the work of disciplinary task forces appointed by twelve participating learned societies. In its charge to the task forces, the committee asked the learned societies to address (1) faculty responsibility for shaping major programs; (2) organizing principles for study-in-depth; (3) processes for integrating learning; and (4) relations between the major and other parts of the undergraduate curriculum. Students, the committee contended, had a right to expect coherent and integrated curricula that addressed and encouraged relationships among subjects of study. *Integrity in the College Curriculum* urged faculty to help students develop critical perspectives on what they studied and to aid them in connecting what they learned to their lives and to the world of work. Finally, the committee appealed to faculty to create more inclusive communities of learners by reducing barriers to underrepresented students. Abridged reports of the twelve individual task forces were published in *Reports from the Fields* (1991).

In 1988 a report of the Professional Preparation Network, *Strengthening the Ties That Bind: Integrating Undergraduate Liberal and Professional Study*, argued that educators could use different plans to achieve similar purposes. A national task force of instructors from liberal arts and professional fields identified ten student outcomes that were common to both professional and liberal arts education, as well as specific outcomes unique to either type of program. The authors hoped that recognition of common purposes might ease tension in the debate between liberal and professional education and provide opportunities to develop proposals for integration.

### **General Commentaries on the State of Higher Education**

A few reports of this era examined higher education in general rather than the undergraduate curriculum specifically, and these reports often included some recommendations for curricular reform. A 1985 Carnegie Foundation Special Report, *Higher Education and the American Resurgence*, argued that education was essential to the advancement of key national interests. To ensure political, economic, and social health and progress, higher education

must produce individuals who can think creatively and act with conviction and concern. A coherent general education program would educate students for civic responsibility. To develop graduates who would think creatively and act responsibly, the report advocated active learning in the classroom and experiences in public service.

In *To Secure the Blessings of Liberty* (1986), the National Commission on the Role and Future of State Colleges and Universities expressed similar concerns about a constellation of social, political, economic, and educational conditions. According to this report, high dropout rates, poor achievement of underrepresented minority students, adult illiteracy, and the growth of the U.S. underclass jeopardized American society. Thus, the report recommended the integration of experiential and service learning into the undergraduate curriculum in order to expand knowledge about the workplace, cultivate a commitment to the public good, develop students' international perspectives and communications skills through the study of foreign languages and cultures, and improve graduates' abilities to understand science and technology so they could contribute knowledgeably to public discussions. The commission also urged state institutions to provide remedial education.

In 1986 the Education Commission of the States, in an attempt to identify how the states might effectively support improvements in postsecondary education, published *Transforming the State Role in Undergraduate Education: Time for a Different View*. Noting the challenges facing higher education (including student preparation for a changing society and workforce, diversity, and student involvement), the report recommended student assessment at all levels. The National Governors Association, in its 1986 report, *Time for Results*, also considered assessment a key to improving undergraduate education, arguing that assessment results should not only be used for improvement but also shared with the public. The recommendations on assessment in *To Secure the Blessings of Liberty* were more cautious, with the authors advising that assessment be used primarily to enhance program quality rather than as a means to ensure accountability.

In January 1993 four leading private foundations convened a working group to examine the question of what society needed from higher education. The resulting report, *An American Imperative: Higher Expectations for Higher Education*, echoed

concerns about student dropout rates, low educational standards, and credentialing: "The simple fact is that some faculties and institutions certify for graduation too many students who cannot read and write very well, too many whose intellectual depth and breadth are unimpressive, and too many whose skills are inadequate in the face of the demands of contemporary life" (Wingspread Group on Higher Education, p. 1). The report challenged higher education institutions to model the values they taught, to offer students' education opportunities to experience and reflect on their society, and to include moral and spiritual development among their goals. Furthermore, institutions needed to recommit themselves to student learning by setting higher expectations for learning and by effectively helping students to meet those expectations. Finally, the report urged institutions to align education with the personal, civic, and workplace needs of the twenty-first century. Many of the specific recommendations of the report focused on setting, communicating, and assessing goals and expectations.

The higher education community has responded in different ways to these various reports. Some colleges and universities have used the reports to stimulate discussion about the curriculum on their campuses, while a number of campuses have revised their major and general education programs. It is unclear, however, which of these actions were directly attributable to the calls for reform. The reports also had their critics. Feminists and pluralists disagreed with the NEH recommendations for assuming that a canon of works that all students should study could be identified, and for insisting on a Western humanities curriculum that excluded ideas from individuals of different classes, ethnicities, nationalities, faiths, and gender. Others challenged the ideas that students should passively accept tradition and that liberal education truly served society. For example, Daniel Rossides (1987) claimed that liberal education masked a conservative social agenda focused on preserving the self-interest and power of social elites. According to Rossides, the humanities were no longer relevant because the world they interpreted had disappeared.

*See also:* ACADEMIC MAJOR, THE; CURRICULUM, HIGHER EDUCATION, *subentry on* TRADITIONAL AND CONTEMPORARY PERSPECTIVES; GENERAL EDUCATION IN HIGHER EDUCATION.

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## TRADITIONAL AND CONTEMPORARY PERSPECTIVES

The term *curriculum* has been associated with academic study and training in higher education since its appearance in vernacular English in the sixteenth century. At several points in its history, the term not only defined an identifiable course or plan of study in a university context, it also referred to the corollary body of scholars engaged in that coursework. As such, curricula refer to both an individual and collective learning experience. In common terminology, a curriculum vitae (literally, the course of one's life) is the accepted form of an academic resume, a brief account of a scholar's education and career.

In the United States, the curriculum designated the form and content of baccalaureate experience in early American colleges beginning with Harvard College in 1636. Because the term lent itself readily to documents in both English and Latin, university administrators and faculty used it frequently, and it appears consistently throughout seventeenth- and eighteenth-century sources. As institutions of higher education expanded rapidly throughout the period preceding the Civil War, the essential curricula forming the core of their instruction continued to

follow the academic inheritance of the classical Greek schools and medieval European universities. The quadrivium—the “higher” arts of arithmetic, geometry, astronomy, and music—fortified more basic instruction in the trivium: grammar, rhetoric, and logic. As early American universities matured, national and institutional leaders influenced curricula and advanced new ideas concerning university philosophy and purpose, especially as land-grant institutions and state universities were founded across the country in the nineteenth century. Academic course offerings in higher education typically reflected both federally recognized and funded curricula along with more localized learning needs. In this respect, curricula continue to serve functions recognizable in higher education today.

While most modern academic departments can trace their roots to the historic plans of study described in the quadrivium and trivium, more recent developments reflect the increasing specialization of academic and administrative systems within institutions of higher education in the United States. In the twentieth century, most societal institutions invoked rational principles and a scientific method of development. Just as the Industrial Revolution fueled technological advances in the nineteenth century, technological revolutions have propelled the form and function of educational institutions. In the latter half of the twentieth century, increasing percentages of the adult population in the United States enrolled in increasingly diverse types of colleges, universities, and vocational programs. The national demographic of education has shifted, and the curriculum in higher education has responded to and reflected changing political, socioeconomic, and cultural dynamics. Growing recognition of professional fields and the attendant expansion of professional education has also fostered curricular adaptation and evolution. As these developments have changed expectations for higher education, they have also transformed perspectives on the meaning and development of curricula.

### **Reflecting on Curriculum in Higher Education in the United States**

Curriculum enables people to make sense of our lives and the world around them. Individuals use curriculum with varying degrees of intentionality to interpret events, to deepen their understanding of what they learn and who they are as learners, and to create a shared experience for teaching and learning.

In simplest terms, any curriculum presents an academic plan, a designed progression of coursework framing a student’s experience in higher education. Certain curricula or designed plans mandate more rigidity and more refined coursework for the student, but minimum undergraduate requirements commonly include these emphases: inquiry and critical thinking; enhanced literacy; numerical comprehension; historical consciousness; scientific, ethical, and artistic pursuits; some kind of international or multicultural experience; and in-depth study in the student’s chosen topic or field.

Consonant with emerging conceptions of curriculum, contemporary perspectives on the curriculum in higher education in the United States consider the necessity of such academic plans and planning as representative of both educational and social experience, as a way of being in, understanding, and assessing a constantly changing world. In turn, researchers and practitioners alike are focusing on learning experiences in general and shared learning experiences in particular. Researchers in curricular studies regularly engage sociological, historical, cultural, psychological, and pedagogical issues in quantitative and qualitative inquiries. Increasing emphasis has been placed on measuring the outcomes of curricular design and implementation, measurements that help students and teachers alike determine the efficacy of curricula, the students’ balance between a breadth of knowledge and depth in training, and the continuity of learning and experience.

### **Developing Shared Learning Experiences: Recurring and Emerging Models of Curricula**

Several theorists have described the design, organization, and delivery of curricula in higher education, and scholars and practitioners from all disciplines have suggested approaches to curricular planning. Many of these approaches are anchored in the rationalist tradition underpinning institutions of higher education in the United States and offer rational models to guide contemporary curricular planning.

Ralph Tyler, arguably the first commentator on postsecondary curricula in the United States, published *Basic Principles of Curriculum and Instruction* in 1949. He posited four essential questions that could be used to structure knowledge in educational contexts: (1) What purpose shall the curriculum serve? (2) What experiences should the institution and its faculty provide to meet these expressed pur-

poses? (3) How might the curriculum be organized most effectively? (4) How can one best determine the outcomes of learning—the purposes and attainment of the curriculum?

In her 1962 book *Curriculum Development: Theory and Practice*, Hilda Taba provided, in essence, the first manual for curricular planning for a generation of college and university leaders. Taba furthered Tyler's essential questions by arguing that a change in the curriculum signals a change in the institution and charges teachers to play an active role in establishing goals and objectives for learning. Taba introduced a seven-step model for developing curriculum, and her efforts to create an orderly process spurred educational scholars to develop additional models and approaches.

Paul Dressel (1968) and Clifton Conrad (1978) advanced rational approaches that acknowledged Tyler's and Taba's seminal works but provided a more modern perspective on topics such as decision-making strategies, political influence, and the role of stakeholders in the curricular planning process. In the early 1980s, William H. Bergquist and his colleagues described eight curricular models that encompassed all undergraduate experience in the United States, models that described knowledge structured according to institutional mission and purpose: thematic, competency, career, experience, student, values, future, and heritage. Since the publication of their 1981 book *Designing Undergraduate Education*, other leading curricular scholars have refined and revealed diagnostic and formulaic assessments drawing upon the taxonomy of Bergquist and his colleagues and the curricular dimensions, or elements, essential to organizing curriculum. In a 1983 article Conrad and Anne M. Pratt examined these elements and introduced a model that considered inputs or curricular design variables that influence the process. Joan S. Stark and Lisa R. Lattuca, authors of the 1997 book *Shaping the College Curriculum: Academic Plans in Action*, also considered influences upon the planning process, in particular the characteristics of academic disciplines. They revisited the idea of curriculum as an academic plan and suggested that this can be used to develop a course, a program, or even a comprehensive college curriculum.

Since the 1980s several curricular scholars, including Kenneth A. Bruffee, William G. Tierney, Jennifer Grant Haworth, and Conrad, have advanced a perspective that acknowledges students as active participants in determining and assessing

their learning experiences in higher education. Their work, along with that of Marcia Baxter Magolda, Marcia Mentkowski, and Becky Ropers-Huilman, marks a departure from traditional, rational approaches and embraces the view that curriculum is more than a static plan created by faculty to direct the academic progress of students. These scholars contend that curriculum is socially constructed and, as such, reflects the engagement of students, teachers, administrators, and other stakeholders. This perspective is attracting renewed attention as enrollment and hiring patterns continue to shift in higher education. College and university students embody the most culturally diverse segment of the national population in the history of the United States, and they will inherit a complex of social, political, economic, and environmental problems. While the composition of student enrollment has changed, so has the number of students. In the early twenty-first century some 70 percent of high school graduates in the United States matriculated in some form of higher education, and educators have pointed to the need for the curriculum to address more holistically a learner's lifelong experience and the profound variation characterizing these experiences.

### Emerging Challenges in Creating Shared Experiences

Arguably the most significant opportunity for leaders of learning communities will be to create enriching shared experiences in healthy tension with diverse individual needs and interests. Existing and emergent perspectives on learning and curricular design, however, are not value-neutral and have engendered unprecedented competition and conflict. Fewer and fewer curricula, too, accommodate comprehensive training for individual learning styles and needs; national trends reflect increasing specialization and fragmentation of subject matter and methodology. Those who wish to create shared learning experiences will face challenges from within and beyond academe, challenges that ask people to understand their roles as teachers and learners, incorporate multiple perspectives on curricular content, and reconsider established curricular features including general education, the liberal arts, and the academic major.

**Incorporating multiple perspectives on curricular content.** Like any other aspect of an educational institution, the curriculum responds to external and internal forces and reflects the identity, assumptions,

and perspectives of decision makers affecting it. Curricular development and practice are not apolitical processes, nor are they static. A flurry of publications in the national media in the early 1980s testified to the importance of curricula in higher education; not only was the curriculum seen as an academic construct, it was also understood to be the repository of cultures, both national and multinational, and the historic medium for the transmission of cultural themes. The conflict of the so-called Culture Wars at the center of the discourse over educational missions and curricula in the 1980s and 1990s reflected a larger and longer shift in the national demographic of education. As more and more women and minorities matriculated in institutions of higher education, the curricula available to them as learners broadened as a result of this development. Some educational leaders and programs balked at more inclusive measures to redesign the curriculum, but the resurgent interest in control of curricula clearly signaled that what students read, and who decides what they will be reading, still shapes the national conversation about higher education and its purpose. Unlike any other single feature of an educational institution, the curriculum represents the core values and shared beliefs of communities. Developing shared learning experiences, then, requires that educational leaders invite and engage the values and beliefs of not one, but many communities.

#### **Balancing the individual and collective experience.**

Curriculum is the rational conversation between learner and coursework in higher education. It is the students' experience, on any given campus, of any given course; each syllabus represents one sequential or supporting piece of evidence that students have indeed engaged the institution. Curricula are as distinct as learners, and more differentiated than ever before in the history of education, in terms of guiding framework, applications and practices, and enrollments. Just as the term was used to imply both direction and pace in its original context in Latin, curriculum, much like a river, follows both a recognizably fluid and formed course.

In the United States, people in the twenty-first century will likely change careers and jobs several times in the course of their productive years. As the nature of employment changes within society, educational goals likewise shift. Curricula serve as an important measure of learning and student achievement within a shifting landscape, so any institutional assessment of curriculum should provide compel-

ling answers to increasingly demanding questions and needs of the society, the state agencies funding higher education, and the individual learners and participants themselves.

**Understanding general education as the formed course.** In the typical college and university setting, general education courses structure the core instruction that is provided by and required by the institution, and these courses usually occupy the first two years of coursework, regardless of a student's designated or intended field of study. These courses stress skills rather than specialized intellectual training, and they are usually designed to overlook disciplinary boundaries, to articulate and expand the implications of knowledge for students. Educators have long agreed that the integration of general requirements within curricula should repeatedly emphasize learning how to learn, the common process by which each individual student integrates their advancing knowledge and skills. Students must be able to meaningfully relate their classroom experiences and the insights they gain in less structured environments. Likewise, general education courses, or core requirements, at most institutions of higher education are designed to evoke the analytical and interpretive sensibilities of scholars and of learning communities, while also providing broader frames of reference for students.

The purpose of general education requirements is to provide coherence and unity in an otherwise specialized undergraduate experience, and to promote the social and intellectual integration of the students enrolled in these courses. Many university leaders have also argued that general education requirements provide students with readily accessible strategies for discerning truth, knowledge, and insight, that is, developing the most general and most useful skills and habits of the mind.

General education requirements are intended to provide a common experience but critics contend that such requirements cannot resolve the problems created by fragmentation and specialization. General education must be considered in concert with liberal and disciplinary studies in order to create meaningful, shared learning experiences.

#### **Recognizing liberal arts as a tradition of fluidity.**

In historical consideration of higher education, the liberal arts have formed a core curriculum since the formation of medieval universities in Europe, and they comprise a tradition of intellectual training that

transferred to most American universities. In theory, a liberal education affords educational experience that encourages and sustains lifelong learning—an education defined not necessarily by specific knowledge, as Paul L. Dressel explained in 1968, but instead by the ways in which individuals think and behave. In practice, the curricula of liberal arts balances innovative and imitative subject matter for undergraduates, generating a breadth of knowledge and depth of insight in the course of required readings. The historical emphasis of the liberal arts is tangible and includes the essential courses listed in the quadrivium and trivium; in modern institutions of higher education, however, the subject matter, pedagogy, and consequential learning of a liberal education typically orient students to the broad array of disciplines represented in the humanities in the evolved curriculum of medieval universities. A liberal arts curriculum asserts that certain texts have been proven historically to be most instructive to think with, although all texts might be useful to think about. In closer reading of these selected texts—the canon—learners engage in elemental inquiry, gaining insights into the nature and meaning of life, human purpose and ethos, and societal organization and improvement.

Leading theorists of liberal curricula have suggested that such an education improves students' cultural awareness and supports the education mission with an identifiable moral agency that affords students an appreciation of wisdom gained in the past. The emphasis is on knowledge as its own end—that learning is valuable for its own sake, and that learners engaged in learning on such levels inherently contribute in service to their communities, in the solution of complex problems, or in the creation of more informed public policies.

**Understanding the purpose of the academic major.** Under the influence of eighteenth- and nineteenth-century European university models, specific academic fields of study began to appear in the United States in the twentieth century, and since the 1950s, majors have become the standard units of curricular organization, the most obvious identifying feature of any student's coursework. Faculty and scholars affiliated with institutions of higher education have rearranged and aligned themselves according to subject matter and specialized areas of interest and research; departments have relocated themselves within institutions in more segmented and narrowly defined components. Learners are asked to organize

and align their own interests and coursework according to these educational constructs. The dominant scientific paradigm mandates increasingly refined focus in order to further inquiry and specify useful study. Rapidly expanding numbers of departments, majors, minors, and subspecialties have occurred throughout American higher education since the 1970s. Recognizably interdisciplinary fields of study (such as the liberal arts) have subsequently receded. This, some critics charge, has encouraged an overemphasis on specialization and denies students the opportunity for a liberal education.

*See also:* ACADEMIC MAJOR, THE; CURRICULUM, HIGHER EDUCATION, *subentry on* NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM; GENERAL EDUCATION IN HIGHER EDUCATION.

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## CURRICULUM, INTERNATIONAL

The field of curriculum studies is cluttered by an array of dissimilar definitions of the term *curriculum*. In empirical studies, definitions of curriculum run the gamut from those that would have the term signify everything that takes place in a classroom to others that restrict its meaning to only the topics that are defined as instructional requirements in the official policy of an educational system. There are also those that limit the definition of curriculum to only those topics actually taught by teachers.

In 1979, during the development of the Second International Mathematics Study (SIMS) conducted under the auspices of the International Association for the Evaluation of Educational Achievement (IEA), Curtis C. McKnight proposed a model that subdivides the curriculum into three components: the intended, the implemented, and the attained (see Figure 1). The intended curriculum is understood to be what an official educational agency (most often a ministry, secretariat, or other national or subnational agency responsible for guiding and articulating the educational intent of a system) expects to be taught or holds as learning goals in its educational system. The intended curriculum is thus distinguishable from both the implemented curriculum—the instructional implementation of the intended curriculum—which is therefore embodied in classroom instruction, and the attained curriculum. The at-

tained curriculum is understood to be the skills, knowledge, and dispositions that students effectively acquire as a result of their schooling. This model subdivides the curriculum for purposes of analysis, and the different levels are not considered wholly independent. This discussion makes use of this model, focusing primarily on the intended curriculum.

The intended curriculum acquired special prominence in educational policy in the latter half of the twentieth century. Many of the world's educational systems experienced a shift of focus in education policies during that period. Whereas the stress had traditionally fallen on improving material investments and guaranteeing universal access to public education, the 1980s and 1990s brought a stronger emphasis on the conceptual understandings, procedural knowledge, and other academic objectives to be met by all students in primary and secondary education—and thus a renewed interest in the intended curriculum as a critical policy instrument. The movement toward the development of educational standards in many educational systems reflects this emphasis on the quality of the content of the intended curriculum, as policymakers and educational leaders have favored the development of official curricula and a variety of implementation tools in order to ensure the delivery and attainment of socially significant disciplinary content. Most new curricula stipulate the acquisition of higher-order knowledge by all students, and such prescription tends to be informed by the type and amount of knowledge that is perceived to be critical for students to function effectively in society and in the economy.

A considerable body of work has been contributed to support the use of educational policy programs focused on the quality of the content of schooling in what has been termed content-driven systemic reform. It is stated that ambitious curriculum intentions must be formulated and subsequently appropriate mechanisms must be designed to implement these curricula so that students have the opportunity to attain high levels of achievement. Content-driven reform holds that a core specification of curriculum goals provides the basis for setting up a policy structure designed to enhance the achievement of pupils. Thus, the intended curriculum is intended to directly influence teacher training and certification, school course offerings, instructional resources, and systems of accountability.

Curriculum reform policy, as espoused in these reform theories, assigns to standards documents, curriculum guides, frameworks, programs of study, and the like a primary role in defining potential educational experiences. They are intended to help shape goals and expectations for learning. These visions are anticipated to guide the experiences of students in classrooms.

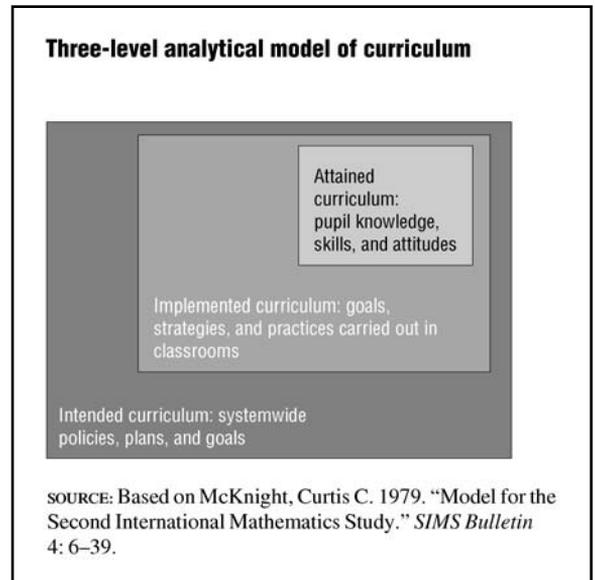
Certainly high expectations concerning the role of policies regarding curriculum intentions have been held in many countries. In a survey of thirty-eight nations conducted as a part of the Third International Mathematics and Science Study (TIMSS) the majority reported a number of reforms and managed changes in the content, pedagogy, and technology prescribed in national curriculum policy for school mathematics and science.

### Authority and Function

At the time TIMSS curriculum data were collected (1990–1992), curriculum guides published by national or subnational governmental bodies existed in all TIMSS countries with the exception of Iran. The guides all carried some degree of official status, although status and authority varied among countries and occasionally within a country in the case of subnational or regional guides. The significance of these documents varied substantially by country. Curriculum guides in Australia, for example, had titles such as “Course Advice,” whereas in Japan they were known as “National Courses of Study” and in Norway as “Curriculum Guidelines.” These diverse titles suggest different statuses and functions. Some guides specified the courses of study for which teachers were responsible. Others specified how teachers might pursue their goals and what types of instructional methods and assessment strategies might be appropriate. Still others left most implementation details to teachers and attempted to achieve their purpose solely by stating shared objectives.

These documents that set forth the intended curriculum for entire educational systems varied in the type of strategic elements they used to present policy and shape its enactment. Specifically, some strategic elements were more prescriptive than others were; they stated policies, formal objectives for instruction, and so on. Other elements were more facilitative; they included such information as suggested strategies for teachers, examples, and assessment ideas. The TIMSS analysis of intended curricula, however, revealed that there was a high

**FIGURE 1**



level of cross-national agreement on the use of a prescriptive approach to setting forth curriculum policy. Most countries favored the prescription of specific policies, objectives, goals, and contents in their curriculum guides, over the use of material that facilitated implementation through the suggestion of appropriate pedagogy, the use of exemplars of particular curriculum elements, or recommendations regarding appropriate ways to assess whether or not goals have been reached. In fact, the countries that exhibited the highest levels of mean student achievement on the TIMSS mathematics and science tests commonly had intended curricula with the heaviest reliance on the prescription of an inventory of skills and contents to be mastered by pupils, grade by grade, throughout primary and secondary schooling. Policy instruments balancing facilitative and prescriptive approaches were rare. This finding, coupled with earlier secondary analysis of SIMS data—which found that countries with the mostly highly centralized forms of curriculum policy structures were the most effective ones in guaranteeing the enactment of a given intended curriculum—provided evidence contradictory to policies intended to promote decentralized decision-making regarding educational goals or standards.

### Curriculum and Globalization

A particularly vexing problem for educational policymakers advocating content-driven reform has been the increasingly international character of dis-

cussions on the intended curriculum. Curriculum experts, professional associations, and policymakers became concerned with how standards defined in their own country compared to those in other countries, especially the countries they regarded as their most important economic competitors. Most traditional cross-national research provided little guidance here, as three associated theoretical-methodological perspectives largely guided it. A large amount of theoretical work was done in the 1970s, and this work largely concentrated on the structure of social and economic relationships that curricula were thought to promote or reproduce. This aspect of the intended curriculum was often termed the “hidden” curriculum, and many theoreticians in the Marxist tradition devoted their attention to describing its nature and its function in perpetuating the class struggle in the world’s most developed capitalist economies. Other theorists used dependency theory, another variant of the Marxist tradition that arose mostly from work done in political economy and economic history in Latin America and Africa, to develop accounts of the imposition of dominant models of schooling on nations of the economic and social periphery. These authors affirmed that the propagation of curricula from the great economic metropolises to the periphery was a particular instance of cultural domination within the framework of an international division of labor. A third tradition, largely influenced by “world systems” theories, studied aspects of curriculum associated with the worldwide expansion of enrollments in schooling. Theorists within this tradition argued that since the 1950s the “Western” model of schooling has spread throughout the world as part of a pervasive phenomenon of the emergence of an increasingly integrated world economic and social system. This was considered to have resulted, for example, in virtually all of the world’s educational systems according similar importance to mathematics and science education in their curricula.

But what of policymakers and curriculum designers who wished to find information to guide their efforts in promoting educational opportunities that would enhance national economic competitiveness? Increasingly, regardless of their specific economic circumstances, many countries developed a consensus in according much importance to prescribing rigorous curricula in academic disciplines, despite a paucity of strong empirical evidence at the time connecting achievement in these disciplines

with economic benefits (subsequently some evidence was advanced in the early 1990s that the character of mathematics courses taken in secondary school affects mean individual income levels, and that increases in hours allocated to elementary instruction in the sciences is associated with increases in national standards of living). Despite the apparent international consensus on the value of teaching mathematics and the sciences, for example, there was clearly considerable cross-national variation in the specific topics that were taught as part of these disciplines and the specific sets of skills and dispositions that were promoted in regard to these topics.

Interest groups in education across the world, such as governments, the business community, professional associations of educators, and many others, began to be concerned with the idea of “world-class standards” and were preoccupied with formulating rigorous and meaningful intended curricula that compare favorably with that elusive standard. But what precisely are “world-class” standards? What expectations do, for example, high-achieving countries have regarding essential knowledge and skills that children must acquire in order to meet the goals held for them by the educational system? As the attention to the intended curriculum increased among educational leaders and policymakers, it thus occasioned an increased interest in the possible educational application of another instrument that—like the idea of “standards” themselves—arose from modern business management strategies: international benchmarking.

**Benchmarking.** Benchmarking originated in efforts of business firms to identify external points of reference for their business practices in order to achieve continuous improvement. As such, the selection of the “point of reference” is central to determining how benchmarking studies can be used. From the perspective of educational systems, this choice is in effect a selection of the school systems from which they would like to learn. As the concern regarding the “international competitiveness” of intended curricula and the interest in benchmarking has increased, consequently so has interest in cross-national studies of student achievement. These have become of critical importance to policymakers, which explains the high levels of participation in the original TIMSS in the 1990s—and in subsequent endeavors conducted, most notably by the Organisation for Economic Co-operation and Development

(the Programme for International Student Assessment—PISA) and the IEA (through the continuation of TIMSS by way of the Trends in Mathematics and Science Study and PIRLS—Progress in International Reading Literacy Study).

The first published reports from the original TIMSS constituted important milestones in curriculum studies. In a pair of companion volumes the U.S. TIMSS research team used the first large-scale cross-national empirical study of the intended curriculum (termed the TIMSS Curriculum Analysis) to identify those curricular standards that are most common to TIMSS countries. These standards were then compared to standards in specific countries—beginning with the United States. Interest in cross-national benchmarking was acute given that on the one hand, a national policy objective was for U.S. schoolchildren to be “first in the world” in mathematics and science—and on the other hand, mean student performance on the TIMSS assessment at the close of the twentieth century proved the nation to be quite distant from that objective. Prior to the TIMSS curriculum analysis, no comprehensive effort to empirically measure and specify intended curricula using a large sample of countries and representative samples of curricular materials had ever been attempted.

These studies uncovered notable differences between the intended curricula of countries exhibiting high levels of mean student achievement in mathematics and science and that of countries with lower mean achievement levels. Focusing on the exhaustive characterization of the disciplinary content and expectations for student performance contained in standards documents and student textbooks, these studies resulted in findings with important implications for the development of curriculum policy.

These findings point to a variety of elements common among most high-achieving countries that are not shared by most low-achieving countries. They make up what appears to be necessary, but not sufficient, conditions for the realization of higher achievement for larger numbers of schoolchildren.

A number of low-achieving countries in the TIMSS had curricula that emphasized the coverage of long lists of topics. Conversely, highest achieving countries intended the teaching and learning of a more focused set of basic contents, to be explored in depth and mastered. The unfocused curriculum of

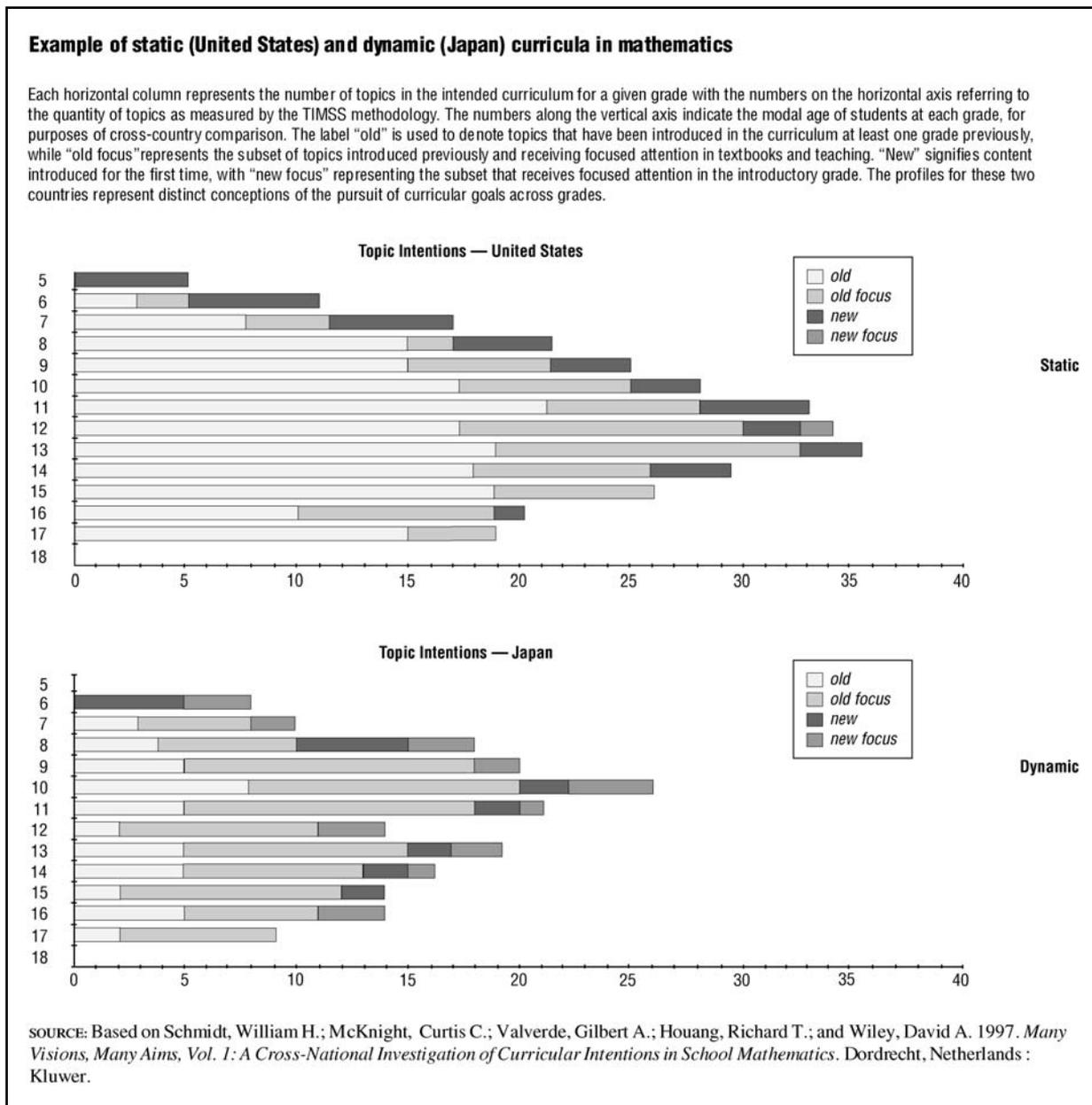
broad-ranging lists of topics to be covered is also typically a curriculum of very little coherence. TIMSS studies reveal that attempting to cover a large number of topics results in textbooks, and teaching methods, that are disjointed and episodic. That is, textbooks and teachers present items from the long lists of topics prescribed by these curricula one after the other, in an attempt to cover them all before the school year runs out with little or no effort invested in exploring the relationships between these topics or in fundamental unifying ideas or themes. Loss of these relationships between ideas appears to encourage students to regard these disciplines as no more than a series of disconnected notions that they are unable to conceive of as belonging to a disciplinary whole.

**Learning goals.** These benchmarking studies also reveal important differences in how school systems define learning goals. In a number of low-achieving countries—with the most relevant example being the United States—there is an extremely static definition of fundamental goals. That is, goals that are deemed fundamental (often termed “the basics”) are considered to be fundamental throughout schooling, requiring repetition in many grades. Arithmetic, for example, is a set of contents and skills prominent in curricula throughout the years of compulsory schooling. Even in eighth grade, when most high-achieving TIMSS countries concentrate their curricular focus on algebra and geometry, arithmetic is a major part of schooling in the United States.

In high-achieving nations, when goals first enter the curriculum they receive concentrated attention with the expectation that they can be mastered and that students can be prepared to attain a new set of different priority goals in ensuing grades. Focused curricula are the motor of a dynamic definition of curricular objectives. In most of the highest achieving countries, each new grade sees a new set of curricular goals receiving concentrated attention to prepare for and build toward mastering more challenging goals yet to come.

The consequence of lack of focus and coherence, and the static approach to defining what is basic, is that these types of curricula are undemanding compared to those of other countries. Materials intended for students in these countries cover a large array of topics, most of which are first introduced in the elementary grades. This cursory treatment does not include much more than the learning of algo-

FIGURE 2



arithms and simple facts. Demanding standards appear to require more sophisticated content taught in depth, as students progress through the grades. Rigorous standards are a result of a dynamic process of focused and coherent transitions from more simple to increasingly more complex content and skills. Figure 2 presents an illustration of the contrast between the static curriculum of the United States—a country that showed mediocre mean student achievement in TIMSS—and the dynamic curriculum of a significantly higher achieving Japan.

### Curriculum and Learning

The fundamental premise of educational reforms that focus on the intended curriculum is that the intended curriculum serves to support the creation of opportunities for students to learn. This is to say that the faith placed in standards—world-class or otherwise—is derived from the assumption that standards are associated with learning. This premise, until recently, had little empirical support. The original TIMSS study, however, by including comprehensive integrated data on all three levels of curriculum, pro-

vided an unprecedented opportunity to test this assumption in a number of ways. Results from these tests indicate clearly that the intended curriculum—oftentimes as mediated through textbooks—is significantly related to specific learning opportunities (that is, the pedagogical decisions of teachers) and consequently to the growth in knowledge and skills that students are able to demonstrate in achievement tests. It is also clear from this work that there are identifiable structural relationships among subareas in mathematics and science curricula that intensify their relationship with learning—such that learning one aspect of an academic subject is related not only to the specific opportunities that are provided to learn that aspect but also to opportunities to learn other aspects of the discipline that are structurally related. Further, there is evidence that the enactment of the intended curriculum—to be effective in promoting learning—is not simply a matter of covering the contents specified in the curriculum, nor even simply a matter of the amount of time devoted to teaching them. Clearly there are pedagogies that are more appropriate to achieve the levels of rigor and cognitive demand promoted by many of the world’s most ambitious curricula.

Thus, there is evidence that the intended curriculum deserves the intense attention of policymakers that it has enjoyed over the past decades. It is a key instrument in assuring access to rich and meaningful educational experiences. New methods have been developed to characterize and benchmark curricular material. These have resulted in the specification of many of the key features of curricula that would promote high achievement. Much empirical work remains, however, particularly in the area of determining whether it is possible to reconcile these most recent findings with the movement toward decentralized systems of curriculum policy formulation and enactment. Future scholarship must focus on the cultural traditions, policy instruments, and other formal and informal processes that determine how power over the intended curriculum is exercised at various levels in different educational systems; how different educational stakeholders interact in these processes; and how decisions regarding curricular objectives are made—with an eye to gauging their influence on the quality of educational experiences that students are provided.

*See also:* GLOBALIZATION AND EDUCATION; INTERNATIONAL ASSESSMENTS.

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GILBERT A. VALVERDE

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## CURRICULUM, SCHOOL

### OVERVIEW

Ian Westbury

### CORE KNOWLEDGE CURRICULUM

E. D. Hirsch Jr.

### HIDDEN CURRICULUM

Catherine Cornbleth

## OVERVIEW

In its organizational aspect the curriculum is an authoritative prescription for the course of study of a school or system of schools. In their traditional form, such prescriptions set out the content to be covered at a grade level or in a course or sequences of courses, along with recommended or prescribed methods of teaching. In their contemporary form such prescriptions have been re-presented as national and state *standards*, outlining outcomes to be achieved by schools without prescribing the specific bodies of content to be covered or methods of teaching to be used.

Curricula in both of these senses are seen as defining what schools purposefully do. However, most scholars and administrators who work with curricula or evaluate the impact of curriculum prescriptions or reforms do not believe that “curricula-as-documents” direct the work of schools in significant ways. Curricula-as-documents are more often than not developed after the fact, and are based on existing practices of teachers or a simple listing of the content of textbooks being used. Further, many teachers are not familiar with the curriculum their district has mandated.

Nevertheless, curricula and curricular mandates are the objects of persistent and hotly contested debates around schooling, and are widely taken to be important. Interest groups, governments, school districts, and their staffs devote much time and attention to discussions of the curriculum. Why does the idea of the curriculum and curriculum reform assume such importance in educational discourse and policymaking? Is it possible to direct the work of schooling?

### Curricula, Education, and Schooling

All curricula emerge from ideas about what should be taught and learned, and how such teaching and learning might best be undertaken and then certified. As a result the fundamental question lying behind the prescription and development of all curricula is often seen as “What knowledge is of most worth?”—because it is the knowledge that is of most worth that education should, seemingly, reflect. In its ideological or philosophical aspect, much curricular thought seeks to articulate reasoned starting points for one or another form of curriculum. Such work can accept the framework of contemporary understanding of the scope and nature of edu-

cation and schooling. It can be critical, seeking to articulate the hidden assumptions around such categories as race, gender, and class that have driven, and drive, schooling in inappropriate, even morally wrong, directions.

However, looked at more analytically, the curriculum of the school reflects layered cultural understandings of what is considered necessary for young people to know or experience if they are to take their place in the social and cultural order. Thus, as the central component of a pervasive modern institution, the curriculum is necessarily a part of all of the sociological and cultural ambiguities within societies. As such, the scope and nature of the curriculum are viewed as critically important for teachers, parents, cultural critics, interest groups, and the employers of the graduates of the school. As the curriculum as an idea is seen through the eyes of all such groups, it becomes a mirror that reflects different visions of the society and culture, and the tensions within the society around, say, the proper nature of the work of schooling and/or status-attainment and employment possibilities. As a result inevitable and unresolved differences of viewpoint characteristically surface around all discussions of the curriculum as a symbol of both a normative order for education and of the quality and character of what schools are understood as doing.

For these reasons the history of curriculum thinking and practice is marked, on the one hand, by popular and professional conflict and debate about what the curriculum should be and how teaching should be undertaken and, on the other hand, by rationalization of the good and/or bad consequences of one or another curriculum. What, for example, should the curriculum that is most appropriate for young people be based on?

- The needs of the economy for human resources
- National or international ideals
- The need for societal and cultural change or preservation
- Ameliorating pervasive distinctions of gender and race
- The set of perennially “essential” and fundamental forms of knowledge and ways of thinking
- The forms of a life that is most worth living

As a result of the competition between such starting points, there is political, cultural, and policy conflict

around what should be authoritatively prescribed in curricula, how teaching should be undertaken, and how schooling should be organized.

The classification of such different conceptions of education and educating has been one of the core approaches used to give both teachers and laypeople a framework for approaching the normative issues that circle around such starting points for education and curriculum building. Often, as with Elliot Eisner and Elizabeth Vallance's 1974 classification, these issues are presented as involving perennial controversies. Thus in their frame there is a web of controversy built around an unresolved conflict among five classical curriculum "conceptions": (1) curriculum as the development of cognitive processes; (2) curriculum as technology; (3) curriculum as self-actualization or consumatory experience; (4) curriculum for social learning; and (5) curriculum for academic rationalization. But Eisner and Vallance also point to other ways of framing such debates: child-centered versus society-centered; futurist, that is, socially reconstructive, versus presentist or adaptive; values-centered education versus skills-training; and humanist or existential versus behaviorist models of education and teaching.

There are, of course, difficulties associated with such controversy-framed conceptions around the curriculum problem. Such overviews of curricular conceptions reflect abstractions about the curriculum rather than the practices of schooling. Most centrally, they do not reflect the complexities of curricular action.

Walter Doyle has sought to clarify the endemic questions around all curriculum thinking by pointing out that curricular action occurs at three distinct levels.

1. Institutional, where the issues center on policies at the intersection between schooling, culture, and society.
2. Programmatic, where the issues center on (1) the specification of subject content for schools, school types and tracks, with their core and elective course requirements or expectations, subject specifications, and so forth; and (2) the construction of appropriate content for classroom coverage within these subjects.
3. Classroom, where the issues center on the elaboration of the programmatic curriculum and its connection to the worlds of schools and classrooms in their real-world contexts.

For instance, all institutional work around either the scope and rationale of an optimal mathematics curriculum or how the teaching of reading should best be undertaken centers on metaphors that reflect idealized norms for an imagined social institution. More often than not the discourse is framed in terms of *reform* and the need for change if a convergence between a normative ideal and the ongoing work of schools is to be achieved. Such discussions rarely, if ever, connect in any immediate way to the central issues around either programmatic or classroom curricula. There the effective delivery of *existing* procedures and practices, and not reform, is the overriding preoccupation. Nevertheless, the image-making that is characteristic of curriculum policy debates within and among interest groups is important. Such debates symbolize and instantiate what communities should value. In this sense curriculum discussion, debate, and planning—and the public and professional processes involved in such work—is a social form for clarifying the role that schooling *as an idea* plays in the social and cultural order.

Programmatic curriculum work has two tasks. On the one hand, it is focused on the sociocultural, political, and organizational processes through which educational visions that are accepted by elites or publics are translated into operational frameworks for schools. Thus a policy language of "excellence" becomes the introduction of gifted programs in elementary schools or Advanced Placement courses in the high school. Programmatic work is also part of the search for solutions to operational problems, such as a mismatch between the capacity of a school system or school and enrollments, and the need to reconfigure a system around, for instance, middle schools. All such programmatic discourse and action seeks to precipitate social, cultural, and educational symbols into a workable and working organizational interpretation and framework. Such organizational frameworks, however, are only indirectly linked to actual classroom teaching. In such discourse and program building, teaching is seen as a passive agency implementing or realizing both an organizationally sanctioned program and its legitimating ideology. Curriculum work in this programmatic sense *frames* the character of schools and classrooms organizationally, as well as the ways in which schools might be seen within their communities. It does not direct the work of schools or teachers in any straightforward way.

At the classroom level the curriculum is a sequence of activities, jointly developed by teachers, students, parents and communities, that reflects their understanding of the potential for them of the programmatic framework or curriculum. At this level teachers, and the schools they work within, are active interpreters, not passive agents, of the mandated or recommended policy, programmatic, or organizational frameworks. Their interpretations may or may not be well articulated with the curriculum as imaged or mandated at the policy and programmatic levels. The educational legitimacy of such local interpretations, however, is not derived from the organizational framework of the curriculum. Instead it derives from the seeming match between what a local school is, and seems to be, doing and the understandings of its community about what its school can and should be doing.

But consistency among what a community's school does, the language and symbols used to describe and project that work, and the dominant ideologies and values is only one component of the framework for the school or district programs and curricula. Financial and/or personnel issues, state-sanctioned or state-funded mandates for programs such as special education or physical and health education, and the incentives for program change offered by governments and/or foundations are, more often than not, the immediate determinants of whether or not a school offers a pre-kindergarten program or upper-level "academic" courses.

In other words, the curriculum is the symbolic center of a loosely coupled system of ideologies, symbols, organizational forms, mandates, and subject and classroom practices that instantiates collective, and often differing, understandings about what is to be valued about the idea and the ongoing practice of education. At the same time the myth of an authoritative and hierarchical framework by which legislative bodies determine classroom work, with the curriculum as the agent of the linkage, is necessary for the legitimacy of a public schooling that is subject to political control. It is this paradox that gives all discussion of the curriculum its emotional force.

### Curriculum-Making in the Twentieth Century

In an essay written at the beginning of the twentieth century, John Dewey declared his pessimism about the implications for educational reform of a "settlement" he saw between progressive educational re-

formers, who controlled educators' ideologies, and conservatives, who controlled actual school conditions, and had little or no interest in reform. The settlement he described has persisted and has controlled most of the conventional historical writing on the twentieth-century curriculum of the American school. The histories of the American curriculum across the twentieth century offer accounts of the absence of real and lasting Progressive curriculum reform in the school, along with a search for explanations of the seemingly persistent failure of reform impulses. But it was fundamental change that marked the history of the curriculum in the twentieth century. This reality is most clearly seen in the history of the secondary school and its curriculum.

In the late nineteenth century the significant curricular questions around the idea of what was later termed *secondary education* centered on the character of the cultures present in secondary schools or academies—the conflict between cultures achieving its force from its interaction with the changing relationships between social groups. Should the curriculum offer as its core the traditional humanistic inculcation into the classical and liberal culture built around the teaching of Latin and Greek, or should it embrace "modern" subjects like science and English literature? Should the ideology of the high-status secondary school be exclusively liberal (i.e., centered on high-status classical or modern academic knowledge), or should it be directly or indirectly vocational in the sense that it might embrace and give educational legitimacy to agriculture, engineering, applied sciences and arts, and so forth?

The late nineteenth- and early twentieth-century programmatic resolution of these policy conflicts centered around the development of several secondary school types (e.g., classical and modern pre-university, technical/prevocational, and vocational schools), with each type seeking legitimacy in terms of a different curricular ideology and a different clientele of parents and students. At this time the high-status pre-university schools were schools for the elite only. Most adolescents who entered secondary schools sought employment well before graduation, or were enrolled in school types, such as normal schools, that did not lead to matriculation to a university.

In the 1920s and 1930s this situation changed dramatically in the United States in a way that was not repeated in western Europe until the 1960s. Schooling began to assume a much greater signifi-

cance in the pathway to adulthood, with the result that a new form of mass high school emerged as an alternative to apprenticeship as the way to work and adulthood. This new school offered the symbol of a high school diploma, along with a set of tracked four-year courses of study potentially open to the adolescent age cohort. This new school was, in Martin Trow's words, a "mass terminal" secondary school.

This new school required new legitimating ideologies that could serve to make it appear inevitable and desirable to both the range of its external constituencies and to the teachers who would work within it. Schooling as a preparation for work and life, (i.e., life-adjustment; citizenship; Americanization; child-centeredness; and, in the Great Depression, the vision of the school and the curriculum as a seedbed for social and cultural reconstruction) emerged as new educational ideologies to submerge (but not replace) the older public and professional ideology of academic training and mental discipline as the legitimate core tasks of the high school.

Seen in terms of their programs, however, these new schools offered reinterpretations of the modern curricular categories of the traditional high-status pre-university high school in their new, nonuniversity tracks, plus, as appropriate, prevocational or explicitly vocational courses. In other words, the program of the mass terminal high school did not build on the curricular potential of the technical or applied arts curricular traditions, or develop a new curricular form—although its extracurriculum of athletics and music did represent something quite new. It was, of course, the idea of the high school experience that its students and parents were seeking.

The years after World War II saw the second major transformation of the American school as a mass college-preparatory high school emerge from the prewar mass terminal school. This new high school required a rearticulation of the ideology of the high school curriculum with the ideology of the university, creating, in its turn, a need for new ways to frame popular and professional understandings. This required the rejection of the ideological platforms of the very different prewar high school. Thus, the college-preparatory role of the school reemerged into public visibility, a visibility most clearly symbolized by the comprehensive high schools being built in the new suburbs.

The new mission of the high school was presented in terms of academic development and the

need to teach the intellectual structure of the now symbolically important sciences of physics and math—a goal that was interpreted as having implications for national defense and the national welfare. Programs embodying the new ideologies were aggressively introduced as symbols of the new mission of the school, although the program-building practices of those years centered overwhelmingly on merely serving the expanding number of students enrolling in the traditional college-prep track.

The high school of the late 1960s and 1970s reflected the political and cultural turbulence, and the rejection of tradition, of those years. These years brought a renewal of the avant-garde ideologies and curricular platforms of the 1930s (often with a countercultural gloss) as well as of a vision of the school as a site for social, cultural, and racial reconstruction, social justice, and the like. Programmatically, noncanonical works appeared in literature courses; environmentalism emerged as a topic in science; courses in film, black studies, and so forth, emerged in many schools. With these changes the ordered institution of the school was being questioned symbolically and, as a result, appeared at risk. The subject categories of the school seemed to lose their clear meaning and significance, and the quality of, for example, urban schools became an issue as the racial and ethnic makeup of their student bodies changed from majority to minority students. Public anxieties around the symbolic meaning and effectiveness of the high school as the way to adulthood became the focus of demands for a restoration of more traditional understandings of the school.

These tensions were symbolized by the National Commission on Excellence in Education's 1983 report *A Nation at Risk*, an endorsement of the symbols of the "traditional" academic model of the pre-university high school. But most observers of the contemporary school agree that while, programmatically, courses have been renamed and given new rationales, classroom work has continued on its own trajectory. Middle school mathematics courses are renamed *algebra*, but traditional eighth-grade mathematics texts are used. And, to complete the picture of the stable ideological order around the curriculum that Dewey described, constructivism has come to serve as the educators' counterpoint to the symbolic conservative restoration.

### Rethinking Curriculum Discussions

Seen historically, it is clear that much, if not most, public discussion of the curriculum should be seen as a rhetorical form that seeks to stake out positions in the ideological space around the concept of the *school*. Such discourse, as Dewey noted, does not directly influence programmatic or classroom practice, which have their own logics. Thus looked at across the twentieth century, the Progressive educational and curriculum philosophies, conceptions, platforms, and developments that journalists' and educators' discussions have taken as significant have had little demonstrable impact on the day-to-day work of the school. They are part of the changing parade of ideologies and platforms that have been invoked to legitimate one or another image of the school as an institution.

When the characteristic forms of normative educational and curriculum philosophy are looked at analytically, it is clear that they cannot have any significant directive force on the complexities of schooling and teaching. Most important, what such discourse also fails to offer is any explanation of the overwhelming success of the school as an institution across the divides of race, class, gender, and so forth, and of the ways in which the curriculum has both contributed to, and responded to, this success. The secondary school as an institution has achieved an increasingly dominant role in the lives of children and youth across all developed nations. This dominance is overwhelmingly accepted by the societies and cultures that host the modern school, despite the tensions that can circle around it.

Elizabeth McEneaney and John Meyer have argued that all thinking and research around the curriculum, and by extension all policymaking and program development, must be grounded in the recognition of the overwhelming success of the school as an institution. For McEneaney and Meyer an understanding of the idea or model of the modern nation, and of the individually empowered citizen in the nation, lies at the heart of any understanding of the success of the school and the curriculum. Access to high-status forms of schooling has come to be seen as both as a right of citizenship and as a way of integrating citizens within the framework of a common national culture. This culture is, in its turn, seen as both inclusive and rational, a self-understanding that must be instilled by way of the curriculum that frames the knowledge and attitudes

that are seen to undergird the modern nation and modern society.

As a result of this twofold mission of incorporating the population and teaching an understanding of modernity, both the curriculum and teaching have become, paradoxically, increasingly participatory and expressive, yet increasingly rational in terms of their emphasis on mathematics and science, and tolerance of global and local diversity. Conversely, this modern curriculum has increasingly de-emphasized transcending (and often exclusionary) cultural or religious traditions as well as rigid patterns of allocation of student-citizens across schools or school types.

As the implicit expression of the pervasive modern self-image of the citizen and nation, these changes have not, and do not, take place as a result of planned activity or reform. Instead, they come about as the model of society, and modern models for the curriculum, are incorporated, in routinized ways, in the work of teachers and policymakers. Of course, this instantiation of the model of society in the school and curriculum has not come about as a linear process. There are cycles of reform and resistance, the product of the tensions between older and newer models of society and the school and between the global and the local. Organizational structures, as seen for example in the highly centralized French system, can make change problematic at times. In the U.S. school system, with its loosely coupled, locally based structures, many of the tensions that create the need for major cycles of curriculum reform in other countries can be contained. As McEneaney and Meyer point out, schools can be required at the policy level to teach sexual abstinence and at the same time hand out condoms in the classroom. The policy curriculum can be an object of controversy; but the programmatic curriculum works in stable, deliberate ways at further incorporation of youth into the idea and institution of the school, while the classroom curriculum selectively incorporates a changing model of schoolwork in unplanned and unorganized ways. The evolving, changing classroom curriculum can at times be celebrated symbolically at the programmatic level, and made very visible to local communities. Or it can be concealed by a skillful management of the programmatic models and symbols presented to local communities, with their diverse publics.

In one sense, such an "institutionalist" account of the curriculum can be seen as *Progressive*, in the

way that that term has been understood by educators for over a century. But Dewey, in common with most educational reformers of his time and since, bemoaned the absence in American society of what he saw as an appropriately Progressive theory of education, and insistently asked why this was the case in the face of the self-evident claims of the Progressive ideal. The institutional understanding of the curriculum outlined by McEneaney and Meyer, however, suggests that the United States, in common with all developed societies, has in fact institutionalized a normative democratic understanding of the curriculum and the school. It is this understanding that has determined, and is determining, the actual form of both the structures and work of schools.

An institutional understanding of the curriculum, and of the school that gives it agency, presents a major challenge to most of the ways that are used by educators to discuss the school curriculum. It offers a framing context in which their conventional approaches to understanding the curriculum might be placed while at the same time explaining what those approaches cannot explain.

*See also:* CURRICULUM, SCHOOL, *subentry on* HIDDEN CURRICULUM; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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IAN WESTBURY

#### CORE KNOWLEDGE CURRICULUM

More properly termed "the Core Knowledge Sequence," Core Knowledge is a grade-by-grade specification of topics in history, geography, literature, visual art, music, language, science, and mathemat-

ics for grades pre-kindergarten through eight. These topics are set forth with some specificity in a publication called *The Core Knowledge Sequence*, available from the nonprofit Core Knowledge Foundation.

The following is an example of the sequence in grade two history and geography:

## II. Early Civilizations: Asia

### A. Geography of Asia

1. The largest continent with the most populous countries in the world
2. Locate: China, India, Japan

### B. India

1. Indus River and Ganges River
2. Hinduism
  - a. Brahma, Vishnu, Shiva
  - b. Many holy books, including the *Rig Veda*
3. Buddhism
  - a. Prince Siddhartha becomes Buddha, “The Enlightened One”
  - b. Buddhism begins as an outgrowth of Hinduism in India, then spreads through many countries in Asia
  - c. King Asoka (also spelled Ashoka)

This example illustrates the specificity and the selectivity of the sequence, as well as its unique feature of providing solid content in the primary grades.

The selectivity of the sequence is partly a result of expert consensus on the importance of topics within a domain, but is mainly determined by whether or not this knowledge tends to be taken for granted in books addressed to a general reader, and whether or not it tends to be possessed by the top economic tier of U.S. society, but not by the bottom economic tier. The sequence is premised on the belief that if schools teach this enabling knowledge, the knowledge gap and the related income gap between the lowest and highest economic groups would be reduced.

The contents of the sequence have evolved as the result of field testing and consensus building, starting in March 1990, with a conference of some 150 teachers, scholars, and administrators meeting in Charlottesville, Virginia.

## The Goals of the Core Knowledge Curriculum

The basic goals of the Core Knowledge Curriculum are congruent with the basic goals of education in a

democracy: fostering autonomous and knowledgeable citizens, giving every person an equal chance, and fostering community. These basic goals are intertwined, and all of them depend upon shared knowledge. The acquired abilities that give people an equal chance in life are the same abilities that make for autonomous citizens and a cohesive society. That is because the ability to communicate and to learn is based upon the same foundation of shared knowledge as the ability to earn a living and to vote intelligently, as well as to communicate with fellow citizens. The founding theory of the Core Knowledge Curriculum was that an inventory of this shared knowledge could be taken, and that imparting this knowledge to all rather than a few would foster all the democratic aims (including the equity aims) of public education.

## Assessments of Effectiveness

Where Core Knowledge is implemented, the effects on achievement and equity have been highly significant both statistically and from the standpoint of effect size. The most important studies of actual school effects include a three-year study conducted by a team from Johns Hopkins University, and a large-scale study conducted by the Oklahoma City public schools. In the Hopkins report, “the gain difference on standardized tests between low and high implementing schools varied from 8.83 NCEs to 16.28 NCEs. That is an average rise of about 12 NCEs (similar to percentile points) over the controls, more than half a standard deviation—a very significant gain” (p. 26). (NCEs are Normal Curve Equivalents, a way of measuring where students fall along the normal curve when the mean is 50 and the standard deviation is 21.06.) The Oklahoma City study analyzed the effects of implementing one year of Core Knowledge in grades three, four, and five using the well-validated Iowa Test of Basic Skills. The study paired some 300 Core Knowledge students with 300 students not in the Core Knowledge program that had the same characteristics on seven variables:

1. Grade level
2. Pre-score
3. Sex
4. Race/ethnicity
5. Free-lunch eligibility
6. Title I eligibility
7. Special-education eligibility

Given the precise matching of these 300 pairs of students, the expectation would be that the end-of-year results of both groups would continue to be similar on the Iowa Test of Basic Skills. But, in fact, the Core Knowledge students made significantly greater one-year gains in reading comprehension, vocabulary, science, mathematics concepts, and social studies. The greatest gains—in reading, vocabulary, and social studies—were computed to be statistically highly significant. The vocabulary gain was especially notable, because vocabulary is the single best predictor of academic achievement and the area where the gap between ethnic and racial groups has proved to be especially difficult to overcome.

*See also:* SCHOOL REFORM.

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## HIDDEN CURRICULUM

*Hidden curriculum* refers to messages communicated by the organization and operation of schooling apart from the official or public statements of school mission and subject area curriculum guidelines. In other words, the medium is a key source of messages. The messages of hidden curriculum usually deal with attitudes, values, beliefs, and behavior. There are numerous such messages conveyed indirectly. For example, that reading and mathematics are the most important elementary school subjects is clearly if implicitly communicated by scheduling more time for these subjects than for others, such as science and social studies, scheduling them in morning prime time rather than in the afternoon, and testing them more often than other subjects or skills.

The messages of hidden curriculum may complement or contradict each other as well as the official curriculum. For example, while school social studies curriculum typically emphasizes and even celebrates democratic political systems and principles, such as one person-one vote, majority rule and minority rights, separation of church and state, equality before the law, and due process, these principles are not always practiced in public school classrooms and corridors. Hidden curriculum can support or undermine official curriculum. Prominent displays of athletic trophies in the hallway near the school's main office—but not recognition for debate or music or scholarship—communicates a hierarchy of valued accomplishments that puts sports ahead of academics. It is likely that hidden curriculum has the most impact when there is an aggregate or a pattern of consistent messages. When hidden and explicit curricula conflict, it may be that hidden curriculum, like nonverbal communication, carries more weight.

Much of the organization and culture of schooling now referred to as hidden curriculum was once explicit assertive socialization according to a 1977 study by Elizabeth Vallance. The nineteenth-century McGuffey readers, for example, were intended to inculcate good behavior, such as passivity, punctuality, and respect for authority, through their stories, Protestant Christian prayers, and direct admonitions. Such teachings became implicit, if not hidden, by the early twentieth century because they were seen to be working and could be taken for granted as natural and normal. Students new to U.S. public schools, such as recent immigrants, were expected to adapt

and fit in, for example, by looking at the teacher when spoken to, learning and using standard English, waiting (to speak, for the teacher's attention, for permission to use the toilet), and working hard.

Thus, a major purpose of the hidden curriculum of U.S. public schools has been cultural transmission or teaching students the routines for getting along in school and the larger society. In other words, hidden curriculum usually serves to maintain the status quo, specifically the dominant culture and prevailing socioeconomic hierarchy. It is this conservative bias, portrayed in articles by Jean Anyon and Michael Apple, that has been targeted by critics concerned about aspects of hidden curriculum, which work against diversity, equity, and social justice. Nonpublic schools, in contrast, such as Quaker or elite private schools, convey different hidden curriculum messages.

Earlier studies of hidden curriculum were conducted primarily in public elementary schools with a focus on academic classrooms. More recent work also has examined physical and business education and student cultures, with attention to messages about race/ethnicity, disability, and gender/sexual orientation as well as social class, politics, and culture. For example, Annette Hemmings investigated what she calls a "hidden corridor curriculum" that students have to negotiate in one way or another. Played out in hallways, lunchrooms, restrooms, and other nonclassroom spaces in two urban high schools she studied, it was dominated by a hostile, alienated youth culture antagonistic to typically middle-class school and social norms.

Two related aspects of hidden curriculum—sources of hidden curriculum messages—can be distinguished: the structural or organizational and the cultural. These categories and the illustrative examples that follow can be useful guides to what to look or listen for in examining the nature and extent of hidden curriculum at a particular school.

Structural or organizational aspects of hidden curriculum include time scheduling of classes and other school activities; facilities provided; materials, such as textbooks and computer software; examinations; required courses; special programs, such as speech therapy or advanced placement; extracurricular activities and services; and grading and grouping policies.

Cultural aspects of hidden curriculum include school norms or ethos; décor and wall decorations;

roles and relationships, including intergroup relations (within and between teachers and students); student cliques, rituals, and celebrations; and teacher expectations of various groups of students.

### Mediation and Effects

While considerable attention has been paid to the messages of hidden curriculum, relatively little has been directed to whether they are received, how they are interpreted, and what effects they have on individuals or groups. Messages sent are not necessarily received or interpreted as intended by the sender. Particularly when a school's hidden curriculum offers varied or contradictory messages, as all but the smallest and most homogeneous tend to do, students have choices regarding which messages to act on and how to do so. Most students appear to neither totally accept nor completely reject the various messages of schooling. Numerous students become adept at "playing school," that is, keeping up appearances and seeming to go along in order to gain advantage, such as good grades, without internalizing the school's values or views of the world.

While the incorporation or Americanization of generations of immigrants and their children attests to the effectiveness of hidden curriculum, evidence of specific effects on individuals or groups of students remains sketchy. Illustrative evidence comes from the political socialization and citizenship education literature. For example, according to a 1980 article by Lee Ehman, a classroom setting in which controversial issues are freely discussed and students believe that they can influence classroom events shows a consistently strong relationship with political and participatory attitudes, including higher political efficacy and trust and lower political cynicism and alienation.

In sum, the primary value of the concept of hidden curriculum is that it calls attention to aspects of schooling that are only occasionally acknowledged and remain largely unexamined. Messages communicated by schools' organization and culture can support or undermine their stated purposes and official curricula.

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CATHERINE CORNBLETH

## CURTI, MERLE (1897–1996)

A leading U.S. historian, Merle Curti studied the complex relationship of education to democratic values and to capitalist institutions. Born in Nebraska, he went to Harvard for his B.A. and stayed to complete his Ph.D. He worked with both Frederick Jackson Turner and Arthur M. Schlesinger, Sr. During Curti's years as a graduate student, he became acquainted with Charles Beard, the most influential American historian between 1910 and the 1940s. Around 1910 Beard had joined with James Harvey Robinson and Carl Becker to call for a "New History." These three believed that historians should be aware of the ways in which they constructed narratives: they should be aware that their narratives either protected the status quo or worked to create a better future.

Curti was an enthusiastic practitioner of the "New History." He rapidly published three books—*The American Peace Crusade, 1815–1860* (1929), *Bryan and World Peace* (1931), and *Peace or War: The American Struggle, 1636–1936* (1936)—that were designed to strengthen the peace movement in the United States. Beard admired Curti's scholarship

and enlisted him to participate in the Commission on the Social Sciences created by the American Historical Association. The purpose of this commission was to improve the teaching of history at the high school and college levels. Curti was asked to write volume ten of the Report of the American Historical Association's Committee on the Social Studies in the School. This book, *The Social Ideas of American Educators* (1935), analyzed the educational philosophy of a group of men from the colonial period onward, concluding with John Dewey. Curti focused on whether the educational ideas of these men encouraged or discouraged the development of democracy. Like his mentors, Charles Beard and John Dewey, Curti argued that capitalism, with its emphasis on competition and with its hierarchical organization, was a threat to democracy. He shared Dewey's hope that schools could provide an alternative environment of cooperation and equality that would strengthen democracy in the United States. Curti's next book, *The Great Mr. Locke: America's Philosopher, 1783–1861* (1937), was another expression of his interest in educational philosophy.

Beard also enlisted Curti to provide leadership for a project of the Social Science Research Council of the American Historical Association. This project resulted in a group of essays called *Theory and Practice in Historical Study: A Report of the Committee on Historiography* (1946). Known in the history profession as *Bulletin 54*, this volume would, in the minds of Beard and Curti, help create a consensus among historians in the 1940s that accepted the outlook of the "New History." During this decade, however, the report received more criticism than support. Beard, Dewey, and Curti were isolationists. Many intellectuals believed in 1918 that American participation in World War I had been a mistake. By the end of the 1930s, numerous scholars were embracing internationalism and wanted the United States to participate in World War II. These pro-war historians believed that the "New History" encouraged a position of moral relativism that made it difficult to condemn the evils of totalitarianism and to support the traditions of liberty in the United States and England. The pro-war historians also argued that Beard, Dewey, and Curti were representatives for a "conflict" school of historical writing. Their emphasis on a conflict between capitalism and democracy would, according to a new school of "consensus" historians, divide the nation in wartime. The "consensus" historians who became dominant in the

1950s argued that there was no conflict between capitalism and democracy.

At the same time Curti experienced this professional political defeat, he experienced success in helping to establish intellectual history as a topic to be taught in history departments. In 1943 he had published an intellectual history of the United States and its colonial past, *The Growth of American Thought*. This book won a Pulitzer Prize, and a poll of historians in 1950 voted it the most important contribution to history between 1936 and 1950. It expressed Curti's belief that ideas should be rooted in social history. It was a challenge to the approach to the history of ideas represented by Arthur Lovejoy and the *Journal of the History of Ideas*. Curti criticized Lovejoy for discussing ideas as if they were autonomous.

After teaching at Smith College, Curti moved to Teachers College of Columbia University and then to the University of Wisconsin in 1942. At Columbia he had directed the work of Richard Hofstadter, who became a leader in the new field of intellectual history. Under Curti's leadership, the University of Wisconsin was probably the most important center in the 1940s and 1950s for the study of the intellectual history of the United States. Several of Curti's first students at Wisconsin—John Higham, Warren Susman, and David W. Noble—became, like Hofstadter, leaders in the new field.

Curti continued to publish steadily, producing eight more books after 1946. The most important of these was *The Making of an American Community: A Case Study of Democracy in a Frontier County* (1959). Here he tested the frontier thesis of Frederick Jackson Turner by a detailed analysis of census materials.

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DAVID W. NOBLE

# D

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## DALTON SCHOOL

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The Dalton School, founded by Helen Parkhurst in New York City in 1919, was one of the important Progressive schools created in the early part of the twentieth century and the home of the internationally famous Dalton Plan. In the early twenty-first century it is a competitive, elite, coeducational K–12 independent day school located on Manhattan’s Upper East Side.

Parkhurst opened her school in New York City, naming it after the hometown of her benefactress, Mrs. Murray Crane, of Dalton, Massachusetts. The Dalton School followed Parkhurst’s particular philosophy, “education on the Dalton Plan,” an innovative synthesis of the ideas of the American educator and philosopher John Dewey and Progressive school superintendent (Winnetka, Illinois) Carleton W. Washburne, which featured House, Laboratory, and Assignment, designed to individualize instruction and, concurrently, create community.

Parkhurst’s Dalton Plan reflected the child-centered Progressive movement of its time: often chaotic and disorganized, but also intimate, caring, nurturing, and familial. It focused on child growth and development, community and social service, and it strove to effect a synthesis between the affective and cognitive domains of the child.

In 1942 Parkhurst was forced to resign due to financial irregularities. By the time she did so, the Dalton Plan was firmly established from the nursery school through the high school. In addition, the Dalton Plan was internationally accepted as an important model for schooling and Parkhurst’s ideas had

been implemented in such places as Japan, the former Soviet Union, and the Netherlands.

Charlotte Durham, a teacher and administrator under Parkhurst since 1922, was headmistress from 1942 to 1960. She inherited an innovative, experimental, but financially troubled institution. Under Durham, Dalton was able to retain its child-centered pedagogy and its caring and familial orientation, while placing more emphasis on academic rigor. It was also administered in a more orderly and rational fashion and became perhaps less experimental and more a part of the traditional New York City independent school community. In essence, Durham’s genius was to create a tradition out of a Progressive experiment, using the Dalton Plan as its guiding ritual.

Donald Barr served as Dalton’s headmaster from 1964 to 1974. His educational background included attending the Progressive Lincoln School in New York City. He came to Dalton having been assistant dean of the Engineering School at Columbia University. Although a product of Progressive education, Barr had developed an educational philosophy closer to that of such conservative critics of Progressivism as Arthur Bestor. He thought Progressive education anti-intellectual and permissive and he sought to inject a rigorous and traditional curriculum into the Dalton Plan.

Under Barr, the parent constituency began to change, including a greater proportion of the recently affluent. The curriculum and physical plant expanded, enrollment more than doubled, the high school became coeducational, and the emphasis on academic rigor and achievement intensified still more. Reflecting an actual antipathy for Progressive education, Barr began the transformation of Dalton

into a large, academically competitive, fashionable—and even trendy—institution. Although Barr created a desirable school, his administration was rife with controversy, and in the end, he resigned under a cloud.

Gardner Dunnan served as Dalton's headmaster from 1975 to 1997. He came to Dalton in 1975 after a career as a public school administrator in a number of affluent suburban school districts—the first head to come from the public sector, rather than from the independent school world, or in Barr's case, the university. Dunnan continued Dalton's transformation into an organized, efficient, selective, and academically rigorous institution. He enlarged the physical plant and initiated the Dalton Technology Plan, which he promoted as the link between the Progressivism of Helen Parkhurst and the Dalton of modernity. The school's graduates continued to enter prestigious colleges and universities, reflecting the goals of its parent body. By the time Dunnan resigned amid financial and personal problems in 1997, the Dalton School had become a traditional, elite college preparatory school with only vestiges of its Progressive past.

After four years of uninspired leadership, in which certain members of the board of trustees filled the leadership vacuum, Ellen Stein, a former Dalton student, became head in 2001. Although the school continues to pay lip service to the Dalton Plan, and the school is more progressive than most public schools, it is a far cry from the school Helen Parkhurst founded.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; INSTRUCTIONAL STRATEGIES; PROGRESSIVE EDUCATION.

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SUSAN F. SEMEL

## DEAF STUDENTS

*See:* HEARING IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH.

## DECENTRALIZATION AND EDUCATION

The ways in which public primary and secondary education is financed and delivered varies greatly throughout the world. In France, education is highly centralized at the level of the national government, whereas in Canada the national government does not even have an education ministry, and in the United States education is mainly the responsibility of local school districts. Many developing countries and countries in transition to market economies have highly centralized government administration of education and other public services. During the 1990s and early twenty-first century, many of these countries began to decentralize education. This phenomenon proceeded fastest in Latin America and eastern Europe, but several countries in Asia and Africa also began initiating decentralization policies.

### Definition

*Decentralization* is defined as the transfer of decision-making authority closer to the consumer or beneficiary. This can take the form of transferring powers to lower levels of an organization, which is called deconcentration or administrative decentralization. A popular form of deconcentration in education is to give additional responsibilities to schools. This is often called school autonomy or school-based management and may take the form of creating elected or appointed school councils and giving them budgets and the authority to make important educational decisions. Deconcentration may also take the form of empowering school directors or directors and teaching faculty to make decisions within the school.

Another form of decentralization, called devolution, entails transferring powers to lower levels of government. Most often, education responsibilities are transferred to general-purpose governments at the regional or local levels. Examples are the decentralization of basic education to local (district) level governments in India and Pakistan. In rare cases additional responsibilities are given to single-purpose governments, such as the local school district in the

United States. When education responsibilities are transferred to general-purpose governments, the elected governing bodies of those governments must make decisions about how much to spend on education versus other local services.

### Measurement

The measurement of education decentralization is especially difficult. Economists often measure decentralization to lower levels of government by looking at the percent of educational revenues that come from local (or regional) sources, or, alternatively, by looking at the share of educational resources—whatever their origin—that local governments control. Using these measures, education is highly centralized in countries such as Greece, Italy, and Turkey and highly decentralized in countries such as Canada, Norway, the United Kingdom, and the United States.

However, these measures may be misleading when central governments mandate educational policies or programs that require the local government to allocate its revenues in a certain way. Mandating reductions in class size or the creation of special education programs, for example, reduces the degree of power the local government has to allocate its own revenues or resources. In the United States, the federal and state governments influence local education resource allocation both through unfunded policy and program mandates and through the use of conditional grants-in-aid, which require local governments or school districts to match federal or state funding for certain purposes. The combination of these mandates and conditional grants results in local school districts having discretionary expenditure control over only a small portion of their revenues and budgets.

An alternative means of measuring education decentralization is more subjective and entails (1) identifying the major decisions made regarding the finance and provision of education and (2) answering the question, who makes each decision? The Organisation for Economic Co-operation and Development (OECD) has developed a methodology for measuring the degree of education decentralization. This methodology divides educational functions into four groups: the organization of instruction, personnel management, planning and structures, and resources. The content of each group is given in Table 1.

**TABLE 1**

<b>Types of decisions that may be decentralized</b>	
Organization of instruction	Select school attended by student. Set instruction time. Choose textbooks. Define curriculum content. Determine teaching methods.
Personnel management	Hire and fire school director. Recruit and hire teachers. Set or augment teacher pay scale. Assign teaching responsibilities. Determine provision of in-service training.
Planning and structures	Create or close a school. Select programs offered in a school. Define course content. Set examinations to monitor school performance.
Resources	Develop school improvement plan. Allocate personnel budget. Allocate nonpersonnel budget. Allocate resources for in-service teacher training.
SOURCE: Adapted from the Organisation for Economic Co-operation and Development.	

Some educational functions are decentralized even within centralized systems, and others are centralized even within decentralized systems. An OECD survey of its members, for example, shows that, even in centralized systems, schools make most of the decisions about the organization of instruction. On the other hand, in many countries most personnel-management decisions are made at a central level.

Measuring decentralization by answering questions concerning who makes decisions in what areas does not provide an easy answer as to how decentralized one country's education system is relative to another's. Not all decisions are equally important. Indeed, one decision-making area is far more important than the others. Teachers and other school staff represent about 80 percent of total recurrent education spending in developed countries and more than 90 percent of total recurrent education spending in many developing countries. Research on learning also demonstrates that teachers and their ability to teach are the single most important factor in the school that affects learning. Thus, a shortcut for determining whether one country is more decentralized than another is to compare the countries' policies in personnel management. Countries that allow school councils to select school directors and allow schools to recruit, hire, and evaluate teachers have already achieved a significant degree of decen-

tralization even though school finance may still be highly centralized and teachers may be paid according to a national pay scale.

### **Rationale**

The rationale for education decentralization tends to be associated with four distinct objectives: democratization, regional and/or ethnic pressures, improved efficiency, and enhanced quality of schooling. Several countries with a history of authoritarian government have decentralized government in the name of democratization. More specifically, decentralization in these countries is designed to increase the voice of the local citizen and to empower the citizen to more fully participate in decision-making at the local level. Democratization has been the rationale for transferring education responsibilities to local governments in countries as diverse as Poland and Brazil.

In other countries, there have been pressures from regionally based ethnic and language groups to develop their own curriculum, teach in their own languages, and manage their own schools. A good example of this is Spain, where initially the Basque and Catalan regions gained the right to manage their own educational systems, followed later by other regions.

One of the potential benefits of decentralization is increased accountability to the citizen/beneficiary, resulting in improved efficiency in the use of school resources. The improved efficiency results from two effects. One effect is the better match between services provided and the preferences of citizens. The other effect is increased output relative to resources or expenditures. Chile is an example of a country where education was decentralized to local governments primarily in the pursuit of greater efficiency.

When education is decentralized in pursuit of democratization, or in response to regional/ethnic pressures, it is usually just one of several services being transferred to local or regional governments. In addition, educators often resist decentralization for these purposes, fearing greater inequality in spending and educational outcomes. On the other hand, when education is decentralized in pursuit of greater quality, it is usually done as part of a larger reform promoted by educators themselves. An example of this can be found in several large U.S. cities where school councils and school directors have been given greater decision-making autonomy. At

the same time, however, the performance of schools is carefully monitored, and schools are held accountable for improved performance to both parents and system administrators.

These four objectives account for most, but not all, of the reasons for education decentralization. Some countries have transferred the finance and delivery of education to lower levels of government to help solve the central government's own fiscal problems. Argentina, for example, transferred education from the national to the regional governments in order to reduce central government fiscal deficits. Since the education sector employs more personnel than other sectors and also requires large recurrent salary expenditures, it is a tempting target to decentralize for fiscal reasons. Other countries have given local governments the authority to run their own schools as a means of circumventing central government bureaucracies in order to rapidly increase enrollments in remote areas. El Salvador provides an example of decentralization to remote rural communities for this purpose.

### **Implementation**

Like other education reforms, decentralization can result in political winners and losers. The potential winners are those gaining new decision-making powers, while the potential losers are those losing those powers. Two of the potential losers—civil servants and teacher unions—are sufficiently powerful that they can effectively stop decentralization processes. The civil servants working in education ministries have perhaps the most to lose, because some of their jobs become redundant and their power to influence the allocation of resources may be diminished. In countries where corruption in government is a serious problem, reduced power will be also reflected in a reduced ability of civil servants to extract financial or in-kind rents. The leaders of national teacher unions also lose power to the extent that salary negotiations, teacher recruitment, and teacher promotion are moved from national to lower levels of government. Union members may also fear lower salaries if the funding of education is moved to local governments with fewer sources of government revenues. In countries where being elected head of a teacher union is an important stepping-stone to a political career, decentralization of labor negotiations is likely to reduce the political importance of leading the national union.

The implementation of education decentralization reforms can either be rapid or slow. Legislative or constitutional changes that immediately transfer responsibilities from the national to lower levels of government run the risk that lower levels of government will lack the required administrative capacity required to manage the system well. The result may be disruption in the delivery of schooling to children that adversely affects their learning, at least for a time. A more gradual decentralization can allow powers to be transferred to lower levels of government as those governments gain administrative capacity. The difficulty with gradual decentralization is that it may never occur at all, as the potential losers marshal their forces to fight the policy change.

In some countries with serious problems of internal conflict, weak public bureaucracies, or very weak government finances, one finds *de facto* decentralization of education. In these cases, the central government abdicates its responsibility for financing and providing public education, especially in remote areas, so local communities organize and finance their own schools and recruit and hire their own teachers. In Africa, the countries of Benin and Togo provide examples of community control and finance of schools resulting from the lack of central government supply. In other cases, the central government finances an inadequate number of teachers and other school resources to ensure schooling of adequate quality. In these cases, parents may form school councils to raise revenues to hire additional teachers, construct and equip school buildings, and provide other school resources. By virtue of their important role in funding education, parents and school councils may exercise significant decision-making power.

### **School Finance**

The financing of decentralized education can be very complicated in systems where two or three levels of government share financing responsibilities. The choices for financing education in such systems can be framed as follows: (1) central versus local funding, (2) conditional versus unconditional grants, and (3) negotiated versus formula-driven grants. The choices made concerning education finance are extremely important as they determine both the degree of effective control local governments have as well as the implications for efficiency and equity.

The single most important choice is whether the level of government providing education (in most

cases, the local government) is expected to generate its own revenues for education from its own tax and other revenues sources or if it will receive the bulk of the required educational revenues from a higher level government. Local government capacity to generate revenues (i.e., its tax base, or its fiscal capacity) tends to vary widely across local governments within regions or countries. Thus, requiring local governments to raise all their own revenues for education ensures an unacceptably high degree of inequality in spending per child. Countries where local governments finance education from their own source revenues (e.g., Brazil, the United States) have adopted intergovernmental grants to help even out spending inequalities. In the case of Brazil, the central government provides additional financing to ensure each jurisdiction spends a minimum amount per student. In the case of the United States, school finance policies vary by state, but in general they, too, ensure a minimum level of spending and, in some cases, put a cap on the maximum amount a local school district can spend.

Most countries have made the choice to fund a large portion of primary and secondary education spending from either the regional or national government budgets. This funding can be provided in one of two ways. Monies can be transferred from the central government to either the general fund of the local (or regional) government or to a special education fund of the local (or regional) government. In the former case, the local or regional government receives funding sufficient to cover a large portion of expected education expenditures, but the local or regional government makes the decision of how much to spend on education. In the latter case, the local or regional government is required to spend the grant monies on education only. Requiring grant monies to be spent on education ensures adequate education spending but reduces the expenditure autonomy of the local (or regional) government.

Once a decision is made to transfer monies to lower levels of government, a further decision needs to be made as to how to determine what amount of money should be transferred to each receiving government. The basic choice is whether to negotiate that amount between governments or to determine the amount using a capitation formula. Negotiation has political advantages in that it allows central governments to reward their political allies, and thus it is often popular. Capitation formulas, however, are more equitable and may also provide incentives for

educational performance. Chile, for example, determines how much it provides to each local government based on a formula that includes indicators of educational cost, educational need, and student average daily attendance. Since local governments receive more revenues if more students are enrolled and attending regularly, the formula has encouraged those governments to undertake campaigns to keep children in school.

### Effects of Decentralization

It is extremely difficult to disentangle the effects of education decentralization policies from other variables simultaneously affecting educational outcomes, and there have been few rigorous attempts to do so. Two studies that did attempt to isolate the effects of devolution in Central America concluded that it increased parental participation, reduced teacher and student absenteeism, and increased student learning by a significant, but small, amount.

*See also:* GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF; SCHOOL-BASED DECISION-MAKING.

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## DECISION-MAKING IN DEVELOPING NATIONS, APPLYING ECONOMIC ANALYSIS TO

In mainstream economic analysis, education is seen as a production process in which *inputs* (e.g., students, teachers, and textbooks) are combined to yield desired *outputs* (e.g., student learning) within the education sector, and larger societal outcomes outside the sector (e.g., increased earnings in the workplace or greater social equality), under the prevailing educational technology (encompassing pedagogy, curriculum, and school organization) and input prices. A major application of economic analysis is to inform decision-making in education in order to improve efficiency in educational production; that is, producing more desired education outputs and outcomes given educational resources. Analytically, educational efficiency can be distinguished as internal efficiency and external efficiency. Internal efficiency relates educational outputs to educational inputs, while external efficiency relates educational outcomes to educational inputs. Analysis of educational efficiency is not confined to economic concerns only, since educational outputs and outcomes also pertain to social and political dimensions of national development.

A substantial literature exists concerning the economic analysis of educational development in developing nations. Developing nations are not a homogenous group; there are substantial differences between them in terms of the level of socioeconomic development, extent of ethnic and religious diversity, history, and cultural values.

### Internal Efficiency of Education

The internal efficiency of education is improved when more education outputs are produced at given education resources or fewer education resources are used in producing the same amount of education outputs. Thus educational economic analysis is cen-

trally concerned with the production of education outputs and with education costs.

An educational production function is a mathematical construct that mainstream economists and researchers from other disciplines often use to study educational production. It relates some measure of education output (e.g., student achievement) to various inputs used in education (e.g., student characteristics and family background, teacher characteristics and other school-related factors). An early application in developing nations is the 1975 study by Leigh Alexander and John Simmons that found that family backgrounds and socioeconomic factors, not school factors, were the most important determinants of student achievement. But a 1983 study by Stephen Heyneman and William Loxley countered that school factors could also affect student achievement, and that such factors had stronger effects in low-income nations than in high-income nations. Other studies also tried to identify school factors that could boost student learning and to show that spending on school quality could have a good return. These studies argued that it is not enough to focus on quantitative development of the education system, and that the government and the donor community should pay more attention to improving school quality. Patrick McEwan and Martin Carnoy's 2000 study and Emmanuel Jimenez and Marlaine Lockheed's 1995 study of educational production include data that compare the effectiveness of public versus private schools and that employ more sophisticated statistical techniques.

The costs of education refer to resources utilized in the education production process; they include not only government expenditure on education, but also household spending on education and the foregone opportunities of schooling (e.g., gainful employment). Education cost studies range from macroanalysis of national educational expenditures across nations to microanalysis of educational decision-making by individuals and households. Cross-national studies have found that government spending on education (as a percentage of national output) has declined in the developing nations since the 1980s, after a rising trend in the 1960s and 1970s. Studies in a number of developing nations have shown that private spending on education is a significant part of the total spending on education, and that private costs are an important source of educational inequality and inequity in these nations. In addition, household education costs could be a

heavy economic burden on poor and rural households, resulting in negative educational consequences such as dropping out. Financial assistance targeted at poor and rural populations should be part of the overall strategy to improve school attendance for marginalized population groups. There is a need to carefully estimate the costs of educational inclusion of marginalized groups because such costs tend to be quite different from those for nonmarginalized groups.

Privatization of schooling has been proposed as a strategy for improving the effectiveness and cost-effectiveness of education in developing nations. Proponents of privatization argue that private schools are more effective and are more likely to be less costly than public schools. Competition in the education market could also lead to improvement of public schools. Critics of privatization point out that there is no conclusive evidence to show that private schools are more effective than public schools. For example, in 2000 McEwan and Carnoy found that Chile shows different types of private schools—some more effective; others, less effective than government schools. An unpublished review by Mun C. Tsang of the costs of public and private schools in developing nations finds that most studies tend to underestimate the costs (thus overestimate the internal efficiency) of private schools relative to public schools. Controversy remains as privatization is concerned not only with cost-effectiveness, but also with opposing ideologies and competing goals of schooling.

A subject of sustained interest in developing nations is the economic analysis of new educational technology because of the need to provide educational services in remote and sparsely populated areas, to reduce unit cost and meet educational demand under very tight government education budgets, and more generally to improve educational quality through more cost-effective alternatives to traditional schooling. Studies found that small media (e.g., radio) were less costly and more cost-effective than large media (e.g., television). Distance education is an effective way to reach learners in remote and sparsely populated areas. Cost analysis indicates that programs using educational media demonstrate economies of scale. But since they require large start-up costs, these programs have to have large enrollments and a long period of operation in order to be comparable to traditional schooling in terms of unit costs. The use of computers in

the school context has had mixed success. Of particular current interest is the use of the Internet in education. It is necessary to ascertain the potential of the Internet in developing nations and to address the concern of some observers that there is an increasing digital divide between developing nations and advanced industrialized nations. A mindful introduction of new technology into education, informed by a careful analysis of the education problems to be addressed and the range of technological alternatives available, is highly desirable.

Teachers are a key input in educational production, and an adequate supply of skilled teachers is a prominent policy concern in many nations, including developing ones. Not unexpectedly, teacher supply is influenced by such factors as teachers' salaries and working conditions relative to those in other occupations, and the costs of teacher preparation relative to those for other occupations. The harsh working conditions in rural areas in developing nations often lead to a shortage of skilled teachers in these areas. In some developing nations, low educational quality is related to the existence of a significant proportion of untrained teachers, an uneven distribution of teachers across schools, and teacher absenteeism. There is a lack of published studies of teachers' markets and the utilization of teachers in the developing world.

Educational finance is an important domain in education economics since it deals with the mobilization and allocation of resources in the production of education. For many nations in the developing world, especially poor ones, external resources, in terms of bilateral or multilateral assistance, are a key source of funding for educational development. However, international funding is becoming more problematic over time because of a combination of factors, including declining financial support from advanced industrialized nations, the increasing demand and competition among receiving nations, and the imposition of more stringent conditions for receiving aid. Economic reforms pushed by the International Monetary Fund in developing nations often impose strong limits on government spending. Such a policy was associated with negative effects on the education sector in much of the 1970s and 1980s. Since the 1990s international development agencies have become more vocal in calling for more spending on the social sectors, including education. The ability of developing nations to finance educational development has also been hampered by the need of

each government to make interest payments on international and domestic debts. Increasingly, there is a call that debt relief for developing nations and for international development agencies be in the form of grants instead of loans to these nations, especially in the social sectors. As the leadership of the World Bank pointed out in 1995, however, debt relief is only part of the solution; what is also needed is the opening up of agricultural and other markets in advanced industrialized nations to products from developing nations.

It would be misguided to focus only on central government and external sources for financing education. In many developing nations, the community has been an important source, in cash and/or in kind, for educational development. Community involvement is useful not only for financial reasons, but also for educational and accountability purposes. Participation from parents and community members can discourage teacher and student absenteeism. In addition, fiscal and administrative decentralization in education have the potential for not only mobilizing additional resources to education from various levels, but also enabling more informed and more efficient decision-making about education matters at the local level. To mitigate the disequalizing and inequity effects that often accompany decentralization, however, central and regional governments need to provide equalization aid to poor and rural areas. Moreover, nongovernmental organizations (NGOs) could have an important role to play in raising additional resources for education and/or in implementing educational programs, particularly for marginalized populations. Finally, there is an increasing emphasis on cost recovery in education, especially at the higher-education level, so that the financing responsibility is shifted more from the government to households.

### **External Efficiency of Education**

The external efficiency of education is improved when more education outcomes are produced at given education resources or fewer education resources are used in producing the same amount of education outcomes. During the closing decades of the twentieth century, emphasis in developing nations regarding educational development has been placed on three broad outcomes of education: contribution to economic growth and competitiveness, improvement in social equity, and poverty alleviation.

According to human capital theory, education is a form of human capital that could raise the productive capacity of individuals in economic production. Empirical studies in agriculture found a positive and significant relationship between productivity and education. At the macro level, education was also associated with economic growth. Spending on education can be seen as an investment activity with both costs and benefits, and thus subject to a cost–benefit analysis. A review of rate of returns studies, such as the 1994 study of George Psacharopoulos, found that in developing nations education had a high rate of return and that the return was higher at lower education levels. Paul Bennell, however, has criticized these studies, in terms of appropriateness of method and quality of data. Some analysts, such as Ronald Dore, point out that educational expansion in a depressed economy could lead to unemployment of the educated or overeducation. Nevertheless, there is increasing consensus across nations that human capital, particularly in terms of problem-solving skills, communication skills in a diverse setting, and the ability to adapt to change, can enhance economic competitiveness in the global economy of the twenty-first century. There is also increasing attention to investment in preschool education and in education for sustainable development.

### Growth with Social Equity?

There have been different views on whether increased economic growth and improved social equity could coexist. Using the experience of eight East Asian economies, the World Bank concluded in a 1993 publication that growth with equity was possible. This study made a guarded but positive assessment of the role of education: education was only one of many contributing factors to growth with equity but appropriate education policy did matter, especially in terms of adequate investment in education and the focus of government policy on lower levels of education. The financial crisis that began in 1997, however, underscored the importance of noneducation factors that could affect the health of the economy in these nations.

Earlier efforts in promoting education for poverty reduction have been accompanied by high hope and disillusionment. The urgent need for poverty reduction in the developing world is reflected by the World Bank's redefining itself as a poverty-reduction organization. There is common under-

standing in the early twenty-first century that “quality basic education for all” is an important part of the overall strategy for poverty reduction. But education alone is not sufficient; rather a multisectoral approach involving related interventions in agriculture, education, health (including addressing the AIDS epidemic), credit market for small producers, and other social sectors, is needed. Poverty reduction also requires targeted interventions. Women are one of the most important targeted groups because they are often subject to multiple disadvantages in the developing world. Increasing educational access and improving quality for girls could have profound economic, social, and political benefits for women and for society.

*See also:* DECISION-MAKING IN SCHOOLS, APPLYING ECONOMIC ANALYSIS TO; SOCIAL CAPITAL AND EDUCATION.

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MUN C. TSANG

## DECISION-MAKING IN SCHOOLS, APPLYING ECONOMIC ANALYSIS TO

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In the 1999 through 2000 school year, spending for all levels of education amounted to \$646.8 billion. According to the National Center for Education Statistics, of this total, \$389 billion was spent for K–12 education and the remaining \$257.8 billion was expended by postsecondary institutions. Despite the substantial financial commitment to education, the impact of economics on the way educational institutions allocate and use their resources has been remarkably limited. Economics is concerned with obtaining the best possible outcome from a limited budget, and thus seems an ideal approach for dealing with how to allocate resources within schools. Although economists are beginning to analyze educational problems in increasing numbers, they have yet to make major inroads in improving educational productivity. This article describes ways in which economic analysis could be used to improve decision-making in educational institutions, and to inform the allocation and use of educational resources.

Even though virtually all educators believe that additional resources will lead to higher student per-

formance, it remains unclear how best to spend dollars to achieve that goal. As a result, demands for more money, absent a well-reasoned description of how the money will be used, does not build confidence that money—by itself—will make a difference.

Researchers have used production functions—a statistical approach linking outcomes with specific inputs—to understand how money matters. To date, this research has been inconclusive with some arguing that money matters and others suggesting a systematic link between higher levels of resources and more money does not appear to exist. This stems in part from disagreement over the proper outcome of schooling.

Traditional allocation tools like cost–benefit analysis are infrequently applied in educational settings due largely to the difficulty of placing a monetary value on the outcomes or benefits of education. Henry M. Levin and Patrick McEwan suggest that linking costs to some measure of performance, or effectiveness, is a better approach for education. Under this model, the cost per unit gain of achievement is estimated so that programs that are more efficient, or cost effective, can be identified and chosen.

Eric Hanushek argues that the proper incentives for better performance and efficient use of educational resources are not in place, and that holding schools accountable for student performance is essential to use more effectively existing and new money. Improvement of student performance, with or without new funds, requires improved decision-making in the following four areas.

- Reallocation of existing resources
- Incentives for improved performance
- Development of the concept of *venture capital* for schools and school systems
- A more market-based budgeting environment

### **Reallocation of Existing Resources**

Regardless of what impact additional funds might have, it is important that existing resources be used as efficiently as possible. In many districts it may be possible to reduce class size through different assignments of teachers throughout the district. To the extent that smaller class size improves student performance, these changes would offer an improvement in student performance at little or no cost.

Before seeking additional funds, schools may investigate other ways to restructure what is done with

current funds. Allan Odden and Carolyn Busch argue that schools can find additional resources through a combination of creative use of categorical funds, elimination of classroom aides, and reallocation of resources, such as the elimination of one or two teaching positions. Although some of these options may result in larger classes, or fewer teachers, the more intensive use of staff and greater professional development activities available have resulted in improved student performance in many of the schools that have adopted this approach.

### **Incentives**

The use of incentives to encourage schools or school districts to allocate resources in ways that lead to improved student performance is not a new idea. Unfortunately, the incentives that seem to have the most success have been sanctions. Schools faced with threats of intervention often act quickly to improve performance rather than risk the stigma of a sanction. Conversely, many positive incentives have been less successful. For example, high-performing schools are often granted waivers from state regulation in exchange for success. In this case, the regulatory system loosened constraints that may have made the organization successful. Perhaps the more appropriate incentive would be to provide such waivers to under-performing schools with the hope that increased flexibility would lead to improvements.

Hanushek argues that the incentives currently in place in schools do not encourage teachers to work towards improving student performance and therefore need to be changed. He suggests that there is not sufficient awareness of positive performance incentives, and that more experimentation and research is needed.

### **Venture Capital (Equity)**

One problem of education in the early twenty-first century is that once funds are appropriated to a school or program, they become the possession of that entity. In a study of the costs of implementing California's "Caught in the Middle" reforms for middle schools, published in 1992, David Marsh and Jennifer Sevilla found that the annual costs of restructuring schools to meet the requirements of this program were between 3 and 6 percent higher than current average expenditures per pupil in California schools. However, they also concluded that the first year start-up costs amounted to approximately 25

percent of annual costs. The problem schools face is finding those start-up funds. Often such funds are not available for all schools in a district, and schools receiving such funds treat them as a continuous source of revenue. Yet if such funds were rotated among schools, it would be possible to institute new programs in all schools over a few years.

Related to the concept of venture capital is the concept of revolving funds. This notion offers a way for school districts to deal with large purchases, like computers, that occur on a regular but nonannual basis. Budget procedures in school districts do not reward schools for saving resources in one year to make large purchases the next year. A school that receives a sum of discretionary money in one year is likely to lose any of the funds it has not expended by the end of the fiscal year. As a result, schools are often unable to make a large coordinated purchase.

A solution to this would be a revolving fund in the district to pay for such purchases. Schools would receive large appropriations of funds for such purchases once every few years. Finding a way to use the money in a revolving fashion would facilitate continued improvements in educational programs. The major problem is determining who gets the venture capital funds first and who has to wait. In many large districts, the superintendent publishes lists of the best- and worst-performing schools, and such lists could be used to prioritize the allocation of these funds. Another issue is the equity of the distribution. Although some schools will get more funds one year than others, over the established time period, all schools will receive an equal amount—one simply has to accept the idea that equity is measured over some time frame, and not on an annual basis.

### Market Approaches

Many reformers call for market-based changes in the organization of schools. There are many ways to introduce the market into the educational arena, but most of these fall under the heading of school choice. Public school choice can be considered as either an intradistrict or interdistrict choice, and these can be broken down further into the various types of programs in each category. Two other types of choice involve the blurring of the line between public and private education: private school vouchers and privatization of former public schools.

Intradistrict choice programs, by definition confined to one school district, grew largely out of

an attempt to desegregate schools, rather than to provide competition or parent choice. The first of these programs is called controlled choice, where districts created models for assigning students to schools outside of the traditional neighborhood school model as a way of reducing segregation. A second type of intradistrict choice program is the magnet school. Magnet schools were designed to attract white students to schools with high minority populations, often located in heavily minority communities.

The newest model of intradistrict choice is the charter school. With the development of the charter school, the purpose of the choice models shifted away from desegregation to a focus on providing parents with the choice to send their children to schools that may be less regulated than their traditional neighborhood school. These schools operate under a charter between those who organize the school (typically teachers and parents) and a sponsor (typically the local school board or state board of education).

Interdistrict choice programs allow the transfer of students between school districts. Although interdistrict choice programs also grew out of attempts to desegregate, they always had the goal of increasing parental choice as well. Many states allow interdistrict choice through open enrollment policies, which vary from state to state; some states mandate that all districts have open enrollment while others allow districts to choose whether they wish to be open or closed.

Perhaps the most talked-about form of choice program is the voucher program. Voucher programs can be organized in different ways, but the basic idea is to give some children access to private schools by issuing vouchers to their families, which the families then give to the school in lieu of a tuition payment. Often these programs have the intention of allowing low-income students to go to schools they could not otherwise afford to attend, although vouchers are not necessarily limited to those in poverty.

A final market-based approach is the privatization of schools that were formerly public. This is also a relatively new approach, and one that arose largely out of a demand for strategies that could save failing schools. The argument is that if public education functions like a monopoly (a firm that has control over its price and product) because it is not subject to competition, it has little incentive to function effi-

ciently. By introducing some competition through privatization, schools would be forced to provide higher-quality education at a lower price.

Recent efforts to collect resource data at the school site and even student level may lead to enhanced knowledge of how resources impact student outcomes. To the extent that such knowledge is applied to decisions about how schools are operated, the long-term impact may be improved educational productivity through enhanced and informed decision-making.

*See also:* PUBLIC SCHOOL BUDGETING, ACCOUNTING, AND AUDITING.

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LAWRENCE O. PICUS

### DE LIMA, AGNES (1887–1974)

Journalist, educator, and activist, Agnes de Lima wrote significant books and articles about Progress-

sive education. She was born in Holywood, New Jersey, and grew up in Larchmont, New York, and New York City in a prosperous, conservative banking family that had emigrated from Curacao. De Lima attended private school and entered Vassar College in 1904 at the age of seventeen. At Vassar, de Lima received an excellent liberal education and majored in English. Through such teachers as feminist Lucy Salmon she encountered some of the liberal reformist thinking of the Progressive period. She worked with the College Settlement Association and was active in a campus organization that tried to improve the pay and working conditions of college maids. Her Vassar experience led her away from her family's conservative values, and she became active in socialist, feminist, labor, educational, and other reform movements.

After graduating from Vassar in 1908, de Lima moved to New York City, where she lived in a settlement house and worked as a writer for the Russell Sage Foundation and the Bureau of Municipal Research. She continued her education at the New York School of Social Work from which she received a master's degree in 1912. In 1917 there was a major political struggle over the efforts of reformist mayor John Mitchel to begin a "platoon school" innovation in New York City. In these schools students moved through a variety of workshops, assemblies, and libraries in platoons or groups, rather than remaining in one classroom. Willard Wirt, who had created a platoon system in Gary, Indiana, was hired to develop the program in New York. De Lima worked with Randolph Bourne and other young activists to promote the innovation, which was dropped in 1918 after voters rejected the reformist mayor.

These activities led to de Lima's more intense involvement with education and liberal journalism. Randolph Bourne had been the major education writer for the *New Republic* after the founding of that journal in 1914. Following his death in 1918, de Lima became the leading writer on education both for that journal and for the *Nation*, the other influential liberal periodical. She wrote for these journals a series of articles on Progressive education, which she then collected into a 1924 book titled *Our Enemy the Child*. This was one of the earliest books to describe and interpret what was actually happening in Progressive classrooms, and it has since been widely cited by scholars in educational history. It was the first study to identify clearly the three figures of Progressive education that Lawrence Cremin, in his in-

fluent 1960s book *The Transformation of the School*, labeled “scientists, sentimentalists, and radicals.” De Lima’s parallel groups were the “technicians,” who focused on testing and methods; the “child-centered” educators; and the “visionaries,” who hoped to reform society through the schools. De Lima was particularly supportive of the child-centered educators, believing that the best learning began with the needs and interests of children. She was most critical of the behaviorist “technicians” whom she described as “socializers, habit makers, and standardizers.” As a socially concerned reformer, she encouraged the extension of successful Progressive experiments from private to public schools.

De Lima’s brief marriage to Arthur McFarlane in the 1920s ended in divorce. During the 1930s de Lima continued her career as an education writer, publishing articles and reviews in the *Nation*, the *New Republic*, *Progressive Education*, the *New York Times*, the *New York Herald Tribune*, and other periodicals. She also wrote publicity materials for Progressive schools, including the Lincoln School and the Bank Street School.

De Lima’s own teaching career was brief, but the experience of running her own small Progressive school helped her to understand and write about education and related social issues from the perspective of teachers. De Lima worked effectively with Progressive school faculties to help them report on and evaluate their work. She and the elementary teachers of the Lincoln School produced *A School for the World of Tomorrow* in 1939. With the secondary faculty of the same school two years later she wrote *Democracy’s High School*. In 1942, with the same group of high school teachers, she published *South of the Rio Grande: An Experiment in International Understanding*. That same year she published *The Little Red Schoolhouse*, written in collaboration with the faculty of the school by that name. John Dewey, the leading figure in Progressive education, wrote an enthusiastic introduction to the book.

From 1940 to 1960, de Lima was director of public relations for the New School for Social Research in New York City. The New School, led by economist Alvin Johnson, was one of America’s leading Progressive experiments in higher education, and de Lima contributed to its success and reputation by publicizing its innovative programs and activities. De Lima retired from the New School in 1960 and lived quietly in Greenwich Village until her death in 1974. De Lima is remembered chiefly for

her role in describing and interpreting Progressive education and for promoting it as an essential element in broader movements of social and political reform.

**See also:** EDUCATION REFORM; PROGRESSIVE EDUCATION.

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JAMES M. WALLACE

## DENTAL HEALTH AND CHILDREN

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The oral health of children is important to their overall well-being. Just as the mouth cannot be separated from the rest of the body, oral health cannot be considered separate from the rest of children’s health. Often thought to be only the presence or absence of tooth decay, oral health actually includes all the sensory, digestive, respiratory, structural, and emotional functions of the teeth, the mouth, and associated facial structures.

Like other aspects of children’s health, oral health must be considered in the context of social, cultural, and environmental factors. Dental and oral disorders can have a profound impact on children, and the burden of untreated dental health problems is substantial. Untreated dental decay (cavities) can result in pain, infection, tooth loss, difficulty eating or speaking, and poor appearance, all of which present challenges for maintaining self-esteem and attentiveness to learning. Chronic pain can alter a child’s ability to sleep and play, and it hinders efforts to show them that their personal actions can make a difference in their own health.

Tooth decay is one of the most common chronic childhood diseases—it is five times more common than asthma. By the first grade, more than 50 percent of children in the United States have dental caries (decay) in their primary teeth, and more than 80 percent of U.S. adolescents have dental decay by age seventeen. Despite the availability of cost-effective preventive measures and improvements in children's oral health in the United States, many children still lack needed dental care—more, in fact, than lack medical care. There are significant and important disparities in oral health and access to dental care for poor and minority children, and for those with unusual health care needs. Hispanic, African-American and Native American children have more severe disease and greater levels of untreated disease than other children. In addition, children from low-income families are much less likely to have access to dental care than their peers, and their disease is almost twice as likely to remain untreated. Sadly, the children at greatest risk for problems resulting from tooth decay are also those least likely to receive dental care. In fact, dental care has become the most frequently reported unmet health need of children.

### **Prevention of Dental Diseases**

Fortunately, most dental diseases can be prevented. The most common oral health problem for children is dental decay, which is preventable by a combination of community, professional, and individual measures, including water fluoridation, professionally applied topical fluorides and dental sealants (protective plastic coatings), regular use of fluoride toothpastes, and healthful dietary practices. Childhood is also a time to form healthful habits to reduce injury to the mouth or face, especially during sporting and recreational activities. Use of protective devices in schools may help young athletes recognize the hazards posed by their athletic interests and as they attain adulthood they may be more comfortable using the devices than if they had not used them at a younger age. A significant proportion of other oral problems, such as destructive gum disease and mouth and throat cancer, do not commonly arise until adulthood, and much of this burden can be attributed to the use of tobacco. Most daily smokers started smoking before age eighteen, and more than 3,000 young persons in the United States begin smoking each day. School programs to prevent tobacco use could become one of the most effective strategies to reduce tobacco use in the United States.

Community water fluoridation is the most effective way to prevent dental caries in all children, regardless of socioeconomic status, race, or ethnicity; and it can reduce cavities in children by up to 40 percent. Yet, more than 100 million people in the United States do not have fluoridated water. Where children do not have fluoridated water and dental screenings have identified them to be at high risk for dental caries, fluoride can be provided through school programs that offer supplemental tablets or rinses, and the importance of brushing with fluoride toothpaste at home every day can be reinforced.

Unfortunately, fluoride has somewhat limited effectiveness on the chewing surfaces of teeth. Not surprisingly, more than 80 percent of tooth decay in schoolchildren is on the chewing surfaces of molar (back) teeth. The use of dental sealants applied to the chewing surfaces can prevent 60 percent of decay on these surfaces, but only about one in four children have at least one sealed tooth. Among poor minority children, less than 5 percent have received dental sealants, except those who attend schools that have programs to assure access to this service.

### **School-Based Health Care Services**

The school is a good setting for programs to assure that children have an opportunity to receive protective dental sealants in a timely manner to prevent tooth decay. Although such programs can be a component of more comprehensive dental programs, it is far more common for school programs to be more narrowly focused on these effective preventive services. Dental sealants can be provided at school or through active referral to participating dentists in the community. Although these programs have been found to be effective among children of varying socioeconomic status and risk of decay, most such programs in the United States target those vulnerable populations less likely to receive private dental care, such as children eligible for free or reduced-cost lunch programs. Accordingly, these programs can not only increase the prevalence of dental sealants, but also reduce disparities in sealant use by race or income.

Health education programs in schools can stress the importance of oral health, increase understanding of the disease process, promote healthful behaviors, and reinforce the value of regular professional care for prevention. Such a role for professional care may not be consistent with the experiences of children who have not received dental care or who only

associate it with treatment of toothaches. Instruction of the children and their parents—through educational materials that are taken home—can help alleviate the consequences of some parents' own experiences and dental fears, which may impede their seeking care for their children.

When preventive measures fail to completely stop disease, schools can assure that tooth decay is treated early so that it does not negatively affect learning and quality of life. Some schools have programs of screening and referral, which are not only helpful to the individual children referred for care, but also provide information that enables the public health system to target, organize, and evaluate programs. In addition, some schools have health centers on the grounds, which have been critical providers of health services for young people, particularly those who are uninsured. Central to the effectiveness of these centers are partnerships with community-based providers and collaboration with parents and school administrators.

Through the initiatives described here, schools can make important contributions to the quality of life of low-income, minority, migrant, and immigrant children, who frequently have difficulty accessing information and services for both the prevention of disease and dental care. When these children do not get the dental care they need, their already difficult lives can become even more stressful, and they may be less likely to overcome obstacles, achieve their dreams, and contribute to society.

### **Dental-Health Education Curriculum for Schoolchildren**

The ideal dental-health education curriculum would encourage students to think about the relationships between knowledge, choice, behavior, and enhanced human health. Knowledge and choice equals power, and having power and engaging in appropriate behavior can lead to enhanced human health. In addition to acquiring knowledge, students need to develop the skills to incorporate healthful behaviors into their lives. Behaviors that promote oral health and prevent disease include brushing teeth with fluoride toothpaste, reducing the number of times sugar-rich foods are eaten, and resisting tobacco use. Curricula should be age-appropriate for both children's cognitive abilities and the main health risks they face at each stage of development.

During the preschool years, development of the habit of using fluoride toothpaste twice per day and

acquisition of a positive attitude about visiting the dentist are the most important outcomes of education about oral health. Parental participation may be particularly important for children from disadvantaged homes, where parents may not otherwise appreciate the importance of these behaviors.

During the primary school years, the dental-health education curriculum can support the type of learning that frames experiences for children in a way that builds on their prior knowledge and encourages them to explore and seek answers to new concepts by themselves. Ideally, such a curriculum should link lessons with the National Science Education Standards developed by the National Academy of Sciences for grades K–4. Children at this age can learn to brush plaque from their teeth, and to protect their teeth with a toothpaste containing fluoride. In addition, these children should receive dental care within a year after the eruption of their first permanent molars (age six or seven), so that protective sealants can be placed on the chewing surfaces. These children are old enough to understand that eating several times during the day can create as many problems as eating too many sugary or starchy foods, especially if they eat those foods as between-meal snacks. Curricula should help students see that choices they make can affect their overall oral health.

During adolescence, when children increasingly make their own decisions regarding both self-care and diet, the health education curriculum should reinforce oral hygiene, prevention of tobacco use, and healthful dietary practices. Interest in the social advantages of a healthy mouth can make students more receptive to information about oral hygiene techniques, as they can be shown that appropriate use of the toothbrush and dental floss can make their teeth more attractive, prevent bleeding gums, and reduce halitosis (bad breath). These are the years to reinforce healthful lifestyle behaviors that will have important consequences for maintaining oral health with minimal need for expensive dental care repair—behaviors that will provide benefits for a lifetime.

### **Summary**

The oral health of children is essential to their overall well-being. Education in schools prepares girls and boys to accept responsibility for their own health and to engage in personal care that will maintain and improve health. The use of precious classroom time to teach personal self-care skills, using the classroom

to deliver fluoride products, and using the school setting to screen and refer children for needed dental services can be justified by the impact on children's health and welfare. Dental health problems can profoundly affect children, impairing their performance as students, lowering self-esteem, and slowing personal development. In addition, failure to prevent dental diseases has a large effect on school attendance. It is estimated that more than 50 million school hours are lost nationally each year due to dental-related illness or care, a loss that could be sharply reduced with more timely receipt of preventive services.

*See also:* HEALTH EDUCATION, SCHOOL; HEALTH SERVICES, *subentry on* SCHOOL.

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WILLIAM R. MAAS

## DENTISTRY EDUCATION

There are fifty-four dental schools in the United States as of 2001. These schools share the goal of producing graduates who are dedicated to the highest standards of health involving the teeth, gums, and other hard and soft tissues of the mouth. Dentists are educated in the basic and clinical sciences and are capable of providing quality dental care in several specialty areas.

More than 17,000 students were enrolled in U.S. dental schools during the 1998-1999 academic year; 4,268 of them were first-year students. The first-year enrollees were selected from 9,477 individuals who applied for admission to dental schools. The process of applying to dental school involves several defined steps, including completion of specific undergraduate college courses, earning an acceptable score on the Dental Admissions Test (DAT), and submitting formal applications to selected schools.

### Undergraduate Requirements

The minimum requirement for admission to dental school is two years of undergraduate or pre dental education. Most dental schools, however, accept students who have three or four years of undergraduate education. Science courses are the mainstay of the pre dental education. Most dental schools require courses with laboratory experience in inorganic and organic chemistry, biology, and physics for admission to their degree-granting programs. In addition to these nearly universally required courses, some schools also require courses in mathematics, English composition, zoology, psychology, a foreign lan-

guage, social sciences, biochemistry, microbiology, and physiology. Because requirements vary from school to school, applicants should obtain specific information about required undergraduate courses from the individual dental schools.

The majority of applicants to dental schools major in science, pre dentistry, or pre medicine; however, majoring in a science is not a prerequisite for admission. The most important consideration at the majority of schools is whether the applicant has met the minimum course requirements. Most dental schools have established a minimum undergraduate grade point average (GPA) for admission. The lowest acceptable GPA for admission to a dental school is 2.0 (on a 4.0 scale). The preferred GPA for most dental schools is 3.0 or above.

### **The Dental Admissions Test**

The single mandatory requirement for admission to all U.S. dental schools is the DAT. Dental schools view the DAT, along with the undergraduate GPA, as a predictor of performance in dental education. This standardized test has been administered on a national basis since 1950. The test is designed to assess general academic ability, comprehension of scientific information, and perceptual ability. The DAT consists of four separate examinations of 100 multiple-choice questions, which test knowledge of the natural sciences, reading comprehension, quantitative reasoning, and perceptual ability. Most students who sit for the DAT have completed two or more years of undergraduate education. The American Association of Dental Schools (AADS) recommends taking the DAT one year prior to entering dental school. As of 1999 the DAT is administered only on the computer. The DAT can be taken on almost any day of the year at designated testing centers. Scoring of the DAT, which ranges from 1 to 30, is based on the number of correct answers. Nationally a score of 17 on the examination is considered average.

### **The Application Process**

The American Association of Dental Schools sponsors a centralized application service. Applicants to U.S. dental schools complete one application form, which (for a fee) is distributed in a standardized format to the schools designated by the applicant. Most participants in the AADS Application Service (AADSAS) complete and submit the application using the Internet.

Upon receiving the AADSAS application, admission committees at each school may ask appli-

cants to submit an institution-specific application form, letters of recommendation, and academic transcripts. The admission committee, generally composed of dental school faculty members, review the academic and biographical information provided by applicants. Results of the DAT, the GPA, and letters of recommendation are evaluated by the committee. Students who meet requirements for admission are invited for personal interviews. Some dental schools have special programs for underrepresented minority students, which are designed to enhance the diversity of the student population and increase racial and ethnic diversity within the profession. Admissions committees strive to select applicants whose academic and personal qualities appear to mesh with their school's program objectives and suggest the candidate has the potential to successfully complete the academic program.

Choosing and applying to dental school requires careful consideration of one's career goals, personal interests, and family circumstances. Applicants may choose to apply to traditional four-year dental programs that award the Doctor of Dental Surgery (D.D.S.) or Doctor of Dental Medicine (D.M.D.), which are equivalent degrees, or to combined-degree programs. Twenty-seven schools offer formal combined bachelor's and dental degree programs. Thirty-seven schools offer combined dental and graduate degrees. Although deadlines for submitting applications vary among dental schools, most range from October to March. Most schools fill their entering class for the next academic year by December.

Cost is also a major consideration for some applicants. Applicants to dental schools are encouraged to apply for financial assistance at the same time they apply for admission. Federal student financial aid programs, mostly loan programs, are the primary sources of support for dental education. Other sources of support include scholarships and grants, research fellowships, commitment service scholarships, and loan repayment programs. Applicants are advised to contact schools individually to obtain information about financial assistance.

### **Licensing and Certification**

Most students who enroll in dental schools participate in a traditional four-year academic program. During the first two years, dental students study the biological sciences to learn the function and structure of the human body. Courses offered during this phase of education include oral anatomy, oral pa-

thology, oral histology, and principles of oral diagnosis and treatment. The third and fourth years of study provide clinical training. During clinical training, students learn basic techniques for oral diagnosis, restorative dentistry, periodontics, oral surgery, orthodontics, pediatric dentistry, prosthodontics, endodontics, and other areas of treatment. Students acquire these skills by rotating through various dental clinics under the supervision of a clinical instructor.

To fulfill the requirements for licensure to practice dentistry, dental students take Part 1 and Part 2 of the National Board Dental Examination (NBDE) while in dental school. Part 1 is usually taken after the second year, following completion of all biological science courses. Part 1 assesses knowledge in four areas: anatomic sciences, biochemistry/physiology, microbiology/pathology, and dental anatomy and occlusion. Part 2 is usually taken during the last year of dental school and tests for knowledge in the dental sciences. Students are eligible to sit for Part 1 and Part 2 when the dean of the dental school or a designee of the dean certifies the student has successfully completed all subjects covered by the examinations. The minimum standard passing score on each part is 75. Licensure boards in all fifty states, the District of Columbia, and Puerto Rico and the U.S. Virgin Islands use the NBDE as a major portion of their requirements for licensure. All states also require a performance-based clinical examination for licensing.

Upon graduation from dental school, graduates may pursue licensure in general dentistry or one of nine recognized specialties: dental public health, endodontics, oral and maxillofacial pathology, oral and maxillofacial radiology, oral and maxillofacial surgery, orthodontics and dentofacial orthopedics, pediatric dentistry, periodontics, or prosthodontics. Dentists who pursue postdoctoral training through residencies and advanced education programs are encouraged to obtain certification from dental specialty boards.

*See also:* MEDICAL EDUCATION.

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JUANITA F. BUFORD

## DEPARTMENT CHAIRPERSON, THE

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Over time, the profile of academic department chairpersons, often referred to as chairs, has remained fairly constant. They are tenured faculty, primarily male, and between the ages of forty and sixty. For the most part, chairs are internal appointees, either selected by their deans or elected by their departments and then appointed by their deans for terms of usually three to five years.

In some colleges, faculty become chairs out of a sense of duty with little enthusiasm for the job. Many times these chairs see themselves as scholars who temporarily accept responsibility for administrative tasks so other professors can continue their teaching and scholarly pursuits. In fact, few department chairs view themselves as administrators, and less than one-third of them will seek a higher administrative position. Their primary function is to champion their faculty. They work for and with faculty, providing protection from central administrative intrusion and support for faculty academic endeavors.

In the first instance, department chairs guard faculty autonomy and academic freedom by filtering and interpreting demands placed on faculty and departments by college deans. In the second, they foster collegiality, honor specialized expertise, and promote excellence in teaching, research, and service to the department, college, and university by ensur-

ing that department work gets shared equitably, that a collaborative work environment exists, and that requisite resources are allocated properly.

The dilemma for many department chairs arises from their treatment as faculty in some venues, such as evaluation for promotion and merit, and as administrators in others, where eleven- or twelve-month contracts preclude research time. In addition, the task of carrying out administrative mandates can often pit them against their faculty peers.

### Chairperson Roles

Chairs engage in four primary categories of tasks: faculty development, management, scholarship, and leadership. Each role is important to success as a department chair.

**Faculty development.** As faculty developers, chairs are responsible for supervising the recruitment, selection, and evaluation of faculty and for enhancing faculty teaching, research, and morale through development and support. Certain behaviors help build and monitor an environment that prizes effective teaching, research excellence, and service to the community of scholars in which they reside. These actions fall into several categories that include, but are not limited to, selection, support, development, networking, recognition, rewarding, and reinforcement.

*Selection* refers to the establishment of deliberate and well thought out faculty hiring policies, which are in accord with departmental practices and governing procedures and clearly delineate what the department values. Chairs *support* faculty in their academic endeavors by encouraging faculty to attend learned societies and professional meetings, and by sponsoring activities such as team teaching, collaborative research efforts, and peer mentoring.

*Development* of faculty is closely related to providing support. Here, the chair shows concern for each faculty member's growth as both an instructional leader and an academic expert. Providing departmental reimbursement of the expenses that faculty incur while attending workshops and seminars on effective teaching or professional conferences where they present their research to peers outside their departments sends the message that excellence counts. So does creating individual development plans annually with faculty members.

When a department chair promotes *networking*, faculty can engage in dialogue with each other and

debate about effective practice. Mentoring also occurs, with veteran faculty teaching new colleagues the bureaucratic ropes of a department and an institution.

*Recognition* and *rewarding* go hand-in-hand. The first refers to such intangibles as praise, verbal communication, and expressions of appreciation. The second denotes tangible benefits, such as merit increases, promotions, better teaching assignments, and release time for pursuing research agendas that accrue to a faculty member as a result of good teaching, research, and departmental citizenship.

Finally, *reinforcement* is used to provide for continued success of the department. An effective chair builds on a foundation set by the development of sound plans for achieving teaching and research effectiveness and engaging in institutional service where progress gets monitored, recognized, and rewarded regularly.

**Management.** As managers, chairs oversee the day-to-day fiduciary requirements of the department. They assign duties to faculty, plan meetings, plan and evaluate curriculum, keep faculty informed of college priorities, and coordinate department activities. In addition, they manage the department's fiscal resources and non-academic staff, prepare budgets, keep accurate records, and serve as the department's representative to the administration. In some instances, chairs also select and supervise graduate students and attempt to obtain external funding for departmental projects.

**Scholarship.** The chair's role as a scholar is perhaps the most comfortable one and at the same time most frustrating. It is comfortable because it encompasses one's academic identity; it can be frustrating because time previously devoted to academic endeavors is now siphoned off by managerial and other duties. In order to retain stature as scholars, department chairs must maintain research plans, obtain resources for personal research, and remain current in their academic discipline.

**Leadership.** Leadership may well be considered by many academic department chairs the most elusive of their roles. Tasks related to leadership focus on either faculty or the department as a whole. The first group includes encouraging faculty research, publication, and professional development. Departmental leadership tasks aim at maintaining a conducive work environment and setting long-range departmental goals. An important part of this second lead-

ership role involves soliciting ideas from faculty to improve the department.

Leadership tasks are often summarily ignored by otherwise well-meaning department chairs. Many surmise that this occurs because chairs come to the position without leadership training or prior administrative experience, and without a clear understanding of the complexity of the role or the cost to their academic careers and personal lives that it can exact. Typically, chairs are not prepared or equipped to deal with increasing legal and organizational demands, and they harbor only vague notions of what it means to be entrepreneurial or responsive to changes in institutional direction. As a result, they misconstrue leadership to mean management, and in doing so, immerse themselves in a process of maintenance rather than one based on creativity and innovation.

### A Challenging, Important Position

Interestingly, experts estimate that more than 80 percent of all administrative decisions in universities take place at the department level. In the early twenty-first century, department chairs face a complex, changing environment. The success of a department chair depends upon department members acting with integrity; engaging in open communication; exhibiting a willingness to accept criticism; valuing human potential, growth, and accomplishment; and manifesting a collective spirit. Strong institutional cultures or governance policies and practices can prove strong inhibitors to any such efforts. Subcultures built on a tradition of mistrust may also render chairs powerless.

Proactive chairs undertake their tasks with the determination to develop faculty as researchers and teachers, the will to persevere as a scholar, a concern for the fiscal viability of the department, and the administrative savvy and foresight to ensure departmental regeneration. As such, department chairs fill one of the most important, yet most challenging, administrative positions in the academy.

*See also:* ACADEMIC DEAN, THE; BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; CHIEF ACADEMIC OFFICERS, COLLEGE AND UNIVERSITY; COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY SENATES, COLLEGE AND UNIVERSITY; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; PRESIDENCY, COLLEGE AND UNIVERSITY.

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## DEPARTMENT OF EDUCATION

*See:* U.S. DEPARTMENT OF EDUCATION.

## DEPRESSION

*See:* STRESS AND DEPRESSION.

## DEVELOPING NATIONS, APPLYING ECONOMIC ANALYSIS TO DECISION-MAKING IN

*See:* DECISION-MAKING IN DEVELOPING NATIONS, APPLYING ECONOMIC ANALYSIS TO.

## DEVELOPMENTAL THEORY

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### HISTORICAL OVERVIEW

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## HISTORICAL OVERVIEW

Developmental psychology attempts to understand the nature and sources of growth in children's cogni-

tive, language, and social skills. Within that context, there are four central themes that are unique to a developmental perspective and that bear on issues in childhood education. The first is the role of *nature versus nurture* in shaping development. Specifically, developmentalists want to know the contribution of genetic or maturational influences on development as well as the role played by environmental experiences. One important educational issue related to this topic is the question of whether a child's entrance age, or maturational level, is important for school success. For this and other important educational questions, nature and nurture interact in complex ways to shape a child's academic growth.

The second question focuses on whether children's growth proceeds in a continuous or more stage-like fashion. Stage theories, such as those proposed by Jean Piaget, Erik Erikson, and Sigmund Freud, contend that development progresses through maturationally determined stages. While this perspective underscores the contributions of both biology and the environment, a greater emphasis is placed on a maturationally predetermined progression through a fixed developmental sequence. Many researchers and theorists dispute such a rigid, step-like theory of development, emphasizing instead a more continuous, gradual process influenced equally by both brain maturation and environmental stimulation. Two important educational questions relevant to this issue are the extent to which children can be taught particular concepts or skills prior to entering a given developmental stage, and whether concepts learned in one domain are automatically transferred to other similar domains as a child reaches a new developmental stage.

A distinct but related theme centers on the existence of critical or sensitive periods in human development. A critical or sensitive period is defined as a time of growth during which an organism is maximally responsive to certain environmental or biological events. Critical periods emphasize the interaction of both nature and nurture, with environmental experiences (nurture) activating biologically programmed (nature) developmental changes, or, conversely, biologically determined changes enabling an organism to assimilate certain environmental experiences. In terms of language development, educators often wonder whether there is a critical or sensitive period during which children should learn a second language. While certain components of language, such as phonological process-

ing, are believed to be constrained by sensitive periods in development, other elements of language, such as vocabulary, clearly evolve over the lifespan.

The final theme concerns the importance of early experience in shaping later growth and development. Developmental scientists such as Mary Ainsworth, Alan Sroufe, and Freud emphasize the significance of early attachment and emotional conflict in predicting later psychological adjustment. It is argued that early risk factors have a more permanent influence on the course of development than later experiences. Early negative circumstances such as family conflict and social disadvantage have been linked to later delinquent behavior and school failure. Nevertheless, many children display resilience in the face of such early adverse social and environmental conditions. Thus, it is the cumulative impact of both early and later experiences that determines a child's developmental outcome. Children's literacy development, for example, is a product of both early experiences, such as parent-child book reading, as well as later experiences, such as reading instruction in school.

Modern developmental theory centers on these four central issues. An in-depth examination of these topics within a historical context will provide a more comprehensive understanding of developmental theory and its relevance for educational policies and practices.

### Nature Versus Nurture

Philosophers and psychologists have debated the relative roles of nature and nurture in human development for centuries. The seventeenth-century English philosopher John Locke described a young child's mind as a *tabula rasa* (blank slate) upon which the child's experiences are written. Jean-Jacques Rousseau, an eighteenth-century French philosopher, also argued that human development was primarily a function of experience. He believed in the existence of a *natural*, unspoiled state of humankind that is altered and corrupted by modern civilization. In contrast, nineteenth-century scientists such as Gregor Mendel, Charles Darwin, and Sir Francis Galton highlighted the importance of heredity in shaping development. While all of these scientists provided meaningful insights into the role of heredity and the environment, modern researchers have sought to further explore the dynamic interactions between nature and nurture that shape human development.

The twentieth century saw the evolution of various theories of development that differentially emphasized the role of biological versus environmental factors. These theories can be classified according to four major developmental frameworks: (1) environmental learning (empiricism), (2) biological maturation (nativism), (3) cultural context, and (4) constructivist.

The environmental-learning framework, best exemplified by the behaviorist theories of John B. Watson and B. F. Skinner, underscores the paramount importance of empirical learning in development. According to behaviorist theories, learning is characterized as the process by which an organism's behavior is shaped by experience. While environmental-learning theorists do not completely discount the role of innate factors, they argue that it is the external environment that has the greatest influence on development.

Biological-maturationist theories represent the opposing swing of the theoretical pendulum. This framework posits that biologically and genetically predetermined patterns of change have a greater impact on development than environmental influences. During the early twentieth century, theorists such as Freud and Arnold Gessell proposed that experiential influences were secondary to innate maturational mechanisms. This perspective regained popularity in the late twentieth and early twenty-first centuries as a result of major advances in genetic research, as well as the introduction of twin studies and behavioral genetics. Researchers such as Robert Plomin, Noam Chomsky, and Steven Pinker assert that human characteristics such as personality, intelligence, and language acquisition are, to a great extent, genetically grounded and maturationally controlled.

The cultural-context perspective of psychologists such as Lev Vygotsky and Barbara Rogoff contends that while both biological and experiential factors exert important influences on development, such factors are filtered through an individual's social and cultural context. Lev Vygotsky believed that the activities, symbols, and customs of particular social groups are formed by the collective social, cultural, and historical experiences of their ancestors. Through influences on social customs and practices, parenting, and the environment, culture shapes children's cognitive, language, and social development. For example, children's academic performance has been found to vary cross-culturally, as demonstrated

by studies showing that Asian immigrant children outperform their white peers in the United States, as well as the black-white test score gap.

Finally, the constructivist, or interactionist, approach stresses the balanced interaction of nature and nurture in forming the foundation for developmental change. In such a framework, both genetics and environment play an important role, and it is the dynamic relations among such internal and external influences that ultimately shape development. Piaget's theory of cognitive development asserts that children *construct* their knowledge based on the combination of input received from both maturational and environmental sources. Theorists such as Richard Lerner, Gilbert Gottlieb, Esther Thelen, and Linda Smith have taken this conceptualization one step further with the introduction of dynamic systems theories, which emphasize that the source of developmental change is in the process of bidirectional interaction among complex environmental and biological systems.

Frederick Morrison and colleagues have explored one facet of the nature-nurture question relevant to education by examining the importance of entrance age, or maturation level, on school readiness and academic growth. They found that younger first graders benefited as much from instruction in reading and math as older first graders, and that the younger students made significantly more progress than older kindergarteners of essentially the same age. Thus, entrance age—or maturation level—is not an important indicator of learning or academic risk.

The dispute over the relative importance of nature and nurture in children's development has endured for several centuries, and will no doubt continue to divide theorists for a long time to come. Increasingly, however, developmental scientists are concluding that, for most human characteristics, nature and nurture are inextricably linked and interact in complex ways to shape human growth.

### Stages in Development

According to Piaget's stage theory, children progress through a sequence of qualitative transformations, advancing from simple to more complex levels of thought. Piaget believed these transformations to be universal, innately programmed shifts in a child's perception and understanding of the world. He proposed four main stages of cognitive development:

sensorimotor, preoperational, concrete operational, and formal operational.

The transition from preoperational to concrete operational thought, at about five to seven years of age, corresponds with entry into formal schooling. While children in the preoperational stage are able to internally represent reality through the use of symbols such as language and mental images, concrete-operational children move beyond this simple mental representation of objects and actions and are able to logically integrate, order, and transform these objects and actions. For instance, because preoperational children cannot integrate information about height and width simultaneously, they are unable to recognize that water poured from a short, wide container into a tall, narrow container represents the same volume of water. Yet once they reach the *age of reason*, their maturational level converges with their accumulated experiences to facilitate a qualitative shift toward concrete operational thinking.

In addition to Piaget's stage theory of cognitive development, several others have proposed stage theories of psychosexual/personality development (Freud), psychosocial/identity development (Erikson), moral reasoning (Lawrence Kohlberg), and social development (Theory of Mind). These theories claim that children proceed through universal, age-specific stages of growth. Yet not all psychologists agree with such a rigid, step-like representation of development. Recently, neo-Piagetian theorists such as Kurt Fischer, Robbie Case, Annette Karmiloff-Smith, and others have attempted to reconcile the variability and domain-specificity observed in children's cognitive growth with Piaget's static stage theory.

In general, the neo-Piagetian perspective expands upon Piagetian theory by asserting that, while some general constraints or core capacities are hard-wired at birth, learning and experience lead to variation and domain-specificity in the acquisition of knowledge and skills. Cross-cultural studies have shown that varying cultural experiences result in the acquisition of different, contextually relevant skills. For example, children from a Mexican village known for its pottery-making learn conservation of solids (e.g., the fact that a ball of clay has the same mass even when it is molded into a long, thin roll) before conservation of number, which is generally mastered first in formally schooled children. Thus, most neo-Piagetians believe that while learning is constrained by innate mechanisms or information processing ca-

pacities, it proceeds in an individualized, domain-specific manner.

The question of whether certain knowledge or skills can be acquired before a child has reached a specified stage of development has also been addressed by neo-Piagetians. Renee Baillargeon conducted experiments with young infants and found that they recognize properties of object permanence prior to reaching that designated Piagetian stage of development. In addition, researchers have demonstrated that children can be taught concrete-operational concepts even before they have formally reached that stage of cognitive understanding—though these children are unable to transfer such knowledge outside the context of the testing situation.

Other theorists construe development as a constructive web (Kurt Fischer) or as a series of overlapping waves (Robert Siegler), rather than a sequence of qualitatively distinct steps. They recognize that cognitive development is the result of gradually acquired skills and abilities that build upon each other. Siegler, in particular, emphasizes the overlapping use of progressively more advanced strategies in the acquisition of skills such as addition. He found that children learning addition use various strategies in “overlapping waves,” such as finger counting, verbal counting in their head, the Min strategy (taking the larger of two numbers as a base and adding the smaller number to it) and, eventually, retrieval from memory. They gradually move from using easier, less efficient strategies to more difficult, but more efficient, strategies.

The neo-Piagetian view resembles the information-processing perspective in that both contend that cognitive development is limited by general constraints that are hard-wired at birth. Information-processing researchers such as Robert Kail, Wolfgang Schneider, and David Bjorklund argue that children's learning is restricted by the broad processing capacities of the brain, which improve with age. This perspective regards development as a more gradual, continuous process that evolves as children's processing speed or capacity for holding information increases. Thus, the step-like progression of development is rejected for a more linear representation.

### Critical Periods

A *critical*, or *sensitive* period is defined as a period of time in development when a particular environ-

mental experience or biological event has its greatest influence. Evidence demonstrates that some physiological and psychological processes are constrained by critical periods.

The existence of sensitive periods in children's psychological development has been noted in aspects of language acquisition. Children deprived of verbal stimulation during the first few years of life are severely impaired in their capacity to learn language and have great difficulty acquiring normal language later on. In addition, while young infants are able to distinguish among the variety of phonemes present in all human languages, after about six months of age the infant's knowledge becomes more focused, and they are only able to discriminate between the various phonemes in their own native language. Consequently, infants can learn any language that they are exposed to, yet it is more difficult for an older child or adult to completely master a non-native or secondary language.

Taken together, such information lends support to the argument that the first few years of life represent a sensitive period for certain aspects of language development. However, the fact that children continue to benefit from exposure to new vocabulary, semantics, and grammatical rules well into elementary school and beyond leads researchers to question whether all language learning is restricted by a sensitive period. During the first few years of life, children's brains grow and become more organized, specialized, and efficient. Yet brain growth and development does not end at three years of age, but rather continues throughout childhood, benefiting from the effects of schooling and other environmental stimulation. Thus, the question of when educators should teach children a second language depends on the components of language being considered (e.g., phonology, semantics, vocabulary, grammar) and the level of proficiency desired.

Another area of development believed to be constrained by a sensitive period is attachment. Psychologists such as John Bowlby, Ainsworth, Sroufe, Erikson, and Freud contend that children's early attachment to their primary caregiver (e.g., mother, father) during the first few years of life sets the foundation for their later socioemotional development. Research conducted by Harry Harlow on infant monkeys found that those deprived of maternal attachment prior to six months of age had a more difficult time recovering socially than those deprived of maternal contact after six months of age, thus lend-

ing support to the existence of a critical period for social development in monkeys. Yet many "natural experiments" looking at orphan children who have been deprived of adequate affection and sensitivity from a primary caregiver have found that, if removed from such a socioemotionally impoverished environment and placed in a loving adoptive home, most children are able to recover socially, emotionally, and cognitively. Thus, while early experiences can and do have an impact on later development, children often demonstrate resilience in response to adverse early experiences.

### Early Experience

Early experience is the consummate critical period. During the broad social reform of the late 1800s, scientists in the newly evolving field of developmental psychology brought attention to the harmful effects of child industrial labor and validated the importance of a healthy and nurturing environment for promotion of normal development. Throughout the twentieth century, psychologists such as Bowlby, Freud, Erikson, and Sroufe have stressed the profound importance of early socioemotional experiences on later psychological outcomes. In addition, scientists and policymakers have recognized the importance of early intervention programs, such as Head Start, that seek to enrich the cognitive development of socially disadvantaged children. During the late twentieth and early twenty-first centuries, public interest and government policy has advocated even earlier interventions, focusing on *zero to three* as the most important age range on which to concentrate resources. Yet, as theorists such as John Bruer argue, the importance of the first three years of life has reached "mythical" proportions. According to Bruer, it is important to recognize the cumulative nature of development, emphasizing both early and later experiences in shaping children's growth.

Evidence from researchers such as Baillargeon and Susan Rose has demonstrated that cognitive skills begin to develop very early in life, and that these skills follow rather stable trajectories over time. Such findings suggest that children's developmental course begins to solidify before they enter formal schooling, and even before they utter their first words.

A problem of particular interest is the poor state of literacy in America, and the impact of early experiences on literacy development. The amount of cognitive enrichment, verbal stimulation, and book

reading, for example, that children are exposed to at an early age is predictive of later literacy skills. Research conducted by Betty Hart and Todd Risley (1995) found a wide range of variability in young children's vocabulary skills as early as two years of age, and this variability was highly correlated with the number of words spoken by their parents. Socioeconomically disadvantaged toddlers were exposed to a substantially lower number of words per day as compared to toddlers from professional families. It is clear from such research that children's early experiences can lead to striking differences among children from enriching versus impoverished environments. Furthermore, studies have shown that the achievement gap between low- and high-performing children widens once children enter school.

With respect to socioemotional development, psychologists such as Freud, Sroufe, Bowlby, Erikson, and Mary Main have claimed that children's early attachment relationships with their primary caregivers lay the foundation for later social functioning. Researchers have found that securely attached children are more cooperative with their mothers, achieve higher cognitive and academic scores, are more curious, and maintain better relationships with teachers and peers, as compared to insecurely attached children. Taken together, such research affirms the impact of early attachment and socioemotional experiences on later psychosocial and cognitive development.

While early risk factors such as poor attachment and socioeconomic disadvantage can have long-term effects on children's cognitive, academic, social, and emotional development, children do demonstrate varying levels of vulnerability and resilience toward such early conditions. Differences in temperament and coping abilities, for example, can moderate the degree to which a child's early experiences forecast their later developmental outcomes. Furthermore, while there is ample evidence that early experiences have a substantial effect on later cognitive and social outcomes, the real question is whether early experiences are any more important than later experiences. Growing evidence suggests that it is the cumulative effects of both early and later experiences that define an individual's trajectories later in life.

In summary, developmental theory pursues four central themes: (1) the importance of nature versus nurture, (2) stages in development, (3) the

existence of critical or sensitive periods, and (4) the impact of early experience. Significant progress has been made over the last thirty years on each of these topics, resulting in a more complex view of human psychological growth and the forces that shape it. With regard to educational practice, modern developmental theory stresses that rigid notions of genetic determinism, stages, critical periods, or the lasting impact of early experience are being replaced by more flexible views that emphasize the malleability of human nature and its potential for change.

*See also:* DEVELOPMENTAL THEORY, *subentries on* COGNITIVE AND INFORMATION PROCESSING, EVOLUTIONARY APPROACH, VYGOTSKIAN THEORY.

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## COGNITIVE AND INFORMATION PROCESSING

Cognitive development typically refers to age-related changes in knowledge and acts of knowing, such as perceiving, remembering, problem solving, reasoning, and understanding. The development of cognition is studied most frequently in infants, children, and adolescents, where changes often are relatively rapid and striking. Many researchers also study cog-

nitive development in aging adults, in children and adults during recovery of function following brain damage, and in a variety of species other than humans. Since the 1890s, when researchers such as James Mark Baldwin and Alfred Binet established cognitive development as a substantive area of inquiry, two overlapping goals have been evident. One goal is to provide insights into how complex, organized knowledge systems develop, an issue with a long history in philosophy and science. The other goal is to provide insights into optimizing human development, especially with respect to education. Researchers have adopted many different theoretical approaches to the study of cognitive development over the past 100 years, and they continue to do so. During the latter part of the twentieth century a relatively new approach, information processing, gained a degree of ascendancy because of its potential for providing rich insights into how cognition develops and how instruction might be improved.

### Assumptions and Findings

In the 1950s and 1960s researchers began to notice similarities between human thinking and the new computers of that era, which could manipulate not only numbers but also a variety of nonnumeric symbols. Allen Newell and Herbert Simon were among the first to suggest that humans and computers could both be viewed as general symbol manipulators, and that knowledge of computers could be used as a metaphor for exploring human cognition. The argument that emerged was not that humans are computers, but rather that computers could be used as a source of ideas about how human cognition works and also as a tool for expressing ideas about how humans process information mentally. Information-processing studies of cognition and its development began to flourish in the 1960s and 1970s.

Information processing is not a theory of cognition but rather a general framework that comprises a family of theories sharing certain core assumptions. One assumption is that all cognitive activities involve mental processes that operate over real time on internal, symbolic representations of information. That is, information of all sorts—including the words on this page, memories of past events, knowledge about friends or world events, and abstract concepts such as "justice"—are all coded as mental representations with certain structural properties.

When one sees a painting for the first time, for example, perceptual processes code new sensory in-

formation and may also create more elaborate representations of what is seen. Memory processes store these representations and also retrieve previously developed representations that can be useful for interpreting the painting. Problem-solving and reasoning processes operate to help understand the artist's intent in creating the painting. From an information-processing view, one does not simply *experience* the painting. Instead, one is engaged in a series of events in which mental representations are created and manipulated by processes operating over time. Information-processing researchers seek to identify these processes and representations and to understand their properties. Researchers therefore focus less on *whether* children solve problems correctly and more on *how* problems are solved. This approach has led to a rich set of findings about the skills and knowledge children acquire on specific tasks in such domains as reading, mathematics, and scientific thinking.

A second assumption is that these processes and representations exist within an organized system with definable properties and constraints. An important goal of research is to define the *cognitive architecture*, that is, the general structural characteristics of the information-processing system. For example, the amount of information that can be activated at any one time is limited, as is often evident when people try to remember new telephone numbers or solve difficult problems. This phenomenon is often interpreted in terms of *working memory*, an important, limited capacity system for manipulating information. Research on working memory has revealed the operation of three interacting components: a *phonological loop* for storing speech-based information; a *visual-spatial sketchpad* for storing visual information; and an *executive system* for combining information from various sources to solve problems and create plans. New research, such as that reported in 2000 by Susan E. Gathercole and Susan J. Pickering, is beginning to link developmental change and individual differences in cognitive performance to changes in these components of working memory. Another constraint on cognitive processing is the speed at which processes operate. In general, faster processing speed should enable more competent performance on particular tasks. Not only does general processing speed increase from early childhood through adolescence, but as researcher Robert Kail reported in 1991, it does so at a consistent and well-defined rate of change. The

reasons for this phenomenon still are not understood.

A third assumption is that cognitive development occurs via self-modification of the information-processing system. Although environmental events critically influence development, the mechanisms by which the information-processing system changes over time are assumed to be internal to the system itself. A number of such mechanisms have been proposed. For example, as children develop some processes become *automatized* in the sense that they are executed more rapidly and with less demand on limited attentional capacity than earlier in development. According to some theories, increasing automatization allows children to operate at higher levels of complexity and flexibility. Knowledge modification processes, such as *generalization* and *discrimination*, operate to create more powerful and accurate processes and representations. A critical task for developmental theorists is defining a cognitive architecture and self-modification mechanisms that, together, can account for the striking changes in thinking that emerge as children develop.

Information-processing theories of development differ significantly from other approaches in fundamental ways. They are not *phenomenological* because they are not limited to conscious experience, and they are not *neurological* in that they do not rely on neural or biochemical mechanisms as explanations. They differ from traditional stimulus-responses theories because of their emphasis on detailed descriptions of mental processes and representations that interact over time. Unlike *structural* theories, such as that of Jean Piaget, the focus is on very specific processes and representations that underlie performance. Information-processing theories often can be amalgamated to some extent with these other approaches, however. In contemporary neuroscience research, for example, information-processing concepts, such as working memory and processing speed, are often used to explore relations between brain and behavior.

## Methods

The assumptions of information processing have led researchers to adapt or create methods appropriate for identifying processes, representations, and characteristics of cognitive architecture. Given the emphasis on temporal properties of processes, researchers have developed highly specialized, *chronometric methods* for measuring the speed of partic-

ular mental processes. With *rule assessment*, tasks are structured so that patterns of responses can be used to identify particular processes and decision rules. *Protocol analysis* is used to examine verbal self-reports, provided by participants as they solve problems, for evidence about solution procedures, internal representations, and processing constraints. When applied to the study of development, these methods need to be used carefully so that they are equally sensitive to important aspects of performance at different developmental levels.

Information-processing researchers also have adopted a number of distinctive methods for illustrating or representing their theories. Because of the emphasis on specific processes and their organization, flow charts and diagrams often are used to indicate how processing is structured. Some researchers take a more formal approach: They implement their theories of cognitive development as computer programs. To the extent that the programs mimic children's behavior and development, researchers receive some support for the veridicality of their theory. If, however, the program crashes, then clearly the theory is lacking.

### Educational Implications

Ideally, educational assessment would provide specific insights about how to adapt instruction to individual children so as to optimize learning. In principle, information processing should provide a basis for assessing specific strengths and weaknesses and for identifying specific processes and representations that can be targeted for instruction. Teachers want their students to answer problems correctly, but measuring achievement only in terms of correct answers can be misleading: Often children can answer a problem correctly but for the wrong reasons, or incorrectly but for reasons that make sense. More important than answering correctly, in terms of educational goals, are whether students use appropriate solution strategies and whether they understand what they are doing. The value of information-processing research for education lies in its inherent distinction between the *products* of children's thinking (i.e., *whether* children solve problems correctly) and the *processes* (i.e., *how* problems are solved). Research on the development of school-related knowledge and skills is beginning to yield impressive advances.

In studies of young children's arithmetic, for example, researchers have identified a wide range of

solution procedures, correct and incorrect, that children use to solve problems. To account for how children select among these procedures, how procedures change as children gain experience, and how some new procedures arise, Robert S. Siegler and Christopher Shipley (1995) developed an information-processing model that includes assumptions about an associative memory for number facts, a memory system for recording the results of past solutions, and a system for deciding whether and how to apply particular procedures. This model accounts extremely well for some aspects of children's development in arithmetic, and it has some specific instructional implications. For example, according to this model, associating problems and correct solutions is critical for later development of efficient solution procedures. Discouraging children from counting accurately with their fingers may increase the chance of incorrect associations developing and thus delay the use of more advanced procedures. The model is far from complete, but it provides a coherent basis for analyzing how children solve arithmetic problems, how and why change occurs, and how instruction might be adapted to the needs of individual children.

Similar progress has been made in other areas. Reading, for example, is a complex skill consisting of numerous components, and information-processing methods have been useful for identifying and measuring these components. One such component is phonological awareness, which includes the ability to identify and manipulate phonemes. Lynette Bradley and Peter E. Bryant (1983) found that instruction designed to enhance phonological awareness in young children strongly and positively influences the rate at which they become effective readers. Problem solving is critical to success in many academic domains. Amarjit S. Dhillon (1998) studied the behavior of experts and novices as they solved physics problems and found that their strategies could be analyzed in terms of fourteen processes or activities. Experts and novices differed systematically in the use and sequence of these activities, a finding that provides insights into understanding students' knowledge in terms of specific concepts and procedures. The results of this research were used to develop problem-solving instruction for high school and university students.

Aside from its use in specific academic domains, information processing also has provided a basis for assessing broad intellectual skills. A new generation

of tests is emerging that are constructed so that children's performance can be interpreted in terms of relatively specific processing skills that, in principle, may be amenable to targeted instruction. One example is the Cognitive Assessment System (CAS), developed by Jagannath P. Das and Jack A. Naglieri, in which tasks from information-processing research have been adapted to measure four aspects of processing (planning, attention, simultaneous processing, and successive processing) that are emphasized in a comprehensive theory developed by the neuropsychologist Aleksandr Luria. Because of the links between theory and measures, the CAS has proved useful in interpreting performance for children with or without learning disabilities and for developing specific instructional interventions.

### Prospects

Information processing is by no means the only approach for studying cognitive development, but its assumptions and methods have proved helpful in exploring the many ways in which children's thinking changes with development. Its greatest utility to date has been in studying task-specific or domain-specific processes and representations. It has been applied with somewhat less success to domain-general characteristics of development, as well as to topics such as motivation and affect that are critical to understanding development and optimizing education. At this point, it is not clear whether these apparent deficiencies are inherent to information processing or whether they are simply a result of how information-processing concepts and methods have been applied to date. The information-processing approach is challenged by connectionist and dynamic systems theories that do not share the assumptions about symbolic representations and discrete processes; by ecological theories that focus on environmental factors and their structure; by neuroscientific theories that provide explanations in terms of neural functioning and neuroanatomy; and by traditional theories, such as those of Jean Piaget and Lev Vygotsky, in which a more general level of analysis and explanation is emphasized. The extent to which information processing succeeds will depend, in part, on the extent to which its practitioners can adapt to accommodate these challenges and contribute to research that enriches educational assessment and instruction.

*See also:* LEARNING; TAXONOMIES OF EDUCATIONAL OBJECTIVES.

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## EVOLUTIONARY APPROACH

The English naturalist Charles Darwin's principles of natural selection provide the theoretical foundation for the biological sciences and are frequently used to address issues in the medical and social sciences. Evolutionary theory can also be used to understand human development in general and children's academic development in particular.

### Life History

Biologists study development by documenting species' life history. Life history refers to the typical ages associated with developmental milestones, such as length of gestation, age of weaning, and life span. Certain life history patterns have been found in many different species. For instance, a long developmental period is common for species that have large brains and sophisticated cognitive skills, and live in complex social groups. The implication is that the demands of living in a complex social world resulted in evolutionary expansions of the developmental period and brain size, and resulted in more complex social-cognitive abilities. The larger brain supports complex social-cognitive abilities, such as language in humans. The long developmental period allows the individual to engage in activities that refine social and other (e.g., foraging) skills.

**Human life history.** The same life history perspective has been applied to human development and is understood in the context of hunter-gatherer societies, that is, societies that are similar to those in which humans evolved. In these societies, there are five distinct periods in the human life cycle. *Infancy* is the time of breast-feeding, and lasts until the age of three years. *Childhood* begins with weaning and lasts until age seven. During this four-year span, children are still heavily dependent on parents, but are becoming increasingly independent. *Juvenility* ranges from seven years until the onset of puberty, which often does not occur until the mid-teens in hunter-gatherer societies. *Adolescence* is the time of

physical maturation, and *adulthood* is the period of mature reproductive activities. These include finding a mate and providing for the well-being of children. Each of these periods is characterized by different social relationships and degree of cognitive maturity.

**Social development.** Social relationships in infancy and childhood function to allow normal physical development (e.g., rapid brain development) and to reduce mortality risks. In hunter-gatherer societies, a high percentage (50%) of children die before reaching juvenility. Social relationships and other activities during juvenility involve a preparation for later survival-related (e.g., hunting) and reproductive activities. Social relationships in adolescence and adulthood are focused more directly on survival and reproduction.

The primary relationship during infancy and childhood is between the child and his mother, although the father is also heavily involved in some cultures. The nature of this relationship is termed *attachment*. Attachment-related behaviors, such as separation anxiety, keep the child close to his parents and thus safe. Play becomes an important activity during childhood, and models adult activities, as in play parenting. During juvenility, the focus of social relationships shifts from parents to peers. Peer relationships mirror and thus provide a context for practicing adult social activities. As an example, boys engage in play fighting and organize themselves into large groups that then compete against other groups of boys. These activities result in the practice and refinement of the social and cognitive skills associated with primitive warfare.

Adolescence is defined by the physical changes that prepare the individual for reproductive activities, such as bearing children or competing for mates. During this time, juvenile play activities become increasingly adult-like. Early adulthood is the reproductive period and in hunter-gatherer societies usually begins in the late teens for girls and a few years later (sometimes much later) for boys. In hunter-gatherer societies, many men will have more than one wife and thus continue to reproduce into old age. Older women, in contrast, focus their activities on raising their later-borne children and investing in the well-being of grandchildren.

**Cognitive development.** In hunter-gatherer societies, people have to learn how to deal with other people; use the local ecology to find food and medicine;

navigate from one place to another; and use tools. The cognitive skills that allow people to engage in social activities and maintain relationships are called *folk psychology*. These skills include language, understanding body language and facial expressions, as well as theory of mind. Theory of mind is the ability to make inferences about what other people are thinking or feeling and predicting their later behavior. The cognitive skills that allow people to understand the behavior, growth patterns, and potential uses of plants and animals for food and medicine are called *folk biology*. *Folk physics* includes the ability to move about in the physical environment, remember the location of things in the environment, and know how to use objects as tools.

The basic skeletal knowledge that supports these cognitive abilities appears to be innate, but must be fleshed out during development. Infants, for instance, automatically attend to human voices and faces, and toddlers easily learn human language through innate brain and cognitive systems that guide children's attention to other people and process social information (e.g., language sounds). However, these brain and cognitive systems are immature, and require extended exposure to language, human faces, and so forth to develop appropriately. Children's play and other activities, such as exploration of the environment and objects, provide the experiences needed to flesh out these innate skeletal systems. The result is an elaboration of the systems that support folk psychology, folk biology, and folk physics. The elaboration results in the adaptation of these brain and cognitive systems to local conditions, such as the local language and the plants and animals in the local ecology.

### Implications for Education

The folk psychological, biological, and physical knowledge that emerges through an interaction between innate brain and cognitive systems on the one hand and children's play and exploration on the other is not sufficient for living in industrial societies. In industrial societies, schools exist to facilitate the acquisition of competencies, such as reading, that are essential for living in these societies, but are not part of our evolutionary heritage. Several educational issues arise from this perspective.

**Academic development.** The evolved cognitive competencies that comprise folk psychology, biology, and physics are called *biologically primary abilities*, and skills that build upon these primary abilities

but are principally cultural inventions, such as reading, are *biologically secondary abilities*. The mechanisms by which evolved systems are adapted to produce secondary competencies are not yet fully understood, but involve, in part, co-opting primary systems for secondary learning, and access to knowledge built into primary systems.

As an example of co-opting, consider the relation between language, a primary ability, and reading, a secondary ability. The acquisition of reading-related abilities, such as word decoding, involves co-opting language and language-related systems, among others (e.g., visual scanning). The result is that these systems can be used for purposes for which they were not designed. For instance, individual differences in the sensitivity of kindergarten children's phonological processing systems, which are part of the language domain, are strongly predictive of the ease with which basic reading skills are acquired in first grade. In other words, the evolutionary pressures that selected for phonological processing, such as the ability to segment language sounds, were unrelated to reading, but these systems are used, or co-opted, when children learn how to read.

As an example of using implicit knowledge for secondary learning, consider that the development of geometry may have been initially based on access to knowledge built into the primary navigation system. In cataloging the basic principles of classical geometry, Euclid started with self-evident truths—implicit navigational knowledge—and then proceeded to prove the rest by logic, that is, by means of fundamental theorems. For example, the implicit understanding that the fastest way to get from one place to another is to go “as the crow flies,” was made explicit in the formal Euclidean postulate, “a line can be drawn from any point to any point,” that is, a line is a straight line. The former reflects an evolved but implicit understanding of how to quickly get from one place to another and is knowledge that is built into the brain and cognitive systems that support navigation. The latter was discovered, that is, made explicit, by Euclid. Once explicit, this knowledge was integrated into the formal discipline of geometry and became socially transmittable and teachable.

**Motivation to learn.** Another implication of the evolutionary perspective is that the motivation to acquire school-taught secondary abilities is based on the requirements of the wider society and not on the

inherent interests of children. Given the relatively recent advent of near-universal schooling in contemporary societies, there is no reason to believe that all children are inherently motivated to acquire the skills that are taught in school, nor is school learning likely to be inherently interesting or enjoyable. Stated differently, an important difference between primary and secondary abilities is the level and source of motivation to engage in the activities needed for their acquisition.

This does not preclude the self-motivated engagement in some secondary activities. Many children and adults are motivated to read. The motivation to read, however, is driven by the content of what is being read rather than by the process itself. In fact, the content of many stories and other secondary activities (e.g., video games) appears to reflect evolutionarily relevant themes that motivate engagement in these activities, such as social relationships and social competition. Furthermore, the finding that intellectual curiosity is a basic dimension of human personality suggests that there will be many intellectually curious individuals who will pursue secondary activities. Euclid's investment in formalizing the principles of geometry is one example. However, this type of discovery typically reflects the activities and insights of only a few individuals, and the associated advances spread through the larger society only by means of informal (e.g., newspapers) and formal education. The point is, the motivation to engage in the activities that will promote the acquisition of secondary abilities is not likely to be universal.

**Instructional activities.** The basic brain and cognitive systems that support the acquisition of primary abilities are inherent, and children are inherently motivated to seek out experiences, through social play, for example, that ensure the appropriate fleshing out and development of these systems. In contrast, there is no inherent structure supporting the acquisition of secondary abilities, nor are most children inherently motivated to engage in the activities that are necessary for secondary learning. Although this conclusion might seem self-evident, it runs counter to many assumptions about children's learning in contemporary education; for example, that children are inherently motivated to learn secondary abilities and will do so through activities that involve play and social discourse.

Thus, from the evolutionary perspective, one essential goal of schooling is to provide content, orga-

nization, and structure to the teaching of secondary abilities, features that have been provided by evolution to primary abilities. It cannot be assumed that children's inherent interests (e.g., social relationships) and preferred learning activities (e.g., play) will be sufficient for the acquisition of secondary abilities. Instruction must often involve engaging children in activities that facilitate the acquisition of secondary abilities, whether or not children would naturally engage in these activities. This does not mean that play and social activities cannot be used to engage children in some forms of secondary learning. It does, however, mean that it is very unlikely that the mastery of many secondary domains (e.g., reading or algebra) will occur with only these types of primary activities. In fact, research in cognitive and educational psychology indicates that some forms of secondary learning will require activities that differ from those associated with fleshing out primary abilities. These would include, among others, direct instruction, where teachers provide the goals, organization, and structure to instructional activities and explicitly teach basic competencies, such as how to sound out unfamiliar words or manipulate algebraic equations. In closing, the evolution of brain, cognition, behavior, and motivation has profound but largely unrecognized implications for educational theory and practice.

*See also:* CHILD DEVELOPMENT, STAGES OF GROWTH.

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## VYGOTSKIAN THEORY

Lev Semenovich Vygotsky was born 1896 in Orsha (in what is now Belarus), and grew up in Gomel in a prosperous Jewish family in the western provinces of the Russian Empire. His higher education was at Moscow University, despite the fact that in Russia under Czar Nicholas II there were strict laws limiting how many Jewish people could receive advanced degrees. His university studies focused on medicine,

and later law. In addition, he studied in an independent university majoring in philosophy and history. After working as a schoolteacher and then as an instructor in a teacher training college, Vygotsky turned to psychology. His career as a psychologist spanned just ten years, ending with his death in 1934. In that time Lev Vygotsky produced about one hundred books and papers, many of which have only recently been published and translated into English. At the time of his death, Lev Vygotsky’s work included numerous powerful ideas, however, many were not fully developed and some were even speculative. His students, including most notably Alexander Luria, Alexei Leontiev, Daniel Elkonin, and Alexander Zaporozhets, and others (in Russia and throughout the world) have been responsible for further elaborating many of the ideas of his initial papers.

In the last decade, the intellectual climate of educational theory in the United States has had been dramatically influenced by the work of Lev Vygotsky. His work was first introduced to the West in 1962 through the translation of *Thought and Language*. Many Westerners learned about the basic ideas of cultural-historical theory from *Mind in Society*, edited by James Wertsch and published in 1978. This brief entry presents the major ideas pioneered by Vygotsky and successors, along with an overview of contemporary Vygotskian educational efforts taking place in Russia and the United States.

Vygotsky’s theory is known in the West as sociocultural, although Vygotsky himself and his close colleagues preferred to describe it as *cultural-historical*, emphasizing the dual focus of this theory: the history of human development and the cultural tools that shape this development. At the core of this theory is Vygotsky’s belief that human development—child development as well as the development of all humankind—is the result of interactions between people and their social environment. These interactions are not limited to actual people but also involve cultural artifacts, mainly language-based (written languages, number systems, various signs, and symbols). Many of these cultural artifacts serve a dual purpose: not only do they make possible the integration of a growing child into the culture but they also transform the very way the child’s mind is being formed. Vygotsky refers to these as special cultural tools, acquisition of which extends one’s mental capacities, making individuals the master of their own behavior. In the course of child development,

a child typically learns how to use these cultural tools through interactions with parents, teachers, or more experienced peers. As a result of using these tools—first in cooperation with others and later independently—the child develops higher mental functions: complex mental processes that are intentional, self-regulated, and mediated by language and other sign systems. Examples of these higher mental functions include focused attention, deliberate memory, and verbal thinking. According to Vygotsky, although all human beings are capable of developing these functions, the particular structure and content of higher mental functions depend on specific social interactions, as determined by culture in general and by each person's unique social situation of development.

Of all the processes involved in acquisition of mental tools, Vygotsky focused primarily on the use of language (it was through the work of his colleagues and students that acquisition of non-verbal mental tools was studied). For him, language is both the most important mental tool and a medium facilitating the acquisition of other mental tools. One of the best-known concepts that illustrates Vygotsky's view of language is the concept of *private speech*. Private speech, or self-talk, originates in social speech, the initial form of speech that is directed to other people. Although it retains the audible characteristic of social speech, private speech changes its function. It now becomes speech directed to oneself rather than speech that is regulated or directed by a more capable person. Noticing that children tend to increase the amount of self-talk when facing more challenging tasks, Vygotsky hypothesized that at some point, they start using private speech to organize (plan, direct, or evaluate) their behaviors. The use of private speech peaks during preschool years and then decreases. Vygotsky associates this decrease with private speech turning first into inner speech and then into verbal thinking. This evolution of speech—from social to self-directed to internalized—exemplifies the path of all higher mental functions, which was described by Vygotsky in his “law of the development of higher mental functions.” According to this law, each higher mental function appears twice in the course of child development: first as shared or carried out by an individual jointly with other people—*intersubjective*—and then as appropriated or internalized by this individual and used independently—*intrasubjective*.

Vygotsky's view of child development and education is an extension of his general approach to the development of higher mental functions. Consistent with his definition of development as socially determined, Vygotsky introduced a new relationship between education, learning, and development. Vygotsky argued against the theorists who believed that child development occurs spontaneously and is driven by the processes of maturation and cannot be affected by education. Neither did he agree with those who claimed that instruction could alter development at any time regardless of a child's age or capacities. Instead, he proposed a more complex and dynamic relationship between learning and development that is determined by what he termed a child's *zone of proximal development* (ZPD).

Vygotsky's theory is based on the idea that learning can lead development, and development can lead learning, and this process takes place through a dynamic interrelationship. The ZPD is the area between a learner's level of independent performance (often called developmental level) and the level of assisted performance—what the child can do with support. Independent performance is the best the learner can do without help, and assisted performance is the maximum the learner can achieve with help. By observing assisted performance one can investigate a learner's potential for current highest level of functioning. ZPD reveals the learner's potential and is realized in interactions with knowledgeable others or in other supportive contexts (such as make-believe play for preschool children). By providing assistance to learners within their ZPD we are supporting their growth.

Through identification of a learner's ZPD, teachers find out what knowledge, skills, and understandings have not yet surfaced for the learner but are on the edge of emergence. Teachers also study ways to engage the learner in shared or co-operative learning experience through participation in the learner's ZPD. This involves doing more than completing a task in a combined fashion; it involves developing the learner's higher mental functions, such as the ability to plan, evaluate, memorize, and reason. In *How Children Think and Learn* (1998), David Wood points out: “By *reminding* children we are helping them to bring to mind and exploit those aspects of their past experience that we (as experts) but not they (as novices) know to be *relevant* to what they are currently trying to do” (p. 97).

### Applications in Contemporary Russia

Examples of work being done in contemporary Russia within Vygotsky's cultural-historical paradigm are too numerous to be listed in a short article. One could say that most of Vygotsky's ideas, suppositions, and insights were further elaborated upon, verified in empirical studies, and often implemented into practical applications. Some of these ideas became starting points to new theories such as the theory of periods in child development developed by Daniel Elkonin, based on Vygotsky's ideas of psychological age and leading activity. Other theories developed by Vygotsky's colleagues and students can be better described as Vygotsky-inspired in a broader sense rather than purely Vygotskian. Among these are Alexei Leont'ev's activity theory and Piotr Gal'perin's theory of step-by-step formation of mental actions. Common features of most of these theories can be traced back to Vygotsky; these include beliefs in social and cultural determination of child development and in the power of education to shape this development. Because of these assumptions, post-Vygotskians were generally successful in implementing their theoretical principles in classroom practice to create innovative educational programs. Examples of those include a number of preschool and kindergarten curricula based on theories of Alexander Zaporozhets and his student Leonid Venger and the system of "developmental education" based on the work of Daniel Elkonin and his student Vasili Davidov, which has been implemented in curricula for school-aged children from primary grades through high school.

### Applications in the United States

As mentioned above, this entry focuses on just a couple of examples of Vygotsky-inspired educational work in the United States. For more perspectives, see the work of Michael Cole and colleagues in *The Construction Zone: Working for Cognitive Change in School*, and Roland G. Sharp and Ronald Gallimore's 1988 book, *Rousing Minds to Life: Teaching, Learning and Schooling in Social Context*. The following are descriptions of two examples: Tools of the Mind, which is an early childhood education program, and Reciprocal Reading, used with older children.

**Tools of the mind.** This first example might be considered a transitional model. Though the work is being developed in the United States, one of the lead authors is Russian and has worked at the Institute

of Preschool Education with Lev Vygotsky's student Alexander Zaporozhets. Elena Bodrova and Deborah Leong have developed an early childhood education model titled, *Tools of the Mind* (1996, 2001). The model has a Vygotskian theoretical basis: development cannot be separated from its social context; learning can lead development; language plays a central role in mental development; teaching should provide organized experiences that are in advance of a child's independent functioning but still remain within the child's ZPD; and teachers should encourage (and even create) opportunities for problem-solving. Implemented in Head Start, preschools, and kindergartens, the program focuses on play, the leading activity of this age. In addition, there are a number of activities designed to promote symbolic representation and self-regulation, such as play planning using Scaffolded Writing, and specially designed artifacts or tools, including the Sound Map, the purpose of which is to support young children in their beginning efforts to spell.

**Reciprocal listening/reading.** A second program motivated by the work of Lev Vygotsky and developed in the United States is *reciprocal listening/reading*, which was introduced in the mid-1980s by Annemarie Sullivan Palincsar and Ann Brown. It is a strategy for teaching reading comprehension that addresses children's need to examine the background of a text and particular words while learning to monitor their own reading process. Children are taught to interact with text and as a result to regulate their own thinking about the text as they read and listen (when being read to).

The ties of this program to Vygotsky lie in the belief that development of complex comprehension strategies has to start in a cooperative activity (intersubjective) and then move inward for use by a student (intrasubjective). Reciprocal teaching provides guided practice in the use of four strategies—predicting, question generating, summarizing, and clarifying—that are designed to enhance children's ability to construct the meaning of text. These strategies for interacting with the text are most often used automatically and soundlessly by readers and listeners. In reciprocal reading and listening, the strategies are vocalized and made available to other learners. To engage in reciprocal teaching dialogues, the children and their teacher read a piece of common text. This reading may be done as a read-along, a silent reading, or an oral reading, depending on the decoding abilities of the children and the level of the text.

The children and the teacher take turns leading the discussion of segments of the text, using strategies to support their discussion. The teacher uses the strategies and the children are encouraged to play the “teacher role” and to interact with the text. Children then learn new ways of interacting with the text by implementing these previously unobserved strategies and being an integral part of what is being taught in their role as “teacher.” Following Vygotskian theory, the children begin to internalize the processes until they become an automatic part of their internal reading and listening comprehension activities. An ultimate purpose of the discussion is the application of the strategies for the purpose of coming to a shared sense of the meaning of the text at hand.

*See also:* LEARNING; VYGOTSKY, LEV.

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#### DEWEY, JOHN (1859–1952)

Throughout the United States and the world at large, the name of John Dewey has become synonymous with the Progressive education movement. Dewey has been generally recognized as the most renowned and influential American philosopher of education.

He was born in 1859 in Burlington, Vermont, and he died in New York City in 1952. During his lifetime the United States developed from a simple

frontier-agricultural society to a complex urban-industrial nation, and Dewey developed his educational ideas largely in response to this rapid and wrenching period of cultural change. His father, whose ancestors came to America in 1630, was the proprietor of Burlington's general store, and his mother was the daughter of a local judge. John, the third of their four sons, was a shy boy and an average student. He delivered newspapers, did his chores, and enjoyed exploring the woodlands and waterways around Burlington. His father hoped that John might become a mechanic, and it is quite possible that John might not have gone to college if the University of Vermont had not been located just down the street. There, after two years of average work, he graduated first in a class of 18 in 1879.

There were few jobs for college graduates in Burlington, and Dewey spent three anxious months searching for work. Finally, a cousin who was the principal of a high school in South Oil City, Pennsylvania, offered him a teaching position which paid \$40 a month. After two years of teaching high school Latin, algebra, and science, Dewey returned to Burlington to teach in a rural school closer to home.

With the encouragement of H. A. P. Torrey, his former philosophy professor at the University of Vermont, Dewey wrote three philosophical essays (1882a; 1882b; 1883) which were accepted for publication in the *Journal of Speculative Philosophy*, whose editor, William Torrey Harris, hailed them as the products of a first-rate philosophical mind. With this taste of success and a \$500 loan from his aunt, Dewey left teaching to do graduate work at Johns Hopkins University. There he studied philosophy—which at that time and place primarily meant Hegelian philosophy and German idealism—and wrote his dissertation on the psychology of Kant.

After he received the doctorate in 1884, Dewey was offered a \$900-a-year instructorship in philosophy and psychology at the University of Michigan. In his first year at Michigan, Dewey not only taught but also produced his first major book, *Psychology* (1887). In addition, he met, wooed, and married Alice Chipman, a student at Michigan who was herself a former schoolteacher. Fatherhood and ten years' teaching experience helped his interest in psychology and philosophy to merge with his growing interest in education.

In 1894 the University of Chicago offered Dewey the chairmanship of the department of phi-

losophy, psychology, and pedagogy. At Chicago he established the now-famous laboratory school (commonly known as the Dewey School), where he scientifically tested, modified, and developed his psychological and educational ideas.

An early statement of his philosophical position in education, *My Pedagogic Creed* (1897), appeared three years after his arrival at Chicago. Four other major educational writings came out of Dewey's Chicago experience. The first two, *The School and Society* (1899), which was first published in 1899, and *The Child and the Curriculum* (1902), were lectures which he delivered to raise money and gain support for the laboratory school. Although the books were brief, they were clear and direct statements of the basic elements of Dewey's educational philosophy and his psychology of learning. Both works stressed the functional relationship between classroom learning activities and real life experiences and analyzed the social and psychological nature of the learning process. Two later volumes, *How We Think* (1910) and *Democracy and Education* (1916), elaborated these themes in greater and more systematic detail.

Dewey's work at Chicago was cut short when, without consulting Dewey, Chicago's president, William Rainey Harper, arranged to merge the laboratory school with the university training school for teachers. The merger not only took control of the school from Dewey's hands but changed it from an experimental laboratory to an institution for teacher-training. Dewey felt that he had no recourse but to resign and wrote to William James at Harvard and to James M. Cattell at Columbia University, informing them of his decision. Dewey's reputation in philosophy had grown considerably by this time, and Cattell had little difficulty in persuading the department of philosophy and psychology at Columbia to offer him a position. Because the salary offer was quite low for a man with six children (three more had been born during his ten years at Chicago), arrangements were made for Dewey to teach an additional two hours a week at Columbia Teachers College for extra compensation. For the next twenty-six years at Columbia, Dewey continued his illustrious career as a philosopher and witnessed the dispersion of his educational ideas throughout the world by many of his disciples at Teachers College, not the least of whom was William Heard Kilpatrick.

Dewey retired in 1930 but was immediately appointed professor emeritus of philosophy in resi-

dence at Columbia and held that post until his eightieth birthday in 1939. The previous year he had published his last major educational work, *Experience and Education* (1938). In this series of lectures he clearly restated his basic philosophy of education and recognized and rebuked the many excesses he thought the Progressive education movement had committed. He chastised the Progressives for casting out traditional educational practices and content without offering something positive and worthwhile to take their place. He offered a reformulation of his views on the intimate connection between learning and experience and challenged those who would call themselves Progressives to work toward the realization of the educational program he had carefully outlined a generation before.

At the age of ninety he published his last large-scale original philosophical work, *Knowing and the Known* (1949), in collaboration with Arthur F. Bentley.

### **Experience and Reflective Thinking**

The starting place in Dewey's philosophy and educational theory is the world of everyday life. Unlike many philosophers, Dewey did not search beyond the realm of ordinary experience to find some more fundamental and enduring reality. For Dewey, the everyday world of common experience was all the reality that man had access to or needed. Dewey was greatly impressed with the success of the physical sciences in solving practical problems and in explaining, predicting, and controlling man's environment. He considered the scientific mode of inquiry and the scientific systematization of human experience the highest attainment in the evolution of the mind of man, and this way of thinking and approaching the world became a major feature of his philosophy. In fact, he defined the educational process as a "continual reorganization, reconstruction and transformation of experience" (1916, p. 50), for he believed that it is only through experience that man learns about the world and only by the use of his experience that man can maintain and better himself in the world.

Dewey was careful in his writings to make clear what kinds of experiences were most valuable and useful. Some experiences are merely passive affairs, pleasant or painful but not educative. An educative experience, according to Dewey, is an experience in which we make a connection between what we do to things and what happens to them or us in conse-

quence; the value of an experience lies in the perception of relationships or continuities among events. Thus, if a child reaches for a candle flame and burns his hand, he experiences pain, but this is not an educative experience unless he realizes that touching the flame resulted in a burn and, moreover, formulates the general expectation that flames will produce burns if touched. In just this way, before we are formally instructed, we learn much about the world, ourselves, and others. It is this natural form of learning from experience, by doing and then reflecting on what happened, which Dewey made central in his approach to schooling.

Reflective thinking and the perception of relationships arise only in problematical situations. As long as our interaction with our environment is a fairly smooth affair we may think of nothing or merely daydream, but when this untroubled state of affairs is disrupted we have a problem which must be solved before the untroubled state can be restored. For example, a man walking in a forest is suddenly stopped short by a stream which blocks his path, and his desire to continue walking in the same direction is thwarted. He considers possible solutions to his problem—finding or producing a set of stepping-stones, finding and jumping across a narrow part, using something to bridge the stream, and so forth—and looks for materials or conditions to fit one of the proposed solutions. He finds an abundance of stones in the area and decides that the first suggestion is most worth testing. Then he places the stones in the water, steps across to the other side, and is off again on his hike. Such an example illustrates all the elements of Dewey's theoretical description of reflective thinking: A real problem arises out of present experiences, suggestions for a solution come to mind, relevant data are observed, and a hypothesis is formed, acted upon, and finally tested.

### **Learning**

For Dewey, learning was primarily an activity which arises from the personal experience of grappling with a problem. This concept of learning implied a theory of education far different from the dominant school practice of his day, when students passively received information that had been packaged and predigested by teachers and textbooks. Thus, Dewey argued, the schools did not provide genuine learning experiences but only an endless amassing of facts, which were fed to the students, who gave them back and soon forgot them.

Dewey distinguished between the psychological and the logical organization of subject matter by comparing the learner to an explorer who maps an unknown territory. The explorer, like the learner, does not know what terrain and adventures his journey holds in store for him. He has yet to discover mountains, deserts, and water holes and to suffer fever, starvation, and other hardships. Finally, when the explorer returns from his journey, he will have a hard-won knowledge of the country he has traversed. Then, and only then, can he produce a map of the region. The map, like a textbook, is an abstraction which omits his thirst, his courage, his despairs and triumphs—the experiences which made his journey personally meaningful. The map records only the relationships between landmarks and terrain, the logic of the features without the psychological revelations of the journey itself.

To give the map to others (as a teacher might) is to give the results of an experience, not the experience by which the map was produced and became personally meaningful to the producer. Although the logical organization of subject matter is the proper goal of learning, the logic of the subject cannot be truly meaningful to the learner without his psychological and personal involvement in exploration. Only by wrestling with the conditions of the problem at hand, “seeking and finding his own way out, does he think . . . . If he cannot devise his own solution (not, of course, in isolation but in correspondence with the teacher and other pupils) and find his own way out he will not learn, not even if he can recite some correct answer with one hundred percent accuracy” (Dewey 1916, p. 160).

Although learning experiences may be described in isolation, education for Dewey consisted in the cumulative and unending acquisition, combination, and reordering of such experiences. Just as a tree does not grow by having new branches and leaves wired to it each spring, so educational growth does not consist in mechanically adding information, skills, or even educative experiences to students in grade after grade. Rather, educational growth consists in combining past experiences with present experiences in order to receive and understand future experiences. To grow, the individual must continually reorganize and reformulate past experiences in the light of new experiences in a cohesive fashion.

## School and Life

Ideas and experiences which are not woven into the fabric of growing experience and knowledge but remain isolated seemed to Dewey a waste of precious natural resources. The dichotomy of in-school and out-of-school experiences he considered especially wasteful, as he indicated as early as 1899 in *The School and Society*:

From the standpoint of the child, the great waste in the school comes from his inability to utilize the experiences he gets outside the school in any complete and free way within the school itself; while on the other hand, he is unable to apply in daily life what he is learning in school. That is the isolation of the school—its isolation from life. When the child gets into the schoolroom he has to put out of his mind a large part of the ideas, interests and activities that predominate in his home and neighborhood. So the school being unable to utilize this everyday experience, sets painfully to work on another tack and by a variety of [artificial] means, to arouse in the child an interest in school studies . . . . [Thus there remains a] gap existing between the everyday experiences of the child and the isolated material supplied in such large measure in the school. (1956, pp. 75–76)

To bridge this chasm between school and life, Dewey advocated a method of teaching which began with the everyday experience of the child. Dewey maintained that unless the initial connection was made between school activities and the life experiences of the child, genuine learning and growth would be impossible. Nevertheless, he was careful to point out that while the experiential familiar was the natural and meaningful place to begin learning, it was more importantly the “intellectual starting point for moving out into the unknown and not an end in itself” (1916, p. 212).

To further reduce the distance between school and life, Dewey urged that the school be made into an embryonic social community which simplified but resembled the social life of the community at large. A society, he reasoned, “is a number of people held together because they are working along common lines, in a common spirit, and with reference to common aims. The common needs and aims demand a growing interchange of thought and grow-

ing unity of sympathetic feeling.” The tragic weakness of the schools of his time was that they were endeavoring “to prepare future members of the social order in a medium in which the conditions of the social spirit [were] eminently wanting” (1956, pp. 14–15).

Thus Dewey affirmed his fundamental belief in the two-sidedness of the educational process. Neither the psychological nor the sociological purpose of education could be neglected if evil results were not to follow. To isolate the school from life was to cut students off from the psychological ties which make learning meaningful; not to provide a school environment which prepared students for life in society was to waste the resources of the school as a socializing institution.

### Democracy and Education

Dewey recognized that the major instrument of human learning is language, which is itself a social product and is learned through social experiences. He saw that in providing a pool of common meanings for communication, the language of each society becomes the repository of the society’s ideals, values, beliefs, and accumulated knowledge. To transmit the contents of the language to the young and to initiate the young in the ways of civilized life was for Dewey the primary function of the school as an institution of society. But, he argued, a way of life cannot be transmitted by words alone. Essential to acquiring the spirit of a way of life is immersion in ways of living.

More specifically, Dewey thought that in a democratic society the school should provide students with the opportunity to experience democracy in action. For Dewey, democracy was more than a form of government; it was a way of living which went beyond politics, votes, and laws to pervade all aspects of society. Dewey recognized that every social group, even a band of thieves, is held together by certain common interests, goals, values, and meanings, and he knew that every such group also comes into contact with other groups. He believed, however, that the extent to which democracy has been attained in any society can be measured by the extent to which differing groups share similar values, goals, and interests and interact freely and fruitfully with each other.

A democratic society, therefore, is one in which barriers of any kind—class, race, religion, color, pol-

itics, or nationality—among groups are minimized, and numerous meanings, values, interests, and goals are held in common. In a democracy, according to Dewey, the schools must act to ensure that each individual gets an opportunity to escape from the limitations of the social group in which he was born, to come into contact with a broader environment, and to be freed from the effects of economic inequalities. The schools must also provide an environment in which individuals may share in determining and achieving their common purposes in learning so that in contact with each other the students may recognize their common humanity: “The emphasis must be put upon whatever binds people together in cooperative human pursuits . . . and the fuller, freer, intercourse of all human beings with one another . . . [This] ideal may seem remote of execution, but the democratic ideal of education is a farcical yet tragic delusion except as the ideal more and more dominates our public system of education” (Dewey, 1916, p. 98).

Dewey’s belief in democracy and in the schools’ ability to provide a staging platform for social progress pervades all his work but is perhaps most clearly stated in his early *Pedagogic Creed*:

I believe that education is the fundamental method of social progress and reform. All reforms which rest simply upon the enactment of law, or the threatening of certain penalties, or upon changes in mechanical or outward arrangements, are transitory and futile . . . By law and punishment, by social agitation and discussion, society can regulate and form itself in a more or less haphazard and chance way. But through education society can formulate its own purposes, can organize its own means and resources, and thus shape itself with definiteness and economy in the direction in which it wishes to move . . . Education thus conceived marks the most perfect and intimate union of science and art conceivable in human experience. (1964, pp. 437–438)

Perhaps it was with these ideas in mind that Dewey was prompted to equate education with philosophy, for he felt that a deep knowledge of man and nature was not only the proper goal of education but the eternal quest of the philosopher: “If we are willing to conceive of education as the process of forming fundamental dispositions, intellectual and emotion-

al, toward nature and fellow men, philosophy may even be defined as the general theory of education” (1916, p. 328).

*See also:* PROGRESSIVE EDUCATION.

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JONAS F. SOLTIS

## DISABILITIES

*See:* ADAPTED PHYSICAL EDUCATION; ASSISTIVE TECHNOLOGY; AUTISM, EDUCATION OF INDIVIDUALS WITH; COLLEGE STUDENTS WITH DISABILITIES; COUNCIL FOR EXCEPTIONAL STUDENTS; EMOTIONALLY DISTURBED, EDUCATION OF; LEARNING DISABILITIES, EDUCATION OF INDIVIDUALS WITH; MENTAL RETARDATION, EDUCATION OF INDIVIDUALS WITH; PEOPLE WITH DISABILITIES, FEDERAL PROGRAMS TO ASSIST; PHYSICAL DISABILITIES, EDUCATION OF INDIVIDUALS WITH; READING DISABILITIES; SEVERE AND MULTIPLE DISABILITIES, EDUCATION OF INDIVIDUALS WITH; SPECIAL EDUCATION; SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH; VISUAL IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH.

## DISCIPLINE

*See:* CLASSROOM MANAGEMENT.

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## DISCOURSE

CLASSROOM DISCOURSE

Graham Nuthall

COGNITIVE PERSPECTIVE

Arthur Graesser

Natalie Person

### CLASSROOM DISCOURSE

The term *classroom discourse* refers to the language that teachers and students use to communicate with each other in the classroom. Talking, or conversation, is the medium through which most teaching takes place, so the study of classroom discourse is the study of the process of face-to-face classroom teaching.

The earliest systematic study of classroom discourse was reported in 1910 and used stenographers to make a continuous record of teacher and student talk in high school classrooms. The first use of audiotape recorders in classrooms was reported in the 1930s, and during the 1960s there was a rapid growth in the number of studies based on analysis of transcripts of classroom discourse. In 1973, Barak Rosenshine and Norma Furst described seventy-six

different published systems for analysing classroom discourse.

It soon became clear from these early studies that the verbal interaction between teachers and students had an underlying structure that was much the same in all classrooms, and at all grade levels, in English-speaking countries. Essentially, a teacher asks a question, one or two students answer, the teacher comments on the students' answers (sometimes summarizing what has been said), and then asks a further question. This cyclic pattern repeats itself, with interesting variations, throughout the course of a lesson.

The following excerpt from a whole-class discussion in a fifth-grade science class illustrates the nature of this typical participation structure. The teacher was reviewing what the students learned earlier in the day during a science activity on light.

*Teacher.* What's transparent? Something is transparent. What does that mean? We did that this morning, didn't we? What does transparent mean?

*Valerie.* Ah, it doesn't . . . It goes through.

*Teacher.* Can you explain that a little more? What goes through?

*Valerie.* Well it goes through like, um . . . You can, like, you shine a torch on and you can see.

*Teacher.* What goes through?

*Valerie.* The light.

*Teacher.* The light. Light can pass through something if it's transparent. What's the next one? Translucent. What does it mean?

*Jordan?*

*Jordan.* Um, just some light can get through.

*Teacher.* Absolutely. Some light can get through. Can you look around the room and see an example of something that might be translucent? Well, you all can tell me something in here that's translucent because you discovered something this morning that would let some light through. What was it?

*Clarice.* Paper.

*Teacher.* Right. Some paper is translucent. It will allow some light to pass through it. Think of something else that's translucent.

*Morgan.* Oh, um, the curtains over there, you can see right through them.

*Teacher.* OK. Yes that's interesting. They do let some light through don't they. Another

example? Think about light bulbs. Do you think some light bulbs would be translucent?

*Pupils.* Yes.

*Teacher.* They would allow some light through?

*Pupil.* No. Transparent.

*Teacher.* You think they're transparent. They let all the light through. I'm not too sure about that one either. So we might investigate that one.

This excerpt contains two episodes, each initiated by a question ("What does transparent mean?" and "Translucent. What does it mean?"). Within each episode the teacher directed the discussion by commenting on student answers and asking further questions. Each question set off a question-answer-comment cycle. At the beginning of the first episode, the teacher set the context by repeating the question several times and reminding the students that they had learned the answer during the morning's activity. This focused the students' attention and let them know (from their previous experiences with this teacher) that they were expected to know the answer.

The first answer (from Valerie) was not in the appropriate language of a definition. Through two further questions the teacher elicited the missing information and, through a summary, modelled the form of a scientific definition ("Light can pass through something if it's transparent.").

In the next episode, after Jordan copied this model to define translucent, the teacher asked a question to find out if the students understood the term well enough to identify an example ("Can you look around the room and see an example?"). After two answers (paper, curtains) the teacher provided additional help by suggesting an example (light bulb) and asking if the students agreed.

This excerpt illustrates how teachers use questions and student answers to progressively create the curriculum, to engage the students' minds, and to evaluate what the students know and can do. Underlying this exchange are the implicit rules and expectations that determine what, and how, teachers and students communicate. Each statement depends for its meaning on the context in which it occurs and, in turn, adds to the context that determines the meaning of subsequent statements.

Analysis of the patterns of interaction characteristic of most classrooms has shown that, on average, teachers talk for more than two-thirds of the time,

a few students contribute most of the answers, boys talk more than girls, and those sitting in the front and center of the class are more likely to contribute than those sitting at the back and sides. Bracha Alpert has identified three different patterns of classroom discourse: (1) silent (the teacher talks almost all the time and asks only an occasional question), (2) controlled (as in the excerpt above), and (3) active (the teacher facilitates while the students talk primarily to each other). Recent attempts to reform teaching based on constructivist views of learning have called for teachers to ask fewer questions and for students to learn to state and justify their beliefs and argue constructively about reasons and evidence.

Earlier research on classroom discourse tended to focus on specific teacher or student behaviors, and, because of the key role that they play, teacher questions have been most frequently studied. Questions that challenge students to think deeply about the curriculum are more likely to develop students' knowledge and intellectual skills than questions that require recall of facts. In the excerpt above, the first question required simple recall ("what does transparent mean?) while the last question ("do you think some light bulbs would be transparent?") required the students to apply their understanding of *transparent* to their own experience.

The results of this early research were often equivocal, and researchers have argued more recently that specific utterances cannot be separated from the context in which they occur. Greater attention is now being paid to the ways in which meanings evolve as teachers and students mutually construct the unique discourse (with its roles, rules, and expectations) that characterizes each classroom.

An entirely different form of classroom discourse occurs when students are working together in small groups. The following excerpt is from a sixth-grade class studying Antarctica. The teacher organized the students to work in groups of two or three and instructed the students to "write down all the different types of jobs that you think people might do down in Antarctica." Ben, Paul, and Jim worked together, and Ben wrote down the list that they created. A nearby group consisted of Tilly, Koa, and Nell.

*Ben.* Most of the people there are scientists. In fact, just about all of them are.

*Jim.* Even the cooks would be scientists?

*Ben.* Not necessarily. OK.

*Jim.* Some of them?

*Ben.* Pilots.

*Jim.* Yeah, they'd need pilots.

*Ben.* All the things that need to be done to keep you living. You know, you need to have food, you need to have shelter.

*Jim.* I know, a driver. But you could have a scientist to be a driver.

*Ben.* What else would they do? A-ah, what are they called? I don't know.

*Jim.* Maintenance man. Maintenance man.

*Tilly (overhearing).* Thank you. Maintenance person!

*Jim.* Or lady. Maintenance person.

*Paul.* I'll tell you what. Um, explorer.

*Jim.* Um, expedition leader.

*Ben (aware that the next group is listening).* Just whisper, will you?

*(to next group)* Stop copying, you lot. Can't you use your own brain?

*Jim.* Yeah, they haven't got any brain to use.

*Ben.* Exactly.

*Tilly.* How many have you got [on your list]?

*Jim.* Twenty-eight thousand.

*Ben.* You'll have a job to beat that.

*Jim (whispering to Ben).* Mm. Builder?

*Ben (to teacher passing group).* They're copying.

*Tilly and Nell.* We are not.

*Jim.* Yeah, they are too.

*Teacher.* Oh, you don't need that sort of carry on.

*Jim.* Let's see, um . . . um . . . a guide.

*Ben.* Isn't that kind of like a leader?

*Jim.* No, 'cause the expedition leader is a leader. He just, the guide knows where everything is. The expedition leader doesn't.

*Ben.* An expedition leader has to know where everything is as well, or else he wouldn't be an expedition leader 'cause he's supposed to guide them all around the place and tell 'em where to go. He's the most experienced and therefore he should be the guide.

*Jim.* Yeah, but first of all they'd need a guide that's been there. While he's learning.

*Ben.* Well, he wouldn't be the leader while he was learning.

*Jim.* Yeah.

Unlike the teacher-led discussions, the structure of this excerpt is determined by the social relationships between the students. Paul and Jim thought Ben knew a lot and encouraged him to assume a leadership role. Mimicking the role of a teacher, he evaluated Jim's contributions ("Not necessarily. OK."), and provided guidance about how to think about the problem ("All the things that need to be done to keep you living."). When Jim suggested "guide," Ben questioned whether this was different from "expedition leader." Jim tried to defend his suggestion but, in the face of Ben's reasons and authority, he agreed with Ben. Researchers have noted that students are more likely to have their thinking changed by their peers than by their teacher, and that resolving differences is simultaneously about negotiating social relationships and consideration of reasons and evidence.

In this classroom there was an underlying competitiveness, and the teacher had previously talked with the students about the gender bias in their texts and personal experiences. These two agendas combined in the conflict that erupted between Ben's and Tilly's groups. When Tilly overheard Jim use a sexist title ("maintenance man"), she corrected him. This alerted Ben to the possibility that Tilly's group was listening and copying his group's ideas. He told his own group to whisper and told the other group they had no brains. Jim followed Ben's lead ("Yeah, they haven't got any brain to use") and challenged Tilly's group by claiming they had a list of "twenty-eight thousand" items. Clearly, the structure and function of this discourse reflects both the requirements of the task and the evolving social relationships and culture (e.g., about gender and ability differences) of this class.

### Classroom Discourse and Learning

There have been two distinct approaches to explaining how classroom discourse relates to what students learn. Since the 1960s a large number of studies have been carried out in which frequencies of teacher and student verbal behaviors and interaction patterns (such as asking higher-order questions, providing structuring information, praising student answers) have been correlated with student achievement. These developed into experimental studies in which

teachers were scripted to talk in specific predetermined ways. Such studies came to be criticized for their impersonal empiricism and lack of theory. They failed to consider the contextual nature of classroom discourse, particularly the meanings that participants attributed to what was being said.

As interest in the constructivist nature of language developed, researchers argued that the learning process was contained in the process of participating in classroom discourse. As students engage in the discourse they acquire ways of talking and thinking that characterize a particular curriculum area. For example, to learn science is to become an increasingly expert participant in classroom discourse about the procedures, concepts, and use of evidence and argument that constitutes science. This approach is supported by the theories of the Russian psychologist Lev Vygotsky who argued that the higher mental processes are acquired through the internalization of the structures of social discourse. There is still a need, however, for these detailed linguistic and ethnographic analyses of classroom discourse to include independent evidence of how students' knowledge and beliefs are changed by their participation in the discourse.

*See also:* CLASSROOM MANAGEMENT; CLASSROOM QUESTIONS; DISCOURSE, *subentry on* COGNITIVE PERSPECTIVE; LANGUAGE AND EDUCATION.

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## COGNITIVE PERSPECTIVE

The field of *discourse processing* investigates the structures, patterns, mental representations, and processes that underlie written and spoken discourse. It is a multidisciplinary field that includes psychology, rhetoric, sociolinguistics, conversation analysis, education, sociology, anthropology, computational linguistics, and computer science.

Researchers in discourse processing have identified a number of mechanisms that promote learning. The practical mission of the field is to improve the comprehension and production of discourse in textbooks, tutoring sessions, classrooms, computer-based training, and other learning environments. While focused primarily on cognitive mechanisms, it is clear that cognitive, social, emotional, and cultural foundations are tightly intertwined in contemporary theories of discourse processing.

### Levels of Discourse Processing

Discourse researchers have identified five levels of cognitive representation that are constructed during comprehension. These include the *surface code*, the *textbase*, the *situation model*, *pragmatic communication*, and the *discourse genre*. In order to illustrate these five levels, suppose that a high school student had a broken door lock and was reading the following excerpt from the book *The Way Things Work*:

Inserting the key raises the pins and frees the cylinder. When the key is turned, the cylinder rotates, making the cam draw back the bolt against the spring. (Macaulay, p. 17)

The *surface code* is a record of the exact wording and syntax of the sentences. This code is preserved in

memory for only a few seconds when technical text is read. The *textbase* contains explicit propositions in the text in a stripped-down form that captures the semantic meaning but loses details of the surface code. For example, the textbase of the first part of the second sentence includes the following: (1) someone turns a key, and (2) the cylinder rotates when the key is turned. The textbase is preserved in memory for several minutes or longer.

The *situation model* (sometimes called the *mental model*) is the referential mental world of what the text is about. In the above example, the situation model contains causal chains of events that unfold as the key unlocks the door, a visual spatial image of the parts of the lock, and the goals of the person who uses the lock. The construction of an adequate situation model requires a sufficient amount of relevant world knowledge, such as general knowledge about locks and mechanical equipment. *Deep comprehension* consists of the construction of this referential situation model, whereas *shallow comprehension* is limited to the surface code and textbase. The situation model is retained in memory much longer than the textbase and the surface code, assuming that the comprehender has adequate world knowledge to build a situation model.

The *pragmatic communication* level refers to the information exchange between speech participants. In a two-party oral conversation, the two speech participants take turns speaking while pursuing conversational goals. There may be additional participants in a conversation, such as side participants in the circle of conversation and bystanders who are outside of the circle. Speech acts are crafted in a fashion that is sensitive to the common ground (shared knowledge) between speech participants, and linguistic cues differentiate given (old) information in the dialog history from new information. The cognitive representation of a spoken utterance can be quite complex when there are several communication channels between multiple participants (sometimes called *agents*) in a conversation. When printed text is read and comprehended, the pragmatic communication is somewhat simplified, although there are vestiges of oral communication and multiple communication channels in textual matter. For example, there is communication between the reader and writer, between the narrator and audience, and between agents in embedded dialogues within the text content. Text comprehension improves when

readers are sensitive to the communication channel between author and reader.

*Discourse genre* is the type of discourse—such as narration (stories), exposition, persuasion, and so on. Discourse analysts have proposed several different discourse classification schemes, which are organized in a multilevel hierarchical taxonomy or in a multidimensional space (a set of features or levels of representation that are potentially uncorrelated). The Macaulay excerpt above would be classified as *expository text*. *Narrative text* is normally much easier to comprehend than expository text because narrative has a closer affinity to everyday experiences.

Deep comprehenders construct rich representations at the levels of the situation model, pragmatic communication, and discourse genre, whereas the textbase and surface code have a secondary status. Paradoxically, the examinations that students normally receive tap the surface code and textbase rather than the deeper levels. Teachers generally ask students to recall explicit content or to answer multiple-choice questions that tap word recognition, definitions, or attributes of concepts. One way of promoting deep comprehension is to compose exams with questions that emphasize the situation model, inferences, reasoning, and other aspects of the deeper levels. Since the late 1980s, researchers have advocated a shift in assessment standards to encourage deep comprehension.

### Discourse Coherence

Coherence is achieved both *within* and *between* the levels of representation when comprehension occurs. This means that there should be no serious coherence gaps within a particular level and there should be harmony between the levels of representation. A coherence gap occurs within the situation model, for example, when an incoming clause (the clause currently being read) in the text cannot be linked to the previous content on any conceptual dimension, such as causality, temporality, spatiality, or motives of characters. Simply put, a coherence gap occurs when information is mentioned out of the blue. Similarly, there may be coherence gaps at the levels of the surface code, textbase, pragmatic communication, and discourse genre. Regarding coherence between levels, the elements of the representation at one level need to be systematically related to the elements at another level. Comprehension suffers, for example, when there is a clash between the textbase and situation model. If the text stated,

“The key is turned after the cylinder rotates,” there would be a discrepancy between the order of events in the correct situation model (the key is, in fact, turned before the cylinder rotates) and the explicit textbase, which reverses the correct order.

Comprehension breaks down when there are deficits in world knowledge or processing skills at particular levels of representation. When there is a deficit at one level of representation, the problems can propagate to other levels. For example, non-native speakers of English may have trouble processing the words and syntax of English, so they may also have trouble constructing the deeper levels of representation. Readers have trouble comprehending technical texts on arcane topics because they lack world knowledge about the topic. A barrier in constructing the situation model ends up confining the processing to the surface code and textbase levels, so the material will soon be forgotten.

While studying a test about heart function, McNamara et al. (1996) documented an intriguing interaction among readers' knowledge about a topic, coherence of the textbase, and the level of representation that was being tapped in a test. The readers varied in the amount of prior knowledge they had about the topic covered in the text. In the study, half of the readers read a text with a coherent textbase. That is, clauses were linked by appropriate connectives (e.g., therefore, so, and), and the topic sentences, headings, and subheadings were inserted at appropriate locations. The other texts had low coherence due to violations in the insertion of connectives, topic sentences, headings, and subheadings. The tests tapped either the textbase level of representation (which included recall tests) or the situation level (which included tests of inferences and answers to deep-reasoning questions).

The results of the McNamara study were not particularly surprising for low-knowledge readers. For these readers, texts with high coherence consistently produced higher performance scores than texts with low coherence. The results were more complex for the readers with a high amount of prior knowledge about the heart. A coherent textbase slightly enhanced recall, but actually lowered performance on tasks that tapped the situation model. The gaps, or breaks in temporality, spatiality, and causality, in text coherence forced the high-knowledge reader to draw inferences, construct rich elaborations, and compensate by allocating more processing effort to the situation model. In essence, deep com-

prehension was a positive compensatory result of coherence gaps at the shallow levels of representation.

### Comprehension Calibration

One counterintuitive finding in comprehension research is that most children and adult readers have a poor ability to calibrate the success of their comprehension. *Comprehension calibration* can be measured by asking readers to rate how well they comprehend a text, and then correlating such ratings with comprehension scores on objective tests. These correlations are always either low or modest ( $r = .2$  to  $.4$ ), which suggests that college students have disappointing comprehension calibration. Another method of calibrating comprehension is to plant contradictions in a text and observe whether readers detect them. Such contradictions are not detected by a surprising number of adult readers. Instead, there is a strong tendency for readers to have an illusion of comprehension by adjusting their expectations at handling the surface code and textbase. Readers need to be trained to adjust their metacognitive expectations and strategies to focus on the deeper levels.

Classroom discourse is too often skewed to the shallow rather than the deep end of the comprehension continuum. Teachers typically follow a curriculum script that covers definitions, facts, concepts, attributes of concepts, and examples. This content is at the lower levels of Benjamin Bloom's taxonomy of cognitive objectives. Teachers rarely attempt to encourage Bloom's higher levels of inference, synthesis, integration, and the application of knowledge to practical problems.

### Discourse Mechanisms that Promote Deep Comprehension

There are some methods of improving deep comprehension and learning by invoking discourse processing mechanisms, including: (1) constructing explanations, (2) asking questions, (3) challenging a learner's beliefs and knowledge, and (4) tutoring.

**Constructing explanations.** Good comprehenders generate explanations as they read text or listen to lectures. These explanations trace the causes and consequences of events, the plans and goals of agents (humans, animals or organizations), and the logical derivations of assertions. The questions that drive explanations are *why*, *how*, *what-if*, and *what-if-not* questions. For example, a deep comprehender might implicitly ask the following questions while reading

the cylinder lock text: Why would the person turn the key to the right? How does the bolt move back? What causes the cam to rotate? What if the pins don't rise? Students learn much more when they construct these explanations on their own (self-explanations) than when they merely read or listen to explanations.

**Asking questions.** Students should be encouraged to ask and answer deep-reasoning questions to help them construct explanations. Unfortunately, students are not in the habit of asking many questions, and most of their questions are shallow. A typical student asks only .11 questions per hour in a classroom, and less than 10 percent of student questions involve deep reasoning. When students are trained how to ask good questions while reading or listening to lectures, their comprehension scores increase on objective tests. Teachers rarely ask deep-reasoning questions in classroom settings, so it would be prudent to improve the questioning skills of teachers.

**Challenging the learner's beliefs and knowledge.** One of the easiest ways to get students to ask questions is to challenge one of their entrenched beliefs, and thereby put them in *cognitive disequilibrium*. Suppose, for example, that a teacher expresses the claim that overpopulation is not a significant problem to worry about. This will normally stimulate a large number of student questions and counterarguments. Research on question asking has revealed that genuine information-seeking questions are inspired by contradictions, anomalies, incompatibilities, obstacles to goals, salient contrasts, uncertainty, and obvious gaps in knowledge. Therefore, one secret to eliciting student questions is to create cognitive disequilibrium and then provide useful information when students ask questions.

**Tutoring.** One-to-one human tutoring is superior to normal learning experiences in traditional classroom environments. This advantage cannot entirely be attributed to the possibility that tutors are more accomplished pedagogical experts than teachers. Peers often do an excellent job serving as tutors. Normal tutors rarely implement sophisticated pedagogical strategies, such as the Socratic method, building on prerequisites, error diagnosis and repair, or modeling-scaffolding-fading. It is the discourse patterns in normal tutoring that explain much of the advantages of tutoring over the classroom. The discourse in tutoring emphasizes collaborative problem solving, question asking and answering, and explanation building in the context of specific problems, cases,

and examples. There is a turn-by-turn collaborative exchange (speakers take turns talking) in tutoring that would be impractical to implement in the classroom.

In summary, research in discourse processing can help solve some of the pressing challenges in education. Discourse plays an important role in helping the learner shift from shallow to deep comprehension, and from being a fact collector to being an inquisitive explainer.

*See also:* CLASSROOM QUESTIONS; DEVELOPMENTAL THEORY, *subentry on* COGNITIVE AND INFORMATION PROCESSING; DISCOURSE, *subentry on* CLASSROOM DISCOURSE; SCIENCE LEARNING, *subentry on* EXPLORATION AND ARGUMENTATION.

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## DISTANCE LEARNING IN HIGHER EDUCATION

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For more than a century, distance learning in higher education has constantly evolved—both in practice and in the definition of the term. As in many academic pursuits that are still in a state of development, there have been debates not only about the

definition, but also about the words *distance* and *learning* themselves. While there is no one authority to arbitrate this issue, reviewing some well-researched definitions yields some common concepts.

In the mid-1990s, the U.S. Department of Education undertook two studies that tallied the number of U.S. institutions offering distance-learning courses, the number of courses that they offered, and the number of students served by the courses. The studies defined *distance education* as “education or training courses delivered to remote (off-campus) location(s) via audio, video (live or prerecorded), or computer technologies” (Lewis, Farris, and Levin, p. 2). To gain a precise count, the Department of Education listed what should and should not be counted as distance education. For example, they asked that courses taught by faculty traveling to a remote site not be included.

In the late 1990s the American Association of University Professors addressed the rapid adoption of distance learning in their *Statement on Distance Education*. This document defined distance education (or distance learning) as education in which “the teacher and the student are separated geographically so that face-to-face communication is absent; communication is accomplished instead by one or more technological media, most often electronic (interactive television, satellite television, computers, and the like)” (American Association of University Professors website).

Also late in the 1990s, the Western Cooperative for Educational Telecommunications (WCET) developed a publication entitled *The Distance Learner’s Guide* to assist learners in successfully finding and taking courses at a distance. The authors sought a definition that did not focus on technology and would be easy for anyone to understand: “Perhaps the simplest definition is that distance learning takes place when the instructor and student are not in the same room, but instead are separated by physical distance” (Connick, p. 3).

Three main concepts are common to these definitions:

- **Education.** A course of study is being undertaken involving both teaching and learning.
- **Overcoming barriers of place and/or time.** Teachers and learners traditionally meet at an appointed place at an appointed time to pursue a course of study. Distance learning originally

developed to overcome the difficulties of teachers and learners who were not in the same geographic location. More recently, distance learning may also serve those who might be at the same location, but choose not to meet at the same time.

- **A tool is used to facilitate learning.** To overcome the distance of place or time, some form of technology is used to communicate between the teacher and learner. Originally, the technologies of pen, paper, and the postal service were used to connect them. As electronic communication technologies (audio, video, and data) became readily accessible to learners, these have been increasingly used.

### Related Terms and Concepts

While the term *distance learning* is widely used, the rapid development of communications technologies in the late 1990s and early 2000s created many variations on the theme. To understand distance learning, it is helpful to examine other closely related terms and concepts.

**Correspondence study.** The original form of distance learning, correspondence study involves the exchange of the written word, on paper, between teacher and learner. Improvements in transportation technologies (i.e., trains, trucks, planes) have assisted the postal service in making this an increasingly more viable method of study.

**Distance education.** Those wishing to focus on the learner as the center of the instructional process favor using the word *learning*. Others insist that the higher education institution cannot force someone to learn, and that the activity undertaken by the institution is *education*, not *learning*.

**Distributed education.** As electronic technologies provided more assistance to overcome the barriers of time, instead of just distance, some felt that the focus on *distance* had outlived its usefulness. In distributed education, education is available (or “distributed”) to any location at any time. Often a mix of technologies is proposed, including face-to-face instruction.

**Hybrid classes.** These courses use a mixture of distance learning and face-to-face techniques. For example, a group of learners in a biology class may meet face-to-face for their laboratory work, but the remainder of the instruction may be offered via television or computer.

**Open learning.** This is a term for distance learning commonly used in the British Commonwealth countries. The term derives from the Open University of the United Kingdom. To assist those not privileged to attend Britain's selective universities, the Open University began offering classes in the 1960s via a combination of written materials, televised programs, and local tutors. Open universities have spread throughout the Commonwealth countries and serve millions of students throughout the world.

**Online learning.** Distance learning where the bulk of instruction is offered via computer and the Internet is called online learning.

**E-learning.** Gaining popularity in the early 2000s, the term *e-learning* refers to any electronically assisted instruction, but is most often associated with instruction offered via computer and the Internet.

### Goals of Distance Learning

Educational opportunities are numerous: There are colleges and universities throughout the world, and there are specialty colleges that teach trades of every kind. Why then is distance learning needed?

The main goal of distance learning is to overcome barriers of place and time. Learners may live in isolated, rural areas and have no access to education. Other learners may have ready access to a college, but that college might not offer the course of study needed by that learner. Distance learning allows education to reach those who are not able to physically attend courses on a campus. Further, as learners attempt to balance family, work, and education, time becomes a precious commodity. Driving to campus, parking, and spending time in class at an appointed (and probably inconvenient) time may not fit into the learner's overall schedule. Distance learning courses increasingly allow learners to participate at a time that is most suitable for their schedule.

Distance learning can also overcome barriers of learning styles. "We now know that people learn in different ways, and that because some students do not absorb information well from a lecture style of instruction does not mean they are stupid. . . . But research won't change things until its findings are put to use" (Hull, p. 7). The common complaint about distance learning is that "it is not for everyone." While this complaint could also be made of the lecture method of teaching, it still predominates on campus. Electronic education tools, formerly

used only in distance learning, are increasingly being used in both on- and off-campus courses. "Almost two-thirds (64.1%) of all college courses now utilize electronic mail, up from . . . 20.1 percent in 1995" (Green, p. 7). Using video, audio, active learning, simulations, and electronic advances can overcome problems encountered by learners who do not adapt to just one learning style.

Other educational barriers can also be overcome by distance learning. Learners with physical or mental handicaps have attained degrees without going to a campus. Distance learning allows those with physical handicaps that prevent or hamper their attendance in person to pursue an education. Distance learning allows those with mental handicaps to follow the instructional materials at their own pace.

Workers may find that they are in need of additional skills to maintain a job or advance in the workplace. Distance learning allows these workers to obtain these skills without quitting their jobs, uprooting their families, and moving to a campus.

Distance learning can help students advance toward a degree more quickly. Utah has made a statewide strategic plan to use distance learning to allow high school students to take college courses while still in high school. Distance learning allows students to enter college with credits and obtain a higher education degree in less time.

Learners already enrolled on a campus may seek specialized courses not available on that campus. Distance learning has allowed some learners to transfer courses into their program that are only available at other campuses.

There is also a cost avoidance, or cost saving, factor. Some countries and U.S. states have avoided or delayed investments in campus buildings by serving some learners via distance or open learning. Sometimes erroneously labeled a *cost savings*, the investments in distance learning assist the government in avoiding the higher costs of building new campuses or campus buildings.

### Technologies Used in Distance Learning

Various technologies have been used to overcome the distance between the teacher and the learner. Using these technologies, the teacher prepares the lesson and sends it to the learner, and the learner then interacts with the lesson and sends feedback (questions, assignments, tests) to the teacher. As technologies have improved, so has the quality of this interaction.

An important concept to understand is the difference between two distinct forms of communications: synchronous and asynchronous. “*Synchronous communication* is communication in which all parties participate at the same time. Synchronous communication in distance learning emphasizes a simultaneous group learning experience. Teachers and students communicate in ‘real time’” (Connick, p. 8). An example of synchronous (happening at the same time) communication is a conversation. Whether face-to-face or on the telephone, to have a conversation both parties in the conversation must participate at the same time.

“*Asynchronous communication* is communication in which the parties participate at different times. Asynchronous communication offers a choice of where and, above all, when you will access learning . . . you may read or view these materials at your own convenience” (Connick, p. 8). Examples of asynchronous (not at the same time) communication include letters and e-mails. To communicate by letter does not require both parties to communicate at the same time. One person composes a letter and mails it. The other reads the letter upon receiving it and then responds.

Most teachers and learners are much more familiar with synchronous communication in education. All teacher and learners come to the classroom at the same time, make presentations, and hold discussions. As communication technologies have developed, distance-learning teachers have experimented with them to find ways to improve teacher-learner and learner-learner interactions.

Advances in printing, writing, and transportation led to correspondence study, the first major form of distance learning. Teachers would identify books, prepare lessons, and mail them to the learner. Initially, these materials were completely in printed or written form, and the learner would study the lessons, complete the assignments, and mail them back to the teacher. Communication depended on the speed of the postal service. Given the long lag time between lessons, learners often failed to complete the courses.

In the first half of the twentieth century, *broadcast technologies*, such as radio and television, became staples in every home, and colleges experimented with offering lectures via radio as a way to supplement correspondence courses. “The advent of television brought *Sunrise Semester* and its

relatives: the first telecourses. Professor Frank Baxter introduced Shakespeare to millions . . . there was a heavy instructional component in the schedules of America’s first educational television stations in the 50’s and 60’s, well before the creation of PBS” (Witerspoon, p. 5). In the early twenty-first century, open universities (in the United Kingdom and throughout the British Commonwealth) and the Public Broadcasting System in the United States still broadcast many courses via television. The increasingly high production values and use of experts of world-renown have increased the educational effectiveness of these courses. With the advent of cable television, federal regulations in the United States required that a few channels be set aside for public, education, and government use. Some colleges broadcast classes to cable television subscribers.

*Recording and playback technologies* are asynchronous technologies that have also found their ways into the homes of learners. Colleges in metropolitan areas have used audiotapes of lectures to reach learners who spend a considerable amount of time commuting to work. Videotapes of lectures and classroom interaction have been used to supplement correspondence course materials. Some colleges have also created highly produced courses that rival those made by PBS. CD-ROMs have increased in popularity as a recording medium as they can contain audio, video, and data files. CD-ROMs are durable, easy to reproduce, and inexpensive to mail.

All of these technologies have relied on consumer products that are available in many homes. There is also experimentation and widespread use of *closed-circuit technologies* that require special equipment and often require the learner to travel to a local college, library, or other learning center to access the instruction. “In 1959 . . . two DC-6 aircraft became high-altitude TV stations, operating from Purdue University and flying figure eights over Indiana to serve K–12 schools in portions of six Midwestern states” (Witerspoon, p. 5). That experiment was the precursor of satellite transmissions of courses. National Technological University still transmits engineering courses via satellite from its member colleges to corporate sites throughout the world. Students may participate synchronously, or they may tape the courses and view them later. In the United States, the federal government has set aside a portion of the microwave broadcast spectrum for educational use only. Colleges use the resulting Instructional Television Fixed Services (ITFS) to transmit courses to

sites and homes that have special receivers. In the late 1980s and into the mid-1990s, two-way video was adopted by a large number of colleges. This synchronous technology employs cameras and monitors at geographically dispersed sites, allowing teachers and learners to both see and hear each other.

The most recent advances in technologies have focused on computers and the Internet. The popularity of these technologies has grown as an increasing number of personal computers entered homes, and as an increasing amount of data could be transmitted over regular telephone lines. The 1960s and 1970s saw experiments using computer-assisted instruction, which were self-contained computer programs that led the learner through the lessons. Given the speed of the computers, many of these programs were originally text-based, and they were greatly improved in later years when graphics, pictures, animation, video, and audio could be added. The Internet created a boom in online learning at the end of the twentieth century. The choice of either synchronous or asynchronous communications options, the ability to add audio and video, as well as a variety of new teaching techniques has made the online learning environment more attractive to both teachers and learners.

In the future, computer processing power should continue to increase at the same great rate that it did during the 1890s and 1990s. *Internet 2*, a high-speed Internet focused on education and research, is one of many high-speed communications options that are under development. Such advances will allow distance learners to have more access to both synchronous and asynchronous audio, video, and computer simulations. As teachers become more familiar with these technologies, they will continue to become part of nearly every class, both on and off campus.

*See also:* CONTINUING PROFESSIONAL EDUCATION; CORPORATE COLLEGES; OPEN EDUCATION; TECHNOLOGY IN EDUCATION, *subentry on* HIGHER EDUCATION.

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## DIVINITY STUDIES

The nature of divinity schools' programs of study and admissions policies, procedures, and qualifications differ greatly from institution to institution. Some generalizations can be made, however. The Association of Theological Schools—the central accrediting agency for divinity schools and seminaries—is a good source for more specific information regarding individual schools or programs.

### Admission to Divinity School

The admissions processes at divinity schools in the United States are typically less strenuous than those of many other graduate programs. Generally, with a few notable exceptions, standardized tests are not required, though they may be used when considering students for scholarships and other kinds of financial aid. Most programs implement a rolling admissions process (admissions is ongoing until a certain number of students is attained) and require submission of all postsecondary transcripts, multiple essays, recommendations, and a consideration fee. Some may also request an interview. Despite the lack of a required standardized test, however, gaining admission to some divinity schools can be a highly competitive endeavor. Most programs require applicants to have completed a minimum of a bachelor's degree

from an accredited four-year institution of higher education, and others mandate certain minimum grade point averages.

Significant financial aid awards usually accompany admission to a divinity school, compensating the student for the reality that most persons who graduate from one of these programs do not find themselves in monetarily lucrative fields.

### **Degrees Conferred**

Divinity school programs of study are diverse, and their respective foci are even more numerous. Generally, however, there are roughly a dozen or so degrees that are most common to divinity schools.

The master of divinity (M.Div.) is considered a professional degree and is probably the most common one awarded by divinity schools. The aim of this program is generally to prepare an individual to move in the direction of ordained ministry, although this is not always the case. Many such programs do, in fact, allow for significant elective credit hours to be spent in other areas of study. However, most M.Div. degrees consist of anywhere from seventy-two to ninety semester hours of study, comprising a mostly Christian-centered curriculum, and require a significant emphasis on practicum. Potential areas of focus include pastoral counseling, missionary work, parish ministry, youth ministry, and social justice ministry. Also, the vast majority of M.Div. programs have a mandatory thesis or "senior project" that must be completed for graduation.

The master of theological studies (M.T.S.) tends to be more of an academically focused degree, although it would still fall under the classification of professional degree. It rarely has a practicum component and is generally thought of as a degree that serves as a broad introduction to theological study. The potential fields of study tend to include a more diverse curriculum, including non-Christian religions, social ethics, and philosophy. This program may also allow individual students the opportunity to design (usually under the guidance of professors and the academic dean) their own program of study. The M.T.S. degree is often sought out by those interested in various kinds of social reform, or by persons looking to go on to pursue another degree. The length of this program generally varies anywhere from thirty to fifty-four semester hours of study, and may or may not require a thesis to be written at its culmination.

Usually understood as an academic degree, the master of arts (M.A.) is a program more often found within the graduate school at a university. Even so, many divinity schools that are not affiliated with universities also offer the degree. It is seen as a program of study that will probably lead to another degree, possibly a Ph.D. The master of arts degree usually spans twenty-four to thirty-six semester hours and requires a thesis, but does not have a practicum component. Areas of concentration may include New Testament, Hebrew Bible, ethics, church history, homiletics, and theology.

The master of theology (Th.M., M.Th.) generally requires that a student already hold the M.Div. or equivalent degree. It affords an opportunity for students to pursue advanced theological studies for one year or roughly twenty-four semester hours. The program is especially recommended for students who seek to gain additional competence for the ministry beyond that provided by the master of divinity degree.

A professional degree, the master of religious education (M.R.E.) centers on the process of education as it relates to understanding the Christian faith and its implications for human existence. Areas such as creativity, imagination, spirituality, and pedagogy are often fused to create a holistic process whereby individuals learn to educate the entire person. The length of the degree may last anywhere from twenty-four to fifty-four semester hours, and usually requires a practicum component.

Quite similar to the Th.M. and M.T.S. in terms of degree requirements, the master of sacred theology (S.T.M.) tends to focus primarily on Christian theology, texts, and history.

The master of sacred music (M.S.M) is also a professional degree and generally consists of a series of required courses in three categories: theology, music, and the ministry of music. It requires the successful completion of anywhere from thirty to sixty credit hours, and a final project is generally mandatory. Proficiency in music theory and history as well as choral conducting is usually required to graduate. In addition to the other general requirements for admission to this program, an audition is sometimes also expected.

Those who wish to enhance their knowledge and their ministerial or teaching competence in certain advanced areas of theology and ministry obtain the doctor of theology degree (Th.D.). It has a

stronger academic specialization than the D.Min, but also differs from the Ph.D. in its integrative character and clear connection to the church. Admission to this program generally requires the M.Div or equivalent degree and superior performance in the respective master's program. The Th.D. program consists of thirty-six to fifty-four hours of credit and a major project, thesis, or dissertation.

A terminal academic degree, the doctor of philosophy (Ph.D.) is usually sought by those with the aim of research and teaching. And like the M.A., this is a degree that is generally offered through the graduate school in cases where a divinity school is part of a greater university. Whatever the case may be, admission to the program is generally very difficult and requires at least one master's degree in a related field, usually accompanied by a significant research paper or thesis. Areas of concentration may include New Testament, Hebrew Bible, ethics, church history, homiletics, and theology.

The Doctor of Ministry (D.Min) is a professional degree that generally has a prerequisite of the M.Div., and serves as a more advanced ministerial degree. Often it allows for more in-depth study in a specific area of Christian ministry than is generally possible in the M.Div. program. A thesis or dissertation is almost always required.

Other degrees that are conferred by divinity schools in the United States may include doctor of educational ministry (D.Ed.Min.), doctor of musical arts (D.M.A.), doctor of missiology (D.Miss.), doctor of education (Ed.D.), master of church music (M.C.M.), master of Christian studies (M.C.S.), master of religion (M. Rel.), master of ministry (M.Min.), and master of pastoral studies (M.P.S.). In addition, there are a few divinity schools that have dual degree programs with other schools at either their own university or those of nearby institutions (i.e., J.D./M.Div., M.D./M.T.S., M.B.A./Th.M.).

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## DOCTORAL DEGREE, THE

Advanced education culminates with the awarding of the doctoral degree. Allen R. Sanderson and Bernard Dugoni, in the 1997 edition of their annual survey of new doctoral recipients from U.S. universities, identified fifty-two different research doctorates. Traditionally, the nonprofessional doctoral degree most often awarded is the doctor of philosophy (Ph.D.), although other degrees such as the doctor of education (Ed.D.), doctor of arts (D.A.), and the doctor of science (D.Sc./Sc.D.) are being offered in greater numbers. Professional doctoral degrees such as the doctor of jurisprudence (J.D.) and the doctor of medicine (M.D.) also indicate the ending of advanced education, but the requirements for these doctoral degrees differ from those of the Ph.D. and its equivalents.

Requirements for doctoral degrees are generally established within the United States. While there are differences with course requirements and completion rates, the basic doctoral degree begins with one to two years of course work and ends with the oral defense of the dissertation. Credit hours generally range from sixty to seventy-five points beyond a master's degree, and course work is most often individually tailored based on the student's background, interests, and professional goals. In addition to completing class work prior to the dissertation, doctoral students are required to take comprehensive exams. Depending on the program, a student may be required to take more than one comprehensive exam throughout the course of study. Typically, a comprehensive exam is administered immediately following completion of course work, and the exam itself may take various forms such as a daylong session where students answer questions based on knowledge obtained in their studies. In most circumstances this is a closed-book exam and, after faculty have had the opportunity to grade the exam, doctoral students must defend their responses orally before a faculty panel.

### The Dissertation

The dissertation is an original topic of research investigated by the student in his final years as a doc-

toral student. A typical dissertation completed by a Ph.D. candidate will include five chapters: the first is a general introduction, the second is a thorough literature review of the subject, the third chapter contains the methodology or how the research is to be conducted, the fourth chapter shows the findings from research, and the final chapter is a discussion of the findings with suggestions for possible future research.

Prior to conducting the dissertation research, the graduate student must defend her proposal to her dissertation committee, which is generally made up of three to five members. The proposal is typically the first three chapters of the dissertation. After the proposal is approved the doctoral student may begin her research and work to complete the dissertation. After the research has been conducted and data analyzed, the doctoral student must again orally defend the dissertation before her committee. Each Ph.D. candidate must show a thorough knowledge of the subject being studied and present original research and findings that add to the body of knowledge for her discipline.

### Ph.D.'s, M.D.'s, and J.D.'s

The Ph.D. is the typical doctoral degree awarded at universities, although the areas of study range from the basic humanities to the sciences and education. Those receiving Ph.D.'s have traditionally gone on to faculty positions at colleges or universities. It is not uncommon, however, for Ph.D. recipients to go immediately into careers outside of academe.

Professional doctoral education, as previously mentioned, is postbaccalaureate study in the professions. Two of the most established professional education fields are medicine and law. The requirements for obtaining an M.D. or J.D. are rigid and do not vary greatly at different universities. In contrast, students in research doctoral programs have more flexibility in their individual courses of study. Professional doctoral students enter their graduate program as a cohort, take the same classes, and graduate within the recommended time period unless serious circumstances delay their progress. The curriculum focuses on more applied areas of study. Unlike a Ph.D. where the dissertation is the culmination of study, often after the professional education is completed, the graduate is required to take state-regulated exams in order to practice their profession such as medicine, law, or nursing.

### Trends

Sanderson and Dugoni's 1997 doctoral survey shows several trends that are expected to continue. One is an upward trend of Ph.D.'s awarded. While the number of doctorates awarded annually is typically the greatest for the life sciences, the largest growth during the 1990s came in engineering. Doctorates granted to women have been on an upward trend since the late 1960s, but women continue to receive the fewest doctorates in the physical sciences and engineering. Racial/ethnic minority groups also have seen increases in the numbers of Ph.D.'s awarded.

*See also:* GRADUATE SCHOOL TRAINING.

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## DRIVER EDUCATION

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Driver and traffic safety education began as a concept in 1928 as part of a doctoral thesis by Albert W. Whitney. Whitney argued that since so many high school students were learning to drive cars, schools had a responsibility to include driver education and safety instruction in the curriculum. Driver and traffic safety education was developed as a method for persons to gain licensure to use an automobile on public roadways. Prior to this period, state licensure to operate an automobile was not required in all states and localities. As automobiles became less costly and more available, the need to control the interaction of trucks, cars, trains, horse-drawn vehicles, ridden horses, bicyclists, and pedestrians became evident as death rates became an issue in larger cities. Public agencies such as the American Automobile Association (AAA), the Highway Users Federation for Safety and Mobility, and the Association of Casualty and Surety Companies called on government agencies to provide better roadway surfaces, roadway signs, roadway controls, driver evaluation, and driver licensing.

Government agencies responded to these lobbying efforts with roadway building projects and driver

licensing programs. Legislative actions provided funding for roadways and licensing agencies. Minimum requirements for licensure established a need to train novice automobile drivers to operate a vehicle effectively. Some local school districts in Pennsylvania and Michigan conducted training programs to help novice drivers as early as 1929. Amos Neyhart, a professor at Pennsylvania State University, established the first recognized driver education curriculum program in 1934. He worked with the State College School District to develop a curriculum for driver education at the high school level. Neyhart became known throughout the United States as the father of high school driver education. His efforts to train high school driver education instructors—efforts that were supported by AAA—have long been recognized as the start of driver education for high-school-age youth. Herbert J. Stack developed the Center for Safety Education at New York University in 1938 and is remembered as the father of safety education in the United States.

### Goals and Purposes

The American Driver and Traffic Safety Education Association (ADTSEA) developed a comprehensive driver education plan to provide an effective educational component for graduated licensing efforts. The goals of such a program would include:

- ensuring that novice drivers are trained for practice driving and capable of entering the restricted licensing process, through the use of a competency-based training and assessment process
- instituting a competency-based training and assessment process for drivers moving from a restricted licensing stage to an unrestricted licensing stage
- ensuring that trained novice drivers qualify for appropriate reductions in insurance premiums
- ensuring that novice drivers are trained to recognize risk and potential consequences in order to make reduced-risk choices
- ensuring that novice drivers make choices to eliminate alcohol or other drug use while using a motor vehicle
- ensuring that novice drivers will use occupant protection as a crash countermeasure
- ensuring that novice drivers are capable of using anger management skills to avoid aggressive driving

- ensuring that novice drivers are capable of recognizing fatigue factors that contribute to crashes
- ensuring that novice drivers are trained to deal successfully with new vehicle technologies
- ensuring that novice drivers and mentors work together as a team in practicing risk-reduction driving strategies as a component of the lifelong driver development process

### Course Offerings in the School Curriculum

Course offerings in the public school curriculum vary in each state, commonwealth, or territory as a result of licensing efforts controlled by state agencies and institutions not under direct federal government control. The course offerings, when offered in the public setting, are often conducted outside the school day or as a summer course. The courses are usually minimum requirement courses consisting of thirty to thirty-five hours of classroom instruction combined with four to eight hours of in-car training. The school curriculum includes traffic safety programs from kindergarten through senior high school in the scope and sequence of the school district program. These programs are usually not coordinated efforts but develop on the expertise and interest of the instructor, students, or parents.

### Student Enrollment

Student enrollment in driver education varies as a result of state requirements, but studies funded by AAA and ADTSEA indicated that 30 percent of the nation's driving population had enrolled in a driver education program prior to licensing. Nearly 40 percent of novice drivers had completed a driver education program for licensing or insurance requirements. These figures are significantly lower than those for the period from 1965 through 1980 when more than 60 percent were enrolled prior to licensing and up to 70 percent of novice drivers completed a state-approved program for licensing or insurance requirements.

### Issues and Trends

Trends in driver and traffic safety education include the shifting of training responsibility from public agencies to private agencies in larger cities. Rural areas are continuing to provide training in the public agencies often because of the lack of an appropriate private agency to provide the training.

The advancement of new vehicle technology has provided a challenge for driver and traffic safety in-

structors. The technology development is moving forward at a rapid pace while instruction techniques are slow to be released by agencies developing the technologies. Instructors and novice drivers often use vehicles with the new technologies and therefore have to teach/learn new driving techniques even though the vehicles that novice drivers often use do not have the new features and technology.

Public financing of driver education continues to decline, so parents and novice drivers are increasingly bearing most of the costs associated with driver and traffic safety education. Parents are beginning to assume new roles because the instructor needs to work with both student and parent regarding new technology and techniques for vehicle control. Parents are assuming more responsibility under graduated licensing programs for training novice drivers and for developing them into responsible roadway users.

### Effectiveness of the Program

Program effectiveness has been considered by many agencies and been the subject of a number of reports throughout the period of federal involvement in crash reduction that began with the passage of the Federal Highway Safety Act of 1966. This act required that states provide comprehensive highway safety programs, including driver education. Unfortunately, the state of knowledge regarding the effectiveness of driver education in the early twenty-first century provides no certainty, and much doubt, that the return on this enormous effort will be commensurate with the investment. The National Highway Traffic Safety Administration (NHTSA) has supported training efforts for drivers in a number of ways. NHTSA supported a study of driver training techniques over a period of five years in De Kalb County, Georgia, and found that elaborate training programs were no more effective than more basic instruction in crash reduction. The study found that a more comprehensive program resulted in a reduction in crashes for a six-month period but that the effects diminished as time increased. The comparisons in this study involving education methods were misconstrued by the public and media to mean that driver education did not work. The Insurance Institute for Highway Safety continues to support driver education as an adequate program for prelicensing efforts in a graduated licensing system, but not as a crash reduction program.

Driver education has been criticized as a program that does not reduce young driver crashes. To their credit, driver and traffic safety education efforts have long been designed to aid the driver in gaining a license to meet minimum standards designed by state agencies. The driver education programs designed in states that require driver education for state licensure have demonstrated a reduced crash rate for fifteen-, sixteen-, and seventeen-year-old drivers when compared to states that do not require driver education for licensure. Michigan developed a graduated licensing program involving two phases of driver education for novice drivers and has demonstrated a reduced crash rate for teen drivers. North Carolina provides driver education as the first stage of a graduated license and has demonstrated a reduction in crash rates. Kentucky, however, does not require driver education as part of its initial phase of graduated licensing and has not demonstrated a reduced crash rate for teen drivers. Such research may indicate that driver and traffic safety education needs to be part of a graduated licensing program as well as the lifelong learning process.

*See also:* SCHOOL-LINKED SERVICES.

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## DROPOUTS, SCHOOL

Individuals who leave school prior to high school graduation can be defined as school dropouts. From the early 1960s into the twenty-first century, as universal secondary school attendance became the norm, such individuals were the subject of study by educators, educational researchers, and concerned policymakers in the United States. With some variation in local circumstances, they are of increasing concern around the world as the educational requirements for full participation in modern societies continue to increase.

### Extent of the Problem

Dropout rates have been examined from several perspectives. Event dropout rates measure the proportion of students who drop out of school in a single year without completing a certain level of schooling. Status dropout rates measure the proportion of the entire population of a given age who have not completed a certain level of schooling and are not currently enrolled. Cohort dropout rates measure dropping out among a single group or cohort of students over a given period. High school completion rates measure the proportion of an entire population of a given age who have left high school and earned a high school diploma or its equivalent.

The U.S. National Center for Education Statistics (NCES) reports annual event dropout rates that describe the proportion of young adults ages fifteen through twenty-four who dropped out during the school year prior to the data collection. Between 1972 and 2000 this annual event dropout rate ranged between 4 and 6.7 percent. This rate decreased from 1972 through 1987. From 1987 to 2000 there were

year-to-year fluctuations, but the overall pattern was one of stable rates ranging from 4 to 5.7 percent.

Status dropout rates are reported by the NCES as the proportion of young adults ages sixteen through twenty-four not currently enrolled in school who have not completed a high school diploma or the equivalent. Between 1972 and 2000 the annual status dropout rate declined from 14.6 percent to 10.9 percent.

Cohort dropout rates are calculated for various cohorts studied as they make their way through secondary school. The most recent large-scale secondary school cohort is found in the National Educational Longitudinal Study of 1988. That study examined the cohort dropout rates for the eighth-grade class of 1988 followed up at two-year intervals through 1994. For this national sample of U.S. secondary school students, the cohort dropout rate in the spring of 1992, when they were scheduled to complete high school, was 10.8 percent. The rate declined to 10.1 percent by August 1992 after some of the students completed high school in the summer. The rate declined further to 7.2 percent by August 1994, two years following their scheduled completion of high school.

High school completion rates reported by the NCES are the proportions of those aged eighteen to twenty-four not in high school who have earned a diploma or the equivalent. Between 1972 and 2000 this rate ranged from 82.8 percent to 86.5 percent.

Dropout rates differ by various demographic factors, including gender, race and ethnicity, immigration status, and geographic location. In the United States dropout rates are higher for males than for females. Hispanics have the highest dropout rates by far, followed by African Americans, non-Hispanic whites, and Asian Americans. For example, in 2000 the status dropout rate for Hispanics was 27.8 percent, while the corresponding rates for African Americans, non-Hispanic whites, and Asian Americans were 13.1 percent, 6.9 percent, and 3.8 percent, respectively. Individuals born outside the United States have a higher dropout rate than those born in the United States. There are also regional differences in the United States, with the South and West having higher dropout rates than the Northeast and Midwest. Students in urban areas are more likely to drop out of school than students in suburban areas.

Internationally, there is considerable variation in dropout rates, because different nations are in dif-

ferent stages of extending universal secondary education. Among developed countries the high school completion rates are generally as high as or higher than in the United States, though the nature of the secondary programs varies considerably. Rates in other countries lag behind those in developed countries, but secondary enrollments and graduation rates have been increasing worldwide. There are also differences in dropout rates associated with socioeconomic and demographic factors. One notable demographic difference concerns the dropout rates for males and females. Females are less likely to drop out in developed countries and in Latin American and the Caribbean, but females are more likely to drop out prior to high school completion in the rest of the world.

### Factors Associated with Early School Leaving

In searching for the reasons that students drop out of school prior to graduation, researchers have focused on three different types of factors. The earliest line of work in this area examined the characteristics of students and their immediate circumstances. This work has been joined by research examining the role of school characteristics. Another set of investigations concerns the impact of broader factors outside of schools, including policies governing the overall educational system.

**Student and family factors.** In view of the pronounced associations between easily recognized student characteristics and dropout rates, it is not surprising that investigators have devoted attention to the potential impact of such characteristics. Among the student characteristics identified as contributing to dropping out have been gender, racial and ethnic minority status, low socioeconomic status, poor school performance, low self-esteem, delinquency, substance abuse, and pregnancy. In addition to these individual characteristics, research has also examined the impact of certain family characteristics, including single-parent families, non-English-speaking families, and families that are less involved in the educational process.

**School factors.** Noting differences in dropout rates among schools, researchers have investigated the characteristics of schools and their programs that appear to be associated with early school leaving. These investigations have considered the academic and social dimensions of schooling as well as the issue of the availability of schooling.

Schools in which students have limited opportunities for academic success appear to have higher dropout rates. One of the strongest correlates of early school leaving in studies of students is the lack of academic success. Students who more often get low grades, fail subjects, and are retained in grade are more likely to leave school prior to graduation. Students experiencing difficulty meeting the academic demands of the school tend to leave rather than continue in the face of the frustration of failing to achieve good grades. The lack of opportunities for success can be viewed as an imbalance between the academic demands of the school and the resources students have to meet those demands. The availability of such resources appears to be related to the structure and organization of schools. In 2000 Russell W. Rumberger and S. L. Thomas found that public, urban, and large schools and those with higher student-teacher ratios tended to have higher dropout rates.

The failure of students to find positive social relationships in schools and the lack of a climate of caring and support also appear to be related to increased rates of dropping out. Positive relationships between teachers and students and among students and a climate of shared purpose and concern have been cited as key elements in schools that hold students until graduation. In 1994 Nettie Legters and Edward L. McDill pointed to organizational features of schools conducive to positive social relations including small school size, teacher and student contacts focused on a limited number of people within the school, and teachers who have been prepared to focus on the needs of students and their families and communities. In 2001 Robert Croninger and Valerie E. Lee found lower dropout rates in schools where students report receiving more support from teachers for their academic work and where teachers report that students receive more guidance about both school and personal matters.

In addition to issues of access to academic success and social acceptance within schools, in some contexts there is an issue of the availability of schooling at all. This is primarily an issue in areas of the world where secondary schooling is not widely available. Although this situation tends to be more prevalent in the developing world, there are areas within developed countries, such as sparsely populated or geographically isolated areas, where access to schooling is not readily available. Completing high school in such circumstances often takes students far from

home and from family and community support and so makes dropping out more likely.

**Outside factors.** Factors outside of schools have also been considered for their impact on dropping out. Examinations of these outside factors typically concern the degree to which they are supportive of schooling or the degree to which schooling is perceived as relevant to the current or future lives of students. In both cases external factors can be the natural consequence of broader social forces or the result of deliberate educational policies.

Support for schooling in general or for the continued enrollment of students through graduation can vary from community to community and society to society. For example, in the United States the long-held view that schooling is essential for a democratic society was reinforced in the late twentieth century by the notion that schooling is essential to meeting the increasing technical requirements of the U.S. economy. These ideologies of support for schooling are reflected in specific policies, such as educational requirements for jobs, and in media campaigns emphasizing the importance of staying in school.

The relevance of schooling and school completion as perceived by students also has an impact on dropping out. When conditions outside of school indicate to students that school completion is important for their current and future success, students are more likely to remain in school. These conditions can be structured by indirect processes as when high school diplomas become so common that they lose their value and are replaced by university graduation as a mark of distinction. Such conditions can also be structured directly through policies such as those requiring students to remain in school to obtain a driver's license.

### **Dropout Prevention Programs and Their Effects**

The major approaches to dropout prevention seek to use knowledge of the factors associated with dropping out to craft interventions to increase the chances that students will remain in school through high school graduation. The various prevention efforts fall into three major categories: school-based approaches, environmental approaches, and system-building approaches.

School-based approaches have included both programs and practices designed to enhance the prospects for student academic success and those de-

signed to strengthen the positive social relationships and climate of support and concern students find in school. Approaches to the former have included improved diagnosis of student abilities and tailoring of instruction to individual students, altering evaluation processes to recognize student effort, restructuring school tasks to draw on a wider range of abilities, enhancing remediation programs to make use of more time for instruction during the school year and during the summer, and increasing the use of tutoring and technology to deliver instruction to students whose needs are not met by regular classroom instruction. Efforts to improve social relationships and create a shared climate of concern for students have included mentoring programs linking adults and students, house plans in large schools to create smaller environments in which a limited number of students and teachers work on the entire academic program, and the use of older students as peer mentors for younger students.

Environmental approaches have included strategies to address unsupportive outside conditions by developing new relationships between families and schools and the integration of educational and human services to address the social and economic problems that impede progress through school. Attempts to reduce the problem of the lack of relevance of school to the current and future lives of students have involved revised curricula that more clearly relate to real-world experiences, updated vocational education programs that integrate academic and vocational skills and make clear links to the world of work, multicultural curricula that include materials and role models from students' own ethnic or cultural backgrounds, and programs that make more salient the link between schooling and work.

System-building approaches include all those activities entailed in continuing to expand secondary education in those societies in which secondary schooling is not widely available. Included are things such as establishing schools closer to the local communities of students and enhancing the quality of the teaching force and the curriculum.

The evaluation evidence on the effectiveness of the various dropout prevention efforts is limited, with most programs subjected to little in the way of rigorous study. Attempts at evaluation are complicated by the long lead time between early interventions and on-time high school completion and by the complex and multifaceted approaches often attempted with students in secondary schools.

*See also:* GENERAL EDUCATIONAL DEVELOPMENT TEST; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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GARY NATRIELLO

## DRUG ABUSE

*See:* DRUG AND ALCOHOL ABUSE; FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ALCOHOL, TOBACCO, AND OTHER DRUGS; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS; RISK BEHAVIORS, *subentry on* DRUG USE AMONG TEENS.

## DRUG AND ALCOHOL ABUSE

### SCHOOL

Gilbert J. Botvin  
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### COLLEGE

Leigh Z. Gilchrist

## SCHOOL

Drug and alcohol abuse are important problems that affect school-age youth at earlier ages than in the

past. Young people frequently begin to experiment with alcohol, tobacco, and other drugs during the middle school years, with a smaller number starting during elementary school. By the time students are in high school, rates of substance use are remarkably high. According to national survey data, about one in three twelfth graders reports being drunk or binge drinking (i.e., five or more drinks in a row) in the past thirty days; furthermore, almost half of high school students report ever using marijuana and more than one-fourth report using marijuana in the past thirty days. Marijuana is the most commonly used illicit drug among high school students. However, use of the drug ecstasy (MDMA) has seen a sharp increase among American teenagers at the end of the twentieth century, from 6 percent in 1996 up to 11 percent reporting having tried ecstasy in 2000. Indeed, at the beginning of the twenty-first century, ecstasy was used by more American teenagers than cocaine.

Many educators recognize that drug and alcohol abuse among students are significant barriers to the achievement of educational objectives. Furthermore, federal and state agencies and local school districts frequently mandate that schools provide health education classes to students, including content on drug and alcohol abuse. The Safe and Drug-Free Schools Program is a comprehensive federal initiative funded by the U.S. Department of Education, which is designed to strengthen programs that prevent the use of alcohol, tobacco, drugs, and violence in and around the nation's schools. In order to receive federal funding under this program, school districts are expected to develop a comprehensive education and prevention plan, which involves students, teachers, parents, and other members of the community. Thus it is clear that schools have become the major focus of drug and alcohol abuse education and prevention activities for youth. This makes sense from a practical standpoint because schools offer efficient access to large numbers of youth during the years that they typically begin to use drugs and alcohol.

Since the 1970s several approaches to drug and alcohol abuse education and prevention have been implemented in school settings. Traditionally, drug and alcohol abuse education has involved the dissemination of information on drug abuse and the negative health, social, and legal consequences of abuse. Contemporary approaches include social resistance and competence-enhancement programs,

which focus less on didactic instruction and more on interactive-skills training techniques. The most promising contemporary approaches are conceptualized within a theoretical framework based on the etiology of drug abuse and have been subjected to empirical testing using appropriate research methods. Contemporary programs are typically categorized into one of three types: (1) *universal* programs focus on the general population, such as all students in a particular school; (2) *selective* programs target high-risk groups, such as poor school achievers; and (3) *indicated* programs are designed for youth already experimenting with drugs or engaging in other high-risk behaviors.

### Traditional Educational Approach

**Information dissemination.** The most commonly used approach to drug and alcohol abuse education involves simply providing students with factual information about drugs and alcohol. Some information-dissemination approaches attempt to dramatize the dangers of drug abuse by using fear-arousal techniques designed to attract attention and frighten individuals into not using drugs, accompanied by vivid portrayals of the severe adverse consequences of drug abuse.

**Methods.** Informational approaches may include classroom lectures about the dangers of abuse, as well as educational pamphlets and other printed materials, and short films that impart information to students about different types of drugs and the negative consequences of use. Some programs have police officers come into the classroom and discuss law-enforcement issues, including drug-related crime and penalties for buying or possessing illegal drugs. Other programs use doctors or other health professionals to talk about the severe, often irreversible, health effects of drug use.

**Effectiveness.** Evaluation studies of informational approaches to drug and alcohol abuse prevention have shown that in some cases a temporary impact on knowledge and antidrug attitudes can occur. However, 1997 meta-analytic studies by Nancy Tobler and Howard Stratton consistently fail to show any impact on drug use behavior or intentions to use drugs in the future. It has become increasingly clear that the etiology of drug and alcohol abuse is complex, and prevention strategies that rely primarily on information dissemination are not effective in changing behavior.

## Contemporary Educational Approaches

**Social resistance approach.** There has been a growing recognition since the 1970s that social and psychological factors are central in promoting the onset of cigarette smoking and, later, drug and alcohol abuse. Drug abuse education and prevention approaches are increasingly more closely tied to psychological theories of human behavior. The social resistance approach is based on a conceptualization of adolescent drug abuse as resulting from pro-drug social influences from peers, persuasive advertising appeals, and media portrayals encouraging drug use, along with exposure to drug-using role models. Therefore, social influence programs focus extensively on teaching students how to recognize and deal with social influences to use drugs from peers and the media. These resistance-skills programs focus on skills training to increase students' resistance to negative social influences to engage in drug use, particularly peer pressure.

**Methods.** The goal of resistance-skills training approaches is to have students learn ways to avoid high-risk situations where they are likely to experience peer pressure to smoke, drink, or use drugs, and/or acquire the knowledge, confidence, and skills needed to handle peer pressure in these and other situations. These programs frequently include a component that makes students aware of pro-smoking influences from the media, with an emphasis on the techniques used by advertisers to influence consumer behavior. Also, because adolescents tend to overestimate the prevalence of tobacco, alcohol, and drug use, social resistance programs often attempt to correct normative expectations that nearly everybody smokes, drinks alcohol, or uses drugs. In fact, it has been proposed that resistance skills training may be ineffective in the absence of conservative social norms against drug use, since if the norm is to use drugs, adolescents will be less likely to resist offers of drugs.

**Effectiveness.** Resistance skills programs as a whole have generally been successful. A comprehensive review of resistance skills studies published from 1980 to 1990 reported that the majority of prevention studies (63%) had positive effects on drug use behavior, with fewer studies having neutral (26%) or negative effects on behavior (11%)—with several in the neutral category having inadequate statistical power to detect program effects. Furthermore, several follow-up studies of resistance skills interventions have reported positive behavioral effects lasting

for up to three years, although longer term follow-up studies have shown that these effects gradually decay over time, suggesting the need for ongoing intervention or booster sessions.

The most popular school-based drug education program based on the social influence model is Drug Abuse Resistance Education, or Project DARE. The core DARE curriculum is typically provided to children in the fifth or sixth grades and contains elements of information dissemination and social influence approaches to drug abuse prevention. DARE uses trained, uniformed police officers in the classroom to teach the drug prevention curriculum. Despite the popularity of DARE, 1998 evaluation studies of DARE by Dennis Rosenbaum and Gordon Hanson examined the most scientifically rigorous published evaluations of DARE and concluded that DARE has little or no impact on drug use behavior, particularly beyond the initial posttest assessment. Some of the possible reasons why DARE is ineffective may be that the program is targeting the wrong mediating processes, that the instructional methods are less interactive than more successful prevention programs, and that teenagers may simply “tune out” what may be perceived as an expected message from an ultimate authority figure.

**Competence enhancement approach.** A limitation of the social influence approach is that it assumes that young people do not want to use drugs but lack the skills or confidence to refuse. For some youth, however, using drugs may not be a matter of yielding to peer pressure but may have instrumental value; it may, for example, help them deal with anxiety, low self-esteem, or a lack of comfort in social situations. According to the competence-enhancement approach, drug use behavior is learned through a process of modeling, imitation, and reinforcement and is influenced by an adolescent's pro-drug cognitions, attitudes, and beliefs. These factors, in combination with poor personal and social skills, are believed to increase an adolescent's susceptibility to social influences in favor of drug use.

**Methods.** Although these approaches have several features that they share with resistance-skills training approaches, a distinctive feature of competence-enhancement approaches is an emphasis on the teaching of generic personal self-management skills and social coping skills. Examples of the kind of generic personal and social skills typically included in this prevention approach are decision-making and problem-solving skills, cognitive skills for resist-

ing interpersonal and media influences, skills for enhancing self-esteem (goal-setting and self-directed behavior change techniques), adaptive coping strategies for dealing with stress and anxiety, general social skills (complimenting, conversational skills, and skills for forming new friendships), and general assertiveness skills. These skills are best taught using proven cognitive-behavioral skills training methods: instruction and demonstration, role playing, group feedback and reinforcement, behavioral rehearsal (in-class practice) and extended (out-of-class) practice through behavioral homework assignments.

**Effectiveness.** Over the years, a number of evaluation studies have been conducted, testing the efficacy of competence-enhancement approaches to drug abuse prevention. These studies have consistently demonstrated behavioral effects as well as effects on hypothesized mediating variables. More important, the magnitude of reported effects of these approaches has typically been relatively large, with studies reporting reductions in drug use behavior in the range of 40 to 80 percent. Long-term follow-up data indicate that the prevention effects of these approaches can last for up to six years. In summary, drug abuse prevention programs that emphasize resistance skills and general life skills (i.e., competence-enhancement approaches) appear to show the most promise of all school-based prevention approaches.

### Challenges for School-Based Drug Abuse Prevention

In the final analysis, research-based prevention programs proven to be successful are unlikely to have any real public health impact unless they are used in a large number of schools. However, programs with proven effectiveness are not widely used. Drug prevention programs most commonly used in real-world settings are those that have not shown evidence of effectiveness or have not been evaluated properly. Thus an important area that deserves further attention is how effective school-based drug abuse prevention programs can be widely disseminated, adopted, and institutionalized. Furthermore, once effective programs are disseminated, steps must be taken to ensure that programs are implemented with sufficient fidelity. Regardless of how effective a prevention program may be, it is not likely to produce the desired results unless it is provided in full and by qualified and motivated staff.

**See also:** FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ALCOHOL, TOBACCO, AND OTHER DRUGS; HEALTH EDUCATION, SCHOOL.

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## COLLEGE

Alcohol, tobacco, and other drugs used in American colleges and universities represents a public health problem of critical proportions. Institutions of higher education are under increased scrutiny due to policy developments from the public health, governmental, and higher education sectors in the 1990s that place revised importance on initiatives addressing student substance use. Despite variation in campus use rates, no institution of higher education is immune to substance use and its related adverse consequences. The negative effects reach beyond the parameters of the campus, catapulting this issue into the forefront of the national agenda. It is in the interest of society to design and implement policies and programs that aim to curb college student substance use and abuse.

### Extent of Use

Alcohol, tobacco, and other drug use represents a ubiquitous problem for American colleges. Alcohol and other drug use on college campuses radically increased between 1993 and 1997, then stabilized between 1997 and 1999. This trend produces great concern as college student use rates are expected to climb due to a radical increase in drug use among those aged twelve to seventeen.

Alcohol, tobacco, and marijuana represent the most frequently used drugs on college campuses. Nationwide, 84 percent of college students report having drunk alcohol within the last year, 68 percent within the previous month, and 3.6 percent on a daily basis, according to Henry Wechsler (1996). Tobacco use shares a student use rate similar to alcohol. Schools indicate a significant increase of 28 percent in student smoking during the 1990s, with nearly one-third of college students having smoked within the past year. Drug use rates are rising on campuses; Arthur Levine and Jeanette S. Cureton estimated that 25 percent of students indicated that they had used some form of illegal drug within the past year. The prevalence of marijuana use rose 22 percent between 1993 and 1999—an increase that occurred among most student demographic groups and at almost all kinds of colleges. Marijuana is used by 24 percent of college students, cocaine by 4 percent, and hallucinogens by nearly 5 percent.

### Alcohol

Alcohol is the number one drug of choice for college students of both two-year and four-year institutions,

and continues to pose tremendous challenges to higher education. On average, college students consume about 4.5 drinks per week and about two in five college students engage in high-risk or binge drinking at least once in an average two-week period. Binge drinking, consuming five or more drinks in succession for men and four for women, is on a substantial increase, affecting about two fifths of the college population. It accounts for the majority of alcohol consumed and is associated with the bulk of problems encountered on campuses, impacting students' social lives, health, and education.

The negative consequences of student alcohol use span well beyond the parameters of the college campus and affect students, the institution, and the community. Alcohol is associated with increased absenteeism from class and poor academic performance, which results in a lower grade point average. The majority of injuries, accidents, vandalism, sexual assaults and rape, fighting, and other crime, on and off college campuses, are linked to alcohol and other drug use. Unplanned and uninhibited sexual behavior may lead to pregnancy and exposure to sexually transmitted diseases and HIV/AIDS. Alcohol use can be associated with injury and death from drinking and driving, alcohol poisoning, and suicide.

### Tobacco

Many students perceive the college years as a time of experimentation, although in fact it is a period heavily shaped by environmental factors, social norms, and peer influences. During these years, it is common for intermittent tobacco use to quickly manifest into a life-long habit. For college students, tobacco in the form of cigarettes, smokeless tobacco, and cigars presents a legal and accessible alternative to other drug use. Its use is linked to various cancers, emphysema, heart disease, and other life-threatening illnesses.

### Other Drugs

By their nature, illicit drugs do not carry a legal age for purchase, consumption, or distribution. Therefore, colleges must address the problem somewhat differently than they do alcohol and tobacco. Students are entering higher education with increased exposure to drugs, which predisposes them to substance dependency. Variation exists among college and universities as to the rate and type of substances used. Marijuana, amphetamines, hallucinogens, in-

halants, cocaine, steroids, and designer drugs represent but a few general forms entering the higher education arena. Marijuana is reported as the illicit drug of choice on campuses. Illicit drug use factors into tragedies that include rape, overdose, vandalism, violence, and death. Memory loss, diminished concentration and attention, increased absenteeism, impaired academic performance, and physical illness are also associated with drug use.

### **Secondhand Effects**

The secondhand effects of substance use on campus are often overlooked and underappreciated for the deleterious effects they may have on students and the quality of their collegiate experience. Students who abstain, use legally, or in moderation often suffer secondhand effects from the behaviors of students that use substances in excess. Nonbinging and abstaining students may become the targets of insults and arguments, physical assaults, unwanted sexual advances, vandalism, and humiliation. Sleep deprivation and study interruption results when these students find themselves caring for intoxicated students. Passive smoke is associated with life-threatening health risks, and smoking within residence halls places people at risk due to fire.

### **Campus Environment**

Perceptions of campus use, campus climate, substance availability, awareness of campus policies and enforcement, and students' family histories of substance abuse impact the extent of substance use on any given campus. The campus and surrounding community exert profound influence on innumerable facets of student life. Establishments encircling college campuses that cater specifically to college students contribute to the substance use climate by selling to underage or intoxicated students. The social, academic, and cocurricular milieus are often shaped by the social norms and perceptions related to campus alcohol, tobacco, and other drug use.

Students typically overestimate the amount and the extent of high-risk drinking, tobacco use, and illicit drug use on their campus and on college campuses in general. These misconceptions lead students to feel pressured and justified in their increased substance use. By exploring how students perceive substance use, policies, and rule enforcement on campus, college administrators are better able to discern and roughly predict how students will react to the perceptions of social norms.

Social fraternities, sororities, and athletics typify student groups at high risk for substance abuse. Fraternities and sororities often find themselves at the center of growing concern as their mere presence on campus is associated with higher campus-wide levels of substance use, particularly alcohol consumption. Leaders of Greek organizations, particularly male members, accounted for the highest alcohol consumption on many college campuses. Due to the integral social role these organizations occupy on most college campuses, the practices they espouse often advocate the use of alcohol, tobacco, and other drugs.

Intercollegiate athletics represents an important aspect of the college experience. However, the college athlete may experience anxiety associated with the dual roles and conflicting expectations of being both an athlete and a student. Attempting to rectify this discourse, college athletes may become increasingly susceptible to substance dependency. Collegiate athletes are more likely to use alcohol and smokeless tobacco, and experience binge drinking more than nonparticipating students. Colleges and universities compound the problem by sending students mixed messages concerning substance use by endorsing alcohol and tobacco industry advertising at collegiate sporting events.

### **Policies**

Affecting the campus environment relies heavily on the pervasive commitment of the college or university. Focused policy, procedures, prevention strategies, data gathering, counseling, and referral approaches enable schools to effectively address this problem. Institutions often find themselves caught in a legal quagmire when they attempt to combat rising substance use and are confronted with issues of legal responsibility and institutional liability while simultaneously acknowledging the behavioral and health implications related to substance abuse.

Local, state, and federal governments play a central role in assisting and bolstering higher education's efforts to reduce substance use and the resulting problems that plague American college campuses. Federal legislative such as the 1986 amendments to the Higher Education Act of 1965, Drug-Free Schools and Communities Act of 1989, and the Crime Awareness and Campus Security Act of 1990 represent such initiatives. The 1998 Parental Notification law permits schools to inform parents if their child violates the rules or laws governing al-

cohol or controlled substances. The Drug-Free Schools and Campuses regulations mandate that schools prepare a biennial report, which certifies that the school has implemented and assessed prevention policy and programs and documents the consistency of policy enforcement. This report must be made available to anyone who requests it.

With increasing cost pressures on colleges, it is difficult to assure adequate and continuous funding for substance-related programs and policy enforcement. In 1993, the Higher Education Center for Alcohol and Other Drug Prevention was established by the United States Department of Education to assist in developing and carrying out substance prevention policies and programs. The U.S. Department of Education and other granting organizations provide national funding support in an effort to address this issue. Specialized task forces and advocacy groups, such as the National Institute on Alcoholism and Alcohol Abuse task force on college drinking, illustrate the nation's commitment to this problem.

Substance abuse is not a campus-centered problem but one that impacts the entire community. To effect change, institutions of higher education acknowledge the need to form committees and coalitions, comprised of administration, students, parents, faculty, alumni, campus organizations, governmental and law enforcement agencies, and the community. By activating multiple, campus-wide policy levers, campus leaders ensure that initiatives span all facets of the institution.

Schools are tightening regulations, strengthening academic requirements, adjusting course scheduling, and offering extended hours for library and recreational facilities, while providing alternative alcohol-free campus-sponsored activities. Schools are withdrawing endorsement of alcohol and tobacco industry advertising on campus and establishing substance-free residences. By targeting social groups such as fraternities and sororities for programming and monitoring of policy compliance, schools are attempting to further shape the social climate. Novel disciplinary actions exhibit the decisive consequences of such behavior, provide support services, and offer mandatory alcohol or drug assessment with the possible introduction of counseling, Twelve Step, and treatment services.

### **Programs**

Through a paradigm that conceptualizes students' college experience systemically, substance-related

strategies strive to alter the social, physical, intellectual, legal, and economic environment on campus and in surrounding communities. Effective initiatives offer diversified programs that account for students' developmental level year in school, age, and level of readiness to change behavior with special attention to the first-year experience.

A variety of creative and versatile approaches are available to institutions of higher education to address issues related to substance use. Education, prevention, counseling, and treatment programs are the most commonly utilized. Approaches that promote increased understanding about substance use and the related effects, provide suggestions for alternative substance-free activities, and attempt to counter misconceptions around social norms comprise the foundation to effective program initiatives.

Standardized programs, developed and distributed by external vendors, offer schools an alternative method for educating students. Many schools find these programs beneficial because of the variety of issues targeted. With the advent of novel technology, innovative and interactive computer programs add to the program arsenal. Often expensive, standardized programming may not be a viable option for institutions with limited resources.

Campus-initiated programming offers another option for colleges and universities. These efforts may include programming such as alcohol awareness month, safe spring break, and substance-free social activities. The formation of substance use task forces, student organizations, and committees corals the campus community around efforts to devise strategies and initiate change in campus norms, perceptions, and climate. Typically cheaper than standardized initiatives, these methods are readily utilized.

Higher education must recognize that alcohol and other drug use and the problems that result from substance abuse are never entirely going to go away. Nevertheless, through continued commitment, campus communities significantly impact the problem through policy and program initiatives that are directed at altering social norms, climate, and practices. To initiate and maintain change in higher education with respect to alcohol, tobacco, and other drugs, programs, policies, and partnerships must become permanent and pervasive fixtures on college and university campuses.

*See also:* ADJUSTMENT TO COLLEGE; DRUG AND ALCOHOL ABUSE, *subentry on* SCHOOL; FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ALCOHOL, TOBACCO, AND OTHER DRUGS; SOCIAL FRATERNITIES AND SORORITIES.

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## DU BOIS, W. E. B. (1868–1963)

Scholar, educator, philosopher, and social activist, William Edward Burghardt Du Bois is among the most influential public intellectuals of the twentieth century. A pioneer of the civil rights movement, Du Bois dedicated his life to ending colonialism, exploitation, and racism worldwide. Experiencing many changes in the nation's political history, he served as a voice for generations of African Americans seeking social justice.

### The Formative Years

Du Bois was born the only child of Alfred and Mary Burghardt Du Bois in Great Barrington, Massachusetts. In the period following the Civil War, Great Barrington was a small town with fewer than 50 African Americans among its 5,000 residents. Du Bois's father, of French and African descent, left home soon after William was born. His mother, of Dutch and African descent, encouraged Du Bois in his educational studies. Aunts, uncles, and close friends gave poverty-stricken Du Bois adequate clothing, food, and finances for schooling.

Attending an integrated grammar school, Du Bois had little direct experience with color discrimination; much of what he did learn came from the visible social divisions within his community as he discovered the hindrances that African Americans faced. Du Bois, however, was quite aware of his intellectual acuity. He excelled and outperformed his white contemporaries, receiving a number of promotions throughout his public schooling.

By the age of seventeen, Du Bois had already served as a correspondent for newspapers in both Great Barrington and New York. He was the first African American to graduate as valedictorian from Great Barrington High School. Influential community members arranged for Du Bois to attend Fisk University in Nashville, Tennessee, where he began studies in 1885. While on a partial scholarship at Fisk University, Du Bois had far greater exposure to African-American culture. In the white South, Du Bois encountered firsthand the oppression faced by the sons and daughters of former slaves, whom he taught in country schools during the summer. As Du Bois witnessed politicians and businessmen destroy the gains of Reconstruction, and African Americans struggle against social, political, and economic injustice, he formed his stance on race relations in America. He began to speak out against the atrocities of

racism as a writer and chief editor of the *Fisk Herald*, until his graduation in 1888.

After receiving his first baccalaureate, Du Bois entered Harvard University in 1888 as a junior. Two years later, he earned a second B.A. in a class of 300 and was one of six commencement speakers. In the fall of 1890, Du Bois began graduate work at Harvard. He studied under legendary professors William James, Josiah Royce, George Santayana, and Albert Bushnell Hart. His studies focused primarily on the subjects of philosophy and history and then gradually shifted into the areas of economics and sociology.

Du Bois acquired his master's degree in the spring of 1891 and chose to further his studies at the University of Berlin (1892–1894), observing and comparing race problems in Africa, Asia, and America. After two years in Berlin, Du Bois became the first African American to earn a Ph.D. from Harvard. His doctoral thesis, approved in 1895, was published in the first volume of the Harvard Historical Studies series as *The Suppression of the African Slave-Trade to the United States of America, 1638 to 1870*.

### Early Scholarship

In 1896 Du Bois married Nina Gomer; they had two children, Yolande and Burghardt (who died at the age of three). After teaching Greek and Latin at Wilberforce University (1894–1896), Du Bois accepted an assistant professorship at the University of Pennsylvania to conduct a research project in Philadelphia. For two years, Du Bois and his wife lived in the heart of Philadelphia's seventh ward, where the notable work *The Philadelphia Negro, A Social Study* (1899) took form.

*The Philadelphia Negro* marked the first major study of American empirical sociology and represented Du Bois's quest to expose racism as a problem of ignorance. Du Bois personally interviewed several thousand residents, and his study documented the living conditions of poor African Americans enduring dilapidated housing, inadequate health care, disease, and violence. In this body of work, Du Bois contended that crime and poverty were manifestations of institutional and structural racism.

In 1897 Du Bois and his family moved to Atlanta, where he taught economics and history at Atlanta University. Here Du Bois witnessed racism, lynching, Ku Klux Klan cross burnings, race riots, and disfranchisement. To challenge these acts, he published

papers in the *Atlantic Monthly* and other journals that explored and confronted discriminatory southern society.

A compilation of unpublished papers led to what many consider Du Bois's greatest work, *The Souls of Black Folk* (1903). In it Du Bois wrote, "The problem of the twentieth century is the problem of the color-line" (p. 54). *The Souls of Black Folk* provided a philosophical framework by which Du Bois addressed the problem of race and the distressing realities of African-American life in America. Within its pages, he challenged the prominent African-American leader, Booker T. Washington. Du Bois firmly opposed Washington's policies of accommodation, calling instead for more social agitation to break the bonds of racial oppression. In addition to his writings, publications, teachings and public speeches, Du Bois served as secretary for the first pan-African congress in London in 1900. He would later go on to organize subsequent sessions in 1919, 1921, 1923, and 1945.

In 1905, Du Bois took on the leadership role in organizing a group of African-American leaders and scholars in what became known as the Niagara Movement. The group was opposed to the conservative platform of Booker T. Washington and the Tuskegee Machine. Despite the failure of the Niagara Movement, it would later serve as a model for another of Du Bois's initiatives in 1909, the National Association for the Advancement of Colored People (NAACP).

### The Crisis Years

Upon leaving his professorship at Atlanta University, Du Bois joined the central staff of the NAACP in November 1910. Having been instrumental in that group's formation, he became the only African American on its executive board, and, more importantly, director of publications and research. In that position, he assumed control of the *Crisis*, the official journal of the NAACP.

While the expanding economy provided former slaves with moderate economic and educational gains, discrimination, violence, and lynching were rampant. Black anger, impatience, and heightened consciousness, combined with expanding literacy, provided a growing audience for the *Crisis*. This journal expanded Du Bois's influence and audience beyond academia to the public. By 1913 its regular circulation reached 30,000.

The *Crisis* informed people about important events, offered analysis, and sowed themes of uplift and civil rights. Du Bois's voice dominated as though it were his own personal journal. His authoritative editorials spoke against injustice, discriminatory practices, lynching, miseducation, and the widespread mistreatment of African Americans. Du Bois was not hesitant to confront those whom he believed misled his people.

World War I was significant for Du Bois. He believed the enthusiastic participation of black soldiers would lead to returned favors from white America. He traveled to France in 1919 reporting the heroism of black soldiers to the *Crisis* directly from the front.

Du Bois was optimistic that the new generations of African Americans would advance the struggles for civil rights and racial justice. His magazine produced articles and pictures about young people. In 1920 he launched the short-lived *Brownies Book*, a *Crisis*-type publication for children.

*Crisis* came to be seen as an authoritative and informative resource by many in black America. Beyond ideological commentary, it published and supported black artistic expression. Langston Hughes, Countee Cullen, Jean Toomer, Claude McKay, and Alain Locke were among the core group of the "Harlem Renaissance" supported by the *Crisis*. Columbus Salley (1999) asserts that Du Bois deserves as much credit as anyone in giving birth to the Harlem Renaissance.

While editing the *Crisis*, Du Bois continued to write books and essays that explained his theories and fueled antagonism. In 1920 he examined global race issues and conflict in *Darkwater: Voices from within the Veil*. Over the years the internationalist and radical Du Bois clashed regularly with the leadership of the NAACP who were committed to gradualism and legalism. In 1934, under fierce pressure, Du Bois retired from the executive board and the *Crisis*.

### After the *Crisis*

Du Bois lost his national platform in the midst of economic depression, international fascism, and political uncertainty. With no resources or base from which to operate, in 1934 he accepted an invitation to return to Atlanta University as chair of the sociology department.

Since his study of the *Philadelphia Negro* (1899), Du Bois was drawn to big research projects. He ad-

hered to the new school of social science, arguing that knowledge of social problems could lead to social change. He proposed that his university along with others undertake large studies of black life including employment, education, family life, and so forth. Additionally, he was hopeful for the eventual publication of an *Encyclopedia Africana*. Lack of funds, changes in university administration, and a changing political climate all worked against Du Bois.

This period found Du Bois refining his views on pan-Africanism and Marxian socialism. He wrote *Black Reconstruction in America* (1935), *Black Folk Then and Now* (1939), *Dusk of Dawn* (1940), and *Color and Democracy* (1945). In 1940 he began *Phylon*, a journal of social science, published at Atlanta University.

Undermined by the new school administration, Du Bois retired from the faculty of Atlanta University in 1943. Declining offers at Howard and Fisk universities, he would never return to academia. As the nation's largest and most recognized civil rights organization, the integrationist NAACP was increasingly drawn into public dialogue. Its leaders, believing that Du Bois could be useful in their research activities, offered him the position of director of special research. Du Bois, fiercely independent and outspoken, challenged American capitalism, imperialism, racial inequality, and the legal system that supported privilege. His linking of pan-Africanism to socialism, and then to democracy, offered an interesting and provocative position. He was denounced by some as a bourgeois intellectual, and by others as a radical extremist.

Although pan-Africanists had gathered since the turn of the century, until 1945 those meetings did little more than unleash indignation from middle-class intellectuals. The 1945 fifth pan-African congress held in Manchester, England, was different. Revolutionary students and activists from throughout colonized sub-Saharan Africa gathered to confront the colonial masters. They resolved to "control their own destiny. . . . All colonies must be free from imperialist control whether political or economic. . . . We say to the peoples of the colonies that they must fight for these ends by all means at their disposal" (Lemelle and Kelley, p. 352). A "third world" movement for independence and social justice now accompanied the modern civil rights movement slowly emerging in the United States. By 1948, Du Bois's support of the Soviet Union, revolution in

Africa, strident criticism of American apartheid, and support of Progressive candidate Henry Wallace in the United States alienated him from the NAACP leadership, especially its moderate chairperson, Walter White. He was dismissed from his position in 1948 leading to a final break with the organization.

### The Final Years

Once again without funds or an organizational base, Du Bois continued his critique of American capitalism and racial inequality. At the end of World War II and the beginning of the cold war, the nation's political climate moved decidedly to the right. Du Bois's Africanist and prosocialist sentiment placed him at odds with the unfolding hysteria. His social circle now consisted of avant-garde intellectuals, internationalists, and left-leaning cultural workers such as Paul Robeson and Shirley Graham. Amid the new jingoism, Du Bois was drawn to the "peace" community. By 1950 he was chair of the Peace Information Center, drawing the antagonism of federal authorities.

In July 1950 Du Bois's first wife, Nina, died, and later that year he ran for the U.S. Senate in New York on the ticket of the American Labor Party. Surprisingly he received 210,000 votes—equivalent to 4 percent of the vote. In early 1951 Du Bois and his Peace Information Center were ordered by the Justice Department to register as foreign agents. Refusing, Du Bois was indicted and jailed but soon exonerated.

Now remarried to Shirley Graham, Du Bois was both vilified and celebrated during the difficult McCarthy period. He watched as friends, associates, and notables such as poet Langston Hughes, actress Lena Horne, Africanist Alphaeus Hunton, actor William Marshall, black professors Forrest Wiggins and Ira Reid, Harlem politician Benjamin Davis, and black Marxists Claude Lightfoot, Claudia Jones, and Henry Winston and others were discredited. Du Bois and his wife were also frequent targets of communist-baiters. As the hysteria escalated, so did Du Bois's defense of those victimized.

Du Bois continued to speak out against the cold war, capitalist exploitation, colonialism, and the international mistreatment of African people. He foresaw a new period of socialistic pan-Africanism, writing in 1955, "American Negroes, freed of their baseless fear of communism, will again begin to turn their attention and aim their activity toward Africa" (p. 5). Denounced at home, Du Bois was regarded as a champion of human rights around the world.

As the civil rights movement began, Du Bois attended the Stockholm Peace Conference where he delivered an address. After visiting Czechoslovakia and Germany, the Du Boises spent five months in the Soviet Union. Having visited the Soviet Union on several previous occasions, Du Bois marveled at the country's continued progress in employment, housing, education, the status of women, and race relations. During this visit, he lobbied endlessly for increased Soviet interactions with Africans and for more research on that continent. Du Bois's visit to the People's Republic of China profoundly influenced him since China served as a reminder that people of color could successfully engage socialism. He noted that a majority of the world's people lived under socialism and declared that egalitarian socialism was the economic system of the future. He believed that African Americans, given their history of mistreatment, could benefit from this type of social system.

Upon returning to America, Du Bois expressed grave pessimism that black Americans could ever achieve economic and political justice under corporate monopoly capitalism, and continued to advocate connection with Africa. He now had a special relationship with Kwame Nkrumah and the revolution in Ghana.

In 1960 Du Bois had one longstanding unfilled objective, to publish his *Encyclopedia Africana*, which would explore every aspect of black life. He had contacted scholars, funding agencies, and anyone who would listen to him to accomplish this project. On October 1, 1961, Du Bois joined the U.S. Communist Party and made a statement that began "Capitalism cannot reform itself; it is doomed to self-destruction. No universal selfishness can bring social good to all. . . . this is the only way of human life. . . . In the end communism will triumph." (Manning, p. 212). Four days later he and his wife moved to Ghana. Working on his encyclopedia to the very end, Du Bois died one day before the famous March on Washington.

*See also:* MULTICULTURAL EDUCATION; RACE, ETHNICITY, AND CULTURE.

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HORACE R. HALL

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# E

## EARLY CHILDHOOD EDUCATION

### OVERVIEW

Janet S. Hansen

### PREPARATION OF TEACHERS

Daniel J. Walsh

Betty J. Liebovich

### INTERNATIONAL CONTEXT

Robert G. Myers

### OVERVIEW

Early childhood education is concerned with the learning experiences of children below the age when compulsory schooling begins (usually age five or six). In terms of organized educational programs, it generally encompasses kindergartens (enrolling mainly five-year-olds) and pre-kindergartens and preschools aimed at children starting at about age three.

#### Mapping American Early Education

Kindergarten, while not compulsory in most states, became over the course of the twentieth century largely the responsibility of public schools. In the process it became accessible and free to most children, and it came to be administered as part of elementary education. By contrast, preschool at the beginning of the twenty-first century is part of a piecemeal and haphazard “nonsystem” of early care and education in which a wide range of providers offer varying mixtures of structured learning and child care to interested parents who either can afford to enroll their children or receive public subsidies, most of which are targeted to lower income families.

**Kindergarten.** Margarethe Schurz founded the first American kindergarten in her home in 1855; a cen-

tury later kindergarten education was available as part of public school systems to just over half of children of kindergarten age. By October 2000, 73 percent of five-year-olds were enrolled in kindergarten, along with 4 percent of three- and four-year-olds and 14 percent of six-year-olds. The overwhelming majority of kindergartners (83%) attended public schools—just 17 percent attended private kindergartens.

Although most children attend public kindergarten, attendance is not compulsory in most states and not all states require that public schools offer kindergarten. In 2001, eleven states did not require that districts offer kindergarten, though districts could choose to do so. Only eight states set their compulsory school age at five and required children to attend kindergarten. Several others mandated kindergarten attendance and either permitted parents to hold their children out of kindergarten until the children were six years old or allowed the children to skip kindergarten by demonstrating “readiness” for first grade.

State and district policies about the length of the kindergarten day vary enormously, and the absence of data on and common definitions of “full-day” and “part-day” complicate the task of portraying the availability of different kindergarten offerings. A study of a national sample of about 22,000 kindergartners enrolled in 1998 indicated that 55 percent attended full-day programs and 45 percent attended half-day programs. Some states required districts to offer full-day kindergarten but not necessarily to the exclusion of half-day offerings.

States were slower to assist districts with the funding of kindergarten than with elementary and secondary education, but in 2001 all provided some

assistance with kindergarten costs of public schools. Twenty-five states and the District of Columbia financed full-day kindergarten for all districts or schools or those that chose to provide it. The remaining twenty-five states financed half-day programs or provided partial funds for kindergarten.

**Preschool.** Characterizing the early education experiences of three- to five-year-olds who have not yet entered kindergarten is made difficult by the absence of clear rules defining the offerings of the myriad providers who serve these children in center-based settings (as distinct from services provided to children by relatives or nonrelatives in home-based settings). What is known is that by the late twentieth century, it had become the norm for these children to spend at least part of a week in a center-based program. In 1999, 59 percent of these pre-kindergarten-age children were enrolled in settings variously labeled day care, nursery school, pre-kindergarten, preschool, and Head Start. The older the child, the more likely she was to be enrolled in such a program: 46 percent of three-year-olds were so enrolled, 69 percent of four-year-olds, and 76 percent of five-year-olds.

Center providers operate under a variety of auspices. Nonprofit groups, including religious organizations, operate some of the centers. Some centers are profit-making businesses, in the form of both single centers and large corporate chains. In some places the public school system offers pre-kindergarten classes, often targeted to children who are at risk of not being ready to succeed in school because of poverty, limited ability to speak English, disabilities, or other factors.

It is not known precisely how many centers serve children age three and over who have not yet entered kindergarten, but in 2001 there were well over 100,000 licensed child-care centers. States differ, however, in the extent to which they include or exclude educationally oriented preschool programs in their child-care licensing requirements. Some states, for example, exclude pre-kindergartens operated by public schools, which may be regulated by different agencies. Some states exclude religiously affiliated centers from licensing requirements.

While precise information on who pays for preschool education is unavailable, it is clear that at the start of the twenty-first century parents bear far more responsibility for preschool costs than they do for kindergarten or elementary and secondary edu-

cation. Federal and state subsidies supplement parent-paid fees through a variety of programs that differ in the extent to which they emphasize educational purposes or custodial care to help working parents.

**Federal preschool initiatives.** At the start of the twenty-first century, most of the federal funding that subsidized education and care for children under age five came from two programs: Head Start and the Child Care Development Fund (CCDF). The former had its origins in 1960s' efforts to expand educational opportunity by giving disadvantaged children a "head start" in school. The CCDF was created out of several earlier child-care programs as part of the Welfare Reform Act of 1996.

Head Start furnishes grants to local agencies to provide comprehensive early childhood developmental, educational, health, nutritional, social, and other services to low-income children and their families. Most participants must be from families whose income is below the poverty level, and in fiscal year 2000, 94 percent of the enrolled children were ages three to five, with a modal age of four. Head Start programs have traditionally been half-day and part-year programs, and local grantees have had wide flexibility in deciding on program structure. They must comply with federal program standards, which have increasingly put more emphasis on school readiness.

The CCDF provides federal grants to states for subsidizing the child-care costs of eligible families and for improving the overall quality and availability of child-care services. Children up to age thirteen who reside with a family whose income does not exceed 85 percent of the state median income are eligible to participate. States are free to set lower eligibility levels and most do. States also set subsidy levels and fee schedules. Parents share responsibility for paying child-care fees, which states may waive for families below the poverty line. In keeping with the CCDF's link to welfare policy, the law requires parents to be working or in education or training.

Although children benefiting from the CCDF may receive care that helps prepare them for school, school readiness and organized educational instruction are not explicit program goals. As of 2002 there were no national performance standards for services or staff other than a basic requirement that states must have and enforce health and safety rules.

In addition to some smaller child-care subsidy programs, federal aid for children with disabilities

included educational assistance for children under age five. Some federal aid for supplemental educational and related services to educationally disadvantaged children in low-income areas went to children under age five, though the bulk of it was used for elementary and secondary students.

**State preschool initiatives.** As of 1998–1999, forty-one states and the District of Columbia invested in state pre-kindergarten initiatives offering regularly scheduled group experiences to help young children learn and develop before entering elementary school. Only Georgia offered pre-kindergarten to all four-year-olds whose parents wanted them to participate. New York and Oklahoma had launched school-district-based initiatives to open pre-kindergarten to all four-year-olds, regardless of income, but not all districts in these states participated (in New York the state limited district eligibility because of funding constraints). The remaining states tended to target pre-kindergarten services to lower-income children or those considered especially in need of preschool preparation. Some served mainly four-year-olds and others included younger children as well.

Unlike publicly funded elementary and secondary education, which was provided through public schools, pre-kindergarten programs in many states operated in a variety of settings, such as public and private schools, Head Start centers, profit-making and nonprofit child-care centers, and churches. Most state pre-kindergarten programs offered only part-day (two to four hours a day), part-year services, although a few states provided the necessary funding for full-day and/or full-year pre-kindergarten for eligible children and also required that it be offered by at least some percentage of eligible programs. Parental fees were required in these extended programs. Many but not all state pre-kindergarten initiatives required providers to meet quality standards that were higher than the state's child-care licensing standards.

### **Pressures for Improvement**

While educators and other child advocates repeatedly urged the expansion of formal early education opportunities for young children during the twentieth century, what had developed by the dawn of the new century was a fragmented and haphazard early learning “nonsystem” that seemed increasingly inadequate to meet the needs of both children and society.

### **Changing views of education, work, and welfare.**

Changing societal perspectives on education, work, and welfare make early education an important public issue and not just a family concern. Efforts in the 1980s and 1990s to improve the quality of elementary and secondary education for all children caused reformers to increasingly realize that student achievement is affected by differences in children's development that are already evident when formal schooling begins.

State courts in New Jersey in 1998 and in North Carolina in 2000 ordered state officials to provide preschool education to children at risk of developing later educational problems. The judicial decisions came in school finance lawsuits challenging the legality of state school funding laws on the grounds that insufficient and inequitable funding denied some students their constitutional rights to an adequate education.

Preschool education also was increasingly seen as a factor helping families balance child-rearing and work responsibilities. Most women are in the labor force; 60 percent of women were working in 2000. This included 73 percent of all women with children under age 17 and 72 percent of women with children aged three to five years.

Reflecting that employment had become the norm for American women, public policy concerning welfare also shifted in its expectations about low-income mothers' participation in the workplace. The major overhaul of welfare policy enacted by the U.S. Congress in 1996 had as key assumptions that all adults, even those with young children, should be self-supporting and that receipt of public income subsidies should be contingent on meeting work or work preparation requirements. This, too, had the effect of shining a brighter spotlight on arrangements for the early care and education of young children.

**Untapped capacity for learning.** Research provides growing evidence that young children have much greater power to learn than has traditionally been realized or developed. In 2001 the National Research Council (NRC) published a report that claimed to be “the first attempt at a comprehensive, cross-disciplinary examination of the accumulated theory, research, and evaluation literature relevant to early childhood education” (p. 31). The review documented a shift in view about “the major tasks for children during the preschool years” (p. 37). In ear-

lier times, these tasks were seen primarily as ones of “socialization: separating from home, learning how to interact with peers and unfamiliar adults, and experiencing new material in a novel environment. Today we recognize the first five years as a time of enormous growth of linguistic, conceptual, and social competence” as well (p. 37).

The NRC review found that there was no one preschool curriculum that was superior to others in terms of effectiveness. The study panel did not find this surprising in light of the evidence that other aspects of learning in addition to curriculum are important to early learning: the adult-child relationship, temperament, social class, and cultural traditions. The panel did, however, find that “children who attend well-planned, high-quality early childhood programs in which curriculum aims are specified and integrated across domains tend to learn more and are better prepared to master the complex demands of formal schooling” (p. 307). It concluded that, among other factors, incorporating more ambitious learning goals into programs for young children requires teachers who are deeply knowledgeable about how children develop in the early years and about how to teach preschool youngsters.

Such expectations about teachers were quite at odds with the training levels of many of the adults who work with young children. Public school kindergarten teachers generally have college degrees and often have additional degrees and certificates common to elementary school teachers, though they may not have specific backgrounds in early childhood education. In 2000, twenty-nine states required their pre-kindergarten teachers to be certified, which required a college degree.

In other pre-kindergarten and preschool settings, however, training levels were significantly lower. In 2000, thirty-one states set no minimum requirements for teachers in child-care centers, and individuals could often be hired with only a high school diploma and little or no experience. Of states with minimum requirements, only Rhode Island and New York City (which has regulations separate from New York State) required teachers in child-care centers to have bachelor’s degrees.

In 2002 the most widely held credential among child-care workers (which also qualified holders to teach in pre-kindergarten programs in some states) was the child development associate (CDA). A nationally recognized credential originally developed

for Head Start workers, it certifies that high school graduates with experience working with children and 120 hours of formal child-care education have also passed a performance-based assessment of their care-giving knowledge and skills. Efforts to upgrade preschool teacher qualifications are likely to reduce the importance of the CDA: the Georgia Prekindergarten Program removed it from the list of acceptable credentials for lead teachers for the 2002–2003 school year, and Congress decreed in 1998 that by 2003 half of Head Start teachers must have an associate’s degree.

The poor pay of early education teachers makes it difficult to attract a highly qualified and stable workforce. Median annual earnings for those teaching in preschools was \$17,310 in 1998, with higher averages for those teachers working in elementary and secondary school systems and lower averages for those classified as working in “child day-care services.” Other child-care workers fared even worse. Moreover, preschool teachers and child-care workers frequently do not receive benefits such as paid vacation and health care. Not surprisingly, high levels of turnover have plagued the preschool and child-care industries.

**Access to educational opportunities.** While kindergarten opportunities are widely available to children from all socioeconomic backgrounds, preschool enrollment patterns in 2000 indicated that children of higher-income and better-educated parents were mostly likely to have the advantage of structured educational programs.

In October 2000 the U.S. Census Bureau found that 52 percent of all three- to five-year-olds not yet enrolled in kindergarten were enrolled in “nursery school”—a group or class organized to provide educational experiences for pre-kindergarten children that included instruction as an important and integral phase of its program. Hispanic children were significantly less likely to be enrolled than non-Hispanic white and African-American children, and only 44 percent of children from the poorest families were enrolled as compared to 71 percent of children from families in the top income level (\$75,000 and over). An even wider gap was evident between the enrollment rates of children whose mothers had only an elementary school education and those whose mothers had college degrees. Poorer children were mostly enrolled in public nursery schools, whereas children from wealthier families depended mostly on private schools.

Unequal access to early education is worrisome because learning gaps are developing among children in the preschool years, and children who are behind when they enter school are unlikely to catch up with their peers. In 2000 the National Center for Education Statistics reported initial findings from a longitudinal study of 22,000 kindergartners that documented many differences in what children know and can do when they enter kindergarten that are linked to family income and mother's education. Differences were found not only in knowledge and academic skills but also in noncognitive domains that are important for school success (such as physical health) and in learning-related experiences that children have at home (such as being read to frequently).

Unequal access to early education is also disturbing in light of a growing body of research showing that early education offers long-term benefits that can substantially offset the large costs involved. Evidence from model demonstration programs providing intensive, high-quality educational and related services to young children from disadvantaged backgrounds shows that participation increased enrollee's school success on such measures as reduced referral to special education, lower incidence of retention in grade, reduced dropout rates, and improved test scores.

The most persuasive results were produced by the High/Scope Perry Preschool and the Carolina Abecedarian projects, both of which employed "gold standard" research designs using randomized treatment and control groups and follow-up of participants over many years. Analyses of the age twenty-seven follow-up on the Perry Preschool program, for example, found that benefits exceeded costs by ratios ranging from 2:1 to 7:1, depending on whether benefits included just savings to government or benefits to program participants, their families, and other members of society as well.

Because model programs are typically small and more expensive than "scaled-up" programs are likely to be, there have long been questions about whether investments in more typical and less-expensive early education programs, such as Head Start and pre-kindergarten, would have similar payoffs. The first large-scale, random-assignment research study on Head Start was scheduled to begin data collection in the fall of 2002 and continue through 2006. Prior research suggests that childcare, health and nutrition, and educational benefits

of Head Start partially or perhaps substantially offset the costs of public investment. Methodological concerns (absence of control or comparison groups, short-term perspectives rather than long-term follow-up, and others) have made findings about the size and sustainability of cognitive gains among Head Start participants controversial.

The most persuasive evidence that large-scale programs that run at lower cost than model preschool programs can also generate significant benefits comes from the Chicago Child-Parent Center (CPC) program begun in 1967. CPC provides preschool and other services to three- to five-year-olds as well as extended interventions into the elementary school years to economically disadvantaged minority children. Researchers followed a group of 1,539 children, born in 1980, who received some combination of CPC services or who were enrolled in locally funded full-day kindergarten programs but did not receive preschool services (the comparison group). The follow-up study of participants at age twenty-one showed that each component of CPC had economic benefits that exceeded costs, with the greatest return resulting from the preschool component. Benefits included increased earnings for participants expected from attaining higher education levels, lower crime rates, and reduced need for school remedial services.

Comparatively little research has been done on the costs and benefits of early education programs for children from middle- and upper-income families, because these children historically were not eligible for public subsidies. As early education programs grow through such developments as the adoption by states of universal pre-kindergarten, this situation should change. While the "payoff" to public investments in disadvantaged children will almost certainly be higher, it is reasonable to expect that all children can potentially benefit from early education, especially if findings from research on the learning capacities of young children are translated into high-quality preschool programs.

**The need for integrated early education and care.** Public policy at the start of the twenty-first century has not caught up with economic and social realities facing parents and society. In fact, "education and care in the early years are two sides of the same coin" (National Research Council, p. 306). Children need early education to develop social competence and exploit their learning potential. Parents, most of whom are employed, need to know that their young

children not only are learning but also are being well-cared-for during the working day.

Public programs, however, are not connected by a comprehensive vision that encompasses both the goals of school readiness for children and support of working parents. Programs tend to emphasize one goal or the other. The result is a service delivery system with disparate missions, administrative mechanisms, and objectives. As a consequence, states face a huge challenge in trying to build comprehensive and coordinated systems of services for young children. Service providers must cope with different eligibility requirements for children and families, different methods of delivering federal and state funds, and different requirements and standards for the programs they deliver. Families face barriers trying to understand the public subsidies for which they are eligible and looking for providers who can meet both the educational and child-care needs of their children.

**Falling behind internationally.** The United States entered the twenty-first century significantly behind other industrialized countries in recognizing the wisdom of investments in young children. European countries in particular have made much progress in providing early learning opportunities available for all with convenient schedules for working parents.

Countries such as Belgium, France, and Italy offer universal, voluntary, and free programs for preschool children age three to six and in 1999–2000 enrolled 95 to 99 percent of this age group. Preschool in these countries lasted for the normal school day, seven or eight hours, with supplemental services (with costs shared by parents) available before and after school and during school holidays. Denmark, Sweden, and Finland enrolled 73 to 83 percent of their three- to six-year-olds in early education programs that integrated education and care, with government paying most of the costs. Austria, the Netherlands, Spain, Germany, and the United Kingdom also had preschool enrollment rates above 70 percent either for children age three and over or those age four and over.

These figures are especially impressive because they apply to education-oriented programs that are required to recruit staff with specialized qualifications in education and exclude day-care centers and similar facilities. Professional staff in Europe who work with children age three and over are generally required to have completed at least three years of

postsecondary education (which is the equivalent of a bachelor's degree in many countries).

Public financing is widely accepted as the appropriate way to pay for preschool in the industrialized countries of Europe. Parents share costs on an ability-to-pay basis in some cases, but their share is small and sometimes limited to the wraparound care needed by those who work.

### Conclusion

Public investment in education in the United States appears seriously unbalanced. In 2001 governments spent roughly \$20 billion to \$25 billion annually on early education for children from birth to age five, compared to roughly \$400 billion on elementary and secondary education and at least \$100 billion on postsecondary education, including student aid. Nobel laureate economist James Heckman argued that at these levels of investment devoting additional funds to improving the basic learning and socialization skills of the very young is the best way to improve the skill levels of American workers. Early education is as vital to both individual and society well-being as the education of older children and young adults and equally worthy of public support.

**See also:** CHILD CARE; COMPENSATORY EDUCATION; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; FROEBEL, FRIEDRICH.

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## PREPARATION OF TEACHERS

A major theme endures through the history of early childhood education: Because young children learn differently than older children, their schooling must be different. Thus, their teachers require specialized training.

### History

The kindergarten became the first large-scale early childhood program in the United States. With it came the first formal training for teachers of young children.

**Kindergartens.** Private kindergarten training schools, usually connected to a kindergarten, spread as the kindergarten spread. The first kindergarten training school was begun in Boston in 1868 by German kindergartners Matilda Kriege and her daughter Alma (the term "kindergartner" is used both for a child attending a kindergarten and for a teacher at a kindergarten). Matilda Kriege studied with Baroness von Marenholtz-Buelow, a patroness and disciple of the German educator Friedrich Froebel (1782–1852), the founder of the kindergarten.

Initially kindergartens were German-speaking and were started by German immigrants, many fleeing the failed 1848 Prussian Revolution. Margarethe Schurz started the first in the United States in her home in Watertown, Wisconsin, in 1855. Schurz had worked in the London kindergarten run by her sister Bertha Ronge, immigrating to the United States in 1852. In 1859 Schurz and her young daughter Agathe met Elizabeth Peabody by chance in Boston. Impressed by Agathe, Peabody pressed Schurz to describe the kindergarten. In 1860 Peabody began the first English-language kindergarten in Boston. In 1867, dissatisfied with her kindergarten, Peabody traveled to Europe. She visited many kindergartens, including the training class in Hamburg run by Luise Froebel, Friedrich Froebel's widow. On her return, Peabody advocated tirelessly for kindergartens and for normal-school training for kindergarten teachers.

In 1873 William Torrey Harris, superintendent of the St. Louis Public Schools, opened the first public kindergarten in the United States, with Susan Blow as head teacher. The kindergarten had twenty children and twelve kindergartners in training, who, for a year, assisted Blow in the mornings and studied Froebelian theory in the afternoons. The second year, Blow taught an advanced class on Saturdays. Blow studied in New York with Maria Kraus-Boelte, who had trained in Hamburg for two years with Luise Froebel and then worked at Ronge's London kindergarten. In 1873 Kraus-Boelte opened the New York Seminary for Kindergartners with her husband, John Kraus, a friend of Froebel. The training consisted of one year of course work and one year of practice teaching. She trained kindergartners until her retirement in 1913.

Alice Putnam, an early Chicago kindergartner, studied with Kraus-Boelte and Blow. From 1876 she ran kindergarten-training classes at Hull-House and later at the University of Chicago and Cook County Normal School. Putnam was instrumental in founding the Chicago Free Kindergarten Association and the Chicago Froebel Association, where many kindergartners trained. In 1887 Elizabeth Harrison, a Putnam student, founded the Chicago Kindergarten and Training School, which evolved through many name changes to become National-Louis University. Another Putnam student, Anna Bryan, founded the Louisville Kindergarten and Training School in 1887. Patty Smith Hill, the dominant figure in early childhood education in the early 1900s, was her first student.

Emma Marwedel, a student of Froebel's, came to the United States at Peabody's urging. She ran a training school in Washington, DC, from 1872 to 1876, then founded a training school in Los Angeles. Her first graduate, Kate Douglas Wiggin, began the Silver Street Kindergarten Training School in San Francisco in 1880. Wiggin's student Caroline Dunlap began the first Kindergarten Training School in Oregon in 1881.

As training schools proliferated, educational publications warned of spurious training schools. In 1894 the president of the National Education Association's (NEA) Department of Kindergarten Education decried "'so-called trainers' who were . . . turning out all graduates with enough money to pay for a course" (Hewes, p. 10).

Kindergartens spread rapidly. By 1880, 7,800 children were enrolled in kindergartens in St. Louis.

Milwaukee included kindergartens in the public schools in 1882. In 1884 the NEA established the Department of Kindergarten Education. One year later, the NEA recommended kindergartens in all public schools. In 1892, in Sarasota Springs, New York, the International Kindergarten Union was founded. By 1890, 150 local kindergarten associations had been formed. By 1900, 189 cities had kindergartens, with 250,000 children attending; by 1910, the latter number had increased to 360,000. In 1912 there were 7,557 kindergartens and 8,856 teachers. By 1933 public kindergartens enrolled 723,000 children and private kindergartens, 54,000.

As the kindergarten became part of the public schools, administrators pressed for kindergarten teachers to meet the same licensure standards as other teachers. Training began to move from private kindergarten-training schools to normal schools. The New York Normal School began a short-lived training program in 1870, reopening it in 1874 with a Kraus-Boelte-trained supervisor. By 1880 some kindergarten training was available at the Milwaukee Normal School. In 1892 the Wisconsin State Normal School of Milwaukee added a Department of Kindergarten Education, which required two years of normal school. Students received a kindergarten assistant certificate after one year and a kindergarten director diploma after two.

Between 1880 and 1895 kindergarten training was incorporated into state normal schools in Oshkosh, Wisconsin; Winona, Minnesota; Oswego and Fredonia, New York; Emporia, Kansas; Connecticut; and Michigan; as well as into the city normal schools in New York and Boston, the Cook County (Illinois) Normal School, and the Philadelphia Girls Normal School.

By 1913, 147 institutions offered kindergarten training. As more normal schools offered kindergarten training, kindergarten-training schools declined—a 1916 report of 126 teacher-training programs showed only twenty-four freestanding kindergarten-training schools. During the 1900s normal schools slowly transformed into colleges and universities. As normal schools became colleges, training for kindergarten teachers became four-year degree programs.

**Nursery schools.** With the nursery school movement, early childhood education became increasingly identified with preschool (pre-kindergarten) education. The nursery school was founded in En-

gland by Margaret and Rachel McMillan in 1911. The first American nursery teachers went to England for training, many with the McMillans.

Nursery schools spread rapidly. In 1924 there were twenty-eight nurseries in eleven states; by 1933 the number grew to 1,700. In 1926 Patty Smith Hill invited a select group of early educators to New York. This group formed the National Committee on Nursery Schools, which later became the National Association for Nursery Education, and still later the National Association for the Education of Young Children (NAEYC). Nursery schools also became part of many universities. Between 1924 and 1930, Lawrence Frank, at the Laura Spelman Rockefeller Memorial Fund, directed funding toward the establishment of many university laboratory nursery schools, most often in home economics departments, at, for example, Iowa State University, the Ohio State University, Cornell University, the University of Georgia, Spelman College, and Michigan State University.

The Merrill-Palmer Nursery School in Detroit and the Ruggles Street Nursery in Boston were early nursery-teacher-training institutes. By the mid-1920s teacher training was occurring at nursery laboratory schools at the Iowa Child Welfare Research Station, the University of California—Los Angeles, the University of Minnesota, Columbia University, Yale University, National Kindergarten and Elementary College, Cleveland Kindergarten—Primary Training School of Western Reserve University, and normal schools in Kalamazoo, Michigan, and Milwaukee. In 1927 the National Committee on Nursery Schools Second Conference recommended a four-year college degree for nursery teachers to better enable them to deal with specialists from such fields as nutrition and psychology.

The primary focus at many laboratory schools, however, was research on child development. The training was seen as important for women in general. Edna Noble White, who founded Merrill-Palmer, stated in a letter to Lawrence Frank in 1924 that a “laboratory for training young women in child care . . . should be made part of the training of every young woman since they come in contact with children in many capacities—mothers, teachers, social workers etc.” (Braun and Edwards, p. 149).

During the Great Depression of the 1930s, the Works Progress Administration (WPA) set up emergency nursery schools to provide work for unem-

ployed teachers. As many as 2,500 nursery schools appeared in the public and private sector by 1940. WPA nursery funding ended in 1942, the year that the Lanham Act set up about 2,000 day-care centers to enable mothers to enter the work force to support the war effort. Both programs required rapid and large-scale training, often of teachers without experience with young children. A survey in the second year of the WPA nursery schools found that of 3,775 teachers, 158 had nursery experience, 290 had kindergarten experience, and 64 percent had teaching experience. Many groups were involved in the training, including the National Association of Nursery Educators, the Association for Childhood Education, and the National Committee on Parent Education. The training itself is not well documented.

Following World War II, the Lanham Act day care centers closed down. Early schooling returned to the pre-depression level until the summer of 1965 when Head Start began with 652,000 children in 2,500 centers, employing 41,000 teachers and 250,000 other workers, including volunteers. Head Start spawned more federally funded early intervention programs, such as Child Parent Education Centers, which targeted poor young children. In the 1980s and 1990s individual states began funding preschool programs for young children termed “at-risk.” At the same time, the day-care industry grew rapidly as more women worked outside of the home.

### Current Structure and Organization

The Council for Professional Development reported that almost 1,400 two- and four-year institutions offered early childhood programs in 2000. More than half of these were two-year institutions offering associate degrees. As early schooling and care expands, many teachers of young children receive their training in other than four-year institutions. The 1985 NAEYC guidelines for an early childhood associate degree specified that at least half the program be professional courses. Programs vary greatly across institutions.

Many early childhood teachers earn the Child Development Associate (CDA) degree, which was initiated in 1971 by the U.S. Office of Child Development. The goal was to identify basic competencies and provide training in them, leading to a national credential. Since 1985, NAEYC has administered the program. The program’s competency goals emphasize performance rather than prescribed courses or

credits. There is considerable local control in interpreting standards and providing training.

Early childhood programs at four-year institutions also vary greatly depending on how early childhood is defined in a given state. In 1997, sixteen states had licensure for teaching ages zero to eight. Seventeen others and the District of Columbia had licensure for ages three to six. Three states defined early childhood as age five to age nine. Five states had an early childhood endorsement to be added to the elementary license, while ten included kindergarten in the elementary license. Increasingly four-year institutions educate early childhood teachers for public school programs requiring state certification, and two-year programs educate teachers for other early childhood programs.

### **In-Service and Staff Development Programs**

NAEYC, the Association for Childhood Education International (ACEI), and Head Start offer guidelines and recommendations for professional development and in-service training. Historically, the goal of in-service and staff development has been to improve weak areas of practice. In the late 1980s the goal shifted to a developmental model that emphasizes growth and collegiality. This model prepares teachers to participate in decision-making and to advance professionally.

NAEYC's 1993 position statement on early childhood professional development specifically addresses "an effective system of early childhood professional development that provides meaningful opportunities for career advancement to ensure a well-qualified and stable work force" (p. 1). NAEYC and ACEI offer publications that support preparation and training, conferences to improve professional preparation and training, and professional preparation and program review. NAEYC stresses the importance of developing a professional development system embedded within the larger system of effective early childhood programs.

Head Start's in-service training approach addresses the needs of teachers, children, and families. From its inception Head Start has been committed to staff development. Educators in Head Start programs have a wide range of early childhood experiences and credentials. Head Start offers a variety of in-service approaches to assist staff in developing their practice and professionalism. Some of the in-service programs include integration of training with

exemplary Head Start programs, hands-on participatory activities, mentoring, collaborative learning, training teams, individualized training, goal-setting strategies, and follow-up training.

### **Trends, Issues, and Controversies**

Programs at four-year institutions face the perennial challenges of teacher education: how to balance professional education, general education, and specific areas of academic study; and how to balance university course work and clinical experience. In the 1980s and 1990s, the general trend was to decrease professional education and to increase general education and courses in a noneducation specialization. The amount of clinical experience has generally stayed the same or increased. The tension between the amount of coursework in pedagogy versus child development in the professional education component remains.

The importance of training for early childhood teachers has become increasingly recognized. For example, Head Start has mandated that half of all program staff must have an associate degree by 2003. In 1998 forty-one states and the District of Columbia had early childhood initiatives, many with more stringent requirements for early educators. At least nineteen states require some pre-service training for child-care providers.

Many early childhood educators promote a system of certification by which teachers would move up a career ladder from, for example, a CDA to an AA (Associate in Arts) to a bachelor's degree and state licensure. Although some progress has been made toward such a system, differences in course types and patterns between two-year and four-year institutions remain an obstacle. Arguments for academic credit for work experience further complicate matters.

Both ACEI and NAEYC now define early childhood as birth through age eight (or third grade). It remains to be seen how this shift in emphasis from preschool to preschool through third grade will actually affect teacher training. Early childhood programs in traditional home economics programs and two-year colleges focus on preschools. Preschool education is often regulated by state agencies other than education, usually child-welfare agencies.

A serious teacher shortage is predicted for the first decades of the twenty-first century. A shortage may lead, once again, to abbreviated teacher training

and different routes to licensure. It should be noted, however, that discussions of alternative licensure generally focus on high school and elementary teachers, in specified shortage areas, not on early childhood.

The question of who controls teacher credentialing remains. Originally local districts credentialled teachers but soon states took over. Many groups have a stake in credentialing, in particular, state boards of education, professional organizations, teachers unions, and universities; and shifting coalitions across these groups are common. NAEYC's 1996 *Guidelines for Preparation of Early Childhood Professionals*, for example, cites endorsements by the Association of Teacher Educators, the Division of Early Childhood of the Council for Exceptional Children, and the National Council for Accreditation of Teacher Education.

Given the changing and local nature of teacher licensure, generalizing about credentialing is difficult. Nevertheless, the general historical trend has been as follows. Until the early 1900s teachers were credentialled by examination. They were then credentialled based on professional training. In the 1950s states moved from credentialing based on state-specified courses and hours to approved programs, which meet state requirements but vary across colleges and universities. In most states the approved program is accompanied by some form of state competency examination in one or more of the following areas: basic skills, subject matter, and professional knowledge. By the early twenty-first century, the trend was toward performance-based credentialing, often requiring student-produced portfolios as evidence of successful performance.

## Conclusion

The major challenge to education of early childhood teachers is the broad and changing nature of the field. The term *teacher-caregiver* has become common, giving some sense of this breadth and change. Across teaching in general and in early childhood teaching in particular, the diversity of roles people take in working with young children makes it difficult to identify a single knowledge base. Early childhood education serves an increasingly diverse population and is expected to provide an increasingly wide range of services to these children and their families. The most pressing, and perennial, challenge is the "widespread misconception that work with young children can be carried out effectively without

the benefit of specialized knowledge" (Powell and Dunn, p. 63).

*See also:* CHILD CARE; TEACHER EDUCATION; TEACHER EVALUATION.

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### INTERNATIONAL CONTEXT

Early education, sometimes referred to as *early childhood care and development* (ECCD), emerged at the 1990 World Conference on Education for All, held in Jomtien, Thailand, as an important extension of the more traditional approach to basic education, in which "education" begins with entrance into school. According to the Jomtien Declaration, "learning begins at birth. This calls for early childhood care and initial education. These can be provided through arrangements involving families, communities or institutional programs, as appropriate." One of the

targets for the 1990s of the Jomtien Framework for Action was an "expansion of early childhood care and development activities, including family and community interventions, especially for poor, disadvantaged and disabled children." The Jomtien Declaration and Framework for Action gave international presence and sanction to early childhood care and development, and to "initial education" in a way that it had not enjoyed previously. Expectations were raised at Jomtien in relation to: (a) the well-being of young children; (b) enrollments; (c) conditions favoring improvement in ECCD programs; and (d) shifts in the type and quality of program being provided.

It is difficult to understand changes in the field of early childhood care and development without paying attention to the broader context in which changes occur. Trends that have important effects on ECCD include: industrialization, urbanization, and internal migration; declining birth rates; technological and scientific developments; globalization; changing social values; the mobilization and emancipation of women; internal strife and civil wars; the ecology movement, the HIV/AIDS pandemic; and moves toward greater administrative decentralization. While space does not allow a detailed description and analysis of these changing contexts, or of their effects on childrearing practices, the welfare and quality of life of young children, and the evolution of ECCD programs, it should be noted that conditions and contexts, as well as the rate at which they are changing, vary widely among and within countries, making it likely that changes in ECCD, for good or ill, may be more closely related to local circumstances than to the influence of the World Conference on Education for All and the ensuing activities.

#### The Well-Being of Young Children

**Health and nutritional status.** Despite the fact that millions of children in the world still die from preventable diseases, major advances have been made since the 1980s in reducing infant and child mortality. For example, the positive effect of immunization programs on infant mortality has been widely documented, and polio is on the verge of being eradicated. Micronutrient supplementation programs seem to have had important positive effects; particularly notable are advances related to the provision of vitamin A and iodine.

At the same time, it is important to note the dramatic setback in general well-being related to the HIV/AIDS pandemic, particularly in Africa. Major health advances and remaining challenges are documented in the annual reports of the World Health Organization and United Nations Children's Fund (UNICEF). Relatively high levels of undernourishment and vitamin deficiencies continue in many parts of Asia, Africa, and Latin America. Moreover, feeding programs have not always lived up to expectation. For example, two evaluations carried out in Latin America found that there was little or no improvement in the nutritional status of participants in ECCD programs, despite a relatively high cost of feeding children in the programs. Evaluations suggest that broad approaches, directed to the whole family, need to be promoted if health and nutrition components of ECCD programs are to be effective in improving the well-being of young children—simple supplementary feeding programs are insufficient.

**Psychosocial development and learning.** Unfortunately, very few countries provide measures of the psychosocial well-being of young children, or of their advances in learning during their early years. It is therefore impossible to judge advances in this area for national populations or to link advances to the many program initiatives that have been undertaken.

### Enrollment

The most commonly used indicator for early childhood programs is the percentage of a particular age group who are enrolled in recognized programs, creating a *gross enrollment ratio* (GER). From the evaluation reports presented by countries prior to the World Education Forum held in Dakar in 2000, it is possible to obtain a rough overview of enrollments and changes over the last decade of the twentieth century. Although the data need to be interpreted with caution, a number of conclusions seem to be valid.

**General enrollment trends.** The general tendency has been for enrollments to increase since 1990. In Latin America and southern and eastern Asia, all of the countries reporting data showed an increase in enrollments, with the exception of Afghanistan. In the Caribbean, all but one country (Grenada) showed increases (or remained steady at more than 100 percent). Cook Islands in the Pacific showed a decrease, but all other countries in the region in-

creased their enrollments. A summary from the Spanish-, Portuguese-, and French-speaking countries in Africa notes a marginal increase for the region during the 1990s (from 0.7% percent to 3.6%), and specifically mentions a decrease only in Togo. The United Nations Educational, Scientific and Cultural Organization (UNESCO) reported in 1999 that “enrollment has grown and access, although small, has improved” (UNESCO 1999b); there is no indication, however, of cases in which there may have been a decrease.

As a major exception to the above, decreases in enrollments were found in all the central Asian countries that were former members of the Soviet Union, and for which data were available. These decreases are a product of the breakup of the former Soviet Union, of economic difficulties associated with independence and the shift to a market-based economy (sometimes accompanied by civil war or territorial battles with neighbors), and of a decentralization process within the countries. With these changes, the centrally supported, extensive, and expensive system of relatively high-quality early-childhood provision broke down. This was particularly significant for rural areas where attention had been provided through rural cooperatives. It appears, however, that enrollments began to recover slightly during the late 1990s, related to somewhat greater stability, financial assistance from abroad, and the emergence of a range of new alternatives.

The most dramatic increases during the 1990s appeared in the Caribbean, where statistics for the tiny Turks and Caicos Islands show a jump from zero coverage at the beginning of the decade to an enrollment of 99 percent. Cuba showed a major increase over the period (from 29% to 98%), a result of having introduced (and having included in their statistics) a massive parental education program. Honduras, Nicaragua, and Paraguay also showed significant advances, but began from a relatively low baseline. The same is true of the Philippines. China, Thailand, and Vietnam also showed important enrollment increases.

In most cases, however, change has been modest, slogging along at one or two per cent per year. UNESCO reported that “ten years after Jomtien, despite efforts of some governments, very little progress has been made to achieve the set goals” (UNESCO 1999b). It can be concluded, therefore, that a great deal of work is still needed if ECCD pro-

grams are to have a significant effect on the lives of children, families, and countries.

In 1998, the variation in enrollment rates was enormous, ranging from almost zero to more than 100 percent:

- In Latin America, Ecuador reported a coverage of 14 percent for children up to age five, contrasting with 98 percent for Cuba.
- In the Caribbean, Belize reported 26 percent of its children three to five years of age were enrolled, contrasted with 100 percent for the Bahamas and Jamaica.
- In the Middle East and North Africa, Yemen reported 1 percent, and Bahrain 36 percent, of children ages three to five were enrolled.
- In southern and eastern Africa, Zambia reported 7 percent of children ages three to six were enrolled, whereas Mauritius report an enrollment of 98 percent for children four and five years of age.
- In central Asia and eastern Europe, Afghanistan reported 0 percent enrolled, Tajikistan reported 4 percent of children ages one to six were enrolled, and Russia reported an enrollment of 54 percent. Seychelles, an island nation in the Indian Ocean, however, had 107 percent enrollment.
- Enrollments in the Pacific Islands vary from 15 percent in Fiji to 73 percent in Papua New Guinea and 100 percent in Tuvalu.

These immense disparities across countries, when added to the obvious cultural and economic differences within countries, reinforces the idea that formulas should be avoided.

**Preschool trends.** Attention to ECCD continues to be very much focused on preschool, and is concentrated on the age just prior to entry into primary school. This preprimary age may be as young as four (because kindergarten is considered part of the primary-school system and the enrollment at age five is virtually 100 percent, a situation found in various Caribbean countries), or as old as age six. Data from the evaluation reports, when broken down by age, shows the greatest enrollments for age five or ages five to six. In Chile, for instance, 83 percent of children five to six are enrolled, as compared with only 35 percent of children three to four. In Japan, the corresponding figures are 97 percent and 58 percent. These figures support the notion of a strong bias to-

wards preschool education as the main strain of ECCD. In Latin America, at least seven countries (Argentina, Chile, Costa Rica, Cuba, Mexico, Peru, and Uruguay) can point to enrollment figures of more than 80 percent for the year prior to entry into primary school. The general point is reinforced when one takes into account that various countries include in their statistics special programs designed specifically to prepare children for primary schooling.

Coverage is very low, however, in institutionalized ECCD programs for children under two, and even under four, years of age. In most of the world, the tradition of mothers or other family members caring for very young children at home on a full-time basis continues to be the norm. Accordingly, parental support and education programs that will guide parents in helping their young children not only to survive and grow, but also to develop their full potential, are extraordinarily important. Together with the hope that many people can be reached at a relatively low cost, this has led to a spate of *parenting education* programs. These are often mentioned in country reports, but are not usually included in statistics.

Although countries in the Third World, and in eastern Europe and central Asia, are likely to provide families with noninstitutionalized support (e.g., maternity and paternity work leave, sick leave, child payments, housing subsidies), this type of support for families with young children is seldom found in developed nations, where responsibility for the first years falls squarely, and even exclusively in some places, on family and community. Sweden has reported a relatively high proportion of children ages one to two in child-care centers.

**Urban versus rural education.** Urban children are more likely than rural children to be enrolled in some sort of ECCD program, though in a number of countries there is a suggestion that rural enrollments grew more than urban enrollments during the 1990s. The bias towards urban areas is probably greater for daycare programs, which are usually linked to urban work situations, but this information is not available in reports.

**Socioeconomic factors.** Children from families that are better off economically and socially are more likely to be enrolled than are children from families with few resources or that are part of groups discriminated against socially. Although this statement

is logical and comes from a general literature review, in evaluation reports prepared for the World Education Forum almost no attempt was made to present hard data showing how enrollment is related to economic or social status. The main exception is Chile, which reported a direct relationship between enrollment and income based on household survey data—in 1996, enrollment for children under six years of age was more than twice as high for children from families in the upper fifth of the income distribution (48%) as it was for children from families in the lowest fifth (22%). In the period from 1990 to 1996, enrollment grew 32 percent for the lowest income group and 49 percent for the highest.

**Boys versus girls.** In most countries, there is virtual parity between boys and girls, but there are exceptions in which girls lag behind. Nepal, Pakistan, India, Maldives, and Iran are cases in point. Several of the countries in the Middle East and North also show lower enrollments for girls, but there is evidence that the gap is slowly narrowing. Gender inequality tends to be magnified in rural areas.

**Political factors.** The role of the state, of private-sector institutions, and of communities varies widely from region to region and country to country. In nations with a socialist bent (including former members of the Soviet Union, the Lao People's Democratic Republic, Cuba, and Sweden, among others) education has been a major responsibility of the state, including education and care during the preschool years. Accordingly, important efforts were made prior to the 1990s to develop state-funded systems of comprehensive care and early education. During the 1990s, however, the role of the state changed dramatically in many of these countries, sometimes with newfound independence and a shift towards a market economy.

The socialist stance contrasts markedly with that of the United States and the United Kingdom, where ECCD has developed along mixed private and governmental lines, but with a heavy bias towards private and community provision regulated through the market. In Africa, with some exceptions, governments have paid little attention to ECCD, which has been viewed as the responsibility of families and communities. Nongovernmental organizations (NGOs)—which are statistically labeled as private, but might better be considered part of a social sector—have played an important role in the region.

In Latin America, the percentage of enrollments accounted for by nongovernmental programs runs

between 10 percent and 15 percent for most countries. In the Caribbean, heavy emphasis is placed on private and community programs. In Southeast Asia, Indonesia reported 19 percent (1996) and Thailand reported 24 percent (1998) of their enrollments were administered by organizations that are not part of the government.

### Changes in Conditions Affecting ECCD Programming

The immediate conditions affecting ECCD are changing, including shifts in: (1) knowledge and its dissemination, including the conceptual and scientific bases available to be drawn upon and the formation of communication networks; (2) attitudes and awareness of political leaders, funders, planners, and the population at large about the importance of ECCD and its potential benefits; (3) policies and legal and legislative frameworks for programming, both internationally and nationally; (4) the availability of resources, both financial and human; and (5) organizational bases, both governmental and non-governmental.

**Changes in the knowledge base and conceptual shifts.** In a survey carried out by Robert Myers, the most frequently mentioned advance in knowledge related to ECCD during the 1990s was an advance in understanding how the brain develops and functions. To many survey respondents, it was clear that new discoveries in neuroscience—and their dissemination through scientific, professional, and popular channels—have had an important influence on the demand for, and the willingness to consider support for, early childhood education and development programs. An example is the finding that there are “windows of opportunity” for learning during the early years when learning particular practices is most efficient and which, if missed, make subsequent learning very difficult.

Also mentioned with some frequency was a growing body of knowledge from research studies and program evaluations showing long-term benefits of early intervention programs for children at risk. It is now possible to point to longitudinal studies in various countries showing clearly that ECCD programs can have effects on children in primary school. A prime example is the excellent work done in Turkey, in which children cared for in different settings, and whose mothers participated in a parent education program, were shown to benefit in later life from such programs. These studies have

helped to convince policymakers and programs of the value of investing in ECCD. They reinforce the Jomtien commitment to including early education within basic education.

These studies, together with the few cases where there has been some agreement on an indicator of psychosocial development and where consistent measurement has occurred over time (e.g., Chile), show that:

- Programs of reasonable quality do have important positive effects on early development, often with longer-term effects.
- The effects can favor rural children who are at a social disadvantage.
- An important improvement in the nutritional status of children does not automatically bring about the anticipated improvement in various dimensions of psychosocial development.
- The area of language development seems to show a consistent lag in development related to socioeconomic conditions, as well as to first-language differences.

Other new avenues of research that are beginning to influence practice include studies of resilience; conditions under which programs can have a negative effect on child development (for example, when the quality of a center is very low); and child-rearing practices and patterns.

A range of conceptual shifts was also noted by survey respondents. For example, although a behaviorist model that is not very “child friendly” still holds sway in some countries, there has been a shift towards active learning and the constructivist ideas of Jean Piaget (1896–1980). Although Piaget has had a strong influence on early childhood curricula and practices, particularly in the developed world and in Latin America, even more of a shift has been noted towards programs based on the thinking of Lev Vygotsky (1896–1934). While not contradicting Piaget, Vygotsky places greater emphasis on social and cultural influences that affect all aspects of children’s development (as contrasted with emphasis on individual discovery) giving renewed importance to the role of the teacher and to the place of language in the teaching/learning process.

The influence of ecological and transactional models that gained prominence in the 1980s continues to provide a basis for complementary approaches to ECCD that work towards changing the family,

community, and broader institutional and cultural environments with which a child interacts in the process of developing and learning.

The search for *best practices*, which took off in the 1980s, continues, but the chorus of those who question the search for universals and the base for best practices in developmental psychology has grown ever louder. Additional importance is being attached to discovering, respecting, and incorporating cultural differences into thinking about how early childhood education and care should occur. Viewpoints grounded in anthropology, sociology, ethics, and other fields are being brought to bear on ECCD, highlighting the need to begin with the cultural and social definitions of childhood and education held by those who are the participants in early childhood programs rather than with a predetermined set of definitions and models imposed from outside. This tendency is consistent with a strand of thinking about social and economic development that is grounded in local participation, and in “putting the first last,” as Robert Chambers aptly subtitled his study.

To try to overcome inevitable tensions between international and local expressions of what “should be,” a third path is evolving in which the search for best practices begins by looking for and supporting those practices valued both in terms of traditional wisdom based on experience and their scientific value. Points of difference are handled through dialogue in which underlying values are made explicit.

There are also shifts in the way planning, programming, and implementing organizations are going about moving knowledge into action. For instance, there is a tendency for ECCD programming to be set within broader frameworks such as poverty alleviation. There have also been calls for a “new citizenry” as transitions to democracy occur, and for moderating problems of street children and criminal behavior. Incipient is a tendency to think more in preventive, rather than compensatory, terms.

Related to globalization, there appears to be a conceptual shift in how governments see their role in the provision of ECCD services, with a tendency toward privatization.

**Changes in attitudes, awareness, policies, and legal frameworks.** The 1980s and 1990s saw an important increase in awareness of the importance of ECCD, sometimes linked to research findings, sometimes to evaluations and the perceived effectiveness of partic-

ular programs, and sometimes to discussions of children's rights. In some circles, awareness has grown of the importance of the very early years, not only linked to research on the brain, but also to a new appreciation for the effects of *bonding* and *attachment*.

In some cases, this new awareness has been translated into policies and/or legal and legislative frameworks. Some countries have lowered the age of entrance into primary school, thereby giving what had been one year of preschool a new obligatory status; others have declared one or more years of preschool education to be obligatory. New policy statements have been issued in several countries, India being a prime example. In Africa, new policies appeared in at least ten countries during the 1990s. In the Caribbean, a regional plan of action has been jointly approved and is moving into an operational phase. However, new awareness and new laws do not necessarily translate into greater financial commitment to ECCD, or to major advances in enrollment or quality.

#### **Changes in the availability of financial resources.**

During the 1990s the availability of financing from international banks and donors for ECCD programs increased significantly, particularly from the World Bank, with important new initiatives financed also by the Inter-American Development Bank and the Asian Development Bank. The picture is less clear, however, with respect to national budgets. Little specific information is available about national financing of ECCD programs, but the general impression is that very small proportions of educational budgets are devoted to early childhood programs. According to a UNESCO report, "governments in general have neither the financial nor administrative capacity to engage in early childhood education in the way they are involved in the provision of primary universal education" (UNESCO 1999b).

Estimates are not available for the financial support that is provided by the private and social sectors. Despite laws in some countries that mandate employers to provide child care, the contributions of the private sector to ECCD seem to be minimal. The low allocations by governments and the private sector suggest that the major burden of financing ECCD continues to fall on families and communities, as well as on civic and religious organizations.

**Changes in program strategies and quality.** Shifts appear to be occurring, albeit slowly, in the strategies used to foster early childhood development and to

improve learning and education during the pre-school years. For example:

- Although most attention in the field continues to be focused on the immediate pre-school years, there is more attention being given to children under four years of age—not only through health programs, but also through programs of parental education that include attention to psychosocial development.
- Although fractured and uncoordinated sectoral and monofocal programs still predominate, more attention is being given to multidimensional strategies that seek convergence, coordination, or integration.
- Strategies more often provide for a variety of service models, using a range of different agents, as contrasted with the still prominent strategy that extends the same service and the same model to all families and children, regardless of their culture and circumstances.
- Somewhat greater attention is being given to adjusting curricula to culture, as the idea of "beginning where people are" is gaining ground.
- The presence of nonformal programs has grown.

Unfortunately, very little is known, in a systematic way, about the quality of ECCD programs in the developed world, whether defined in terms of inputs, processes, or results. It has been difficult to arrive at an agreement about the instruments and methods that should be used for measuring quality. Nevertheless, it seems fair to say that program expansion has outrun attention to quality.

#### **Problems and Proposals**

**Weak political will.** In many, even most, countries, the need continues to convince politicians, policymakers, programmers, and education officials of the importance of ECCD. To do so, better strategies of communication, lobbying, and advocacy are needed, together with a better information base related to systematic monitoring efforts.

**Weak policy and legal frameworks.** In order to formulate and strengthen policy there is a need to: (1) undertake analytical studies of existing policies affecting children, looking beyond narrowly conceived educational policies to (for example) social welfare, health, and labor policies; (2) seek conformity with the Convention on the Rights of the Child; (3) estab-

lish norms and standards that are not so rigid or high as to be unworkable, but which will assure positive attention to children; and (4) clarify the roles of the family, state, civil society, and the private sector—as well as forms of partnerships among them.

**Lack of, or poor use of, financial resources.** ECCD programs generally command a small portion of government budgets. There is a need to increase, and make more permanent allocations to, ECCD in national budgets; strengthen the capacity of states and municipalities to obtain resources for ECCD; and seek cost-effective approaches, including quality community-based nonformal programs. In addition, alternative avenues of funding, such as debt swaps, philanthropic contributions, and private-sector involvement, need to be explored, and local organizations should have access to central pools of money in order to better respond to the needs of local communities.

**Uniformity (lack of options).** The bureaucratically convenient tendency to extend the same program to all children conflicts with the need to tailor ECCD programs to cultural, geographic, economic, and age differences. There is therefore a need to: (1) think in terms of complementary and varied approaches to ECCD that include family and community-based programs; (2) involve NGOs more actively as partners; (3) decentralize; and (4) construct culturally relevant programs with local communities.

**Poor quality.** There is a pressing need to reexamine training and supervision, and provide sound training (both pre-service and in-service) at all levels, with respect to a diversity of ECCD approaches, and to reduce the number of children (or families) per education/care agent. Curricula must be improved and reformulated, taking into account local definitions of what constitutes best practices. In addition, existing experience can be drawn upon in a more systematic way, and better systems for monitoring and evaluating children and programs need to be established.

**Lack of attention to particular populations.** The following “disadvantaged” populations need to be given greater attention: low-income, rural, and indigenous populations; girls; HIV/AIDS patients; children up to three years of age; pregnant and lactating mothers; working mothers; and fathers.

**Lack of coordination.** If a holistic and integrated notion of learning and development is to be honored, and if resources are to be used more effectively,

greater coordination is needed among governmental programs, within the education sector (especially between ECCD and primary schooling), and between governmental and nongovernmental organizations. There is a need to create intersectoral, interorganizational coordinating bodies; to construct joint programs crossing bureaucratic boundaries; to strengthen the ability of families and communities to call upon and bring together services that are currently offered in an uncoordinated fashion; and to seek agreement on the populations that are most in need of attention, and then direct services to those populations in a converging manner.

**Narrow conceptualization.** The conceptual frameworks guiding programs intended to improve early childhood care and development and early learning have come primarily from developmental psychology and formal education. There is a need to go beyond the knowledge that these fields provide to incorporate broader views, with cultural, social, and ethical dimensions brought to bear. There is also a need to relate ECCD programming, conceptually and operationally, to other program lines that begin from (for example) analyses of children’s rights, poverty, working mothers, rural development, special needs, refugees, adolescents, and gender.

*See also:* CHILD CARE; EARLY CHILDHOOD EDUCATION, *subentries on* OVERVIEW, PREPARATION OF TEACHERS; HEALTH AND EDUCATION; FROEBEL, FRIEDRICH.

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ROBERT G. MYERS

## **EAST ASIA AND THE PACIFIC**

The region of East Asia and the Pacific encompasses some of the richest and poorest nations in the world,

as well as the largest (China) and some of the smallest (the island states). It includes states with most successful record of economic development in the late twentieth century—the high-performing Asian economies (HPAEs) of the Republic of Korea, Taiwan, Hong Kong (China), and Singapore—and those where growth has been fragile and disrupted by strife and natural disasters (Vietnam and Cambodia). Cultural, ethnic, and linguistic diversity exists throughout the region, both between and within countries. So also do different historic legacies, which influence the form, content, and future development of education.

There are a number of possible criteria that could be applied to groups of countries in this area that highlight some of these differences. Conventional geographical groupings can be useful, but conceal large variations in educational development, economic conditions, history, and culture. An alternative is to select a set of general indicators, which might include demographic factors (e.g. population size, population growth rates, measures of the rate of urbanization); levels of literacy; and economic status, which is determined by measures such as GNP (gross national product), GDP (PPP) (gross domestic product, based on purchasing power parity estimates), growth rates, and changes in the structure of employment. The Human Resource Development Index (HDI) of the United Nations Development Program (UNDP), based on measures of life expectancy, literacy, and real GDP per capita, is also potentially useful.

Using a combination of these characteristics, five groups of countries can be identified. The first group consists only of China, which stands on its own as a mega-state containing most of the region's population. China itself is very diverse, and includes areas where educational participation and achievement levels are very high (predominantly the coastal provinces), alongside parts where educational disadvantage is widespread and literacy levels are low (in the interior and among national minorities). The HDI is used by the UNDP to rank levels of development using an aggregate measure of life expectancy, literacy, and real GDP per capita. China in the early twenty-first century has an HDI rank of 87, placing it among other medium (49 to 127) human-development countries as does its GDP (PPP) per capita of \$5,200. More than 35 percent of its population is urban, and it has a low population growth rate, creating a dependency ratio of less than 40

percent (the dependency ratio reflects the number of 0–14 year olds as a percentage of 15–65 year olds).

The second group includes the HPAEs (Korea, Taiwan, Hong Kong (China), and Singapore). These countries have an HDI rank between 24 and 27 (HDI not available for Taiwan), and more than 80 percent urban populations. GDP (PPP) per capita is more than \$15,000, and the largest proportions of their labor force are employed in services. Malaysia shares many characteristics with this group, as does Brunei Darussalam. The former has experienced rapid sustained growth, ranks 56 on the HDI, and has a small (15%) and diminishing proportion of its labor force in agriculture. The latter has a high HDI ranking (32) and high levels of GNP per capita, with a labor force mostly concentrated in the service sector.

The third group comprises a collection of states that have HDI rankings between 50 and 100 (Indonesia, Philippines, and Thailand). These countries have low- to middle-levels of GDP (PPP) per capita, and most have experienced substantial levels of growth, have an average of about 50 percent of the labor force in agriculture, and generally low illiteracy. Thailand is both the richest and fastest growing nation in this group, but also has the lowest level of urbanization. Vietnam is also urbanizing and developing rapidly.

The fourth group of countries have HDI ranks from 120 to about 135, and all have lower GDP (PPP) per capita than those in the third group. On average, they have lower levels of urbanization and industrialization. Included in this group are Myanmar, Cambodia, and the Lao People's Democratic Republic. They are all low-income and low-growth countries, with less than 20 percent urbanization and predominantly agricultural economies—with the great majority of employment in this sector and little industrial production.

The Pacific Islands fall into the last grouping, though they are far from homogeneous. All have populations of less than one million, except Papua New Guinea, which shares historic and cultural links with many of the islands. HDI ranks are between 85 and 125 (for countries where HDI is available) with the exception of Fiji (67). Most of these countries have middle levels of GDP (PPP) per capita and low rates of urbanization. Countries in this group include Kiribati, Samoa, the Solomon Islands, Tonga,

Tuvalu, the Cook Islands, and Vanuatu. Table 1 presents basic data on countries in East Asia and the Pacific Islands and profiles population, national wealth, the length of school cycles, participation, and educational expenditure.

### Some Key Issues

The key issues confronting these nations reflect different priorities, historic preferences, expectations about the future, and responses to changing exogenous circumstances. It is therefore difficult to look across East Asia and the Pacific Islands as if they were homogeneous. However, if there is some consensus that the purposes of public investment in education is intended to promote economic growth, improve equity in access to basic education services, enhance quality and internal efficiency, and respond to emerging needs, then several sets of issues suggest themselves as likely to be prominent across groups of countries.

First, educational investment in the region will be conditioned by the resources available and the sociopolitical environment in which choices are made. Macroeconomic conditions are likely to remain difficult in some countries (Cambodia, Laos, Myanmar, and Papua New Guinea and some other Pacific Islands). Growth in real GDP per capita (and hence the ability to invest in educational services) seems likely to be slow and unlikely to release substantial additional resources for educational investment. External assistance may have the biggest role to play in these countries. Indonesia has better prospects of real growth, as do Vietnam and the Philippines—assuming political stability is a reality. In these countries, national resources should be largely sufficient to support educational development if it is prioritized in public expenditure plans. The HPAEs, Malaysia, and Thailand should continue to experience sustained economic growth. This, coupled with falling proportions of school-age children and an increased propensity to invest private resources in education, should lead to rapid growth in higher levels of educational investment.

Second, in those countries where spending is relatively low as a proportion of GNP per capita and public budget, increased allocations may be a priority. This will especially be the case where what is currently delivered is manifestly inadequate. However, increasing spending in already inefficient systems has few attractions, unless the underlying sources of inefficiency are addressed simultaneously with en-

TABLE 1

## Basic educational data: East Asia and the Pacific

	Population (thousands)	Population growth (percent)	Dependency 0-14/15-65 (percent)	Urban (percent)	Life expectancy	GNP per capita (U.S. \$)	GDP (PPP) (Int. \$)	HDI Rank		
<b>Asia</b>										
Brunei Darussalam	308	2.6	54	69	76	—	—	32		
Cambodia	10,478	2.8	78	20	53	300	1,290	121		
China	1,244,202	1.1	38	30	70	860	3,070	87		
China Hong Kong	6,511	1.9	26	95	78	25,200	24,350	24		
Indonesia	203,380	1.5	50	35	65	1,110	3,390	102		
Laos	5,032	2.8	85	21	53	400	1,300	131		
Macau	450	2.7	36	99	78	—	—	—		
Malaysia	20,983	2.3	58	54	72	4,530	7,730	56		
Myanmar	43,936	1.2	46	26	60	—	—	118		
Philippines	71,430	2.4	64	54	68	1,200	3,670	70		
Korea	45,731	0.9	32	81	72	10,550	13,430	27		
Singapore	3,427	1.8	31	100	77	32,810	29,230	26		
Thailand	59,736	1.0	39	20	69	2,740	6,490	66		
Vietnam	76,387	2.0	60	19	67	310	1,590	101		
<b>Oceania</b>										
Cook Islands	19	0.6	—	60	—	—	—	—		
Fiji	786	1.1	54	41	73	2,460	3,860	—		
Kiribati	80	1.4	—	36	—	910	—	—		
Papua New Guinea	4,499	2.3	68	16	58	930	—	122		
Samoa	172	1.0	68	21	71	1,140	3,570	—		
Solomon Islands	404	3.3	82	17	72	870	2,270	—		
Tonga	98	0.3	—	41	—	1,810	—	—		
Tuvalu	11	2.9	—	47	—	—	—	—		
Vanuatu	177	2.5	80	19	67	1,340	3,230	—		
	Primary years	Lower secondary years	Upper secondary years	Primary gross enrollment rate	Secondary gross enrollment rate	Primary pupil- teacher ratio	Secondary pupil- teacher ratio	Higher education students/ 100,000	Education expenditures (percent of GNP)	Education expenditures (percent of government budget)
<b>Asia</b>										
Brunei Darussalam	6	5	2	106	77	15	11	516	—	—
Cambodia	6	3	3	110	24	46	18	85	3	—
China	5	3	2	123	70	24	17	473	2	—
China Hong Kong	6	5	2	94	73	24	20	—	3	—
Indonesia	6	3	3	113	51	22	14	1,157	—	—
Laos	5	3	3	112	28	30	17	260	3	10.3
Macau	6	—	6	—	—	—	—	1,701	—	—
Malaysia	6	3	4	101	64	19	19	1,048	5	15.4
Myanmar	5	4	2	121	30	46	16	590	1	14.4
Philippines	6	—	4	114	77	35	32	2,958	3	17.6
Korea	6	3	3	94	102	31	25	6,106	4	17.5
Singapore	6	4	3	94	74	25	20	2,730	3	23.4
Thailand	6	3	3	87	56	—	—	2,252	5	—
Vietnam	5	4	3	113	47	32	29	678	3	—
<b>Oceania</b>										
Cook Islands	6	3	3	—	—	—	—	—	—	—
Fiji	6	—	6	—	—	—	—	—	—	—
Kiribati	7	—	5	—	—	24	17	—	11	—
Papua New Guinea	6	4	2	—	14	37	24	318	—	—
Samoa	8	3	2	—	62	24	19	—	—	—
Solomon Islands	6	3	2	100	17	24	—	—	—	—
Tonga	6	—	7	97	—	—	—	—	—	—
Tuvalu	8	4	—	—	—	—	—	—	—	—
Vanuatu	6	4	3	—	—	—	—	—	5	—

SOURCE: Based on data from United Nations Educational, Scientific and Cultural Organization, 2000.

hanced resource allocation. Where much less than 3 percent of GNP per capita is allocated (and less than

15 percent of the public budget), some reconsideration would seem desirable.

Third, where primary enrollment rates are significantly below 100 percent, especially where literacy is also low and gender differences are large, investment at the primary level should be a priority. The benefits for equity and economic development should be considerable. This is likely to be the most cost-effective way to improve adult literacy in the medium term, and one of the easiest ways to reduce gender inequity.

Fourth, internal efficiency needs improvement, both to extend the resources available to make increased access affordable, and to ensure better distribution of participation and achievement of valued outcomes. Where student–teacher ratios are high and very uneven across schools, these need to be reduced; where they are low, they may need increasing. Unequal investment that arises from wide differences in actual resource allocation (uneven teacher deployment and utilization, within-school preferences for spending on higher grades, heavy subsidy of some institutions and levels at the expense of others) is likely to suppress retention and on-schedule graduation rates, increase repetition, and enhance social selectivity and regressive subsidy related to household incomes. (A regressive subsidy is one that favors households with high income rather than low income.) Initiatives that decentralize control and finance may have a role to play in increasing efficiency and engaging the energies of stakeholders to improve quality and relevance, but they appear unlikely to be sufficient unless accompanied by appropriate checks and balances to encourage desired outcomes and monitor effects. Decentralization may be least attractive where infrastructure is weakest and incomes lowest.

Fifth, more effective educational management, administration, and monitoring—and steps to reverse regressive subsidies—can help provide better value and contribute to equity. Where it can be demonstrated that new incentive structures would work to improve quality without adverse effects that compromise their value, these should be incorporated into management systems.

Sixth, the public costs of secondary schooling should be limited to a small multiplier (no more than about 2:1) of those for primary education, unless there are strong contraindications. In those countries where primary schooling is not universalized, high secondary-unit costs may represent a poor allocation choice unless restricted to a small number of schools with open and fair selection. Where pri-

mary schooling of acceptable quality is becoming widely available, access to, and financing of, secondary schooling will become a dominant policy issue.

Seventh, higher-education policy can encourage more cost recovery from those who benefit. This appears to be the most plausible mechanism for expanding access in the face of growing demand without conceding a growing public subsidy to those most likely to enjoy above-average incomes subsequently. How this is implemented must be context sensitive, since in the poorer countries scope may be extremely limited and some possible mechanisms could result in counter-productive outcomes. Cross-border trading of educational services at the tertiary level is likely to grow rapidly, and may begin to have consequences for national institutions that become uncompetitive in cost and quality with institutions in other countries.

Eighth, education systems should be encouraged to respond to the changing characteristics of labor markets, in which there are an increasing proportion of service and manufacturing sector jobs. As these jobs become more knowledge and skill intensive, curricula, especially at the secondary level and above, need adaptation and redesign to promote outcomes valued in the marketplace. Traditional curricula need to be questioned to establish if they meet new needs and opportunities, and to balance domestic priorities for learning with those derived from educational development at an international level.

### **Prospects for the Future**

It is difficult to predict the educational future of the countries in this region. History provides a reminder of how fragile foresight can be. Predictions of China's economic and educational growth, vocationalization of secondary schools, and increasingly autonomous higher education institutions with large numbers of fee-paying, self-supporting students entering into a burgeoning socialist market economy were conspicuously absent in 1975. Malaysia's rapid and sustained educational development was easier to anticipate. However, the successful contribution of education policy to maintaining stability, redistributing employment opportunities, and generating wealth surprised those critical of its strongly interventionist character under the country's New Economic Policy. Nevertheless, it is worth speculating how things will unfold as a way of drawing attention

to some of the issues that will preoccupy future policymakers.

## China

In much of China, access to six to nine years of education is assured, and enrollment rates are high, with gross enrollment rates (GERs) at the primary level over 125 percent (GER is the number enrolled over the size of the relevant age group; it can therefore exceed 100% because of overage enrollment and repetition). The main development agendas are improved internal efficiency, greater quality, and higher levels of achievement. Legislation has been in place since the mid-1980s to universalize enrollment, and this has largely been achieved. In the poorest areas and among the national minorities, underenrollment, high dropout rates, and substantial repetition remain a problem, but one manageable with domestic resources. Sustained rates of economic growth and generally low population growth (though not in many national minority areas) should facilitate the extension of the educational franchise. What will be achieved in basic education will depend on the political will to spread social benefits of development to areas that lag behind the coastal provinces and developed parts of central China.

At the secondary level, enrollments will continue to grow rapidly, to the point where most students will complete the lower secondary level in the near future. This will substantially increase rural enrollments. Participation rates at upper secondary schools will continue to expand, and will probably retain an emphasis on technical and vocational education, where the challenge is to maintain relevance to employment and develop a consistent certification system. Tertiary-level enrollments are likely to grow substantially to meet demand from students. Tertiary institutions will be consolidated into fewer and larger institutions, and will progressively take more responsibility for their own funding. It is probable that a core of universities, perhaps twenty or so, will remain directly supported as national institutions, and a similar-sized group will retain provincial government support. Most of the others will move away from the control of specific ministries and will have to seek mixed sources of funding. At the upper secondary and tertiary levels, it can be expected that fee systems will provide a growing proportion of operating costs, and the number of self-financing students will continue to increase.

Competition for access to secondary *key schools* (schools with selective entry for the most able children, and which have additional resources and high-quality teachers) will intensify, as it will for entry to associated primary schools and to prestigious universities. Providing access in ways that are seen as equitable and socially efficient will be an important issue. In many respects, China will probably move towards patterns of participation and access found in several of the HPAEs, while retaining and developing a large range of educational delivery services using the media, adult study programs, and training related to the workplace.

During the early twenty-first century, China will experience the effects of rapid urbanization (which was already well advanced in 2000) and an aging population. The former will concentrate more and more educational services in towns and cities, and may exacerbate the problem of the relative neglect of educational development in rural areas. The aging population will ultimately cause the dependency ratio to rise (in this case, dependency ratio includes those over sixty-five), with possible consequences for the amounts available to subsidize public educational provision.

## The HPAEs

Among the high-performing Asian economies, economic growth has been strong, despite temporary setbacks in the late 1990s. Population growth rates are low and declining, enrollments are approaching universal levels at the primary and secondary levels, illiteracy only exists on the margins, and distribution of public expenditure is fairly even. At the primary and lower secondary levels, enrollments are likely to fall for demographic reasons, creating further opportunities to improve quality and enrich curricula offerings. Student-teacher ratios may continue to decline slowly, and at the primary level are likely to converge towards those at the secondary level. Private provision is likely to continue to grow, both in separate schools and in parallel systems providing complementary services. Preschool enrollments will increase rapidly (mostly outside state provision) as a result of available income continuing to rise, parental investments in schooling being concentrated on fewer children, and strong beliefs in the value of a head start in schooling.

At the secondary level, school facilities are often good and will continue to improve, especially in relation to access to new information technologies.

Skill-based and competency-linked curricula are likely to spread, and links with changing patterns of employment, especially the continued growth of the service sector, will have an impact on teaching and learning. Some of these countries appear to have low between-school variations in achievement, while in others the school attended seems to account for much of the variation in performance in particular subjects. Differences between schools may be expected to diminish as resource distribution ceases to be a major constraint and competitive pressures improve the performance of lower-achieving schools.

Competition for access to higher education is likely to intensify, though participation rates will increase to levels where a majority of the population experience some post-school periods of study and training. The competition will center on the most prestigious institutions at home and abroad. The tertiary sector as a whole is likely to become more diversified and accessible to a wide range of students, including those in midcareer and those in nontraditional fields of specialization. Cross-border flows of students will also increase both from HPAEs to richer countries and from other Asian countries to HPAEs. Private financing and mixed systems of support will develop where these are not already dominant, and where they are already substantial they will grow further. The integration of Hong Kong's education system into China may influence the rate of change in Chinese institutions, particularly at the tertiary level.

### **Middle- and Low-Income Countries**

In middle-income countries with industrialization already under way, several scenarios are possible. In Thailand and Indonesia, survival rates up until the fourth grade are high, and enrollment rates are approaching universal levels for all primary grades. Quality remains a problem, as does repetition and the number of dropouts. Uneven resource distribution remains a critical issue, and urbanization will result in more resources being needed for city and town schools. In these countries a demographic transition to low growth is already established, and universal access to a basic education cycle is achievable by 2020. Enrollment rates at the secondary level will increase, especially in Thailand and Indonesia, and it is here that the resource demands are likely to be largest. Malaysia will converge towards the educational characteristics of the HPAEs, with which it now has much in common. Higher education

growth will occur, especially in privately financed institutions, which already enroll large numbers in the Philippines, Indonesia, and Thailand.

Poorer Asian countries with a developing industrial base include Myanmar and Vietnam. Myanmar's development will be partly determined by the extent to which it adopts reforms similar to those in surrounding countries, which would lead to increased resources for education and higher participation rates. Vietnam is rapidly modernizing, and economic growth and industrialization are taking place. Secondary school participation rates will start to rise, and tertiary-level enrollment is likely to begin to grow rapidly.

The poorest agriculturally based countries confront the most difficult conditions. Basic educational infrastructure is impoverished, resources for growth are heavily constrained, and needs are greatest. School provision is predominantly rural, retention is poor, repetition is high, and illiteracy widespread. These fundamental realities will condition educational development (e.g., in Cambodia and Laos) and should focus attention on building basic delivery systems with reasonable coverage and quality. Expansion at higher levels that utilizes public funding should probably be deferred until greater proportions of the population acquire basic skills.

In most of the Pacific Islands, primary enrollment rates are high, except in Papua New Guinea, where there is some way to travel to reach universal access. Fiji stands out as having high levels of enrollment. There are problems associated with small populations in these countries, and most will continue to send students overseas for higher education. Migration will also affect demand in many of these states, and curriculum will remain dependent and derived from larger and richer metropolitan countries, many of which receive high levels of external support for education and have close links with larger countries that sponsor educational development and receive students and migrant labor.

### **Conclusion**

This short review has highlighted some of the main characteristics of education in East Asia and the Pacific Islands. It gives some of the flavor of the diversity of circumstances, current problems, and future developments. In particular, it distinguishes five broad groups of countries at different points in their development. The challenges these groups face are

somewhat different. However, across the region there is cause for optimism that educational participation will grow and become more equitable, quality will improve, and labor markets will benefit from more and more investment in the skills and competencies associated with education and training. This will be accelerated by governments that maintain stability, prioritize educational investment, judiciously take advantage of opportunities created by globalization, learn from the experience of the HPAEs, and capitalize on the special characteristics of each national system.

*See also:* EASTERN EUROPE AND CENTRAL ASIA; INTERNATIONAL EDUCATION; POPULATION AND EDUCATION; SOUTH ASIA.

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KEITH M. LEWIN

## EASTERN EUROPE AND CENTRAL ASIA

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The Europe and Central Asia (ECA) region includes Central Europe (the Czech Republic, Hungary, Poland, and the Slovak Republic), Southeast Europe (Albania, Bulgaria, and Romania), the Baltic States (Estonia, Latvia, and Lithuania), the western Commonwealth of Independent States (Belarus, Moldova, Russia, and Ukraine), the Caucasus (Armenia, Azerbaijan, and the Republic of Georgia), former Yugoslavia (Slovenia, Croatia, Republic of Macedonia, Bosnia and Herzegovina, and the Federal Republic of Yugoslavia), and the Central Asian republics (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan). In the early 1990s, the countries of the ECA began a transition from command economies to market economies. As the transition began, the countries had reason to take pride in their education systems. They had solved educational problems that still bedeviled several other regions of the world. Adult literacy was generally universal; participation and completion rates for children and youth of both genders were high at all levels of education; teachers came to work; students had textbooks; students in countries that participated in international assessments of mathematics and science performed well; school dropout rates and rates of grade repetition were low.

In the early 1990s, therefore, education seemed so secure that it could safely be ignored as countries

faced the staggering problems of collapsing economies, fragile democracies, unproductive state-owned enterprises, and rapidly increasing poverty. Within ten years that reality changed. ECA education systems joined the ranks of the deeply troubled sectors.

### **New Rules for Education in the ECA Region**

The rules for market economies and open political systems differ from those for command economies and authoritarian political systems. For example, the continuous changes characteristic of market economies and the ambiguities of a democracy require such skills as knowing how to learn, problem solving, and evaluating. Most ECA education systems, however, focus on memorized factual and procedural knowledge, which is adequate for the predictability of a planned economy and the dogma of authoritarianism but not for the volatility of a market economy or the choices required of citizens in democracies.

Analyses of the education systems of ECA identified five central problems:

- **Alignment:** Educational quality is contextual; it is not a constant under all conditions. ECA education systems that were a good fit with planned economies and authoritarian political systems do not fit well with open market economies and open political systems.
- **Fairness:** Education is an important mechanism for reducing and preventing poverty. Differences in children's learning opportunities are emerging in ECA countries at that very point in the region's history when skills and knowledge increasingly determine a family's poverty status.
- **Financing:** ECA countries need to realign the financing of their education systems with fiscal realities without jeopardizing the fairness and quality of educational services. Their failure to rationalize education finance is eroding the achievements of the pretransition period.
- **Efficiency:** Most ECA education systems use inputs inefficiently. These inefficiencies are the legacy of centrally planned economies, where prices and budgets did not affect allocation decisions.
- **Governance, management, and accountability:** Most ECA education systems do not perform well against standards of transparent and effective governance, efficient management, and vigorous accountability to a range of stakeholders.

The sector is still dominated by governments unchecked by private sector competition and participation of stakeholders.

These problems were found to apply at all levels of education, but they play out in different ways at each level.

### **The Economic Imperative**

Both economic and civic imperatives for ECA countries define how their education systems will have to adapt. In regard to the economic imperative, the region is undergoing three radical economic shifts: (1) from centrally planned to market economies; (2) from protected trade based on politics to global trade based on economic comparative advantage; and (3) from mass production to flexible, or customized, production.

**Market economy.** The implications of a market economy for education are significantly different from those of a planned economy, but they are fairly easy to see. In market economies wages reflect skills and knowledge; in planned economies, there is little relationship between the two.

**Globalization.** Integrating into the global economy imposes a discipline on domestic producers by increasing competition and clarifying comparative advantages. It is a stimulus for doing what producers have to do anyway in order to raise productivity, which is the key to higher wages and higher standards of living. Globalization, in conjunction with the flexible production of goods and services and expanded and cheaper communication and transport systems, gives customers more choice. Thus, moving into the global economy raises the standards for goods and services that suppliers have to meet. These higher standards prevail even within suppliers' domestic markets, because standards "leak" back and forth across national boundaries in the form of traded goods and services.

**Flexible production.** Moving from mass production to the flexible production of goods and services changes the opportunities and ultimately the basis for economic growth. Computerized technologies have revolutionized production by allowing both long and short production runs that can respond to niche or customized markets at the cost savings of mass production.

**Employer responses.** Globalization and flexible production have combined to change the profile of customer demand for manufactured goods, agricultural

products, and services. Customers have come to expect a large, varied, and continuously improving basket of goods and services, fast delivery of orders, high and consistent quality, and low prices. To meet these demands, employers have to change technologies and the organization of work. Mass production of goods and services depended on routinization and a hierarchical specialization of function, where most workers, even middle managers, were order takers. Workers were not expected to exercise judgment, initiative, or problem-solving skills, and most decisions were referred up the chain of command. This productive regime was predicated on slow rates of change that minimized the need for adult learning.

Under flexible production, however, employers broaden job descriptions to give each worker authority over more of the component tasks of production. Employers flatten organizational hierarchies and introduce job rotation and team-based work. These changes save the time lost by referring decisions up and down organizational ladders; they reduce middle management and supervisory jobs. The jobs of less-skilled workers begin to incorporate some of the supervisory, planning, repair, maintenance, and quality-control functions previously reserved for managers or specialists.

**Worker skills required.** In this context workers need solid literacy or information-processing and interpretive skills, better problem-solving skills, better knowing-how-to-learn skills, and greater initiative. Advanced economies confront increasing unemployment rates and falling wages for those with low educational qualifications.

**Status of ECA countries.** Evidence from the Organisation for Economic Co-operation and Development (OECD) International Adult Literacy Survey (IALS) suggests that the region's education systems are a poor fit with modern economies. Four ECA countries—Hungary, Slovenia, Poland, and the Czech Republic—have participated in the IALS. Of these four, three—Hungary, Slovenia, and Poland—seriously lag OECD countries in the information-processing and interpretive skills that modern economies require of their citizens.

A comparison of the IALS data for the low-performing ECA countries with those for the strong ECA performer (the Czech Republic) and with participating OECD countries tells an important story. First of all, in Hungary, Slovenia, and Poland, very high percentages of workers aged sixteen to sixty-

five tested at levels one and two on the prose, document, and quantitative scales, with about 75 percent of the workers in each of the three countries testing below level three on the prose scale. Scores at or above level three predict the ability of a person to function in a modern workplace.

The differences between the tested skills of adults in Hungary, Poland, and Slovenia and those of Czech adults and adults in participating OECD countries cannot be attributed to the *quantity* of education that low-performing ECA populations complete.

The performances of those still in, or recently graduated from, school reflect most pertinently on the quality of their country's education system. Substantially higher percentages of twenty- to twenty-five-year-olds in Hungary, Poland, and Slovenia tested at lower literacy levels than those of the same age group in the Czech Republic and participating OECD countries, indicating that education systems of the transition countries are not producing the skills that new entrants into the workplace will need as these workplaces modernize.

Multivariate analyses show that parental socioeconomic status has a significantly greater effect on scores in the three low-performing ECA countries than in the Czech Republic and OECD countries. Apparently, education policy in these three ECA countries is not designed to minimize the effect of parental background and may operate to reinforce it via mechanisms such as early tracking.

### The Civic Imperative

For decades ECA countries were ruled by authoritarian regimes that controlled their populations through fear and the deliberate creation and manipulation of distrust. In the posttransition era, ECA schools can be important weapons for socializing children to the rights and obligations of citizenship and for developing the trust among groups that leads to a willingness to cooperate across the boundaries that normally divides the groups (e.g., clan, ethnic or religious membership)—provided that the political context supports these values.

### Increasing Inequality in Education

In the pretransition period learning opportunities were inequitable, but given the region's wage compression (the lack of variation in wages), unequal access to education had little effect on family income.

Unequal learning opportunities matter more in ECA countries in the early twenty-first century because education matters more. Skills and knowledge affect individuals' earnings, unemployment probabilities, and likelihood of receiving wage-enhancing training from employers. Because the education acquired by parents affects that acquired by their children, lower levels of education in one generation can ignite intergenerational cycles of poverty through the intergenerational transmission of lower levels of skills and knowledge.

Statistical relationships are emerging in the ECA region between educational attainment and such outcomes as employment status, wage level, and poverty. Figures from 1993 to 1998 show that households whose heads had completed only basic education were 20 to 80 percent more likely to be poor than the average household.

**Declining enrollment rates.** Enrollment rates, the best available measure of learning opportunities in ECA countries, are declining at all levels except at the tertiary level (see Table 1). These enrollment rates indicate that a larger number of young people are building fewer skills and less knowledge and a smaller number are building more. Calculations show a decline in the number of years of full-time education (excluding preschool) that the average six-year-old child in the ECA region can expect to achieve over her lifetime. In 1989 the average full-time school expectancy was 11.2 years; by 1997 it had declined to 10.6 years. In contrast, the average full-time school expectancy for OECD countries in 1998 was 15.4 years.

The secondary vocational/technical track accounts for enrollment losses at the secondary level. Enrollment declines at this level signal emerging educational inequalities of particular significance because a solid upper-secondary education increases the chances of acquiring the skills required in modern workplaces.

**Relationships between enrollment rates and family income and education costs.** Results of poverty assessments show that youth from poorer and less well-educated families in the ECA region are likely to leave school before completing basic education or at the time of its completion. Because students from poorer families tend to select the technical/vocational track, losses out of upper-secondary education are concentrated among poorer families. As a result, upper-secondary enrollments are becoming increasingly biased in favor of the nonpoor.

**TABLE 1**
**Gross enrollment rates in Europe and Central Asia by level of education, 1989–1997**

Level of Education	Year	
	1989	1997
Preschool	51.4	41.0
Basic	94.4	90.6
Upper secondary	71.4	61.3
Academic	26.2	27.4
Vocational/technical	45.2	33.8
Tertiary	13.1	17.8
<b>Expected years of education completed</b>	<b>11.2</b>	<b>10.6</b>

SOURCE: Based on data from World Bank, 2000. *Making Transition Work for Everyone: Poverty and Inequality in Europe and Central Asia*. Washington, DC: World Bank, Europe and Central Asia Region, Human Development Sector Unit.

ECA countries have substantial poverty overall, and income inequality is growing as a predictable and inevitable consequence of the shift to market economies where demand, not central wage-setting, determines the price for labor. Greater income inequality translates into less-equal abilities to pay the costs of education. Early studies indicate that education is costing families more than before the transition, although costs vary by country and among jurisdictions within countries. These studies also show that poor families are paying a higher percentage of per capita consumption for education than nonpoor families. Not surprisingly, the countries and jurisdictions that are under the greatest fiscal pressures are shifting costs to families more than those that are less fiscally constrained. Unfortunately, it is just these countries and jurisdictions that tend to have higher levels of family poverty.

**Problems Stemming from the Financing Structure**

Since the transition, the education systems in many ECA countries have been experiencing serious fiscal constraints that will almost certainly persist for the foreseeable future. Governments have yet to reconcile their education sectors with fiscal realities without jeopardizing education outcomes and fairness of educational opportunities.

The resource imbalance in the sector stems from three causes: (1) macroeconomic declines have reduced total public funds available for education; (2) the removal of subsidies and price distortions has led

to market-based pricing for inputs, particularly for energy; and (3) major inefficiencies inherited from the pretransition period are pervasive in the sector, a problem discussed in the efficiency section below.

Following the disintegration of the Soviet Union, macroeconomic conditions deteriorated dramatically in all ECA countries. Most countries in Central Europe and the Baltics have subsequently recovered, but the rest of the region continues to face macroeconomic decline or stagnation. Countries experiencing declines in gross domestic product (GDP) have tended to react by reducing public spending on education even more rapidly, causing not only an absolute decline but also a decline in the ratio of public education spending to GDP.

**How have education sectors reacted to budget pressures?** ECA governments and local education authorities have not yet adjusted effectively to reduced funding (in some cases) or to increased prices (in all cases). Instead, they have tended to take temporary measures that only paper over fiscal shortfalls and that tend to delay genuine adjustment. Such temporary measures, which increase the eventual costs of adjustment and undermine education outcomes and fairness, include:

- continuing to defer building maintenance, thereby borrowing from the future at exorbitant interest rates because it will cost much more to rehabilitate schools in the future than it would to repair them in the present
- cutting the purchase of teaching materials and equipment
- saving on heating bills by closing schools
- allowing teachers' wage rates to fall relative to other wages
- shifting financing responsibilities to local governments that lack adequate taxing authorities to pay schooling costs
- running up arrears in energy bills and teacher wages
- shifting costs of education to families

### **The Command Economies' Legacy of Inefficiency**

Depending on the country, ECA countries may consume at least double the resources employed per basic and secondary student in the West. The most egregious examples of the inefficient use of resources are space norms per student, utility consumption,

and labor inputs. Many of the inefficiencies are a legacy of pretransition economies when planners, not market forces, determined wages, subsidies, and prices. There were no mechanisms for determining the total costs of anything and therefore no incentives to contain costs.

Schools in the ECA region were not built to conserve energy and consume, on average, between two and three times as much energy as modern school buildings in OECD countries. For example, the average Danish school consumes about 100 kilowatt-hours per square meter per year, in contrast to Latvia's typical 285 kilowatt-hours per square meter per year. Now that energy is being priced at market levels, the percentage of education budgets devoted to energy has increased from less than 5 percent to between 25 and 40 percent, depending on the severity of the climate.

Staffing norms inherited from the pretransition period mean that the proportion of teachers to students is two or three times as great as in OECD countries. Low at the start of the transition, student/teacher ratios worsened over the next decade for most ECA countries. The ECA practice of using single-subject teachers after the primary grades fuels labor inefficiencies, given that highly specialized resources of any kind are more difficult to allocate efficiently. Although data on nonteaching staff are not generally available, limited data hint at further inefficiencies in the countries that had comprised the Soviet Union. For example, in 1999 Moldova had a ratio for all levels of education of 1.35 nonteaching staff to one teacher.

Total fertility rates for all ECA countries declined dramatically between 1989 and 1997, falling from 2.1 to 1.3 children per family in all ECA countries except Albania and the Central Asian republics. Thus, at least in the short- to medium term, ECA education systems are sized for more children than will be going through them, adding to the need to downsize inputs.

### **Failures in Governance, Management, and Accountability**

Because the state takes actions in education on behalf of its citizens and taxpayers, it must respond to questions about how well it represents their interests. Is the education sector doing the right things? Is it doing the right things right? What mechanisms do stakeholders have to hold the state accountable for its actions?

The answers to these questions lie in the sector's arrangements for governance, management, and accountability. Unfortunately, ECA education systems tend to fail spectacularly on these three key dimensions. Improving these functions seems to be absolutely essential for straightening out other problems of the sector.

**Governance—goal setting and monitoring.** Major changes in context, such as ECA countries are experiencing, normally force countries to rethink and debate goals for their education systems. The discussion in the ECA region is not well focused, however, and only the most progressive countries in the region have moved toward goals that are practical rather than focusing on vague ideals.

**Management.** Countries can vary in how they distribute responsibilities and powers among levels of government and still secure reasonably efficient service. In the ECA region's education sector, however, the responsibilities of management tend to be allocated to different levels of government in ways that are contradictory, unclear, or duplicated within or between levels; the responsibilities are often misaligned with the availability of resources, or they may be missing altogether. For example, even in centralized education systems, ministers often do not perform functions that should be centralized, such as leading improvement efforts, setting learning standards and ensuring educational quality, monitoring performance, and ensuring educational fairness.

Even where functions and decision-making powers are complete and sensibly allocated among levels of government, functions may be performed well or poorly. In the ECA region, the performance of functions in the education sector falls woefully short of good international practice.

**Accountability.** The key to accountability in education is a checks-and-balances relationship among the interests of three groups: the public sector (government and professional educators), the private sector, and the civic society (taxpayers, users, and beneficiaries). Each of these three actors plays according to different rules. The public sector uses rules and standards to establish the framework for service delivery; the private sector uses competition and choice; and the civic society uses participation or "voice."

Analyses show that the state cannot be trusted to supply educational goods and services efficiently

without the competitive checks of markets or the exercise of voice by beneficiaries. These same studies, however, also show that efficiency and responsiveness decline if any one of these players dominates. Mechanisms for strengthening accountability carry their own distortions. Thus, it is the checks and balances among the three mechanisms that result in the most efficient and responsive provision of services.

In ECA the state dominates the sector. Competition in the form of private provision and contracting out of services is still in its infancy. Voice is a very weak reed in the region. Several ECA countries impose legal or political constraints on mechanisms for expressing voice—such as constraints on the press.

*See also:* GLOBALIZATION AND EDUCATION; GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF.

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SUE BERRYMAN

## ECONOMIC BENEFITS OF EDUCATION INVESTMENT, MEASUREMENT

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The concept of the rate of return on investment in education is very similar to that for any other investment. It is a summary of the costs and benefits of the investment incurred at different points in time, and it is expressed in an annual (percentage) yield, similar to that quoted for savings accounts or government bonds.

Returns on investment in education based on human capital theory have been estimated since the late 1950s. Human capital theory puts forward the concept that investments in education increase future productivity. There have been thousands of estimates, from a wide variety of countries; some based on studies done over time and some based on new econometric techniques. All reaffirm the importance of human capital theory.

The rise in earnings inequality, and the subsequent increase in the returns on schooling experienced during the 1980s and 1990s in many countries, led to renewed interest in estimates of returns on educational investment. The literature suggests that systematic changes in the production process brought about by changes in technology and the

growth of the knowledge-based economy whereby product cycles become shorter and flexibility is needed, led to changes in the demand for skilled labor.

### An Illustration

For illustrative purposes, assume that an eighteen-year-old secondary-school graduate is driven only by monetary considerations in deciding whether or not to invest in a four-year university degree. Such a student will have to contemplate and compare the costs and benefits associated with going to college. The cost per year for tuition and other related expenses (\$10,000 in this hypothetical case) is the *direct cost*. In addition, the student will incur an indirect (or opportunity) cost because he or she will not be able to work while attending college. This cost is approximated by what the average student with a secondary school diploma earns in the labor market, perhaps \$20,000 per year. On the benefits side, the student expects to be making, on average, approximately \$15,000 more than a secondary school graduate over his or her lifetime after graduating from college.

A rough way to summarize the above costs and benefits is to divide the annual benefit of \$15,000 by the lump-sum cost of \$120,000, yielding a 12.5 percent rate of return on investment in education. The logic of this calculation is similar to that of buying a \$120,000 bond giving an annual coupon of \$15,000. The yield of the bond is 12.5 percent.

### Private Versus Social Costs

A very important distinction in rate of return calculations is whether one evaluates the private cost or the social cost of an education. The example given above refers to a private rate of return, where the costs are what the individual actually pays in order to receive an education. A social rate of return calculation includes, on the cost side, the full resource cost of one's education. That is, it includes not only what the individual pays, but also what it really costs society to educate one person. In most countries education is heavily subsidized, so the social cost is much higher than the private cost. The social rate of return, therefore, is typically less than the corresponding private rate of return.

Beyond the above monetary calculations used to arrive at a private rate of return, the social rate of return should ideally include the externalities associated with education. This is, of course, extremely difficult to measure, and the issue of externalities has

remained a qualification accompanying rate of return estimates—in the sense that such rates, as conventionally computed on the basis of monetary earnings and costs, must underestimate the true social return on investment in education.

The earnings of educated individuals do not reflect the external benefits that affect society as a whole. Such benefits are known as *externalities* or *spillover benefits*, since they spill over to other members of the community. They are often hard to identify and even harder to measure. In the case of education, some studies have succeeded in identifying positive externalities, but few have been able to quantify them. If one could include externalities, then social rates of return might well be higher than private rates of return on education.

### Empirical Findings

Typically, returns on educational investment are higher at lower levels of schooling and also higher for countries at lower levels of economic development. The scarcity of human capital in low-income countries provides a significant premium to investing in education. The high returns on primary education provide an added justification for making education a priority in developing countries.

In low-income countries, the returns are high, as can be seen in Table 1, which presents an illustrative summary of typical rates of return. Estimates of rates of return over a range of country types show the usual pattern most researchers find. For low-income countries, rates of return can be as high as 12 percent or more. In middle-income countries similar estimates can be found. In many eastern European transition economies, returns are relatively low, but rising. In high-income countries, rates of return on education tend to be lower than in lower-income countries. However, during the 1980s and 1990s returns on schooling increased in these countries, especially in the United States.

Private rates of return are higher than social returns. This is because of the public subsidization of education and the fact that typical social rate of return estimates are not able to include social benefits. Nevertheless, the degree of public subsidization increases with the level of education, which has regressive policy implications. Illustrative rates of return for a variety of countries are shown in Table 2. Higher education remains a profitable investment for individuals in high-income countries, as repre-

sented by the private rate of return. There is an even greater private incentive to invest in education in middle- and low-income countries. In these countries the social returns on education are particularly high, signaling a priority investment for society.

Overall, women receive higher returns on their schooling investments, though the returns on primary education are much higher for men (20%) than for women (13%). Women experience higher returns on secondary education (18% versus 14%, respectively).

The highest returns on a per-country basis are recorded for low- and middle-income countries. Overall, the average rate of return on another year of schooling is about 10 percent. From 1990 to 2002, average returns on schooling have declined by 0.6 percent. At the same time, average schooling levels have increased. Therefore (and according to human capital theory), everything else being the same, an increase in the supply of education has led to a slight decrease in the returns on schooling. That is, if there are no “shocks,”—such as changes in technology—that increase the demand for schooling, then an increase in overall school levels should lead to a decrease in the returns of schooling. Over the recent decades the returns to schooling have declined in many low income countries, while the technological revolution has increased demand for skilled labor in developed countries and the returns to schooling have increased.

### Estimation Issues

Ideally, a rate of return on investment in education should be based on a representative sample of a country’s population. But in reality this is the exception rather than the rule. It is problematic when the estimated rates of return are based on a survey of firms (rather than households), because firm-based samples are highly selective. In order to control survey costs, such samples focus on large firms with many employees. Second, the questionnaire is typically filled out by the payroll department rather than by the individual employee. This approach leads to the use of samples concentrated only in urban areas.

Another problem occurs when rate-of-return estimates are based on samples that include civil servants, since public-sector wages, in most cases, do not reflect market wages. Of course, in many countries (although fewer than in the past) the majority of graduates end up in public-sector employment.

The concentration of graduates in public-sector employment is identified as a problem in major growth studies. However, rate-of-return estimates based on civil-service pay are useful in private calculations regarding the incentives set by the state to invest in education.

A less serious problem occurs when wage effects are confused for returns on investment. Jacob Mincer has provided a great service and convenience in estimating returns on educational investment by means of the well-known earnings function he first put forward that explains differences in earnings among individuals according to their differences in schooling attainments and work experience.

Another methodological limitation is that many researchers feel obliged to include in the regression whatever independent variables they seem to have in the data set, including occupation. In effect, this procedure leads to those other variables taking away a significant part of the effect of education on earnings that comes from occupational mobility.

Perhaps the returns on education estimates that stem from the work of Ashenfelter and colleagues using twins, and other natural experiments, are the most reliable of all. According to this work, the overall private rate of return on investment in education in the United States is of the order of 10 percent, and this figure establishes a benchmark for what the social rate of return would be (a couple of percentage points lower, if not adjusted for externalities), or what the rate of return should be in a country with a lower per capita income than the United States (several percentage points higher, as based on the extrapolation of the noncomparable returns on education presented earlier).

### Extensions

More research on the social benefits of schooling is needed. For developing countries, there is a need for more evidence on the impact of education on earnings using a quasi-experimental design—for example, looking at the earnings of different groups, say those exposed to a special training program and those who are not; or children who received early interventions such as nutrition and those who did not. There are more opportunities in the early twenty-first century for this type of research. Moreover, this research needs to be used to create programs that promote investment and reform financing mechanisms.

**TABLE 1**

**The overall private rate of return on investment in education**

Type of country	Country	Rate of return (percent)
Low-income countries	Ghana	9.7
	India	10.6
	Indonesia	7.0
	Nicaragua	12.1
Middle-income countries	Bolivia	10.7
	China	12.2
	Poland	7.0
	Venezuela	9.4
High-income countries	Denmark	4.5
	Finland	8.2
	Netherlands	6.4
	United States	10.0

SOURCE: Based on Psacharopoulos, George, and Patrinos, Harry Anthony. 2002. *Returns on Investment in Education: A Further Update*. Washington, DC: World Bank.

There is a concern in the literature with social rates of return that include true social benefits, or externalities. Efforts to make such estimates are numerous, but the estimates vary widely. If one could include externalities, then social rates of return may well be higher than private rates. Richard Venniker's 2000 review found that empirical evidence is scarce and inconclusive, providing some support for human capital externalities (though this support is not very strong and has been disputed). These studies estimate externalities in the form of an individual's human capital enhancing the productivity of other factors of production through channels that are not internalized by the individual (similar to Lucas's 1998 theory). As Venniker states, the evidence is not unambiguous. In fact, some estimates give negative values, while others give very high estimates.

A few studies in Africa have focused on estimating external benefits of education in agriculture using the education of neighboring farmers. A one-year rise in the average primary schooling of neighboring farmers is associated with a 4.3 percent rise in output, compared to a 2.8 percent effect of one's own primary education in Uganda. Another study found that neighboring farmers' education raises productivity by 56 percent, while one's own education raises productivity by only 2 percent in Ethiopia; however, the 56 percent figure seems rather high. Overall, the results are inconclusive.

TABLE 2

## Rate of return on education by level, type, and country, in percent

Income level	Country	Year	Private			Social		
			Primary	Secondary	Higher	Primary	Secondary	Higher
High-income	Greece	1993		8.3	8.1		6.5	5.7
	New Zealand	1991		13.8	11.9		12.4	9.5
Middle-income	Bolivia	1990	20.0	6.0	19.0	13.0	6.0	13.0
	China	1993	18.0	13.4	15.1	14.4	12.9	11.3
	Mexico	1992	18.9	20.1	15.7	11.8	14.6	11.1
Low-income	Ethiopia	1996	24.7	24.2	26.6	14.9	14.4	11.9
	Nepal	1999	16.6	8.5	12.0	15.7	8.1	9.1

SOURCE: Based on Psacharopoulos, George, and Patrinos, Harry Anthony. 2002. *Returns on Investment in Education: A Further Update*. Washington, DC: World Bank.

Not only has the academic literature on returns on schooling increased, both in quantity and quality, but the policy implications have changed as well. Returns on education are no longer seen as prescriptive, but rather as indicators, suggesting areas of concentration. A good example is the impact of technology on wage differentials, which has led to a huge literature on changing wage structures.

At the same time, the importance of returns on education is seen in their adoption as a key indicator by the Organisation for Economic Co-operation and Development (OECD) in their annual *Education at a Glance* series and other policy documents. Increasingly, governments and other agencies are funding studies of returns on education, along with other research, to guide macro-policy decisions about the organization and financing of education reforms. This was the case in the United Kingdom higher education reforms as well as the Australian higher-education financing reforms.

Innovative use of rate-of-return studies is being used to both set overall policy guidelines and to evaluate specific programs. Examples include the Indonesia school building program, India's Operation Blackboard project, and Ethiopia's major sector investment program.

Above all, returns on investment in education are a useful indicator of the productivity of education, and they serve as an incentive for individuals to invest in their own human capital. As such, they can play an important role in the design of policies and the crafting of incentives that both promote investment and ensure that low-income families make an investment in education.

*See also:* DECISION-MAKING IN DEVELOPING NATIONS, APPLYING ECONOMIC ANALYSIS TO; INTERNATIONAL EDUCATION STATISTICS.

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## EDUCATIONAL ACCOUNTABILITY

Accountability has been an educational issue for as long as people have had to pay for and govern schools. The term covers a diverse array of means by which some broad entity requires some providers of education to give an account of their work and holds them responsible for their performance. These means include, among others:

- "performance by results" schemes used by the English school system in the nineteenth century, and later variations on the theme of merit pay;
- the American pattern of a school board held accountable through a local election, with the school board in turn holding a superintendent and district staff accountable;
- marketizing education through charter schools, vouchers, and the Dutch practice of using the same system for funding what Americans would call both public and private schools;
- the school inspections used in many European countries; and
- the recent rise of state testing of students in which test results are sometimes, but not always, linked to rewards or punishments for students or school staffs.

According to a 1999 article written by Jacob E. Adams and Michael W. Kirst, what these and other examples have in common is a relationship in which a "principal" holds an "agent" responsible for certain kinds of performance. The agent is expected to provide an "account" to the principal. This account describes the performance for which that agent is held responsible. It may be simply descriptive—such as the percent of children in a school passing a particular test—or it may also include an explanation for and/or a justification of the performance achieved. Often the principal sets standards for what constitutes adequate performance. The principal may reward the agent for performance that exceeds the standard or punish the agent for below standard work.

Many ideas about accountability come from the business world and are developed in the fields of economics and political science. Attention paid to accountability waxes and wanes. While it never disappears, it often receives more attention in periods of conservative ascendance. This article briefly describes six approaches to educational accountability: moral, professional, bureaucratic, political, market, and legal. These are described singly, although in practice they are usually combined. It then examines one legal strategy that has received a great deal of attention in the United States: the use of state standards and assessment to promote student, school, and district accountability. Finally, it comments on the interaction among different accountability approaches.

### **Moral and Professional Accountability**

The principal has the least control with moral accountability where the agent's actions depend largely on an internalized obligation, reinforced with a personal sense of remorse or potential social ostracism if the obligation is not met.

Professional accountability also provides the agent with a high degree of autonomy. This form operates on the assumption that the agent on the spot—typically a teacher—has special knowledge either of general principles or of the specific situation. Either way, it is difficult for the principal to specify actions or outcomes in great detail, so the agent has a great deal of discretion. On the other hand, before taking a position, the agent must demonstrate that he or she has the required competence, values, and knowledge by taking a prescribed course of study and/or passing specialized certification examinations. Thus, the primary point of control is more at entry to the profession or the specific position rather than over performance across time. Newer developments related to professional accountability include stronger state licensure requirements and the introduction of new assessments of initial competence. These, however, are usually introduced using the authority of the state, so professional and legal accountability intertwine. The National Board for Professional Teaching Standards, with its advanced certification for experienced teachers, tight connections to the field of teaching, and relatively loose ties to government, is closer to the form of professionally guided licensure found in other fields.

In addition, peer review can provide further oversight for the professional. The individual teacher

offers evidence of practice that is reviewed by colleagues to ensure that it meets professional standards. These standards usually refer to the use of appropriate procedures and materials, recognizing that the outcome is usually a joint product of both the teacher and the student. The difficulty with peer review is the tendency for professionals to protect their own. This is especially problematic in education where teaching is usually practiced in isolation. Nevertheless, studies of the formation of professional communities in schools have shown that, under special conditions, teachers can band together to enforce shared and challenging standards and help colleagues improve their practice.

### **Bureaucratic Accountability**

Bureaucratic accountability is based on the superior-subordinate relationship and depends upon the formal definition of the responsibilities of positions within an organization. An educational example might be the relationship between a superintendent and a principal. Where bureaucratic accountability dominates, the superior assigns tasks to subordinates. Rules and procedures for doing the work are specified in advance, and criteria for good performance are established. The supervisor then observes the process and evaluates both the process and the results.

Formal authority alone may be used to enforce compliance, but that authority can be reinforced with incentives that are linked to performance as judged by the superior. These incentives might include promotions, salary increases, and removal from a position. Such incentives work best when agents are held accountable for work processes that are relatively easy to specify in procedures—such as teaching certain content that can be specified in a written curriculum—and that are observable by supervisors. Incentives are more difficult to use when the work is unpredictable and uncertain. There have been several efforts to increase bureaucratic authority through various forms of merit pay and related approaches. While such experimentation continues, for the most part American education has stayed with salary systems that reward experience and formal education and provide few means for superiors to reward subordinates. A major reason for the difficulty in adopting such systems has been the inability to design ones that teachers believe fairly reflect their work rather than reflecting the capricious judgments on the part of higher administrators.

## Political Accountability

Political accountability in its purest form is between an elected official—such as a school board member—and the voters. As with professional accountability, the performances expected can be quite variable and hard to specify. They may include curriculum taught, the level of spending on education, or special treatment for a constituent's children. They may also change radically over time so that what the voters want at one point, they reject at another. Political accountability facilitates the lobbying of elected officials to ensure that they act on one's preferences, and it may include rewarding them by helping them get reelected. Political accountability extends to officers appointed (more or less directly) by elected representatives, especially superintendents appointed by elected school boards.

Historically, American schools have primarily used a mix of political, bureaucratic, and professional accountability. The elected school board set policy and appointed the superintendent, who held the highest position in the formal bureaucracy. Still, teachers had considerable autonomy to choose instructional methods, even if licensure standards were rarely challenging and peer accountability was the exception, not the rule.

This older system remains in place in the early twenty-first century, although it has undergone changes as some forms of site-based management have shifted the balance between bureaucratic and political accountability as well as accountability to local principals from more central ones. New approaches to teacher licensure have also increased professional accountability. The major developments, however, have been the extension of two forms of accountability that historically played a lesser role in education: market and legal accountability.

## Market Accountability

With market accountability, children or parents are customers who choose schools and can shop for the one that best reflects their preferences. The discipline of competition ensures that educators respond to parent and student preferences. Market accountability has become more popular as confidence in government has waned and the public questions the costs of public provision of services. It is especially prescribed where schools have become excessively bureaucratized, politically nonresponsive, and un-

willing or unable to improve their performance. American cities appear to be a ripe target for marketization because performance is so poor and improvement so slow.

The United States has always provided a small measure of choice through private and parochial schools operating alongside the public schools as well as through the housing market that allows some Americans to choose their schools. Recently, there has been a strong upsurge in interest in two new developments. One is charter schools, which are state funded but started by individuals or groups outside the public system and which then compete with public schools for students (and funding). The other is vouchers whereby tax receipts go to schools indirectly. Fixed amounts are given to parents who then use state funds (sometimes supplemented with their own money) to select the school their child will attend. In other countries, the public-private distinction is more muted or, as in New Zealand, parents are given total freedom of choice of which public school their children will attend.

Many claims have been made for various privatization approaches. It is said that they will be more efficient, increase variation in the kind of education delivered, raise test scores, increase equity, and, through competition, promote improvement of regular public schools. In most cases, it is difficult to tell what the effects of market accountability are. For instance, there have been few well-designed studies clarifying the effects of choice on achievement, at least in the American context, and those that have been conducted are much disputed. There is little evidence to suggest that competition is changing public schools in the United States, perhaps because competition is still so limited. On the other hand, there is evidence that choice programs are inequitable. The clientele of such programs tends to be more white and better off, and there tend to be fewer children with the more severe handicaps attending such schools. This is true even when schools of choice must use lotteries and other systems that preclude selecting more advantaged students and when whole countries have gone to choice systems.

## Legal Accountability

Legal accountability occurs when the principal formulates rules and monitors and enforces the agent's compliance with those rules. It differs from bureaucratic accountability where the rules are formulated within an organization in that the principal is usually

one level of government, such as the federal or state government, formulating rules for organizations at a lower level. Rules are usually formulated by legislatures but can be elaborated through executive regulation and formulated *de novo* (over again) by both the executive branch and the courts. Legal accountability often works in conjunction with professional, political, and bureaucratic accountability by establishing the broad framework within which they operate.

Legal accountability structures the inputs and resources teachers receive through funding formulas and teacher licensure regulations. The former have been highly contested and the source of a great deal of school finance litigation. The latter is a central pillar of professional accountability. Legal accountability also defines the structures and processes through which education is delivered by defining forms of governance—for instance, school boards and local control—attendance policies, desegregation orders, and building codes.

What has been new since the 1970s has been the use of legal accountability to specify, monitor, and improve the outcomes of education. Historically, states have specified outcomes indirectly by defining high school graduation requirements. Beginning in the 1970s and more often since the early 1980s, however, state governments took stronger steps. At first, these focused on testing students and increasing high school graduation requirements. More recently, there has been more emphasis on setting standards and assessing performance in light of those standards. By now, almost every American state and many foreign countries take these two linked steps. Because this approach has become so pervasive, it deserves special attention.

### Standards and Assessment

A system of state standards might include the following elements:

- Content standards that set out the knowledge and skills children are expected to develop,
- Tests or assessments aligned with those content standards,
- Student performance standards that define proficient performance in terms of those assessments, and
- Rewards provided to students or schools that meet or exceed the standards and punishments or remediation activities for those that do not.

A strong system would have all four elements. The theory of action behind such a system is that the formal sanctions linked to meeting standards motivate educators and students to learn what is tested. A weak system would certainly not have the last two elements and might not have the first—many states began testing without any guidance from standards. The theory then is that the publication of test scores will motivate improvement either by appealing to professional pride or indirectly to the public, which will use political accountability to promote improvement.

While the theory is clear enough at a general level, states face difficult design issues with both technical and political dimensions related to each element of the accountability system. In practice, the politics of state standards and assessment has led to rapid, dramatic changes in state tests and related policies. Each element listed above has been problematic in some instances. For instance, content standards have become a source of frequent disputes. In science, whether or not to teach evolution has been an issue from the Scopes trial to the 1999 deliberations of the Kansas school board. Even more seemingly neutral subjects have been cause for great debate. For instance, while the National Council of Teachers of Mathematics has urged states to develop standards that focus on exploring mathematical ideas, logical reasoning, and the ability to solve non-routine problems, many people still want state standards to require memorizing mathematical facts and procedures.

The design of tests has created other problems. In the 1970s states relied primarily on multiple-choice tests, which were familiar (thereby ensuring a certain legitimacy), inexpensive, and could obtain reliable scores relatively inexpensively. During the 1990s there was a push for portfolios and performance assessments where students constructed the responses. Such assessments were viewed as more valid measures of higher standards and better guidance, and were believed to encourage teachers to adopt more challenging instructional approaches. It now appears that while performance assessments have many advantages for improving instruction, they often lack the economy and reliability required for public accountability.

Other issues relate to performance standards, including whether and how to take into account the well-known correlation between family background and performance when measuring school perfor-

mance, whether to develop standards for absolute performance or improvement and—if the latter—how to measure improvement, and whether to use norm-referenced (comparison to some larger group) or criterion-referenced (comparison to an absolute level of performance) standards of performance. Developing criterion-referenced standards has been the subject of much research, but a great deal of art is still involved.

Another major issue concerns the usefulness of rewards and punishments. The theory of action behind accountability systems is that the challenge for the principal is to motivate the agent to perform in ways the principal prefers. A criticism of this theory as it applies to state assessment systems is that strong sanctions, also referred to as high stakes, will lead to “teaching to the test.” This term refers to a wide range of behaviors from adjusting the curriculum to ensure that topics tested are taught before the test is given, to cheating. The term implies that something is done to raise test scores without necessarily increasing students’ knowledge of the subject tested. Moreover, critics argue that more challenging forms of instruction are less likely to be adopted in high-stakes settings.

An alternative theory for improving teaching and learning in schools is that the major problem is a lack of capacity—that is, the knowledge, skills, funding, and other resources needed to perform in effective ways. Numerous capacities are needed to raise test scores by improving student knowledge. These include understanding the content taught and effective ways to teach it, the ability to analyze tests and know what performances are really called for, and the collective capacity of members of the target school in question to work together to improve itself. Even a weak accountability system can make teachers aware of the need to change practice and provide general guidance about the kinds of changes preferred. Without appropriate internal capacity or capacity-building efforts, however, movement toward more challenging instruction is not likely.

A number of studies have recently pointed to the need to align internal and external accountability. These studies suggest that schools with reasonably strong cultures develop their own internal accountability often based on peer professional accountability. Such cultures can provide strong support for improvement because they combine motivational and capacity-building efforts. Where internal and external accountability are mutually re-

inforcing, it appears that change is powerfully supported. Where the two are not aligned, internal accountability is likely to overwhelm external accountability or external accountability may undermine local capacity.

### Coordinating Accountability Mechanisms

For all of the difficulty in designing and implementing individual accountability mechanisms, policy analysts recognize that educators face a variety of interacting mechanisms. The American educational system is highly fragmented, with authority dispersed between political and professional organizations and across local, state, and federal levels of government. Consensus on what constitutes effective education and who should be educated are difficult to achieve.

Moreover, educators are accountable to multiple constituencies. The research on internal accountability illustrates how professional accountability may reinforce or work against state assessment systems. Other work suggests that the public may not understand or support state standards and assessment. When they do not, they may protest at the state level, or local school boards may not give top priority to achieving high standards, thus undermining efforts to achieve them.

In sum, educators and policy analysts will always be concerned about educational accountability. It is hard to imagine an educational system where educators are not accountable to multiple constituencies through a variety of mechanisms. This means that educators will be accountable to different people for different things. It is becoming more and more important to design accountability mechanisms that encourage schools to provide a more effective education for all children and to orchestrate these mechanisms so that they send as consistent a message to educators as possible.

*See also:* CONSTITUTIONAL REQUIREMENTS GOVERNING AMERICAN EDUCATION; EDUCATIONAL POLICY; PRINCIPAL, SCHOOL; SCHOOL BOARDS; SUPERINTENDENT OF SCHOOLS.

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## EDUCATIONAL BROADCASTING, FEDERAL SUPPORT

The U.S. federal government has always had a strong interest in broadcasting, but its relationship with the broadcasting industry was not formalized until the enactment of the Communications Act of 1934. The primary objective of this legislation was to clearly and officially assert federal, rather than private, control over all channels of interstate and international communications by wire and radio in the United States. The act created the Federal Communications Commission (FCC), and within a broad range of regulatory power, this body was authorized to grant licenses to eligible persons and organizations for limited periods of time to operate radio (and by subsequent interpretation, television) stations "in the public interest, convenience, and necessity."

Radio, even from its earliest days, incorporated educational and instructional materials in its programming. Nevertheless, both radio and television broadcasting was mainly a commercial endeavor through the 1940s. The first significant action to spur educational television broadcasting on a national level came in 1952 when the FCC, revising its table of frequency allocations, set aside 242 channels for the exclusive use of noncommercial educational television (ETV). FCC actions in 1961 and 1966 increased this number to 329.

The University of Houston became the first institution to establish a noncommercial broadcasting station when it began operation of station KUHT in 1953. Encouraged by grants of \$100,000 from the Ford Foundation, other stations came into being in such cities as Miami, Pittsburgh, Chicago, Denver, and Madison, Wisconsin. Nevertheless, the cost of building, equipping, and operating a television station remained prohibitive for many institutions, and by 1962 there were only eighty ETV stations on the air or under construction throughout the United States.

It became obvious that if the channels reserved by the FCC for noncommercial use were to be used

as intended, federal funding would be required, and so Congress passed the Educational Television Facilities Act (Pub. L. 87-447) in 1962, which included \$32 million in facility construction grants. By June 1967 the number of ETV stations on the air had more than doubled, to 175, with ten more under construction and grants to activate another thirty stations in process. When the ETV Facilities Act expired in 1967, Congress passed the Public Broadcasting Act, which broadened considerably the federal role in noncommercial broadcasting—most notably through the formation of the Corporation for Public Broadcasting (CPB).

CPB was set up as a private, nongovernmental, not-for-profit corporation to provide for the improved quality of “public” broadcasting (previously known as ETV) and for a live network interconnection of educational broadcasting stations. CPB began by establishing entities that would build on the common needs and interests of public broadcasting stations around the country, and create some of the economies of a broadcast network. The Public Broadcast Service (PBS) was incorporated in November 1969 to provide an interconnection, or a means of sharing programs, among public television stations, and a source of production funding. PBS was prohibited, however, from producing programs itself, or from owning and operating any stations. National Public Radio (NPR) plays a similar role in terms of interconnection for radio stations but, unlike PBS, it was chartered as a producing entity as well.

The activities of CPB, PBS, and NPR overlap in terms of their common mission to support public broadcasting, but their operations remain appropriately distinct. CPB receives a federal appropriation for public broadcasting and distributes it to TV and radio stations. The stations, in turn, can choose to become members of PBS or NPR, which in return fund (in the case of PBS) or produce (in the case of NPR) national programming, and both PBS and NPR provide the technical infrastructure necessary to distribute the programming nationally.

### Financial Arrangements

Even with such generous support from taxpayers, the public broadcasting system (a \$2 billion per year industry by 1997) receives just 17 percent of its revenue from the federal government. In addition to an annual appropriation to CPB, public broadcasting stations may receive federal funding through the Na-

tional Telecommunications and Information Administration (NTIA) at the Department of Commerce, or through programming grants from various federal agencies such as the Department of Education, the National Science Foundation, the National Endowment for the Arts, and the National Endowment for the Humanities.

NTIA money, funded through the Public Telecommunications Facilities Program (PTFP) has become particularly crucial as public broadcasting moves into the digital age. Massive infrastructure costs are being incurred for the transition to digital broadcasting that will ultimately increase channel capacity by a factor of five or six, and allow for a wide range of new interactive services for the benefit of the public.

Programming dollars from the Department of Education (and its predecessors) have supported children’s programming from *Sesame Street* to *Arthur*. The National Endowment for the Humanities has supported extraordinary programming like Ken Burns’s documentary *The Civil War* and continuing series such as the *American Experience*. Jazz, classical, and traditional music on the radio, and performance programs on PBS are supported through the National Endowment for the Arts.

### Current Scope of Services and Analysis of Impact

The decentralized and inherently local nature of public broadcasting in the United States is intrinsic to its independence and unique brand of public service. At the same time, this structure limits a range of “efficiencies” that might be practiced in a commercial environment. Consequently, debates flare up on Capitol Hill regarding the role of federal funding in public broadcasting. But while there is little in the way of quantitative measures of public broadcasting’s impact, the ongoing and overwhelming public support that is demonstrated when funding cuts are considered reflects a significant positive impression and impact on the American people.

### The Challenges and Opportunities Ahead

The explosive growth of nonbroadcast (i.e., cable and direct satellite) television has provided a new level of competition to public television. The Discovery Channel, A&E, the History Channel, and Nickelodeon, among others, have built entire channels around particular genres that were previously unique to public broadcasting. Direct satellite radio

began broadcasting in 2001, and may prove to be a similar challenge for public radio.

The Internet has also provided competition for public broadcasting, at least in terms of claiming another slice of time from each individual's media viewing. At the same time, however, the Internet has provided great opportunities to extend the impact of public broadcasting.

Both nonbroadcast television and the Internet have pushed public broadcasting to do what it has always done best: innovate. Public broadcasting must clearly demonstrate that it is a vital public service, and at the same time it must achieve a fine balance between sustainable financial practices while retaining an unimpeded, commercial-free environment to the satisfaction of its viewers and listeners. In an era when media outlets have essentially been consolidated into a handful of international conglomerates, the need for unbiased, public-interest broadcasting is as powerful as ever.

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PETER M. NEAL

## EDUCATIONAL CHANGE

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Education is generally thought to promote social, economic, and cultural transformation during times of fundamental national and global changes. Indeed, educational change has become a common theme in many education systems and in plans for the development of schools. According to Seymour Sarason, the history of educational reform is replete with fail-

ure and disappointment in respect to achieving intended goals and implementing new ideas. Since the 1960s, however, thinking about educational change has undergone several phases of development. In the early twenty-first century much more is known about change strategies that typically lead to successful educational reforms.

#### Phases of Educational Change

The first phase of educational changes was in the 1960s when educational reforms in most Western countries were based on externally mandated large-scale changes that focused on renewing curricula and instruction. The second phase, in the 1970s, was a period of increasing dissatisfaction of the public and government officials with public education and the performance of schools, decreasing financing of change initiatives, and shrinking attention to fundamental reforms. Consequently, in the 1980s the third phase shifted toward granting decision-making power to, and emphasizing the accountability of, local school systems and schools. Educational change gradually became an issue to be managed equally by school authorities and by the local community, including school principals and teachers. The fourth phase started in the 1990s when it became evident that accountability and self-management, in and of themselves, were insufficient to make successful changes in education.

Furthermore, educational change began to place more emphasis on organizational learning, systemic reforms, and large-scale change initiatives rather than restructuring isolated fields of education. In brief, educators' understanding of educational change has developed from linear approaches to nonlinear systems approaches that emphasize the complexity of reform processes, according to Shlomo Sharan and his colleagues. Similarly, the focus of change has shifted from restructuring single components of educational systems towards transforming the organizational cultures that prevail in given schools or school systems, as well as towards transforming large sections of a given school or system rather than distinct components of schooling.

#### Emerging Theories of Educational Change

In the early twenty-first century it is generally acknowledged that significant educational change cannot be achieved by a linear "recipe-like" process. The consensus among theorists and practitioners is growing that traditional models of thinking about

educational change no longer provide sufficient conceptual tools for responding to multidimensional needs and politically contested environments. The major challenge of educational change is how to understand and cope with rapid change in an unpredictably turbulent world. Emerging new theories of educational change are beginning to employ concepts and ideas derived from the sciences of chaos and complexity. The main characteristics of these new theories are nonlinearity of processes, thinking about education as an open system, the interdependency of the various components of the system, and the influence of context on the change process itself.

Although educational change occurs everywhere, it is still not discussed systematically or analyzed by researchers and educators worldwide. Particularly in countries undergoing political and economic transition, educational change remains a political agenda rather than a well-designed engine of social reform. The heart of successful educational change is learning, both at the individual and at the community levels.

*See also:* EDUCATION REFORM; SCHOOL-BASED DECISION-MAKING; SCHOOL REFORM.

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## EDUCATIONAL EXPENDITURES, PROJECTING

Every responsible educational organization estimates the amount of expenditures necessary to provide services desired by its students, staff, and faculty. Utilizing historical financial data, an analyst can use a variety of statistical methods to project fairly accurately what expenditures will be needed to provide the same level of educational services in future years. Though there are a number of sophisticated and reliable statistical methods used to project expenditures, three methods are prevalent: (1) average annual increases in expenditures; (2) average annual percentage increases in inflation (i.e., the Consumer Price Index); and (3) regression analysis. These methods have been validated and refined by use in a wide variety of economic, political, and social contexts. Moreover, the accuracy of these expenditure projection methods has improved with advances in data definitions, data reporting, generally accepted accounting principles, and data collection methods.

### Projections Using Average Annual Increases in Expenditures

Although a variety of methods can be used to project educational expenditures, one of the simplest methods is to survey states and educational institutions (e.g., state departments of education or local district offices) to find out some details about their historical spending patterns for educational dollars (see Table 1). Then, based on this contextual information, one would use an average annual increase in educational expenditures—taken over some period of time—to project an incremental increase to the most recent year's actual data.

Table 2 provides sample state-level projections for educational expenditures over multiple time periods using the average annual increases in expenditures to determine projected expenditures for the 2003 academic year. The ten-year projection using the average annual increase methodology is \$5,678; the seven-year projection using the average annual increase is \$5,714, the five-year projection using the average annual increase is \$5,797; and the three-year projection using the average annual increase is \$5,786. Notice that the ten-year and seven-year expenditure projections are substantially lower than the remaining projections due to the inclusion of an unusually low increase in 1997.

TABLE 1

Sample state-level data for educational expenditures and consumer price indices with annual increases				
Year	Expenditures	Annual increase in expenditures	CPI	Annual percent increase in CPI
1992	\$2,409	—	136.2	—
1993	\$2,563	\$154	140.3	3.0
1994	\$2,784	\$221	144.5	3.0
1995	\$3,047	\$263	148.2	2.6
1996	\$3,250	\$203	152.4	2.8
1997	\$3,300	\$50	156.9	3.0
1998	\$3,706	\$406	160.5	2.3
1999	\$4,167	\$461	163.0	1.6
2000	\$4,526	\$359	166.5	2.2
2001	\$4,924	\$398	172.2	3.4
2002	\$5,381	\$457	177.1	2.8

SOURCE: Courtesy of author.

Usually, the longer the time period used when computing an average annual increase, the less likely the probability that an atypical yearly increase (i.e., an annual increase, or decrease, that does not fall within the trend over a period of time) will influence negatively the estimated level of expenditure. In the case of an atypical increase (or decrease) in expenditures, due caution should be noted when examining the results.

### Projections Using Average Annual Percentage Increases in Inflation

Another method used to project educational expenditures is to use an average annual percentage increase in inflation—taken over some period of time—to project an incremental increase to the most recent year's actual data. Again, the longer the time period used when computing an average annual increase, the less likely the probability that an atypical yearly increase will negatively influence the estimated level of expenditure. Table 2 also provides sample state-level projections for educational expenditures over multiple time periods using the average annual percentage increases in expenditures to estimate a projected expenditure for the 2003 academic year. The ten-year projection using the average annual percentage increase in inflation methodology is \$5,525; the seven-year projection using the average annual increase is \$5,520, the five-year projection using the average annual increase is \$5,513; and the three-year projection using the average annual increase is \$5,679. Notice that the five-year expenditure projection is substantially lower than the

TABLE 2

Sample state-level projections of 2003 educational expenditures using average increases in expenditures, average increases in CPI, and OLS regression analysis			
Years of data	Average increases in expenditures	Average increases in CPI	OLS regression analysis
Ten-year projection	\$5,678	\$5,525	\$5,541
Seven-year projection	\$5,714	\$5,520	\$5,663
Five-year projection	\$5,797	\$5,513	\$5,656
Three-year projection	\$5,786	\$5,679	\$5,580

SOURCE: Courtesy of author.

remaining projections due to the inclusion of an unusually low increase in 1999.

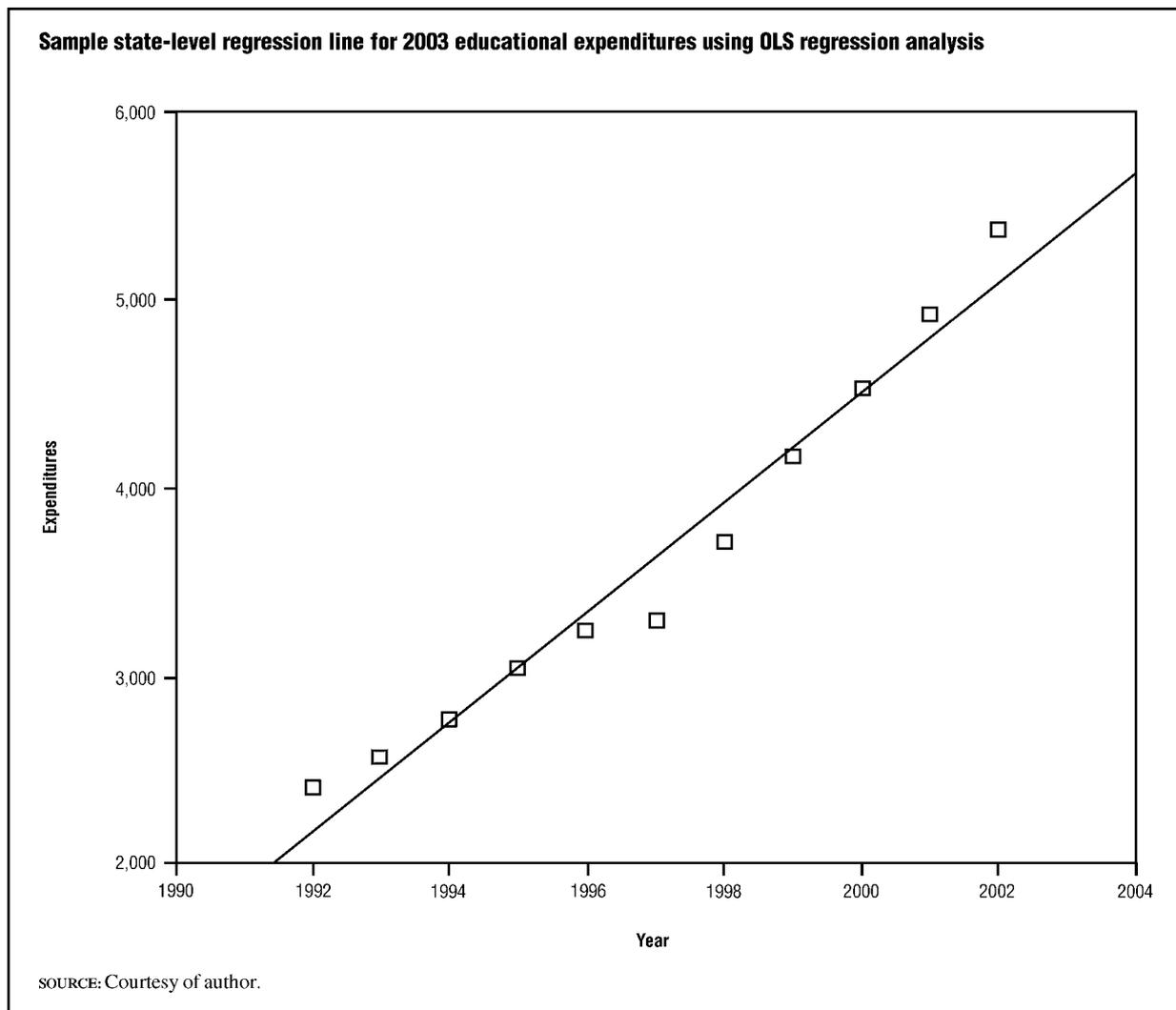
### Projections Using Regression Analysis

This statistical technique for predicting educational expenditures—specifically called Ordinary Least Squares (OLS) Regression Analysis—consists of constructing a line that “best fits the data” over a certain period of time (see Figure 1). The line of best fit (also known as the *regression line*) is the one line—and the only line—that falls as close as possible to every coordinate simultaneously and can be used to make fairly accurate expenditure projections (Because this discussion is limited to linear regression, and does not include non-linear regressions, the mathematical functions discussed will be equations for straight lines). Now the process of expenditure projections using regression analysis involves two steps: (1) determining the mathematical equation for the regression line; and (2) using the mathematical equation to predict scores.

The mathematical equation for the straight line in Figure 1 expresses a direct relationship between time (along the horizontal axis) and expenditures (along the vertical axis). The general form of the equation for a line is  $Y = bX + a$ , where  $Y$  is the predicted expenditure,  $b$  is the slope of the line,  $a$  is  $Y$ -intercept, and  $X$  is the year to be predicted. Theoretically, every line extends infinitely in both directions, but for the purposes of this discussion, the line extends along the horizontal axis from the year 1992 to 2003.

For each set of expenditure data analyzed, a specific regression line is fitted onto the graphed data using the mathematical methods of ordinary least squares. The formulas for the slope—referred to as

FIGURE 1



the *regression coefficient*—and the Y-intercept—referred to as the *regression constant*—are derived using calculus and can be found in any statistics book. Once the specific regression equation has been determined, the prediction of educational expenditures is straightforward: Substitute the values of X, a, and b into the equation and solve for Y. For example, the ten-year projection using OLS regression analysis is \$5,541; the seven-year projection using regression analysis is \$5,663; the five-year projection using regression analysis is \$5,656; and the three-year projection using regression analysis is \$5,580. Notice that the seven-year and five-year expenditure projections are substantially lower than the remaining projections due to the inclusion of an unusually high increase as a percentage of expenditure in 1998 and 1999.

### Summary

Despite the improvements in the precision of expenditure projections methods, it is important to remember that the usefulness of any economic or financial estimate rests upon the strength and validity of the assumptions used to define the context of the analysis. For example, local school districts are expected to provide a broad-based curriculum, fully-equipped classrooms, quality teaching materials, new technologies, qualified teachers, and a wide range of programs, services, and products. Simply investing more money into a school district's total available revenue is not enough to improve educational services or student attainment. However, targeting new expenditures to effective programs that improve the quality of the education system for stu-

dents, staff, and faculty can improve educational services. And, accurately projecting distributions of revenues and expenditures is key for these types of school improvements.

Two major institutions provide primary resources in the determination of educational expenditures: the National Center for Education Statistics (NCES) and the National Education Association (NEA). The National Center for Educational Statistics is the primary federal institution for collecting, analyzing, and reporting educational data related to education in the United States. Annually, NCES sends surveys to state educational agencies and uses this data to publish reports and develop estimates for publications such as *The Condition of Education*, *The Digest of Education Statistics*, and *Early Estimates of Public Elementary and Secondary Education Statistics*. The National Education Association presents its expenditure projections in a combined annual report called *Rankings and Estimates*. The *Rankings* portion of the report presents expenditure data useful in determining how states differ from one another on selected demographic, economic, political, and social arenas. The *Estimates* portion of the report provides projections of information about educational expenditures in addition to data on student enrollment, school employment, personnel compensation, and other educational finances. The data elements presented by both of these organizations permit general assessments of trends and should be used with the understanding that specific contextual elements influence their interpretations.

*See also:* PUBLIC SCHOOL BUDGETING, ACCOUNTING, AND AUDITING.

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## EDUCATIONAL INTEREST GROUPS

Public schools in the United States operate in a pluralist democracy that enables competing interests to gain access to the decision-making process. Quite frequently, conflicts over educational issues occur. Political leaders and educational professionals formulate policies that attempt to mediate competing views and contending interests. There are, however, three understandings about the interaction between interest groups and the public educational enterprise. One school of thought finds that the school system benefits from interest group activities as it incorporates diverse demands. Another perspective views interest groups as autonomous centers that can undermine the schools' legitimacy. A third perspective observes a reconfiguration of the goals and functions of interest groups in an era in the early twenty-first century of "postmaterialism."

#### Diversity

Pluralistic representation, according to many researchers, can strengthen public schools. Historically, school responsiveness to its diverse clients is seen in the development of an increasingly professionalized system. In his study of three central-city districts from 1870 to 1940, Paul Peterson observed in 1985 the "politics of institutionalization," where clients who had previously been excluded from school services gradually gained admission to the system. As schools expanded their client base, Peterson saw no single interest as dominant over all school issues. Al-

though the business elites tended to prevail in fiscal issues, working-class organizations exercised substantial influence over compulsory education. Because diverse actors and interests contributed to an expanding school system, the real winners were the school system and its broadening clientele. The urban public school system practiced the politics of nonexclusion, gradually extending services from the middle class to the low-income populations, and from groups with roots in the United States to various immigrant and racial groups.

Conceptually, Peterson's analysis is consistent with the tradition of pluralist scholarship in political science as exemplified by Robert Dahl's classic 1961 work *Who Governs?*. From a policy point of view, interest group competition has encouraged the school bureaucracy to adopt objective, universal criteria in distributing resources to neighborhood schools.

School responsiveness to its diverse clients also improves equal educational opportunity for the disadvantaged since the 1960s. In 1986 Gary Orfield and Susan Eaton discussed "group rights" politics in securing governmental resources for low-income inner-city African Americans in the Atlanta metropolitan area. Further, using data from the U.S. Office of Civil Rights in districts with at least 15,000 students and 1 percent African-American enrollment, Kenneth Meier and colleagues examined in 1989 the practice of second-generation discrimination in the classroom following the implementation of a school desegregation plan. They found that African-American representation on the school board has contributed to the recruitment of African-American administrators, who in turn hired more African-American teachers. African-American teachers, according to the study, are crucial in reducing the assignment of African-American students to classes for the educable mentally retarded. African-American representation in the instructional staff also reduces the number of disciplinary actions against African-American students and increases the latter's participation in classes for the gifted. Luis Fraga and colleagues found a similar situation in 1986 with Hispanic students in thirty-five large urban districts. Thus, "group rights" politics is critical to ensure allocative practices that benefit the disadvantaged.

### **Autonomous Power Centers**

Although interest group politics may facilitate collective concerns, organized interests can become autonomous power centers that undermine the

organizational capacity of the school system. A major interest group is the teacher union. William Grimshaw's 1979 study of Chicago's teacher union suggested that the union had gone through two phases in its relationship with the city and school administration. During the formative years, the union largely cooperated with the administration (and the mayor) in return for a legitimate role in the policy-making process. In the second phase, which Grimshaw characterized as "union rule," the union became independent of both the local political machine and the reform fractions. Instead, it looked to the national union leadership for guidance and engaged in tough bargaining with the administration over better compensation and working conditions. Consequently, Grimshaw argued that policymakers "no longer are able to set policy unless the policy is consistent with the union's objectives" (p. 150).

Organizational growth, in Bruce Cooper's view, has led to problems of "mature institutions," where union leaders have to mediate trade-offs between quality and supply. Seeing a new trend in school competition, Susan Moore Johnson observed the need for replacing "collective bargaining" with "reform bargaining."

Another organized interest is the increasingly well-organized taxpaying public, a substantial portion of which no longer has children in the public schools. The aging population has placed public education in competition with transportation, public safety, community development, and health care over budgetary allocation. Discontent with property taxes became widespread during the time of the much-publicized campaign for Proposition 13 in California. According to Jack Citrin, between 1978 and 1983, of the sixty-seven tax or spending limitation measures on state ballots across the nation, thirty-nine were approved. During the 1990s, business-organized lobbying groups have been successful in pushing for higher academic standards and stronger accountability measures. In districts where public schools fail repeatedly, political leaders tend to seek for alternative ways of delivering schooling services, including privatization or creating charter schools. At the federal level, the No Child Left Behind Act of 2001 that was passed in January 2002 allowed for public school choice as a corrective action to schools that fail repeatedly.

### Postmaterialism

A third perspective sees a weakening of the hierarchical structures of organizing interests. In the post-materialist era, Ronald Inglehart, Terry Clark, Jeffrey Berry, and other social scientists argue that political parties no longer play a key role in mobilizing voter turnout. The union is losing its direct influence over its membership. Ideologically based groups, both left and right, seem to have lost much of their reputation in the nation's capital. Instead, organized interests are realigned in several ways. They have become more focused on "quality of life" issues, less organized along rigid class cleavages, and more pragmatic about governmental and market solutions to educational and social problems. Increasingly, racial and class categories are less predictive of how citizens view and decide on educational policy issues. In short, this early-twenty-first-century re-configuration of interest group politics is likely to shape the research community's understanding of group-based influence in public education.

*See also:* EDUCATIONAL ACCOUNTABILITY; SCHOOL-BASED DECISION-MAKING; TEACHER UNIONS.

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KENNETH K. WONG

## EDUCATIONAL LEADERSHIP

Schools are social institutions that play an important role in what is arguably the most complex responsibility of society: the healthy development of children. The people who lead schools must have a deep understanding of the many dimensions of this task, yet the challenges fall within the general category of crafting and carrying out agreements among many stakeholders. Some of these agreements have long timelines and reach into the heart of the enterprise. The bulk of the agreements, however, are short, temporary arrangements that get the various stakeholders—students, teachers, parents, policy makers—from one step in the process to the next. Effective schools are places in which these agreements are fashioned and honored successfully. Effective educational leaders are people who make that happen.

In the United States, the responsibility for public schools falls within the jurisdiction of the states, but from an operational perspective schools are the business of local government. The authority of principals and superintendents derives from that basic structure, and educational leadership is traditionally associated with the people in those positions. Accordingly, principals and superintendents are the parties most responsible for crafting the essential agreements upon which schools either succeed or fail.

The role of these leaders has evolved as society has changed and as schools have been asked to take

on responsibilities that far exceed the basic literacy and numeracy skills that were expected in the early days of American public schools. As communities grew and schools increased in size beyond the point where a single teacher could meet the needs of all pupils, and as the amount of schooling required of all children increased, the position of principal—a term that literally implies the first teacher—or headmaster was created to provide instructional leadership to ensure coordination among the teachers. When the continuing growth of communities forced them to create multiple schools, the superintendent position was created to coordinate the system within those schools operated.

Beginning in the early 1960s with the advent of comprehensive high schools and consolidated school districts, and eventually in response to increased demands placed upon schools by the states and the federal government, there was dramatic growth in the number of other administrative positions in the district's central office. These school leaders are more specialized, working, for example, in a single area such as finance or curriculum.

School administration also became differentiated through positions associated with content-area specialists and, in some cases, basic assistance for the principal. During the last decades of the twentieth century, there was steady growth in the number of educators working in districts who did not participate directly in the instruction of students. Pressures throughout the schools and districts, including the supervision of these new administrators, and the steady flow of multiple mandates from state and federal government, began to erode the opportunity principals and superintendents once had to provide real leadership.

In the late 1990s, another notion about educational leadership arose. Recognizing the value of distributing leadership responsibility to those people who were closest to student learning, some educators began to talk about the need for teacher leadership. The concept was unusual in a system that associates leaders with people who have specific titles. Also, the idea that teachers might be expected to provide leadership for their peers, their schools, and their profession while remaining in the primary role as teacher was a radical departure from the norm.

## A Challenging Environment

The basic context in which schools operate makes leadership difficult. Everyone, it seems, has a vested interest in schools. Each of the nation's chief executives has regularly tried to identify himself as the "Education President." Governors make similar assertions, and states have a chief school officer, either appointed or elected, who is surrounded by an administrative staff to oversee the proper operation of schools. Money, and who provides that money, gives another road map to lines of authority, and for all but the nation's poorest schools, the combined contributions of state and federal dollars do not equal the dollars provided by local government and local taxpayers. That balance leads to a large amount of authority vested in school boards, typically elected officials, who run for these offices for a variety of reasons, or appointed people who have their own allegiances.

Thrown into this mix are teacher unions, connected with powerful national associations, and other unions serving the needs of support staff. Anyone trying to lead a public school cannot take lightly the contract a district has with a bus company, for example, or with the maintenance staff who have control of very basic parts of the operation. This list of interested parties is far from complete, and the challenges of leadership have outpaced the profession's capacity to recruit, prepare, and sustain those who take on that responsibility.

## Recruiting, Preparing, and Sustaining School Leaders

As public schools became larger and more complex, the professional path to becoming a school leader became more prescribed. As with other professions, the responsibility for preparing school leaders came to rest within the universities and particularly in graduate departments of education. In keeping with the traditional patterns of the academic world, preparation was defined by certain courses of study and the successful accumulation of credits. School administration became an actual course and eventually was broken up into a series of courses that included everything from finance to labor relations to organizational behavior. While most graduate degree programs include a practicum or internship, this part of required study has been minimal.

The states have been involved in the formalizing and conceptualizing of what skills and credentials a

person must have in order to become a principal or superintendent. States prescribe these skills and credentials within a certification process. Because supply and demand for principals and superintendents varies over time and sometimes puts districts at risk of losing good candidates or not having enough candidates to fill positions, many states have alternative paths to certification and interim permissions that can be granted in lieu of certain requirements or until those requirements can be completed.

This standard approach to preparing principals and superintendents has been questioned during the school reform era that began in the early 1980s. One response, directly related to an increasing concern over the quantity and quality of the candidate pool for principals, was the rise in what are called *aspiring principal programs*. These programs require educators who hope to become principals to spend large amounts of time with successful principals on the job. The belief is that while formal courses can help prepare people to become principals, the more important skills are acquired through apprenticeship.

The principalship has changed significantly since the 1960s. With the growth of strong central offices and increasing unionization of teachers, principals began to be removed from their role as first teacher or headmaster. They lost the authority to hire and fire their own teachers and were no longer in a position to provide leadership for curriculum and instruction. In many cases, principals are not even the highest paid educators within a school building, while they regularly work a longer school year than teachers do.

Principals have a difficult time finding the authority to secure agreements among the key stakeholders, and they seldom have the resources necessary to support such work. These conditions are not conducive to encouraging educators who have passion and vision about teaching and learning to consider moving from the classroom to the principal's office.

One positive development for principals began in 1981 when the first Principals Center was created at the Harvard Graduate School of Education. This center was founded to provide a professional community for principals, who often are the most isolated educators in their schools, and to encourage the kind of lifelong learning that would improve the skills of principals as leaders and managers of their schools. The concept spread rapidly, and within ten

years, more than one hundred similar centers had been founded throughout the United States and in other countries. These centers are connected through their own international association.

Superintendents have had similar difficulties. Their domain is connected with local politics, the elected or appointed school boards and mayors and city councils that often play a significant role in approving budgets. These challenges have been exacerbated in large urban districts that saw their tax base decline in the last four decades of the twentieth century, their middle class families depart, and a growing number of special challenges related to rapidly changing populations, high levels of poverty, and a physical infrastructure that was crumbling. Many urban districts also face a disproportionate increase in the number of school-age children and a decreasing amount of money to support them. In many cases, these financial pressures lead to greater state subsidies for these districts and the accompanying demands, all of which only add to the political climate surrounding the work of superintendents.

One measurable result of these increased pressures has been the length of time the average superintendent remains in that position, which by the late 1990s had dropped to under three years. Given the difficulties of leading these complex organizations, such a rapid turnover among superintendents makes it nearly impossible for any meaningful change to take place.

Public school superintendents have responsibility in four basic areas: managing a complex enterprise, managing multilayered politics, building community and public support for schools, and leading a whole systems improvement process. Most superintendents accept inherited agreements made by their predecessors in the first three areas. They come into their jobs with all of those areas in place and little opportunity to refashion agreements. Their vision for the fourth area cannot easily penetrate the existing structure of the district, much of which is already dictated by a variety of contracts with teachers, administrators, and different support staff. The budget, too, is often already established, and given the large percentage of school budgets that is earmarked for salaries, benefits, and maintenance, there are very few financial resources superintendents can deploy to help support their initiatives. As is the case with principal preparation programs, university-based programs leading to advanced degrees and certification have had a difficult time keeping up with the

rapid changes in the field and the demands placed on these district leaders.

### **Leadership in the Twenty-First Century**

State standards enacted in the 1990s defined a new goal of helping all students graduate ready for further learning, work and citizenship. States, frustrated by the slow pace of progress in too many schools, began to attach consequences to school failure. Although few could argue with the validity of this new proposition, it challenged the beliefs, assumptions, structures, and practice of the American educational system, and required school leaders to craft new agreements. It also multiplied the complexity and difficulty of educational leadership. By 2000, state assessments regularly were diagnosing the health of schools and were testing the success and strength of the agreements that school leaders either crafted or inherited.

Low-performing schools suffer most from a lack of leadership. The agreements made or tolerated in these schools leave children ill-prepared for the world they will inherit and do a particular disservice to disadvantaged youth. The identification of low-performing schools often results in a variety of district and state interventions. To be effective, these interventions take the shape of new agreements designed to create a clear focus, improve curriculum and assessment of student work, and strengthen staff evaluation and professional development.

While those strategies often find fertile ground in elementary schools, they seldom are enough to improve secondary schools, especially those that are large and comprehensive. In these schools the agreements that exist among stakeholders are simply not conducive to the national goal of leaving no child behind. The first task that the principals of these schools must confront, in concert with their superintendent, is leadership focused on redesigning their large comprehensive high schools into small learning communities.

### **System Leaders as Agreement Crafters**

Least well understood, and central to all of these roles, is the question: how should the system work? With growing diversity, emerging opportunities and challenges of information technology, evolving knowledge about high performance organizations, and the new proposition that all students can and should achieve at high levels, it is often not clear what success at scale looks like. The new proposition

of the standards movement—that all students should leave high school prepared for college, work, and citizenship—is easy to accept in theory but much more difficult to actualize. As school districts grapple with standards, high-stakes tests, growing frustration among taxpayers and politicians, and new alternatives to the public schools, the most important agreement that every superintendent and principal must craft is around the basic way that the district and the schools should work.

Given the multiple layers of federal, state, and local bureaucracy in education, and decades of piling layers of programs and policies onto schools, the first challenge of system leaders is to create coherence—making everything work together for students and teachers. Leaders can either attempt to create coherence, or alignment, throughout the system or create a system where schools achieve their own unique form of coherence.

Whatever the answer to the question about how a school or district should work, the system leader must be able to describe the organizational strategy in simple terms and support it with consistent organizational behavior. In order for that vision to take root, the leader must bring many parties to the agreement. Radically changing the way a school system works takes a reshaping of virtually all of the agreements between the district and schools and many of the basic agreements inside schools. Making any answer work requires a sustained effort, perhaps over a period of at least a decade.

The role of agreement crafter implies the need for new experiences and skills for both principals and superintendents. Superintendents and principals need opportunities to study a variety of approaches and the context in which they are being deployed. They need to adopt, modify, or reject the agreements that they inherit based on a deep understanding of the local context and exposure to strategic options.

Agreement crafters must be politically savvy, possess sophisticated consulting skills, and be adept change managers. Principals and superintendents need to be aware of community power structure, key influencers, and political decision makers. The demands of diversity, technology, and standards, particularly at the secondary level, require a set of consulting skills to design and facilitate a series of linked conversations that lead to adult learning and shared vision. As change managers, principals and

superintendents must sequence complex tasks in a way that is manageable for the staff to incorporate.

*See also:* PRINCIPAL, SCHOOL; SUPERINTENDENT OF SCHOOLS.

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## EDUCATIONAL POLICY, UNITED STATES

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Education is an instrument of the broader social order. When society changes, education, sooner or later, also changes. Few activities or agencies, however, change as slowly, or in such small increments, as formal education—both schools and colleges as well as both public and private institutions. Education's roots are deep and wide, penetrating almost every facet of society. Hence, education is subject to virtually every political force, including those that want change and those that want to protect the status quo.

Public K–12 education—which operates across fifty states, 14,000 local school districts, and 100,000

schools; involves 5 million employees and more than 48 million students; and costs more than \$2 billion each day—is too large, too costly, and too enmeshed in political dynamics to change quickly. Postsecondary institutions—colleges and universities—have become equally ponderous. With the advent of post–World War II enrollment increases; the significance of university-based research for preserving the nation's economic, medical, and military preeminence; and the substantial assumption of student financial aid by government, higher education also has become a major feature of the political landscape and become engulfed by much of the inertia that immobilizes lower schools.

For most of American history, the nation's most prestigious elementary and secondary schools and elite colleges have been few in number, and their private charters and religious affiliations have rendered them generally independent of government. But for colleges and universities, nearly all of which, in the early twenty-first century, are accepting student financial-aid subsidies from government and engaging in government-sponsored research, this situation has changed. Government now is a major constituent for higher education, both public and private.

Even for private preparatory and religious elementary and secondary schools, the condition of independence from government could change. If the U.S. Supreme Court approves allocation of public funds for private and religious institutions, private schools could come under the full umbrella of public policy in the same way as their public institutional counterparts.

Still, even as subjects of increasing politicization, and even if only at a glacial pace, schools and colleges do change. Formal education at the onset of the twenty-first century exhibited many differences from that of even thirty years previous, and it certainly was different from what children and parents experienced in the early part of the twentieth century.

### The Basics of Educational Policy

Societies rely upon the informal socialization of youth and immigrants and the formal education of citizens to preserve the polity and facilitate pursuit of individuals' collective and personal preferences. Because of this mediating role in maintaining a society, formal education systems, and those who steer

them, are unusually sensitive to alterations in citizens' will or shifts in decision makers' views. When a society perceives itself subjected to threat or is engrossed in a major economic, technological, demographic, or ecological transformation, the education system is a principal instrument to which it turns in order to adjust to change and seek a new social equilibrium.

The larger and more democratic a society, the less linear and less transparent its education system alterations will be. In a dictatorship or narrow oligarchy, it is relatively easy to change an education system. In the booming, buzzing cacophony of the open, modern information age and a globally interdependent society, education reform is episodic, conflict prone, inconsistent, and, sometimes painful.

Indeed, the more porous and dynamic a society, the more inconsistent and conflictual its efforts to change its education system will appear. Interests deeply rooted in spheres such as economics, religion, ideology, institutions, geography, race, and ethnicity will vie to have their worldview represented most forcefully in whatever education system emerges. These are the centrifugal forces that threaten the momentum and unity of any society. Countering these are centripetal (unifying) forces, mostly institutions, ideologies, and influential individuals that seek consensus and cohesion. It is the tension between these dynamics that eventually shapes changes to a democracy's education system.

### **The Pressure for Reform in American Education**

The twentieth century, particularly its last two decades, represented a period of remarkably intense change. A brief review of what took place globally during this period suggests the reason why America's education system has been under such intense pressure to reform.

The post-World War II cold war rivalry between East and West ended in the early 1990s. Democratic capitalism generally surmounted totalitarian socialism to become the world's dominant political economy. Modern communication and transportation technologies contributed to globally oriented, highly mobile, and rapidly paced societies. Economic developments created a heretofore-unknown degree of individual, organizational, and international interdependence. The United States emerged as the leading economic and political power in the world. This condition, coupled with globalization, generat-

ed added diplomatic, military, and humanitarian responsibilities for the nation and its citizens.

The United States is fortunate in having vast resources. It has become expected, however, to deploy these riches not only for the protection and promotion of its citizens but also for the well-being of the world. Issues of health in Africa, overpopulation in Asia, political instability in Latin America, religious conflict in the Middle East, trade restrictions in Europe, ozone depletion in Antarctica, overfishing in the North Atlantic, or ice cap reductions in the Arctic are no longer remote issues. The eventual outcome of these conditions now matters as much for a child being raised on a productive family farm in South Dakota as to an apartheid-liberated farm family in South Africa.

This new and fast-paced world has dampened some old issues. Widespread fears of nuclear annihilation, pestilence, and global famine have become ameliorated. But age-old concerns regarding religious and racial intolerance, social injustice, economic inequality, and discouraging instances of inhumanity have by no means been eliminated. Even a few new issues have evolved, for example, fear of widespread environmental degradation and uneven economic development between nations in the northern and southern hemispheres.

In making its adjustments to the new global world, American education policy is moving on two fronts simultaneously. First, the new world order necessitates that everyone be educated. Hence, issues of access and equality remain important. Second, it is no longer sufficient that individuals simply be exposed to schooling, it is increasingly important that they actually learn. Hence, the additional policy pressure is to render education institutions effective, both in achieving their objectives and in the use of the vast resources they command. The upshot is that both equality and efficiency are paramount issues on the education policy agenda. When pressures emerge, however, for maximization of these two ends, then, inevitably, counterforces arise out of reaction to protect and extend the other policy objective, liberty.

### **Defining Policy**

Policy is one of the principal vectors through which influence flows between the larger society and education institutions. The term *policy* refers to the decisions and rules enacted by the three branches of

government at all levels—national, state, and local. The policy pipeline is capable of reciprocal transmission. Whereas society's preferences shape and continually reshape education, the outcomes of education continually influence the values and preferences of the broader society.

The word *policy* is derived from the Greek *polis*, referring to city or citizen. Subsequent Roman usage led to the term *polity*, meaning government, government organization, regime, or nation. In modern parlance, policy refers to a uniform decision rule, a regulation, or a set of prescriptions that applies in all similar circumstances. The term *public policy* refers to a government-specified or -enacted decision rule. Of course, when people speak of education policy, or at least public education policy, they are referring to government decision rules regarding education, schools, colleges, or related matters.

Government rules regarding school attendance, graduation, college entry, what will be studied, who will teach, who will be paid, and who will pay are all illustrations of education policies. Policies are enacted by all three branches of government in the form of executive orders from the president, governors, and mayors; statutes and ordinances enacted by legislative bodies such as the U.S. Congress, state legislatures, and city councils; and judicial decisions issued by courts.

### The Public Values Underlying Education Policy

American culture contains three strongly held values that significantly influence public policy in general and education policy specifically. They are equality, efficiency, and liberty. Government actions regarding national defense, housing, taxation, antitrust regulation, racial desegregation, and literally hundreds of other policy dimensions, including education, are motivated and molded by one or more of these three values.

The overwhelming majority of the public views equality, liberty, and efficiency as conditions that government should attempt to maximize. The historical roots of these values are deeply embedded in the cultural streams that comprise the common heritage of the United States. These values permeate the ideologies promulgated by political parties, religions, schools, and other social institutions.

Despite widespread public devotion to equality, efficiency, and liberty as abstract goals, it is almost impossible to pursue these values to their ultimate

practical fulfillment. At their roots, the three desired conditions are inconsistent and antithetical. Exclusive or concentrated pursuit of equality restricts or eliminates liberty and efficiency. Similarly, one-sided attention to either one of the other values reduces the remaining two. Consequently, efforts to rearrange society so as to maximize fulfillment of one of the three values are constrained by forces desiring to enhance or preserve the status quo of one or both of the others.

The three values are always suspended in dynamic equilibrium. The practical relationships among them constantly shift; the balance at any particular point in time is fixed as a consequence of a complicated series of compromises made within the political and economic systems.

It can be argued that liberty or freedom is the highest of the three values. Efficiency for its own sake is absent much meaning. The justification for desiring that an endeavor be undertaken efficiently is to conserve resources that then can be used for other endeavors, thus achieving greater equality or expanding choice. Similarly, equality as an end in itself appears hollow. Few if any persons desire absolute parity with their peers. Rather, equality of wealth, power, and circumstance can be viewed as desirable means to the end of greater opportunity or choice. Education is one of the prime instruments through which American society attempts to promote fulfillment of all three values.

### Education as Policy Instrument in the Pursuit of Equality, Efficiency, and Liberty

Various large-scale social movements have, over time, contributed to formal education's place among society's major institutions. For example, the sixteenth-century Protestant Reformation encouraged education as a means to facilitate individual interpretation of religious scriptures. Similarly, among eighteenth-century leaders of the new republic, the United States, education was viewed as a means to enable one to participate as an equal in the affairs of government. Under these circumstances, education was important to ensure political liberty. It was not until the nineteenth century, however, that formal education began to assume significance for economic purposes in Western societies.

The increasing technical complexity of nineteenth-century industrialization necessitated a more highly educated workforce. This condition provoked

widespread provision of public schooling, and, in subsequent periods, schooling has been taken as an important contributor to economic efficiency.

In the opening of one of his famous mid-nineteenth-century annual reports as secretary for the Massachusetts Board of Education, Horace Mann said “Education prevents being poor.” Here was one of the first highly visible expressions of the new nineteenth-century relationship between education and economic well-being. By the twentieth century, and even more so in the early twenty-first century, schooling has been rendered crucial for an individual’s economic and social success. Consequently, schooling has assumed new importance for fulfilling the practical expression of individual equality.

Beginning with the 1954 U.S. Supreme Court decision in *Brown v. Board of Education of Topeka, Kansas*, and continuing with the vast increase in federal government education programs of the 1960s and the education finance reform efforts of the 1970s, a major portion of mid- and late twentieth-century education policy was directed at achieving greater equality.

### Equality in and Access to Education

In the latter half of the twentieth century, courts began to apply the U.S. Constitution’s equal protection clause to a spectrum of social conditions, such as voting rights, housing, employment, and education. This Civil War–era constitutional provision stretched the mantle of federally protected civil liberties to include state government. Hence, the 1950s and several decades thereafter marked a period of intense judicial activism by which courts began to ensure that federally guaranteed civil rights were not overridden by state or local policies. A long-heralded era of “local control” regarding schools was now about to be substantially restricted.

**Racial desegregation.** It is possible that the topic of racial desegregation provoked greater controversy in the United States than any other public policy issue in the last half of the twentieth century. National guard mobilization, massive public demonstrations, civil disobedience, heated political campaigns, acrimonious school board elections, and movements aiming to recall state officials are but a few illustrations of the intensity of the conflict.

The initial U.S. Supreme Court decision in *Brown v. Board of Education* incorporated social

science evidence in support of the view that legally enforced segregation of schools violated the Fourteenth Amendment and was damaging to minority students. In subsequent years, researchers, primarily sociologists, conducted numerous analytic studies to assess the effects of desegregated schooling. For the most part, results proved ambiguous. No clear path of direct evidentiary proof exists as to whether minority students benefit from desegregated school settings. Even the original social science research cited by the U.S. Supreme Court is disputed in the early twenty-first century. There are those who contend that the entire school desegregation movement, on balance, is a social experiment that has failed. They cite as evidence for their position the following: more African-American children attended racially isolated classes in 2000 than was the case twenty-five years before. Conversely, there is aggregate evidence that suggests racial desegregation is beneficial for so-called minority families and children. For example 2000 census results show that middle-income African-American students more often than their lower income counterparts attend schools in desegregated suburban communities. In such communities, African-American students’ academic achievement and economic performance measures are higher. Such studies are unable to control for a host of competing hypotheses such as that those who flourish economically, and who choose a suburban lifestyle, are possibly more motivated personally. The confounding of conditions renders a solid answer difficult.

Despite the ambiguity of social science desegregation results and the mixed success of northern school desegregation efforts, one facet of the issue emerges with relative clarity. The *de jure* segregated school systems of southern states, with few exceptions, have been successfully dismantled. This is the case not because of the dramatic findings of policy analysts and researchers, but because of the construction of successful legal strategies and judicial enforcement.

**Education finance.** In 1967 Arthur E. Wise questioned the constitutionality of state school financing arrangements. Wise, then a doctoral student in school administration at the University of Chicago, contributed to the effort to eliminate inequality, not a new set of fiscal analyses, but, rather, the suggestion of a new legal theory. He published his ideas in a 1968 book titled *Rich Schools, Poor Schools*.

Other legal scholars were quick to follow. Subsequently, John E. Coons, William H. Clune III, and

Stephen D. Sugarman wrote *Private Wealth and Public Education*, which, in a lucid fashion, dissected the operation of state school finance statutes and described a strategy whereby they could be challenged legally. Wise, as well as Coons and his colleagues, formulated the principle of fiscal neutrality, that is, the principle that the quality of a child's schooling should not be a function of wealth, other than the wealth of the state as a whole. By providing a negatively phrased decision rule, permitting courts to strike down existing schemes while allowing legislatures to construct a statutory redress of the inequity, Wise and Coons and his colleagues rescued the fledgling "equal protection" school finance movement from judicial oblivion. Prior to that time, courts were deciding against plaintiffs on grounds that no judicially manageable solutions were apparent.

By the close of the twentieth century, most gross fiscal disparities had been mitigated. Only a few egregious inequities remained. Indeed, a study by Sheila Murray, David Evans, and Robert Schwab demonstrated that most school spending differences were between states, not within states.

In the latter years of the twentieth century, proponents of greater equality of education financing began to alter conventional "equal protection" arguments. They took their cue from the Kentucky Supreme Court in its 1989 *Rose v. Council for Better Education* decision. Here the court held the state accountable not only for equal financing but also for equal educational opportunity. The Kentucky decision gave rise to a subsequent genre of what has come to be known as "adequacy" suits. In these suits, the distribution of school dollars has not been the consideration as much as the consequences of school dollars. The contention of plaintiffs is that education is a state constitutional responsibility, and, thus, states must ensure that local districts and schools deliver an education adequate for a student to succeed in the workforce and as a democratic citizen.

**Special education.** Special education was the latest school population category to be the focus for substantial reform. The reform proceeded on two dimensions: the provision of appropriate school services to students with physical and mental disabilities and the provision of bilingual instruction to non- or limited-English-speaking students.

The historic inability or unwillingness of school districts to serve adequately the needs of students

with disabilities had long been recognized. As was the case historically with school finance inequities, however, there appeared no easy means by which the situation could be altered. Specialized services can be extraordinarily expensive; school officials claimed that their budgets simply were too stretched to provide them. When state categorical funds were provided for special education, local school districts all too frequently diverted all or a portion of such moneys to subsidize the regular school program. The mid-1960s innovation aimed at rectifying these conditions was the construction of a successful legal theory to mandate change.

The landmark cases are *Mills v. Board of Education* and *Pennsylvania Association of Retarded Children v. Commonwealth of Pennsylvania* for students with disabilities and *Lau v. Nichols* for the non-English speaking. These cases both altered the special education practices of states and local school districts and influenced Congress in enacting the Education for All Handicapped Children Act of 1975. The consequence of these movements has been to increase dollar spending for special education by billions. At the beginning of the twenty-first century, American public schools were spending 20 percent of their operating budgets on the education of students with disabilities. No claim is made that all problems have disappeared in the schooling of students with disabilities. At the turn of the twenty-first century, however, the landscape was powerfully different than even a quarter of a century before.

**Collective bargaining.** Concerns for equity have not concentrated upon students exclusively. Professional educators have also sought means by which they could be treated more equally.

Beginning in the 1950s, teachers began to expand their unions to engage more effectively in collective bargaining with school boards. This development was initiated in large cities and subsequently spread to almost every school district in the United States. To a large degree, increases in organizational size, bureaucratization, and the expansion of administrative levels probably accounted for teachers' feelings of inefficacy and alienation and prompted them to unionize.

Although it frequently is the case that teacher representatives come to the bargaining table with concerns for the welfare of students and respect for the interests of the broader public, their primary allegiance is to teachers' welfare. They cannot legiti-

mately claim to represent the larger public. Nevertheless, duly elected public representatives—school board members—must share decision-making authority with them. The outcome is to further centralize school policymaking and to erode the ability of the general public to participate in the process. It is conditions such as these that prompt critics of public education to demand yet other changes.

**Higher education.** The pursuit of greater equality has also left an imprint on the nation's colleges. For example, Title IX of the Higher Education Act decrees parity in athletics for males and females at postsecondary institutions. In addition the Higher Education Act requires colleges to pledge themselves not to discriminate racially or in other ways if they use federal funding to subsidize student financial aid, promote research, or construct dormitories.

### The Pursuit of Efficiency in Education

Efficiency advocates, usually overlooking the substantial expansion in functions expected of America's public schools, claim that per-pupil expenditures nationwide have escalated in a troublesome manner. They argue that even when inflation is discounted, the per-pupil increase in school spending between 1950 and 2000 was 500 percent. The additional funds have been used to purchase items that, according to conventional education wisdom, will facilitate production. For example, class sizes have been reduced, and many categories of instructional and administrative specialists have been added. Despite such added resources, there appear to be no dramatic increases in output. Indeed, to the extent that standardized test scores are valid indicators of school production, output has diminished.

Efficiency has always been a major concern for educational policymakers and school administrators. There have existed points in history, however, at which particular attention has been accorded the topic. The mid-1920s was a time of such intense interest. This period coincided with the expansion of school administration as a specialized field. In an effort to enhance their professionalism, education officials attempted to adopt for schools many of the efficiency techniques then popular in industry. Raymond E. Callahan, in his 1960 book *Education and the Cult of Efficiency*, described this movement.

School district consolidation was another strategic arrow in the quiver of pre-World War II education efficiency proponents. By 1930 the number of

local school districts in the United States had reached its high point—in excess of 125,000 separate units. By 1976 this number had been reduced to approximately 16,000. The number of districts hovered around 14,000 at the beginning of the twenty-first century. This drastic reduction in the number of units of a specialized local government took place in a manner so subtle as virtually to escape the notice of policy analysts. It also took place without a shred of persuasive evidence that it would indeed save money. Nevertheless, it constitutes one of the most dramatic of all changes in America's patterns of government.

In the 1960s, sociologists dominated school efficiency research. The premier study of this period was the *Coleman Report*, named after its principal author, James S. Coleman. The Coleman team concluded that school quality had little effect on student achievement independent of the social background of students. This finding, even though not so intended, was widely interpreted by the media and other lay sources as meaning that dollars for schools made little difference in student learning. This misunderstood assertion was widely publicized by efficiency advocates, and the Coleman finding served as justification during the 1970s for reducing the trajectory of school spending increases.

At various points in U.S. education history, the term *accountability* appears as a symbol. It represents a policy effort to control escalating school costs and insufficient student achievement by employing techniques that advocates suggest will improve school productivity. The efficiency movement of the late twentieth and early twenty-first centuries, operating under the episodically popular label of accountability, was launched by the 1983 appearance of *A Nation at Risk*, a highly visible national report by the National Commission on Excellence in Education. Seldom has an elite panel issued a document whose thesis was more inaccurate. Paradoxically, seldom has a blue-ribbon report had such a widespread and long-lasting consequence and had such a profound and lasting impact on public opinion and policy.

The report asserted that America's preeminence in defense, technology, economics, science, and industry was threatened by the mediocrity of its public education system. The report left the impression that the United States was about to succumb to a deluge of foreign dominance, unless its schools were rapidly rendered more rigorous. But twenty years later, it became plain to see that the economic slump

in which the United States found itself at the report's 1983 issuance was far more a consequence of inefficient management practices than it was the nation's ineffective education system. Also in the intervening period, the Japanese economy plummeted, and its once vaunted education system was unable to protect it from its inefficient financial practices and protectionist trade policies. Indeed, beginning in 2000, Japan took steps to pattern its education system more after the United States. Rightly or wrongly, however, *A Nation at Risk* launched two decades of education reform in America, and the call for change shows no signs of subsiding.

### Illustrating the Changes

The early twenty-first century mantra of educational accountability has an accompanying lexicon. This includes terms and ideas such as high performance schools, high-stakes testing, academic accountability, school effectiveness, organizational efficiency, teacher productivity, performance financing, charter schools, alternative schools, break-the-mold schools, privatizing, outsourcing, and pay for results. These and similar terms are illustrative of the slogans, issues, and topics that dominate American education policy and practice at the onset of the twenty-first century.

Underneath the slogans, two major change strategies have evolved. One is called the standards movement. The other travels under the banner of "competition" or "privatization." The two strategies are not mutually incompatible. Each necessitates government specification of learning standards or curricular goals that schools are expected to meet.

In the standards movement, textbooks and other instructional materials, teacher training, professional licensing, financial arrangements, statewide achievement testing, and performance awards and penalties are expected to be aligned and made consistent with these purposes. Advocates for the second strategy, competition, contend that American automobiles improved in the 1970s only under the threat of foreign competition, and schools are no different. Only when the current public school monopoly is severed, the argument goes, will professional educators be motivated to try harder and teach better. Competition or privatization advocates seek magnet schools, charter schools, voucher plans, parent choice plans, and smaller schools and school districts.

At the beginning of the twenty-first century, the standards movement held the upper hand. Literally thousands of legislative enactments, commission reports, gubernatorial campaigns, and regulatory activities had been constructed in its support. It was too early, however, to judge its effects.

Competition or choice has not yet seen a full day. Proposals for greater privatization of schooling have not come to dominate either the marketplace of policy ideas nor the practical arena of school operation. Union leaders speak in substantial opposition to privatization. Other critics fear the prospect of religious and ideological extremists being the recipients of government support. There are yet other critics who fear that greater privatization will further impede achieving a vision of a more fully integrated society, both racially and economically.

The U.S. Supreme Court was expected to rule in 2002 on the constitutionality of an Ohio law permitting public funds to be used in support of students' private schooling. Should the court rule favorably on the plan, privatization and competition might receive a substantial boost. An unfavorable decision might slow or substantially stall competition.

### The Pursuit of Liberty

A third deeply held value that frequently influences the direction of American education policy is liberty. This value provided a major ideological justification for the revolution that gave birth to the United States as a nation. In an essay on the new Constitution published in the *National Gazette* on January 17, 1792, James Madison wrote: "In Europe, charters of liberty have been granted by power. America has set the example, and France has followed it on charters of power granted by liberty."

For Americans, liberty has meant the freedom to choose, to be able to select from among different courses of action. The desire for choice fueled the historical American affection for a market economy. Competition among producers, along with other benefits, is held to expand the range of items from which consumers can choose. In the public sector, responsive governmental institutions are taken to be a crucial element for the expressions and preservation of choice and liberty.

In the view of those who initially designed the structures of American government, authority was vested in the citizenry, who then delegated the power to govern to selected representatives. A measure of

representatives' effectiveness was the degree to which they were responsive to the will of those they governed. Lack of responsiveness eroded power of the citizenry and, thus, constituted grounds for removal from office.

A second means for preserving liberty was to dispense governmental authority widely. This accounts for the separation of powers between three branches and over various levels of government. Efforts to inhibit accumulation of power also account for the deliberate fragmentation of decision-making authority, with some specific powers accorded to the federal government, some accorded to the states, and some reserved for the people themselves. Historically, the power to make educational decisions was structured in the same fashion. Centralized authority was viewed as perilous because of the prospect of exerting widespread control and uniformity. Formation of literally thousands of small local school districts, portending both inefficiency and inequality, was intended as an antidote to the accumulation of power. Proximity to constituents, coupled with the electoral process, was taken as a means to enhance governmental responsiveness and preserve liberty.

The federal constitution provides the state governments with ultimate legal responsibility for school decision-making. Historically states delegated substantial policy discretion to local units of government. In the period since World War II, however, factors such as increasing school costs, the politicization of school decisions, and intensified efforts to achieve greater equality of educational opportunity and more efficient use of school resources have heightened state-level participation.

A consequence of this increased state participation has been to remove a large measure of decision-making discretion from local education authorities. For example, state specifications on accountability dimensions such as the school curriculum, teacher salaries and working conditions, graduation requirements, and school architecture have increased markedly. Fewer persons now determine more decisions regarding schools. Choice is restricted, the ability of local officials to respond to constituent preferences is constrained, and, at least in a legal sense, local autonomy, liberty, and probably efficiency have been diminished.

By the latter half of the 1960s, a reaction to the diminished status of representativeness had begun.

Requests for change stemmed initially from ethnic enclaves in large cities, which perceived themselves as relatively impotent in affecting the operation of their children's schools. They demanded what was then labeled "community control." For example, several community-control experiments were attempted in the New York City schools. The state legislature ultimately recognized the growing political tide by dividing New York City into thirty-two elementary school districts. Given that each of the thirty-two averaged 30,000 students, approximately the size of the entire school system of the city of Syracuse, this could not realistically be characterized as community control. Nevertheless, each of New York's local districts was authorized to elect a nine-member local board of education. Thus, New York's elected school policymakers grew from 9 to 297.

Reaction to the dilution of representativeness also reached Congress. Federal education acts were amended in the early 1970s to mandate parent participation in the making of decisions about the use of federal program funds. Also, by the mid-1970s several state legislatures were requiring formation of parent advisory councils at school sites. Numerous local school districts were voluntarily implementing plans for wider involvement of citizens in school decision-making.

By the 1990s, and extending into the twenty-first century, liberty advocates were pursuing more powerful strategies than simply enhanced parent advisory councils. The new expressions of liberty were charter schools and voucher plans.

Charter schools in effect are local schools free to operate outside the restraint of a school district. Their operating charter can be granted either by state authority or, in some instances, by a local school board. They can be private or public. They derive their financial support from public sources. They are the equivalent of so-called grant-maintained schools in Great Britain. They are required to have a board of directors and to be fiscally responsible. In most states, charter schools are also required to adhere to a minimal state curriculum and to administer state standardized achievement tests. Students are free to attend charter schools or to select their regularly assigned public school.

Voucher plans involve public education funds flowing to households that then choose the school for their children. Vouchers are the subject of experimentation in Milwaukee, Wisconsin; Cleveland,

Ohio; and San Antonio, Texas. They are unusually controversial because their subsidy may pierce the conventional First Amendment prohibition of public funding in support of religious causes. In June 2000 the U.S. Supreme Court ruled that students in Cleveland may use state-funded vouchers to pay tuition at private schools, including schools with a religious affiliation. The decision in this case is likely to have a significant policy impact for years to come.

### Conclusion

Will accountability efforts succeed in elevating U.S. school performance? Will colleges and universities eventually be subjected to the same kind of efficiency requirements experienced by public schools? Will the achievement gap between middle- and lower income students be narrowed? Will public funding of private and religious schools eventually be approved, and, if so, will such arrangements prove the undoing of the great American socialization engine, public schooling?

There is no effort here at predicting the outcome of such queries. The answers will come in time and, no doubt, will be the subject of future analysis and comment. What is predictable, however, is that the significance of education for society will only increase and that government will continue to be challenged by continually having to strike a new balance among the advocates of greater equality, efficiency, and liberty.

*See also:* EDUCATION REFORM; EFFICIENCY IN EDUCATION; FINANCIAL SUPPORT OF SCHOOLS; GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF; MULTICULTURAL EDUCATION; SCHOOL REFORM; SPECIAL EDUCATION.

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## EDUCATIONAL PSYCHOLOGY

Educational psychologists "study what people think and do as they teach and learn a particular curriculum in a particular environment where education and training are intended to take place" (Berliner, p. 145). The work of educational psychologists focuses "on the rich and significant everyday problems of education" (Wittrock, pp. 132–133).

### History

Long before educational psychology became a formal discipline, scholars were concerned about what people think and do as they teach and learn. The Greek philosophers Plato and Aristotle discussed topics still studied by educational psychologists—the role of the teacher, the relationship between teacher and student, methods of teaching, the nature

and order of learning, the role of affect in learning. In the 1500s the Spanish humanist Juan Luis Vives emphasized the value of practice, the need to tap student interests and adapt instruction to individual differences, and the advantages of using self-comparisons rather than competitive social comparisons in evaluating students' work. In the 1600s the Czech theologian and educator Johann Amos Comenius introduced visual aids and proclaimed that understanding, not memorizing, was the goal of teaching. Writings of European philosophers and reformers such as Jean-Jacques Rousseau (1712–1778), Johann Heinrich Pestalozzi (1746–1827), Johann Friedrich Herbart (1776–1841), and Friedrich Wilhelm August Froebel (1782–1852) stressed the value of activity, prior experience, and interest. All these ideas are consistent with current work in educational psychology.

In the United States, psychology was linked to education and teachers from its inception. In 1890 the American philosopher William James founded psychology in America and then followed with a lecture series for teachers titled "Talks to Teachers about Psychology." These lectures were given in summer schools for teachers around the country and then published in 1899 both as a book and in the *Atlantic Monthly* magazine. Again, some of James's ideas were quite modern—he supported the use of discussion, projects and activities, laboratory experiments, writing, drawing, and concrete materials in teaching.

James's student, G. Stanley Hall, founded the American Psychological Association and was its first president. Teachers helped him collect data for his dissertation about children's understandings of the world. Hall founded the child-study movement in the United States and wrote extensively about children and adolescents. He encouraged teachers to make detailed observations and keep careful records to study their students' development—as his mother had done when she was a teacher. Hall's ideas influenced education through courses in child study introduced into normal schools beginning around 1863.

Hall's student, John Dewey, founded the Laboratory School at the University of Chicago and is considered the father of the Progressive education movement. Another of William James's students, Edward Lee Thorndike, wrote the first educational psychology text in 1903 and founded the *Journal of Educational Psychology* in 1910.

**Psychology and key ideas in education.** Developments in education continued to be closely tied to psychologists in the first half of the twentieth century. In fact, in 1919, Ellwood Cubberly dubbed educational psychology a "guiding science of the school" (p. 755). It was not uncommon for psychologists such as Thorndike, Charles H. Judd, or their students to be both presidents of the American Psychological Association and authors of materials for teaching school subjects or measuring achievement in reading, mathematics, or even handwriting. The work of Thorndike, Alfred Binet, Jean Piaget, and Benjamin Bloom illustrate earlier connections between psychology and education.

**Thorndike, teaching, and transfer.** Although Thorndike is most well known in psychology for his research on learning that paved the way for B. F. Skinner's later studies of operant conditioning, his impact in education went beyond his studies of learning. He developed methods for teaching reading and arithmetic that were widely adopted, as well as scales to measure ability in reading, arithmetic, handwriting, drawing, spelling, and English composition. He supported the scientific movement in education—an effort to base teaching practice on empirical evidence and sound measurement. His view proved narrow as he sought laws of learning in laboratories that could be applied to teaching without actually evaluating the applications in real classrooms. It took fifty years to return to the psychological study of learning in the classroom, when the Soviet Union's successful launch of *Sputnik* in 1957 startled the United States and precipitated funding for basic and applied research on teaching and learning. Thorndike also had a lasting effect on education by demonstrating that learning Greek, Latin, and mathematics did not "exercise the mind" to improve general thinking abilities. Partly because of his research, required study of the classics decreased.

**Binet and assessments of intelligence.** About the time that Thorndike was developing measures of reading and arithmetic abilities, Alfred Binet was working on the assessment of intelligence in France. Binet, a psychologist and political activist in Paris in the early 1900s, was charged with developing a procedure for identifying students who would need special education classes. He believed that having an objective measure of learning ability could protect students of poor families who might be forced to leave school because they were assumed to be slow

learners. Binet and his collaborator Théodore Simon identified fifty-eight tests, several for each age group from three to thirteen, that allowed the examiner to determine a mental age for a child. A child who succeeded on the items passed by most six-year-olds, for example, was considered to have a mental age of six, whether the child was actually four, six, or eight years old. The concept of intelligence quotient, or IQ, was added after Binet's procedure was brought to the United States and revised at Stanford University to become the Stanford-Binet test. The early Stanford-Binet has been revised four times as of 2002, most recently in 1986. The success of the Stanford-Binet has led to the development of several other modern intelligence tests.

***Piaget and the development of thinking.*** As a new Ph.D. working in Binet's laboratory, Jean Piaget became intrigued with children's wrong answers to Binet's tasks. Over the next several decades, Piaget devised a model to describe the thinking behind these wrong answers and to explain how humans gather and organize information. Piaget's theory of cognitive development is based on the assumption that people try to make sense of the world and actively create their knowledge through direct experience with objects, people, and ideas. Maturation, activity, social interaction, and equilibration (the constant testing of the adequacy of understanding) influence the way thinking and knowledge develop. Piaget believed that young people pass through four stages in their cognitive development: sensorimotor, preoperational, concrete-operational, and formal-operational. Piaget's theory transformed education in mathematics and science and is still a force in the early twenty-first century in constructivist approaches to teaching.

***Bloom and the goals of instruction.*** Also during the 1950s and 1960s, results of a project directed by Benjamin Bloom touched education at all levels around the world. Bloom and his colleagues developed a taxonomy, or classification system, of educational objectives. Objectives were divided into three domains: cognitive, affective, and psychomotor. A handbook describing the objectives in each area was eventually published. These taxonomies have been included in hundreds of books and articles about teaching and testing. Teachers, test developers, and curriculum designers use the taxonomies to develop instructional objectives and test questions. It would be difficult to find an educator trained in the past thirty years who had not heard of Bloom's taxonomy

in some form. The cognitive domain taxonomy was revised in 2001 by Lorin W. Anderson and David R. Krathwohl.

***Moving toward contemporary educational psychology.*** In the 1960s a number of educational psychologists developed approaches to teaching that foreshadowed some of the contemporary applications and arguments. Jerome Bruner's early research on thinking stirred his interest in education. Bruner's work emphasized the importance of understanding the structure of a subject being studied, the need for active learning as the basis for true understanding, and the value of inductive reasoning in learning. Bruner believed students must actively identify key principles for themselves rather than relying on teachers' explanations. Teachers should provide problem situations stimulating students to question, explore, and experiment—a process called discovery learning. Thus, Bruner believed that classroom learning should take place through inductive reasoning, that is, by using specific examples to formulate a general principle.

David Ausubel disagreed. He believed that people acquire knowledge primarily through reception rather than discovery; thus learning should progress not inductively from examples to rules as Bruner recommended, but deductively: from the general to the specific, or from the rule to examples. Ausubel's strategy always began with an advance organizer—a technique still popular in the twenty-first century—which is a kind of conceptual bridge between new material and students' current knowledge.

### **Contemporary Views of Learning and Motivation**

Educational psychologists have studied cognition, instruction, learning, motivation, individual differences, and the measurement of human abilities, to name just a few areas that relate to education and schooling. Of all these, perhaps the study of learning is the most closely associated with education. Different theories of learning have had different impacts on education and have supported different practices.

***Behavioral views of learning.*** The behavioral approach to learning developed out of work by Skinner, whose research in operant conditioning showed that voluntary behavior can be altered by changes in the antecedents of the behavior, the consequences, or both. Early work focused on consequences and demonstrated that consequences following an action

may serve as reinforcement or punishment. Skinner's theories have been used extensively in education, by applying principles of reinforcement and punishment to change behaviors, often called applied behavior analysis. For much of the 1960s Skinner's ideas and those of behaviorists who followed him shaped teaching in regular and special education, training in the military, coaching, and many other aspects of education. Principles of reinforcement continue to be important for all teachers, particularly in classroom management and in decisions about grades and incentives for learning.

In the 1970s and 1980s a number of educational psychologists turned their attention from research on learning to research on teaching. Their findings shaped educational policy and practice during those years and since. Much of the research that focused on effective teaching during that time period pointed toward a model of teaching that is related to improved student learning called direct instruction or explicit teaching.

**Cognitive views of learning.** Behaviorists define learning as a change in behavior brought about by experience with little concern for the mental or internal aspects of learning. The cognitive view, in contrast, sees people as active learners who initiate experiences, seek out information to solve problems, and reorganize what they already know to achieve new insights. In fact, learning within this perspective is seen as “transforming significant understanding we already have, rather than simple acquisitions written on blank slates” (Greeno, Collins, and Resnick, p. 18). Much of the work on behavioral learning principles has been with animals in controlled laboratory settings. The goal is to identify a few general laws of learning that apply to all higher organisms (including humans, regardless of age, intelligence, or other individual differences). Cognitive psychologists, on the other hand, focus on individual and developmental differences in cognition; they have not sought general laws of learning. Cognitive views of learning are consistent with the educational theories of Bruner and Ausubel and with approaches that teach learning strategies, such as summarizing, organizing, planning, and note taking.

**Constructivist theories of learning.** Constructivist perspectives on learning and teaching are increasingly influential today. These views are grounded in the research of Piaget, Lev Vygotsky, the Gestalt psychologists, Fredric Bartlett, and Bruner as well as the Progressive educational philosophy of Dewey. There

are constructivist approaches in science and mathematics education, in educational psychology and anthropology, and in computer-based education. Some constructivist views emphasize the shared, social construction of knowledge; others see social forces as less important.

Even though there is no single constructivist theory, many constructivist teaching approaches recommend the following:

- Complex, challenging learning environments and authentic tasks
- Social negotiation and shared responsibility as a part of learning
- Multiple representations of content
- Understanding that knowledge is constructed
- Student-centered instruction

Inquiry is an example of constructivist teaching. Dewey described the basic inquiry learning format in 1910. There have been many adaptations of this strategy, but the teacher usually presents a puzzling event, question, or problem. The students formulate hypotheses to explain the event or solve the problem, collect data to test the hypotheses, draw conclusions, and reflect on the original problem and on the thinking processes needed to solve it. Like discovery learning, inquiry methods require great preparation, organization, and monitoring to be sure everyone is engaged and challenged.

A second example of constructivist teaching influenced by Vygotsky's theories of assisted learning is called cognitive apprenticeships. There are many models, but most share six features:

1. Students observe an expert (usually the teacher) model the performance.
2. Students get external support through coaching or tutoring (including hints, feedback, models, reminders).
3. Conceptual scaffolding (in the form of outlines, explanations, notes, definitions, formulas, procedures, etc.) is provided and then gradually faded as the student becomes more competent and proficient.
4. Students continually articulate their knowledge—putting into words their understanding of the processes and content being learned.
5. Students reflect on their progress, comparing their problem solving to an expert's performance and to their own earlier performances.

6. Students are required to explore new ways to apply what they are learning—ways that they have not practiced at the professional's side.

**Motivation in education.** Much work in educational psychology has focused on student motivation: the engine that fuels learning and the steering wheel that guides its progress. Just as there are many theories of learning, there are quite a few explanations of motivation. Behaviorists explain motivation with concepts such as “reward” and “incentive.” Rewards are desirable consequences for appropriate behavior; incentives provide the prospect for future rewards. Giving grades, stars, and so on for learning—or demerits for misbehavior—is an attempt to motivate students by extrinsic (external) means of incentives, rewards, and punishments. Humanistic views of motivation emphasize such intrinsic (internal) forces as a person's needs for “self-actualization,” the inborn “actualizing tendency,” or the need for “self-determination.” From the humanistic perspective, motivation of students means to encourage their inner resources—their sense of competence, self-esteem, autonomy, and self-actualization.

Cognitive theorists believe that behavior is determined by thinking, not simply by whether one has been rewarded or punished for the behavior in the past. From this perspective, behavior is initiated and regulated by plans, goals, schemas (generalized knowledge), expectations, and attributions (the causes we see for our own and other people's behavior). Social learning theories of motivation are integrations of behavioral and cognitive approaches: They take into account both the behaviorists' concern with the effects or outcomes of behavior and the cognitivists' interest in the impact of individual beliefs and expectations. Many influential social learning explanations of motivation can be characterized as expectancy and value theories that view motivation as the product of two main forces: (1) the individual's expectation of reaching a goal and (2) the value of that goal to the individual. Attempts to build a sense of efficacy for classroom learning are educational applications of this approach.

### Issues and Controversies

The application of psychology to education has seen many controversies. The psychological content of teacher preparation moved from Hall's emphasis on child study to Thorndike's connectionist approach to learning; to educational psychology texts for teachers in the 1920s that included measurement

and the psychology of school subjects; to an emphasis in the 1950s on mental hygiene, child development, personality, and motivation; to a greater emphasis on learning theories and programmed instruction in the 1960s; to research on teaching in the 1970s; to the dominance of Piagetian theories and the resurgence of cognitive approaches in the 1980s; to current texts that emphasize Vygotskian influences and constructivism along with a return to the instructional psychology of school subjects. Once a requirement in virtually all teacher preparation programs, educational courses have been replaced, renamed, redesigned, and integrated into other education courses. As examples of two issues in educational psychology and schooling, consider conceptions of intelligence and approaches to the teaching of reading.

**What does intelligence mean?** The idea of intelligence has been with us for a long time. Plato discussed similar variations more than 2,000 years ago. Most early theories about the nature of intelligence involved one or more of the following three themes: (1) the capacity to learn; (2) the total knowledge a person has acquired; and (3) the ability to adapt successfully to new situations and to the environment in general.

In the twentieth century there was considerable controversy over the meaning of intelligence. In 1986 at a symposium on intelligence, twenty-four psychologists each offered a different view about the nature of intelligence. More than half of the experts mentioned higher-level thinking processes such as abstract reasoning, problem solving, and decision-making as important aspects of intelligence, but they disagreed about the structure of intelligence: Is it a single ability or many separate abilities? Evidence that intelligence is a single basic ability affecting performance on all cognitively oriented tasks comes from consistent correlations among scores on most tests of specific mental abilities. In spite of these correlations, however, some psychologists insist that there several separate “primary mental abilities.” In 1938 Louis Leon Thurstone listed verbal comprehension, memory, reasoning, ability to visualize spatial relationships, numerical ability, word fluency, and perceptual speed as the major mental abilities underlying intellectual tasks. Joy Paul Guilford and Howard Gardner are the most prominent modern proponents of the concept of multiple cognitive abilities. Gardner's theory of multiple intelligences has had the greatest impact on education. According to

Gardner there are at least eight separate kinds of intelligences: linguistic, musical, spatial, logical-mathematical, bodily-kinesthetic, interpersonal, intrapersonal, and environmental.

**Ability differences in schools.** In the early 1900s, before group intelligence tests were readily available, teachers dealt with student achievement differences by promoting students who performed adequately and holding back others. This worked well for those who were promoted, but not for those who failed. The idea of social promotion was introduced to keep age-mates together, but then teaching had to change. When intelligence test became available, one solution was to promote all students, but group them by ability within their grade level. Ability grouping was the basis of many studies in the 1930s, but fell from favor until 1957 and the era of *Sputnik*, when concern grew about developing talent in mathematics and science. Again, in the 1960s and 1970s, ability grouping was criticized. In the early twenty-first century, teachers are encouraged to use forms of cooperative learning and heterogeneous grouping to deal with ability differences in their classes.

**Learning to read.** Educational psychologists have made great progress understanding how students learn different subjects. Based on these findings, approaches have been developed to teach reading, writing, science, mathematics, social studies, and other subjects. Reading instruction has been the focus of great controversy. Educators have debated whether students should be taught to read and write through code-based (phonics, skills) approaches that relate letters to sounds and sounds to words or through meaning-based (whole-language, literature-based, emergent literacy) approaches that focus on the meaning of the text.

Research in educational psychology demonstrates that whole language approaches to reading and writing are most effective in preschool and kindergarten because they improve students' motivation and interest and help them understand the nature and purposes of reading and writing. Phonemic awareness—the sense that words are composed of separate sounds and that sounds are combined to say words—in kindergarten and first grade predicts literacy in later grades. If children do not have phonemic awareness in the early grades, direct teaching can dramatically improve their chances of long-term achievement in literacy. Excellent primary school teachers use a balance of explicit decoding-skills teaching and whole language instruction.

**Testing in education.** By 1925 Charles Judd proclaimed that “tests and measures are to be found in every progressive school in the land” (p. 807). In fact, psychology has had a profound impact on education through the adoption of testing. On the average, more than 1 million standardized tests are given per school day in classes throughout the United States. But tests are not without controversy. Critics of standardized testing state that these tests measure disjointed facts and skills that have no use or meaning in the real world. Often test questions do not match the curriculum of the schools, so the tests cannot measure how well students have learned the curriculum. Supporters assert that tests provide useful information. As Joseph Rice suggested more than a century ago, a good way to judge if teaching has been effective might be to test what the students learned. The test, however, does not tell all. Also more than 100 years ago, William James suggested that with test results must be combined with observations made “upon the total demeanor of the measured individual, by teachers with eyes in their heads and common sense and some feeling for the concrete facts of human nature in their hearts” (p. 84).

**Expectations of the profession.** Increasingly technology offers an alternative or addition to traditional materials in teaching and learning. For example, the Cognition and Technology Group at Vanderbilt University has developed a problem-based learning environment called anchored instruction. The anchor is the rich, authentic, and interesting situation presented via videodisk or computer that provides a focus—a reason for setting goals, planning, and using mathematical tools to solve problems. Anchored instruction is an example of cognitive apprenticeships described above.

It is likely that educational psychologists will continue to contribute to education as they learn more about the brain and how learning occurs; the development of intellect, affect, personality, character, and motivation; ways of assessing learning; and the creation of multifaceted learning environments. It also is likely that some issues will spiral through these contributions. What is a useful and appropriate balance of discovery and direct instruction? How can teachers, who must work with groups, adapt instruction to individual variations? What should be the role of testing and grading in education? What are the goals of education and how do instructors balance cognitive, affective, and psychomotor objectives? How can learning technologies be used to best

advantage for students? How can teachers help students understand, remember, and apply knowledge? These questions may not be as new as they seem upon attendance to the history of psychology and its applications to education.

*See also:* DEVELOPMENTAL THEORY; INDIVIDUAL DIFFERENCES; INSTRUCTIONAL DESIGN; LEARNING THEORY.

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ANITA WOOLFOLK HOY

## EDUCATIONAL RESOURCES INFORMATION CENTER

The Educational Resources Information Center (ERIC) is a federally funded nationwide information system established to provide easy access to information about education research. ERIC offers educators and researchers a single source through which they can identify and obtain copies of education-related documents, articles, books, monographs, tests, manuals and handbooks, bibliographies, statistical reports, conference papers, dissertations and theses, historical materials, yearbooks, and translations. ERIC's mission is to improve American learning, teaching, and educational decision making by facilitating access to helpful educational research and information.

### Program

The massive ERIC database contains more than 1 million abstracts of education-related documents and articles, making it the world's largest repository of education information. The database is updated monthly, and more than 30,000 items are added each year. Interested parties can access the database via the Internet or through commercial vendors. Access to the ERIC database is also available at more than 1,000 libraries and education resource centers around the world. Many of these sites maintain an ERIC microfiche collection and can provide electronic copies of ERIC documents. In addition, ERIC abstracts are available in the print publications *Resources in Education*, ERIC's main announcement bulletin, and *Current Index to Journals in Education*, a monthly comprehensive index to periodical literature in education research.

Anyone interested in education can obtain copies of the full text of many ERIC documents at any library that owns the ERIC microfiche collection. Full-text microfiche or paper copies can also be ordered from ERIC's Document Reproduction Service. The full texts of some documents are also available online. ERIC does not supply full-text copies of journal articles abstracted in the ERIC database; these can be obtained from many library periodical collections or from the journal publisher.

During the 1990s ERIC implemented several invaluable electronic services. One of the most popular is AskERIC, an Internet-based service begun in 1992. AskERIC provides access to a web-based version of the ERIC database that includes document and journal citations from 1966 to the present. AskERIC also offers education-related question-and-answer services, a question archive, lesson plans, mailing lists, internet links, and listings of educational organizations, meetings, and conferences.

ERIC publications include popular two-page research syntheses called *ERIC Digest*. The digests are short reports that give an overview of a current topic of interest in education. ERIC produces approximately one hundred new digests each year. By 2001 there were nearly 2,500 *ERIC Digests*, most available online. Another publication, the *ERIC Review*, features information about emerging education issues, as well as announcements about ERIC products, services, and developments. ERIC also issues Parent Brochures, produces an online journal called *Parent News*, and sponsors the National Parent Information Network for parents who are interested in their children's education.

### Organization

ERIC is supported by the U.S. Department of Education's Office of Educational Research and Improvement, and is administered by the National Library of Education. Unlike most federal information systems, in which all activities are conducted under one roof with centralized control, ERIC conducts much of its document processing and dissemination activities at decentralized and relatively autonomous clearinghouses. The ERIC network consists of sixteen main clearinghouses, nine adjunct clearinghouses, one affiliate clearinghouse, and three support components. ERIC's clearinghouses and components are located at various sites around the country. Most clearinghouses are associated with a college or university.

Each of ERIC's sixteen main clearinghouses is responsible for the collection, processing, and dissemination of documents in a specific topic or field of education research. ERIC clearinghouses include, for example, the Clearinghouse on Adult, Career, and Vocational Education at the Ohio State University; the Clearinghouse on Information and Technology at Syracuse University in New York; the Clearinghouse on Elementary and Early Childhood Education at the University of Illinois in Champaign-Urbana; and the Clearinghouse for Social Studies/Social Science Education at Indiana University. ERIC clearinghouses also respond to requests for information and produce publications on current research and practices in their designated subject area. The nine adjunct clearinghouses are associated with one of the sixteen larger ERIC clearinghouses and have similar responsibilities.

Support components include the online service AskERIC; the ERIC Document Reproduction Service in Springfield, Virginia; and the ERIC Processing and Reference Facility in Lanham, Maryland. The three ERIC support components are responsible for producing, publishing, and disseminating systemwide products and services.

### History

ERIC was created in 1966 as the Educational Research Information Center by the United States Office of Education; a year later its name was changed by substituting "Resources" for "Research" (the acronym remained ERIC) because ERIC had grown into a national education information system of service to educators and researchers.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; U.S. DEPARTMENT OF EDUCATION.

### INTERNET RESOURCES

AskERIC. 2002. <[www.askeric.org](http://www.askeric.org)>.

ERIC: THE EDUCATIONAL RESOURCES INFORMATION CENTER. 2002. <[www.eric.ed.gov](http://www.eric.ed.gov)>.

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*Revised by*  
 JUDITH J. CULLIGAN

## EDUCATIONAL TESTING SERVICE

Educational Testing Service (ETS) is a nonprofit organization whose mission is to help advance quality and equity in education by providing fair and valid assessments, research, and related services. Its products and services measure knowledge and skills, promote learning and performance, and support education and professional development worldwide. Founded in 1947 as an independent organization by the American Council on Education, the Carnegie Foundation for the Advancement of Teaching, and the College Entrance Examination Board, ETS has grown to become the world's largest private educational testing and measurement organization, annually administering more than 11 million tests in 181 countries. Helping ETS carry out its mission are the following key divisions.

The ETS Statistics and Research Division is a group of innovative, internationally respected measurement experts who specialize in research and development in psychometrics, equitable testing, and assessment technology. More than 250 division staff, including some of the nation's most distinguished scientists in the fields of psychometrics and statistics, engage in research and analysis to support existing assessments and generate ideas for future assessment products and services. At the same time, they contribute to the field of educational measurement and policy research more broadly, providing objective data to inform current discussions about policy affecting the national education debates.

The School and College Services Division manages testing and nontesting programs, develops tests and ancillary services, prepares a number of publications, and offers a variety of products and services to the education market.

The division carries out work for a number of clients as well as for ETS. It serves ETS's largest client, The College Board, by providing the development and delivery of programs such as the SAT, the Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT), and Advanced Placement tests (AP).

The School and College Services Division also serves the National Center for Education Statistics through the development and delivery of the National Assessment of Educational Progress (NAEP) tests. Its other clients are the Educational Records

Bureau (ERB), the Southern Regional Education Board (SREB), Johns Hopkins University Institute for the Academic Advancement of Youth (IAAY), the New York City Board of Education, the National Association of Independent Schools (NAIS), the University of California, and the California State University System.

The mission of the Graduate and Professional Education Division is to provide leadership and continuous improvement in fair and equitable assessments and services that serve students, institutions, and society in graduate and professional education. It offers the majority of its testing through computers, and its major programs are the Graduate Record Examinations (GRE), the Graduate Management Admission Test (GMAT) and the Test of English as a Foreign Language (TOEFL).

The division also houses the Fairness, Access, Multiculturalism, and Equity (FAME) Initiative, a research-based effort to help ETS address the concerns of its increasingly diverse graduate and professional school education constituencies. FAME is an ethics-based effort designed to examine the connections between the expressed values underlying the company's assessments, products, and services and actual outcomes.

The purpose of the Information Systems and Technology Division is to deliver business value through information technology. Business value is defined as increasing revenue, decreasing costs, improving productivity, and supporting strategic initiatives and directives. Within Information Systems and Technology is the Advanced Assessment and Delivery Technologies (AADT) Division that is responsible for all enterprisewide systems associated with test creation, scoring, analysis, and delivery of assessments, collecting the candidate results. This includes paper-and-pencil tests as well as computer-based tests.

The Teaching and Learning Division is committed to supporting learning and advancing good teaching through a coherent approach to the licensing, advanced certification, and professional development of teachers and school leaders. Its major assessment programs include the Praxis Series: Professional Assessments for Beginning Teachers, the School Leadership Series, and working as the primary contractor to provide certification for the National Board for Professional Teaching Standards. The division also is responsible for the Pathwise Series

that offers a variety of professional development programs tied to research-based standards to help teachers at all levels (student, beginning, and experienced teachers) improve their teaching practices.

The Communications and Public Affairs Division has the responsibility to meet the communication and information needs of ETS employees and key external constituents to support the company's strategic direction. It aids management to project the public voice of ETS, articulating the philosophy, policy, and position of the organization as a leader in education reform.

*See also:* TESTING, *subentries on* IMPACT OF TEST PREPARATION PROGRAMS, STANDARDIZED TESTS AND HIGH-STAKES ASSESSMENT.

#### INTERNET RESOURCE

EDUCATIONAL TESTING SERVICE. 2002. <[www.ets.org](http://www.ets.org)>.

KURT LANDGRAF

## EDUCATION COMMISSION OF THE STATES

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The Education Commission of the States (ECS) is an interstate compact created in 1965 to improve education by facilitating the exchange of information, ideas, experiences, and innovations among state policymakers and education leaders.

Forty-nine states, three territories, and the District of Columbia constitute the commission's membership, each represented by the governor and six other individuals: legislators, chief state school officers, state and local school board members, higher-education officials, superintendents, teachers, and business leaders. The ECS chairmanship and vice chairmanship are held by a governor and a legislator, respectively, alternating between the two major political parties.

The Education Commission of the States' status as a nonpartisan organization, involving key leaders from all levels of the education system, creates unique opportunities to build partnerships, share information and promote the development of policy based on the best available research and strategies. ECS obtains financial support through a combina-

tion of state fees and contracts, sponsorships, and grants from foundations, corporations and the federal government.

ECS, which is headquartered in Denver, Colorado, has three operating divisions that work together to provide state policymakers with the services and products they need to make informed policy decisions about education. The Information Clearinghouse gathers, analyzes, disseminates, and serves as a repository of information on a broad range of education topics, from a wide variety of sources—including state legislation, research studies, reports, journals, and news articles. ECS provides access to this extensive collection of material through its website, through various print publications, and through customized, quick turnaround searches by Clearinghouse staff.

Through its Policy Studies and Programs Division, ECS identifies, studies, and provides heightened visibility for education trends and issues that are of greatest concern to its constituents. The organization's current areas of focus are accountability, finance, governance, leadership, and teaching quality.

State Services provides a range of customized technical assistance to states: consultation and advice, testimony at legislative hearings, policy audits and analysis, meeting facilitation, and support for partnerships and networks.

ECS sponsors state, regional, and national conferences (including the annual National Forum on Education Policy), all of which provide policymakers, educators, and other interested parties with an opportunity to share ideas and learn from one another.

*See also:* STATES AND EDUCATION.

#### INTERNET RESOURCE

EDUCATION COMMISSION OF THE STATES. 2002.  
<[www.ecs.org](http://www.ecs.org)>.

TED SANDERS

## EDUCATION DEVELOPMENT PROJECTS

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Contemporary education development projects can trace their origins to the programs of bilateral and

multilateral official development assistance offered to newly independent and developing countries after World War II. The goals and purposes, content, format, actors, financing, and delivery of education development projects have undergone many changes throughout the last half of the twentieth century.

### History

Official development assistance (hereafter, *aid*) for education expanded rapidly during the 1950s and 1960s when many previously colonized countries became independent. Industrialized countries were seen as partly responsible for the development of poorer and newly independent countries, through the provision of both financial resources and technical skills. Many multilateral institutions were founded to deliver development assistance, including the International Bank for Reconstruction and Development (IBRD), and the United Nations Development Program (UNDP). Foundations such as the Rockefeller and Ford Foundations became early players in the delivery of education development projects. Bilateral development assistance institutions, such as the United States Agency for International Development (USAID), were also established, and came to deliver both the largest share of international funding for development, and for educational development.

Ideas about modernization and progress dominated the work of these organizations. Development was generally defined as linear progress toward the kinds of economic and political systems existing in the Western industrialized world. Education, which was associated in industrialized countries with economic progress and national development through the creation of human resources, quickly became an important component of their development agenda.

Initially, educational aid was primarily used to provide tertiary or graduate training to foreign nationals in donor countries, to bring trained educators to developing countries, or to help establish international professional organizations. However, in the 1960s, the focus of educational aid shifted somewhat as concerns about “brain drain” and continued developing country dependency on external institutions led donor governments and organizations to support vocational programs and the construction of tertiary and secondary institutions in developing countries. Donors began to invest in discrete education projects, which often focused on training for education providers (for example,

teachers), provided technical support to education ministries, or constructed schools. Projects tended to fund capital as opposed to recurrent costs (like teacher salaries), and were small in scale, and staffed and monitored by the donor organization. Individual donors often specialized in a specific type of educational intervention or level of education, thus dominating that field and the pattern of its development in the recipient country.

### **The Project Model**

The project model for delivering aid had several advantages over the initial focus on high level training. It often kept developing country personnel in country for training, trained lower-level personnel, built infrastructure, and offered a greater variety of technical services and training. It allowed for variation and experimentation—leading, for example, to innovative efforts to focus on grassroots educational development and literacy by Scandinavian donors. Joel Samoff (1997) outlines some of the project model's weaknesses. Project aid often fragmented educational development and planning into a set of mismatched and uncoordinated donor-led interventions. It tended to emphasize short-term goals over longer-term needs, and to focus the resources of many of the countries' ministries of education on short term project management and evaluation, rather than on systemwide development. Donor resources were often tied—provided only to finance goods and services from donor nationals. Finally, the choice and implementation paths of education development projects were often highly politicized. Education development projects produced complex donor/recipient government interactions, often colored by the ideological or institutional experience with education in the donor country and by the donor's control over resources. For this reason, education development projects never functioned as the simple transfer of technical and financial resources originally envisaged in modernization theory.

### **Aid for Education**

Hans Weiler notes that in the late 1970s, even as donor organizations reconfirmed the benefits of education for national development, education aid budgets began to stagnate or decline. Although there is a lack of comparable data before 1973, it appears that overall aid for education from Organisation for Economic Co-operation and Development (OECD) member countries barely kept pace with inflation

after 1980. Ever fewer resources came from Eastern European, Soviet, and OPEC states and greater numbers of newly independent states vied for shrinking aid dollars. At the same time, the balance of influence among donors active in educational development projects shifted, with the World Bank emerging as the most significant single lender to education both in terms of technical and financial capacities.

Throughout the 1980s and 1990s, many developing countries faced a serious crisis in national education spending, caused both by widespread scale economic collapse and by subsequent structural adjustment programs. Financial tensions fueled debates among donors about the merits of educational expansion versus qualitative improvement, basic versus postprimary expansion of education, and academic versus technical/vocational or adult education. In the early 1980s, commentators such as Paul Hurst questioned the assumption that investment in education would yield economic growth, since two decades of large growth in educational investment in developing countries had not convincingly supported this claim. Soon after, new economic studies, such as Maraline Lockheed and Adriaan Verspoor's World Bank-sponsored study claimed that a focus on basic education (particularly for girls) was the most cost-effective and developmentally effective form of educational investment. An era of economic austerity also fueled the introduction of new components in educational development projects, including an emphasis on cost recovery mechanisms, the decentralization of educational systems, the introduction of national testing programs, and support for nongovernmental provision of educational services.

The 1990s saw a new convergence of donor activities, perhaps in part because of the ideological convergence that followed the collapse of state socialism. The 1990 World Conference on Education for All, sponsored by the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Bank, the United Nations Children's Fund (UNICEF), and others, brought donors and developing countries together around a more unified aid agenda focused on the revitalization of primary education in the poorest developing countries. Many donors subsequently reoriented their educational development efforts to focus on primary education. However, despite strong rhetoric, overall

levels of donor aid did not increase substantially during the last decade of the twentieth century.

Donors also began to debate the merits of sectorwide or systemwide approaches in education during the 1990s. Sectorwide approaches differ from project-based approaches in a number of ways. One of the most obvious is that sectorwide aid provides money directly to the developing country government's budget, on the basis of a long-term education development plan. There is debate about whether the effect of this mechanism is to give the recipient government greater control over how money is spent, or whether this shift actually amounts to greater restrictions on the government. First, sectorwide aid is often heavily conditioned, and second, donors now can expect recipient governments' entire sectoral approach to align with their increasingly convergent notion of what kind of education is best for development. Furthermore, instead of providing small-scale aid to many countries, the sectorwide model is highly selective, targeting the few countries able to provide a rational sector plan for educational change. Lastly, sectorwide aid is increasingly linked to wider acceptance of reforms in the areas of governance and economic policy.

Another important shift in educational development projects has been the growth of funding to support nongovernmental organizations (NGOs) as direct providers of educational services. There remains considerable debate about the sustainability of such strategies. Several of the largest international nongovernmental organizations active in educational development believe that NGOs should act more as policy advocates that service providers, and have launched an international campaign to this effect.

There have been tremendous changes in the putative focus of educational development projects—towards basic education, and a greater commitment to donor coordination, systemwide planning and local control. However, many scholars question the depth of such changes. In many countries, education development continues to receive limited external funding. A lack of coordination among donors and a lack of government control over the direction of educational development are commonplace. As in the past, the longer term sustainability of such efforts remains open to question.

*See also:* DECISION-MAKING IN DEVELOPING NATIONS, APPLYING ECONOMIC ANALYSIS TO; INTERNATIONAL DEVELOPMENT AGENCIES AND EDU-

CATION; NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS.

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## EDUCATION REFORM

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### OVERVIEW

Jacob E. Adams Jr.

### REPORTS OF HISTORICAL SIGNIFICANCE

Rick Ginsberg

## OVERVIEW

In 1983 American education reform entered a new era. It was in that year that the federal government published a report of the National Commission on Excellence in Education entitled *A Nation at Risk: The Imperative for Educational Reform*. Commissioned in August 1981 by President Ronald Reagan's secretary of education, Terrel H. Bell, and chaired by David P. Gardner, then president of the University of Utah, this eighteen-member blue-ribbon panel of educators and elected officials examined the quality of elementary and secondary public education in the United States and found a "rising tide of mediocrity" that threatened the nation's future. In inflammatory tones, the commissioners reported that the United States had engaged in unthinking, unilateral educational disarmament, asserting that if an unfriendly foreign power had attempted to impose on America the mediocre educational performance the commissioners found, the nation might well have viewed it as an "act of war."

In support of their conclusions, the commissioners presented numerous indicators of risk, including Americans' poor academic performance relative to students overseas, high levels of functional illiteracy among U.S. adults and seventeen-year-olds, and declining achievement-test scores. The commissioners also cited increasing enrollments in college remedial courses, increasing business and military expenditures on remedial education, and a diluted curriculum in the schools. They detailed low expectations for student performance and college admissions, less time devoted to instruction and homework, and poor-quality teaching and teacher preparation. According to the commission's analysis, the nation's schools narrowly emphasized basic

reading and computational skills at the expense of other essential talents, such as comprehension, analysis, problem solving, and the ability to draw conclusions. For the first time in U.S. history, the report concluded, the educational skills of one generation would not surpass, nor would they even equal, those of its predecessors. This development was particularly striking as it would occur during a period of increasing business demand for highly trained workers.

The commission called for a new public commitment to excellence and education reform anchored in higher expectations for all students. It encouraged students to work harder and elected officials to encourage and support students' efforts. The rhetoric of reform proclaimed that all children can learn and that public policies should do everything possible to fully develop the talents of America's youth.

Specifically, the commission recommended tougher high school graduation requirements, more rigorous and measurable standards of student performance and conduct, more time devoted to learning, better teaching and teacher preparation, more effective school leadership, and greater fiscal support. The report struck a national nerve, defining the public dialog about school quality and sparking state action in education reform. California acted first, adopting omnibus education reform legislation that increased high school graduation requirements, lengthened the school day and year, raised expectations for homework and student conduct, expanded student testing, and increased education funding. Other states followed California's lead, adopting education reforms of varying magnitude. The *excellence era* in education reform was launched, ushering in more than two decades of federal, state, and local initiatives to improve America's public schools.

### Reform Groundswell

Why was *A Nation at Risk* such a successful catalyst for U.S. education reform? Arriving against a backdrop of widespread concern regarding the health of the U.S. economy, the report reflected contemporary misgivings that America was losing its "once unchallenged preeminence" in commerce and technology. Confronted by economic recession at home and declining market share abroad, government and business leaders looked to public schools to assign blame and to seek solutions. In fact, one of the fundamental assumptions of education reform in the

mid-1980s was that the quality of K–12 education would determine the nation's economic success. While the booming U.S. economy of the 1990s proved this assumption false in the aggregate, the relationship between improved education and an individual worker's success in the new marketplace remained compelling. According to analysts, the business-related skills needed to earn a middle-class income had changed radically.

In the mid-1990s the economists Richard Murnane and Frank Levy described three elements to these *new basic skills*: (1) basic mathematics, problem-solving, and reading abilities at levels much higher than high school graduates typically attain; (2) the ability to work in groups and to make effective oral and written presentations, skills many schools do not even teach; and (3) the ability to use personal computers to carry out simple tasks such as word processing. To secure these skills, they concluded, schools must help teachers learn to teach new material, devise better tests of student knowledge and understanding, raise expectations, and engage students' attention and energy. Education reform promised an avenue to such changes.

Further reinforcing *A Nation at Risk's* call for education reform, the mid-1980s saw publication of book-length, unflattering critiques of American high schools written by leading academic researchers. All told, philanthropic foundations, business groups, academic researchers, education organizations, political associations, and government agencies produced more than two dozen influential reports on public education between 1983 and the end of the twentieth century. All of these reports found deficiencies in American schools, and all called for education reforms of one kind or another.

The impetus for reform gained additional energy from growing social and political discontent. Social service agencies reported increasing incidences of poverty, drug abuse, unwanted pregnancy, and violence; while citizens, through property-tax revolts and consideration of privatization proposals, demonstrated a declining confidence in public institutions. Could changes in American education address these social and political ills in the same way that they might better prepare students for productive careers? Advocates thought so, and the call for reform broadened.

Buttressing the imperative for education reform, the nation's top political leaders added their

support. In 1989 President George Bush convened an education summit of corporate leaders and the nation's governors. This elite group crafted the first-ever national goals for public education. Subsequently, Presidents Bill Clinton and George W. Bush similarly sponsored national education summits (in 1996 and 2001, respectively), symbolizing the continued importance of public education reform to the nation.

In the 1990s education reform benefited still further from a broad social demand to improve government efficiency. Operating under the moniker *reinventing government*, advocates argued that bureaucratic government had become inefficient, or even bankrupt, and they promoted new forms of government organization and activity that emphasized dispersed authority, competition, flexibility, customer service, community empowerment, performance incentives, and oversight based on results. Many excellence-era education reforms substantially reflected this reinventing government agenda.

Finally, national commissions on teaching and education governance issued reports in the 1990s, the former crafting a blueprint for recruiting, preparing, and supporting excellent teaching; the latter defining options for infusing greater adaptability, flexibility, and accountability into public school governance.

This groundswell for public-education reform was not without critics, however. Contesting the evidence of public education's demise, these critics argued that Americans were being misled about school accomplishments, even to the extent of confronting a "manufactured crisis." The ensuing debate contested the interpretation of student test scores and other performance indicators, while the tone of the debate reflected alternative political claims that conservatives wished to discredit public education and that liberals undercut a legitimate need for education reform. While neither side claimed that public education was satisfactory, they scuffled over which problems deserved attention and which solutions held the key to fundamental school improvement.

This debate was not surprising. As historians David Tyack and Larry Cuban have noted, disagreements about progress and regress in American public education are characteristic of the landscape, and political arguments have often been used to mobilize and direct education reform.

## Reform Policies

During the excellence era two strands of activity have dominated the nation's education reform efforts. The more visible strand involved federal, state, and local initiatives to improve educational programs and governance. Designed to influence what students know and are able to do, program and governance reforms divide into three overlapping periods, which are distinguished by their predominant reform strategy and relative reliance on governmental, professional, citizen, and market mechanisms of education reform.

*Intensification period* initiatives (1983–1987) tightened existing education regulations and raised student requirements. Examples include increased high school graduation requirements, a longer school day and year, and skills tests for beginning teachers. *Restructuring period* initiatives (1986–1995) altered the way education was organized and governed, devolving authority to schools (particularly teachers) and to parents. Examples include school-based management and school choice. So-called whole-school designs emerged during this period as well, representing ambitious attempts to restructure American education. The New American Schools, the Coalition of Essential Schools, Core Knowledge schools, Accelerated Schools, Success for All, and the Edison Project represent these research-based, result-driven comprehensive plans to reorganize entire schools. Restructuring reforms also reached beyond the schoolhouse, linking education and social services in an effort to address poverty, pregnancy, and other nonschool circumstances that inhibit students' learning.

*Standards period* initiatives (beginning in 1992) established content standards for student knowledge, performance standards regarding levels of student mastery, and opportunity-to-learn standards governing conditions of learning. States reinforced the new standards through equally new performance accountability systems composed variously of public reporting requirements and performance tests, some tied to school rewards, sanctions, or state interventions to assist failing schools.

Standards-based reforms adopted a systemic perspective on education change, pursuing greater coherence across the gamut of learning goals, curriculum changes, professional development, accountability assessment, and governance arrangements. Simultaneously, other governance concerns

spawned unrelated experiments with charter schools, contracting, and forms of privatization.

A second strand of education reform activity during the post-1983 period originated in legal challenges to state school-finance systems. Based on equal protection claims, judicially mandated finance changes attempted to ensure the equitable provision of educational resources. In arguing that unequal resources unfairly preclude groups of students from the educational services they need to have even a chance at academic success, equity proponents conceived the problem of poor student performance as an issue of relative, even minimal, educational opportunity.

On the whole, the program-governance and finance reforms developed separately. Program-governance reforms arose as a remedy to the nation's poor showing on international comparisons of economic and educational performance; they sought changes in student achievement, promoted excellence, involved multiple levels of government, mandated changes in educational practice, and promised difficult implementation. In contrast, school finance reforms arose as a remedy to unequal educational resources; they sought a different distribution of dollars, promoted equity, primarily involved state government, and mandated only technical changes in school funding formulas, which were relatively simple to implement.

In the 1990s the two strands began to converge. Fourteen state supreme courts decided school finance cases on the unique basis of education clauses in state constitutions, finding a new obligation that public education must be adequate, not just equitable. Adequacy combines equity concerns regarding resource distribution with attention to what those resources accomplish. Though the future of adequacy as an important impetus to education reform remains uncertain, adequacy does link school finance to the core purposes of public education in ways that equity does not.

### Reform Dynamics

While finance, intensification, restructuring, and standards-based reform strategies all sought improvements in student learning, they operated from different conceptions of the problems that hamper school success. Finance reforms attempted to remedy inequitable resource allocations. Intensification policies targeted low expectations. Restructuring ad-

ressed outmoded forms of school organization. Systemic initiatives combated fragmented and uncoordinated state education policies, and standards redressed unspecified student learning goals and measures of success.

Within the excellence era, the transition from one period of reform to another resulted from judgments that current initiatives were not improving student achievement, primarily because they were not addressing the right problem. The transitions signaled the continued search for a sound theory of education reform.

Analysts working from different disciplinary perspectives have identified other dynamics that shape the promise of reform. Political scientists, for instance, have highlighted fundamental value conflicts in education reform proposals. Because values conflict, reform goals and resources shift as often as their supporting political coalitions shift, or as issues gain and lose salience in legislative deliberations.

Policy analysts have depicted the incomplete design of many education reform policies. Researchers Paul T. Hill and Mary Beth Celio coined the phrase *zones of wishful thinking* to describe the situation that occurs when reform initiatives do not cause all of the changes in public education that are necessary to achieve the results they seek, leaving school improvements, in part, to chance. Implementation scholars have noted, at the local level, the lack of motivation or capacity to undertake reform, inspiring Milbrey McLaughlin's conclusion that it is incredibly hard to make something happen, especially across levels of government and institutional settings.

Sociologists have discussed how the organization of schooling shields teaching from education policymaking, protecting classrooms from the turmoil of shifting reform agendas but also fostering a teaching culture of isolated and idiosyncratic practice, rendering uniform changes problematic. This loose coupling of education policy and practice helps explain how constancy and change coexist in public schools. Educators have targeted weak instruction, proposing improvements in teacher preparation, initial licensing, and advanced certification, thus pinning reform hopes on a re-created infrastructure for professional learning and accountability.

While these dynamics influence parts of the education system, political economists have assailed the whole system, arguing that the prevailing bu-

reaucratic organization of public schooling, with its regulatory and compliance mentality and reliance on collective bargaining, precludes serious change. Their remedies would alter education's incentives and governance arrangements.

Psychologists studying adolescent behavior have added a further dimension to the debate, demonstrating how students' home environments, peer culture, and part-time work explain more differences in student achievement than teacher quality or other school factors. From this perspective, education reforms must extend beyond the boundaries of schools.

While demonstrating the complexity of education reform, these analyses also signal how the search for excellence in education has opened the entire educational enterprise to review.

### Reform Results

What are the results so far, in the early twenty-first century, of excellence-era education reforms? First, reform produced policy changes at all levels of government. At the national level, elected officials and business leaders articulated national education goals. Three presidents, George Bush, Bill Clinton, and George W. Bush, launched and touted education reform initiatives, while national education organizations adopted new professional standards for teacher education and administrator licensure.

At the state level, all states developed tests to measure student performance, and forty-nine states developed academic standards. Twenty-seven states began to hold schools accountable for results, promoting performance-based accountability but also inspiring debates about the scope and quality of standards, the adequacy of tests, and needed supports for change. Many states, California and Kentucky notably, legislated substantial programs of reform. Eighteen state courts overturned school finance systems, opening the door to greater equity in educational opportunity or adequacy in school funding.

Locally, with varying degrees of success, school districts and schools either adapted to these reforms or launched their own improvement initiatives. School spending increased approximately 36 percent in real terms, and education agencies grappled with how best to intervene in persistently low-performing schools. Throughout this period, education reform remained on legislative agendas, reflecting the public

commitment to reform envisioned by the National Commission on Excellence in Education.

Second, education reform introduced new structures to the institutional landscape of public education. Notable governance additions included school site councils, charter schools, service contracts, and vouchers. The new National Board for Professional Teaching Standards institutionalized professional teaching certification, while experiments with teacher compensation systems and with labor-management relations challenged teacher pay and work arrangements. At the school level, whole-school designs offered ready-made reform structures, and family resource centers integrated educational and social services.

Third, reform's policies and institutions wrought shifts in authority over education's goals and work. Among key actors, control shifted from educators and education interest groups to state policymakers, business leaders, mayors, and parents—the latter two, respectively, through mayoral takeovers of school districts and the introduction of school councils, charter schools, and school choice. At the organizational level, authority shifted simultaneously from school districts upward to state agencies and downward to schools. The shifts resulted from diminished public confidence in educators and education bureaucracies to accomplish school improvements and from the new focus on performance accountability, which enhanced state-school connections.

Fourth, in contrast to the level of reform activity, academic performance remained essentially flat. A gap persisted between test scores of white and minority students, though some gaps narrowed for some age groups in some subjects. More high school graduates made an immediate transition to college, from 53 percent in 1983 to 63 percent in 1999. Dropout trends were erratic but lower overall. In percentage terms, twice as many students took advanced courses in math, science, English, and foreign languages, though the overall numbers remained low—less than a third in English and language, less than half in math and science. In international comparisons of student performance, fourth and eighth graders in the United States scored above international averages in math and science, while twelfth graders scored below international averages in both subjects. On another dimension, Americans failed to attain even one of the six national education goals by the target year 2000.

Fifth, flat achievement notwithstanding, public support for public schools reached a new high in 2001. For the first time, a majority of Americans (51 percent) graded public schools either A or B, with 68 percent of public school parents grading their child's school A or B. Moreover, when asked to choose between reforming the existing school system and seeking alternatives to it, 72 percent of Americans chose education reform.

Finally, lessons learned from extensive school reform efforts in Kentucky and in Houston, Texas, demonstrated that bold education reform is possible but difficult. Observers credited success in these locations to a common vision of success, high expectations for all students, focus on results, strong leadership and teacher competence grounded in coherent curriculum and professional development, and business involvement. In short, education reform in these locations required incentives for performance, investments in organizational and individual capacity, and greater school autonomy.

### Enduring Issue

Americans have long translated their social ambitions into demands for education reform. In the excellence era, these ambitions primarily addressed economic and civic vitality. The compelling argument behind excellence-era education reform was that persistent, low levels of student achievement failed to equip students for success in the emerging economy and polity. That challenge remains. History's lesson is that, of all education reforms, changes in teaching and student achievement come slowly.

*See also:* EDUCATIONAL ACCOUNTABILITY; SCHOOL REFORM.

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## REPORTS OF HISTORICAL SIGNIFICANCE

Reports compiled by individuals or commissions suggesting reforms for public education have appeared throughout America's postcolonial history. Beginning in the late nineteenth century, committees and commissions of prominent individuals became popular for suggesting innovations to cure some educational ills. Since the 1983 release of the National Commission on Excellence in Education's landmark report, *A Nation at Risk*, reform reports have peppered the landscape on a wide array of topics affecting K-12 and higher education. Most of the waves of reform since the 1980s have been spearheaded by a high-profile study of schooling containing a clarion call regarding the need for improvements. Indeed, reform-by-commission has

become a mainstay in the arsenal of those hoping to change schools.

Those specifically examining the reform-by-commission process have come to a series of conclusions about these reports: (1) they have been around for a long time; (2) they tend to suggest changes in a very general manner; (3) they rarely attend to the significant issues in the implementation of reforms; and (4) their specific recommendations have had little direct impact on schools. That said, it is also clear that reform reports provide the rhetorical and symbolic context for reforms to be considered, as they denounce perceived problems and attempt to incite a sense of urgency demanding resolution.

Educational reform reports can be separated into three distinct periods. The first period, the period of early reform-report activity, includes the few reports generated in the United States up until the late nineteenth century. The second period, the era of Progressive reforms, roughly covers the late nineteenth century up until the 1980s. The final period, the era of the modern reform report, began in the early 1980s.

### Early Reform-Report Activity

A number of reports of Prussian and French educational innovations heightened interest in improving America's schools. For example, the German professor Johann Friederich Herbart published a volume on the psychology of the art of teaching in 1831, while a Frenchman, Victor Cousin, published a report on the Prussian system of preparing teachers that was reprinted in English in 1835. The first U.S. educational reform reports were generally conducted by prominent individuals driven to foster the development of the nation's universal, free, public, and compulsory system of common schools. Leaders such as Henry Barnard of Connecticut, Calvin Stowe of Ohio, Caleb Mills of Indiana, Calvin Whiley of North Carolina, and John Pierce of Michigan advocated reforms for schools. Most significant among these were the reports of Horace Mann, the secretary of the State Board of Massachusetts in the late 1830s and 1840s. Mann's twelve annual reports covered a broad range of topics and decried the poor efficiency of the public schools. His reports analyzed topics including the moral purposes of schooling, the curriculum, libraries, pedagogical methods, the quality and training of teachers, discipline, school facilities, and church-state relations regarding public schools. Mann urged the standardization of the schools.

Toward the end of the early reform period, the analyses of Joseph M. Rice, the editor of *Forum* magazine, were published. Rice, a pediatrician who had studied pedagogy in Germany, visited hundreds of urban classrooms in thirty-six cities during the 1890s. He found the conditions and methods of instruction deplorable. Rice eventually designed a simple method of testing spelling to make more reliable evaluations and reported his findings in a series of articles appearing in *Forum*.

As the design and nature of schooling in the United States unfolded during the nineteenth century, reports emerged that depicted the condition of American education and offered various remedies for reform. The pace of reports about schools intensified as the country expanded west and the American population grew. This pattern was evident in the era of Progressive reforms.

### Era of Progressive Reforms

From the 1890s until the 1980s a number of key education reports were published. These ranged from blue-ribbon commissions produced by elite educators and business persons to studies of schools prepared by prominent individual researchers. In this period the practice of conducting surveys of individual school districts was popularized. A 1940 textbook on educational history by John Russell and Charles Judd of the University of Chicago reported an astounding 3,022 educational surveys between 1910 and 1935. Supporters of this burgeoning examination of schools stressed the importance of using scientific techniques to inform policy.

Beginning in the 1890s the National Education Association (NEA), the leading professional education organization, produced a number of reports, the first and most notable being the 1893 report of the Committee on Secondary School Studies (chaired by Harvard president Charles Eliot), the *Report of the Committee of Ten*. The report identified the lack of uniformity in secondary programs and college admission requirements and sought to formulate curriculum and admissions requirements that would bring some harmony to secondary and higher education. Though scholars differ in their interpretation of the impact of this report's findings, the report did force high schools to work towards greater uniformity in curriculum.

In response to the tremendous growth in secondary school enrollment during the early decades

of the twentieth century, the NEA established the Committee on the Reorganization of Secondary Education, which produced *The Cardinal Principles of Secondary Education* in 1918. Published by the U.S. Department of Education, the document identified several means of preparing students for their duties as citizens, workers, and family members. The bulk of the report dealt with the goals of education in a democracy, the main objectives of education (seven were identified), and the role of secondary education in achieving these objectives. Key recommendations included compulsory schooling for at least eight hours a week until age eighteen and the creation of junior and senior high schools—with a comprehensive high school being one with a core curriculum, variables depending on vocation, and electives to accommodate special interests. The report reflected much of the thinking on education at the time, though its release during World War I no doubt affected its impact.

Other NEA-sponsored reports were released in the 1930s by the Commission on the Orientation of Secondary Education. *Issues of Secondary Education* (1936) and *Functions of Secondary Education* (1937) produced recommendations and key functions for secondary schools, including the idea of universal secondary school; curriculum beyond college preparatory, which was differentiated to meet specific needs; greater articulation between elementary and secondary schools; and, most controversially, that students should be eliminated from school once it was apparent that they would no longer benefit from being there.

Reports produced by the NEA-related Educational Policies Commission (EPC) included *The Unique Functions of Education in American Democracy* (1937) and *The Purposes of Education in American Democracy* (1938). In the first document, *schooling* was characterized as an institution that should be run by professionals with great academic freedom. Schools were to be run in a climate protective of democratic and scientific principles. The *Purposes* document amplified the key aims laid out in the *Cardinal Principles*. Some argued, however, that these recommendations were out of step with burgeoning issues related to the control of American youth.

The Progressive Education Association undertook several studies, the most prominent of which was the Eight-Year Study, the findings of which were released in 1942. This landmark evaluation project

included twenty-nine secondary schools with Progressive curricula whose students were studied for eight years. Several colleges agreed to accept students from these programs who didn't meet usual entrance requirements. The evaluation matched 1,475 pairs of students from Progressive and conventional high schools across an array of variables in college. Much of the impact of the study was clearly blunted by its release during World War II, and although little remained of the programs in the Progressive schools years after the study, the evaluation design served as the model for studies for decades.

Toward the end of World War II, the EPC released *Education for All American Youth* (1944). Re-released in 1952 to account for postwar changes, this report made suggestions for improving secondary education. At that time, more than half of all students never completed high school, yet the growing population and an increased faith in the power of schooling were swelling enrollments. Later in the 1950s, the Carnegie Corporation sponsored James Conant's *The American High School Today*, which involved visitations to fifty-five schools in eighteen states. Schools were evaluated, and it was determined that academically talented students were not being challenged. Key ingredients of successful schools were found to include strong school board members, superintendents, and principals; twenty-one specific recommendations for curriculum were included.

Probably the most significant report of the 1960s was the federally funded research study *Equality of Educational Opportunity*, published in 1966. Authored by James Coleman and associates, the report examined data from 600,000 students in 4,000 schools. The educational and socioeconomic backgrounds of students' families were found to be the most important variables explaining achievement, far outweighing the impact of school or teacher variables. These findings inspired several decades of debate, affecting a variety of school-related policies.

In the 1970s the Kettering Foundation created the National Commission on the Reform of Secondary Education, which worked on updating the Conant findings. Its 1973 report, *The Reform of Secondary Education*, focused primarily on alternatives to the traditional high school curriculum and a general definition for all American high schools.

Most of the reports in this period were driven by the push for scientific inquiry and the expanding

role of schooling in American culture. In the early 1980s, highly visible reports underscored perceived problems and offered solutions for change.

### Era of the Modern Reform Report

The 1980s became the decade of the reform report starting with the publication of Mortimer Adler's *The Paideia Proposal* in 1982. With the 1983 release of *A Nation at Risk*, the most widely acclaimed report of this genre, an unprecedented period of reform report activity began. It stated that a "rising tide of mediocrity" had overcome America's schools, and that if another nation had tried to impose such mediocrity on U.S. schools it would be considered "an act of war." Its many recommendations included strengthening the curriculum, lengthening the school day and the school year, paying teachers based on performance, and increasing homework. These recommendations were debated from statehouse to statehouse across the country. Though the recommendations may not have been followed exactly, the atmosphere for reform generated by the report ushered in a reform period unlike any other in the nation's history.

Other reports soon followed. In 1983 alone, major reports that were released included: Ernest Boyer's *High School*; the Business-Higher Education Forum's *America's Competitive Challenge*; the College Entrance Examination Board's *Academic Preparation for College*; John Goodlad's *A Place Called School*; the National Science Board Commission on Precollege Education in Mathematics, Science and Technology's *Educating Americans for the 21st Century*; the Southern Regional Education Board's *Meeting the Need for Quality Action in the South*; the Task Force on Education for Economic Growth's *Action for Excellence*; and the Twentieth Century Fund's *Making the Grade*. In 1984 TheodoreSizer's influential *Horace's Compromise: The Dilemma of the American High School* was published. Obviously, diverse entities focused on education, and no reforms could be promulgated without a commission-style report.

This reliance on reform reports continued unabated throughout the 1980s. Key areas for scrutiny included teacher education (*A Nation Prepared* [1986], *Tomorrow's Teachers* [1986]), educational administration (Leader's for America's Schools [1987]), improving school performance (*Time for Results* [1986]), and strengthening the economy through schooling (*Investing in Our Children* [1985],

*Children in Need* [1987]). The pace of reform-report activity continued in the 1990s and the early part of the twenty-first century. Examples of such reports include government-sponsored documents, such as *Does School Quality Matter, Beyond Rhetoric: A New American Agenda for Children and Families*, and *Prisoners of Time*; reports from business groups, such as *Investing in Teaching*; and privately financed reports from think tanks and interest groups, such as *The Teachers We Want and How to Get More of Them* and *The Essential Profession*. It appears that any government agency or interest group wishing to propose a series of educational reforms often launch their initiative with a reform report. With the growth of the Internet and its ability to deliver information quickly and cheaply, reports continue to emerge and are readily available to anyone with access to a computer.

### Conclusion

What can be said of reform reports across America's history? Clearly, such reports have been a mainstay of those interested in schools, though their use grew dramatically towards the latter part of the twentieth century. This history suggests that they will continue as a means of examining aspects of schooling and promoting particular solutions. Whether being merely symbolic or ceremonial in terms of creating a climate for considering change, or more directly functional in promoting specific policies into practice, they operate as a form of *trickle-down* reform, where some government agency or other body sets out policy recommendations for policymakers or those close to schools to consider. The policies that ultimately appear may not be as initially intended, but the reform reports help set the tone for the educational reform agenda that policymakers consider.

*See also:* EDUCATIONAL ACCOUNTABILITY; SCHOOL REFORM.

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RICK GINSBERG

## EFFICIENCY IN EDUCATION

Educators often feel ambivalent about the pursuit of efficiency in education. On the one hand, there is a basic belief that efficiency is a good and worthy goal; on the other hand, there is sense of worry that efforts to improve efficiency will ultimately undermine what lies at the heart of high-quality education. Part of the difficulty stems from a misunderstanding about the meaning of efficiency as well as from the legacy of past, sometimes misguided, efforts to improve the efficiency of educational systems. It is therefore useful to begin with a basic discussion of the efficiency concept.

The notion of efficiency applies to a remarkably large number of fields, including education. It is a

disarmingly simple idea that presupposes a transformation of some kind. One can think in terms of what was in hand before the transformation, what was in hand after the transformation, and one can also think about the transformation process itself. The *before* elements are commonly referred to as ingredients, inputs, or resources while the *after* elements are called results, outputs, or outcomes. The transformation process is sometimes less obvious and can become confused with ingredients. For example, in an educational setting, a teacher can be thought of as an ingredient while teaching is an important part of the actual transformation process.

The concept of efficiency is often connected to a moral imperative to obtain more desired results from fewer resources. Efficiency needs to be thought of as a matter of degree. Efficiency is not a "yes/no" kind of phenomenon. It is instead better thought of in relative or comparative terms. One operation may be more efficient than another. This said, the more efficient of the two operations could become even more efficient. The quest for greater efficiency is never over, and this sense of a perennially unfinished agenda is one source of the generalized sense of anxiety that tends to surround the efficiency concept.

### The Choice of Outcomes

If the goal is to obtain more desired results from fewer resources, then it is important to be clear about what is being sought. Society might have a very efficient system because a large amount of outcome is being obtained relative to the resources being spent or invested, but if the outcomes are out of sync with what is truly desired, there is a real sense in which the system is not very efficient. Of course, this invites important questions about who gets to decide what counts as a desirable outcome, and in education there are longstanding and ongoing debates over what the educational system ought to be accomplishing.

In the United States, education is viewed as a responsibility of the individual states rather than the national government, and the states have made efforts to define the outcomes they seek from their educational systems. These efforts have come to be known as *standards-driven initiatives*, where the standards constitute pronouncements from the states about the collective expectations for what the schools need to accomplish. The idea has been for each state to articulate the desired outcomes and then provide flexibility to the districts, schools, ad-

ministrators, teachers, and students to meet the standards in ways that make the most sense given local circumstances.

States have handled this in different ways and there are interesting deeper questions about how to balance state judgments with judgments that are made at more localized levels. How, for example, should a disagreement between a duly constituted local school board and the state be settled? Going further, how should the views of local boards be considered as the state sets its standards? What is the proper role for minority views? And how should revisions be handled as time passes?

It is customary to think of the state's setting minimum standards that can be exceeded by individual localities if a locality resolves to do so and can muster the necessary resources. This thinking presupposes a hierarchical view of educational outcomes in the sense that outcome "C" builds upon outcome "B" while outcome "B" builds upon outcome "A." A problem is that outcomes may not always have this kind of hierarchical nature. Suppose a school wants to provide a high degree of personalized attention as part of its program. Is this an input or an outcome? Let us suppose that this is a costly thing to do. The school that pursues this strategy is going to consume more ingredients and if only the standard outcomes are looked at, this school is going to look like costs are high relative to the outcomes that are realized. Hence, the school could look inefficient for the simple reason that it has chosen to pursue a different set of educational goals. There is also the possibility that a locally selected goal can interfere with or undermine one of the state selected goals.

In addition to reaching agreement about the mix of outcomes to pursue, there are important measurement issues to consider. An interest in efficiency is frequently accompanied by an interest in measuring magnitudes. If one is seeking more out of less, one frequently wants to know "how much more," and the result has been a boom in the efforts by educational psychologists and others to develop valid and reliable measures of the learning gains of students. Critics of efficiency analysis in education worry that ease of measurement can unduly influence the selection of the outcomes that the system will be structured to achieve. In other words, the worry is that the drive for efficiency will lead, perhaps inadvertently, toward the use of educational outcomes that are chosen more because they are easy

to measure than because of their intrinsic long-term value for either individual students or the larger society. Standardized tests of various kinds have been relied upon as measures of the outcomes of schooling and have been criticized on these grounds.

Sometimes there is interest in the economic consequences of schooling, and this interest has prompted analysts to use earnings as a measure of schooling outcomes. A rich literature has developed in the economics of education where efforts have been made to estimate the economic rate of return to different levels and types of schooling. This is a challenging area of research because earnings are influenced by many factors and it is difficult to isolate the effects of schooling. The goal of this research is to capture the value added by schooling activities.

The relevance of the *value-added* concept is not limited to economists' studies of rates of return. Even in cases where the focus is on learning outcomes as measured by tests or other psychometric instruments, there are questions to answer about the effects of schooling activities relative to the effects of other potentially quite significant influences on gains in students' capabilities. Serious studies of the efficiency of educational systems measure educational outcomes in value-added terms.

Measurement issues also arise from the collective nature of schooling. The results gained from schooling experiences are likely to vary among individual students and this prompts questions about how best to examine the result for the group in contrast to an individual student. Is one primarily interested in, say, the average performance level, or is there a parallel and perhaps even more important concern with what is happening to the level of variation that exists across all of the students within the unit, be it a classroom, grade level within a school, a school, a district, a state, or a nation? The early research on educational efficiency in the 1960s placed a heavy emphasis on average test score results for relatively large units like school districts. More recent work demonstrates greater interest in measures of inequality among students. The standards-driven reform movement includes a considerable amount of rhetoric about all students reaching high standards; the analysis of efficiency presupposes an ability to move beyond the easy rhetoric to make clear decisions about how uniform performance expectations are for students.

In addition, there is an important distinction to maintain between the level at which a system oper-

ates and the rate at which inputs are being transformed into outcomes. One can “get the outputs right” so that the desired items are being taught/learned in the correct proportion to one another. In such a case, gains in the understanding of mathematics are occurring in the correct proportion to, say, gains in language capabilities. But this says nothing about the absolute level at which the system is operating. The naive view might be that the system should operate at 100 percent of its capacity, but this overlooks the fact that scarce resources are needed to operate at this level and that education is not the only worthy use of these precious resources. Policy-makers must make often difficult trade-off decisions about the level at which the educational system will operate relative to the level of other competing social services. The early twenty-first century is witnessing a considerable amount of debate over the proper level at which to set the educational system, often as part of an effort to define what counts as an “adequate” education.

With respect to outcomes, the goal is to reach agreement about (1) the relative mix of performance outcomes to realize; (2) the degree of uniformity of performance across students; and (3) the level of capacity at which the system should operate. In addition, there needs to be an ability to measure what is being accomplished.

### The Choice of Inputs

The outcomes that are selected drive the entire system. Input issues, in contrast, are more straightforward and almost mechanical in nature. Once what is to be accomplished is known, at what level, and for whom, society can then turn to the challenge of doing so in as economical a way that is possible. In other words the goal is to accomplish the desired results for as little cost as possible, and this involves making the best possible use of whatever ingredients or resources that are available.

Although this seems straightforward, there are a number of complexities that need to be considered. First, there is the dynamic nature of the process. As time passes, more is learned about how to make better and better use of the available resources and new resources may also become available. A good example of a new resource lies in the area of telecommunication and computing technology. These advances have great potential to affect the day-to-day life of educational practice. It is also important to keep in mind that the nature of how tech-

nology develops is not external to the system. Technology does not develop in a vacuum. Instead, there are sometimes powerful forces that shape the nature of how technology develops. For example, many existing instructional computing technologies are designed to supplement rather than to supplant existing classroom activities. This tendency for computing to be treated as the handmaiden of the traditional classroom structure may not be in the best long-term interest of the larger society.

Second, there is the technical versus cost dimension to consider. A particular resource or input might be highly productive in the sense that a small amount could make a significant difference, but this same highly productive resource might be extraordinarily costly. For example, suppose having one hour per week of a Nobel prize winning physicist’s time turns out to be an extraordinarily productive input for high school students who are learning physics. Suppose further that such a resource is quite costly. In contrast, an hour per week of a local Ph.D. in physics might be less costly but let us also say that it is less productive. From an efficiency perspective, the question is: How do the ratios of benefit relative to cost compare? It is quite conceivable that the benefit/cost ratio for the Nobel prize winner is smaller than the comparable ratio for the local Ph.D., even though the absolute measure of the Nobel prize winner’s effectiveness (i.e., the result per unit of input) is higher.

Third, in addition to making sense of benefits relative to costs, there is also the challenge of making the best possible use of whatever resource is being employed. For example, just because a Nobel prize winner has the potential to be a very productive input does not preclude the possibility of that resource being squandered in a particular setting, and the same can be said of the local Ph.D. in physics, or an artist who is hired to spend some time in a school. The quest for greater efficiency requires the parties to make the best possible use of whatever resources come into their possession.

Finally, there is the potential for the costs of inputs to influence the selection of outcomes. Some outcomes are more costly to produce than others. For example, a student who finds it difficult to learn will, by definition, be relatively costly to educate, and these extra costs could influence decisions that are made about how uniform to make the learning outcome standards. And thus, the distinction between outcomes and inputs begins to break down.

## The Transformation Process and Implications for Policy

Policymakers are very interested in assessing the degree of efficiency in educational systems. One difficulty arises when indicators are used that fail to provide accurate information. For example, a widely available statistic is the level of spending on education expressed on a per pupil basis. At first glance, this looks like an efficiency indicator since it provides insight into the commitment of resources (the expenditure figure) and the result (the number of students being served by the system). Critics note that this statistic has been rising over time and conclude that the system is becoming less efficient. There are many reasons to be wary of using an expenditure per pupil statistic and its changes over time to reach such a conclusion. Even with a control for the effects of inflation, there remains a fundamental problem on the outcome side of the analysis since there is no direct measure of what the schools are accomplishing and how this might have changed over the period.

Even if accurate, noncontroversial measures of efficiency and its changes over time can be obtained, it is difficult to obtain clear insight into what policies should be developed to ensure gains in efficiency without undermining other key social goals like fairness and freedom of choice. Much of the challenge here depends on the fundamental nature of the transformation process that is presupposed as part of the efficiency concept. The efficiency concept derives from the field of economics where it was initially applied to industrial production processes such as the manufacture of automobiles. These industrial manufacturing processes involve the combination of numerous nonhuman ingredients such as lengths of steel, aluminum, glass, chrome, and so forth. These ingredients are transformed thanks to various physical and chemical processes whose scientific properties are relatively well understood, making the results quite predictable.

For a manager whose goal is to improve efficiency, this kind of information is invaluable. With this information the manager can compare higher performing units with lower performing units and make a diagnosis about the source of the inefficiency in the underperforming units. There may be problems with a unit's ability to get the most out of the inputs it is using; there may be a less than optimal mix of inputs being used; and/or the mix of outputs being produced may be misaligned. The "efficiency

expert" in such a situation is able to pinpoint the source of the difficulty and can prescribe steps for improvements.

In contrast, the educational process is heavily committed to the use of human resources and the various inputs are brought together and transformed in ways that are sometimes difficult to predict. Without denying the significance of the human dimension within industrial manufacturing processes, it stands to reason that the production or transformation process that lies at the center of educational systems is fundamentally more complex and less well-understood than production in the industrial sector. A better comparison comes from studies of efficiency in crop production in the field of agricultural economics. But even here, the production process for growing a particular plant is better understood than is the process through which human minds mature and acquire knowledge and understanding. Indeed, it is possible to question whether the educational process really lends itself to the input-output, mechanical formulation that lies at the heart of the efficiency concept. According to this view, educational growth is inherently unpredictable, and the teacher is better thought of as a creative artist than as a productive input whose impact can be measured and predicted in a rigorous and scientific way.

While it is clear that knowledge of the technical properties of the educational process is more limited than what exists, say, in the area of automobile manufacturing, it does not follow that the educational process is inherently unknowable in this sense. In other words, the lack of progress to date in coming to grips with the technical properties of the education transformation process does not mean the process is inherently unpredictable and unmanageable. A more prudent conclusion is that care needs to be exercised in efforts to assess the efficiency of educational systems. It also follows that care needs to be exercised in the use of the efficiency assessment data that are gathered.

Consider the following example of how the results of an efficiency analysis in education can be misapplied. Suppose an analysis goes forward that suggests that a particular school or school district is less efficient than most others. Suppose the response is to penalize the less efficient unit by reducing the flow of state or federal resources. A byproduct of such a policy is a reduction in the funding of the education being provided to students who through no fault of their own find themselves located within an

inefficient educational system. Those who work to improve the efficiency of educational systems must guard against this potential to “blame the ultimate victim” of the situation. Similarly, the use of incentives to encourage greater efficiency runs the risk of rewarding those who are already enjoying considerable success. If the problem lies with the unknown nature of the production process, it is perverse to be implicitly penalizing the underperforming districts because they do not have knowledge that is lacking elsewhere. Penalizing underperformers makes sense only if the knowledge is available and the penalties are meant to provide greater incentive to find it. States sometimes handle this by providing technical assistance but technical assistance really works only when it is based on bona fide knowledge, something which is not always possible, given the continued limited understanding of the properties of educational production under a wide range of circumstances.

At this stage of development in efforts to apply the efficiency concept to the field of education several conclusions can be reached.

1. It is important to make sure that the comparative information suggesting that one educational unit is more or less efficient than another is accurate.
2. This accurate comparative information needs to be used as a set of guidelines/suggestions and needs to stop short of becoming overly rigid and prescriptive.
3. Efforts need to be made to monitor very carefully the results of attempts to improve the efficiency of educational systems that are perceived to be below expectations.
4. Additional research efforts need to be made to better understand the technical properties of the transformation process that gives rise to desired educational results.

The results of this continuing research will be instrumental in future efforts to make further efficiency improvements in education and can go far toward reducing the ambivalence that historically has characterized educators' reaction to the efficiency concept and its application to the field of education.

*See also:* EDUCATIONAL ACCOUNTABILITY; EDUCATION REFORM.

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DAVID H. MONK

## EFFORT AND INTEREST

The research literature provides support for John Dewey's observation that effort and interest in education can be understood as being both oppositional and complementary. Five minutes of work on a task may feel like hours to a student who does not know what the next steps need to be, or even what the longer-range goals for the work are—especially if the student does not have a developed interest for the task. Similarly, a student with a well-developed individual interest for Latin may be able to briefly glance at the third declension adjective endings and decide he knows them, while another, equally able student with a less-developed interest for Latin, has to work after school to learn these endings.

### Effort

*Effort* usually refers to whether a student tries hard, asks for help, and/or participates in class. Studies of

student effort suggest that the more difficult a task appears—in the sense of the task’s difficulty and the likelihood that the student can complete it successfully—the less likely it is that the student will be motivated to take the task on. On the other hand, studies of student effort also suggest that effort is associated with the possibility of doing well on a task. Thus, students might be expected to figure out what they need to study, study it, and be successful—if they have the *ability* to do the assigned task, confidence in this ability, and no anxiety about the task.

Whether students exert effort or not is typically described as a choice or decision that is made by the student about whether success is possible. Students’ *expectancy value* is influenced by their previous success, their perceptions about teachers’ beliefs and practices, their goals, and by their self-concept. Students’ beliefs about both their own abilities, and about the relation between ability and effort, influence the likelihood that they will exert effort. As Carol Dweck points out, students’ beliefs develop over time in conjunction with experience. She also notes that students are increasingly influenced by the feedback they receive, meaning that some change in students’ beliefs and motivation is possible.

Deborah Stipek’s research, for example, suggests that students are engaged and learning takes place when teachers promote effort in the classroom by emphasizing participation, setting high expectations, and encouraging students to support each other as learners. If students have a clear understanding of the goals of the tasks they are assigned, they also might be expected to be better able to effectively regulate the possibility of their success. In fact, students who have a sense of efficacy, who both value and experience feelings of enjoyment for the task, can also be expected to expend effort to master the task.

## Interest

*Interest* describes the cognitive and affective relationship between a student and particular classes of subject matter. However, one student’s effort to master Latin, mathematics, or lacrosse is not likely to be the same as another student’s efforts. Moreover, how a student approaches different subjects can be expected to vary, just as the background and basic abilities that each student brings to each subject will vary.

Interest can hold a student’s attention, encourage effort, and support learning. It also has been found to enhance strategic processing. Furthermore,

students can experience more than one type of interest concurrently.

Three types of interest can be identified, each of which reflects differing amounts of knowledge, value, and feelings. These are: (1) situational interest, (2) individual interest (sometimes referred to as *topic interest*), and (3) well-developed individual interest. *Situational interest* refers to the short-lived or momentary attention to, or curiosity about, particular subject matter, and can be accompanied by either positive or negative feelings. *Individual interest* is a relatively enduring predisposition to experience enjoyment in working with particular subject matter. An individual interest may or may not provide a student with the support to put forth effort when faced with a difficult task, presumably because the identification of individual interest in terms of enjoyment provides no information about the depth of a student’s knowledge about the topic. *Well-developed individual interest* is a relatively enduring predisposition to re-engage particular classes of subject matter over time. A student with a well-developed individual interest for a subject has more stored knowledge and stored value for that subject than he or she has for other subjects. With more stored knowledge and stored value for a given subject matter, the student is positioned to begin asking curiosity questions that drive knowledge acquisition, consolidation, and elaboration, and that leads the student to persist in the face of frustration or difficulty.

Well-developed interest is the type of student interest to which most people are referring when they talk about interest and its impact on learning. For example, students who immerse themselves in a task they have been assigned, or who are willing to expend a lot of effort to master a skill that will allow them to begin work on some future project, are likely to have a well-developed interest for the subject of that project. Importantly, the student who has a well-developed interest for a subject area may not seem to be aware that he or she is exerting effort. Instead, it appears that interest may free up possibilities for students to push themselves, just as it frees up their ability to process interesting stories.

A student does not simply decide to have a well-developed interest for a subject about which he or she has previously had either little knowledge or value. Nor is a well-developed interest a set of beliefs about utility or value. In fact, a student who has a well-developed interest for mathematics may or may

not be aware that he or she has begun to think and question in ways that are similar to a mathematician.

A student could, however, make a decision to learn about a subject, and in so doing move rather rapidly from having a situational interest to having an individual interest for it. In this instance, the student's decision to work on developing his or her knowledge is a choice and would involve effort, and would probably be identified as an individual interest. Once the student began to generate his or her own questions about the subject, worked to understand these, and did not find major investments of time effortful, the student might then be considered to have a well-developed individual interest for the subject matter.

All types of interest require conditions that allow the interest to be maintained, to continue to deepen, and to merge with other content. A number of studies have suggested the importance of providing students with meaningful choices, well-organized texts that promote interest, and the background knowledge necessary to fully understand a topic. Even students with a well-developed interest for a particular subject need to be supported to continue challenging what they know and assume in order for their interest to be sustained.

### Effort and Interest

The research reviewed here suggests that effort needs to be understood as involving choice, as being rooted in beliefs, and as being influenced by feedback. In addition, interest needs to be understood as a cognitive and affective relationship between a student and a particular subject that varies depending on the type of interest being described. As Andreas Krapp has observed, students who want to be doing what they are supposed to be doing because of a well-developed interest are not a problem for educators. The challenge for education could be understood as one that involves figuring out how to get students to want to do what teachers want them to do. However this interpretation sets effort and interest at cross purposes and is not productive. Instead, the research suggests that educators should focus on the complementarity qualities of effort and interest. Providing students with conditions that will involve them in deepening their knowledge should position them to begin asking their own questions about a particular subject matter; recognize that they both have the ability to work on developing their understanding of, as well as their confidence about their ability to

work with, the subject matter; and provide support for developing interest and effort that includes trying hard, asking for help, and/or participating. In fact, as John Dewey anticipated, it appears that when conditions to support student interest are in place, effort will follow.

*See also:* MOTIVATION.

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## EIGHT-YEAR STUDY

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The Eight-Year Study (also known as the Thirty-School Study) was an experimental project conducted between 1930 to 1942 by the Progressive Education Association (PEA), in which thirty high schools redesigned their curriculum while initiating innovative practices in student testing, program assessment, student guidance, curriculum design, and staff development.

### Purpose

By the late 1920s the members of PEA acknowledged that only one out of six American high school students continued on to college, yet conventional college preparation programs still dominated the basic course of study at the secondary school level. Seeking to address the needs of non-college-bound students while also providing better coordination between high schools and colleges for those students who continued their postsecondary education, the PEA initiated in 1930 the first of three Eight-Year Study commissions, the Commission on the Relation of School and College (also known as the Aikin Commission), chaired by Wilford Aikin. The purpose of the commission was to foster relations between schools and colleges that would permit experimentation of the secondary school curriculum and would address how the high school could serve youth more effectively.

The Aikin Commission proceeded to select approximately thirty schools (including some school systems) that were freed to revise their secondary curriculum. Over 250 colleges agreed to suspend their admissions requirements for graduates of the participating high schools, and alternative forms of documentation were provided by the secondary schools for college admission. All of these secondary schools did not embrace Progressive Education practices, however. While some of the most progres-

sive schools in the country participated, including Denver's public high schools, Chicago's Parker School, New York's Lincoln School, Ohio State University's Laboratory School, Des Moines's Roosevelt High School, and Tulsa's Central High School, other participating secondary schools displayed few progressive practices and little interest in experimenting with their curriculum.

### Method

During the initial years of the study, each school staff developed its own curricular program—core curriculum—which sought to integrate and unify the separate academic subjects. A series of innovative staff-development workshops were scheduled beginning in 1936 to assist teachers in reconsidering the basic goals and philosophy of their specific school and to support the development of their own teaching materials. The Aikin Commission coordinated the Follow-Up (evaluation) Study and selected 1,475 students to follow from high school into college. These Progressive school graduates were matched with graduates from traditional secondary school programs, and the pairs of students were evaluated as they proceeded through college. In comparison to their counterparts, the Progressive school graduates performed comparably well academically and were substantially more involved and successful in cultural and artistic activities. The Follow-Up Study also concluded that graduates from these thirty experimental schools did not experience any impairment in their college preparation. The Eight-Year Study confirmed that schools could experiment with the curriculum while attending to the needs of all students, and in so doing, those college-bound graduates would not be ill-prepared. The Commission on the Relation of School and College released a five-volume report in 1942, titled *Adventures in Learning*, which described the curriculum and evaluation of the schools.

As the Aikin Commission worked with school and college staff, the Commission on Secondary School Curriculum (also known as the Thayer Commission), chaired by V. T. Thayer, was formed in 1932 to develop curriculum materials for the participating schools. The Thayer Commission recognized that further study of youth needed to be undertaken, and within the auspices of this PEA commission, the Study of Adolescents was conducted. Between 1937 and 1940, five volumes of curriculum materials aligned to the traditional subject areas of general ed-

ucation (science, mathematics, social studies, arts, and language) and an additional six volumes encompassing the study of adolescence were published. A third PEA commission, the Commission on Human Relations (also known as the Keliher Commission) formed in 1935, prepared social-science-related curriculum materials—incorporating the then-innovative use of motion pictures—and examined those human problems faced by youth. Six volumes were released by the Keliher Commission between 1938 and 1943, some written directly for high school students and others written for professional educators who sought to integrate the school curriculum around the needs, interests, and problems of youth. Membership among these three commissions overlapped greatly and are now viewed as integral components of the Eight-Year Study.

### Results

To correct a general misconception, the Aikin Commission's Follow-Up Study was not the sole purpose of the Eight-Year Study. Important outcomes of the Eight-Year Study included developing more sophisticated student tests and forms of assessment; innovative adolescent study techniques; and novel programs of curriculum design, instruction, teacher education, and staff development. Moreover, the Eight-Year Study proved that many different forms of secondary curricular design can ensure college success and that the high school need not be chained to a college preparatory curriculum. In fact, students from the most experimental, nonstandard schools earned markedly higher academic achievement rates than their traditional school counterparts and other Progressive-prepared students.

*See also:* ALBERTY, H. B.; INSTRUCTIONAL STRATEGIES; PROGRESSIVE EDUCATION; SECONDARY EDUCATION, *subentry on* HISTORY OF; THAYER, V. T.

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CRAIG KRIDEL

## ELEMENTARY AND SECONDARY EDUCATION ACT OF 2001

See: NO CHILD LEFT BEHIND ACT OF 2001.

## ELEMENTARY EDUCATION

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### HISTORY OF

Gerald L. Gutek

### CURRENT TRENDS

Jane McCarthy

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### PREPARATION OF TEACHERS

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## HISTORY OF

Elementary schools exist worldwide as the basic foundational institution in the formal educational structure. Elementary schooling, which prepares children in fundamental skills and knowledge areas, can be defined as the early stages of formal, or organized, education that are prior to secondary school. The age range of pupils who attend elementary schools in the United States is from six to twelve, thirteen, or fourteen, depending on the organizational pattern of the particular state or school district. While a few, mainly small rural, districts, retain the traditional pattern of grades one through eight, a more common pattern is grades one through six. In most school districts as well as in many teacher preparation programs, elementary education is organized into the following levels: primary, which includes kindergarten and grades one, two, and three; intermediate, which includes grades four, five, and six; and upper, which includes grades seven and eight. A commonly found organizational pattern places grades seven and eight, and sometimes grade six and nine, into middle or junior high schools. When the middle school and junior high school pattern is followed, these institutions are usually linked into secondary education, encompassing grades six through twelve.

In comparing elementary schools in the United States with those of other countries, some distinc-

tions in terminology are necessary. In the United States, *elementary* education refers to children's first formal schooling prior to secondary school. (Although kindergartens, enrolling children at age five, are part of public schools, attendance is not compulsory.) In school systems in many other countries, the term *primary* covers what in the United States is designated as elementary schooling. In American elementary schools, the term *primary* refers to the first level, namely kindergarten through grades one, two, and three.

The elementary school curriculum provides work in the educational basics—reading, writing, arithmetic, an introduction to natural and social sciences, health, arts and crafts, and physical education. An important part of elementary schooling is socialization with peers and the creating of an identification of the child with the community and nation.

### History of Elementary Education in the United States

The European settlers in the North American colonies, in the sixteenth and seventeenth centuries, initially re-created the school systems of their homelands. They established a two-track school system in which the lower socioeconomic classes attended primary vernacular schools and upper class males attended separate preparatory schools and colleges. The primary schools—elementary institutions under church control—offered a basic curriculum of reading, writing, arithmetic, and religion.

**Colonial period.** While many similarities existed in the colonial schools, there were some important differences between New England, the Mid-Atlantic, and the South. The New England colonies of Massachusetts, Connecticut, and New Hampshire, which were settled primarily by Puritans, were characterized by a strong sense of religious and social conformity. Because of their Calvinistic emphasis on reading the Bible and other religious literature, the Puritans quickly established elementary schools. In 1642 the Massachusetts General Court, the colony's legislative body, made parents and guardians responsible for making sure that children were taught reading and religion. In 1647 the General Court enacted the Old Deluder Satan Act, which virtually established elementary education by requiring every town of fifty or more families to appoint a reading and writing teacher. Massachusetts and the other New England colonies developed the town school, a locally controlled, usually coeducational elementary

school, attended by pupils ranging in age from six to thirteen or fourteen. The school's curriculum included reading, writing, arithmetic, catechism, and religious hymns. The model of the town school, governed by its local trustees or board, became an important feature of later U.S. elementary schooling.

The Middle Atlantic colonies of New York, New Jersey, Delaware, and Pennsylvania were settled by diverse ethnic and religious groups. In addition to English, Scots, and Scotch-Irish, there were Dutch in New York, Swedes in Delaware, and Germans in Pennsylvania. The Middle Atlantic colonies' religious and language diversity had important educational implications. Elementary schools were usually parochial institutions, supported and governed by the various churches.

In the southern colonies—Maryland, Virginia, the Carolinas, and Georgia—enslaved Africans were used as forced labor on the plantations. Wealthy families employed private teachers or tutors to educate their children. Enslaved Africans were trained to be agricultural workers, field hands, craftspeople, or domestic servants, but they were legally forbidden to learn to read or write. There were some notable exceptions who learned to read secretly.

**Early national period.** After the establishment of the United States as an independent nation, the earliest U.S. federal legislation relating to education was included in the Northwest Ordinance of 1785. The ordinance divided the Northwest Territory into townships of thirty-six square miles, and each township was subdivided into thirty-six 640-acre sections. Each township's sixteenth section was to be used to support education. Unlike constitutions or basic laws in other nations, the U.S. Constitution, ratified as the law of the land in 1789, did not refer specifically to education. The Tenth Amendment's "reserved powers" clause (which reserved to the states all powers not specifically delegated to the federal government or prohibited to the states by the Constitution) left education as a responsibility of each individual state.

During the early national period, the first half of the nineteenth century, American leaders, such as Thomas Jefferson (1743–1826), argued that the United States needed to develop republican schools that were different from those found in the European monarchies. Jefferson's "Bill for the More General Diffusion of Knowledge," introduced in the Virginia legislature in 1779, would have made the

state responsible for providing both girls and boys with a basic elementary education, in a local ward school, at public expense. Although not enacted, Jefferson's bill had an important influence on later developments.

The movement to establish an American version of elementary education was promoted by Noah Webster (1758–1843), who sought to create an American version of the English language and instill an American identity into the young through language instruction. Webster's *American Spelling Book* and *American Dictionary* were widely used in schools.

**The movement to common or public schools.** In the 1830s and 1840s, several Western nations began to develop national elementary or primary school systems that were intended to augment or replace the existing church-controlled institutions. In France, Francois Guizot, the Minister of Education in the regime of Louis Philippe, promoted national elementary schools. In the United States, with its historic tradition of local and state control, the movement to establish public elementary schools was not national but carried on in the various states.

Before public elementary schools were established, attempts were made in the United States to establish various kinds of philanthropic elementary schools, such as the Sunday and monitorial schools. The United Kingdom, a leading industrial nation, also experimented with these approaches to primary education. The Sunday school, developed by Robert Raikes, an English religious leader, sought to provide children with basic literacy and religious instruction on the one day that factories were closed. In both the United States and the United Kingdom, Sunday schools were established in the larger cities.

Monitorialism, also known as mutual instruction, was a popular method of elementary education in the early nineteenth century in the United Kingdom, the United States, and other countries. Two rival English educators, Andrew Bell, an Anglican churchman, and Joseph Lancaster, a Quaker teacher, promoted monitorialism independently. The monitorial method relied heavily on *monitors*—more advanced pupils, trained by a master teacher—to teach younger children. Monitors aided teachers in conducting classes, taking attendance, and maintaining order. In using this method, the master teacher trained a selected group of older students as monitors in a particular skill, such as adding single-digit

numbers or reading simple words. These monitors then taught that particular skill to subgroups of less advanced pupils. Since the monitorial method promised to teach large numbers of pupils basic literacy and numeracy skills, it gained the support of those who wanted to provide basic elementary education at limited costs.

Initially, monitorial schools were popular in the larger American cities such as New York and Philadelphia, where they were typically supported by private philanthropists and occasionally received some public funds. In the early 1840s monitorial schooling experienced a rapid decline and virtually disappeared. By the time that the New York Free School Society, which had operated monitorial schools, turned them over to the public school system in 1853, more than 600,000 children had attended its schools.

**The common school.** The common school movement refers to the establishment of state elementary school systems in the first half of the nineteenth century. The term *common* meant that these state-supported public elementary schools, exalted as the school that “educated the children of all the people,” were open to children of all socioeconomic classes and ethnic and racial groups. Nevertheless, many children, particularly enslaved African Americans, did not attend.

Not a selective academic institution, the common school sought to develop the literacy and numeracy needed in everyday life and work. Its basic curriculum stressed reading, writing, spelling, arithmetic, history, and geography. Emphasizing American patriotism and Christian piety, it was regarded as the educational agency that would assimilate and Americanize the children of immigrants.

The common school movement in the United States paralleled some trends taking place in western Europe in the first half of the nineteenth century. In the 1830s the British parliament, though not creating a state school system, began to provide grants to educational societies for primary schooling. In France, under Guizot, a primary school system, too, was established during the regime of Louis Philippe. These transnational trends, found in Europe and America, indicated that governments were beginning to take the responsibility for providing some kind of elementary schooling. Unlike in France, which was beginning to create a highly centralized national educational system, U.S. public schools

were decentralized. The U.S. Constitution's Tenth Amendment reserved education to each state. The states, in turn, delegated considerable responsibility for providing and maintaining schools to local districts. Even within a particular state, especially on the frontier where many small school districts were created, resources available for schooling varied considerably from district to district.

The common school movement scored its initial successes in New England, particularly in Massachusetts and Connecticut. Massachusetts, in 1826, required every town to elect a school committee to provide and set policy for the local schools. The Massachusetts legislature established the first state board of education in 1837. It named Horace Mann (1796–1859), an eloquent spokesman for common schooling, as its secretary. Mann, as editor of the *Common School Journal* and a popular orator, gained considerable support for public schools.

Other northern states emulated New England's common school model. As the frontier moved westward and new states joined the Union, they, too, followed the model and passed laws to create public elementary school systems. In the South, with a few exceptions, common schools were rare until the post–Civil War Reconstruction.

A unique feature in the United States was the small one-room school, found in rural areas and small towns across the country. These schools served local school districts, governed by elected boards. Although small one-room village schools existed in other countries, the American ones were local creations rather than impositions of a national government. The American school's immediacy to its people made the local school a trusted institution rather than an alien intruder into small town life. In contrast, the teacher in France might be suspected as an outsider, a representative of the intrusive central government. Similarly, in tsarist Russia, the *zemstvo* school, established in the villages, was often extraneous to the needs of life in the countryside. The *zemstvo* teachers often were not accepted by the peasants whose children they tried to teach or were regarded as rivals of the village priest. In America's one-room schools, the elected school board determined the tax levy and hired and supervised the teacher. This pattern of local control contrasted with the visiting school inspectors sent to inspect teachers and schools in France or even with the royal inspectors in the United Kingdom.

The pupils enrolled in the local one-room schools, often ranging in age from five to seventeen, studied a basic curriculum of reading, writing, arithmetic, history, geography, grammar, spelling, and hygiene. They were instructed by the recitation method in which each pupil stood and recited a previously assigned lesson. Group work might include writing exercises, arithmetic problems, and grammar lessons that stressed diagramming sentences. The values of punctuality, honesty, and hard work were given high priority.

**African-American and Native American elementary education.** The Civil War, Reconstruction, and the Thirteenth Amendment ended slavery in the United States. Although a small number of free blacks had attended elementary school in some northern states before the war, southern slave states had prohibited instruction of African-American children. After the Civil War, the U.S. Congress, in 1865, established the Freedmen's Bureau, which established elementary schools for the children of former slaves. By 1869 more than 114,000 students were attending bureau schools. Many bureau schools functioned until 1872 when the bureau ceased operations.

In the late nineteenth century, the federal government, assisted by well-intentioned but often misguided reformers, sought to "civilize" Native Americans by assimilating them into white society. From 1890 to the 1930s the Bureau of Indian Affairs, in a policy of forced assimilation, relied heavily on boarding schools, many of which contained elementary divisions. Seeking to remove Native American youngsters from their tribal cultures, the students, forbidden to speak their native languages, were forced to use English. The boarding schools stressed a basic curriculum of reading, writing, arithmetic, and vocational training.

**Nonpublic elementary schools.** In addition to the public elementary school, the United States also has private elementary schools, many of which are church-related. Today, nonpublic schools enroll about 11 percent of the pupils in U.S. schools. Roman Catholic parochial schools, serving the children of a particular parish, represent the largest number of private elementary schools. Evangelical and fundamentalist Christian schools are the fastest growing sector in nonpublic elementary education.

## Goals of Elementary Schools

Elementary schools in the United States, as in other countries, have the goals of providing children with fundamental academic skills, basic knowledge, and socialization strategies. They are key institutions in instilling a sense of national identity and citizenship in children.

In the United States, elementary schools prepare children to use language by teaching reading, writing, comprehension, and computation. Elementary schools worldwide devote considerable time and resources to teaching reading, decoding, and comprehending the written and spoken word. The stories and narratives children learn to read are key elements in political and cultural socialization, the forming of civic character, and the shaping of civility and behavior. Throughout the history of American education, the materials used to teach reading exemplified the nation's dominant values. For example, the *New England Primer*, used in colonial schools, stressed Puritanism's religious and ethical values. Noah Webster's spelling books and readers emphasized American national identity and patriotism. The *McGuffey Readers*, widely used in late nineteenth century schools, portrayed boys and girls who always told the truth, who worked diligently, and who honored their fathers and mothers and their country. McGuffey values were reinforced by the American flag, which hung at the front of elementary classrooms, flanked by portraits of Presidents Washington and Lincoln. The "Dick and Jane" readers of the 1930s and 1940s depicted the lifestyle and behaviors of the dominant white middle class. Contemporary reading books and materials portray a much more multicultural view of life and society.

The language of instruction in elementary or primary schools is often highly controversial in many countries, especially in multilingual ones. The ability to use the "official" language provides access to secondary and higher education and entry into professions. In such multilanguage nations as India, Canada, and Belgium, protracted controversies have occurred over which language should be the official one. In the United States, the dominant language of instruction in public schools has been English. The children of non-English-speaking immigrants were assimilated into American culture by the imposition of English through the elementary school curriculum. The later entry of bilingual education in the United States was an often controversial educational

development, and remains so in the early twenty-first century.

Along with the development of language competencies, elementary education prepares children in the fundamental mathematical skills—in counting, using number systems, measuring, and performing the basic operations of adding, subtracting, multiplying, and dividing. Further, the foundations of science, social science, health, art, music, and physical education are also taught.

## Curriculum and Organization

In the United States at the primary level, the first level of organization, the curriculum is highly generalized into broad areas such as language arts or life sciences. It gradually becomes more specialized at the intermediate and upper grade levels into more specific subjects. Because of the generality of the elementary curriculum, especially at the primary and intermediate levels, there is likely to be a greater emphasis on methods and styles of teaching in elementary schools in the United States than in primary schools in other countries. For example, U.S. teachers, in their professional preparation and classroom practices, are more likely to emphasize the process of learning, inquiry skills, and social participation than teachers in other countries. Instruction in many other countries tends to be more oriented to specific skills and subjects. While elementary or primary classrooms in the United States and in other countries are likely to be self-contained, the American teacher generally has more autonomy and is not concerned with visitations by outside government inspectors.

The typical U.S. elementary school curriculum is organized around broad fields such as language arts, social studies, mathematics, and the sciences. The essential strategy in this approach is to integrate and correlate rather than departmentalize areas of knowledge. Curricular departmentalization often begins earlier in some other countries such as Japan, China, and India than in the United States.

The language arts, a crucial curricular area, includes reading, handwriting, spelling, listening, and speaking. It includes the reading and discussing of stories, biographies, and other forms of children's literature. Here, the U.S. emphasis on reading and writing is replicated in other countries. The methods of teaching language, however, vary. In the United States, the teaching of reading is often controversial.

Some teachers and school districts prefer phonics; others use the whole language approach or a combination of several methods such as phonics and guided oral reading.

Social studies, as a component of the U.S. elementary curriculum, represents a fusion and integration of selected elements of history, geography, economics, sociology, and anthropology. It often uses a gradual, step-by-step method of leading children from their immediate home, family, and neighborhood to the larger social and political world. While the U.S. approach to social education has been subject to frequent redefinition and reformulation, its defenders argue that the integration of elements of the various social sciences is a more appropriate way to introduce children to society than a strictly disciplinary approach. Critics, some of them educators from other countries, argue that American students lack the structured knowledge of place that comes from the systematic teaching of geography as a separate discipline or the sense of chronology that comes from the study of history.

Like social studies, science in the elementary curriculum consists of the teaching of selected and integrated concepts and materials from the various natural and physical sciences rather than a focus on the specific sciences. Frequently, science teaching will stress the life and earth sciences by way of field trips, demonstrations, and hands-on experiments. Critics contend that the elementary science curriculum in the United States is too unstructured and does not provide an adequate foundational base of knowledge. Defenders contend, however, that it is more important for students to develop a sense of science as a process and mode of inquiry than to amass scientific facts.

The main part of the elementary curriculum is completed by mathematics, with an emphasis on basic computational skills—addition, subtraction, multiplication, division, measuring, and graphing. The curriculum also includes health concepts and practices, games, safety, music, art, and physical education and fitness, which involves the development of motor skills.

As children in the United States progress from the primary to the intermediate grades, the emphasis on reading continues but changes from stories to more informational narratives. The goal is to develop students' interpretive skills as well as to continue to polish the basic decoding skills related to mechan-

ics and comprehension that were stressed in the primary grades. The broad fields of the curriculum—social studies, mathematics, and science—are pursued but now become more disciplinary.

Depending on the particular organizational pattern being followed, the upper grades—six, seven, and eight—offer a more specialized and differentiated curriculum. Subject matters such as English, literature, social studies, history, natural and physical sciences, and mathematics are taught in a more differentiated way. In addition to the more conventional academic subjects, areas such as vocational, industrial, home arts, career, sex, and drug abuse prevention education appear, especially in the upper grades and in junior high and middle schools.

At the beginning of the twenty-first century, curriculum is being shaped by an emphasis on subject-matter competencies in English, mathematics, and basic sciences. Computer literacy, computer-assisted instruction, and other technologies in school programs reflect the nation's transition to a high-tech information society.

### **The Standards Movement**

The standards movement, which gained momentum in the late 1990s, has required more standardized testing in U.S. elementary education. Standards advocates argue that academic achievement can be best assessed by using standardized tests to determine whether students are performing at prescribed levels in key areas such as reading and mathematics. Most of the states have established standards and require testing in these areas. Strongly endorsed by U.S. President George W. Bush, the standards approach was infused into the federal No Child Left Behind Act of 2001. The act requires that, in order to receive Title I funds, states and school districts must develop and conduct annual assessments in reading and mathematics in grades three through eight. Opponents of the standards movement argue that it is based on a narrow definition of education that encourages teachers to teach for the test rather than for the development of the whole child.

*See also:* COMMON SCHOOL MOVEMENT; CURRICULUM, SCHOOL; NO CHILD LEFT BEHIND ACT OF 2001; PRIVATE SCHOOLING.

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GERALD L. GUTK

**CURRENT TRENDS**

Reform of elementary education in the United States, which began in the latter part of the twentieth century and intensified after the publication of *A Nation at Risk* in 1983, has been aimed at improving the academic performance of all children, with accountability for student achievement being placed on the schools, districts, and states. The federal government is also playing a larger role in elementary education through the funding provided to states under the Elementary and Secondary Education Act. There is concern that the U.S. educational system is not enabling its students to perform as well academically as students in other nations, although some

critics disagree with this assessment. Though the elementary curriculum is constantly in a state of reform and refinement, some common threads exist.

**Goals and Purposes of Elementary Education**

Democratization of education is the evolution of education away from models intended to support ideological, social, or industrial systems toward open, universal public education. Great Britain demonstrates the evolution of open, democratic systems of European education since the Renaissance. Japan in Asia has redesigned its public education system since World War II to reflect those same open democratic values. Chile in South America is currently undergoing an aggressive democratization of public education. The similarities of the reforms in these nations parallels similar reforms underway in the United States.

**United States.** Throughout the history of the United States, Americans have expressed a desire for an educated citizenry. Efforts to establish or reform education in this country include the Old Deluder Satan Act, enacted in Massachusetts in 1647, Thomas Jefferson's 1779 Bill for the More General Diffusion of Knowledge, The Common School Movement of the 1800s, the Education for All American Youth initiative of 1944, and George W. Bush's No Child Left Behind Act of 2001. The existence of a cumulative and consecutive system of universal public education for young children is a part of the national heritage of the United States, and it is expected that elementary education will play a major role in preparing future citizens to live in a modern, industrialized, global society.

Control over elementary education is reserved to the states; however, in 1979 the U.S. Department of Education was created by President Jimmy Carter to coordinate, manage, and account for federal support of educational programs. National and local attention continues to be directed at elementary education in the twenty-first century, as leaders, teachers, and parents seek ways to make the first step in the American education system educative, meaningful, and positive.

While current educational reforms reflect a myriad of societal changes, elementary education at the beginning of the new millennium still resembles the vernacular schools of colonial America. The essential skills of reading, writing, spelling, and arithmetic occupy center stage, and the "common

school” moral themes of honesty, hard work, diligence, and application prevail.

**Europe.** Elementary education in the United States has roots in European models of education, and, in fact, elementary education systems around the world share many common characteristics. Efforts to create public elementary school systems in Europe (mostly in the nineteenth century) were initiated by leaders in the national or central governments. Dominant political, social, and economic classes used elementary schools to encourage conformity with the ideas and values that perpetuated the status quo and provided little opportunity for upward socioeconomic mobility. In the twentieth century the requirement for a more educated workforce has enhanced the place of elementary education within the continuum of formerly hierarchical European education systems.

The compulsory age for children to begin elementary school is five or six and elementary education may last for six years. Typical subjects include reading, writing, arithmetic, art, geography, history, physical education, fine arts, and foreign languages. In some countries, noncompulsory religion classes may be offered. Since the fall of Communism, most eastern European elementary school systems follow the western European education model. Elementary schools in Europe experience many of the same issues related to student achievement, diversity, poverty, and violence that face their U.S. counterparts, and standardized testing has become increasingly important in many countries, such as Great Britain.

**Asia (Japan).** Elementary education in Japan is built on a model of communities of people working together to become healthy in mind, body, and spirit. Students are educated to respect the value of individuals, and to love truth and justice. Elementary education begins at age six in Japan and ends at age eleven or twelve. The structure of Japan’s 6-3-3-4 school system was established by the School Education Law of 1947. The educational reforms resulting from this law, carried out under the direction of the American Occupation, decentralized control of education, authorized autonomous private schools, and encouraged the development of community education. The authority to establish schools is limited to the Ministry of Education, local governments, and private organizations that fulfill the requirements of becoming a school corporation. Municipalities are responsible for establishing elementary schools. Parents, especially mothers, take an active role in their

children’s education and reinforce the school curriculum through teaching their children at home or enrolling them in *Jukus*, which are privately run “cram” schools.

**South America (Chile).** Children in Chile attend primary (elementary) school for eight years. They study a curriculum and use textbooks approved by the government’s Ministry of Education, though following the 1980 educational reforms the oversight of elementary education in Chile was transferred to municipal governments. The typical primary school curriculum includes reading, writing, mathematics, social studies, music, physical education, and art. A national program of school breakfasts and lunches recognizes the importance of nutrition in the education of children. Chilean elementary education is faced with inequities in access to education among the rich and poor and a high dropout rate among the nation’s poorest children. The National Council for School Aid and Grants is charged with making scholarships available to all children. Since 1988, the national government of Chile has provided support for private schools, and this has caused a downturn in public primary school enrollments.

### The Importance of Elementary Education

In America, children normally enroll in elementary schools at age five or six and exit elementary school at age eleven or twelve. In 2002 approximately 25 million children attended elementary schools in the United States. Readiness for elementary school is viewed as highly important. Through Head Start programs, the government provides educational opportunities for children from disadvantaged circumstances in order for them to be prepared for elementary school. Parents of the children who may not qualify for government-supported programs often enroll their children in privately run preschools in hopes of setting their children on a successful path to elementary school. Although school attendance is not mandatory in most states until first grade, national surveys of parents of early elementary pupils show that 98 percent of primary school children attend kindergarten before entering first grade.

The rapid changes in cognitive, social, and moral growth of an elementary school student makes the elementary classroom an ideal setting for shaping individual attitudes and behaviors. The elementary classroom may provide the best opportunity to set in place moral and ethical characteristics

and understandings that have the potential to improve society. Children in the elementary schools are still malleable, and this emphasis on character education is seen as a particularly urgent matter in American classrooms. In fact, the socialization of children in America is no longer viewed as the sole responsibility of their parents.

The view of using the elementary classroom as a stage for molding future citizens of a democratic society is not new, but it does give rise to controversy regarding programs and methods, as parents may disagree with specific curriculum being promoted by local, state, or national agencies. For example, sex education at the elementary school level has been the object of much debate among religious and special interest groups. One result of the disagreements over such controversial curricula may be the large number of children home schooled in 1999–2001 (estimated to be more than 1.3 million). Even so, support may still be offered to home-schooled students through curriculum, books, and materials provided by local schools or districts, as well as access to extracurricular activities and special classes in areas such as technology.

### The Curriculum of the Elementary School

Unlike many other nations, the United States does not have a national curriculum. As mentioned previously, control of the schools is reserved to the states, which in turn give local school districts some control over what is taught and how it is taught. Curriculum may be looked at as a negotiated set of beliefs about what students should know or be able to do. A curriculum framework includes these beliefs, and then specifies by what point students should have mastered specific skills and performances. This is known as the *scope and sequence* of curriculum. Until recently, states and local districts had significant latitude in the development of elementary curriculum. The advent of the standards movement, however, has mitigated this freedom—for the better according to some, and for the worse according to others.

Do standards-based curriculum frameworks and standardized tests prepare children for the twenty-first century workplace where problem solving, creativity, and teamwork are necessary tools? Some people in the business world do not think so. Others argue that it is necessary to insure that all children master at least the basic essentials of reading, mathematics and writing in order to be able to perform at higher levels of performance and thinking. At any

rate, the standards movement has had a definite impact on the curriculum of the elementary school. In the early twenty-first century, forty-nine states have curriculum standards. Recent studies indicate that 87 percent of U.S. teachers believe the standards movement is a step in the right direction, and that the curriculum is more demanding and teacher expectations of students are higher as a result of standards. Many teachers also express frustration that they are not provided with the resources necessary to align the standards to the curriculum.

Prior to the standards movement, curriculum development was impacted by the notion of *cultural literacy* advocated by E. D. Hirsch. Hirsch began a national debate with the 1987 publication of what he considered essential common knowledge that all school children need to possess in order to be literate members of their society. His argument was that students could not be successful at understanding the world around them without a grounding in geography, history, literature, politics, and democratic principles. Hirsch then went on to develop a grade-by-grade outline of the knowledge students should master at each grade level. His book stimulated much national debate, especially with regard to whose cultural knowledge should be included in the curriculum—Western civilization only, or a more inclusive body of knowledge. His theories have had a definite impact on the elementary curriculum in many districts and states.

The current elementary school curriculum is influenced by societal needs and political influence. President George H. W. Bush endorsed the *America 2000* goals for American schooling, several of which have had a particular influence on the elementary curriculum. Basically, the goals stipulated that students would demonstrate mastery in five areas: English, mathematics, science, history and geography. President Clinton's *Goals 2000* program continued in the same vein. Societal concerns resulted in federal attention to the national curriculum, which has resulted in state accountability standards.

The state standards and curriculum are also influenced by the professional societies and their development of standards and benchmarks in their subject areas. The National Council of Teachers of Mathematics (NCTM), for example, developed an extensive set of standards that are centered on the need to develop problem-solving skills in addition to basic skills in math. The NCTM stresses conceptual knowledge as a framework for all mathematics learn-

ing and provides standards and expectations for each grade level. Other societies have provided similar frameworks that are used by the states in the development of standards.

Elementary curriculum is dynamic, changing as the needs and conditions of society evolve and change. While it cannot be said that there will ever be consensus on the content of the curriculum, the negotiated curriculum serves as a framework for the national agenda for education.

### Issues, Trends, and Controversies

The United States has engaged in a national debate over the purposes of schooling since the inception of the public school system. Such debate has resulted in numerous reforms and change efforts over the years. Some reforms have made lasting changes in elementary schooling, while others have gone away as quickly as they arrived. There are a number of burning issues that currently engage the public in discourse and negotiation.

Poor student performance is seen as a failure of the education system and numerous state and national mandates have been put in place to assure equal access to a quality education for all children. In 1983, the National Commission on Excellence in Education's *A Nation at Risk* outlined the decline of American education. This report heralded a revival of academic-driven curricula and resulted in an emphasis on standardized testing and accountability. The No Child Left Behind Act of 2001 requires each state to implement a system of accountability that will identify low-performing schools. It also requires that all students in grades three through eight must be assessed annually in at least reading and mathematics. Parents may also, under certain circumstances, receive governmental support to secure tutoring for children who attend low-performing schools. Such legislation gives rise to controversies surrounding charter schools and school vouchers.

Immigration in the United States has been an issue in elementary education since the advent of public schooling. Immigration patterns shifted dramatically at the beginning of the twentieth century, and continue to shift as children from Southeast Asia, Central America, and eastern European countries enroll in elementary schools. In 2000, 18 percent of the American populace spoke a language other than English at home. In 1990, 15 percent of the total child population was African American, 12

percent Hispanic, 3 percent Asian, and 1 percent Native American. It is projected that, by 2010, Hispanic children will surpass African-American children as the largest child minority. In addition, by 2020, more than one in five American children are expected to be of Hispanic descent. Immigrant children have special needs that must be addressed by the public elementary school. The debate over what form of English education children of immigrants should take has attracted much attention. At the beginning of the twenty-first century, programs for English learners in elementary schools are striving to focus on a holistic approach to educating transcultural/transnational peoples in a global context.

Incidences of school violence and drug use erupted on the school landscape during the late twentieth century. More than half of the nation's schools experienced criminal incidents in 1996–1997, and school security personnel have employed metal detectors to help assure the safety of students. The National Education Association supplies information and tools to help school administrators, teachers, and parents create safe schools. Conflict resolution and counseling have become a part of the elementary education curriculum, as have programs to teach children the dangers of drug use. The Drug Abuse Resistance Education (DARE) program, designed to give kids the life skills they need to avoid involvement with drugs, gangs, and violence, is seen as most influential when delivered to students attending elementary school.

The condition of children living in poverty is an issue of importance to elementary education. Poor children are more likely than more affluent children to experience difficulties in school. The strategies found to be most effective in teaching children of poverty may require special training for teachers, administrators, and school staff. Communication with parents is critical to student success in elementary schools, especially with parents of children of poverty. Many elementary schools in the United States incorporate programs that invite parents to participate in school activities and to feel welcome within the school environment, thereby supporting the families of their students.

The United States has firmly entered the information age. Computers are a common sight in most elementary schools, and school districts employ specialists in instructing students in the use of technology. An important issue that technology brings to elementary education is equal and controlled access.

Questions arise concerning frequent use of computers in schools, supervision of students' access to the Internet, and whether computer use has any impact at all on student learning. National standards have been established to direct the use of technology in schools, and federal funding has been made available to facilitate the widespread use of technology in classrooms. One remarkable problem regarding the use of technology in classrooms stems from the fact that most elementary children have learned technology skills faster than their teachers.

The Education for All Handicapped Children Act of 1975 was designed to assure an "appropriate public education" to meet the unique needs of all students with disabilities. Attached to this bill was a list of provisions for mainstreaming children with disabilities within the public school system. In order to comply with these provisions, elementary schools are faced with the problems of inclusion inherent in making their programs and facilities user-friendly for students with physical, mental, and behavioral disabilities of all sorts.

These issues are just a few of the current challenges faced by elementary education in the early twenty-first century. In spite of the debate, the basic framework of curriculum has survived.

### **The Evaluation of the Elementary Curriculum**

Evaluation of the curriculum has become a focus of concern and disagreement. The use of standardized tests, some argue, drives the curriculum. The importance placed on these tests by local, state, and national entities all but defines what will be taught in schools, thus negating local control of schools and, in fact, creating a form of national curriculum. Teachers who "teach to the test" are neglecting the development of powerful thinking skills and creativity. In fact, the tests are said to penalize those children who are creative thinkers. This limitation was noted by Hilda Taba in 1962, and remains a relevant concern. Some standardized tests, for example, have writing portions that consist solely of multiple-choice questions.

Others insist, however, that standardized tests are a vital tool for measuring the effectiveness of schooling and for holding schools and districts accountable for the education of children. They note that newer versions of these tests include questions to evaluate problem solving and higher-order thinking skills. Yet only a handful of states currently have

tests that directly measure student achievement with regard to mastery of state standards.

Standardized test scores of elementary schools are published and are public record. States maintain Internet sites where anyone can find the test scores of a particular school or district. Schools that consistently fall below state averages may be placed in a special category of *at-risk schools*, and in some instances they may actually be taken over by committees appointed by the state department of education if test scores do not rise within a certain probationary period.

National measures of achievement (e.g., the National Assessment of Educational Progress) are also reported to provide information at a national level about the achievement of all students. These national assessments have found that achievement levels of all children have risen annually, including the achievement of minority children. The gap between the scores of minority students and white students still exists, however, and the latest data show that it actually increased during the 1990s. This information has informed the federal government's educational policies of accountability. Federal legislation now requires that all children in grades three through eight to be assessed annually in mathematics and reading. As of 2002, however, only thirteen states and the District of Columbia met this requirement.

School districts often administer their own criterion-referenced tests to measure the effectiveness of the district curriculum framework. These tests attempt to measure the mastery of skills in the district framework at each grade level. The information provided by these tests is designed to give schools and teachers information about the effectiveness of the delivery of the district curriculum.

State, federal, and district assessments are conducted, in addition to the ongoing assessment performed in individual classrooms. Teachers utilize performance assessments, teacher-developed tests, tests that accompany textbooks, and other measures to monitor student progress. Students of the early twenty-first century are becoming the most frequently evaluated students in history. Whether more frequent testing leads to higher achievement in academic skills has yet to be determined, however.

### **Conclusion**

Elementary education is in an exciting period of reform. Technological advances and improved knowl-

edge about how children learn are being infused into the curriculum and instructional practices in schools. The national debate over the purposes and governance of elementary schools continues in the same historical tradition. Educators and policy-makers throughout the world are grappling with the determination of the skills and knowledge necessary for effective citizenship in the twenty-first century.

*See also:* CHARACTER DEVELOPMENT; CURRICULUM, SCHOOL; DRUG AND ALCOHOL ABUSE, *subentry on* SCHOOL; IMMIGRANT EDUCATION; KNOWLEDGE BUILDING; SCHOOL REFORM; SPECIAL EDUCATION; STANDARDS FOR STUDENT LEARNING; TECHNOLOGY IN EDUCATION.

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#### PREPARATION OF TEACHERS

During the first two centuries following the settlement of the American colonies the education of youngsters was a shared endeavor, with the family assuming major responsibility and the church typically taking on a prominent role as well. Various agencies and businesses in the community also contributed as children early on served in apprenticeships and indentures. Certain individuals did formally teach youngsters. However, in his major history of colonial education (1970), Lawrence Cremin noted that usually these individuals did not view teaching as their primary occupation nor were they formally prepared to do so. Some tutored the youngsters of the upper class. Others, typically women, taught the basics of reading, writing, and ciphering in their homes in what were known as dame schools. This rather informal and shared approach to educating youngsters continued well into the nineteenth century.

When the common school evolved in the early decades of the nineteenth century, the principles of free tuition, universal attendance, and hence tax support also became more prevalent. Correspondingly, the need for qualified teachers spread and the first public normal school was established in Massachusetts in 1839. These teacher preparation institutions spread quickly throughout New England and by the end of the nineteenth century to the rest of the country.

The curriculum in these normal schools focused on the subjects these prospective teachers were eventually to teach. Jesse May Pangburn's 1932 review of normal schools revealed, "students needed to show a mastery of reading, writing, spelling, geography, grammar, and arithmetic for admission to the regular professional courses" (p. 14). Examples of these "professional" courses were thirteen weeks devoted to the history of education, twenty-seven weeks in the science of education, and thirty-one weeks in methods in the elementary branches. Observation in elementary schools followed by practice teaching was a culminating feature of the normal school cur-

riculum and the curriculum was spread out over one or two years.

As late as 1898 there were approximately 250 normal schools; however, these institutions graduated only about a fourth of the total number of elementary teachers needed. Most elementary teachers were simply graduates of elementary schools. These teachers were nearly always women who could be recruited for lower salaries than men and who were believed to possess the nurturing qualities needed to interact effectively with younger children.

With the advent of the twentieth century departments of education in universities evolved. Wayne Urban (1990) reported that the motivation for universities to incorporate teacher preparation into the curriculum stemmed from their need for increased enrollment and the positive public relations that came from addressing the needs of the expanding public school systems. The creation of specific departments of education would “also allow women to enroll but not spread their presence or influence across the campuses” (p. 63).

The normal schools now had to transform themselves in order to compete with the universities. Many of these normal schools became teachers colleges. Some of the teachers colleges eventually included other majors, and in the last half of the twentieth century some even became universities. Bachelor’s degrees were now offered in both universities and teachers colleges. This resulted in adding general education requirements to the more technical teacher education curriculum. In the late 1920s and throughout the 1930s the foundations movement, guided by the social and philosophical ideas of John Dewey, took place in teacher education. The disciplines of history, philosophy, and psychology were brought to bear more directly on both the problems of teaching and the role of school in addressing broader societal issues. Thus, by World War II, the general structure of the preparation of elementary teachers was shaped much as it remains at the beginning of the twenty-first century: academic study, foundational study, professional study, and practice teaching.

### **Current Structure and Organization**

In the early twenty-first century, teacher preparation in the United States is a huge enterprise. There are more than 3 million teachers in public schools in the United States and more than 1,400 institutions of

higher education of various types that offer programs preparing teachers. The preparation of teachers is also increasingly undertaken as a partnership endeavor with elementary and secondary personnel assuming an expanded role, especially in the clinical aspects of this endeavor. A distinctive trend in the 1980s and 1990s was the formulation of professional development, professional practice, or partner schools specifically designed to assist in the preparation of prospective teachers.

The Research About Teacher Education (RATE) Study (1989) was a national survey of the organizational and structural properties of programs preparing elementary teachers in the United States. This study reported that the typical distribution of college credits for an elementary education program consisted of approximately 132 semester hours accordingly: general studies (58 credits), professional studies (42 credits), an area of concentration (20 credits), and student teaching (12 credits). About a third of the programs required an academic major averaging 32 credits, and another fourth required an academic minor averaging 20 credits.

A typical professional sequence for prospective elementary teachers includes six hours in the methods of teaching reading and approximately three hours each in the methods of teaching social studies, math, science, and language arts. Student teaching is usually completed in one setting and lasts about twelve weeks. Many programs preparing elementary teachers are organized into “blocks” of courses so that related subjects can be studied in an integrated fashion.

At the baccalaureate level, one can find preparation programs in relatively equal numbers that begin at the freshman, sophomore, junior, and senior year. However, elementary teacher preparation increasingly has taken on a postbaccalaureate flavor. History shows a pattern of teacher preparation from no formal preparation to two years, then four years, and at the turn of the twenty-first century, often five years and more. Some five-year programs combine undergraduate and graduate credits. Others result in a master’s degree along with the baccalaureate award. In addition there are teacher preparation programs offered solely at the masters level, often designed to attract prospective teachers whose undergraduate degree is in another field. Finally, there are also many alternative licensure programs usually intended to accommodate the “nontraditional” student and to recruit teachers for “high need” schools.

### The Continuing Education of Elementary Teachers

In addition to the trend towards extended programs of preparation, many states and school districts are offering what are referred to as induction or entry year programs wherein novice teachers in the critical first years of teaching are provided assistance by veteran teachers. Novice teachers also come together periodically to continue their education. Some of these programs are sponsored by the district, others by teachers' unions, and still others in partnership with universities.

The education of teachers hardly stops at this point. Licensing requirements mandate that teachers continue their education, and the rapidly changing student demography, new technologies, and ever-expanding information underscore why they continually need to do so. While many teachers return to universities for further coursework (the majority of elementary teachers now complete at least a master's degree), they also regularly engage in educational activities sponsored by their school districts and teachers' unions. Although summer and after-school workshops remain a staple of this continuing education, increasingly forms of continuing professional development are built into teachers' ongoing daily activities with an emphasis on inquiry into and reflection upon how they are impacting student learning. During the 1990s professional development guidelines and accountability measures were put in place so that veteran teachers could be certified by a national board as accomplished teachers.

### Unresolved Issues and Problems

Although inroads generally have been made in the recruitment, preparation, and induction of elementary teachers, problems remain and several issues can be raised as well. First, studies of teaching effectiveness underscore the essentiality of knowing the subject one teaches in considerable depth and having a repertoire of teaching strategies indigenous to that subject. Thus a strong argument can be made that most elementary teachers simply are not adequately prepared to teach five or six subjects well. Rather, what is needed are schools where elementary teachers work in teams assuming collective responsibilities for a group of youngsters but with each teacher on the team teaching only one or two subjects. This suggests quite a different pattern of preparing elementary teachers with an emphasis on effective collaboration among other needed changes. Second, the

plurality of cultures and languages that is now represented in many classrooms calls for teaching that is sensitive and responsive to pluralism and youngsters who live in very different neighborhoods; a daunting challenge indeed. Third, the pervasive presence and massive potential of the computer as a teaching tool and vehicle for learning presents particular challenges in preparing teachers. Fourth and finally, while the preparation of elementary teachers has generally been improved and extended over time and entry-year programs are becoming more common, these endeavors tend to be uncoupled and not aligned with one another.

Although partnerships in the preparation of teachers are evolving and outstanding veteran teachers are contributing in expanded ways, these partnerships tend to be ad hoc in nature and tenuous, involving a few individuals rather than interinstitutional arrangements. Reform in teacher preparation tends not to proceed in an aligned and simultaneous manner with needed reforms in elementary schools.

*See also:* EARLY CHILDHOOD EDUCATION, *subentry on* PREPARATION OF TEACHERS; TEACHER EDUCATION; TEACHER PREPARATION, INTERNATIONAL PERSPECTIVE.

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### ELIOT, CHARLES (1834–1926)

During Charles Eliot's forty-year tenure as president of Harvard, he helped transform the relatively small college into a modern university and became a leading spokesman for Progressive educational reform in America.

The son of a prominent Bostonian businessman, Charles Eliot entered Harvard in 1849. After graduating second in his class, Eliot became a tutor and was then promoted to assistant professor of mathematics and chemistry. When Harvard did not renew Eliot's appointment in 1863, he traveled to Europe to study. He returned home to accept a professorship at the new Massachusetts Institute of Technology. In 1869 Eliot published a two-part essay in the *Atlantic Monthly* entitled "The New Education," which solidified his position as an educational reformer and helped him secure a nomination for the presidency of Harvard.

### Harvard: From College to University

While Eliot's ideas concerning education brought him the nomination for Harvard's presidency, it also brought great criticism of his possible selection. Clergy dominated the leadership of American higher education, and the college curriculum generally centered on classical studies. Eliot, a thirty-five-year-old scientist, threatened these traditions. Even though his election as president in 1869 was not unanimous, he did not shirk from delineating a reform agenda during his inaugural address. He recommended that Harvard reject the notion of antagonism between classical and scientific studies and proposed, among other things, expanding the curriculum, reforming teaching methods, implementing higher standards, and recognizing individual differences and preferences in education. In short, Eliot presented an outline for Harvard's metamorphosis from college to university.

Eliot understood that graduate and professional education provided an integral part of any true university, and in 1872 his administration created a graduate department. The department, however, failed to have any impact as it did not offer any courses designed specifically for graduate students. In contrast, Johns Hopkins and Cornell provided clear examples of institutions devoted to the university ideal by emphasizing specialization and research. Eliot assimilated many of the philosophies espoused by these universities and used Harvard's resources to develop a stronger graduate program. In 1890 Harvard dropped its graduate department in favor of a graduate school, and offered courses designed specifically for graduate students. At the same time Eliot proposed that professional programs, such as law and medicine, become the arbiters of professional standards. With this in mind, Harvard

required a bachelor's degree to enter its top professional schools. This reform encouraged greater scholarship among faculty and students and prompted other institutions to do the same.

### Recruiting a Superior Faculty

High-quality graduate education would not be possible without scholars possessing advanced knowledge in their specific fields, so Eliot provided incentives to lure leading professors to Cambridge. During his first year as president Harvard increased faculty salaries from \$3,000 to \$4,000. Eliot also ignored theological issues when hiring faculty. The opening of Johns Hopkins provided Harvard with a new school from which to hire American Ph.D.'s. Eliot, however, did not stop with hiring the graduates of new universities; he also raided other institutions' faculties, a standard practice in American higher education. In 1880 Eliot promoted the creation of a pension system to encourage the retirement of unproductive employees. Eventually this system expanded to include all faculty members at Harvard. Then, Eliot helped secure a sabbatical year for Harvard professors wishing to focus on scholarship. All of these practices and innovations allowed Harvard to recruit a superior faculty.

### The Elective System

Of all the reforms Eliot implemented at Harvard, none brought more renown than the elective system. Ironically, student freedom in choosing classes was not a new controversy. Thomas Jefferson encouraged the practice when founding the University of Virginia, as did other reformers during the 1840s. While the rationale against student choice as expressed in the Yale Report of 1828 still held sway at Northeastern colleges, even Harvard allowed limited student choice when Eliot took office. The university prescribed all freshmen courses, but some options existed for upperclassmen. Eliot, to the dismay of many colleges, proposed a much more radical version of the elective system. He allowed Harvard seniors to choose all their courses, and gradually loosened restrictions on younger students. By 1884 Harvard granted freshmen some choice in course offerings.

Eliot's primary defense of the elective system emphasized the liberty expressed in both the Protestant Reformation and in American political theory. Freedom, he argued, allowed students to develop true growth of character. Individuals possessed God-

given propensities that students needed to cultivate in order to fulfill their mission of service after leaving Harvard. In addition, allowing students to choose classes helped expand the curriculum and graduate programs. Electives promoted specialization and encouraged professors to work closely with students in order to push the boundaries of knowledge in their specific field. Finally, by providing students with options Eliot could determine which professors were no longer inspiring students with their subject matter or teaching methods.

Closely related to Eliot's philosophy of freedom in academics was his policy of increased student freedom outside the classroom. Eliot delegated responsibility of student conduct to the dean, and he encouraged relaxing restrictions on pupils. During his tenure as president the student rulebook shrank from forty pages down to five. Eliot also lobbied to remove conduct as a factor in deciphering class rank. Finally, the *in loco parentis* attitude was challenged with the ending of mandatory class attendance. All these changes signaled the transformation from college to university.

### **As an Undenominational Institution**

In attempting to end the parental role of Harvard, Eliot diminished the school's religious traditions, and he encouraged other institutions to do the same. The president classified Harvard as "undenominational" and contrasted the institution in Cambridge with smaller denominational liberal arts colleges across the country. The analysis, as his detractors complained, carried a condescending tone, yet Eliot continued to advocate a liberal compatibility between science and religion. At the same time, Eliot derided denominational competition, which spawned large numbers of poorly funded and academically questionable sectarian institutions. As he argued for religious reform nationally, he had more difficulty actually implementing his ideas at Harvard. Eventually the institution followed Eliot's recommendations by abolishing compulsory attendance at daily prayers and emphasizing scientific and intellectual pursuits in the Harvard Divinity School. By doing so, Harvard continued to shed its old-time college image in favor of university status.

### **Admission Practices**

Eliot also sought to raise entrance requirements and to provide standardization for admissions practices. He convinced Harvard to accept the College En-

trance Examination Board's test for admission. This test provided students across the country with the opportunity to apply to Harvard. A more geographically diverse student population, argued Eliot, gave the school another opportunity to shed its historically provincial recruiting practices.

Eliot's ambivalent statements concerning education for minorities mitigated his reforms in admissions. During a tour of the south in 1909 Eliot publicly supported the region's laws prohibiting miscegenation and also opposed relationships between different ethnic groups of European-Americans. Apparently the influx of Irish in Massachusetts convinced him that the proper way to assimilate minorities was through education alone. At the same time Eliot advocated an appeasement approach toward the acceptance of African Americans and failed to condemn Jim Crow laws in the South. Although Harvard accepted a small minority of African Americans, Eliot conceded that a larger black population in the Northeast would precipitate segregated education. Finally, Eliot proved ambivalent on the question of higher education for women. He supported the teaching activities for women at the "Harvard Annex," and he celebrated the creation of Radcliffe College. This system of coordinate education allowed him to argue that Harvard had not become truly coeducational, while he also advanced the notion that Harvard had accepted its role in educating American women. Still, the Harvard president made numerous comments about the possible dangers of educating women, while advocating further inquiry as to the subjects best suited for women to study. These assertions reveal that Eliot's progressivism, like many other reform efforts at the time, did not include the concept of social justice that developed later in the twentieth century.

### **Harvard's Democratic Ideals**

Harvard had always been charged by its critics as elitist and relatively useless to the common man. Eliot used a number of strategies to change this perception and restore the close relationship Harvard once had with the commonwealth and the nation. First, he modified the mission of "practical" higher education advocated by new state universities. He emphasized the progressive reliance on expert scholars who trained other professionals to function in democratic leadership positions. This elitist attitude offended many, but Eliot sought to assuage that tendency. He understood the growing importance of

public image and began distributing literature about Harvard to alumni who worked in the media. He also traveled across the nation to speak on behalf of his institution.

While emphasizing Harvard's "democratic" ideals, Eliot also sought the support of wealthy individuals in order to expand Harvard's offerings. His cordial relations with J. P. Morgan and John D. Rockefeller led to donations that funded the building of the medical school. At the same time, other contributions made the creation of the Graduate School of Business Administration possible. Though funded by the elite, these schools exemplified Eliot's assimilationist tendencies by providing education that would help society at large while avoiding overtly vocational activities. His connections with these "robber barons" and the creation of professional schools offended traditionalists, but allowed Harvard to maintain its status as a leading institution of higher education. Eliot also convinced many of Boston's elite that financial support of Harvard's attempts to become a national university also promoted the status and well-being of their city.

### Eliot as a National Figure

As president of America's leading institution of higher education, Charles Eliot implicitly wielded national influence in educational reform. Success of his agenda in Cambridge gave him more freedom as an ambassador of the university to the rest of the nation. As the years of his tenure increased so did his travel and speaking engagements. During his educational speeches Eliot did not limit himself to collegiate reform. He became increasingly interested in secondary education and its relationship to higher education. He and John Tetlow, a secondary educator, formed the New England Association of Colleges and Preparatory Schools. The organization regulated primary and secondary education in the region and became a model for other regional accreditation agencies. He also expanded his leadership role in the National Education Association. In 1892 he chaired the Committee of Ten, a group of scholars who sought to provide guidelines for high school curricula and admissions standards for colleges. The report of the committee helped solidify Eliot's position as a leading educator in America and also coerced reluctant Harvard administrators to accept the standardization of admissions. In this way Eliot's public role in American education provided reciprocal benefit to himself, his institution, and ed-

ucation in general. He remained active in this capacity after he retired as Harvard's president in 1909 until his death in 1926. His nomination as the honorary president of the Progressive Education Association revealed his importance to educational professionals and the general public.

Eliot's reforms at Harvard were not offered in a vacuum. He was part of a much larger reform movement in higher education that included such individuals as Andrew D. White of Cornell, James Angell of Michigan, and Daniel Coit Gilman of Johns Hopkins. Eliot provided an example of a leader willing to modify his views in light of changing evidence. He adjusted his stance on such issues as his advocacy of graduate teaching and research, curriculum matters, and the government's role in education. Although Eliot often appeared condescending to those who opposed his ideas, he provided opportunity for dissent. Occasionally his dissenters won, as evidenced by the failure of his three-year plan for a bachelor's degree, his attempts to merge Massachusetts Institute of Technology with Harvard, and early failures with entrance requirements. As president of the nation's oldest institution of higher education, he implemented reforms at Harvard that eventually became commonplace in educational institutions across the country. As he defended his reforms to the nation he became a well-respected public figure whom many considered the most important educational reformer of his time. Opposing factions often criticized Eliot's actions, but his reforms proved to be lasting changes that continue to shape American education in the twenty-first century.

*See also:* CURRICULUM, HIGHER EDUCATION, *subentries on* INNOVATIONS IN THE UNDERGRADUATE CURRICULUM, TRADITIONAL AND CONTEMPORARY PERSPECTIVES; HARVARD UNIVERSITY; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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## EMOTIONAL DEVELOPMENT

See: AFFECT AND EMOTIONAL DEVELOPMENT.

## EMOTIONALLY DISTURBED, EDUCATION OF

Since enactment of the Education of All Handicapped Children Act of 1975, under 1 percent of school children have been identified for special education and related services as having *serious emotional disturbance* (SED); since 1997, the term *emotional disturbance* (ED) has been applied under the Individuals with Disabilities Education Act (IDEA). Although the percentage has remained stable for decades, professional estimates suggest the true prevalence is probably three to six times greater. An early twenty-first century report by the U.S. Surgeon General noted that only about one in five children and youth with ED receive mental health services or special education. Reasons for underidentification include economic factors, concern about a stigmatizing label, confusion among professionals, and a vague definition.

Federal legislation incorporates almost verbatim a definition proposed by Eli M. Bower in 1960, which includes five characteristics, one or more of which a student displays to a marked degree and over a long period of time: (1) an inability to learn, which cannot be explained by intellectual, sensory, or health factors; (2) an inability to build or maintain satisfactory interpersonal relationships with peers and teachers; (3) inappropriate types of behavior or feelings under normal circumstances; (4) a general, pervasive mood of unhappiness or depression; and (5) a tendency to develop physical symptoms or fears associated with personal or school problems. Federal language specifies that ED must adversely affect educational performance but does not specifically include social learning or behavior as “educational performance.” The definition has been criticized as vague and highly subjective (e.g., what is “a marked extent,” or a “long period of time?”), and an additional federal clause makes the definition self-contradictory. The addition is an exclusionary statement that the category “does not include children who are socially maladjusted, unless it is also determined that they are seriously emotionally disturbed” (45 C.F.R. 121a.5[b][8][1978]). Nevertheless, the federal definition remains unchanged.

In the 1990s an alternative definition and the term *emotional or behavioral disorder* (EBD) were proposed by the National Mental Health and Special Education Coalition. The coalition consisted of more than thirty professional organizations serving children’s mental health needs. The proposed definition and terminology are thought to be less stigmatizing, to emphasize disorders of emotions and behavior, and they include disabling disorders excluded in the federal definition. Notwithstanding widespread support from coalition members, federal language has not changed. Administrators of special education oppose the alternative definition and terminology, fearing significant increases in the number of students qualifying for special education and related services.

The problems of students with ED are severe and chronic. Only those with the most severe disorders receive services, and appropriate educational services have remained a persistent challenge. Students with ED tend to be served in more restrictive settings (e.g., separate classrooms or schools instead of regular classrooms or schools) than their peers with other disabilities, and student outcomes (school completion, later employment, successful

community adjustment) are poorer for students with ED. Research suggests that for children not receiving effective services before the age of eight years, ED should be viewed as a chronic, lifelong condition requiring continuing support services.

In the late twentieth century and into the twenty-first century, controversies surrounded the full inclusion of students with disabilities in regular schools and classrooms. ED students were generally ignored, although serious questions arose about the advisability and feasibility of including all students with ED in general education. Even as other students with disabilities were increasingly included in regular classrooms, those with ED were more likely to be educated in separate classes.

In 1990 Jane Knitzer, Zina Steinberg, and Brahm Fleisch highlighted the overemphasis in many programs on controlling acting-out behavior at the expense of a focus on instruction in academic skills and social behavior. Subsequently, others emphasized design and delivery of effective academic and social instruction.

Controversy continues about placement and programming. Growing evidence that early intervention and prevention are effective has not resulted in widespread prevention. A particular obstacle to truly effective services is the extreme difficulty in coordinating services from multiple agencies and fostering collaboration among schools and numerous community, family, and adult service providers. Awareness of the cultural differences in behavior is increasing. The complexity of the relationship between behavior and culture is underscored by simultaneous calls for increased attention to the mental health needs of students of minority ethnicity and complaints that students of color with ED are over-represented in special education.

*See also:* COUNCIL FOR EXCEPTIONAL CHILDREN; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## EMPLOYMENT

### GENERAL IMPACT ON STUDENTS

Katherine L. Hughes

### EMPLOYERS' PERCEPTIONS OF EMPLOYMENT

#### READINESS

John Maslyn

Mark Cannon

### REASONS STUDENTS WORK

Katherine L. Hughes

## GENERAL IMPACT ON STUDENTS

Paid employment begins at a relatively young age in the United States. While exact figures vary, depending on the means of measurement, a survey published in 2000 by the U.S. Department of Labor found that half of American twelve-year-olds have had some kind of work experience. While at such young ages work experiences tend to be informal and short-term, as American youth progress through their teenage years their work becomes more formal and more time-consuming. Researchers have been paying increasing attention to the effects on youth of working. In general, the results from this body of research lead to neither a blanket endorsement nor a condemnation of school-aged youth working for pay.

There have been several phases of research on youth and work. Before 1970, researchers paid almost no attention to students' paid work. The influential report of the Coleman commission of the President's Science Advisory Committee (1974) blamed schooling—because it isolates young people from adults and from productive work—for actually retarding youth's transition to adulthood. The report called for placing young people into work situations earlier, as a tool for social development. Presumably, work would provide a valuable educational experience, even if the work took place in an occupation not related to the eventual employment.

As national surveys in the 1970s and 1980s were demonstrating that paid youth work was very com-

mon, Ellen Greenberger and Laurence Steinberg's *When Teenagers Work*, which reported the results of research on primarily middle-class youth in California, brought attention to some negative consequences of work. This spurred a lively debate and further study among academics. In particular, some feared that work could have negative consequences on school engagement and performance. While youths tend to work more during the summer than during the school months, some data show that the majority of high school juniors and seniors do work during the academic year. At the start of the twenty-first century, researchers have been turning their focus to the quality of young people's jobs and proposing to increase jobs' learning content through formal linkages with school curricula.

In contrast to the concern over too much working, some find access to work for minority and low socioeconomic status youth to be a greater problem. Working during high school does reduce the risk of unemployment later. Racial and ethnic disparities in teenage job-holding and in the number of hours worked are well-established. Multiple studies indicate that minority teenagers, and teens in poor families and families receiving public assistance, are less likely to work than white or higher socioeconomic status youth. As Jeylan T. Mortimer and her colleagues reported in 1990, "employment is very much a middle-class phenomenon" (p. 208). In one study of several hundred youth in Baltimore, African-American youth reported equal or greater job-seeking as white youth but lower rates of obtaining jobs. Hence African-American youth started working later, and were less often employed. The U.S. Department of Labor reported in 2000 that African-American and Hispanic youth have much higher unemployment rates than do white youth. However, when they do work, Hispanic youth work more hours during the school year than do other youth.

Young people's first paid jobs tend to be informal (or "freelance jobs," as the U.S. Department of Labor refers to them), such as child care and lawn work. According to Mortimer and associates (1990), girls tend to start paid work earlier, yet their first jobs are more likely than those of boys to be of the informal type and concentrated within a smaller number of areas. Of the ninth-graders in this study, most of the girls were working in private households while the boys were more divided among informal work, sales work, and restaurant work.

Research has established that there are sex differences in industry and occupation of young workers. Male and female youth are about equally likely to work in eating and drinking places, with about 27 percent of fifteen-year-old boys and 31 percent of fifteen-year-old girls working in such establishments, but males are more likely to be employed in the agriculture, mining, construction, and manufacturing industries. Boys fifteen to seventeen years of age are much more likely to work in farm, forestry, and fishing occupations, as well as blue-collar occupations, while girls of the same ages tend to work in sales occupations such as cashier (this is true for the school year *and* the summer months).

Youth tend to give the reason for working as “to buy things,” noted the Mortimer study in 1990. Katherine S. Newman makes the point that teenagers from poor families in particular need to work so that they have money with which to participate in youth culture, yet Doris R. Entwistle and associates reported that lower-status youth are more likely than other youth to share their earnings with their family. The young fast-food workers in Harlem that Newman studied also sought work as a place to escape from violence in their own neighborhoods.

Earnings for teenage workers are generally just above minimum wage; in 1998 median earnings of fifteen- to seventeen-year-olds were \$5.57 per hour, while minimum wage was \$5.15. Hourly earnings do increase with age. White and Hispanic males tend to have the highest median hourly earnings while Hispanic and African-American females have the lowest. Mortimer’s 1990 report found significant wage differences between boys and girls overall, with boys reporting a higher mean wage.

### **Employment after School and Effects on Academic Outcomes**

The propensity of American youth to work (and often to work a significant number of hours) during the school year has led to debate among researchers and policymakers about the effect of this work on young people, particularly on their academic engagement and achievement.

According to the U.S. Department of Labor, during the 1996–1998 school months, 39 percent of seventeen-year-olds were employed during the average month. This method of measurement, tabulating the percentage of young people employed at a particular point in time, minimizes the extent of youth

work; when students are asked if they have *ever* worked during their high school years, figures are significantly higher. An analysis of National Longitudinal Survey of Youth (NLSY) data in 1995 by Michael Pergamit found that about 64 percent of juniors and 73 percent of seniors said that they had worked at least one week during the school year.

The concern over youth working while in school emanates from two perspectives. One focuses on the amount of time spent at the workplace, reasoning that time spent at work is likely to be time taken away from academic pursuits such as homework. While young people work longer hours during the summer than they do during the school year, the number of hours spent on the job in the academic months, about 17 per week according to the Department of Labor, is still significant. Another concern is about the low quality of the jobs youth tend to hold. As noted above, young people tend to start with informal jobs, such as child care and lawn work, with the majority then moving into the retail trade industry, which includes eating and drinking places such as fast-food outlets. There is the question of whether youth gain developmentally at all on the job, given the low-level positions they tend to have. Young people themselves say they work to earn money to buy things and save for college, rather than to add to their knowledge or skills.

In general, an examination of the literature on youth working while in high school finds costs and benefits, and some of the literature is conflicting. In terms of effects on academic achievement, some researchers have found a negative relationship between the number of hours worked during the school year and both high school and postsecondary school attainment measures. However, David Stern and Derek Briggs reviewed the literature and concluded that the relationship between hours of work and performance in school actually follows an inverted-U pattern, meaning that students who work more moderate hours perform at a higher level in high school than students who work more heavily or not at all. This pattern appears to extend to postsecondary achievement as well; Department of Labor analysis of NLSY data shows that teenagers who worked twenty or fewer hours per week while in high school were more likely to have achieved at least some college education by age thirty than those who had worked more than twenty hours or not at all.

However, some researchers contend that the observed effects are spurious because they do not take

into account preexisting differences between students who work and those who do not. And some of the research is not able to fully sort out the direction of causality. For example, students who are not already performing well in school may seek more hours at their paid jobs, rather than spending long hours studying. Researchers have also questioned the zero-sum assumption that hours on the job are hours not spent in study. An analysis of longitudinal data by Mark Schoenhals, Marta Tienda, and Barbara Schneider found that youth employment lowered the amount of time spent in watching television, not the time spent reading or doing homework.

### Employment during the Summer

Youth are more likely to work during the summer than during the school year, and according to the Department of Labor, 20 percent of employed youth aged fifteen to seventeen work full-time over the summer months, compared with 6 percent during the rest of the year. Mihaly Csikszentmihalyi and Barbara Schneider report that youth from higher-income families generally have more work experience and are particularly more likely to work solely in the summer.

Employed youth aged fifteen to seventeen tend to work in similar industries in the summer as they do during the school year, with the majority working in retail, which includes eating and drinking establishments. However, in the summer the proportion in retail declines somewhat as teens take more jobs in agriculture, construction, and service industries. Csikszentmihalyi and Schneider note that affluent teenagers tend to have jobs such as camp counselor and lifeguard, likely reflecting their tendency to work only during the summer and the opportunities available in their communities, while working-class youth were found more likely to hold positions in fast-food outlets. Hourly earnings for youth working during the summer versus the school months are about the same.

In the research literature there is much less concern about, and hence much less attention given to, paid work that students perform during the summer months. One study that did attempt to measure the costs and benefits of summer work to youth found that summer employment had positive effects on post-high school employment status and other outcomes. According to Herbert W. Marsh, no negative effects were found. Thus the summer employment problem may be better redefined as the difficulty

that minority and low socioeconomic status youth face in gaining access to valuable paid positions. As noted above, there are racial and ethnic disparities in teenage job-holding and in the number of hours worked. While the federal government has long funded summer job programs aimed at youth with serious barriers to employment, the 1998 Workforce Investment Act changed the focus to year-round services, eliminating the separate appropriation for summer activities.

### Effects on Psychosocial Outcomes

There is no doubt about the importance of the work role in adulthood, thus most recognize that for an adolescent, taking on a new social role as worker can be a formative experience. Yet there is considerable debate about whether the experience affects the development of youth positively or negatively. In addition, there may be sex differences with regard to developmental impact, as girls and boys tend to have different types of jobs, particularly in their early teens.

Some researchers question whether youth gain any skills at all on the job, given the positions youth have and the workplaces they are in, and argue, as do Greenberger and Steinberg, that youth work can lead to stress as well as to adult behaviors such as alcohol use. Studies do report that working is associated with “problem behaviors” such as substance abuse and other delinquent activities; Mortimer, Carolyn Harley, and Pamela Aronson provided a review of a number of these studies in 1999. Again, however, the direction of causality is difficult to determine.

Most research finds that the general public regards youth work positively, believing it to have developmental benefits. For example, a study by Mortimer and associates published in 1999 examined parents’ retrospective views of their early jobs, as well as their attitudes toward their children’s work. The parents were enthusiastic about working during adolescence, listing a variety of competencies they believed they had acquired as a result, such as gaining a sense of responsibility, money management skills, discipline, and so on. Not surprisingly, then, the parents had favorable attitudes about their children’s employment. The children reported benefits of working quite similar to those their parents had reported.

With regard to skills learned on the job, a study of youth working in fast food argues that these posi-

tions do yield skills, as they require much in the way of information processing, coordination, and responding to unpredictable events. Youth also must learn to handle customers, which can help them to develop what Newman characterizes as “people skills.” Other research has found that even positions such as child care can develop innovative thinking skills in and provide challenge to young people. Mortimer and Catherine Yamoore (1987) pointed out that the opportunity for self-direction in a work setting can have positive consequences for a worker’s self-concept and interest in work. Thus research has examined not only the types of specific skills youth workers might gain on the job, but also psychological effects that might influence attitudes and behaviors.

An important point brought out in the research is that the influence of a particular job on a young person likely depends on the nature of the job. One study finds that “the quality of the work (i.e., its stressful or rewarding character) is a more important determinant of adolescent psychological functioning than either work status or its intensity” (Finch et al., p. 606). However, young people actually report little stress from their jobs alone; it is combining or juggling being both a worker and a student that can be stressful.

### Connecting Work and School

Several researchers have observed that youth perceive school and the workplace as conflicting, not complementary, and argue that more efforts should be made to integrate the two. A study by Barbara Schneider and David Stevenson found that youth enjoy working more than they enjoy being in school.

There seems little chance that students will cease working. Thus researchers and policymakers are increasingly turning to a focus on building and strengthening connections between work and school, which should help to improve the nature of some youth work. While school-arranged work placements such as co-op and internships have been in place for years, the 1990s saw a renewed emphasis on school-sponsored work-based learning, particularly through the 1994 School-to-Work Opportunities Act. Research by Alan M. Hershey, Marsha K. Silverberg, and Joshua Haimson evaluating the effectiveness of the legislation included surveys of 1998 high school seniors, who reported that work opportunities offered through the schools had important advantages over the workplace activities students re-

ported finding on their own. School-developed positions tended to be in a wider range of industries, and tended to more closely match students’ career goals. Students with school-arranged paid jobs were more likely than other students to spend at least half their time in training on the job. They were also more likely to report discussing possible careers with adults at their workplace, and were more likely to receive a performance evaluation from school or employer staff. Students who had obtained positions through school more often reported using academic or technical skills learned in school at the workplace, and were more likely to draw on their work experience in school assignments or discussions, thus experiencing more substantive connections between their studies and work experience.

Despite the challenges of coordinating work activities through school, advocates of these arrangements hope to expand them. While there is no definitive answer to the question of whether working during the school year negatively affects students’ school work, it is certainly desirable to help youth perceive school and the workplace as complementary, rather than conflicting. Since it is unlikely that young people will stop working, the idea is to help youth gain as much as possible from their employment experiences.

*See also:* OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; VOCATIONAL AND TECHNICAL EDUCATION.

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KATHERINE L. HUGHES

## EMPLOYERS' PERCEPTIONS OF EMPLOYMENT READINESS

Employers in the business community are getting into the education business. From companies like Cisco Systems and Manpower to the Bill and Melinda Gates Foundation, American businesses and business leaders are spending millions of dollars to address what they perceive to be a deficiency in the ability of the American education system to adequately prepare students to meet the demands of the workplace of the early twenty-first century. From funding for inner city computer centers to school-to-work participation, their interest is driven by the belief that high school and college graduates are not ready to adequately contribute in the workplace. This article addresses employer perceptions of employee readiness by outlining what employers need from employees, followed by their perceptions of the readiness of new employees to contribute to the organization's ability to meet these challenges.

Concern about readiness for work is not new. There is a history of government initiatives on this topic, perhaps most notably the Secretary's Commission on Achieving Necessary Skills (SCANS) in 1991. Readiness for work entails preparedness to learn and perform on the job, the ability to continue

to learn, and the personal characteristics that contribute to successful accomplishment of work. According to Harold F. O'Neil Jr., Keith Allred, and Eva L. Baker, general categories of readiness skills consist of basic academic skills, higher order thinking or problem solving skills, interpersonal and teamwork skills, and attitudes or other characteristics such as the willingness and ability to take initiative and responsibility.

### **Organizational Needs and the Employment Environment**

Perceptions of readiness are based on a framework of organizational needs that have been influenced significantly in recent years by changes in the competitive environment, in technology, and in theories of managerial best practices. Intense competition has forced organizations to become more customer-focused, with greater emphasis on understanding and quickly satisfying customer needs and on responding rapidly to changing customer preferences. Whereas Harry Braverman argued in 1974 that the technologies of the future would reduce workers to button-pushing automatons, the opposite has been the case. Workers at low levels of the organization are often expected to perform across a range of roles and responsibilities and must take initiative and use judgment in determining how to best satisfy customer needs and keep their team running smoothly. Whether responding to customer needs, competitor activities, or rapidly changing technology, the organizational imperatives are clear: speed, agility, and adaptability are crucial. Traditional command-and-control hierarchies with narrow, highly structured, routine jobs and tightly supervised workers are poorly suited to this kind of environment. Instead, organizations today are often more flexible, utilizing team-oriented, decentralized structures that empower lower-level workers to make decisions and take initiative.

Employer perceptions of employee readiness are influenced by a dynamic interplay among evolving organizational needs, educational institutions' practices, and the preparation of the students who enroll in educational institutions. These factors have changed the employers' needs and expectations of employees on all fronts. First, to function effectively in the twenty-first century workplace, employees need greater ability in the basics such as reading, writing, and arithmetic. Thus, employers desire workers with more formal education. In fact, where-

as jobs requiring at least a bachelor's degree constituted 21 percent of jobs in 2000, they are forecast to comprise 29 percent of jobs by 2010. Employers expect employees to have the interpersonal skills necessary to communicate, solve problems, coordinate activities, and resolve conflict. Employees also need to possess the ability to self-manage, take initiative, and engage in self-directed learning. Moreover, employers want employees who are ethical and flexible. Research by Kristy Lauver and Huy Le shows a relationship between higher levels of emotional stability, agreeableness, and conscientiousness and lower numbers of workplace accidents.

### **Perceptions of Readiness**

Employers tend to expect schools to build general skills such as basic knowledge, discipline, professionalism, good work habits, the ability to communicate, openness, perseverance, problem-solving ability, and well roundedness. Employers have not seen schools as being effective in producing specific, job-related skills, and employers do not view schooling as the sole or even primary source for developing such skills. For example, Madelyn Schulman's 1999 study of high school interns in school-to-work transition across various occupations revealed that, once at work, interns found themselves in an environment of which they had little or no understanding. Furthermore, 73 percent of managers in one survey described in *The Lessons of Experience* (1988) indicated that they used the skills taught in their master's of business administration (MBA) programs either "marginally or not at all" in their initial managerial assignments. Lynne Leveson reports that despite the efforts invested in building general competencies, the essential differences in the educational environment and the work environment create the inevitability of certain discontinuities between the two. Thus, many employers believe that job-related skills are company-specific and best acquired on the job and see the schools' role as making people trainable.

Daniela Gabric and Kathleen L. McFadden reported in 2001 that both employers' and students' judgment of the value of general skills such as working in teams, problem solving, and effective communication was significantly higher than the value of technical skills (which were still important but to a lesser degree). This approach is consistent with an ability to address the ever-changing demands from the competitive environment. However, despite the fact that both students and employers see great value

in these general skills, employers still see schools as falling short. As noted above, this can be inferred from the actions taken and expenses incurred by employers to increase the readiness of individuals before, and as, they reach the workplace. In addition, anecdotal comments from employers suggest that many people in the early twenty-first century are coming out of school with a genuine lack of basic skills. Such comments are supported by empirical data from a variety of organizations. For example, Donald F. Treadwell and Jill B. Treadwell studied employers of communications graduates from multiple business sectors. They found that only 18.5 percent of the employers reported that new hires could perform the duties for which they were hired without additional time investment in training. The most critical weaknesses cited were the ability to write effectively for multiple audiences, to write persuasively, to engage in logical or critical thinking, and to work responsibly without supervision. In this area alone, problems resulting from poor written communication have been estimated to cost U.S. businesses more than \$1 billion annually.

### Employer and Employee Agreement

In order to address employee readiness, it is important for employers, employees, and educational institutions to recognize that there is, in fact, a problem. Are the perceptions of employers and new employees similar regarding employees' readiness for work?

John Arnold and Kate Mackenzie Davey examined whether new employees rated themselves comparably with their new managers on various workplace competencies, including company know-how, interpersonal skills, product and service knowledge, specialist skills and knowledge, and achieving results; their findings indicated that perceptions varied between the two groups. Overall new employees rated themselves higher in skill level than did their managers. However, both new employees and their managers were least confident about the new employees' knowledge of the products and services of their organization and its competitors.

Similarly, differences have been found in the skills or traits deemed to be most important by employers and students about to enter the workforce. Gabric and McFadden noted that one of the major differences between employers' and students' ratings was in how highly they ranked the skill of conscientiousness. In a ranking of 34 personality traits,

"being conscientious" was ranked sixth most important by employers but eighteenth by students, suggesting that students may not realize how important employers consider conscientiousness to be in employees.

Reducing the gap between new employee abilities and employer expectations may be facilitated by providing students with a better understanding of what qualities and characteristics employers value most and an accurate assessment of where students currently rank on these competencies and traits. Both schools and employers can assist in this process. Teachers may need to learn more about what employers want, do a better job of conveying this information to students, give students feedback, and encourage students to learn in applied settings as well as in the classroom. Employers may assist by providing internships and summer jobs that expose students to employer expectations, and by providing feedback to the students.

### Conclusion

In sum, employers see schools as responsible for preparing students for productive work. Changes in technology, managerial practices, and the competitive environment have raised the level and breadth of knowledge, skills, and abilities that employers require from employees. This has further widened the already significant gap between employer needs and the actual skill levels and abilities of the graduates who enter the labor pool. Employers recognize that some forms of training are best conducted on the job and do not expect schools to produce students with specific job skills. However, employers expect schools to produce students with the ability to use general knowledge and with traditional academic skills such as reading, mathematics, writing, oral communication, and problem solving. Employers would also like schools to prepare students with general characteristics that enhance work performance, such as the ability to work productively with others and demonstrate initiative and responsibility.

*See also:* OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; VOCATIONAL AND TECHNICAL EDUCATION.

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JOHN MASLYN  
MARK CANNON

#### REASONS STUDENTS WORK

Most American teenagers work for pay; figures vary depending on whether labor force participation is measured at a particular point in time or over the course of several years. A U.S. Department of Education survey published in 2000 found two-thirds of twelfth graders saying that they worked for pay; other research asking high school students if they have ever worked has yielded even higher figures.

Beginning in the 1980s, researchers have increasingly paid attention to this phenomenon. Yet rather than exploring the reasons for the high incidence of youth employment, for the most part researchers have engaged in a study and debate of the

costs and benefits to American youth of their working. Much of the literature has focused on whether working has detrimental effects on young people's engagement in school and academic outcomes, as well as youth's social and psychological development. While some studies have found a negative relationship between the number of hours worked during the school year and school attainment measures, David Stern and Derek Briggs's review of the literature concluded that students who work moderate hours perform better in school than students who work extensively or not at all.

In addition, some of the research is not able to fully sort out the direction of causality, for example, whether students with lower grade point averages tend to work more hours or whether working lowers the grades. Thus negative effects could be due to selection, that is, the possibility that students who are already not engaged in school choose to work more. In *The Ambitious Generation*, Barbara Schneider and David Stevenson report their findings that youth generally enjoy working more than they enjoy being in school.

There has been surprisingly little research examining why youth work, or why many work quite long hours. Youth employment has tended to be studied after the fact, rather than examining reasons or motivations leading to employment. That high school students have part-time jobs has come to be seen as the norm, likely due to the American cultural emphasis on occupation as a primary component of identity, and appreciation for work ethic and entrepreneurship. American youth do tend to start working earlier and work more than youth in other countries. And research has found that adults have quite positive retrospective views of their own early jobs, as well as favorable attitudes about their children's employment.

Some researchers speculate that the motivation for working is entirely financial, as it has been estimated that 54 percent of American youth receive no allowance, as reported by James R. Stone III and Jeylan T. Mortimer in 1998. Certainly American youth require money to participate in the automobile culture and buy the consumer goods that are significant parts of society. Hence, youth do tend to give the reason for working as "to buy things," according to Mortimer and colleagues in a report published in 1990. Teenagers from poor families in particular need to work so that they have money with which to participate in youth culture. Poor and immigrant

youth also tend to share their earnings with their families. And some teenagers work primarily to save money for college, which appears to have positive effects on several outcome measures such as the likelihood of attending college and educational aspirations.

There are other reasons for working aside from monetary gain. Researchers have found that some young people seem to have an internal drive towards working; they like to be occupied by productive activity. In 2000 Mihaly Csikszentmihalyi and Barbara Schneider reported that the young people they studied who spent the most time working perceived work more positively than young people who worked less, and saw work as important to themselves and to their future. Finally, the young fast-food workers in Harlem that Katherine S. Newman reported about in *No Shame in My Game: The Working Poor in the Inner City* needed income but also sought work in order to have a safe, structured place to go, away from the pressures of street violence.

In keeping with the idea that paid employment is the norm for American youth, researchers have examined why some youth do not work. It is well-established that work experience is more common among upper socioeconomic status and white teenagers. Most experts believe that this is due to a lack of employment opportunities for poorer youth, rather than less desire for work. According to Csikszentmihalyi and Schneider's *Becoming Adult: How Teenagers Prepare for the World of Work* (2000), upper class youth are more likely to work during the summer than during the school year, however, likely reflecting a concern about work interfering with studies. However, the minority youth in this study had a more positive view of work than the other young people.

Based on the types of jobs American youth tend to hold, it is unlikely that they are working in order to learn about possible adult career fields. Young people's first paid jobs tend to be informal (or "freelance jobs," as the U.S. Department of Labor refers to them), such as child care and lawn work. As youth progress into their mid-teens, the majority work in retail, which includes eating and drinking establishments such as fast-food restaurants. Even affluent teenagers tend to hold jobs, such as camp counseling and life guarding, that they are not likely to pursue as career fields. To remedy this situation, the 1990s saw a renewed emphasis on school-sponsored work-based learning, particularly through the 1994

School-to-Work Opportunities Act. Research on work opportunities offered through school has found that those positions tend to be in a wider range of industries and tend to more closely match students' career goals. Advocates hope that youth can gain more than money from their employment experiences.

*See also:* OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; VOCATIONAL AND TECHNICAL EDUCATION.

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## ENGINEERING EDUCATION

As of 1997, 315 institutions housed 1,516 accredited engineering programs within the United States. To receive accreditation for their engineering programs, university departments comply with the standards established by the Accreditation Board of Engineering and Technology (ABET). ABET is an organization that consists of twenty-six professional engineering societies and six other affiliating professional organizations. The twenty-five accredited engineering specializations in the United States include the following: aerospace engineering, agricultural engineering, bio-engineering, ceramic engineering, chemical engineering, civil engineering, computer engineering, construction engineering, electrical engineering, engineering management, engineering mechanics, environmental engineering, geological engineering, industrial engineering, manufacturing engineering, materials engineering, mechanical engi-

neering, metallurgical engineering, mining engineering, naval architecture and marine engineering, nuclear engineering, ocean engineering, petroleum engineering, survey engineering, and nontraditional programs.

Despite the existence of an accreditation board, however, not all engineering schools and engineering programs within the United States are accredited. Therefore, prospective students are responsible for investigating the accreditation status of the department to which they apply. Accredited degrees are especially significant for undergraduate students who wish to pursue advanced degrees in engineering.

In addition to investigating the accreditation status of their proposed schools, engineering students must decide where they will pursue their engineering degrees. Engineering programs within research universities target both undergraduate and graduate engineering scholars. These departments are usually large and sometimes have undergraduate classes that are taught by graduate students pursuing a degree in the department. Schools with a majority of students whose primary area of study is engineering are often called *institutes of technology*. State universities house departments that usually produce the greatest number of engineers in the country because of the increased affordability of an engineering education at these schools and because of the larger number of students who enroll in state universities.

### Undergraduate Curricula

The curricula of undergraduate engineering programs may be completed within four years, although most engineering students take longer to complete their bachelor of science (B.S.) degree requirements. Typically, engineering students begin classes within their major during their sophomore year. By their junior year, students continue to fulfill their major's requirements with an increased emphasis on laboratory assignments. Within their senior year design courses, students are expected to use their cumulative knowledge of engineering, writing, and the humanities to solve a problem within their major area of study.

General undergraduate engineering requirements as established by ABET mandate that each student's curriculum includes mathematics, engineering topics, and humanities. Because the entering level of mathematics varies depending upon a stu-

dent's beginning knowledge of the subject, the amount of time required to complete mathematics requirements also varies. Once engineering students meet necessary mathematics prerequisites, they are required to complete differential and integral calculus, differential equations, and one or more upper-level mathematics classes successfully.

Students are also required to complete general engineering courses on topics such as mechanics, thermodynamics, electrical and engineering circuits, transport phenomena, and computer science. Students fulfill the third requirement, humanities, they complete classes in subjects such as literature, art, foreign languages, and social sciences.

In addition to the three requirements established by ABET, all engineering students must take core classes in physics and chemistry, as well as free and technical electives. Within the undergraduate engineering curriculum, electives may be classified as either free electives or technical electives. Free electives are classes that students can take in any department of the university if they meet prerequisites for that class. Technical electives are electives that are a part of a student's major course of study. In the process of fulfilling technical electives and major requirements, students might also fulfill minor area requirements and therefore obtain engineering knowledge across disciplines.

### Graduate Curricula

Compared to the undergraduate engineering program, graduate study in engineering is more research intensive and flexible. In addition, the class requirements for graduate students are not as restrictive as the requirements for the undergraduate degree. Because of the variation of specialization in graduate engineering courses across the United States, defining a standard program of study for a particular discipline is difficult. By working closely with an adviser in their major, however, students may create a program of study with classes that not only interest them but also will prepare them to specialize in an area within their field of engineering.

Admission requirements to U.S. graduate engineering departments vary. Students are generally admitted to a program, however, if they have a "B" average in their undergraduate classes. Once admitted into a program, students typically fulfill course requirements within one to two years, depending upon any deficiencies that a student might have prior to beginning a program of study.

Upon completion of a graduate engineering program, students may obtain one of two types of master's degrees within their discipline, the master of science (M.S.) or the master of engineering (M.Eng.). The master of science degree requires the writing of a thesis, whereas the master of engineering degree requires the completion of course work. Two types of degrees also exist for doctoral students of engineering, the doctor of philosophy (Ph.D.) and the doctor of science (Sc.D.). The doctor of philosophy degree is more research oriented than the doctor of science degree and obtaining it requires a student to write and defend a dissertation successfully. A student can typically complete an engineering doctorate two to four years after the completion of the master's degree.

### Traditional Degree Areas

The five largest and most traditional areas of engineering study in United States colleges and universities are chemical, civil, electrical, industrial, and mechanical engineering. Within the United States, approximately 260 departments award these five degrees. Over the years, twenty-five specializations have emerged from the basic fields, and in 2001, eighty-five subdivisions of these fields existed in colleges across the United States. Following are descriptions of the five major types of engineering degrees.

Chemical engineering is a field of engineering that combines the knowledge of chemistry and engineering. Unlike chemists, however, chemical engineers develop new materials and design processes for manufacturing. In an effort to design these processes, chemical engineers must stay abreast of technological advancement in society. Specific curricula requirements for undergraduate chemical engineering students include engineering science, engineering design, communications, and basic life sciences. In addition to general engineering requirements, chemical engineering students are expected to earn course credit for classes in materials science and material and energy balances. Engineering design courses include engineering economics, design of chemical reactors, heating and cooling apparatus, and piping. In addition, chemical engineering students are required to understand computer programming languages and complete a technical writing class.

Civil engineers utilize their knowledge of structural processes in a variety of ways. They often oversee the development of facilities such as buildings

and bridges, in addition to the construction of highways, water resource facilities, and environmental projects. Specific course requirements for civil engineering undergraduates include classes in engineering and scientific programming, soil mechanics, engineering geology, strength of materials, analysis of determinate and indeterminate structures, hydraulics, highway geometrics, and surveying. A sample topic within a civil engineering design course might include an investigation of the design of steel and concrete structures.

Electrical engineers design and develop various types of electrical processes. Examples of their contributions include computer chips and systems, radio and television equipment, and power generation and control systems. Specific courses for electrical engineering students include classes in logic, set theory, algorithms, probability and statistics, numerical methods and analysis, and operating systems. Subdivisions of electrical engineering include power generation, control systems, communications, or electronics.

Industrial engineers contribute to the successful integration of processes and people. They look at the broad picture of engineering in an effort to maximize the benefits of a system. Additional courses for industrial engineering students include engineering economics, organizational development, computer simulation, statistical quality control, human factors engineering, and system evaluation. Other suggested classes include biology and psychology. Finally, mechanical engineers examine how mechanical work and various types of energy combine in an effort to design materials and processes for use. In addition to core engineering classes, mechanical engineers may complete several courses in electrical and materials engineering.

### Other Engineering Specializations

In addition to the traditional engineering fields, there are several branches of engineering and areas of specialization. Aerospace engineering is the study of aspects of aeronautics and space. Aerospace engineers may select from several divisions of study within their field. They are encouraged, however, to also obtain knowledge about mass transportation, environmental pollution, and medical science within their curricula.

Agricultural engineering is a field of engineering that is most closely related to the environment. Agri-

cultural engineers are concerned about the conservation of natural resources and are required to build new tools that will aid the production and distribution of food and fibers.

Biomedical engineering applies the principles of anatomy and engineering to biological systems. With their knowledge of these systems, biomedical engineers may assist the health care industry through the design and maintenance of medical systems and equipment. In addition, biomedical engineering students often use their engineering training as a foundation for medical school.

Computer engineering mandates that students become knowledgeable in the areas of computer information systems, computer science, computer hardware, and information science. In many schools, computer and electrical engineering is a dual specialization. Next, environmental engineering improves the quality of life through the preservation of the environment. Environmental engineers are interested in reducing pollution, encouraging hygiene, and reducing waste and toxins found in air and water.

Nuclear engineering closely resembles the science of physics, because nuclear engineers study matter, including protons, neutrons, and electrons. They primarily investigate the nature of inanimate objects. Metallurgical engineers study metals and investigate ways to improve the characteristics of metal for society's use. Three areas of specialization within this field include process metallurgy, physical metallurgy, and materials science.

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MONICA FARMER COX

## ENGLISH AS A SECOND LANGUAGE

*See:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; LANGUAGE MINORITY STUDENTS.

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### ENGLISH EDUCATION

TEACHING OF

Stephen Tchudi

PREPARATION OF TEACHERS

Pamela L. Grossman

#### TEACHING OF

The teaching of the English language has a long history in U.S. education; the practice of teaching a native language can be traced to antiquity. In the Greek and Roman worlds, literacy was encouraged both to foster citizen participation in a democracy as advocated by Plato, Quintilian, and Cicero; much later it was fostered by the emergence of print and print cultures in western Europe.

#### The History of English in the Schools

In the American colonies, education in literacy was the essence of education, along with arithmetic. Literacy education followed patterns of instruction that could also trace their ancestry to Greek and Roman education, transmitted to the colonies via Great Britain. The tradition in early literacy instruction was one of formalism, which posits that knowledge of the forms of language (as identified in such studies as grammar, logic, rhetoric, and orthography) enables a learner to read and write successfully. Thus such seminal books as the *New England Primer* (1775) concentrated heavily on the basic elements of English: the alphabet, then words of one, two, and more syllables—a pattern of small to large language particles to whole meaning.

In a seminal book written in the late 1960s, *Growth Through English*, John Dixon described this formalist approach as characteristic of the first phase in the development of literacy: an era of basic skills. A second stage is one of enculturation, where the mastery of basic skills opens up a canon of “great books” to young learners. A third stage, Dixon asserted, is concerned with personal growth, where knowledge of culture through literacy allows the

learner to move freely and flexibly through the full range of language to enhance his or her personal life, philosophy, and aesthetic.

In the United States, Dixon's first two stages can clearly be seen in the nineteenth century, when first grammar, then composition and literature, became standard features in the emerging curricula of the American elementary schools and, in particular, of that dramatic experiment in democracy: the free public high school. By the end of the nineteenth century, the tripod curriculum of language, literature, and composition was established, taught primarily from a formalist perspective.

In the 1960s and 1970s a shift of perspective away from basic skills and enculturation prompted educators to declare that a paradigm shift of major proportions was taking place, matching trends in American education away from formalism toward student- and child-centered education. Proclamation of this paradigm shift may have been premature, for in fact, English education has been and continues to be subject to contrary and contradictory influences and philosophies.

The alleged paradigm shift was toward a contrary (or possibly contradictory) curriculum that can be called *naturalistic* or *experiential*. Its roots can be found in the European philosophies of such educators as Johann Amos Comenius and Jean-Jacques Rousseau, both of whom argued for engagement in learning practices as opposed to rote study. The experiential movement can also be labeled romantic, traceable to the humanistic and naturalistic philosophies of such writers as William Wordsworth and Samuel Taylor Coleridge. In the United States, John Dewey's Progressive education movement translated the experiential strand of educational thought into curriculum designs, reflected most prominently in two publications of the National Council of Teachers of English in the 1930s: one outlining the essentials of an "experience curriculum in English," the other advocating a "correlated curriculum," with language activities infused throughout the school curriculum in all disciplines.

Yet the formalist tradition persisted, setting the stage for conflict in the final quarter of the twentieth century between formalist and experiential schools of thought. For the general public and the legislators who represent them, the formalist strategy—teach the basics and move on to larger activities—makes common sense. Among English language arts educa-

tors, according to Rodger D. Sell, those favoring a formalist approach have become increasingly sophisticated in their understanding of language structures, arguing for teaching multiple discourse forms and an increasingly broad and inclusive literary canon.

Those from the experiential camp, such as Kenneth Goodman and Frank Smith, on the other hand, have developed philosophies of whole language—hotly contested in both convention halls and legislative chambers. The experiential school argues Dewey's theme that the formal structures of language are mastered, not by study of forms, but through engagement with a wide range of "real world" or purposeful discourse.

### Consensus: The National Standards

In the 1990s concern about the quality of American education became centered—in English language arts as in other fields—on a quest for national standards in the subject fields. The concept of *standards* appears to be formalist; that is, it posits that by identifying discrete "learnings" that are to be required of all students, one can systematize curriculum and improve scores on standardized tests of literacy. The tests themselves tend to measure formalist rather than experiential "knowledges" and skills. Thus there has often been ideological conflict between, on the one hand, parents and legislators who favor a standards and testing approach, and, on the other, English teachers, who are moving toward an experiential curriculum.

The task of creating national standards in English fell to the National Council of Teachers of English and the International Reading Association, whose members and their representatives agonized over the challenge of defining and describing what young people ought to be able to know and do with language. The resulting document, *Standards for the English Language Arts*, described a consensus view of what the English studies can, could, and should be. The fourteen standards outlined for K–12 classrooms emphasize growth and development of language use for personal, social, academic, and vocational purposes. The standards present a series of illustrative vignettes showing students who are engaged in extending the range of literature they read; developing increasing competence in a broadening range of forms and genres in speaking and writing; reading and writing for personal and aesthetic pleasure as well as public competence; and in-

creasing their skill at using language within the purposeful settings. Perhaps disappointing to the public and legislators, the national standards did not spell out basic skills and knowledges in grammar, spelling, and the like; nor did they suggest a canon of books that all children should read. In short, the standards tended toward the Progressive/experiential model, while making a genuine effort to accommodate the interests and traditions of formalism. The authors of the standards note very clearly that theirs is a work in progress and that it would indeed be naive to suppose that any group of specialists can define and describe the parameters of language study for the unforeseeable future.

### Current Issues in the English Language Arts

The national standards in the English language arts thus provide a platform for the development of curricula in the twenty-first century. Clearly, the coming years will produce new demands on literate people and call for new forms of literacy; in addition, research in human learning can be expected to increase educators' understanding of language acquisition and thus how to establish increasingly successful venues for offering language instruction. Ongoing issues, problems, concerns, and debates over the English language arts include the following topics.

**Basic skills, testing, and accountability.** The standards movement has been part of an ongoing call for accountability for English language arts teachers (and teachers in all fields). The general public wants concrete evidence that teachers are teaching well and that students are learning. In turn, this pressure has led to increased testing in all fields and disciplines, but in no field more than English, where students experience local or state progress testing virtually every year, standardized testing on nationally normed tests at regular intervals, state or district proficiency examinations for high school diplomas, and national measures such as the National Assessment of Educational Progress. Given pressures for students to perform well on these tests, teachers in the schools find themselves increasingly focusing the curriculum on test preparation or, more broadly, on teaching the kinds of formalist knowledge that is most frequently encountered on those tests.

**Literacy and society.** Beyond the immediate concerns of test scores, there remains considerable debate over the fundamental aims of literacy education. The English teaching profession is in gen-

eral agreement with the notion that literacy instruction needs to go beyond the demands for practical skills and must include Dixon's category of language for personal and aesthetic growth. This is not to say that English teachers are committed to an elitist view of "art for art's sake" or falsely elevated notions of "taste" and "culture." Rather, from the experiential philosophy of language education, teachers generally believe that broad language education—teaching students to speak, read, and write articulately on a range of issues and problems—not only encompasses, but moves beyond simple mastery of basic English. The work of Paulo Freire has been especially influential in encouraging educators to consider the social and political implications of what they teach, exploring the possibility that narrow training in literacy fosters citizen subservience, while general literacy arguably leads to independent thinking.

However, such issues are also linked more broadly to issues and trends in education, specifically, the role that the general public perceives for the schools. In the last quarter of the twentieth century, an increasingly global economy and greater demands on the American economic system increased pressures on the schools to be a direct part of the economic engine. The accountability and testing movements, for example, are often linked to the goal of keeping the United States competitive in world markets. Although few would disagree with that expression of need, opinions differ dramatically in how it can be met. Some would have the schools focus primarily on job literacy (in both the immediate and long-range senses), which implies an English curriculum more like that advocated by the formalists. Others insist that schools must resist the push to become employment oriented and should return to the concept of general or liberal education, creating well-educated individuals who are equipped to adapt to changing conditions. Contemporary English theory and research lean in the direction of general/liberal education, but the outcome of this debate is more likely to be determined in the legislatures.

**Multiple types of English.** If there is a single unifying trend in English education, it is that what has been labeled *the English language arts* is becoming increasingly broad through what can be called *the multiple English curriculum*, including the following.

**Multidisciplinary English.** In the 1970s through the end of the twentieth century, parallel movements for writing across the curriculum and reading in the content areas moved English language arts outside

the immediate confines of the language classroom. English educators proposed that reading and writing skills could not be expected to be developed if they are limited to practice inside the English classroom. Moreover, they claimed that by attending to language, teachers in other disciplines would find student learning improved; that is, by attending to the language skills and needs of their own disciplines, educators would find students improving in their understanding of the processes of inquiry and expression and thus of the discipline itself. These movements toward multidisciplinary English in every classroom have found limited success. Although the concept receives widespread general support, many disciplinary teachers do not feel they have the training to deal with language problems, especially with curricula that are already crowded with concepts, national standards, and parental expectations.

**Multicultural English.** Due in no small measure to the activism of minority and feminist groups, English language arts teachers have greatly broadened the cultural content of their field. Courses in literature by and about minorities and by about women have led to a realization that the traditional English canon of English and American literature, much of it written by white males, is both culturally biased and intellectually limited. Originally isolated in their own courses or units, these multicultural literatures are increasingly being found throughout the curriculum, and they include not only literatures written by people whose first language is not English, but also world literature translated into English. Like every other trend in English, this one is not without its detractors, particularly those who argue that cultural literacy begins at home, and that the canon of Anglo literatures, not world “Englishes,” should be the substance of the curriculum.

**Multilingual English.** Immediately linked to multicultural teaching are questions concerning the use of multiple languages, both languages other than English (e.g., Spanish), and dialects other than standard English (e.g., African-American English). Much theory and research has argued for teaching methodologies based on the concept of bilingualism: that students should be provided with opportunities to develop and learn in their native language as they receive instruction in English. The counterposition to bilingualism argues for quick introduction into the structures of the target language and mainstreaming of bilingual students into classes where

English is used exclusively. The latter position also reflects strong public interest in “English Only,” a concept that would legislate English as the official national (or adopted state) language. Opponents of that movement note that the United States is rapidly becoming a bilingual country, that the evolution of language is natural, and that one cannot either limit or prescribe peoples’ mastery of language.

Analogous arguments are offered in favor and in opposition to insistence on a single dialect of standard English instead of recognizing that all speakers operate in the a range of dialects. Particularly controversial was a decision in the Oakland, California, schools to include the understanding of “Ebonics,” a dialect of African-American English, as a curriculum goal for both teachers and students.

**Multigenre and multimedia English.** Whether one supports the concept of English as practical in orientation—preparing students for the immediate demands of society, the workplace, and school—or more general and liberal in application, research and practice are responding to the rapidly broadening array of discourse forms and technologies. Computer literacy has been widely adopted as an aim of school curricula, with mastery of basic computer skills seen as necessary for any graduate of public education. For the English teacher, such literacy moves beyond the mechanical operation of machinery. In the twenty-first century, English/computer literacy will also include the critical analysis and evaluation of language and information sources as well as the ability to compose and create in new media forms. Thus as an extension of print literacy, many English classes now commonly include language experiences involving e-mail, chat and discussion groups, the Internet, presentation software, and even video and audio production. It is clear that the traditional English classroom centered on books, pencils, and papers will evolve considerably in the coming years.

### **Reflective Practice, Teacher Preparation, and In-Service Reeducation**

Even as the public and legislators have expressed reservations about the performance of students in the English language, the English profession has made great strides in elaborating and rationalizing English programs. Considerable research in English education conducted since the early 1990s has led to widespread discussion of the research-based curriculum, where teachers operate from known principles of rhetoric, linguistics, psychology, and literary criti-

cism rather than from teacher lore and tradition. Equally important is the concept of *reflective practice*, where teachers consciously articulate the reasons for their instruction and seek ways of assessing whether or not it is succeeding.

Particularly notable in English is the growth of portfolio assessment as an alternative to standardized testing, where students prepare collections of materials that demonstrate their best work and their competencies, engage in self-analysis, and discuss with teachers and community members the success of the work.

Also noteworthy is the great success of the National Writing Project (NWP) in promoting growth in English curricula through the sharing of practices among teachers. Founded in the 1970s in response to the "back to basics" crisis, the NWP has branches in every state and in several other countries. Its methodology features the sharing of best practices by teachers, reading and discussion of theory and research, and systematic in-service education.

The NWP is part of a broader movement toward teacher empowerment, which argues that curriculum decisions are best made by teachers themselves. This movement is understandably in opposition to other approaches, most notably the widespread belief that legislation, standards, accountability, and even "teacher-proof" materials can lead to educational reform. By contrast, some professionals, such as Denny T. Wolfe and Joe Antinarella, present the case that English language arts teachers themselves can and should be leaders in educational reform.

*See also:* CURRICULUM, SCHOOL; ENGLISH EDUCATION, *subentry on* PREPARATION OF TEACHERS; NATIONAL COUNCIL OF TEACHERS OF ENGLISH; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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STEPHEN TCHUDI

## PREPARATION OF TEACHERS

The field of English education includes research and practice related to both the teaching and learning of English/language arts and the preparation of English teachers. As befits a broad and comprehensive subject matter, the field of English education includes a wide range of topics and lines of research. Under the umbrella of English education, one might find research on rhetoric and the teaching of writing, on the literature curriculum and different approaches to the teaching of literature, as well as a range of topics related to communication, visual literacy, drama, journalism, and language more broadly. In fact, one of the persistent challenges facing the field of English has been the difficulty of self-definition, as Peter Elbow (1990) plaintively inquires in the title of his book, *What is English?* Others have asked, equally plaintively, what important topics might not be considered the province of English teachers. This lack of self-definition leads to what Robert Protherough termed "a pervasive uncertainty about the nature of the discipline" (p. 1).

The sheer scope of the subject matter and its blurry definition have its roots in the history of the subject matter. In a definitive history of the field, Arthur Applebee demonstrated the various ways in which the subject has been defined over time, from its first emergence as a major school subject in the 1890s. While earlier battles focused more on the relative centrality of classical versus vernacular texts,

more recent skirmishes have tackled the role of literature—and the type of literature—in the English classroom. One of the enduring themes in the history of English education has been the search for a way to unify the subject.

In addition to breadth and lack of clear definition, English education is characterized by a multiplicity of theoretical perspectives regarding the subject. Different versions of English to be found in classrooms might include a basic skills approach, an approach that privileges cultural heritage, a personal growth approach, an apprenticeship into the discipline, and an approach that advocates critical or transformative literacy. Each of these versions implies a different set of assumptions regarding the goals for teaching English, posits a different curriculum, and advocates distinctive approaches to teaching.

### Preparation of English Teachers

These features of the subject matter pose challenges to the preparation of English teachers. The sheer breadth of the subject raises questions about how to assure that prospective teachers develop a deep understanding of the field. The existence of multiple, and often competing, versions of English suggests that pre-service teachers will encounter quite different practices during their own experiences in schools. Finally, the inherent complexity of the subject, with its separate domains and subcomponents, offers teachers greater autonomy in developing curriculum. For beginning teachers, however, such autonomy can be daunting as they struggle to decide what exactly to teach.

One critical question concerning the preparation of English teachers has to do with how well prepared they are within the subject matter itself. According to a national survey conducted by Applebee in the early 1990s, approximately 95 percent of English teachers received degrees in English or a related major. However, Richard Ingersoll's 1998 study of out-of-field teaching found that nearly one-fourth of teachers who teach English have neither a major nor a minor in English or related fields. While a major in English does not guarantee the depth of subject matter knowledge required for teaching, the fact that people without English majors are teaching the subject is certainly cause for concern.

English teachers in the United States receive their professional preparation in a wide variety of

programs, from undergraduate programs lasting four or five years, to fifth-year programs in which teachers have one year of professional preparation following completion of an undergraduate degree, to alternative route programs. In the early twenty-first century, research has only begun to chart how differences among programs affect the quality of teacher preparation. Michael Andrew's 1990 study, for example, found that graduates of five-year programs reported greater satisfaction with both their teacher preparation and chosen career and were more likely to remain in teaching than graduates of four-year programs. However, much more work needs to explore how structural differences among preparation programs affect the quality of their graduates.

Relatively few studies have looked systematically at teacher education within the field of English. Studies on the preparation of English teachers have focused primarily on teachers' knowledge and beliefs about the subject matter, and on how teachers develop their understandings of how to teach English. A growing body of research suggests that what English teachers know and believe about literature influences both their curricular and instructional choices. How teachers choose to teach a literary text reflects their own understanding of literature and its interpretation. Similarly, teachers' knowledge of the complexity of the writing process affects their approaches to the teaching of writing. The teaching of writing requires knowledge of how the demands of writing vary depending upon the nature of the task, audience, and genre, among other factors. Lack of this knowledge among teachers may help explain why writing instruction too often reduces the writing process to a lock-step series of discrete stages.

Another body of research has focused on the development of pedagogical content knowledge—the knowledge of how to teach English to a wide range of students. A number of studies have looked at how teachers transform their knowledge of the subject, *per se*, to knowledge of how to teach the subject to diverse learners. In looking at this transformation, a number of studies have focused on the importance of subject-specific methods courses. This line of research suggests that prospective teachers begin the task of rethinking their subject matter from a pedagogical perspective within the context of English methods courses. Such courses often require prospective teachers to confront their implicit assumptions about the subject matter, through assignments such as literacy autobiographies or the examination

of personal metaphors for teaching. Methods courses also provide opportunities to learn more about how students learn to read and write, and some of the predictable struggles they may face. The potential of methods classes to shape prospective teachers' classroom practice is mediated by their experiences in actual classrooms. When they do not have opportunities to observe or try out the practices they are studying in methods classes, they may begin to doubt their feasibility.

Learning to teach English takes longer than the brief period allotted for teacher education. Research conducted by Pamela Grossman and colleagues in 2001 suggests that new teachers are still in the process of learning to teach when they enter the classroom. Given the importance of the first few years of teaching, many districts provide support to beginning teachers through mentoring programs. This also suggests the need for more longitudinal studies of learning to teach, that span teacher education and the first few years of teaching.

### **Professional Development**

Perhaps the best-known professional development opportunities for English teachers are the workshops offered by the National Writing Project (NWP) and its affiliates. The NWP is a national network that began in 1974 at the University of California, Berkeley. Its goal is the improvement of the teaching of writing and the quality of student writing. The NWP has served more than 2 million teachers, across all grades and subjects, since it first came into existence. Some of the basic tenets of the NWP model include the need for writing teachers to become writers themselves; the importance of teacher knowledge and expertise in the teaching of writing; and the value of teachers teaching other teachers. Although relatively little systematic research has investigated the influence of teachers' participation in NWP activities on classroom practice, teachers are generally enthusiastic about their experiences and value the sense of community and professionalism engendered by the writing project activities.

No equivalent large-scale professional development model exists for the teaching of literature or language. The closest equivalents are teachers' book clubs, in which teachers read literature, including memoirs, fiction, and other genres, as way of learning both about their students or about literature and how to teach it. However, these are primarily local innovations. Other models that exist are summer in-

stitutes for teachers, run by organizations such as the National Endowment for the Humanities and the Bread Loaf School of English, in which teachers have the opportunity to learn more about the subject matter.

The most common form of professional development for English teachers, however, continues to be the district in-service day. By their very structure, in-service days are generally dedicated to technical issues important to the district, such as learning new assessment schemes, writing objectives for student learning, or implementing a new curriculum or textbook series. Because district in-service programs are designed to appeal to a broad spectrum of teachers, they are generally unlikely to address subject-specific concerns.

If English teachers are to benefit from the growing body of knowledge about effective professional development, those responsible for teacher learning will need to invest more strategically in school-based structures that support ongoing teacher learning, collegial interaction, and experimentation. Critiques of the NWP have suggested that without strong support at the school site and without opportunities to get ongoing help in developing new practices, teachers find it difficult to implement the ideas they encountered in summer workshops. Another body of work suggests that departments may be the locus for professional community and provide the impetus and opportunity for continued learning.

## Conclusion

English continues to be a contested field of study. Although recent debates have focused on what literature should be taught in schools, others have questioned whether literature should even continue to occupy the center of the subject. The range of literacy required of students, from print literacy to visual and technological literacy, has again expanded the scope of the English curriculum. Such expansions to the curriculum inevitably pose challenges for the education of teachers, as both teacher education and professional development must prepare teachers to incorporate new content and skills into their teaching. Given the features of the subject matter that make such redefinitions inevitable, prospective English teachers will need opportunities to grapple with the multiple purposes envisioned for the teaching of English and to explore ways of bringing coherence to students' experiences in English classes.

*See also:* LANGUAGE ARTS, TEACHING OF; MENTORING; TEACHER EDUCATION.

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PAMELA L. GROSSMAN

## ENROLLMENT MANAGEMENT IN HIGHER EDUCATION

During the last decades of the twentieth century, the concept of enrollment management emerged as a new organizational structure within two- and four-

year colleges and universities. The term *enrollment management* refers to the ability of institutions of higher education to exert more systematic influence over the number and characteristics of new students, as well as influence the persistence of students to continue their enrollment from the time of their matriculation to their graduation. The emergence of enrollment management as a new administrative structure within institutions of higher education originated in North America, but it has also been employed in Europe, Africa, and Asia.

This phenomenon can be explained by shifting public-policy priorities in many countries that are the result governments reducing their subsidies for institutions of higher education, and for students earning a postsecondary degree. Increasingly, attending college is being viewed primarily as a private benefit to individuals rather than as a public benefit to society. Colleges and universities are being asked to fund more of their own budgets through tuition revenues, and students are borrowing increasing amounts of money to pay the rising costs of higher education. As a result of these trends, more and more students have come to view postsecondary education as a consumptive decision, and the increased competition for (and reliance upon) student dollars has caused governmental agencies, university governing boards, and university administrators to pay considerable attention to developing more effective student enrollment strategies.

### Defining Enrollment Management

Don Hossler, John P. Bean, and colleagues defined *enrollment management* as "an organizational concept and a systematic set of activities designed to enable educational institutions to exert more influence over their student enrollments. Organized by strategic planning and supported by institutional research, enrollment management activities concern student college choice, transition to college, student attrition and retention, and student outcomes. These processes are studied to guide institutional practices in the areas of new student recruitment and financial aid, student support services, curriculum development, and other academic areas that affect enrollments, student persistence, and student outcomes from college" (p. 5). Enrollment management is an open-systems and synergistic organizational approach that fosters an organizational atmosphere that makes reporting relationships among student-service units more transparent. It also fosters an environment

where offices and divisions work collaboratively to enhance the quality of the student experience, thus facilitating the strategic management of enrollments.

Enrollment management can be viewed as a synergistic organizational concept that can be used to link several administrative functions within a college or university in order to optimize institutional enrollment goals. Examples of this approach can be found among the financial strategies of many college campuses, where important linkages have emerged between senior enrollment managers and chief financial administrators. Both private and public colleges use some of their tuition income to fund campus-based scholarships for students. Tuition revenue accounts for millions of dollars, and campus-based financial aid has become a large expenditure at most four-year institutions. Enrollment management efforts have therefore become closely linked to budgeting and campus financial planning. Successful enrollment management strategies and practices must also take into account the growing importance of college and university rankings. For many institutions of higher education, enrollment management has come to involve a combination of student enrollment strategy, budgeting strategy, and institutional positioning strategy.

### **Key Offices and Tasks in Enrollment Management**

A university's office of institutional research should play a major role in successful enrollment management efforts. The more enrollment management professionals know about the characteristics, attitudes, and values of prospective students, the better able they are to design effective recruitment and orientation programs. Persistence studies conducted by institutional researchers can inform strategies to enhance the success of first-year students, and institutional research professionals can examine the impact of various forms of student financial assistance upon matriculation decisions and the academic success. A strong institutional function is a critical element of a sound enrollment management effort.

The office of admissions plays a key role in enrollment management efforts. The first order of business for enrollment managers is to ensure that their university has broad marketing efforts in place to make the institution visible and sufficiently attractive, so that desirable prospective students are motivated to seriously consider them. These marketing efforts should be segmented to appeal to differ-

ent types of students, emphasizing different strengths of the institution. Once prospective students have expressed interest, campuses need to provide the right information at the right time in order to be perceived as a good match, and thereby attract applications.

The office of financial aid has a dual purpose. The first purpose is that of providing federal, state, and campus-based need-based financial aid to enable students to attend the institution of their choice. The second purpose is the growing use of campus-based financial aid to reward academic merit and other special talents to enable colleges and universities to attract a desired number of students with the academic ability and other special talents they are seeking. Historically, institutions of higher education relied primarily upon endowed gifts to fund campus-based scholarships. Toward the close of the twentieth century, however, more and more institutions began using part of the tuition students pay to fund scholarships. This practice is often described as *tuition discounting*.

Orientation programs in the summer and fall bring prospective students (and sometimes their parents) to campus for as little as one or two days and for as long as a week. These programs give students a closer look at an institution, and they also help prospective students to succeed once they decide to attend. Through campus tours, academic advising and registration, and structured academic and social programs, orientation programs help aspiring students to become familiar with the campus culture, the norms, and the values of the faculty and of peers. This is crucial to the anticipatory socialization process and the getting-ready behaviors can facilitate a successful transition to college.

Student retention efforts are an important aspect of enrollment management efforts. Few colleges or universities have formal retention offices. Instead they have retention programs that can be organized by a range of academic and student-life offices. The dean of academic affairs, the dean of student affairs, or an enrollment management division can sponsor academic support programs. A number of institutional interventions are known to exert a positive influence upon student success and persistence during the first year of college. These include enhanced student life and academic initiatives to encourage in-class and out-of-class interaction between first-year students and faculty, staff, and other students; creating more opportunities for students to work on

campus; engagement in student activities and events; providing academic and career advising that promotes clear career and academic goals; enacting academic and pedagogical policies and practices that enhance student study habits and promote regular class attendance; a strong orientation program; special support programs for international students and students of color; and family and/or spousal/partner support for degree completion.

Other student-life offices can also be integral to the success of enrollment management offices, including academic advising, academic support and tutoring centers, career planning, student activities, and residence life.

### Organizational Models

The literature on enrollment management often addresses different administrative approaches for organizing enrollment management efforts.

**The enrollment management coordinator.** The enrollment management coordinator is charged with organizing recruitment and retention activities. Usually, a midlevel administrator, such as the dean of admissions or financial aid, is asked to coordinate offices such as admissions, financial aid, and registration and records. An important disadvantage is that the coordinator model provides no formal mechanism for linking enrollment concerns into the decision-making agenda of senior level administrators.

**The enrollment management matrix.** The enrollment management matrix is a more centralized approach. In the matrix model, an existing senior level administrator, such as the vice president for student affairs, academic affairs, or institutional advancement, directs the activities of the enrollment management matrix. In this model, administrative units such as financial aid or student retention are not formally reassigned to a new vice president. Instead, the administrative heads of these units continue their existing reporting relationships, but they also become part of the enrollment management matrix.

**The enrollment management division.** The most centralized organizational model is the enrollment management division. In the division model, a vice president or associate vice president is assigned the responsibilities for most or all of the administrative areas that influence student enrollments, housed within one large functional unit. This model requires high levels of administrative support; the

president or a senior vice president generally has to become a strong advocate of this model. One important advantage of this model is that an enrollment management vice president can carry enrollment-related concerns directly to the president and the board of trustees.

There is little empirical evidence to indicate that any particular organizational approach is inherently better than another. Most experienced enrollment managers place more emphasis on strong working relationships with other key administrators on campus than on advocating for a specific organizational model. Another recurring theme is the need for a senior campus administrator, such as the president or provost, to provide visible and consistent support for the institution's enrollment management efforts. In colleges and universities of all sizes, support from the top appears to be more important than a specific administrative structure established to manage enrollments.

Given the current pressures on institutions to maximize revenue, and the attention being given to the characteristics of enrolled students, enrollment management is likely to remain an important administrative focus at most colleges and universities.

*See also:* COLLEGE ADMISSIONS; COLLEGE FINANCIAL AID; COLLEGE RECRUITMENT PRACTICES; COLLEGE SEARCH AND SELECTION; COLLEGE STUDENT RETENTION.

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DON HOSSLER

## ERIC

*See:* EDUCATIONAL RESOURCES INFORMATION CENTER.

### ERIKSON, ERIK (1902–1994)

Child psychoanalyst Erik Homburger Erikson focused his research on the effects of society and culture on individual psychological development; he also developed the eight-stage model of human development. Erikson was born in Frankfurt, Germany, of Danish parents who had separated before his birth. His surname for the first four decades of his life, Homburger, was that of his stepfather, a physician. Upon becoming a U.S. citizen in 1939 he adopted the surname Erikson.

#### Career

Although Erikson graduated from a classical gymnasium where he studied Latin, Greek, German literature, and history, he was not a good student. For the next seven years following his graduation, he was a wandering artist through Europe, sketching, doing woodcuts and etchings, and intermittently studying art. In 1927, at age 25, he received an invitation from a childhood friend in Vienna to teach in a small progressive school for English and American children. While teaching art and history, he became acquainted with the Freud family and was judged an excellent candidate for psychoanalytic training. As Robert Coles observed, at that time candidates did not apply, but were chosen.

He graduated with a diploma from the Vienna Psychoanalytic Society in 1933, where he was viewed as a gifted student. He also was one of two men to graduate from the Montessori teachers association. Upon graduation, he and his wife and young son fled from the encroaching Nazi domination to the United States.

Although Erikson had no formal degree, he became the first child analyst in Boston and a research associate at Harvard Medical School. From 1936

through the 1940s, he served as a research associate at Yale, then at the University of California, finally receiving a professional appointment at the latter institution. During this period, in addition to his analytic work with children, he undertook the in-depth observational study of children in two American Indian tribes, the Sioux of South Dakota and the Yuron of northern California. These studies marked the beginning of his integration of the analytic clinical perspective with the social and economic events that influence child development.

Shortly after Erikson received a professorial appointment at the University of California, the signing of a loyalty oath became a contractual requirement for faculty. Refusing to sign the oath, Erikson resigned in June 1950. Noting that his field, psychoanalysis, included the study of hysteria, he stated he could not participate in this inadequate response to public hysteria. Erikson then returned to the analysis of troubled children by accepting a position at the Austen Riggs Center in Stockbridge, Massachusetts. In 1960 he was appointed professor at Harvard University, where he remained until his retirement in the early 1970s.

#### Contribution

Although trained as a psychoanalyst, Erikson's scholarship, which included fourteen books, transcended the discipline in his interweaving of culture, history, and the individual across a variety of topics. Specifically, he applied psychoanalysis in addressing anthropological, religious, and historical questions in addition to developing a comprehensive life span model of psychological development.

In his work, Erikson went beyond the Freudian focus on dysfunctional behavior to pursue the ways that the normal self is able to function successfully. His unique contribution to the applications of psychoanalysis, his inclusion of the effects of society and culture on individual psychological development, led to the designation of his perspective as psychosocial. Early examples are the study of the American Indian children, which combined anthropological observation and clinical analysis with tribal history and economic circumstances.

Erikson also applied psychoanalysis to develop richly detailed biographical histories of leaders who made a difference in society. Included are his chapter on Maxim Gorky, his lectures on Thomas Jefferson, and his books on Martin Luther (*Young Man Luther*:

*A Study in Psychoanalysis and History*, 1962) and Mahatma Gandhi. The latter work, *Gandhi's Truth: On the Origins of Militant Nonviolence* (1969), received both the 1970 Pulitzer Prize and the National Book Award. In these works, Erikson applied clinical analysis to develop an understanding of the ways that leaders faced with untenable situations rose above them to forge new identities for themselves and other citizens.

In education and psychology, Erikson is best known for his eight-stage model of the human life cycle, developed with the assistance of his wife, Joan. This model identifies particular goals, challenges, and concerns at each stage of life. They are the following: (1) Basic Trust versus Basic Mistrust (infancy); (2) Autonomy versus Shame and Doubt (early childhood); (3) Initiative versus Guilt (play age); (4) Industry versus Inferiority (school age); (5) Identity versus Role Confusion (adolescence); (6) Intimacy versus Isolation (young adulthood); (7) Generativity versus Stagnation (adulthood); (8) Ego Identity versus Despair (later adulthood). Further, the stages are interdependent in that unresolved conflicts at one stage influence development at later stages, as in the development of either a loving trusting relationship with a caregiver in infancy or mistrust of others.

Unlike Freud, who focused on early childhood, Erikson emphasized adolescence and adulthood. Erikson introduced the term *identity* and *identity crisis* to explain the psychological and social complexities faced by young people in attempting to find their place in a specific town, nation, and time. Adolescent development, in other words, is a complex answer to the question, "Who am I?" and requires organization of the individual's drives, abilities, beliefs, and history into a view of oneself. This focus reflects Erikson's own youthful wanderings before finding his place as a teacher, analyst, and writer.

In the 1960s Erikson focused on the seventh or "generative" stage of adulthood. In this stage, adults are obligated to care for the next generation, either one's own children or a broader group, through personal deeds and words. In the case of Gandhi, his contribution to the next generation was his militant nonviolence as a means to address social injustice. In addition Erikson described the final stage, late adulthood, as an active period that involves acceptance of self and the development of wisdom.

A third focus in Erikson's writing, ethical and moral responsibility, is reflected most prominently

in *Insight and Responsibility* (1964). In this work, he included a set of eight virtues that correspond with his eight life stages (hope, will, purpose, competence, fidelity, love, care, and wisdom). He also introduced the term *pseudospeciation* to describe the destructive mechanism that leads to human conflict, aggression, and war. Specifically, pseudospeciation refers to the "arrogant placing of one's nation, race, culture, and (or) society ahead of others; the failure to recognize that all of humanity was of one species" (Friedman, p. 357). Groups of individuals, in other words, are assigned membership in a not-quite human or pseudo-species. With this concept, as in his other writings, Erikson spoke to human psychological issues within the broader context of history and culture.

*See also:* EDUCATIONAL PSYCHOLOGY.

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MARGARET GREDLER

## ESL

*See:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; LANGUAGE MINORITY STUDENTS.

## ETHICS

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SCHOOL TEACHING

Kenneth A. Strike

HIGHER EDUCATION

Carol J. Auster

### SCHOOL TEACHING

Ethical concerns about teachers and teaching occur in a variety of contexts and can be thought of in several ways. This article discusses (1) how ethical issues are represented in the law; (2) how ethical issues are represented in the National Education Association's (NEA's) code of ethics; (3) ethically based comprehensive views of education; (4) the role of ethics in educational policy; and (5) meta-ethical disputes relevant to education.

#### **Ethics and the Law**

The education codes of many states require that teachers be persons of good character. Most states also permit teachers to be dismissed for unethical conduct. States also forbid particular forms of misconduct, such as child abuse, sexual harassment, and drug abuse, and their violation may be grounds for dismissal.

What counts as good character or conduct can be a contentious matter. In past decades teachers might have been dismissed not only for drunkenness, homosexuality, unwed pregnancy, or cohabitation, but also for myriad other offenses against the moral code of their community. Some of these may still be gray areas; however, in recent years, courts have been inclined to insist that actionable immoral conduct be job-related, providing some protection for the private lives of teachers. Here a particularly contentious matter is whether being a role model is part of the job of teachers, because this expectation can expand public authority over the lives of teachers. In certain cases, as when teachers discuss controversial matters in class or employ controversial teaching methods, they may be protected by the First Amendment. Teachers, especially those who are tenured, are also likely to have significant due-process rights. Dismissal for immoral conduct is most likely when the teacher has committed a felony, in cases of inappropriate sexual advances toward students, or in cases of child abuse. In this last case, teachers may also have a duty to report suspected misconduct by others.

The kinds of misconduct dealt with by the law are usually acts that are (or can be viewed as) unethical in any context. Teachers, like others, are expected to not steal, kill, commit assault, abuse children, or engage in sexual harassment. Although the definition of immoral conduct in the law has not become coextensive with violations of criminal law, there is little in the meaning of immoral conduct that is distinctive to teachers or teaching.

#### **The NEA Code of Ethics and Ethical Principles Internal to Teaching**

The most prominent code of ethics for teachers is the NEA's *Code of Ethics for the Education Profession*. The preamble to this code begins: "The educator, believing in the worth and dignity of each human being, recognizes the supreme importance of the pursuit of truth, devotion to excellence, and the nurture of democratic principles. Essential to these goals is the protection of the freedom to learn and to teach and the guarantee of equal education opportunity for all."

The code has two sections with eight provisions in each. The first section, entitled "Commitment to the Student," promotes the freedom to learn, requires equal opportunity, protects students against disparagement, and protects privacy. The freedom-to-learn provisions prohibit teachers from preventing student inquiry, denying students access to diverse points of view, and distorting subject matter. The code-specific provisions do not assert affirmative duties for teachers to create an inquiry-oriented environment or to pursue educational objectives, which might be associated with the pursuit of truth, individual autonomy, or democratic principles. The prohibition against distortion of subject matter falls short of a prohibition of indoctrination.

The second section of the code begins with the comment that "the educator shall exert every effort to raise professional standards, to promote a climate that encourages the exercise of professional judgment, to achieve conditions which attract persons worthy of the trust to careers in education and to assist in preventing the practice of the profession by unqualified persons."

Among its enumerated provisions are prohibitions against misrepresenting one's own qualifications or those of others, prohibitions against assisting unqualified persons to teach, and prohibitions against the defamation of colleagues. Although

the ideals expressed in the introduction of the second section of the code might lead one to expect specific provisions requiring conscientious professional development, the maintaining of qualifications, or the creation of a collegial learning environment, no such provisions are found.

The NEA code implicitly recognizes three sources of ethical ideals and principles. The first is what might be termed the *ethics of inquiry*. The second area might be called the *civic ethic*. That is, the NEA code recognizes those ideals and principles that regulate the public conduct of citizens of liberal democratic states to be ideals and principles that should also regulate the practice of education. A reason for this is that one goal of education is the creation of citizens. The third source of ethical ideals is the ideal of *professionalism*.

There are difficulties and questions associated with such ideals and principles. Consider the following examples:

1. What fundamental values underlie these principles? The NEA code suggests that the value that underlies the ethics of inquiry is truth, but another possibility is autonomy.
2. What is the best construction of these abstract principles? The NEA code indicates that students may not be unfairly excluded, denied a benefit, or given favoritism on the basis of a list of presumptively irrelevant characteristics. The use of the word *unfairly* cloaks a multitude of issues. For example, how do we know when exclusion or inclusion on the basis of race (one of the irrelevant characteristics listed) is unfair? Is affirmative action unfair?
3. Are there values that must be balanced against these principles? In some understandings of professionalism, a core commitment of professionalism is: *Those who know should rule*. If so, professionalism in education needs to be balanced against the expectation that public schools are under the democratic authority of school boards and state legislatures.
4. What is omitted? These three sources of ethical content do not clearly include various conceptions concerning human relations that seem relevant to teaching. Examples might be caring and trust. Nor are ideals such as promoting the growth of the whole child or creating community mentioned.

## Ethics and the Philosophy of Education

It has been common in the philosophy of education to begin an inquiry into the aims of education by asking questions such as “What is the nature of the good life?” and “What kinds of societies promote the best lives?” The Greek philosopher Plato’s *Republic* is a classical example. Such questions fall within the range of the subject matter of ethics. Answers to these questions can provide part of the framework for building a comprehensive vision of education rooted in what John Rawls has termed a “comprehensive doctrine” (1993, p. 13), and they may guide the professional practice of teachers. In societies characterized by what Rawls calls durable pluralism, there are serious difficulties with such an approach. In such societies, the educational systems cannot be rooted in a single comprehensive doctrine without marginalizing or oppressing those who hold other doctrines and without restricting personal autonomy.

Arguably, societies committed to liberal democratic values may respect pluralism and personal autonomy while also emphasizing creation of citizens. Amy Gutmann in *Democratic Education* (1987) argues that the central aim of the schools of a democratic society must be to develop democratic character. Eamonn Callan in *Creating Citizens* (1997) argues that societies committed to liberal principles of tolerance and reasonableness must provide students with an education enabling them to understand and sympathetically engage a variety of ways of life. It may, however, be argued that such an education is itself intolerant of those who wish to transmit a distinctive way of life to their children. One of the more difficult issues for the schools of liberal democratic societies is how to respect diversity while having common schools that produce good citizens.

## Ethics and Educational Policy

The civic ethic provides conceptions that are relevant, not only to teachers’ classroom practice, but to wide-ranging areas of educational policy. For example, it has been common in recent years to claim that equality of opportunity should emphasize equal educational outcomes instead of equal access or equal inputs. Assume that achievement can be measured by test scores. What pattern of test scores would be desired, and how should resources be distributed to attain it? Consider three possibilities:

1. Emphasize increasing average test scores.

Possible objections are that this is consistent with considerable disparity in levels of achievement. Moreover, average scores might be increased by focusing resources on the most able at the expense of the least able.

2. Emphasize the achievement of the least advantaged or least able. Possible objections are that such an approach might lead to significant investment in the education of students where there will be only modest return, and resources will be used inefficiently.
3. Emphasize getting all who are able above some threshold that defines minimal ability to participate in our society. This approach may lead to difficulties similar to the previous one.

These are competing principles for distributing educational resources. Although they concern such matters as state or school district budgets, in fact they may also concern the distribution of teacher time. They shed light on such questions as whether teachers should spend disproportionate time with those who are most needful or with those who will make the most progress. These various approaches are analogous to principles of distributive justice that are widely discussed in philosophical literature. The first is a utilitarian principle emphasizing the maximization of good outcomes. The second seeks to maximize the welfare of those who occupy the least advantaged positions in society. The third is a threshold view emphasizing getting everyone above some defined level. These principles illustrate the ways in which moral conceptions can inform policy and practice.

### Meta-ethical Issues

The term *meta-ethics* concerns the general nature of ethics instead of specific ethical prescriptions. Two meta-ethical disputes are the justice/caring debate and the postmodern critique of modernity.

The justice/caring dispute grows out of a critique of Lawrence Kohlberg's views of moral development by feminist scholars, principally Carol Gilligan. Kohlberg viewed justice as the central moral conception. Gilligan claimed in *In a Different Voice* that women's thinking about ethics emphasizes care. Other advocates of an ethic of care, such as Nel Noddings, have developed the notion into a robust view of ethics and of education. By the early

twenty-first century there was some rapprochement between these views, based on the claim that both justice and caring should be a part of any adequate ethic.

A second meta-ethical perspective is postmodernism. Although understandings of this stance are complex and varied, one useful characterization of postmodernism claims that it is incredulity toward all grand meta-narratives. A grand meta-narrative is a sweeping and general view about human beings and society. Liberalism and socialism are examples. Postmodernists often argue that all such grand stories represent the perspectives of groups or eras and, when viewed as the single truth of the matter, are oppressive. Postmodern critiques often seek to deconstruct such meta-narratives by showing their biased character and how they serve the interests of some over others.

### Summary

The following (not mutually exclusive) sources of ethical ideals and principles are relevant to an informed view of the ethics of teaching:

1. The law pertaining to teacher certification and dismissal, which is likely to proscribe only the most egregious behavior.
2. The NEA code of ethics. This code draws on three sources of ethical content.
  - a. The ethic of inquiry.
  - b. The civic ethic.
  - c. An ethic of professionalism.
3. Ethical conceptions that inform educational policy, such as views of distributive justice.
4. Conceptions of human flourishing and the nature of liberal democratic societies.
5. Competing meta-ethical conceptions.

Of these sources, ethical conceptions rooted in the ethics of inquiry and in the civic ethic may have the most salience to teachers because they are associated with the paramount educational goals of advancing knowledge and creating citizens. They are "internal" to the activity of teaching. Other sources apply to schools because they apply broadly to most social institutions or human activities.

**See also:** NATIONAL EDUCATION ASSOCIATION; PHILOSOPHY OF EDUCATION; TEACHER.

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KENNETH A. STRIKE

## HIGHER EDUCATION

As members of the academic community, faculty and students have a responsibility to abide by ethical principles regarding academic freedom, intellectual integrity, and the fair and respectful treatment of others. The notion of academic freedom lies at the very heart of the academic enterprise. In the "1940 Statement of Principles on Academic Freedom and Tenure," the American Association of University Professors (AAUP) states, "Academic freedom . . . applies to both teaching and research. Freedom in research is fundamental to the advancement of truth. Academic freedom in its teaching aspect is fundamental for the protection of the rights of the teacher in teaching and of the student to freedom in learning" (p. 3). Intellectual integrity involves using sound and ethical methods in the pursuit of knowledge as well as embracing honesty in the dissemination of knowledge. Individuals' expectation of fair and respectful treatment by faculty and students applies not only to interactions with one another, but also to administrators, staff, and others with whom they interact in their role as members of the academic community. Fair and respectful treatment also extends, for example, to the evaluation of students' academic work and colleagues' scholarly work.

The ethical principles that guide the behavior of faculty are reflected in standards of ethics described in the documents of professional associations for faculty in higher education, such as the "Statement on Professional Ethics (1987)" published by the American Association of University Professors, and

codes of ethics published by disciplinary associations, such as the American Chemical Society, the American Psychological Association, the American Sociological Association, and the Modern Language Association. In addition, college and university faculty handbooks often include a section that addresses ethical standards or expectations regarding the behavior of faculty. Ethical standards for students may be found in official student handbooks or college and university catalogues, although standards for graduate students are also addressed in some of the professional and disciplinary association codes of ethics. These various documents embody shared beliefs that are intended to guide both the activities and the behavior of those engaged in the academic enterprise.

### Faculty

Faculty are guided by ethical principles that address their professional responsibilities as teachers, scholars, and, more generally, members of college and university communities. While some aspects of documents concerning ethical standards describe the behavior to be embraced, other aspects make clear what actions must be avoided.

**Plagiarism.** Representing the ideas, words, or data of another person or persons as one's own constitutes plagiarism. Thus, a person's words, ideas, or data, whether published or unpublished, must be acknowledged as such. For example, the MLA (Modern Language Association) Style Manual states, "To use another person's ideas or expressions in your writing without acknowledging the source is to plagiarize" (Gibaldi, sec. 1.8). "The most blatant form of plagiarism is reproducing someone else's sentences more or less verbatim, and presenting them as your own" (Achten and Gibaldi, sec. 1.4). Although scholars have long recognized the importance of citing both published and unpublished work, those engaged in teaching or research also recognize that information from electronic resources must be properly credited. Proper citation allows others to trace the origin and development of ideas, theories, and research outcomes and helps support the integrity of the academic enterprise and needed mutual trust between those seeking and those disseminating knowledge.

**Acknowledgement of contributions.** Acknowledgement of the contributions of others means appropriately recognizing and crediting those who have contributed to a scholarly work whether the work is

a manuscript, exhibit, or performance. Both recognition and accountability come with allocations of credit. Depending on their contributions, such others, including students, may be deserving of credit ranging from acknowledgement in a footnote to coauthorship. Regardless of whether faculty members work with students or colleagues, the work of all parties should be equitably acknowledged in a manner appropriate to the norms of their discipline.

**Data.** Researchers must acknowledge the source(s) of their data and accurately describe the method by which their data was gathered. Moreover, the fabrication or falsification of data or results constitutes a violation of ethical standards. While fabrication is defined as "making up data or results," falsification is "changing or misreporting data or results" (Committee on Science, Engineering, and Public Policy, p. 16). Both of these actions interfere with the search for knowledge and truth and undermine trust both within and outside the academic community.

**Conflict of interest.** Research funded by corporate sponsors potentially leads to a situation in which a conflict of interest may arise. Researchers may feel pressure, for example, to conduct research in a way that would bias the results toward the desires of the sponsor or to reveal only those results that benefit the sponsor. Biomedical research, in particular, brings forth such concerns. Conflict of interest issues are not limited to corporate-sponsored research projects; conflict of interest situations may occur with government-sponsored research as well. Non-profit organizations and social advocacy groups also have the potential to place college and university researchers in situations that make it potentially difficult to conduct the sponsored research in an unbiased manner. Researchers must be able to publicly disclose their sources of funding and the intent of the research, as well as conduct their research in a manner consistent with the ethical standards for investigation in their respective disciplines. Scholars must not let the source of their funding nor the sponsors' goals cloud their own professional and scientific judgments regarding their research.

**Other research concerns.** The prevalence of the discussion of particular ethical concerns varies across disciplines because of the nature of the research process. For example, the American Sociological Association's "Code of Ethics" describes the importance of informed consent for research involving human subjects. That is, human subjects must be aware of the nature of the research as well as voluntarily agree

to be a part of such research. The American Psychological Association discusses not only informed consent in their code of ethics, but also the importance of the humane use and care of animals in research. Disciplines that rely more heavily on archival research may say little about informed consent from human subjects, but may focus on the importance of obtaining permission to use archival data. Professional associations in the sciences, such as the American Chemical Society, are additionally concerned with providing safe working conditions for those who work in research laboratories.

**Harassment.** The most frequently discussed form of harassment is sexual harassment. As the AAUP statement on sexual harassment states, “no member of the academic community may sexually harass another” (p. 209). Such policies are applicable to faculty and students as well as to administrators, staff, other employees, and research subjects. The American Sociological Association notes that “sexual harassment may include sexual solicitation, physical advance, or verbal or non-verbal conduct that is sexual in nature” (p. 7). Some types of sexual harassment are *quid pro quo*, in which the sexual favors are presumably requested in exchange for a promised or implied future benefit, such as a higher grade or appointment to a position. Other conduct, namely that which creates a hostile or uncomfortable work environment, including the classroom environment, also constitutes sexual harassment. The code of ethics of many professional and disciplinary associations addresses the issue of sexual harassment, and faculty handbooks and other institutional documents typically include a set of procedures for dealing with situations in which alleged sexual harassment has occurred.

In addition, members of the academic community should not harass others on the basis of other personal and demographic characteristics, including race, ethnicity, age, religion, national origin, sexual orientation, and disability. Regardless of the basis of harassing or demeaning behavior, victims of harassment may find it helpful to consult with faculty and administrators for advice on avenues of action in such situations.

**Nondiscrimination and fair evaluation.** In their work, members of the academic community should not engage in discrimination “based on age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, socioeconomic status, or any basis proscribed by law” (American Psychological

Association, sec. 1.10). With regard to employment, members of the academic community should not “discriminate in hiring, promotion, salary, treatment, or any other conditions of employment or career development” (American Sociological Association, sec. 8). Furthermore, professors who have agreed to serve as reviewers of manuscripts, grant proposals, or other scholarly submissions, should evaluate those materials in a fair, objective, professional, and timely manner. These standards are also applicable to the evaluation of students’ academic work. In “A Statement of the Association’s Council: Freedom and Responsibility” the AAUP further explains, “Students are entitled to an atmosphere conducive to learning and to even-handed treatment in all aspects of the teacher-student relationship” (p. 135). The principle of fair and respectful treatment also applies to interactions with and evaluation of the work of other members of the academic community.

**Allegations of ethical misconduct.** Alleged ethical violations on the part of faculty are dealt with in a number of ways. A student or faculty member may choose to approach the faculty member thought to have engaged in ethical misconduct. One could also speak with another faculty member, chair of the department, or administrator about the alleged misconduct and seek advice about possible avenues of action. A hearing on the matter is one of the possible outcomes. Faculty members accused of ethical misconduct are entitled to academic due process. That is, the educational institution should follow a set of procedures already in place for dealing with such allegations. For faculty, the AAUP also sets forth a number of parameters related to the allegations of various types and methods for proceeding to pursue such allegations, particularly within the confines of the employing educational institution. Although most incidents of alleged misconduct are handled within such institutional frameworks, many disciplinary and professional associations have provisions for pursuing breaches of ethical conduct through mechanisms within those associations.

### Students

Students are guided by the same general ethical principles as faculty regarding their academic work. Academic honesty and intellectual integrity are central in the educational process. These two principles apply to academic work, including, but not limited to, papers, theses, assignments, laboratory reports,

exams, quizzes, oral presentations, exhibits, and performances. Students can avoid plagiarism by proper citation of the resources that provide them with the ideas, words, and data that they present in their academic work. Although intellectual theft may not have been intended, careless note taking can also result in inadvertent plagiarism. Students must also not engage in the fabrication or falsification of sources, data, or results. If students work on a project together, the work of those students should be equitably acknowledged. Moreover, students must not engage in unauthorized collaboration nor give or receive inappropriate assistance with their academic work. Violation of ethical standards would be grounds for action against a student. The situational context of the violation along with the institutional norms and regulations affect the path of action. Although some situations involving a student's alleged violation of ethical standards may warrant action on the part of a faculty member or an administrative officer, other situations may warrant a hearing by a duly constituted committee to determine whether the alleged act occurred as well as the appropriate sanctions.

Some institutions of higher education have an honor code that makes clear that cheating and other forms of academic dishonesty are violations of ethical standards. These codes typically obligate students to practice academic integrity and avoid engaging in academic misconduct, but also to take action when they believe others have engaged in academic misconduct. The action taken by a fellow student who witnesses the ethical digression can range from directly confronting the alleged perpetrator to reporting the alleged act to individuals acting on the part of the institution, who may find it appropriate to convene a hearing panel for a judicial process in which students usually play an important role.

### Broader Concerns

Some ethical standards apply to members of the academic community in their relationship with wider society. The Committee on Science, Engineering, and Public Policy says, "Society trusts that the results of research reflect an honest attempt by scientists to describe the world accurately and without bias" (preface). Many codes of ethics for professional disciplinary associations specifically recognize the consequences of research beyond its intended goal. For example, the American Chemical Society indicates that, "Chemists should understand and antici-

pate the environmental consequences of their work. Chemists have responsibility to avoid pollution and to protect the environment." Under the heading "Social Responsibility," the American Sociological Association says, "Sociologists are aware of their professional and scientific responsibility to the communities and societies in which they live and work . . . . When undertaking research, they strive to advance the science of sociology and to serve the public good" (Principle E). Both faculty and students need to be aware that their ideas and implications of their research may reach well beyond their own immediate goal.

Socialization to ethical principles needs to be more explicit and the mechanisms of social control within academic profession need to be strengthened in order to improve adherence to ethical principles. To improve faculty adherence to ethical principles, John M. Braxton and Allen E. Bayer suggest, in particular, that faculty and administrations need to (1) better articulate and codify the norms of professional behavior; (2) more explicitly socialize graduate students about the profession and its ethical obligations; (3) increasingly provide incentives for teaching [and research] behavior that is consistent with the standards of the profession; and (4) when necessary, impose sanctions for violations of those standards. Undergraduate and graduate students need to be made more aware of the expectations for their behavior as well as the consequences of the failure to meet those expectations.

If the ethical standards were more explicit, members of the academic community might be more likely to both act in accordance with such standards and speak out against the ethical misconduct of others in the academic community. In fact, the Committee on Science, Engineering, and Public Policy says, "someone who has witnessed misconduct has an unmistakable obligation to act" (p. 18). Yet, allegations of misconduct may require certain types of confidentiality because of the situations or the parties involved. However, if colleges and universities deal with alleged misconduct in a less clandestine manner, it will be easier for members of the academic community, particularly newcomers, to distinguish between ethical and unethical behavior.

*See also:* ACADEMIC FREEDOM AND TENURE; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY ROLES AND RESPONSIBILITIES; HUMAN SUBJECTS, PROTECTION OF; SCIENTIFIC MISCONDUCT.

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CAROL J. AUSTER

**EXCEPTIONAL CHILDREN,  
EDUCATION OF**

See: SPECIAL EDUCATION.

**EXPERIENTIAL EDUCATION**

Although experiential education has come to mean simply "learning by doing" for some, educators utilizing this approach recognize both its distinguished historical and philosophical roots and the complexi-

ty of applying what appears to be so elementary. When education is said to be *experiential*, it means that it is structured in a way that allows the learner to explore the phenomenon under study—to form a direct relationship with the subject matter—rather than merely reading about the phenomenon or encountering it indirectly. Experiential learning, then, requires that the learner play an active role in the experience and that the experience is followed by reflection as a method for processing, understanding, and making sense of it.

Experiential education, most generally, occurs in different kinds of programs that have as their goal the construction of knowledge, skills, and dispositions from direct experience. Service learning, adventure education, outdoor and environmental education, and workplace internships are just a few examples.

**Brief History of the Role of Experience in Education**

The role of experience in education has a history that connects back to philosophical debates between rationalists and empiricists. Rationalists argued that the information that is gained through one's senses is unreliable, and the only reliable knowledge is that which is gained through reason alone. Empiricists argued that knowledge is derived from empirical sense impressions, and abstract concepts that cannot directly be experienced cannot be known. In 1787 the German philosopher Immanuel Kant resolved the debate by arguing that both rationality and experience have a place in the construction of knowledge. Indeed, the human mind imposes order on the experience of the world in the process of perceiving it. Therefore, all experiences are organized by the actively structuring mind.

John Dewey (1859–1952), perhaps the most prominent American philosopher of the early twentieth century, expanded on the relationship between experience and learning in the publication of his well-known book *Experience and Education* (1938). He argued that not all experience is educative, noting:

The belief that all genuine education comes about through experience does not mean that all experiences are genuinely or equally educative . . . . Any experience is mis-education that has the effect of arresting or distorting the growth of further

experience . . . . A given experience may increase a person's automatic skill in a particular direction and yet tend to land him in a groove or rut; the effect again is to narrow the field of further experience. (Dewey, pp. 25–26)

For Dewey, experiences could be judged to be educative if they led to further growth, intellectually and morally; if there was a benefit to the community; and if the experience resulted in affective qualities that led to continued growth, such as curiosity, initiative, and a sense of purpose. Finally, it is important to emphasize that Dewey saw traditional education as hierarchical and inherently undemocratic, and argued that in order to promote the development of a thoughtful and active democratic citizenry, students in schools needed to be able to participate in aspects of the school program democratically.

Kurt Hahn (1886–1974), considered to be one of the foremost educators of the twentieth century, contributed to experiential education as a practitioner worldwide. Hahn established academic schools, such as Salem in Germany and Gordons-toun in Scotland, and the Outward Bound schools, which total twenty-eight in Europe, the United Kingdom, Africa, Asia, Australia, and North America. In addition he founded the Duke of Edinburgh Award for involvement in voluntary, noncompetitive practical, cultural, and adventurous activities for young people between the ages of fourteen and twenty-five. For Hahn, the entire school day—including curricula, daily routines, social life, and extracurricular activities—could be used to help young people develop social responsibility and high aspirations. Most important, it could also provide education and practice in the fundamental principles of democratic life.

The work of field theorist Kurt Lewin (1890–1947), genetic epistemologist Jean Piaget (1896–1980), and educator and activist Paulo Freire (1921–1997) also provides theoretical grounding for experiential education.

### Roles for the Teacher and the Student

Reports by John Goodlad and TheodoreSizer suggest that most teaching, particularly at the high school level, still involves the teacher as the authority and the dispenser of knowledge and the students as passive recipients. Perhaps the most obvious marker of experiential education is the shift in roles required

for both teachers and students. Teachers who utilize experiential education become facilitators and, in doing so, engage their students in some of the decision-making and problem solving that have in the past been the sole responsibility of the teacher. In addition, teachers facilitate the transfer of learning from the experiential activity to the real world, structure the process of reflection for the students in order to derive the most learning from the experience, and ensure that the learning outcomes are reached. Some educators call this shift a move toward *student-centered teaching*, or a *child-centered curriculum*. Overall it means that the students are placed at the center and the teacher's role is to develop methods for engaging the students in experiences that provide them with access to knowledge and practice in particular skills and dispositions.

The role of the student is transformed in relation to the role of the teacher. Therefore, the student role becomes more active and involved, with additional responsibility and ownership over the process of learning, whether in an outdoor education program or in a middle school. For example, students, as members of a particular learning community, may be responsible for certain day-to-day activities, may be engaged in some aspects of curriculum development, or may be engaged in service activities in their community as a method for learning about different careers and contributing to their neighborhood. Whether in an outdoor education program or a service-learning program in a school, the student's role is one of engagement and deliberation—a continuous cycle of action and reflection, or *praxis*, as defined by Paulo Freire.

### The Assessment of Student Learning

The assessment of learning outcomes for students has reflected ongoing economic and political debates surrounding the definition of learning. Legislators in the United States, looking for efficient ways of quantifying learning, advocate standardized multiple-choice tests, which can be mass-produced and are inexpensive to score. Unfortunately, the kind of learning that is measured by these tests is merely a matter of recognition—recognizing the one right answer from among four or five possible answers. Proponents of experiential education define learning in a manner that is more reflective of the complexity of both cognitive and affective development: Learning is “the process whereby knowledge is created through the transformation of experience” (Kolb, p.

41). Central to the process of transformation is reflection.

**Reflection.** In 1984 David A. Kolb published *Experiential Learning: Experience as the Source of Learning and Development*, which outlines a cycle for reflection. The cycle begins with concrete experience, moves to reflective observation, then to abstract conceptualization, and finally to the application stage, active experimentation. Reflection typically includes reconstructing the experience, making connections to prior knowledge or skills, testing understanding, and making decisions about how to apply the knowledge or skills in a new situation. In addition, David Boud, Rosemary Keogh, and David Walker (1985) offered examples of various methods for promoting reflection including oral conversations, such as informal debriefing sessions following experiential activities and written responses to experiences through diaries, journals, portfolios, and student exhibits, which may include text, pictures, and photos.

**Assessing student learning.** Assessing experiential learning is an ongoing process based upon the learning outcomes defined at the beginning of the experience or program. As an example, Norman Evans argues that student assessment is “a matter of making independent judgments about the level and quality of learning which has been reached by an individual at a particular time” (p. 68). He notes a four-stage sequence for compiling evidence in a portfolio assessment: “(1) Systematic reflection on experience for significant learning; (2) Identification of significant learning, expressed in precise statements, constituting claims to the possession of knowledge and skills; (3) Synthesis of evidence to support the claims made to knowledge and skills; (4) Assessment for accreditation” (p. 71).

For K–16 students, and particular to service learning, Kathryn Cumbo and Jennifer Vadeboncoeur note that service and learning goals should be articulated early in the planning process for an experiential activity. Indeed, the discussion surrounding the reason behind the experience and the way it reflects the curriculum goals may be a learning experience in and of itself between the teacher and his or her students. Finally, the definition of the service goals requires input from the community group or organization that provides the experiential site through partnership with the school. Cumbo and Vadeboncoeur offer examples of scoring rubrics and assessment tools to assess curricular knowledge.

## Evidence of Effectiveness

It is important to emphasize that different experiential programs have different learning outcomes, all of which may be assessed using some type of measure, though much of what is learned may not be assessable on a standardized multiple-choice test. Research, which provides evidence for the effectiveness of experiential education, tends to be separated by the type of experiential program. For example, Alan W. Ewert demonstrated effects for outdoor adventure programs, including enhanced self-concept, effectiveness in treating chemical dependency, and a reduction in the rate of recidivism for young people. In addition, John Hattie, H. W. March, James T. Neill, and Garry E. Richards reviewed the literature for adventure education and Outward Bound programs and completed a meta-analysis of ninety-six separate studies. Their work highlights continued gains and longevity of the positive follow-up effects, in particular for programs lasting more than twenty days. Finally, with regard to service learning, in a national study of Learn and Serve America programs completed over three years by Brandeis University, key findings included positive short-term impacts for a range of civic and educational attitudes and behaviors for participants and a positive impact on the community in terms of service performed.

## Major Issues

There are several issues that stand in the way of increasing access to experiential education in schools, although programs that exist outside of schools, such as Outward Bound and the National Outdoor Leadership schools, are flourishing. For in-school programs, the cost of engaging in experiential education, including transportation, can be prohibitive, not to mention the time it takes to plan and carry out experiential programs. In addition, even after the prominence of Dewey’s work and the commitment of so many experiential educators, legislators and some parents seem to prioritize teacher accountability as measured through student achievement on standardized tests, over and above a more complex view of student learning. As long as the definition of learning is narrowed to rote memorization, quantifiable on multiple-choice tests, teachers will be restricted to covering curriculum and teaching to the test. There should be a continued effort to develop and share assessment tools for measuring student learning from experiential education. In addition, the culture as a whole should play a part in

rethinking the definition of learning, taking into account a more broadly conceived view of the role of experience and reflection.

See also: OUTDOOR AND ENVIRONMENTAL EDUCATION; SERVICE LEARNING, *subentry on* SCHOOLS.

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JENNIFER A. VADEBONCOEUR

## EXPERTISE

### ADAPTIVE EXPERTISE

Giyoo Hatano

### DOMAIN EXPERTISE

K. Anders Ericsson

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### ADAPTIVE EXPERTISE

Investigators on knowledge transfer have almost unanimously concluded that students seldom effectively apply short-term training at school to problem-solving situations outside school. Experts, who have had years of problem-solving experience in a given domain, may not be different—they can solve familiar types of problems quickly and accurately but fail to go beyond procedural efficiency. Even in knowledge-rich domains, experts may be characterized by their possession of problem schemas by which they classify problems and apply one of the solution routines accordingly.

The notion of adaptive experts as against routine experts was proposed by Giyoo Hatano as an ideal of educational researchers looking to find ways to teach students so they can apply learned procedures flexibly or adaptively. Keith Holyoak aptly describes the distinction: "Whereas routine experts are able to solve familiar types of problems quickly and accurately, they have only modest capabilities in dealing with novel types of problems. Adaptive experts, on the other hand, may be able to invent new procedures derived from their expert knowledge" (p. 310). Giyoo Hatano and Kayoko Inagaki, in their 1986 paper, slightly expand the above characterization of adaptive experts: They are able to (1) comprehend why those procedures they know work; (2) modify those procedures flexibly when needed; and (3) invent new procedures when none of the known procedures are effective.

### Sources of Adaptiveness

Where does the adaptiveness of adaptive experts come from? Adaptive experts are assumed to pos-

ness, as the source of their flexibility and inventiveness, conceptual knowledge of the objects of the procedures (that is, what each of these objects is like). “Flexibility and adaptability seem to be possible only when there is some corresponding conceptual knowledge to give meaning to each step of the skill and provide criteria for selection among possible alternatives for each step within the procedure” (Hatano 1982, p. 15). Such conceptual knowledge enables experts to construct mental models of the major entities of the domain, which can be used in mental simulation. Using Holyoak’s expression, the key to adaptive expertise is the development of deeper conceptual understanding of the target domain. Needless to say, such conceptual understanding must be connected to procedural competencies and meta-cognitive awareness and monitoring of one’s own understanding.

It is hypothesized that if people ask themselves why a skill works or why each step is needed during its application, this question will tend to lead them to form some conceptual knowledge about the object. This was similar to what Donald Schoen in 1983 called “reflection-in-action” as against technical problem-solving in his attempt to characterize professionals. Although experts are seldom taught conceptual knowledge in the verbalized form, they may construct it in the process of solving problems or performing tasks in the domain.

### Motivational and Contextual Conditions

When are people likely to gain adaptive expertise? Identifying particular kinds of learning experiences that develop adaptive expertise is a serious challenge for educational researchers. In 1992 Hatano and Inagaki proposed four conditions that would promote sustained comprehension activity that is likely to lead to adaptive expertise. Their proposal is based on the assumption that *cognitive incongruity* (a state of feeling that current comprehension is inadequate; for example, wondering why a given procedure works) induces enduring comprehension activity, including seeking further information from the outside, retrieving another piece of prior knowledge, generating new inferences, examining the compatibility of inferences more closely, and so forth. The first two of the proposed conditions are concerned with the arousal of cognitive incongruity and the last two with the elicitation of committed and persistent comprehension activity in response to induced incongruity. The four conditions are: (1) encountering

fairly often a novel problem to which prior knowledge is not readily applicable or a phenomenon that disconfirms a prediction based on prior knowledge; (2) engaging in frequent dialogical interaction, such as discussion, controversy, and reciprocal teaching; (3) being free from urgent external need (e.g., material rewards or positive evaluations), and thus able to pursue comprehension even when it is time consuming; and (4) being surrounded by reference group members who value understanding.

These conditions can be rephrased in terms of the nature of the practice in which people participate. For example, when a practice is oriented toward skillfully solving a fixed class of problems (e.g., making the same products for years), participants tend not to encounter novel problems, and thus they are likely to become experts distinguished in terms of speed, accuracy, and automaticity (i.e., routine experts). In contrast, when successful participation in a practice requires meeting varied and changing demands (e.g., making new, fashionable products), participants’ prior knowledge must be applied flexibly, and they are likely to acquire adaptive skills. From sociocultural perspectives, adaptive experts may not be characterized only by their domain-specific knowledge; in order to invent new procedures, for example, in addition to deeper conceptual understanding, people have to be able to participate in discourse, offer valuable suggestions, evaluate others’ suggestions, and so on.

### Educational Implications

At school students are seldom expected to become experts in a particular domain. Rather they are expected to learn in many subject-matter domains. Thus the extent to which school instruction and vocational expertise share similar goals and processes of learning is debatable. Trying to build a classroom as a community of adaptive experts is challenging, but practically it may be too ambitious or require too much effort on the part of educators.

Whatever the ultimate goal for instruction should be, the concept of adaptive expertise “provides an important model of successful learning” (Bransford, Brown, and Cocking, p. 36). It is thus encouraging to see attempts to apply this notion to teaching and learning in mathematics, science, history, and other subjects.

*See also:* EXPERTISE, *subentry on* DOMAIN EXPERTISE.

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GIYOO HATANO

## DOMAIN EXPERTISE

*Expertise* refers to the psychological mechanisms underlying the superior achievement of an expert and the social forces that designate the status of being an expert, that is, "one who has acquired special skill in or knowledge of a particular subject through professional training and practical experience" (*Webster's Third New International Dictionary*, p. 800). The term expert has been used to describe highly experienced professionals, such as medical doctors, accountants, teachers, and scientists, but has been expanded to include any individual who has attained superior performance by instruction and extended practice, ranging from bird-watchers to pianists, golfers to chess players.

## Theoretical Frameworks

Experts' behavior looks so effortless and natural that it is often attributed to special talents, though knowledge and training are necessary. The role of

acquired skill for the highest levels of achievement has traditionally been minimized. However, when scientists began measuring the experts' presumed superior powers of speed of thought, memory, and intelligence with psychometric tests, no general superiority was found—the demonstrated superiority was domain specific. For example, the chess experts' vastly superior memory was constrained to regular chess positions and did not generalize to other types of materials. Not even IQ could distinguish the chess masters among chess players nor the most successful and creative among artists and scientists. In K. Anders Ericsson and Andreas C. Lehmann's 1996 review, it was found that (1) measures of general basic capacities do not reliably predict success in a domain; (2) the superior performance of experts is often very domain specific and transfer outside their narrow area of expertise is limited; and (3) systematic differences between experts and less proficient individuals nearly always reflect attributes acquired by the experts during their lengthy training.

**Thought processes.** In a pioneering empirical study first published in 1946 of the thought processes at the highest levels of performance, Adrian de Groot instructed expert and world-class chess players to think aloud while they selected their next move for an unfamiliar chess position. The world-class players did not differ in the speed of their thoughts or the size of their basic memory capacity, and their ability to recognize promising potential moves was based on their extensive experience and knowledge of patterns in chess. In their influential 1973 theory of expertise, Herbert A. Simon and William G. Chase proposed that experts with extended experience acquire and remember a larger number of complex patterns and use these new patterns to store new knowledge about which actions should be taken in similar situations.

According to this influential theory, expert performance is viewed as the result of skill acquired with gradual improvements of performance during extended experience in a domain. Furthermore, this theory assigned a central role of acquired knowledge and encouraged efforts to elicit experts' knowledge to build computer models of experts, that is, expert systems.

It is tempting to assume that the performance of experts improves as a direct function of increases in knowledge through training and extended experience. However, there are many demonstrations that extensive domain knowledge does not necessarily

entail superior performance. For example, the outcome of psychological therapy does not increase as a function of the length of training and professional experience of the therapist. Similarly, the accuracy of decision-making—such as medical diagnosis for common diseases and the quality of investment decisions—does not improve with further professional experience. More generally, the number of years of work and experience in a domain is a poor predictor of attained performance.

**The development of expert performance.** In a 1985 pioneering study, Benjamin S. Bloom and his colleagues studied the developmental history of scientists, athletes, and artists who had attained international awards for their outstanding achievements. These elite performers did not attain their performance from regular experience in their respective domains but were given access to superior instruction in the best educational environments. Their families provided them substantial financial and emotional support to allow them to focus fully on the development of their performance. Bloom's influential research demonstrated the necessity for extended training in the best training environments to reach the highest levels of performance.

**Effects of practice and experience.** Subsequent research published in 1993 by Ericsson, Ralf Krampe, and Clemens Tesch-Römer analyzed the effects of different types of experience on the improvement of performance. They found that in activities where individuals had attained an acceptable level of performance, such as recreational golf and many professions, even decades of continued experience was not associated with any improvement of performance. The researchers proposed that in those domains where performance consistently increases, aspiring expert performers seek out particular kinds of experience, that is, deliberate practice—activities designed, typically by a teacher, for the sole purpose of effectively improving specific aspects of an individual's performance. In support of a critical role of deliberate practice, expert musicians differing in the level of attained solo performance also differed in the amounts of time they had spent in solitary practice during their skill development, which totaled around 10,000 hours by age twenty for the best experts, around 5,000 hours for the least accomplished expert musicians, and only 2,000 hours for serious amateur pianists. More generally, the accumulated amount of deliberate practice is closely related to the

attained level of performance of many types of experts, such as musicians, chess players, and athletes.

## Conclusions

Advances in the understanding of the complex representations, knowledge, and skills that mediate experts' superior performance derive from studies where experts are instructed to think aloud while completing representative tasks and from studies using methods of cognitive task analysis and cognitive field research. These process-tracing studies have shown that the difference between experts and less-skilled individuals is not merely a matter of the amount and complexity of the accumulated knowledge; it also reflects qualitative differences in strategies, the organization of knowledge, and the representation of problems. During the acquisition of their performance, experts acquire domain-specific memory skills that allow them to rely on long-term memory to dramatically expand the amount of information that can be kept accessible during planning and during reasoning about alternative courses of action. The superior quality of the experts' mental representations allows them to adapt to changing circumstances as well as anticipate future events in advance, so the expert performers can respond with impressive speed. The same acquired representations appear to be essential for experts' ability to monitor and evaluate their own performance so they can keep improving by designing their own training and assimilating new knowledge.

*See also:* EXPERTISE, *subentry on* ADAPTIVE EXPERTISE.

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## **FACULTY AS ENTREPRENEURS**

Although entrepreneurship is a term seldom associated with educational institutions, faculty entrepreneurial activities are not a recent development. Known as consulting, sponsored research, knowledge commercialization, academic capitalism, or moonlighting, the multifaceted phenomenon of faculty entrepreneurship has existed for some time on campuses. Nevertheless, little research has been undertaken on this topic. In part, this reflects the lack of consensus on what constitutes faculty entrepreneurship as well as the secrecy that often surrounds outside activities of faculty members. The objectives of this chapter are threefold. First, the reasons underlying the growth of faculty entrepreneurship are addressed. Second, a definition of what constitutes faculty entrepreneurship is provided. Finally, advantages and disadvantages of faculty entrepreneurship are discussed.

### **Growth of Faculty Entrepreneurship**

Traditionally, faculty members have provided industry, communities, governments, and other entities with their professional expertise and research findings. Faculty entrepreneurial activities date back to the medieval period when members of law and medical faculties engaged in professional practice to supplement their university salaries. Later, in the seventeenth century, university faculty played an important role in the formation of the pharmaceutical industry in Germany. In the initial decades of the twentieth century, the growth of the service element in the university mission, coupled with technological advancement, provided a strong impetus for faculty entrepreneurship by linking research to the needs of

businesses. The railroad industry, petroleum refining, and polymer industries are just a few examples of commercial endeavors that benefited from these linkages. In the second half of the twentieth century, entrepreneurial activities of university faculty played an instrumental role in the development of the computer industry and also contributed to the emergence and rapid growth of biotechnology.

What is new at the start of the twenty-first century is the rapid increase in the scope and intensity of faculty entrepreneurial activities as well as the normative shift towards an emerging academic culture that values equally the intellectual and commercial potential of faculty expertise and research. The growth of faculty entrepreneurship is spurred by the synergetic interaction of pull and push factors. The pull factors include the rise of the knowledge-based economy, technological advancement, and globalization, which generate demands for faculty expertise, thus creating new opportunities for scholars and scientists to engage in commercial activities. The push factors, such as waning public support for higher education, increasing research costs, institutional reward systems that tend to encourage faculty to generate external revenues, and state pressures on institutions to become more active actors in economic development, motivate faculty to engage in paid outside activities, thus augmenting the supply of academic entrepreneurship. Widely publicized successes of university entrepreneurs in biotechnology and new legislations permitting the commercialization of knowledge further encourage faculty entrepreneurship.

## What Is Faculty Entrepreneurship?

Faculty entrepreneurship involves efforts to transform individual academic expertise and research results into intellectual property, marketable commodities, and economic development, thereby enhancing faculty remuneration and professional status. An essential characteristic of a faculty entrepreneur is entrepreneurial expertise, which is described by Sheila Slaughter and Larry L. Leslie as the ability to recognize the market potential of faculty research and other intellectual property, to cultivate commercial partnerships, and to negotiate contracts.

Historically, faculty entrepreneurship has followed two basic patterns. The first represented the application of specialized expertise to solve specific industrial problems by chemical and electrical engineering faculty in the late nineteenth century. Contractual research, consulting, and external teaching generally followed this pattern. The second pattern, which originated at the Massachusetts Institute of Technology in the 1920s, involved the patenting, development, and commercialization of faculty discoveries. In many instances, this involved the formation of firms by researchers—especially in the engineering and life sciences.

Magnus Klofsten and Dylan Jones-Evans suggest the following typology of contemporary faculty entrepreneurial activities: (1) large-scale science projects funded through public grants or industrial sources; (2) research contracted to solve specific problems; (3) consulting or the sale of personal expertise directed towards the resolution of identifiable problems; (4) patenting/licensing; (5) the formation of new firms or organizations to exploit the results of academic research; (6) external teaching; (7) commercial selling of research products; and (8) provision of testing and calibration services to external entities.

The most common types of entrepreneurial activities undertaken by faculty members appear to be consulting, contractual research, large-scale science projects, and external teaching. Although types and levels of entrepreneurial activities vary by academic fields, faculty in the disciplines of engineering, computer science, medicine, agriculture, chemistry, and biotechnology are the most likely to be engaged in entrepreneurial activities, followed by social scientists, natural scientists, and humanists. Traditional activities such as consulting appear to be distributed evenly across the disciplines while activities such as

the formation of private firms, including those involved in the patenting or commercialization of new products and processes, are dominated most often by the life sciences and engineering.

## Advantages of Faculty Entrepreneurship

Individual faculty members, their institutional employers, clients, and the society at large share in the benefits of faculty entrepreneurship. The obvious benefit for the individual faculty member is supplemental income, which improves faculty economic status and sometimes contributes to additional research funding. Furthermore, outside activities often enhance the continuing education of faculty, help to ensure currency of teaching and research, and provide faculty with external affirmation of their expertise and greater peer recognition.

The primary benefit of faculty entrepreneurship for clients is efficient access to sources of specialized expertise. Moreover, sponsors often have first access to research findings and privileged positions with respect to exclusive patent licenses. Involving faculty researchers in product commercialization also enables clients to gain a competitive edge in the marketplace by accelerating new product development and launching. Another important benefit is the cross-fertilization of ideas between industry and institutions of higher education. Synergies with respect to the training and development of staff may be significant as well.

Faculty entrepreneurial activities also benefit institutions. External funds secured by faculty entrepreneurs may supplement monies available to institutions for conducting basic research and offering improved grants or assistantships to graduate students. Permissive policies regarding faculty entrepreneurship enable institutions to recruit professors who otherwise would be inclined to opt for employment in private industry or government. Additionally, successful faculty entrepreneurs improve institutional visibility and reputation.

Faculty entrepreneurs take an active part in solving various social or community problems by providing their expertise to non-profit organizations and governmental agencies. Furthermore, academic entrepreneurship, especially efforts that involve start-up companies, plays an increasingly important role in regional and national economic development. On the whole, faculty entrepreneurial activities promote technological advancement and accel-

erate the transfer of knowledge from discovery to utilization, thus contributing to social progress.

### Disadvantages of Faculty Entrepreneurship

On the negative side, faculty entrepreneurial activities may lead to situations involving conflicts of interest, commitment, or internal equity. Conflicts of interest are usually of a financial nature and may lead to biases in the design of research, the interpretation of results, publication delays and/or secrecy, as well as conflicts with student interests.

Conflicts of interest may arise when faculty entrepreneurs engage in activities to advance their own financial interests that might harm their institutional employer. The potential for conflicts of interest exists, for example, when faculty entrepreneurs use institutional resources for their outside activities or have financial interests in entities that do business with the institution.

A faculty entrepreneur may manipulate research design or fail to present accurate research results if the findings do not yield a profit or desired result for the sponsoring entity, and the dissemination of research findings may be unduly delayed or prevented on the grounds that proprietary information has to be protected in order to secure the competitive edge of the client. Another important, but often overlooked, conflict of interest involves student interests. Potential exists for faculty entrepreneurs to abuse their positions by using students as inexpensive labor or to exploit students' ideas without giving them credit. More subtle conflicts that also represent significant risks include steering student research toward topics that reflect the priorities of a faculty entrepreneur or corporate sponsor, or delaying student publications because of proprietary interests.

Conflicts of commitment between the role of the faculty entrepreneur and the role of teacher, researcher, or public servant merit attention. The central issue to consider when assessing possible conflicts of commitment is whether particular entrepreneurial activities negatively influence faculty teaching, research, and service productivity. Existing research provides mixed results and suggests that the relationships between entrepreneurial activities and faculty productivity are nonlinear, may vary across academic disciplines, and depend on the time spent on outside activities.

Conflicts of internal equity involve conflicts between the values of faculty as entrepreneur and fac-

ulty as collegian. Internal institutional practices increasingly favor academics engaged in entrepreneurial activities. These individuals tend to receive higher salaries and benefits as well as lower workloads than their nonentrepreneurial peers. These considerations, coupled with the unequal positioning of disciplines and institutions relative to the market, are potentially detrimental to collegiality and may exacerbate existing stratification between faculty, disciplines, and institutions.

### Conclusion

Faculty members are increasingly pushed, encouraged, and provided with opportunities to take on new entrepreneurial roles. At a time when "entrepreneurship is the key to present and future institutional and cultural preference, approval, and legitimacy" (Slaughter and Leslie, p. 200), the ignorance of faculty entrepreneurship or attempts to hinder its development may contribute to intellectual stagnation or a loss of talent and knowledge from academia. Faculty entrepreneurial activities should be studied carefully and managed cautiously in order to maximize their benefits and minimize disadvantages.

*See also:* UNIVERSITY-INDUSTRIAL RESEARCH COLLABORATION.

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ALEXEI G. MATVEEV

## FACULTY CONSULTING

The central issue concerning faculty who consult with outside clients is the relationship of the faculty to the college or university that employs them. This relationship is evolving rapidly. The institutions first opposed faculty consulting, then tolerated it, next

encouraged it, and then some even began to sponsor faculty consulting through organized programs of technical assistance to industry.

Three aspects of faculty consulting will be discussed in this entry: major issues associated with the practice; typical policies drawn up by institutions to guide relationships with faculty who consult; and characteristics of faculty who consult compared to those who do not, taking into consideration differences due to academic discipline. Also reported are findings about the amount of outside income faculty earn from consulting.

### Issues

A continuing concern of employing institutions is the extent to which faculty who consult may be shortchanging their teaching responsibilities and restricting their opportunities to interact with students. Institutions may also be concerned that faculty who do outside consulting may have less time for curriculum development or departmental committee work.

In addition, the product of paid consulting work is generally the property of the clients who may keep the results proprietary and not make them available in the public domain. This is considered by many as contrary to the spirit of free inquiry which they believe should characterize the academic world.

From an institutional perspective, management issues may also arise about the extent to which college or university resources, such as office space or equipment, are used by faculty inappropriately for outside consulting projects. Further, involvement of students in outside consulting projects may need to be monitored to determine whether it constitutes a legitimate learning experience, a valuable internship with a potential future employer, or exploitation.

Faculty consulting contracts are considered by institutions to be personal agreements, but these contracts may create conflicts of interest with employing institutions or subject the institutions to risks. Consequently, some institutions provide reviews of the consulting contracts to ensure that the provisions recognize the preexisting obligations of the faculty to their primary employing institution, including the obligations to disclose new inventions and assign patent rights.

On the other hand, companies hiring faculty consultants may require that their company's proprietary information be kept confidential, and re-

strict disclosure and use of the information. This practice may not contribute to the free and open inquiry promoted in the academic world.

Thus, the ultimate issue with respect to faculty consulting is who benefits? Faculty benefit from consulting if they derive opportunities to strengthen their research, especially in fields where the leading edge of scientific inquiry is migrating to industry from academic institutions—because industry has more money. Faculty also benefit from consulting if they collaborate in meeting real-world challenges that may make their teaching more relevant and lively, which in turn benefits students. Consulting also gives faculty opportunities to supplement their income, which may be especially important in fields where there is a great, and growing, disparity between salaries earned in business and in the academic world. Consulting projects may also provide learning opportunities for students, and possibly employment opportunities working on practical projects. Institutions may benefit by building stronger business, community, and governmental relationships, which may lead in the long run to greater financial support. Indeed there is likely a complementary relationship between the reputation of faculty and that of their employing institutions: the better the reputation of the institution, the greater the recognition of the faculty they can attract; the greater the recognition of the faculty, the wider the range of consulting opportunities and the greater the amount of outside support faculty can garner for their institutions.

Financial and academic costs and other negative outcomes are also issues in assessing the value of faculty consulting to an academic institution. An institution has an interest in protecting itself from charges of abuse of the employment relationship by a faculty member consulting and inappropriately invoking the reputation of the institution. Apparent, and real, conflicts of interest sometimes arise that might affect faculty judgments about educational matters. Faculty otherwise engaged may become inaccessible to students or to other faculty. Outside agendas may distort academic priorities, leading to active student opposition, as in the 1960s when students objected to what they considered to be too great involvement of the faculty with defense contractors.

## Policies

Faculty handbooks generally set forth the policies and procedures defining and governing consulting by their faculty with outside clients. These conditions are then incorporated into faculty employment contracts. Typically, these provisions apply only to full-time faculty, not part-time faculty, and apply during the nine-month academic year, including the summer months only if the faculty member is teaching during the summer session. The institution may not limit the amount of consulting done during periods when the faculty is not on the payroll (during the summer or on leave), but the institution's policies with respect to conflict of interest and restrictions on the use of institutional resources still apply. Faculty employment contracts typically allow faculty up to one day, or ten hours, a week—or four days a month—for outside consulting. More than that is considered to jeopardize the commitment to teaching, research, and service at the employing institutions.

Faculty consulting is subject to varying reporting requirements and oversight by the colleges and universities. Some boards of trustees require periodic reporting by the institution of the policies and procedures that cover faculty consulting and how they are enforced. They may consider the following:

- how faculty consulting is defined
- the types of clients served
- the nature of the services performed
- the amount of time that is spent consulting on a particular project
- the total amount of time spent consulting accumulated over the academic year
- the amount and sources of outside remuneration
- reimbursement of the institution for the use of institutional resources, facilities, or services

The board of trustees may also require an evaluation of the value of faculty consulting to their institution.

Some institutions require that faculty make annual reports of their outside consulting, but only of consulting that relates to their academic specialty, which consequently may raise a question about how broadly the specialty is defined. Some institutions have made a distinction between consulting for a single occasion that is reported annually after the fact, and consulting that is of a longer duration and

**TABLE 1****Percentage of faculty who earn income from consulting by academic discipline, 1998**

Engineering	32.7
Business	26.2
Agriculture and home economics	25.4
Education	23.4
Social sciences	23.3
Fine arts	22.6
Natural sciences	18.6
Health sciences	17.9
Humanities	15.4
All other programs	22.2

SOURCE: Based on data from National Center for Education Statistics, National Survey of Postsecondary Faculty: 1999, Data Analysis System.

requires specific prior approval. Public institutions may take into consideration whether the consulting is for another state agency or for an outside client.

Institutions actively reaching out to their local business community have more recently begun to actually sponsor faculty consulting through formal technical assistance programs. The programs are characterized as community service programs which help local businesses and contribute more broadly to regional economic development.

### Characteristics of Faculty Who Consult

At the start of the twenty-first century about one out of every five faculty members at American colleges and universities earns income from consulting or freelance work. Based on estimates derived from the 1999 National Survey of Postsecondary Faculty (NSOPF99) using the data analysis system of the National Center for Education Statistics, the percentage ranges by type of primary employing institution from 30 percent of faculty at private research institutions to only about half that, or 14 percent, at public two-year colleges. In general, a higher percentage of the faculty at all types of private institutions consult than do the faculty at counterpart public institutions.

The percentage of faculty who earn income from consulting also varies significantly by academic discipline. As shown in Table 1, the percentage ranges from 33 percent for engineering faculty to only 15 percent of faculty in the humanities.

The percentage of faculty who consult varies significantly by gender, age, and race. Considering gender, a much higher percentage of faculty men (23

percent) earn consulting income than do faculty women (17 percent). Considering age, a much higher percentage of faculty aged 35 and over (19 to 23 percent) earn consulting income than did those under the age of 35 (only 14 percent). Faculty aged 55 to 59 report the highest percentage earning consulting income (23 percent). Even 21 percent of the faculty aged 70 and over report consulting income. Consulting also varies by race/ethnicity, with only 13 percent of the faculty who are Asian reporting consulting income compared with 18 percent of the African Americans, 19 percent of the Hispanics, and 21 percent of the whites.

It might be expected that lower-income faculty would be using consulting to supplement their income. They do, but an even higher percentage of the higher-income faculty report earning consulting income. About 15 percent of those faculty with base salaries of \$25,000 to \$40,000 report earning consulting income compared with 34 percent of those with base salaries of \$85,000 to \$100,000. The opportunities to consult are much greater for those who are older, tenured, and have well-established reputations in their field.

The higher-income faculty also report earning much higher amounts of consulting income. Of those faculty who do earn consulting income, the amounts range from an average of about \$4,000 for those who earn \$25,000 to \$40,000, rising progressively to about \$19,000 for those faculty who earn \$130,000 or more. Although the dollar amounts of consulting income rise steeply, the percentage of the base salary from the institution increases only from about 12 percent at the \$25,000 to \$40,000 range to about 14 percent at the higher income ranges. Faculty with the lowest base salaries from the institution, under \$25,000, appear to be an exception, reporting about \$8,500 in consulting income, which represents a considerably higher percentage of the base salary.

A slightly higher percentage of faculty (24 percent) who have had previous employment outside of higher education earn consulting income than those who do not (20 percent), a smaller difference than might be expected to result from prior connections with industry or government. Though consulting is likely to be covered by collective bargaining agreements, the consulting practices of union and nonunion members do not significantly differ. Seventeen percent of union members report earning consulting income, compared to 21 percent of those who are not members.

### Impact of Consulting on the Faculty Commitment to Teaching and Research

The most heated debate over the extent of faculty consulting concerns the impact of consulting on teaching and research. The NSOPF99 survey data suggest that there is a positive relationship. Generally speaking, the higher the number of student contact hours per week, the higher the percentage of faculty who earn income from consulting. There is, however, a great difference depending on the level of students instructed. Eighteen percent of those instructing only undergraduate students reported consulting income, compared with 27 to 30 percent for those instructing graduate students.

Opportunities to consult are directly connected with faculty research. In general, the higher the amounts of research grants and contracts awarded to faculty, the higher the percentage of faculty who earn income from consulting. The percentage of faculty who earn income from consulting ranges from under 20 percent for those faculty with less than \$10,000 in outside research grants and contracts to almost 40 percent for those with \$100,000 or more.

Faculty with consulting income also reported comparatively higher rates of participation in unpaid activities at the institutions, including administrative duties, curriculum development, meeting with students, mentoring, and community service. On the other hand, these faculty reported comparatively lower rates of attending faculty meetings, holding office hours, grading papers, or attending athletic events. Thus, it appears that, in general, faculty who consult value their time and are less willing to spend hours on the bureaucratic aspects of academic work. They also appear to have less leisure time, indicating that faculty who consult are not shortchanging their students, but are simply busier.

The opportunities to consult appear to affect somewhat positively overall faculty satisfaction with their work. Of those faculty who are very satisfied with their salary and with their job security, a higher percentage earn consulting income than do those faculty who are very dissatisfied. The opposite is true considering satisfaction with the work load: a higher percentage of those who are dissatisfied report earning consulting income than do those who are satisfied.

Faculty who earn consulting income respond differently from those who do not when asked to contemplate the factors most important to them if

they were to leave their institution. Among those faculty who reported the factors of more opportunities for advancement, greater opportunities to do research, and good research facilities and equipment, a higher percentage earned income from consulting than did those reporting the factors of salary level, benefits, or job security. Interestingly, faculty consulting apparently has little or no effect on interest in taking early retirement.

With faculty salaries slipping further below salaries of comparable professionals, it might be expected that the percentage of faculty who consult to supplement their income would be increasing. This is not the case, however. As cited earlier, about 20 percent of all faculty reported earning income from consulting in 1998, which is almost exactly the same percent as reported in 1992, and slightly lower than the 24 percent reported in 1987. While the extent of consulting is not increasing, the percent of faculty reporting income from self-owned businesses is increasing. Thus, faculty are not only consulting but also becoming more entrepreneurial. Indeed, one of the most important new phenomena in the academic world may be the transformation of the faculty consultant into the faculty entrepreneur.

*See also:* FACULTY AS ENTREPRENEURS; UNIVERSITY-INDUSTRIAL RESEARCH COLLABORATION.

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CAROL FRANCES

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## FACULTY DIVERSITY

Race, ethnicity, and gender are the most common characteristics that institutions observe in order to

measure faculty diversity. Individuals from various minority or racial/ethnic groups (e.g., American Indian/Alaskan Native, Asian/Pacific Islander, African American, and Hispanic) comprise nearly 30 percent of the population but account for only 15 percent of the professoriate. While females constitute 51 percent of the population; their representation in academe is 45 percent. An even broader approach to faculty diversity involves age, socioeconomic background, national origin, sexual orientation, and diverse learning styles and opinions.

Higher education institutions are generally concerned with structural diversity, which is the numerical representation of women and people of different racial and ethnic groups. Research confirms that institutions desiring to improve the campus climate for diversity must first increase the structural diversity of the institution. Increasing the structural diversity provides a “critical mass” of individuals from diverse social and cultural backgrounds who interact across racial/ethnic and gender groups. However, improving structural diversity alone will not enhance the environment that faculty encounter. Institutions must take steps to transform the psychological and behavioral climate if faculty diversity and all that it encompasses is to be achieved. For example, the diversity of thought and scholarship includes building a group of faculty with different opinions who work within competing paradigms and whose differences serve to foster intellectual growth.

### **The Growth of Faculty Diversity as an Ideal**

In order to understand why diversity has become a worthy goal, one must first understand that, until the latter part of the twentieth century, the professoriate in the western world was composed almost exclusively of wealthy, heterosexual males of Caucasian descent. Prominent studies in 1969 and 1975 include data on changes in faculty background characteristics, but a 20-year lag in the observation of some of these variables left a critical void in the literature pertaining to the changing professoriate. Additionally, all of the previous studies discussed the social origins of faculty across both age and gender. However, none of these studies reported differences in socioeconomic background relative to race.

Although the face of America began to evolve dramatically in the late 1800s with the introduction of newly-freed slaves into society and, later, with the tremendous infusion of immigrants, the representation of various racial/ethnic groups in the ranks of

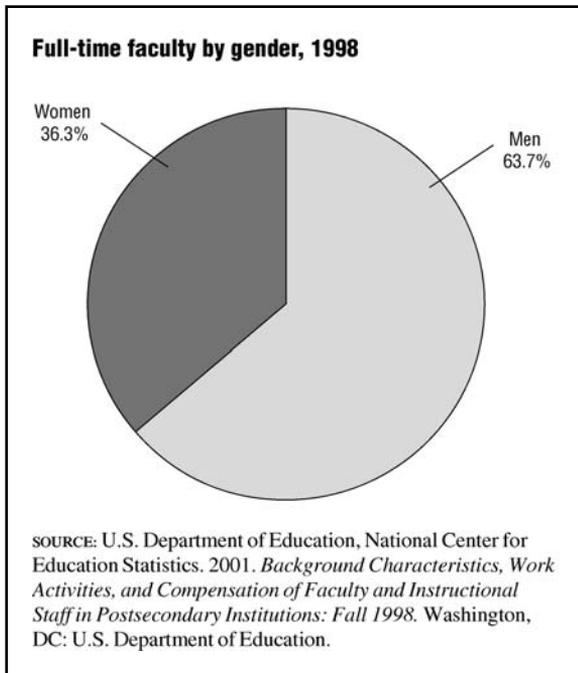
the professoriate remained at insignificant levels throughout much of the twentieth century. It was not until the 1973 court decision of *Adams v. Richardson*, which mandated an increase in minority faculty at public institutions, that noticeable numbers of minority faculty were hired at predominantly white institutions (PWIs). However, historically black colleges and universities (HBCUs), hispanic serving institutions (HSIs) and tribal colleges (TCs) have employed faculty from diverse racial and ethnic groups since their inceptions. Moreover, at least one-third of minority faculty members are employed at HBCUs, HSIs, and TCs, further minimizing their presence at PWIs. For example, 48 percent of full-time African-American faculty work at HBCUs.

The passage of equal employment legislation and the momentum of the civil rights movement in the 1960s stimulated greater participation of women in the workforce. By 1970, 23 percent of all faculty members were females. The next three decades saw female faculty increase to 39 percent in 1993, of which 33 percent were full-time. While encouraging, these gains have been mitigated by the disproportionate representation of women at two-year institutions in non-tenured and part-time positions.

Prompted by affirmative action and encouraged by influential idealists in academe, most colleges and universities continue to espouse the notion that having a diverse faculty can be a positive force in the attempt to increase the breadth of scholarship and the pursuit of knowledge in general. Though some institutions have committed themselves to this ideal in varying degrees and with differing interpretations, the goal of fostering a more diverse faculty seems to have widespread appeal in mainstream post-secondary institutions, though the move from idea to praxis is an arduous one.

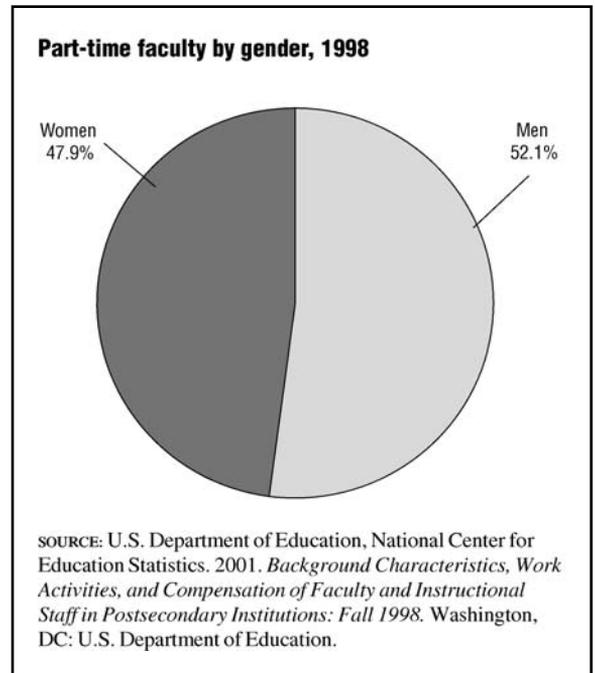
### **Barriers in the Academic Workplace**

Some studies reveal that this paucity of diversity may simply be related to a problem of supply and demand. For example, African Americans, Native Americans, and Hispanics are underrepresented in graduate schools, resulting in the fact that there are relatively few people from these groups available for faculty positions. Therefore, it would seem that an obvious solution would be to increase the supply by encouraging persons of color to attain doctoral degrees, especially in those fields where their numbers are the smallest (e.g., engineering). Opponents of the

**FIGURE 1**

educational pipeline approach maintain that a greater supply will not remove the other barriers within academia that hinder institutional and individual efforts at promoting growth in faculty diversity across gender and racial/ethnic groups.

A review of the literature reveals several common barriers that women and minority faculty encounter across all institutional types: (1) Isolation: Faculty members are often excluded—intentionally or otherwise—from the informal social networks that exist in academia; (2) Tokenism: In some departments, senior faculty believe that they have fulfilled their obligation to diversify once they have hired one minority or female faculty member; (3) Lack of Professional Respect: Senior faculty members often assume that women and minority faculty members are less capable of scholarly pursuits; thus women and minority faculty members are often denied opportunities for research and other scholarly pursuits; (4) Occupational Stress: Minority and female faculty members are often expected to serve on various committees related to diversity as well as to serve as “token” representatives on departmental and institutional committees. They are further burdened when students seeking role models seek them out for mentoring and support; and (5) Institutional Racism: Tenured, mainstream faculty often denigrate research relative to female and minority issues

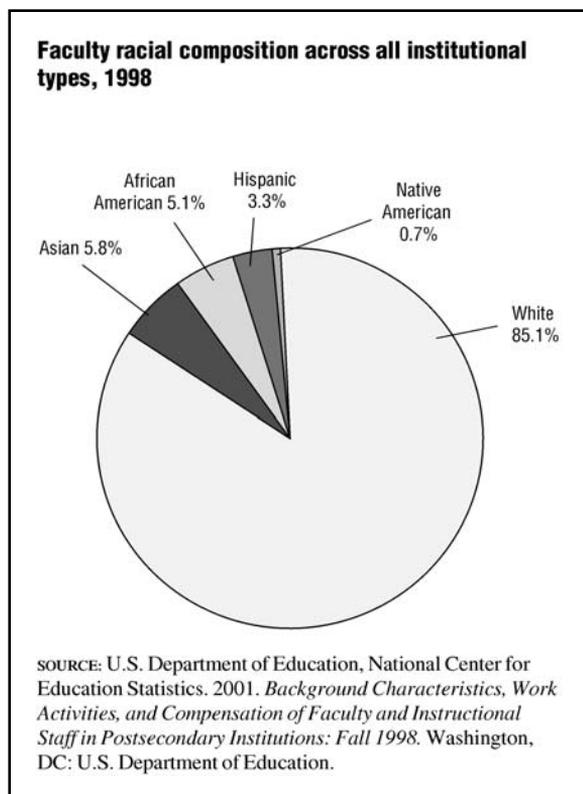
**FIGURE 2**

by viewing such work as less than scholarly, especially if the research is published in periodicals outside of the mainstream. Often the expression “brown on brown research” is used to describe the work of minority faculty members who research issues related to their own minority group. In a related manner, obstacles encountered by women and minority faculty can be likened to many other underrepresented groups if the concept of diversity is broadened to encompass attributes such as age, national origin, and sexual orientation.

Research reveals that an overwhelming majority of post-secondary institutions emphasize structural diversity by recruiting faculty across gender and racial/ethnic groups. However, the fact remains that many of these same institutions provide little—if any—organized support to attain the goal of faculty diversity.

### Demographics

In 1998, the National Center for Education Statistics (NCES) reported that 57 percent of faculty were full-time, of which 64 percent were men and 36 percent were women (see Figure 1). However, males and females were almost evenly divided among part-time faculty with women and men accounting for 48 and 52 percent, respectively (see Figure 2). Also, NCES reported that racial/ethnic faculty members repre-

**FIGURE 3**

sented 15 percent (Asians, 6%; African Americans, 5%; Hispanics, 3%; Native Americans, 1%) of all faculty across all institutional types (see Figure 3). Nonetheless, minority faculty are still disproportionately underrepresented in higher education since they constitute 29 percent of the general population. In contrast, Caucasians comprise 69 percent of the general population but account for 85 percent of the teaching force.

Even though findings from the Martin Finkelstein, Robert Seal, and Jack Schuster (1998) analysis of the National Study of Postsecondary Faculty database confirm the professoriate is becoming more diverse with representation across gender, race and ethnicity, the findings also reveal that there is still a disproportionate number of faculty who are from moderate to high socioeconomic backgrounds. With regard to educational background, research reveals that new career entrants' fathers are better educated (40%) than the fathers of senior faculty (32%). Likewise, as senior faculty increased in age, the educational level of both parents decreased. For example, only 11 percent of fathers of new faculty in the youngest age category (less than 35 years old) held less

than a high school diploma, compared to 24 percent of faculty in the same age range who had already attained the status of senior faculty. This held true for mothers of faculty as well, with 22 percent of senior faculty having mothers with less than a high school diploma versus 12 percent of new career entrants. However, this division across age could be indicative of the increased educational aspirations of society after World War II.

When gender is considered, women of the new academic generation make up 49 percent of all faculty members, while in the senior generation females comprise only 29 percent of the faculty population. Despite the increasing number of women entering the profession, the higher socioeconomic status of the new academic generation continues to be attributed to males. Among new career entrants, both female and male faculty are equal (40% and 41%, respectively) relative to their fathers' possession of bachelor's degrees. Additionally, race is also better-represented in the new generation, with minority faculty members comprising 17 percent of the faculty compared to 12 percent in the senior generation.

*See also:* ACADEMIC LABOR MARKETS; AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; AMERICAN ASSOCIATION OF UNIVERSITY PROFESSORS; MULTICULTURALISM IN HIGHER EDUCATION.

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## FACULTY MEMBERS, PART TIME

Part-time faculty are employed by colleges and universities to work on some basis that is less than a full-time contract. Some part-time faculty teach a single course, while others teach more than one course per academic term. Some part-timers have only a brief relationship with their employing institution and are used to fill a specific short-term instructional need, while others teach on a part-time basis for many years in order to meet ongoing educational needs. Part-time faculty provide a variety of educational services and represent an important part of the instructional work force in American higher education.

In the fall of 1998, 43 percent of college and university faculty worked part time—a proportion that grew steadily during the preceding three decades. In 1987, for example, 33 percent of all faculty worked part time, while in 1970 only 22 percent of college and university professors worked part time.

Although part-time faculty play important roles throughout higher education, their numbers vary by type of institution and academic field. Community

colleges employ the highest percentage of part-time faculty. In 1997, 65 percent of the faculty in community colleges worked part time. In contrast, only about 33 percent of the faculty in four-year institutions worked on a part-time basis. The use of part-time faculty also varies across different academic fields. According to the U.S. Department of Education, in the fall of 1998 well over one-third of the faculty worked part time in such academic areas as fine arts (49%), education (40%), and the humanities (38%). In contrast, less than one-fourth of the faculty worked part time in areas such as the natural sciences (23%), engineering (20%), and agriculture and home economics (14%). In U.S. colleges and universities, women hold a proportionately greater number of part-time than full-time faculty positions. In 1997 women accounted for 36 percent of full-time faculty positions and 47 percent of part-time faculty posts.

The growth of part-time faculty positions appeared to have leveled off in the 1990s. Between 1992 and 1998 the percentage of part-time faculty in American higher education grew only 1 percent, from 42 percent to 43 percent. This decline in the part-time faculty growth rate may represent an attempt by institutions to achieve balance in their use of part-time and full-time faculty appointments. Even though the rate of growth of part-time positions had moderated, in the early twenty-first century part-time faculty represented a larger component of the instructional work force in colleges and universities than ever before.

#### Reasons for the Growth of Part-Time Faculty

Several reasons account for the increased employment of part-time faculty, including a leveling off of public subsidies of higher education, the aging and *tenuring in* of the full-time faculty, and an oversupply of qualified potential instructors in many fields. The overriding reasons for the heavy reliance on part-time faculty, however, appear to be the expansion of community colleges, and particularly the financial hard times and increased competition that have made many institutions reluctant to make long-term financial commitments to full-time tenure-eligible faculty positions. Hiring an instructor on a part-time basis usually costs substantially less than a full-time appointment, and also provides the flexibility institutions wish to preserve in a time of rapid change.

### Who Are the Part-Time Faculty?

Most part-time faculty have full-time jobs in primary occupations outside of higher education—or they are partially or fully retired from another career. In addition, some part-time faculty are freelancers who have built a career around several part-time teaching positions, often at more than one institution. Another segment of the part-time teaching force includes aspiring professors who hope to achieve full-time, permanent academic employment eventually. In research done in the 1990s, Judith Gappa and David Leslie found that part-time faculty are far less likely than full-time faculty to have doctoral degrees. They also found, however, that while only 16 percent of part-time faculty had doctorates at the time of the study, 10 percent had terminal professional degrees (degrees that indicate that the recipient has reached the end of formal education in his/her field) and 52 percent had one or more master's degrees. Gappa and Leslie concluded from their analysis that “part-time faculty are well qualified by reason of preparation and experience to teach the courses they are assigned—principally undergraduate courses” (1996, p. 9).

### What Do Part-Time Faculty Do?

Typically, part-time faculty have a more limited range of responsibilities than their full-time colleagues. Although part-time faculty roles vary somewhat by discipline and type of institution, most teach primarily lower division, introductory level, or skill building courses (e.g., elementary modern languages, English composition, science laboratories). Often, advanced courses for majors and graduate students are reserved for regular full-time faculty. Many part-time faculty whose primary employment is outside of higher education teach courses directly related to their careers in professional fields such as accounting, journalism, allied health, or education. In addition, part-time faculty typically play no role, or a very restricted role, in curriculum development and institutional governance. Due to the limited nature of their appointments, many are not available to assist students outside of class or to provide long-term career guidance. Furthermore, the American Association of University Professors (AAUP) reports that part-time faculty spend less time on class preparation and have lower publication rates than do full-time faculty. These findings suggest that part-time faculty fill more limited roles involving fewer responsibilities than their full-time faculty counterparts.

### Benefits of Employing Part-Time Faculty

Part-time faculty bring valuable expertise and experience to their institutions at relatively low cost. Those who come from primary careers outside of higher education bring to the classroom the added benefit of a practitioner's perspective and direct contact with their employment sector. Gappa and Leslie (1993) cite evidence that part-time faculty, in general, perform just as well in the classroom as their full-time colleagues. By hiring temporary faculty on a per-course basis, institutions avoid the added costs of fringe benefits, professional development, and office and laboratory facilities that usually accompany full-time faculty appointments. By hiring part-time instructional staff members, institutions also maintain the flexibility to respond quickly to changing student interests and community needs.

### Disadvantages of Employing Part-Time Faculty

Opponents of heavy reliance on part-time faculty cite numerous reservations about this academic employment practice. While recognizing the financial benefits of using part-time academic staff, critics cite the “hidden costs” of substituting part-time faculty for more involved and accessible full-time faculty. Essentially, critics are concerned about the impact of part-time faculty employment on: (1) students and educational program quality, (2) full-time faculty and institutional governance, and (3) the careers of the part-time faculty themselves. Critics fear that using part-time faculty to teach many introductory level courses disadvantages students who may need extra assistance as they make the transition to college. Because part-time faculty are usually compensated only for the courses they teach, and often do not have offices, they can be quite inaccessible to students needing out-of-class assistance. When large numbers of part-time faculty work at an institution, the responsibility for advising students, developing and monitoring academic programs, and institutional policymaking falls more heavily on the full-time faculty. Reduced program coherence is a potential negative consequence when a large segment of those providing instruction are not involved in governance, program planning, and student advising. Extensive use of part-time instructors thus increases the workload and limits the flexibility of the full-time permanent faculty.

Finally, those opposed to heavy use of part-time faculty argue that part-time faculty themselves are disadvantaged by their temporary employment sta-

tus. They contend that the “payment-per-course system” inadequately rewards part-time teaching and provides little incentive for scholarship or continued professional development. Likewise, the uncertainty associated with short-term contracts makes it extremely difficult for many part-time faculty to plan a stable career and advance professionally. The result of dual academic-employment tracks is a two-class faculty in which members of the upper class have opportunities, resources, and benefits unavailable to their second-class (part-time) counterparts. Gappa and Leslie concluded from their national study of part-time faculty that, for the most part, part-timers “do not feel ‘connected to’ or ‘integrated into’ campus life. Instead, they feel powerless, alienated, and invisible” (1996, p. 19).

### Contemporary Issues

Full-time employment with a long-term commitment to the faculty role is the standard model of academic life. Most policies and practices in higher education are based on this conception of faculty work. Part-time faculty do not fit this model, and they are disadvantaged to some extent by their aberrant status. At many institutions they are treated as exceptions to the norm rather than as key members of the academic work force who perform essential services and make important contributions to their institutions’ missions.

Trends in the academic profession suggest that colleges and universities can no longer afford to possess such a narrow and unrealistic view of the roles part-time faculty play in the higher education system of the twenty-first century. Experts on part-time faculty recommend that colleges and universities fully integrate part-time faculty into their academic community in order to maintain a seamless academic work force committed to the same mission and striving to achieve shared goals. The literature on part-time faculty suggests that several important issues must be addressed before a diverse but unified faculty becomes reality.

**Compensation.** The per-course pay system commonly used to compensate part-time faculty takes a narrow view of the faculty role. It rewards the formal teaching process, but fails to encourage or compensate important faculty functions such as out-of-class contact with students, professional development activity, or curriculum development work. One alternative strategy is to compensate part-time faculty according to the percentage of full-time work they

are hired to perform. This alternative can provide part-time faculty with compensation for student advising, governance involvement, or other important faculty functions. A more generous approach to part-time faculty compensation may be a key element of efforts to strengthen the diverse faculty work force common on campuses today.

**Working conditions.** Typically, part-time faculty have access only to whatever support services, office space, and supplies are available after the needs of regular full-time faculty are met. Rarely do part-timers receive offices, computers, or consistent secretarial support. Such difficult working conditions can hamper their job performance, and some institutions that acknowledge the important roles part-time faculty perform are taking steps to enhance their working conditions.

**Professional growth and job security.** Gappa and Leslie found that part-timers typically receive far less support for their professional development than do full-time faculty. Institutions that rely heavily on part-time faculty in a time of rapid changes in knowledge and educational technology cannot afford to neglect their professional development. Faculty advocates argue that colleges and universities should make provisions to support the professional development of part-time faculty who serve important functions, especially over the long term. Job security is also an ongoing concern for many part-time faculty, who often work on an unpredictable “as needed” basis. In cases where part-time faculty meet ongoing instructional needs, the opportunity for an extended contract that recognizes long service and successful performance would benefit both the individual instructor and institution that depends on the part-timer’s services.

**Academic freedom.** Academic freedom is a core value of higher education. For many professors this freedom is protected by tenure status, which prevents the termination of a faculty contract without due process. Most part-time faculty are not eligible for tenure, however, and lack this basic academic freedom protection. To maintain the vitality of the academic enterprise when part-timers play an increasingly important role, the AAUP believes that appeal and grievance procedures should be in place to prevent violations of part-timers’ rights as academic professionals.

**Professional status.** Most literature on part-time faculty acknowledges their second-class status. La-

bels such as *invisible faculty* and *subfaculty* clearly give the impression that part-timers are lower forms of academic life. These status distinctions are harmful to the academic community and belie the valuable contributions part-time faculty make to higher education. Advocates for part-time faculty have recommended a variety of initiatives, such as those listed above, to raise the status of part-timers and strengthen the academic profession as a whole.

### The Future

In 2000 contingent faculty working part-time or in temporary full-time positions made up the majority of the American academic profession, and there is no evidence suggesting that colleges and universities will reduce their use of part-time faculty in the foreseeable future. Researchers who have studied the part-time faculty issue in depth, as well as faculty interest groups, have called for reforms in personnel policies and practices to move part-time faculty from their marginal status to the center of the academic profession. They argue that enhancing the work lives of part-time faculty will, in the long run, strengthen the quality of the educational system and better serve the needs of a society increasingly dependent on lifelong learning.

*See also:* COLLEGE TEACHING; FACULTY ROLES AND RESPONSIBILITIES.

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ROGER G. BALDWIN

## FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP

The scholarly performance of faculty is of interest to many groups, including the general public; university faculty, students, and administrators; makers of public policy; and higher-education scholars. A brief history of how the emphasis on research has emerged within American higher education can help one to understand the factors that have intensified pressures on faculty to publish. An appreciation for the nature of scholarship in several fields of study, institutional variations in the priority given to research, and faculty characteristics that can affect their work provides insights into the complexity of defining and documenting scholarly performance and drawing generalizations about professors as a single group.

### Historical Background

The colonial colleges in America were established to prepare citizens to become religious and civic leaders. Faculty members were selected for their religious commitment, not their scholarly accomplishments, and they were held responsible for the civic, moral, and intellectual development of their students.

However, by the mid-nineteenth century, a discernable emphasis on scholarship could be found in

American colleges and universities. A research tradition was emerging in Germany that emphasized scientific rationality and the pursuit of knowledge through experimentation. Growing numbers of American faculty completed their doctoral studies in Germany and sought to replicate these learning environments at home. Established private universities such as Yale and Princeton began to offer programs of study leading to the Ph.D. degree and, in 1876, Johns Hopkins University, a prototype of the modern American research university, was founded. By the late nineteenth century, the University of Chicago had implemented a formal system of faculty review in which research productivity was the primary criterion for promotion in rank and salary. At the same time, the missions of public land-grant institutions were expanding to include service to their states through the application of faculty research to local problems. The idea was that scholarship has utilitarian value, and that research findings could be used to improve production (e.g., agricultural, manufacturing) and the well-being of citizens.

In the twentieth century, particularly during the Great Depression and World War II, the contributions of academic scholars to government efforts and to scientific advancement were widely recognized. The status of professors as an occupational group was enhanced as the value of their expertise, built through research, was publicly acknowledged. Increasing numbers of doctorally prepared scholars moved from research universities to faculty posts on other types of campuses carrying with them a desire to recreate the intellectual climates in which they had studied. Federal monies to support faculty research grew, as did the number of academic presses, disciplinary associations, and professional journals that provided avenues for the dissemination of knowledge. In one decade alone, 1978–1988, more than 29,000 new scientific journals were launched.

By the mid-twentieth century, faculty in general—not just at research universities—understood that they were evaluated primarily as researchers, even though they were hired to teach. At the end of the twentieth century, the issue for many faculty was how to both keep up with and contribute to the ever-expanding body of knowledge in their fields.

### **Factors Affecting Scholarly Performance**

Although the knowledge explosion has occurred across all subject-matter areas, it is a mistake to assume that the amount of time given to research and

the volume of scholarly contributions are uniform across college and university professors. Faculty work is influenced by the cultures of both their institutions and the scholarly fields in which they work. Differences in the norms and rewards lead to variations in scholarly performance.

Institutional cultures serve to bring together people who work in diverse fields around a shared understanding of how they ought to behave as faculty members. One widely used taxonomy of colleges, the Carnegie Classification system, highlights some key differences among campuses, dividing them into several types based on the degrees offered, the comprehensiveness of their mission, and the level of federal support for research achieved by their faculty. Research universities offer baccalaureate and graduate degrees and place a high priority on faculty scholarship. They have the highest level of federal funding for research and award the largest number of doctoral degrees. Doctorate-granting universities share with the research universities a commitment to graduate education, but award fewer doctoral degrees and have fewer research grants. Comprehensive universities and colleges prepare students at the baccalaureate and master's degree levels and tend to emphasize undergraduate education. Liberal arts colleges focus primarily, if not exclusively, on undergraduate education. Two-year community, junior, and technical colleges emphasize instruction and typically offer certificates and associate of arts degrees. The responsibilities and expectations for faculty research, teaching, and service vary across these institutional contexts and in relation to campus priorities.

Disciplinary cultures link people on different campuses who work in the same field through a shared understanding of what constitutes knowledge and how it ought to be communicated. Consider the scholarly lives of chemists and English literature specialists and some key distinctions become clear. Each group has distinctly different sets of research issues on which they focus, as well as assumptions about what constitutes evidence and appropriate methods for collecting and analyzing data. Ultimately, the forms in which they communicate their findings vary—one group employs numeric representations and figures, the other uses words. Whereas teamwork is common among chemists, solitary scholarship is more the prototype in English literature. Funding for chemistry research typically exceeds that available for literary studies. Factors such as

these greatly affect the time and resources available for scholarship and, together with the ways knowledge is customarily reported, affect the rates of publication within a given time period. Teams of chemists simultaneously produce and publish several journal articles, each with multiple authors, while English literature specialists are typically sole authors, more often of books than articles.

Individual characteristics, in addition to the normative pressures exerted by institutions and fields, also affect scholarly performance. Part-time faculty have less time and resources for research than full-time professors, doctorally prepared faculty are more likely to engage in research, individuals with stronger research interests give more time to their scholarship, and professors nearing promotion decisions tend to increase their publication productivity. Tenure often allows faculty more freedom in how they divide their time among teaching, research, and service, resulting in scholarly performance differences within institutions and fields.

### Defining Scholarship

Of course, the preceding discussion begs the question of what scholarship is—by assuming it is inquiries that result in publications. Several writers believe that this perspective is shortsighted and argue for a more expansive definition. In his seminal work, *Scholarship Reconsidered* (1990), Ernest Boyer differentiates among four types of faculty scholarship: (1) *discovery*, consisting of original studies and creative works (e.g., discovering a new planet, composing a symphony); (2) *integration*, consisting of interdisciplinary inquiries, synthetic writing that connects information from multiple sources, and interpretive work that critiques existing research and suggests alternative explanations; (3) *application*, consisting of creative uses of theoretical knowledge to solve problems (e.g., applications of genetic research in the design of medical treatments); and (4) *teaching*, which is what research faculty do to instruct their classes, as well as inquiries into the effectiveness of their instruction. From Boyer's perspective, scholarship culminates in many products, including original ideas, works of art, critiques of other scholars' ideas, books and conference papers, solutions to practical problems developed through the application of abstract theories and principles to real life situations, new computer hardware and programs, and innovative teaching.

### Measurement

Various organizations, as well as individual researchers, gather information about faculty. Government offices, such as the National Center for Educational Statistics (NCES) and the U.S. Department of Education, collect data to monitor the demographic characteristics (e.g., professorial ranks, race, income) and activities (e.g., distribution of effort to different professional activities) of faculty in the United States. Nongovernmental organizations, such as the American Council on Education and the Carnegie Foundation for the Advancement of Teaching, gather similar data, but also conduct international surveys of faculty for comparative purposes. Colleges and universities collect faculty information on a regular basis for annual reports to their governing boards and for decision making (e.g., merit salary increases). Individual investigators conduct studies to answer theoretical and practical questions of interest to their academic communities. Most often, these studies involve faculty self-reports of their activities and publications. Critics note the subjective nature of such estimates, but comparisons of professors' estimates with other independent measures of their workloads and publication rates have found the self-reports to be reliable.

### Scholarly Activities and Products

Given that professors' fields, institutional affiliations, and individual attributes can affect their work, writers must exercise caution when generalizing about the American professoriate as a single group. Furthermore, answers to questions such as who is conducting research, or whether faculty scholarship has positive or negative effects on their teaching, depend on how one defines scholarship. With these caveats in mind, national data on the distribution of faculty across institutional types and fields of study are presented along with findings regarding their scholarship.

In 1992 about 4,000 institutions employed approximately 528,000 full-time faculty in the United States. They were distributed as follows: 26 percent were in research universities, 15 percent in doctoral universities, 25 percent in comprehensive universities, 7 percent in liberal arts colleges, and 21 percent in two-year colleges. In the same year, these institutions employed about 340,000 part-time faculty, the greatest percentages of which were found in two-year colleges (44.2%) and comprehensive universities (22%), with the smallest percentage in liberal

arts colleges (6%). The proportion of full-time faculty with doctorates ranged from about 71 percent in the research universities to about 16 percent in the two-year colleges. The distribution is skewed so that in the early twenty-first century, as in the past, greater proportions of faculty employed in research universities have completed programs of graduate study designed to prepare them as specialized scholars.

In the research, doctoral, and comprehensive universities, the greatest proportion of full-time faculty held the rank of professor (between 30 and 40%) whereas in the liberal arts colleges the percentages were quite evenly distributed across the ranks of professor, associate professor, and assistant professor (between 25 and 29% in each category). Research universities had the largest group of tenured faculty (about 60%) and two-year colleges had the smallest (about 31%). Around half the faculty in the other institutional types were tenured. Nationally, the largest group of full-time faculty was in the natural sciences (19.5%), followed by health (15.3%), humanities (14.2%) and social sciences (11.2%).

Existing studies of scholarly productivity do not provide data on some forms of scholarship identified by Boyer. However, there are data regarding the pressures on faculty to do research—and on how they respond in terms of time given to scholarship and teaching, the number of courses taught, and publications written.

Studies of professors consistently show that, regardless of field, faculty in research universities experience more pressure to conduct research and publish than their counterparts in other types of institutions. Given their graduate preparation, it is not surprising that faculty in these universities also report the most interest in doing research and the greatest sense of competence as researchers.

However, writers have noted a tendency within all institutions, beginning in the 1970s, to increase the emphasis on faculty scholarship in both recruitment and promotion practices. This phenomenon is taken to be a reflection of the importance accorded faculty research in national rankings of universities and colleges. Administrators know that the stature of their faculty as scholars significantly affects the reputations of their campuses. Faculty, too, understand that their tenure and mobility within the faculty labor market is affected by their scholarly accomplishments. Hence, the overall trend has been a heightened emphasis of scholarship, and there has

been a burgeoning of publications across campuses and subject-matter areas. In one year (1989–1990) 300,000 monographs, books, and chapters and a million journal articles were published.

Generally, studies show that faculty in research universities give the most time to research, and faculty in liberal arts and two-year colleges devote the most time to teaching. In 1992 faculty reported an average of fifty-three hours worked per week, with individuals in research universities reporting the highest average (about fifty-seven hours) and two-year colleges the lowest (about forty-seven hours). Faculty in the research universities allocated the greatest portion of this time to research (about 34%), with doctoral and comprehensive universities following in rank order with about 22 percent and 13 percent, respectively. The percentage of time given to teaching was highest in two-year colleges and liberal arts colleges (69% and 64%, respectively), and lowest in research universities (about 38%). Faculty in research universities and doctoral universities, on average, taught two to three courses per year, whereas their counterparts in comprehensive universities and liberal arts colleges typically taught three and four courses, respectively.

Another finding that seems to hold across studies of faculty in all but the two-year colleges is that faculty in the natural sciences (e.g., chemistry, biology, physics) report the greatest portion of their time is given to research, with faculty in the health sciences (e.g., medicine, biochemistry), social sciences (e.g., psychology, sociology), and humanities (e.g., history, languages) following in rank order. The trend is different when one focuses on teaching. Humanities professors give the most time, followed by those in the social sciences, natural sciences, and health sciences.

When the measure of scholarly performance is the number of books, articles, chapters, monographs, and other written products produced within a set time period (e.g., a year) or over the professional life of a faculty member, research university professors consistently publish more than their counterparts in other types of institutions. Similar comparisons across fields of study show that faculty in the natural sciences report the greatest number of publications per year and over their careers. To illustrate the volume produced, consider that, in 1988, faculty in research universities reported they had each authored about thirty-nine publications over their careers, while professors in doctoral universi-

ties authored about twenty-four. Faculty in comprehensive universities and liberal arts colleges, however, had written about twelve and nine publications, respectively. Data for the same year showed that professors in the natural sciences averaged thirty-five publications over their careers, compared with thirty among health scientists, twenty-five among social scientists, and twenty-one among humanities professors.

Questions abound regarding what motivates faculty to do research, teach, and provide service—and empirical studies provide multiple answers. Researchers continue to grapple with questions about how to measure scholarly performance (particularly the outcomes suggested by Boyer) and how to assess the quality of faculty research. Nonetheless, the results of more than forty years of research on faculty consistently document that professors in research universities experience the most pressure to be engaged in research, give more time to their scholarship, and publish most often. Furthermore, natural science faculty tend to write more publications over their careers than their counterparts in other fields. Finally, individuals vary in their research interests, scholarly competence, and tenure status, and these differences contribute to disparities in the scholarly performance of faculty within the same institution and/or within the same field.

*See also:* ACADEMIC DISCIPLINES; ACADEMIC FREEDOM AND TENURE; ACADEMIC LABOR MARKETS; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY ROLES AND RESPONSIBILITIES.

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## FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF

Traditional definitions of faculty work frame contemporary views of its assessment. Faculty work generally falls into three categories: (1) research, which is the discovery or creation of knowledge through systematic inquiry; (2) teaching, which is the transmission of knowledge through class instruction and other learning-focused activities; and (3) service, meaning service to others through application of one's special field of knowledge. Assessment protocols have considered, to a varied extent, scholarly activities performed in each of these areas. Faculty assessment is conducted for purposes of reappointment, promotion, the awarding of tenure, and professional development.

During the last decades of the twentieth century, a societal focus on the work of college and university faculty as a measure of return on the public's investment in higher education stimulated a reevaluation of how faculty performance ought to be measured and assessed. The work of Charles Glassick and his colleagues (1997) has significantly influenced scholarship focused on developing workable evaluation systems. Their work is rooted in the broadened definitions of scholarship proposed by Ernest Boyer in 1990, and on how these definitions impact assessment systems. As scholarship is being conceived more broadly, traditional assessment systems are being reexamined to include all work conducted by faculty.

The development of workable assessment systems is difficult largely due to the fact that the value of assessment is often controversial. The controversy stems from several factors, according to Larry Braskamp and John Ory's 1994 study. First of all, faculty are not used to fully describing or judging their work. Secondly, systems that have been devel-

oped are often criticized by faculty as inadequate, particularly as assessment applies to teaching and service work. Lastly, a preoccupation with *how* to assess has resulted in a lack of attention to *what* is to be assessed. Successful assessment systems are based on clearly specified performance assessment criteria and standards for faculty performance in relevant areas of work. Each of these will be covered in turn.

### **Performance Assessment Criteria**

While faculty are typically assessed based on their performance in their teaching, research, and service roles, the weight assigned to each of these areas varies depending on the type of institution and its associated expectations for faculty involvements in each area. For example, the assessment process for tenure-track faculty in research-focused institutions may place relatively more emphasis on the performance of the research role. An exception is for faculty whose appointments are not tenure-eligible, such as adjunct faculty or those in full-time appointments with a specified term. In these cases, assessment is typically weighted according to the specified terms of each individual's contract, or according to expectations for performance as determined by institutional policy or tradition. For faculty in teaching-oriented liberal arts colleges or community colleges, evaluation processes may focus more on teaching.

Assessment criteria also vary by academic discipline to accommodate the sometimes disparate intellectual products. The intellectual work of faculty in management and education, as applied disciplines, may be best evidenced by corporate or institutional testimonial of improved organizational effectiveness as a result of faculty involvement. The intellectual products of the so-called pure disciplines, such as history, are more appropriately characterized by written articles, reviews, and monographs.

### **Performance Standards and Quality**

Standards for performance quality and assessment protocols are to a large extent determined by the governing bodies of each institution. Weighting of performance in teaching, research, and service is variable as well. Largely due to the disproportionate value placed on the research role of faculty, promotion and tenure guidelines have been clearer in articulating standards for research performance. Relative to assessment of teaching and service, the standards for judging research performance are clear and sys-

tematically linked to guidelines for promotion and the awarding of tenure. Performance is typically measured in terms of productivity, relying largely on the use of quantitative measures such as the number of publications or other creative works produced over a specified period of time.

Standards for teaching performance on the other hand, particularly in research-focused institutions, are less clear. The inherent difficulty in judging teaching performance lies in the fact that effectiveness is best measured by how much students learn. Because evidence of learning is often subjective or qualitative, it is more complicated to measure. This leads to questions of what measures are most appropriate for purposes of faculty evaluation, particularly when faculty compensation, if not entire careers, may rest on reliable assessment processes. This dilemma continues to fuel debates around the best way to assess teaching performance and contributes to faculty mistrust of evaluation systems. In many cases, efforts to develop workable measurement systems have stalled.

Evaluation of service remains illusive. Consequently, when it comes to tenure and promotion, service is often forgotten. This has led, unwittingly, to a devaluing of service work, and "virtually no institution has yet figured out how to quantify such work" (Glassick et al., p. 20). Reliable assessment of the service work of faculty must therefore rely on qualitative judgments rooted in institutionally developed standards for performance. Assessing service work across the professoriate is seen as a formidable challenge, yet, unlike the challenge of teaching evaluation, it has yet to benefit from a significant body of research and experimentation.

As the notion of what constitutes legitimate scholarship is broadened, and as increased attention is being paid to the outcomes of faculty teaching, academe is pressed to redefine measures of quality. Institutions, and the profession as a whole, are facing new questions, such as: How is student learning, as evidence of quality teaching, best documented? What processes associated with the transmission of knowledge are to be considered legitimate evidence of faculty performance? What constitutes appropriate evidence of application of a disciplinary knowledge base into service activities? How is integration of one's area of expertise into a multidisciplinary intellectual context best evidenced?

In 1997 Glassick and colleagues offered a solid framework for institutions considering modifica-

tions of faculty assessment systems. This work has received considerable attention by scholars of higher education and, as of the beginning of the twenty-first century, it has presented the most well-defined approach to assessing faculty work. In this book, the authors examined methods for judging scholarly performance by colleges and universities, granting agencies, journal editors, and university presses. Applying Boyer's four domains of scholarship (discovery, teaching, application, and integration) to define faculty work, they identified six standards commonly associated with high-quality scholarly work: clear goals, adequate preparation, appropriate methods, significant results, effective presentation, and reflective critique. These criteria for determining quality are noteworthy in that they offer not only a framework for evaluation, but also aid in understanding the kinds of intellectual activities and outputs that are legitimate components of the work that faculty perform.

### Assessment Tools

There are numerous tools used for collecting evidence of faculty performance quality. Braskamp and Ory cite the following assessment tools: evaluations by students and peers, as well as self-evaluations, of teaching; the evaluative conference; evaluative letters from colleagues and experts in the field; and portfolios that explicate professional accomplishments. Evaluators may vary depending on institution type. For faculty in research-oriented institutions, considerable weight is placed on the judgments of peers, including scholars from other institutions. In many liberal arts colleges and community colleges, where the faculty role is more oriented toward teaching, there may be greater reliance on the judgments of local faculty who are most familiar with institutional teaching and learning philosophies and standards for teaching performance.

Teaching performance has historically been accomplished by student evaluations at the end of each course, with the weight afforded such evaluations varying from institution to institution and, often, from department to department. In liberal arts colleges and other teaching-focused institutions, a combination of student evaluations and peer review is often used. Peer review involves a review of one's pedagogical skills by his or her faculty colleagues. Toward the end of the twentieth century, peer review of teaching became more popular in research-focused institutions, with a goal of providing a simi-

lar level of support, consultation, and evaluation typically provided for research. Some institutions have begun to enhance rewards for teaching performance, largely in response to societal concerns about the quality of undergraduate education. Such rewards have been in the form of cash awards, special stipends for teaching improvement, and endowed chairs devoted to teaching excellence.

While research performance is commonly measured in terms of the number of published articles, books, and other research products, there is a qualitative aspect to such measures. The type of publication, and whether or not selection for publication involved peer review, also determines research quality. Publications subjected to a peer-review process are typically considered to be of higher quality in that they are thought to have undergone a more rigorous critique than published work that is not reviewed.

### The Portfolio as an Assessment Tool

As definitions of faculty work are broadened, ideas about what constitutes adequate evidence of such work must be broadened as well. The notion of the professional portfolio has received wide attention as a comprehensive way to represent the work of a faculty member. The professional portfolio is a collection of artifacts and materials gathered and presented by each faculty member. It represents the requirements for one's work, as defined by expectations specified at the time of appointment or at the start of the review period. Building on Peter Seldin's notion of the teaching portfolio, Robert Froh and his associates in 1993 specified a set of principles to guide the development of portfolios and their evaluation. While the concept of the portfolio does incorporate elements of the traditional dossier compiled by faculty to document their performance, the portfolio takes a broader view of scholarship by integrating the values of the faculty member with those of the departmental and institutional community. This might be accomplished through a reflective essay and work samples that uniquely represent such an integration of values. Thus, the more standardized representation of work that is characteristic of the traditional dossier must be transformed to reflect the work of each individual and the unique contributions he or she has made in relevant areas of scholarship.

### Assessment Challenges

Assessment of faculty work has become an important consideration for both faculty and administrators, particularly as the pressure for measuring outcomes of faculty work over and above the easily quantifiable numbers of publications has escalated. Policymakers are calling for increased accountability of faculty members' time, and for evidence that the time spent produces acceptable outcomes, specifically with respect to undergraduate education. State governing bodies and Congress have become more involved with academic issues associated with student access, equality, and research integrity, all of which influence how faculty conduct their work and how institutions monitor and assess it. Such external pressures, combined with increasing trends that emphasize the importance of faculty professional development have led to increased attention on faculty assessment systems. Reevaluation of these systems is not without its challenges, however.

First, definitions of scholarship vary from discipline to discipline, and these differences have significant implications for how assessment systems are structured and implemented. Also, the importance of communication of discipline-specific performance factors across disciplines must be addressed if faculty on promotion and tenure review committees are to effectively and reliably judge the work of their colleagues. Second, effective evaluation systems depend on the communication of standards upon which judgments of quality will be based and acceptable mechanisms for documenting faculty work. Third, any changes to traditional assessment systems must maintain the historic autonomy of faculty as sole judges of quality scholarship. As members of a profession, faculty reserve the right to be the sole judges of the quality of the work performance of those claiming membership among their ranks.

Judgments of quality are based on standards set by the profession as a whole, the specific mission of the institution within which a faculty member's work is conducted, and standards circumscribed by the discipline and the institution. As definitions of scholarship are broadened, indicators of quality must be well considered in order to preserve the status of the profession and simultaneously satisfy new calls for accountability. Lastly, assessment systems must be flexible enough to consider the unique work profiles and needs of a growing segment of the professoriate—the full-time, non-tenure-track faculty. This is the environment within which effective eval-

uation systems must be developed so as to serve the changing roles of faculty in higher education.

*See also:* ACADEMIC FREEDOM AND TENURE; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY ROLES AND RESPONSIBILITIES.

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MARIETTA DEL FAVERO

## FACULTY ROLES AND RESPONSIBILITIES

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The roles and responsibilities of college and university faculty members are closely tied to the central functions of higher education. One primary formal description of these functions was contained in the 1915 "Declaration of Principles" formulated by a representative committee of faculty members including members of the American Association of

University Professors (AAUP). According to the Declaration, the functions of colleges and universities are “to promote inquiry and advance the sum of human knowledge, to provide general instruction to the students, and to develop experts for various branches of the public service” (Joughin, pp. 163–164). Correspondingly, college and university faculty members undertake research, teaching, and service roles to carry out the academic work of their respective institutions. Each of these roles enables faculty members to generate and disseminate knowledge to peers, students, and external audiences. The balance among teaching, research, and service, however, differs widely across institution types and by terms of the faculty member’s appointment. The major portion of this article will deal with these kinds of differences while latter sections will focus on the faculty as collective entities and related trends within higher education.

### The Teaching Role

The teaching role of faculty members reflects their centrality in addressing the primary educational mission among colleges and universities. As faculty members teach, they disseminate and impart basic or applied knowledge to students and assist students with the learning process and applying the knowledge. In this construction of the teaching role, the teacher is the content expert, and students are regarded as learners or novices to the academic discipline or field of study. Faculty members are expected to follow developments in the field so their expertise and knowledge base remain current. At many universities, faculty members are also expected to participate in creating the new developments that are taught, which sometimes leads to tensions about appropriate priorities for research and teaching roles.

In the 1980s and 1990s the teaching role came under increased scrutiny as studies such as the Wingspread Report (1993) appeared, outlining the shortcomings of undergraduate education and the failure of higher education to prioritize appropriately its educational mission. New approaches to revitalizing teaching effectiveness include placing an emphasis on effective pedagogy and paying increased attention to the learning needs of students. Consequently, an emphasis on faculty members as facilitators of students’ learning has emerged. This focus on learning incorporates a broad set of goals for learners, such as students’ mastery of content, their abilities to consider and critique, and particu-

larly in professional fields, the development of skill sets that enable students to undertake career positions.

Faculty members employ a variety of teaching strategies based on the institutions where they work. In a large undergraduate lecture section, a faculty member may deliver lectures that are complemented by regular and smaller recitation sections led by graduate teaching assistants. At a community college, faculty members may work side by side with students diagnosing and addressing a mechanical problem in a piece of machinery. At a liberal arts college, faculty members from different disciplines may team teach a small first-year survey course on human civilization.

In a natural sciences class, students may conduct experiments or field work in regular laboratory sessions to complement their growing conceptual knowledge and hone their inquiry skills. Students in a theater class may work alongside faculty members, fellow students, professional actors, and house staff to produce a stage performance. In a graduate seminar, students may lead selected discussions supplemented by a faculty member’s input and appraisal. Students enrolled in a distance-learning class may attend class using technological real-time hookups or may independently complete learning modules and communicate with the instructor through e-mail only as needed or stipulated. The teacher is also responsible for assessing students’ learning, and a wide range of strategies may be used, such as tests, papers, and project-oriented demonstrations of knowledge.

Of the three roles of teaching, research, and service, the teaching role is the most widely shared among faculty members across institutional types. At liberal arts colleges, regional universities, and community colleges, the teaching role takes precedence for most faculty members. Faculty members spend the majority of their time in teaching-related work, and effective teaching is rewarded. At research universities, some faculty members may hold research-only appointments, but the vast majority of faculty members teach courses in addition to maintaining a research agenda. Although effective teaching is rewarded, teaching may be seen as less prestigious and less well rewarded than success in conducting research and securing external funding. At virtual universities, faculty members may not teach so much as participate in creating instructional

modules and provide feedback to students on their degrees of success in mastering specified knowledge.

Depending on the history of an institution, imparting knowledge and developing students' learning abilities may not be the sole purpose for teaching. In religiously affiliated colleges, institutions may expect a faculty member's teaching to be consistent with and complemented by tenets of the sponsoring religious organization. In these institutions, faculty members may be expected to support the college's ministerial or evangelical objectives. In historically black colleges and universities, women's colleges, and tribal colleges, a complementary teaching focus may be on issues of social justice and empowerment of students from these underrepresented and less empowered groups.

Other institutional personnel increasingly have positioned themselves as educators to complement or enhance the traditional teaching role of faculty members. Student affairs professionals, for example, have placed greater focus on out-of-classroom learning opportunities, learning communities, and community service learning as mutually-reinforcing learning opportunities to create a more complete campus learning environment.

### **The Research Role**

Many university faculty members engage in research, thereby contributing to the knowledge base of the discipline or academic field. Research commonly is associated with conducting empirical studies, whether confirmatory or exploratory, but in some academic disciplines research also encompasses highly theoretical work. The extent to which faculty members have a research role as part of their work responsibilities depends largely on the mission of the employing institution, with larger universities more likely to have research and knowledge creation as a significant part of their missions. Although higher education institutions are most often the sites for and sponsors of faculty members' research, the primary audience for most academic researchers is their national and international community of disciplinary colleagues. Faculty members with active research agendas and involvement in their disciplinary communities have been regarded as more cosmopolitan in orientation, with stronger allegiances and loyalties to their disciplines than to their home institutions.

More emphasis is placed on the faculty research role in large universities in part because large univer-

sities also house the majority of graduate programs and provide resources to support the pursuit of research agendas. Additionally, research-oriented faculty members often participate actively in generating internal and external monetary support to underwrite their laboratories or specific research projects. Faculty rewards often are based on the extent to which faculty members contribute to their disciplines through publishing articles and books, presenting research findings, giving performances and exhibits, or disseminating their work to external audiences in other ways. Additionally, rewards may also be based on the faculty member's success in securing funding from external public agencies or companies.

With the growth of externally funded research, concerns have been raised about the potential conflicts of interest between academic freedom to research and disseminate findings and the proprietary ownership of data and findings from externally financed research. This issue is reminiscent of post-World War I concerns, as articulated in Upton Sinclair's study of American education in 1923, about an "interlocking directorate" of higher education and business representatives that disproportionately served the needs of private companies. However, concerns surrounding this trend have increased as support from traditional funding sources for large public universities, including research support, has declined. Faced with this situation, faculty members have become more entrepreneurial and in some cases more reliant on alternate funding streams such as those accompanying research contracts and grants.

Research is seldom, if ever, a significant part of a community college's or virtual university's mission, and participation in research by faculty members at these institutions is not especially common. Although these institutions may employ part-time and adjunct faculty members who work in the research and development divisions of their companies and agencies, their primary work at the community college is to teach. However, the research role is not restricted to faculty members at research-oriented universities. Faculty members at institutions other than research-oriented universities conduct research as part of their faculty role, partly because faculty members who have earned terminal degrees from large universities likely were socialized to conduct research and seek funding for such pursuits. Also, colleges and universities increas-

ingly have focused on faculty research as a way to increase their institutional profiles and prestige. Over the last quarter of the twentieth century, many higher education institutions saw their missions expand to encompass graduate education and research endeavors.

### **The Service Role**

Institutional service performed by faculty members includes serving on internal committees and advisory boards, mentoring and advising students, and assuming part-time administrative appointments as program or unit leaders. In some cases, faculty members also assume term appointments in full-time roles as mid-level or senior level institutional administrators. Some level of faculty members' service to the institution is expected, although tenure-track faculty members may be discouraged or exempted from heavy service commitments to permit greater focus on their research and teaching. Some institutional service roles may carry some prestige, and appointments may include a salary supplement. However, institutional service is not as highly regarded as research and teaching with respect to advancement within faculty ranks.

The public service role for faculty is associated with colonial colleges' preparation of ministers and teachers to serve the citizenry. A local, outreach-oriented faculty service role was codified through land-grant institutions, with their instruction in agricultural, mechanical, and practical subjects. In addition to incorporating these subjects within the curriculum, land-grant institutions also disseminate scientific knowledge and best practices to residents of the state. These universities utilize extension services, often with satellite offices, to provide information in areas such as agricultural innovations, economic and community development, child development and nutrition, and environmental conservation. Faculty members' extension and service roles tend to be less highly valued and rewarded than the research and teaching roles at universities. However, revitalizing the service role has also been offered as an important way to recapture public trust in higher education and demonstrate institutional responsiveness to society and its concerns.

Faculty service is a more central role in community colleges and regional institutions, both of which are characterized by relatively closer ties to the surrounding area. In these institutions, although teaching is the primary faculty role, faculty are also

expected to address local needs. Many community colleges develop educational programs that are tailored to the needs of local industries, thus assuming partial responsibility for employee training or re-training. The service role and faculty members' outreach and demonstrations of responsiveness to local needs are valued and rewarded more highly at these institutions.

### **Integration of Faculty Roles and Responsibilities**

The teaching, research, and service roles of faculty members overlap conceptually and practically. For example, instruction in a particular discipline or skill yields a service in the form of educated or appropriately trained persons, and outreach to a farmer or small business owner may lead to an applied research project undertaken by the faculty member. Some attempts have been made to validate the various forms of faculty work and unify them conceptually. Perhaps the most famous recent model has been the American educator and government official Ernest Boyer's 1990 stipulation of discovery, application, integration, and teaching as separate but related forms of scholarship. Among other outcomes, these models address concerns regarding the implicit hierarchy that grants the most prestige to research and the least to service.

*Variable career emphasis* programs can also help to integrate these faculty roles by offering opportunities for faculty members to stipulate their role emphases at various points in their work lives. Institutions with such programs acknowledge changes and evolutions in faculty members' professional interests and commitments. In some cases negotiations about role emphasis are part of a developmental post-tenure review program. Post-tenure reviews are considered to be responsive to concerns about faculty members' continued vitality and contributions in their later years, particularly since the abolishment of most mandatory retirement age provisions. However, concerns remain about the potential for post-tenure review and variable role emphasis negotiations to be used for punitive rather than developmental purposes.

### **The Collective Faculty**

Although the faculty of an institution is traditionally considered to refer to full-time faculty members, part-time and adjunct faculty members at many institutions have assumed a larger proportion of teaching responsibilities. Although the proportions of

women and minority group members in the full-time faculty ranks grew slowly in the last quarter of the twentieth century, women and minority group members also are concentrated in the lower faculty ranks such as instructors and part-time and adjunct faculty positions. Some blame this slow progress on inadequate numbers of diverse students in graduate programs, market factors that make other career choices more attractive or lucrative, or individual lifestyle choices. However, focus also has been shifted to institutional structures and norms, professional socialization experiences, and tacit assumptions that serve as barriers to progress within faculty ranks. For example, William G. Tierney and Estela M. Bensimon suggest that faculty members from underrepresented groups are found to pay a cultural tax in the form of increased service loads and disproportionate expectations for student advising and mentoring—service roles that often are not valued or rewarded.

The identity, authority, and functions of an institution's collective faculty are largely dependent on institutional type, history, and traditions, as well as on formal codifications of faculty authority and role. The faculty traditionally is responsible for planning and delivering curricula and instruction consistent with the educational goals of the institution and selecting and evaluating probationary faculty members within their colleges, departments, or units. Individual faculty members also may serve term appointments as administrative officers responsible for various functions of the institution, and faculty members may participate in representative assemblies like faculty senates. These bodies provide arenas for faculty deliberations and decision-making where representative faculty members articulate, endorse, or dissent from positions and draft and pass senate resolutions.

While resolutions or legislated outcomes from faculty senates often do not ultimately become university policy on the targeted issues, at institutions with traditions of strong faculty senates, senate actions represent steps in ongoing negotiated processes with administrators in determining institutional policies, especially but not only with respect to academic matters. Faculty senates also provide a regular, representative forum for administrators to meet with the faculty about proposed or enacted institutional decisions and policies.

Faculty members often are less routinely involved in institution-level budget processes, includ-

ing retrenchment decisions and strategic planning—with the exception of academic planning, curriculum planning, and degree program implications. In general, faculties at older institutions and larger institutions have tended to play a more significant role in shaping or influencing institutional governance decisions.

By contrast, many institutions are now more likely to vest a majority of institutional governance functions with professional administrators. In the last two decades of the twentieth century, the number of administrative personnel at universities expanded concurrently with faculty members' becoming more oriented toward their disciplines and less toward the institution. Because of their academic, curriculum, personnel, and shared or dual governance functions, a university's faculty or the faculty at an established liberal arts college may hold a more central and influential position within the organization. In other institutions, faculties are less likely to have such collective identities and influential statuses, perhaps with the exception of unionized faculties.

Faculty collective bargaining units provide faculty members with a formal voice in institutional deliberations and decision-making, and many faculty members regard collective bargaining as a check against the growing degree of professional administrators' authority. A wave of faculty labor organization in the 1960s and 1970s has been followed by a period of less organizing activity by non-unionized faculties. However, more recent participants in academic labor organizing have been graduate students, particularly teaching assistants, in the 1980s and 1990s at relatively prestigious, research-oriented universities. This turn to collective bargaining measures by graduate teaching assistants may presage a resurgence of academic unionization as these teaching assistants become future faculty members at colleges and universities.

*See also:* COLLEGE TEACHING; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY SERVICE ROLE, THE.

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## FACULTY SENATES, COLLEGE AND UNIVERSITY

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Since the 1960s the concept of shared governance has both blossomed and withered. Founded on the principals of western European worker-participation models, the practice of instituting faculty senates at universities and colleges throughout America was intended to alleviate the growing pains of the higher education system brought about by the influx of baby boomers (persons who were born between the years of 1946 and 1964, and who enrolled as traditional college students between the years of 1964 and 1987). The American Association of University Professors (AAUP) first suggested formalized shared governance schemes in the 1966 *Statement on Government of Colleges and Universities*. As a result, many institutions began to experiment with various shared governance arrangements, primarily in the form of faculty senates.

According to Barbara Lee, the ebb and flow of shared governance has been guided by two driving forces: politics and economics. Valerie Collins, however, contends that during the 1960s and 1970s a unique set of political factors, including the civil rights movement and the Vietnam War, converged on American campuses. In response to the unrest and mistrust this politically ripe time instilled in students, faculties began using senates to ensure their influence over decisions that would affect an increasingly large portion of campus life for both students and faculty. A third interpretation, as expressed in William Tierney and Richard Rhodes's work on faculty socialization, addresses the effect of culture: the culture of the discipline, of the institution, and of the profession. They argue that the culture of the profession engendered a need for faculty service roles in the institution and that this need created a condition that allowed for the inception of faculty senates.

Faculty senates have shared responsibilities, ranging from a limited role in program approval and review of tenure decisions to a more comprehensive role that includes budget review and allocation, senior administrative recruitment, and strategic planning. Faculty senates have been studied to show their effect on participation and influence of faculty members and to critique their inability to meet with campus financial constraints. As a result, they have met with both praise and criticism.

The majority of faculty senates operate under a mission statement. These mission statements give

the senates guidelines and provide them with an outline of their areas of authority. Jack Blendiger and colleagues list six strengths of academic senates, stating that they provide the means for: (1) determining short- and long-range interests and needs of faculty; (2) articulating expectations of faculty, staff, and students; (3) developing goals and planning strategies; (4) establishing standards and procedures for the review and evaluation of proposed administrative action dealing with curricula offerings, budgetary practices, and faculty recruitment and retention; (5) increasing knowledge and understanding of issues in departments and units; and (6) allocating resources equitably.

The debate about the worth and ultimate viability of faculty senates lies in these senates' missions. In cases where so-called corporate mentalities have infiltrated campuses, the fault has often been in the shortsightedness of the faculty senates' missions. Sheila Slaughter and Larry Leslie describe a case at San Diego State University when the administration attempted to lay off more than 130 tenured faculty members (the layoff ultimately did not go through); the faculty senate was up in arms yet was powerless to act because their mission had left them devoid of power in financial situations. Conversely, in some situations the university administration may have no ability to adjust faculty levels and program existence due to lack of authority or shared authority and may be perceived as weak by the public and by its board of trust.

As the baby-boomer enrollment gave way to the baby bust (individuals who were born between 1970 and 1985, and who have been enrolled in colleges as traditional students since 1988 and will continue to be enrolled through 2007), many colleges and universities began to feel the economic effects of declining enrollment. The shortages of students brought about an era in which *streamline*, *retrench*, and *economize* were common words spoken at most campuses, and in which all aspects of campus governance began to come into question.

Faculty senates and the institution of shared governance remain a vital part of academia. While it is true that universities must maintain financial solvency, they exist in their own microcosm that allows for adherence to cultural artifacts, regardless of their economic efficiency. As Robert Birnbaum has suggested, academic senates may not always work, but they will not go away.

*See also:* ACADEMIC DEAN, THE; BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; CHIEF ACADEMIC AFFAIRS OFFICERS, COLLEGE AND UNIVERSITY; COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; PRESIDENCY, COLLEGE AND UNIVERSITY.

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STEVEN P. YOUNG

## **FACULTY SERVICE ROLE, THE**

The faculty service role includes a variety of activities: from providing the most advanced knowledge to serve global markets and priorities to performing the most humble committee work designed to assist in the routine functioning of campuses and community groups. Through faculty service activity, colleges and universities maintain shared governance, faculty promote disciplinary networks, and partnerships are sustained between the university and community organizations, governmental agencies, businesses, and industries.

### **Nature of the Faculty Service Role**

In the United States the mission of colleges and universities has long been described as tripartite, including teaching, research, and service. Historic roots of the American faculty service role can be seen in the founding of land-grant, city, metropolitan, and state universities and community colleges, all of which were provided public lands and funds, and nonprofit tax status, with an expectation that faculty members provide not only teaching and research but also service in return. Both the amount and the kinds of faculty service activities have increased over time.

Outside of the United States, the tradition of service activity is not as long. However, developments in many countries during the last two decades of the twentieth century, which have tied universities more closely to national priorities that support economic development, have made the issues surround-

ing the faculty service role no longer a uniquely United States concern.

### **Distinctions among Types of Service**

Ernest A. Lynton suggested in 1995 that faculty engage in four types of activities that tend to be described by their institutions as "service": committee work, program building, and other administrative work related to the promotion of a university's institutional service. When faculty make contributions to their disciplinary associations and edit disciplinary journals they partake in disciplinary service. Faculty provide community service through civic contributions in the form of speeches, board or committee membership, or volunteer work with religious, philanthropic, or other nonprofit organizations. When faculty fulfill their department, college, or university's outreach mission by using their professional expertise to assist communities in responding to real-world problems, they engage in professional service. Examples of professional service activity include agricultural extension, continuing education, social problem solving, policy analysis, program evaluation, assistance with economic development, technology transfer, and entrepreneurial activity. In many institutional mission statements and some of the literature, community service and professional service are combined under the more general rubric of public service.

### **Importance in the Academic Reward Structure**

Through the twentieth century the importance of faculty service in the academic reward structure varied depending on institutional type and priorities, discipline, and status of the profession. In the first colonial colleges, teaching, community service, and institutional service were the primary responsibilities of faculty, and they were rewarded accordingly. As American higher education shifted from colonial colleges to land-grant universities, however, a gradual shift occurred in which faculty became more influenced by networks of colleagues at other institutions than by local, institutional, or community priorities. Although to different degrees depending on institutional type, the reward system followed faculty priorities. By the late 1980s and early 1990s, most colleges and universities favored scholarship, understood as traditional research, over teaching and service in tenure, promotion, merit pay, and contract renewal decisions.

Ironically, at the same time reward systems were evolving to favor research, faculty were being called

upon to engage in more and more service. Land-grant universities, urban and metropolitan universities, and community colleges were all created with explicit outreach missions. These institutions expected all of their faculty, and especially those in professional schools, to link their expertise to real-world problems. As time went on even faculty in liberal arts and private institutions were called upon by the public to engage in community service and professional service.

The tradition of shared governance has always meant a significant proportion of faculty time is spent on maintaining and improving the institution. Typically senior faculty take on more institutional service responsibilities than junior faculty. However, within the last quarter of the twentieth century, women and faculty of color reported increased demands on their time to serve on university committees, advise women and students of color, and serve their respective communities. Also, as the number of disciplinary associations, journals, and professional awards has grown so have the demands on faculty to supervise them.

Despite an increase in activity and demands for service, service is not, and has never been, rewarded comparably to teaching and research within academic communities. In most institutions it occupies a distant and somewhat ambiguous third place behind teaching and research. Service is not easy to evaluate for purposes of reward because it is often difficult to assess the quality of service activities, and to quantify and document service activity that results from ongoing partnerships or ad hoc projects. It is not clear what, if anything, should be evaluated when faculty participate in committees, editorial review boards, or mentoring groups.

During the last decade of the twentieth century, however, significant progress was made in elevating professional service in the academic reward system. In the early 1990s a national movement to reexamine faculty roles and rewards led by the American Association for Higher Education and the 1990 seminal work of Ernest Boyer, *Scholarship Reconsidered*, offered colleges and universities an attractive framework for assessing and rewarding a diversity of faculty work. Hundreds of campuses around the country began to redefine scholarship—the primary activity faculty were rewarded for—to include the teaching, discovery, integration, and application of knowledge. Lynton (1995) and Amy Driscoll (1999) extended this framework by advocating ways in which

faculty could document their professional service as scholarship. Some campuses have written this framework into faculty evaluation policies, offering an opportunity for faculty professional service to be assessed and rewarded with a similar currency to traditional research in the academic reward system.

### Debates about the Faculty Service Role

There is a lively debate about the nature and extent of faculty and institutional service obligations. It is often framed by such questions as the following:

- Do colleges and universities serve best through basic research and the preparation of future generations or through social problem solving, social activism, and social criticism?
- Among the many external demands for the professional expertise of faculty members, whose should have the greatest priority?
- Do colleges and universities have stronger obligations to state and national governments, their primary sources of financial support, than to community groups, the disadvantaged, or the disenfranchised?
- Should faculty consulting work count as service for purposes of the reward system?

The inclusion of economic development and entrepreneurial activities under the banner of service has inspired much controversy, in the United States and elsewhere, about the extent to which such activity is in the public interest or whether it serves the more private financial ambitions of colleges and universities and individual faculty members. Sheila Slaughter and Larry Leslie argue that such activity, which they term *academic capitalism*, changes the nature of the faculty role and the relationship between faculty members and their employing institutions. As institutions come to rely on faculty entrepreneurial activity as part of their financial base, they come to value this activity over other faculty work with negative consequences for teaching and research in areas not close to the market. Slaughter and Leslie anticipate increasing controversies between faculty members and their employing institutions over matters of the ownership of intellectual property, workload, and governance.

From close examination of selected universities in four countries, Burton R. Clark describes a new breed of entrepreneurial university that aggressively seeks to bring in new financial resources to augment and offset the support traditionally provided by na-

tional and state governments. Governmental support, he argues, is no longer sufficient to the ever-increasing demands on universities for new knowledge with marketplace applications. Entrepreneurial universities must rely on their faculty members to turn their knowledge capital into new revenue streams for the institution. Clark describes the “expanded periphery” within entrepreneurial universities—vastly increased numbers of research and outreach centers and institutes as well as multidisciplinary and externally oriented academic units growing up alongside traditional academic departments to engage in applied or policy research and technology transfer. New administrative structures are established to further economic development, manage intellectual property, and profit from the work of the faculty. These institutional changes have important implications for the nature of faculty work and the faculty service role.

Whether as a result of the natural expansion of traditional and generally accepted forms of faculty service or the newer forms propelled by globalization, technology transfer, economic development, academic capitalism, and entrepreneurial behavior, it seems clear that debates about the faculty service role will continue long into the future. There is no doubt that these will be matters of continuing controversy in higher education.

*See also:* COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY ROLES AND RESPONSIBILITIES.

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PATRICIA CROSSON  
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## FACULTY TEACHING

*See:* COLLEGE TEACHING.

## FACULTY TEACHING, ASSESSMENT OF

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A comprehensive model of evaluating teaching advocates the use of multiple sources of information to confirm decisions. Each source—students, self-reports, colleagues and chairs, and evidence of learning—has particular strengths and limitations. The weight of the accumulated results leads to the most valid personnel decisions. Using a mixture of evaluation sources can also lead to greater improvement in teaching because different sources are helpful to different teachers and can help identify weaknesses in different areas of instruction.

Four major sources of information are used to determine the effectiveness of an individual teacher: student evaluations, teacher self-reports, colleague/department chair evaluations, and evidence of student learning. Each of these approaches can be useful in making personnel decisions (salary, promotion, and tenure) or in improving teaching. Each approach has strengths and weaknesses that must be kept in mind and that make it imperative to combine evidence for the best judgments.

## Student Evaluations

Evaluations of teaching by students have become important and a frequently used method of assessment, the rationale being that students, and only students, are constant observers of what happens in the classroom. Moreover, only students can answer questions about the effects of instruction on them. Research over the past forty-five years has generally demonstrated their validity, reliability, and utility in improving instruction; this same body of research has shown that systematic course evaluations by students can provide useful information in assessing teachers for salary, promotion, and tenure decisions.

Although typically administered during the last week or two of the semester (but prior to final exams and grades), rating forms are on occasion given at midsemester so the instructors may make immediate adjustments for a particular course. Machine-scored forms are frequently used in order to process the large amounts of college and department data, but the open-ended comments solicited by most rating forms often provide teachers with more specific suggestions for improvement. The questions asked about teaching or the course commonly fall into these categories: organization or planning, teacher-student interaction or rapport, clarity or communication skill, workload and course difficulty, grading and assignments, and student self-reported learning. In addition there are always questions asking students to provide a global or overall rating of the course, the instructor, or the instruction received.

Many colleges have assembled their own student rating forms and some allow students to make their ratings by computer. Commercial forms published by the Educational Testing Service (SIR II) and Kansas State University (IDEA) have for many years provided colleges with score summaries, comparison information, and research reports.

Any use of student evaluations should take into account the vast amount of evidence from research (more than two thousand studies in the Educational Resource Information Center (ERIC) system since 1971). This evidence provides the foundation for guidelines for the proper use of student evaluations. Some of the guidelines that institutions should keep in mind follow.

1. Use several sets of evaluation results. Because an individual course may not accurately reflect a teacher's performance, a set of results based on several classes should be used for

personnel decisions. Some research suggests using at least five classes.

2. Have a sufficient number of students evaluate each course. Averaging responses from enough students will minimize the effects of a few divergent opinions. Generally, fifteen students is a sufficient number, assuming they represent at least half of the enrolled students in a class. Research also has shown that student evaluations are consistent over short periods of time.
3. Consider some course characteristic in interpreting ratings. Although any single characteristic does not have a great effect, a combination could effect a teacher's evaluation. Research shows, for example, that small classes receive slightly higher ratings and that subject areas such as natural sciences and mathematics receive somewhat lower ratings. Courses that are college required, but not to satisfy the requirements of a major or minor, are also rated lower.
4. For personnel decisions, emphasize global ratings and estimates of learning. Research has shown that an overall or global rating correlated best with measured student achievement—more highly than ratings dealing with different teaching styles and presentation methods. Likewise, student estimates of their learning in a course are good reflections of instructional effectiveness.
5. Student evaluations can improve instruction, depending on how instructors use the results. Good evaluation forms help teachers diagnose their strengths and weaknesses. Studies indicate that some teachers can use the results directly, while others may need to discuss the results with a colleague or a professional consultant.
6. Give those being evaluated an opportunity to respond to evaluation results and to describe their teaching in writing. Teachers being evaluated for personnel purposes should have a chance to describe what they were trying to accomplish in the course and how their teaching methods fit those objectives. The self-report of teaching, which can be part of a teaching portfolio, gives teachers an opportunity to make their own best case.

## Teacher Self-Reports

Teacher self-reports are descriptive information about teaching, which generally becomes part of a teacher's annual report. Self-ratings or self-evaluations can be included in self-reports but they should not be given much emphasis in personnel decisions because they lack validity and objectivity. In studies in which self-ratings were compared to ratings of the teacher made by students or colleagues, there was little agreement between teacher's view of themselves and others view of them. For personnel decisions, self-reports are important because they give the teacher the opportunity to make their own best case. Annual reports, sometimes called "brag sheets," are the most common type of self-report. The reports usually include information about the following activities.

- **Teaching:** teaching load, advising load, honors received, evaluations by students or others.
- **Scholarship and creative endeavors:** publications completed or in press, works in progress, grants, awards, presentations at conferences, performances, exhibitions.
- **Service:** service to the institution (e.g. committee work), service to the government or local community, service to the profession.

## The Teaching Portfolio

The teaching portfolio has been heralded as an important new contribution to teaching evaluation because it allows teachers to provide continuous documentation of their performance. Borrowed from such fields as art and architecture, where the practice is for professionals to display samples of their work to perspective clients or employers, the teaching portfolio (or teaching dossier) contains three kinds of information:

- Products of good teaching (e.g. student workbooks or logs, student pre- and postexamination results).
- Materials developed by the teacher (course materials, syllabi, descriptions of how materials were used in teaching and in innovations attempted, and curriculum development materials).
- Assessments or comments by others (students, colleagues, alumni).

Most writers, including Russell Edgerton and colleagues, believe that a portfolio should include not

only those items that present the teachers' views about their teaching but also examples and artifacts that they or others contribute. They also argue that the portfolio should be reflective and explain the teachers' thoughts and hopes as they made instructional decisions. During the 1990s many colleges have used teaching portfolios for both instructional improvement and personnel decisions. Some institutions also encourage graduate students to use teaching portfolios to document their experience and to demonstrate their potential for prospective employers.

## Colleague and Department Chair Evaluations

Colleagues and department chairs can provide information that is not available from any other source. Neither students, who lack the background and perspective, nor deans, who lack the time, can contribute the kind of information that colleagues and chairs can. Colleagues and chairs can make judgments about the following areas:

- Organization of the subject matter and course. (Does the content appear to be appropriate and relevant?)
- Effective communication. (Are student assignments well defined?)
- Knowledge of subject matter and teaching.
- Fairness in examinations and grading (Do exams test course objectives?)
- Appropriateness of teaching methodology (Do instructional approaches suggest creativity and flexibility?)
- Appropriate student learning outcomes (Are student-produced documents and examinations consistent with course goals and objectives?)

Colleagues can make their judgments about the effectiveness of the teacher by examining course syllabi, assignments, and other documentary evidence. Colleagues in the same subject field as the person being evaluated can best judge several of the areas. In small institutions or in small departments, however, it is virtually impossible to limit evaluators to those in the same departments. In fact, given possible friendships or rivalries within departments, a more balanced evaluation may be achieved by including colleagues from other departments.

For tenure or promotion decisions, colleagues and chairs usually prepare formal written recommendations for candidates from their departments.

Although tenure and promotion committees include faculty representatives, these committee members usually do not have the time to obtain their own information on a candidate's teaching, scholarship, or service performance. Instead, they must rely on other sources. For teaching an ad hoc faculty subcommittee could review each candidate's dossier or teaching portfolio and collect supplementary evidence of teaching effectiveness. Their report and recommendation then is made to the tenure and promotion committee. At institutions in which teaching is of primary importance, this approach provides a way for colleagues to have greater influences in personnel decisions. At least one study by Lewis S. Root in 1987 has shown that a small group of colleagues relying on a variety of evidence on teaching performance, such as that suggested for the ad hoc committees on teaching, do make reliable and valid assessments.

Colleagues can also play an important role in improving teaching through their evaluations and collaboration. One example is a faculty-mentoring program, in which senior faculty members provide intellectual, emotional, and career guidance for young, untenured colleagues. Another example is the so-called buddy system, in which two or three colleagues agree to collaborate on a teaching improvement program. Activities include mutual classroom visitations, student interviews, and discussions among colleagues. Although faculty members vary in their ability to offer useful suggestions to each other, colleagues can still provide a perspective that students or others cannot.

The department chair should meet annually with any faculty member whose teaching is substantially below the department's expectations. Such meetings should be made well before final personnel decisions are to be made so that the candidate has ample opportunity to develop a plan to improve his or her teaching.

### Evidence of Student Learning

Assessing student learning as a way of evaluating teaching performance has always been an important faculty responsibility. Teachers ask students questions in class, administer examinations, and evaluate projects and performance in laboratories and field settings. Some faculty members feel that student scores on final examinations in their courses provide a valid measure of student learning and that this measure should be used to assess their effectiveness

as a teacher. Yet many factors other than the faculty member's teaching competence can affect examination results. Prior knowledge and their ability, interest, and skills in the subject area can also contribute greatly to how students score on examinations.

Another way to assess student learning is to test students at the beginning and then again at the end of a course and inspect the "gain scores." This procedure also is valuable to improve instruction: if significant numbers of students do not understand an important concept, instructional changes are needed. But because gain scores are easily misinterpreted, manipulated and may not be statistically reliable, they should not be used for examining student learning for tenure, promotion or salary decisions.

### The Importance of Evaluation

Tenure decisions have important financial as well as educational implications for a college. Because a faculty member may spend thirty to thirty-five years at an institution, granting tenure amounts to more than a two million-dollar commitment at early twenty-first century salary and fringe benefits rates. When an institution makes this decision, they must consider their own goals and the faculty member's performance related to those goals. At community colleges and at many four-year colleges, teaching is the primary activity; so faculty members are evaluated largely as teachers, although their service and scholarly activities can also receive emphasis. At universities and certain four-year colleges, evidence of research and scholarship is primary, though teaching and to some extent service are also considered. In fact some doctoral-granting universities have made concerted efforts to evaluate and improve teaching performance.

*See also:* COLLEGE TEACHING; FACULTY ROLES AND RESPONSIBILITIES.

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JOHN A. CENTRA

## FAMILY AND CONSUMER SCIENCES EDUCATION

Family and consumer sciences education is a field of study that focuses on families and work—and on their interrelationships. Family and consumer sciences education tries to empower individuals and families to identify and create alternative solutions to significant everyday challenges and to take responsibility for the consequences of their actions in a diverse global society. These challenges are experienced by people of all ages in their families, workplaces, and communities. Consequently, the central concern of the field is the physical, economic, and sociopsychological well-being of individuals and families within that diverse society. From its inception in the nineteenth century, the field has used knowledge to improve people's quality of life.

### Goals and Purposes

Family and consumer sciences education contributes to a broad range of intellectual, moral, and workforce development goals. Its mission is to prepare students for family life, work life, and careers in family and consumer sciences. Nine specific goals,

developed in 1994 by the Family and Consumer Sciences Division of the American Vocational Association (now the Association for Career and Technical Education [ACTE]) provide the direction for curriculum:

1. Strengthen the well-being of individuals and families across the life span
2. Become responsible citizens and leaders for family, community, and work settings
3. Promote optimal nutrition and wellness across the life span
4. Manage resources to meet the material needs of individuals and families
5. Balance personal, home, family, and work lives
6. Use critical and creative thinking skills to address problems in diverse family, community, and work environments
7. Foster successful life management, employment, and career development
8. Function as providers and consumers of goods and services for families
9. Appreciate human worth and accept responsibility for one's actions and success in family and work life

These goals guided the development of national family and consumer sciences content standards during the 1990s. Recommended content includes reasoning for action; career, community, and family connections; consumer and family resources; family development; human development; interpersonal relationships; nutrition and wellness; and parenting. In addition, standards were recommended for the knowledge, skills, and practices required for careers in consumer service; early childhood education and services; facilities management and maintenance; family and consumer services; food production and services; food science, dietetics, and nutrition; hospitality, tourism, and recreation; and housing, interiors, and furnishings.

Family and consumer sciences education is an interdisciplinary field. Teachers integrate knowledge and processes from empirical, interpretive, and critical sciences to help students identify, understand, and solve continuing human concerns or problems that individuals and families experience. To address these concerns, the field draws on social sciences, physical and biological sciences, arts, humanities,

and mathematics. Core processes are integrated in most courses and programs. Scientific and practical reasoning processes are integrated to learn about and solve *what-to-do* problems. Communication processes, including the use of information technology, are integrated to sensitively identify and meet the needs of self and others through caregiving and education. Shared democratic leadership processes are integrated in classroom and community service learning experiences. Management and other processes, such as mathematics, are also incorporated, as needed, into concrete learning activities like those experienced in homes, families, and communities. Academic partnerships between family and consumer sciences and colleagues in science, language arts, and social studies result in team-taught courses in food and nutrition and family issues and relationships.

Family and consumer sciences education is an action-oriented field. It is concerned with the work of the family through everyday life-enhancing, caregiving activities and interactions carried out privately within the family and publicly in the community. Private caregiving focuses on the optimum development of family members. Public caregiving is provided through public service and service careers, such as child-care and food service careers. These personal service careers provide the caregiving that was provided only in homes before the twentieth century.

Educational experiences focus on developing three interrelated and interdependent kinds of reasoned action or processes needed for the work of the family in the home and community: communicative, reflective, and technical action. Communicative action involves developing learning and interpersonal skills needed for sharing meanings and understanding the needs, intentions, and values of family and community members. Reflective action involves developing the critical and ethical thinking skills needed for evaluating and changing social conditions, norms, and power relationships that may be accepted without question, but may be harmful to families, their members, and, ultimately, to society. This critical reflective action focuses on enhancing human capabilities and the physical, psychosocial, and economic well-being of the family and its members in a rapidly changing society. Finally, technical action involves developing the care-giving skills needed for using a variety of methods and technology to meet family needs for food, clothing, shelter,

protection, and the development of family members. Such technical action varies historically and from culture to culture.

Action-oriented classrooms develop and extend these skills into homes and communities. For example, students in a high school parenting education course take communicative, reflective, and technical actions as they analyze, discuss, and evaluate the effects that violence in Saturday morning cartoons has on children. These kinds of actions can then be integrated and used when students or family members plan and work together to effect change in this type of programming—which has become a cultural norm for many children—such as through community education activities for parents and legislators and for companies who sponsor violent programming.

### **History of Family and Consumer Sciences Education**

From its inception, the field has been concerned with using knowledge to improve the quality of life. Family and consumer sciences education began in the mid-nineteenth century as *domestic economy* for girls. During this time—and into the early twentieth century—women were relegated to the private life of the family and separated from the public life of the community. The educational reformer Catharine Beecher (1800–1878) envisioned a field to help students develop the critical thinking skills needed in their homes and in the wider community. Initially, this new field of study was an integral part of a general science-based liberal arts education that prepared females for their “professions” as wives and mothers. By the late 1800s, land-grant colleges offered *domestic science* courses for young women, thus making it acceptable for women to attend coeducational institutions. Two prevailing cultural assumptions supported this new field: (1) domestic tasks are women’s work; and (2) women need specific formal training for their home-centered duties.

During the twentieth century, the family and consumer sciences field evolved along with cultural, political, legislative, and pedagogical change to meet the needs of diverse populations. In the early 1900s, concern for the deterioration of the family and its members in a rapidly changing society motivated Ellen H. Richards (1842–1911) to found the American Home Economics Association (now the American Association of Family and Consumer Sciences). She envisioned this professional organization as one

that would emphasize cultural, ethical, and social ideals, and the scientific management of household work.

Soon after the establishment of this organization, changing political circumstances culminated in federal legislation that extended the field into communities and schools throughout the country. First, the Smith-Lever Act of 1914 established the Cooperative Extension system to provide community educational programs in every county throughout the United States. Home economics education was established as part of this community-based educational system, which continues to provide links between the U.S. Department of Agriculture and land-grant universities for family and consumer education programming in an effort to improve lives and communities.

The Smith-Hughes Act of 1917 established vocational education for paid employment and vocational home economics education in most public schools. By providing funding for teachers and equipment, this legislature transformed the field of study from a female version of general liberal arts and science education for a few women in colleges to *vocational home economics education* for girls in secondary schools throughout the country. Even though this act defined vocational education as technical education for paid employment, home economics education was meant for useful employment and merged two diverse curricular goals: (1) a general liberal arts and science education for family and community members, and (2) preparation for their assumed life work as homemakers. This educational and social reform played a liberating role for girls, since they were encouraged to stay in school at a time when girls tended to drop out after the eighth grade. It also prepared them to participate in their communities. Community leadership was developed through a cocurricular high school student organization, the Future Homemakers of America (FHA), which was established in 1945. Gradually, home economics education prepared girls for every area of home life in the first half of the twentieth century; namely, clothing construction, food preparation and preservation, sanitation, home furnishings, child care, health care, and family relations. Social benefits centered on the country having wise, prepared mothers; responsible family members and citizens; healthy and moral households; and productive and confident homemakers.

By the 1950s the country and the field had begun a transformation as a result of changing cultural assumptions that had limited women's work to the home—and men to work outside the home. Production of food, clothing, and home furnishings—and home care of children and sick, elderly, and handicapped family members—began to occur outside the home. Most families were becoming consumers rather than producers of these goods and services, and career choices expanded for males and females. More women entered wage-earning careers outside the home—including, but not limited to, home- and family-related service careers. Some men's work expanded to homemaking and parenting roles within the home. Consequently, both males and females needed help with recognizing and meeting new challenges of families and consumers, including deciding the direction of their careers and preparing for and managing family, career, and community responsibilities. To meet these needs, many schools offered at least one home economics course for young men, and when Title IX of the Education Amendments Act of 1972 prohibited sex discrimination in education, all courses were suddenly open to males and females. Consequently, male enrollment increased in middle school and high school career and family-related programs, and especially in food and interpersonal relationships courses, to approximately 40 percent in the 1990s. By 1994 the field changed its name and emphasis to *family and consumer sciences* to reflect these and other cultural and educational developments. Subsequently, the Future Homemakers of America student organization was renamed the Family, Career and Community Leaders of America (FCCLA).

### Major Trends, Issues, and Controversies

These name changes reflect major trends and issues within the field. Over the years the field has shifted between technical and critical-science approaches. In the early twenty-first century the trend is toward a critical science approach, as educators focus on perennial and evolving issues concerning families and communities. Problem solving occurs within the context of real-world issues, and this approach integrates academic and workforce preparation. Skill development continues, but rather than emphasizing the development of homemaking skills, the thinking and interpersonal skills needed in families, workplaces, and communities are emphasized. In addition to scientific reasoning, practical or ethical

reasoning is being added to the curriculum. While economic values such as efficiency and productivity continue to be reflected in the curriculum, moral and ethical values, such as personal and social responsibility and respect for all people, and all other types of values are openly discussed (rather than assumed) when discussing and solving problems affecting family and community members.

Grounded in the concrete and abstract experiences of the home, family, and community, family and consumer sciences education provides meaningful ways of knowing and learning for young people and adults with varying abilities and needs. Courses are being designed to help all students (including students at risk for dropping out of school) meet high academic expectations and stay in school. Authentic experiences help students make connections with other academic disciplines and the world beyond the classroom.

With this approach, family and consumer sciences education has become an integral part of the current educational reform movement. Yearlong, comprehensive courses and programs are being redesigned to meet high academic standards and student needs. National and state academic and family and consumer sciences content standards are used to strengthen programs and plans, and courses are becoming more specialized. However, academics, technology, and workforce-development skills are now integrated into the way students learn. These transferable skills are core learnings in process-centered family and consumer sciences classrooms. Real-world, problem-based instruction often includes service learning and other ways of extending learning beyond the classroom. Teachers are designing courses to fit flexible scheduling options, including semester, nine-week, and block-scheduling courses, to replace comprehensive yearlong courses.

Professionals continue to debate the role of family and consumer sciences in schools, as well as teacher preparation needs, teacher certification/licensure requirements, and ways to recruit teachers. These are interrelated issues, since inadequate numbers of teachers are being prepared to replace and expand the family and consumer sciences teaching force.

### **School and Community Curriculum Offerings**

Family and consumer sciences educational programs are provided for youth and adults in schools and

communities throughout the world. School programs for elementary age children are more likely to be offered in other countries, such as Japan and Malaysia, than in the United States. However, middle schools, high schools, and colleges around the world offer elective and required courses in family and consumer sciences education. Such programs have varying names, such as family and consumer sciences, human development and family science, family studies, work and family life, human ecology, or home economics.

High school curriculum offerings include comprehensive home and family life-skills courses and specialized personal, family, career, or community-focused courses. Comprehensive courses are more likely to be offered in the elementary and middle school levels, and specialized courses tend to be at the high school and college levels. Personal development courses are designed to help adolescents and adults learn about themselves, careers, and family responsibilities so they can make reasoned life choices. Course titles reflect these comprehensive emphases: Building Life Skills, Orientation to Life and Careers, Independent Living, Adult Roles and Responsibilities, Leadership in the Workplace, Career Connections, and Career Choices.

More specialized family-oriented courses include titles such as Family Relationships, Interpersonal Relationships, Human Behavior, Parenting and Child Development, Family and Technology, Families in Society Today, Dynamics of Relationships, Families of Many Cultures, and Families in Crisis. Food, nutrition, and wellness courses may be designed to meet personal, family, and career needs—as well as science requirements. Courses offered include Nutrition and Wellness; Family, Food and Society; Sports Nutrition; Modern Meals; Global Cuisine; Food Science; Chemistry of Food and Nutrition; and Experimental Foods. Consumer and family resource management courses, such as Consumer Economics, Life Management, Financial Management, and Life Planning, tend to be more comprehensive in that they are designed to prepare students for their adult roles and responsibilities.

Career-oriented courses in high schools, colleges, and universities prepare students for their family work and an array of personal service careers. High school courses range from exploring career options and developing core processes in a nine-week or semester course to a one- or two-year workforce development course focused on developing the

knowledge and skills necessary for careers in food service, child care, hospitality and tourism, facilities care and management, housing and interiors, or apparel and textiles related careers. Two-year and four-year college programs include combinations of specialized courses to prepare for professional careers in early childhood education; consumer services; financial planning; dietetics; food science; hospitality and food management; interior design; fashion design and merchandising; and product research and development. Baccalaureate and master's degree programs prepare family and consumer sciences educators for schools and Cooperative Extension. Master's and Ph.D. programs prepare researchers, specialists, and university educators.

Family and consumer sciences content may be combined in a variety of ways to meet the special needs of students and communities. School-based programs and courses are offered for pregnant and parenting students, dropout-prone students, and developmentally handicapped students. Graduation rates for pregnant and parenting students from these programs is more than 85 percent, while the national retention rate for these teenagers is 40 percent. Rates of subsequent pregnancies and low birth weights are also lower than state and national averages. School-based and community-based entrepreneurship courses help students, especially in small communities and developing countries, create their own businesses, often providing family and consumer sciences-related services.

Community-based family and consumer sciences community programs are offered by Cooperative Extension and other community agencies and organizations. These family and consumer sciences programs address a variety of individual, family, and community needs and issues. Cooperative Extension is a non-formal educational system concerned with issues faced throughout the life cycle, including child care, parenting, family life, nutrition and food safety, money management, and adult development and aging. Cooperative Extension family and consumer sciences educators collaborate with other county and state Cooperative Extension educators to provide community programming. Basic programming includes 4-H (a non-formal educational program for five- to nineteen-year olds focused on developing their "head, heart, hands, and health") youth and adult leadership development and adult education; agriculture; community resources and economic development; family development and resource man-

agement; leadership and volunteer development; natural resources and environment management; and nutrition, diet, and health. National initiative programming focuses on nationally important issues, such as financial security, caring for children and youth, food safety and quality, healthy people and communities, and workforce preparation.

### Current Status

Family and consumer sciences education is an integral component of the U.S. educational system, and of some other countries' systems. Some countries, such as Japan, require home economics at all levels of their public schools. Most U.S. secondary schools offer family and consumer sciences courses, and some require middle school life-skills courses and/or high school career connections, parenting and child development, and interpersonal relationships courses for all their students. State and local school funding has replaced most federal funding for these programs. Many family and consumer sciences programs strengthened their place in the middle and high school curriculum during the 1990s, especially when curriculum was revised to contribute to academic, technological, workplace, and family and consumer sciences standards and local and state needs. For example, enrollment more than doubled in Ohio's Work and Family Life program during this period. While family and consumer sciences programs have maintained or expanded enrollment in many middle schools and high schools, some schools have eliminated their programs due to the unavailability of teachers.

Cooperative Extension family and consumer sciences programs have maintained their community educational role in rural and small towns and expanded their urban programs. Websites connect families to sources of information and resources such as fact sheets, educational events, self-directed studies, and research findings. All states provide educational programming with varying emphases to meet local needs.

*See also:* CURRICULUM, SCHOOL; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; VOCATIONAL AND TECHNICAL EDUCATION, *subentries on* HISTORY OF, TRENDS.

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## FAMILY COMPOSITION AND CIRCUMSTANCE

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**OVERVIEW**

Debbie Miller

**ADOPTION**

Ellen E. Pinderhughes

**ALCOHOL, TOBACCO, AND OTHER DRUGS**

Nancy K. Young

**FOSTER CARE**

Charlie Ferguson

**OVERVIEW**

Much research has been conducted on what children need to grow up healthy, ready to learn, and to succeed in school. Many aspects of a child's growth and development, family circumstance, and school success have been studied, analyzed, and reported on in an effort to help parents, educators, health care professionals, and policymakers better understand what they can do to assure a child's success. A review of this research reveals two significant circumstances that seem to have the most impact on a child's growth, development, and ultimate educational suc-

cess: poverty and family interactions. Barring significant birth defects or injury, these two circumstances hold the key to virtually every aspect of a child's life that affects his or her ability to grow up healthy and to learn. However, it must be noted that these two factors overlap in many respects and cannot be viewed in isolation. In addition, while it is recognized that a child's behavior is what is sometimes most disruptive to the family, due to the child's drug abuse, mental illness, disability, or other factors, the focus here is on the effects of outside factors on the growth and development of the otherwise normal, healthy child.

### **Effects of Poverty on Children**

All other things being equal, children living in extreme poverty or below the poverty line for many years have the worst outcomes for health and school success. (The most chronically poor counties in the United States are in rural areas of Appalachia and in the South.) The effects of poverty are multiple and profound. Children who are born into families living in poverty generally do not receive adequate prenatal care. Lack of good nutrition for a pregnant woman can result in a baby that has a low birthweight, is more vulnerable to illness, is underdeveloped, and is likely to require more care, compared to the child of a well-nourished mother. Healthy brain development in children from birth to three years of age is critical in the development of speech and language, coordination, and reasoning. Children who suffer from poor brain development are at high risk for delayed speech and motor skills, neurological disorders, learning disabilities, and behavior problems.

Children living in poverty do not usually receive proper and timely health care, which can lead to chronic illness, such as asthma, or chronic infections, such as ear infections that can lead to hearing loss. They often do not receive required immunizations, which can delay school entry and lead to serious childhood illnesses. They are also more prone to complications from minor injuries or illnesses. Many mothers living in poverty suffer from depression, making them less able to properly nurture, stimulate, and interact with their children. As a result, their children suffer from neglect, failure to thrive, and decreased brain development.

Poverty frequently means that a family lives in a neighborhood that has a high rate of violence. Housing in these neighborhoods often exposes children to unsafe living conditions, including environ-

mental toxins, poor ventilation, and infestations of rodents and insects. Low-income children have more than triple the risk of lead poisoning, which causes neurological damage and has been linked to lower IQ and long-term behavior problems such as impaired concentration and violence.

Poor families are more likely to be single-parent families with a parent who is young with unstable employment and low earning potential. These parents suffer stress associated with the constant strain of trying to provide adequate food, housing, clothing, and health care for their children. Parents under stress have a more difficult time providing the nurture and support necessary to establish positive bonding, enable speech acquisition, teach problem-solving skills, and promote early learning activities that affect school readiness. Parents living in poverty are more likely to have low educational attainment and less knowledge about early childhood education and brain development in infants. There are generally fewer books, educational toys and games, and outside opportunities for learning, such as family vacations and trips to a museum.

Children living below the poverty line are 1.3 times more likely to experience learning disabilities and developmental delays than are children who are not poor. Children with learning disabilities and developmental delays are more likely to experience school difficulties, and school failure at an early age is a leading indicator in school drop-out rates.

Families living in poverty also experience housing instability. Children who move frequently tend to have fewer friends, experience social isolation, and have higher truancy rates than those who grow up in more stable homes. In addition, social and educational services designed to support families in poverty are disrupted when the family moves frequently. Many families in poverty experience periods of homelessness, which exposes children to communicable diseases and the chaos found in shelters. Homeless children suffer increased rates of illnesses such as diarrhea, asthma, anemia, and infection. Simply being born into poverty affects a child's ability to grow up healthy, to be nurtured in a safe and stable home, to enter school ready to learn, and to remain in school and complete a high school education.

### **Family Interactions**

Researchers have studied the effects on school success of single-parent families, blended families, ex-

tended families, divorce, death of a parent, foster care, adoption, and gay families. Within each of these family compositions, examples of children who thrive and children who fail can be found. But more important than family composition is family interaction—how family members relate to each other. Can a child who lives in a two-parent home where there is poor family interaction due to drug abuse, domestic violence, or mental illness be said to be at less risk of school failure than a child born into a single-parent family living in extreme poverty?

Family interaction significantly impacts the development of the children in the home, regardless of income level. However, research does show that certain types of family interactions are more common in low-income homes. For example, drug abuse and poverty are the two most common factors cited in domestic violence and child abuse cases.

In families where one or both parents abuse drugs or alcohol, children are frequently neglected, and sometimes injured or abused. In addition, much of the family income is spent on supporting the drug habit, and the family suffers from the diminished resources available for food, clothes, housing, and medical care. Children growing up in homes where drug abuse is present are frequently exposed to violence, unpredictable behavior, overt displays of sexual behavior, absence of one or both parents, poverty, homelessness, and a lack of consistent supervision. Children are often truant from school and may lack school supplies and appropriate seasonal clothing. Nonrelatives are frequently present in the home and prevent the child from maintaining a close relationship with one or both parents. Children may also be expected to perform most household chores, such as cooking and cleaning, and to care for younger siblings or elderly grandparents. Children living in these circumstances may appear tired, lonely, sad, angry, afraid, malnourished, dirty, withdrawn, aggressive, anxious, or defensive, and they may exhibit a wide array of physical symptoms including complaints of stomachaches and headaches, hair loss from stress, nervous tics, stuttering, and thumb/finger/hand sucking when not age appropriate.

Children who live in homes where neglect, abuse, and/or domestic violence are present suffer many of the same effects as those mentioned above. The interactions between adults, and between adult and child, significantly impact the child's growth and development. Children who are abused or ne-

glected suffer from low self-esteem, anger, depression, fear, anxiety, and feelings of abandonment. They manifest these feelings through physical symptoms such as headaches, stomachaches, vomiting, diarrhea, and sometimes sleeping or eating disorders. Very young children are particularly vulnerable to neglect and abuse in homes where domestic violence is present. The victim of domestic violence, which is most often the mother/woman present in the home, may ignore her children to appease the offender. Very young children are particularly at risk of injury or abuse from shaken baby syndrome or battered child syndrome.

### **Effects of Government Intervention**

When the government intervenes to protect children living in homes with drug abuse, domestic violence, or child abuse, the family interactions are again affected. Once a determination is made that a child's safety is at risk, one of two approaches are generally taken: either the child is removed from the home and placed in a home with relatives or in foster care, or the family is provided with in-home counseling and support services. In-home services are considered less intrusive and disruptive to the child and the parent-child relationship. In an ideal situation, the in-home service provider visits with the family members at home and conducts counseling sessions with all family members to help the family interact in more positive ways. However, family members frequently resent the intrusion of an outsider and the child is blamed for the intrusion.

The focus of Child Protective Services, an array of agencies and collaborations designed to assure the safety of children, is specifically on the safety and well-being of the child. As a result, the adults in the home may view the child as the reason for the intervention, causing additional stress on the child. The child may feel guilty that his parents are required to attend counseling sessions, court hearings, or to pay for services. The parents may talk openly around the child about the intrusion and inconvenience of such services, and about their resentment. If the services are not effective, then additional court hearings are held and there may be additional finger pointing and blame directed at the child. Ultimately, the child may be removed from the home, again causing the child to feel that he or she is being punished.

When a child is removed from home, family interactions are very much affected. The child may be in a safer environment, but there is stress associated

with the change in living circumstances. In general, the parent may not be happy with the removal of the child from the home. The parent may call or visit the child and accuse the new caretaker (either a relative or foster parent) of not caring for the child properly, and again the parent may cast blame on the child for causing the disruption.

The parents may also be required to make child-support payments while the child is out of the home, and they may have to receive some type of treatment or counseling as a condition for the child to return home. If the parent fails to complete the court-ordered treatment, the child may view that failure as an indication that the parent has abandoned or does not love him or her. It is reasonable to believe that any period of time in which the child is out of the home is a time of stress and confusion. Even when the child feels more physically safe when not at home, there are emotional attachments that bind the child to the home and make the removal difficult.

### Effects of Mental Illness

The term *mental illness* describes a broad range of mental and emotional conditions that disturb a person's behavior, mood, thought processes and/or social interpersonal relationships. Children who live with a family member who is mentally ill must deal not only with the stigma of mental illness in their family, but also with the stress caused by that illness. While the extreme circumstances of mental illness are widely reported in the news (such as mothers who, while suffering from depression, kill their children), the much more common situations of a parent who suffers from some type of mental disorder or a parent who is caring for a relative with mental illness are found in millions of homes in the United States. Some of the most common types of mental illness are:

- Depression, which is characterized by extreme or prolonged periods of sadness.
- Schizophrenia, a very severe illness characterized by disordered thought processes that can lead to hallucinations and delusions.
- Bipolar disorder, which is a brain disorder involving periods of mania and depression.
- Dementia, which is a loss of mental function usually associated with advanced age and characterized by memory loss, personality change, confusion or disorientation, impairment of judgment, and deteriorating intellectual capaci-

ty. There are many types of dementia, including Alzheimer's disease.

Mental illness can occur in any family. When it first occurs, the family members may at first deny that something different has happened. During an acute episode, family members may react with surprise, fear, and alarm, and once the episode is over there may follow a period of relief and calm. But, as symptoms persist, it becomes clear that life will never again be normal.

Children are particularly affected by the strange behavior of a parent or older sibling. They may have little knowledge about mental illness and blame themselves for what is happening to their relationship with a loved one. They are frequently afraid to discuss their feelings with others, particularly their friends or people outside their families, and they therefore become isolated and withdrawn. How other family members handle the situation is critically important to the child. If other family members, particularly the other parent, become distraught and helpless, then the child will become even more distressed.

A child will receive less attention at this time, because other family members are attending to the member with the illness. The child may begin to exhibit behavior problems at home and at school, become depressed or withdrawn, and exhibit sleeping or eating disturbances. Every episode becomes more difficult to handle, and the child may try to escape by running away from home. Even though the child is not being abused, the effects appear similar, with anger, aggression, fear, depression, anxiety, withdrawal, and sadness all being possible outcomes.

Similar circumstances exist when a family is faced with caring for an extended family member who develops dementia or any other mental illness. If the family member moves into the home, the child is sometimes displaced from his or her room, daily routines may change, and finances may be strained. All of this is very disruptive to children, particularly school-aged children. It is difficult for a child to see a change in the behavior of a beloved relative (grandparent, aunt, uncle, etc.), which might frighten the child. The presence of this person in the household affects the parent-child relationship, as parental responsibility is shifted and there is less time to spend with the child. The resultant stress and concern can create serious family problems. Family life is disrupted and often unpredictable, and the

needs of the ill family member often become the priority.

### What Do Children Need to Be Successful?

Although much research has focused on issues that negatively affect the outcomes for children, little research has focused on what characteristics make children successful. In the mid-1990s the Search Institute, led by Dr. Peter Benson, conducted a nationwide survey of 100,000 young people in more than 200 communities to learn about the assets of successful teens. This research specifically targeted teenagers, but the implications of how the assets were developed are applicable to children of all ages.

The survey identified forty developmental assets that help young people make better decisions, choose positive pathways, and grow up to be competent, caring, and responsible. These assets are grouped into eight categories: support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competencies, and positive identification.

**Support.** Children need to feel loved and supported by their family. Teens reported that spending time with parents, being hugged, being told that they are loved and doing things as a family are important to them. Children learn to love by example. Eating at least one meal per day together as a family, spending time with each child individually, listening and valuing their opinions, respecting their concerns, attending school events, and going to worship together are all examples of how families can show support and love to their children.

**Empowerment.** Young people need to feel that they are valued by their community and that they have the opportunity to contribute to the welfare of others. They need to feel safe at home, at school, and in the neighborhood. Those surveyed reported that they need and want to feel useful in their communities, and that they need to have opportunities to give service back to the community.

**Boundaries and expectations.** Young people need to know what is expected of them and whether their activities and behaviors are acceptable, or “in-bounds.” Boundaries are important not only within the family, but in the school and neighborhood as well. Families need clear rules and consequences for behavior, as well as ways of monitoring behavior. When the rules are clearly communicated and the consequences are fairly and consistently enforced,

children are more comfortable controlling their own behavior, and they make better choices. Teenagers report that positive adult role models are helpful and desirable. Adult role models can be teachers, scout leaders, coaches, parents of friends, or adults they meet and know through community activities such as worship, community service, and sports.

**Constructive use of time.** Young people need opportunities for constructive and creative activities. These opportunities can occur through participation in faith-based organizations and youth programs; through lessons in art, dance, music, drama, and sports; or through learning skills at home, such as cooking, decorating, sewing, building, or designing. Parents can encourage their children to explore arts, sports, or other creative outlets by volunteering to help with a sports team or youth group, or by taking the child to local museums, dance performances, or plays. Activities such as these encourage physical activity, promote problem-solving skills, stimulate creativity, and help young people meet others with similar interests. As an interest in such activities develops, there is less opportunity or interest in watching TV, hanging out on the street with undesirable companions, or experimenting with drugs and sex. As children grow older, parents can encourage them to obtain part-time employment to earn money and teach them how to manage their money.

**Commitment to learning.** Young people need to develop a lifelong commitment to education and learning. Children need to experience at a very young age that learning is fun and that parents value education. Every effort should be made to assure that the child is successful in school. Parents should also model lifelong learning by engaging in new learning experiences, taking part in community and government life, and helping their children apply their knowledge to real life activities. Parents should visit their child’s school, talk with the teacher, and help with homework. Parents can help their children bond with their school by encouraging participation in school activities, showing school spirit, inviting school friends home to work on projects, and participating in school cleanup and work days.

Children who are good readers are better learners, so children should learn to read for pleasure as well as for schoolwork. Parents should start reading to children when they are very young, and they should teach children that books have wonderful stories and interesting information. It is helpful to take children to the public library as soon as they are

able to look at picture books. As children grow older, books can be read together and discussed. Parents can start a young-reader book club with their child and their child's friends to encourage them to read together.

**Positive values.** Young people need to develop strong values that guide their choices. These values include caring, equality and social justice, integrity, honesty, responsibility, and restraint (believing that it is important not to use drugs or alcohol and not to be sexually active). These values help young people make good decisions and it is important for parents to help their children develop these values. It is not enough just to tell children what their values should be; parents must demonstrate that they have these values and how these values translate into everyday life. Children learn by example, so if parents are caring, honest, responsible, and demonstrate restraint in the use of drugs and alcohol, then children will learn these things. As a child grows older, parents can label the values and show how they and others incorporate these values into their lives.

**Social competencies.** Young people need skills and competencies that equip them to make positive choices and to build relationships. Life is full of choices, and how young people make those choices will affect how they spend their time, who their friends are, what work ethics they have, who they choose as a mate, and how they raise their own children. The ability to make choices, and to see how those choices impact the future, is critical in becoming a successful adult. Very young children have a very short sense of time, and they make choices based on what is immediately available to them and what they need or want in that moment. But as children grow older they can learn that choosing to watch TV now means that there is not enough time later to read a story or play a game. Parents can begin to help children understand how a decision will affect their goals. Goal-oriented decision making is a skill that must be learned and practiced successfully.

Another social competency is learning to make friends. Friendships will not last long if a child is self-centered and insensitive to the feelings of others. Parents can help children learn to be empathetic and sensitive by discussing with them how other people feel when they are treated unkindly or when they are hurt. Children learn to respond with empathy and kindness when they see their parents respond to them with these same feelings.

Children must also learn to be comfortable with people of different cultures, races, and ethnic backgrounds. This is sometimes more difficult if the family lives in a very homogenous neighborhood, but through books, films, television programs, and newspapers parents can make children aware of the different people and cultures in the world, and teach them that just because something is different it is not to be feared or disliked. In communities where people of different cultures live, it is important for parents to treat everyone with respect and to introduce their child to experiences of different cultures. Parents can take the child to markets and stores that sell products of different countries, listen to music from other cultures, or invite people of different cultures to speak to a class about their customs, dress, and food.

Children need to learn to resist negative influences and peer pressure. Parents can help by engaging in role-playing situations with them and talking with them about choices that their friends are making. Children need to learn active resistance and about the dangers of being "in the wrong place at the wrong time." Children also need to learn how to resolve conflict peacefully. Parents can start teaching children at a very young age that hitting is not acceptable behavior, and how to resolve conflicts without violence. Parents must also model this behavior in their choice of discipline and in their own behavior.

**Positive identification.** Young people need a strong sense of their own power, purpose, worth, and promise. Teenagers reported in the Search Institute survey that it was important for them to feel that they have control over things that happen to them. Parents can reinforce their children's sense of power and worth in many ways. Helping children learn to make good choices and praising them when those choices are made, helping children identify their strengths and showing them how to use those talents, and giving children time for recognition are all ways of building self-esteem. It is important for young people to feel positive about their future, and to feel that their life has purpose.

Teenagers easily fall into periods of depression due to hormonal changes that occur during different stages of development, and due to the peaks and valleys that occur in friendships and relationships. One day they are on top of the world and the next day everything seems pointless. Some of this is quite normal in the life of a teenager, but parents can help

them view their lives with some perspective and minimize the negative feelings that occur.

Parents should not always shield younger children from failure and disappointment. It is important for children to experience failure along with success, as these experiences help cushion hard times later in life. Children who have learned to cope with disappointment and felt the pride of having overcome adversity become much more resilient teenagers and adults.

While much of what has been learned from research on family composition and circumstance seems quite logical, the impact of this research is profound. It helps explain why some children rise above seemingly overwhelming odds of poverty and family composition to succeed, and why others struggle.

*See also:* CHILD PROTECTIVE SERVICES; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; FAMILY SUPPORT SERVICES; PARENTING; POVERTY AND EDUCATION.

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DEBBIE MILLER

## ADOPTION

In the 1990s an average of 120,000 children were adopted yearly in the United States. Adoption involves the legal transfer of parental rights and responsibilities from birth parents to adoptive parents. The adopted child, adoptive parents, and birth parents form what is known as the *adoptive triad*—three entities profoundly affected by this process. According to the Evan B. Donaldson Adoption Institute, 60 percent of Americans are touched by adoption—either as a relative, friend, or member of the adoption triad.

Most children are placed with their adoptive families through public child-welfare agencies or licensed private adoption agencies. These agencies typically place children after obtaining legal custody of children due to the voluntary or involuntary termination of birth parents' rights. Children are also placed with adoptive parents directly by birth parents; attorneys typically facilitate this process of *independent adoptions*.

Although the legal exchange of rights and responsibilities of parenthood is common to all adoptions, there are different types of adoption. *Infant adoptions* involve the placement of infants; *older-child adoptions* typically involve the placement of children over age three. In *transracial adoptions* children of one race are placed with a family of a different race, while in *international adoptions* children from one country are placed with a family in another country.

Adoptions vary in how much contact or information is shared between adoptive parent and birth parent. Harold Grotevant and Ruth McRoy offer the following definitions: *confidential* adoptions involve no contact at all; *mediated* adoptions involve the exchange of nonidentifying information through a third party; and fully *disclosed* adoptions involve the exchange of at least some identifying information and often include face-to-face meetings.

### Adoption and Children's Development

Two questions typically get asked about adopted children. First, are they better off in adoptive families than they would have been in foster care, institu-

tions, or with their birth families? Coping with the loss of the birth parent is often an important theme for adopted children. However, research on their adjustment clearly shows that they have more positive emotional and behavioral adjustment than children who are raised in foster care, in institutions, or with birth families who continue to have serious problems that impair parenting. Furthermore, Richard Barth and his colleagues have shown that adoption in infancy can greatly minimize the vast problems in learning, social relationships, and emotional development among children who were prenatally exposed to drugs. So, adoption can be an appropriate solution for children whose birth parents cannot, or will not, provide adequate safety and nurturance.

Second, how do adopted children fare in comparison with children in families that more closely resemble their adoptive families? Adopted children tend to receive more mental health services—which some professionals view as a sign that adopted children have many more problems than do their peers. However, adoptive parents also are more likely to seek professional help—for various reasons—than are biological parents. In general, many studies suggest that most adopted children tend to have more adjustment problems than nonadopted children. These problems include school adjustment and learning problems; impulsive, hyperactive, or rule-breaking behavior; and drug use. However, it is important to note that for most adopted children, these problems fall within what is considered a normal range.

Given the slightly higher risk for adopted children to have adjustment difficulties, what are important issues that adoptive families face as children develop? In infancy and toddlerhood, the critical challenge is for adoptive parents to form healthy relationships with the child. Known as a *secure attachment*, this relationship can enable the child to have success in later years forming friendships, learning in school, and learning about the world.

In the preschool years the important step for parents is to begin the process of telling about adoption. David Brodzinsky's work indicates that teaching children about adoption is an ongoing process throughout childhood that should start with words that the child can understand. He and his colleagues have shown that children's understanding of adoption evolves over years—from an ability in the preschool years to make a simple distinction between adoption and birth as paths into a family, to an ability

in adolescence to understand the abstract themes associated with termination of parental rights and adoption.

During the elementary years, as adopted children become able to understand that in order to be adopted someone had to give them up, they become vulnerable to having difficulties with their sense of self. During these years, it is especially important for parents and adopted children to talk openly about adoption.

In the adolescent years, when youth rework their identity, the meaning of being adopted may have little or great significance, depending on how adoption has been handled by family, peers, and the larger community. As adopted adolescents work on their identity, they may explore questions of searching for information about one's birth parents. Marshall Schechter and Doris Bertocci note that although young people vary in their need for information about, or contact with, birth parents, their curiosity about their origins is quite normal. Although little is known about the outcome of searching during adolescence, adults who have searched for birth families have generally been satisfied with the outcome.

### Unique Issues with Different Types of Adoption

Placements of children from foster care are somewhat risky: 10 to 15 percent disrupt or fail, sending children back to foster care. Children who are older, or have severe behavior problems (e.g., fire setting, sexual acting-out, suicidal behavior) are most likely to experience disruption. The adopted child comes with his or her own experiences with previous families and expectations for how families function, and these do not always fit with the expectations that adoptive families have. Flexible parenting styles, maintaining realistic expectations about the adoptee and the placement, and a clear commitment to the placement are important qualities that can enable families to be successful.

In international adoptions challenges for families include medical problems and cultural differences. Children who come from countries lacking in adequate medical care often have physical problems, including infectious disease, growth delay, and neurological diagnoses as a result of their preadoptive experiences. In addition, language and other cultural differences between the adopted child's home country and the adoptive family's country may further complicate adoptive family life.

Transracial adoptions have been very controversial, largely because they often involve European-American parents and adopted children of color. Research generally shows that transracially adopted children can adjust as well as children adopted by families of the same race. The success of such placements are determined, at least in part, by how well adoptive parents promote a sense of ethnic pride, how well they raise their children to be prepared for the discrimination they face, and how well they function as a family of color in the world.

### Summary

Adoption provides children and families with an alternate path to family life that can be both similar to and different from biological family life. Usually, the differences pose unique challenges and complications for family life and children's development; however most adopted children tend to adjust as normally as do nonadopted children. An understanding of the complications and similarities by all—not just the 60 percent of persons touched by adoption—can facilitate more appropriate support for adoptive families and adopted children.

*See also:* FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* FOSTER CARE; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; PARENTING.

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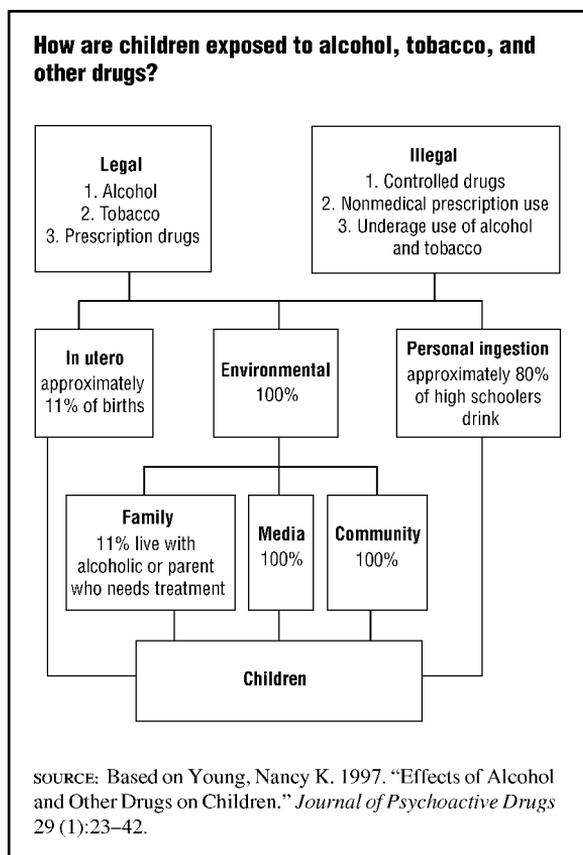
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ELLEN E. PINDERHUGHES

### ALCOHOL, TOBACCO, AND OTHER DRUGS

Substance abuse is a family disease, one that can be transmitted both genetically and through the family environment. Children in families are affected by substance abuse in several ways, as illustrated in Figure 1. This chart shows that legal and illegal use of alcohol, tobacco, and other drugs (ATOD) can affect children through a number of avenues, including prenatal exposure *in utero*. This has very powerful policy implications, including its message that prenatal drug exposure, while very important in its effects on younger children, is only one of the several ways that children can be affected by these substances. Children are also exposed through their parents' and caretakers' use and abuse, through commercial media messages advertising alcohol and tobacco, and through community norms and regulations regarding substance use. The legality of a substance, as well as the way in which children are exposed to its use, plays a significant role in its effect on a child. Often, an emphasis is placed on the effects of illicit drugs, rather than on the harmful effects of tobacco and alcohol. At the federal level, for example, there is an annual "National Drug Policy Strategy" document; no such documents exist for alcohol or tobacco.

FIGURE 1



Both prenatal and postnatal exposure to alcohol, tobacco, and other drugs can affect children in lasting ways. Children who fail to form secure attachments to their parents or caregivers because of their parents' or caregivers' inability to give them sustained attention, children who live in a home where violence and substance abuse are frequent, children who grow up in neighborhoods where there are ten times as many liquor outlets and ads as in the rest of the community, adolescents who receive daily messages that to use alcohol is to be surrounded by attractive people having fun—all of these situations can have a lasting effect on the children involved.

According to the California State Commission on Children and Families, "prenatal exposure to tobacco, alcohol, and illicit drugs increases a child's risk of mental retardation, neurodevelopmental deficits, attention deficit disorders with hyperactivity, fine-motor impairment, as well as more subtle delays in motor performance and speech. Maternal smoking and infant exposure to environmental tobacco smoke has been linked to asthma, low birth

weight and an increased risk of sudden infant death syndrome" (p. 56).

As important as these effects are, however, a 1999 report of the U.S. Department of Health and Human Services cited data showing that 11 percent of all children in the nation live with a parent who is either alcoholic or in need of treatment for their abuse of illicit drugs. According to this report, "children prenatally exposed to drugs and alcohol represent only a small proportion of the children affected and potentially endangered by parental substance abuse" (p. ix).

Thus, as important as prenatal exposure is, a much larger number of children are exposed to milder effects of substance abuse than those exposed to its extreme effects *in utero* such as fetal alcohol syndrome, which has definite facial and other characteristics. The policy and practice questions this raises include whether measurable results will be more readily achieved by targeting severe or milder risk cases; and for which children, and at which points in their development, intervention should be attempted. It may be more appropriate to think of *treatment funds* being allocated to the most affected children and families, *early intervention funds* being allocated to those that are at risk of becoming seriously involved, and *prevention funds* being allocated to a much wider group of children whose needs are not as severe.

### How Are Schools Affected?

For schools, the issues of substance abuse in families arise at many levels of the preschool and school experience. These include:

- The mandated responsibility of schools to identify younger preschool-age children with disabilities, some of whom have been affected by exposure to alcohol and drugs.
- The effects of parental substance abuse on early learning, such as parents' willingness and ability to read to their children regularly.
- The effects of parental substance abuse on the home learning environment, such as whether there is a quiet place to study and a predictable schedule for homework.
- The effects of parental substance abuse on the development of peer-resistance skills that address the learned techniques of responding to negative pressure from peers.

- The effects of adolescent substance experimentation, use, and abuse on learning and social skills.

A 2001 analysis of the impact of substance abuse on schools conducted by researchers at Columbia University found that “substance abuse and addiction will add at least \$41 billion—10 percent—to the costs of elementary and secondary education this year, due to class disruption and violence, special education and tutoring, teacher turnover, truancy, children left behind, student assistance programs, property damage, injury and counseling” (Center for Addiction and Substance Abuse, p. 6).

### Schools’ Responses

Schools have responded with a variety of practices and policies, ranging from *zero-tolerance zones* to drug resistance education and individual counseling. Recent assessments of “what works” have emphasized the following ingredients in successful school-based and school-linked programs:

- They are developmentally appropriate.
- They are culturally sensitive.
- They include the perspectives of young people.
- They have sufficient *dosage* (and when needed, *booster* features) to make a difference. In this context dosage refers to the intensity of the program; some models of prevention programs provide as little as 17 hours of instruction during the fifth grade year, which has been shown to be an inadequate dosage to achieve any lasting impact.
- They are multifaceted, reflecting the dimensions of peers, parents, and the larger community.
- They are evaluated in enough depth to make midcourse corrections possible.

The U.S. Department of Education has rated several programs “exemplary” and “promising,” based on seven criteria developed by the department.

It should also be pointed out that from birth to age eighteen children spend only 9 percent of their lives physically at school, suggesting that one of the most important things schools can also do to respond to the problems of substance abuse is to support effective family- and community-focused prevention and intervention programs.

### Conclusions

The effects of family substance abuse on schools and learning are pervasive. However, as concerns about

adolescent tobacco, drug, and alcohol use have grown, so have the tools available to respond with both preventive and intervention activities. Schools should not venture into these arenas alone, but need to understand the available approaches and the literature on what works.

*See also:* DRUG AND ALCOHOL ABUSE, *subentry on* SCHOOL; RISK BEHAVIORS, *subentry on* DRUG USE AMONG TEENS.

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NANCY K. YOUNG

### FOSTER CARE

According to data from the U.S. Department of Health and Human Services’s Children’s Bureau, the number of children in foster care nationwide increased 93 percent between 1986 and 1999, from approximately 280,000 children to 581,000 children. Approximately 70 percent of the children in foster care in 1999 (405,000) were school-age children. The

following paragraphs provide a definition of foster care before discussing the influence of foster care on students' academic growth and development.

### **Foster Care**

Foster care is a substitute arrangement for children whose families are not able to provide basic social, emotional, and physical care, and who therefore require a substitute caregiver to assume the parental role to provide care, supervision, and support, on a short- or long-term basis. According to the Child Welfare League of America, "children should be removed from their parents and placed in out-of-home care only when it is necessary to ensure their safety and well-being" (p. 7).

Foster care (i.e., out-of-home care) is part of an array of child-welfare services that includes family support programs, family preservation programs, and permanency planning. The array can be described as a continuum, with out-of-home care viewed as a third line defense, following family preservation programs. Family support efforts focus on the prevention of child abuse and neglect, working to educate parents and alleviate a multitude of stressors that may increase the likelihood of maltreatment. Family preservation programs, foster care, and permanency planning efforts occur after a charge of child abuse or neglect has been substantiated by the public child-welfare agency. Family preservation programs, though not instituted in all abuse and neglect cases, provide intensive, in-home services in an effort to avoid out-of-home placement. Permanency planning—efforts to establish a permanent home for the child, either with his or her biological family, through adoption, or in legal guardianship—begins immediately, and permanency is the final goal for a child involved with the child-welfare system. Foster care is defined as a temporary arrangement for children while their families work to resolve the issues that resulted in an out-of-home placement for the child. However, foster care may also be a long-term option when other permanency efforts (i.e., family reunification, adoption, legal guardianship) are not successful.

Children may live in a variety of foster-care settings, depending on the characteristics of their case. Children with urgent substitute care needs may be placed in receiving or shelter homes for a short period of time. Like the array of child-welfare services, the remaining foster-care placement settings can be viewed as a continuum from the least restrictive en-

vironment and level of service intensity to the most restrictive environment and level of service intensity. In kinship foster care, children are placed with a relative; licensing requirements and eligibility for a foster-care payment for costs associated with raising the child depend on policies set by individual states. Family foster care is provided by foster parents who are licensed by a state or county after completing minimal training and meeting health and safety standards, and they receive a federal or state foster-care payment for each child residing in their home. Foster family agencies are private agencies contracted and licensed by the state or county to provide substitute care similar to family foster care but often with a greater level of service intensity. Group homes and residential treatment centers serve children with more specialized needs (i.e., emotional and behavioral difficulties) than other placement settings, are generally operated by private agencies contracted and licensed by the state or county, are more restrictive in their environment and therapeutic in their focus, and are staffed by individuals with more specific skills.

### **Vulnerability of Children in Child Welfare**

School-age children in foster care have any number of life experiences that make them vulnerable to bad outcomes, particularly if those experiences occurred at a young age. Judith A. Silver provides an overview of the risk factors frequently experienced by children who become involved with the child-welfare system and are placed in foster care. Citing Arnold Sameroff, Silver notes that the link between risk factors and outcomes is not deterministic, but the risk factors increase the likelihood of having a negative outcome, such as low test scores. Poverty, the principal risk factor, is a condition faced by the majority of families known to the child-welfare system. Poverty's impact ranges beyond low-socioeconomic status, influencing the effect of other risk factors. A second risk factor, maternal substance abuse, is associated with negative outcomes for children (i.e., low birth weight, premature birth) that influence neurodevelopmental functioning. Exposure to violence, whether during pregnancy or in the home as a child, is another important risk factor that affects a child's mental health as well as his or her cognitive development and ability to learn. Attachment (the stable, emotional connection with a caregiver) is an important consideration for children in foster care, given that the natural parenting structure has collapsed,

children have been removed from their biological families, and face placement within a new and unfamiliar home with new and unfamiliar people. Finally, a substantial proportion of children in foster care are there due to the maltreatment inflicted upon them by a caregiver. Maltreatment can vary (physical abuse, sexual abuse, neglect), but "all forms have predictable outcomes: devastating effects on sense of self, and emotional, social, and cognitive capabilities" (Silver, p. 15).

### The Impact of Foster Care on Student Learning

The impact of foster care on student learning is difficult to assess. The difficulty is due to what Gilles Tremblay calls a "constellation of factors" that determines the influence of foster care on a child (p. 87). Tremblay has organized the factors into five categories: (1) factors relating to the child; (2) familial factors; (3) placement factors; (4) factors related to professional assistance; and (5) external factors. Parsing out the influence of these additional variables to gauge the unique effect of being in care on student learning is problematic.

The educational standing of school-age foster children while in foster care and when leaving foster care is less ambiguous. Researchers using cognitive assessments, academic achievement outcomes, school completion outcomes, and school behavior outcomes as a measure of scholastic achievement have found that children are not faring well while in foster care, or when they leave the foster-care system at the point of their eighteenth birthday.

School-age children in foster care have not fared well in general IQ assessments or on more specific assessments of cognitive functioning. According to reports by Annick Dumaret (1985), Mary Fox and Kathleen Arcuri (1980), and Theresa McNichol and Constance Tash (2001), average IQ scores were 100 or below, and a high number of those studied (up to 46%) were rated as doing poorly on assessments of cognitive functioning.

Performance at the age-appropriate grade level, grade retention, course grades, test scores, and graduation are common indicators of academic performance. A number of studies have found that large percentages (up to 47%) of children in foster care were performing below grade level and that children in foster care were behind in their progress or performing below average across a range of academic subjects. In addition, a high percentage (up to 90%)

of children in foster care repeated at least one grade over their academic career. Researchers also reported that low percentages of students in foster care achieved passing grades, and many had low grade point averages. Children in foster care did not make gains in standardized test scores over time while in care, and scores were below the fiftieth percentile. School completion percentages were low for children discharged from foster care on their eighteenth birthday and a high percentage of children in foster care reported dropping out of school.

School behavior outcomes are important components of educational progress. Attendance appeared to be problematic for some children in foster care, as did general classroom behavior. Study findings for suspension and expulsions were less definitive.

### Conclusion

Assessing the impact of foster care on student learning is difficult due to the influence of various factors. However, research indicates that school-age children in foster care face difficulties in the learning process. Additional research, as well as policies and interventions, are required to assist children in achieving educational goals to ensure a lasting quality of life.

*See also:* CHILD PROTECTIVE SERVICES; FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ADOPTION; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS.

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## FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS

The goal of positive and productive family and community involvement is on every school improvement list, but few schools have implemented comprehensive programs of partnership. Research suggests that this goal is an important one to reach because families and communities contribute to children's learning, development, and school success at every grade level.

Studies are accumulating that show that well-designed programs of partnership are important for helping all families support their children's education in elementary, middle, and high schools. That is, *if* schools plan and implement comprehensive programs of partnership, *then* many more families respond, including those who would not become involved on their own.

Three questions need to be addressed to help educators move from believing in the importance of family and community involvement to conducting effective programs of partnership:

1. What is a comprehensive program of school, family, and community partnerships?
2. How do family and community partnerships link to other aspects of successful schools?
3. How can all schools develop and sustain productive programs of partnerships?

### Components of a Comprehensive Program of Partnerships

A framework of six types of involvement guides schools in establishing full and productive programs of school-family-community partnerships. This section summarizes the six types of involvement and discusses a few *sample practices* that are being implemented in schools across the country that are working to improve and increase family and community connections. Also noted are some of the *challenges* that all schools must overcome to create successful partnerships, along with examples of *results* that can be expected from each type of involvement for students, families, and educators.

Comprehensive programs of partnerships include activities for all six types of involvement. Because there are many activities to choose from, elementary, middle, and high schools can tailor their programs of partnerships by selecting activities that match specific school goals and the interests and needs of students and families.

**Type 1—Parenting.** Type 1 activities are conducted to help families strengthen parenting skills, understand child and adolescent development, and set home conditions to support learning at each school level. Type 1 activities also enable families to provide information to schools so that educators understand families' backgrounds, cultures, and goals for their children.

**Sample practices.** Among Type 1 activities, elementary, middle, and high schools may conduct workshops for parents; provide short, clear summaries of important information on parenting; and organize opportunities for parents to exchange ideas with other parents, educators, and community experts on topics of child and adolescent development. Topics may include health, nutrition, discipline, guidance, peer pressure, preventing drug abuse, and planning for the future. Type 1 activities also provide families with information on what to expect and how to prepare for students' transitions from preschool to elementary school, elementary to middle school, and middle to high school. Additional topics for successful parenting may concern family roles and responsibilities in student attendance, college planning, and other topics that are important for student success in school. Schools also may offer parents General Educational Development (GED) programs, family support sessions, family computer classes, and other learning and social opportunities for parents and for students. To ensure that families provide valuable information to the schools, teachers may ask parents at the start of each school year or periodically to share insights about their children's strengths, talents, interests, needs, and goals.

**Challenges.** One challenge for successful Type 1 activities is to get information from workshops to parents who cannot come to meetings and workshops at the school building. This may be done with videos, tape recordings, summaries, newsletters, cable broadcasts, phone calls, and other print and nonprint communications. Another Type 1 challenge is to design procedures that enable all families to share information easily and as needed about their children with teachers, counselors, and others.

**Results expected.** If useful information flows to and from families about child and adolescent development, parents will increase their confidence about parenting, students will be more aware of parents' continuing guidance, and teachers will better understand their students' families. For example, if practices are targeted to help families send their children

to school every day and on time, then student attendance will improve and lateness will decrease. If families are part of their children's transitions to elementary, middle, and high school, then more students will adjust well to their new schools, and more parents will remain involved across the grades.

**Type 2—Communicating.** Type 2 activities increase school-to-home and home-to-school communications about school programs and student progress through notices, memos, conferences, report cards, newsletters, telephone calls, e-mail and computerized messages, the Internet, open houses, and other traditional and innovative communications.

**Sample practices.** Among many Type 2 activities, elementary, middle, and high schools may provide parents with clear information on each teacher's criteria for report card grades; how to interpret interim progress reports; and, as necessary, how to work with students to improve grades or behavior. Type 2 activities include parent-teacher conferences; parent-teacher-student conferences; or student-led conferences with parents and teachers. Student involvement in conferences helps youngsters take personal responsibility for learning. Activities may be designed to improve school and student newsletters by including student work, a feature column for parents' questions, calendars of important events, and parent response forms. Many schools are beginning to use e-mail, voice mail, and websites to encourage two-way communication between families and teachers, counselors, and administrators.

**Challenges.** One challenge for successful Type 2 activities is to make communications clear and understandable for all families, including parents who have less formal education or who do not read English well, so that all families can understand and respond to the information they receive. Other Type 2 challenges are to know which families are and are not receiving and understanding the communications in order to design ways to reach all families; develop effective two-way channels of communication so that families can easily contact and respond to educators; and make sure that students understand their roles as couriers and interpreters in facilitating school and family connections.

**Results expected.** If communications are clear and useful, and if two-way channels are easily accessed, then school-to-home and home-to-school interactions will increase; more families will understand school programs, follow their children's prog-

ress, guide students to maintain or improve their grades, and attend parent-teacher conferences. Specifically, if computerized phone lines are used to communicate information about homework, more families will know more about their children's daily assignments. If newsletters include respond-and-reply forms, more families will send ideas, questions, and comments to teachers and administrators about school programs and activities.

**Type 3—Volunteering.** Type 3 activities are designed to improve recruitment, training, and schedules to involve parents and others as volunteers and as audiences at the school or in other locations to support students and school programs.

**Sample practices.** Among many Type 3 activities, schools may collect information on family members' talents, occupations, interests, and availability to serve as volunteers. These important human resources may help enrich students' subject classes; improve career explorations; serve as language translators; monitor attendance and call parents of absent students; conduct "parent patrols" and "morning greeters" to increase school safety; and organize and improve activities such as clothing and uniform exchanges, school stores, and fairs. Schools may organize volunteers to serve as home-room parents, neighborhood representatives, and sports and club contacts and may establish telephone trees to help parents communicate with each other about school programs and events. Schools may establish a corps of volunteers to offer a "welcome wagon" of information about the school to students and families who enroll during the school year. Schools also may create opportunities for mentors, coaches, tutors, and leaders of after-school programs to ensure that students have experiences that build and expand their skills and talents and that keep them safe and supervised after school. Some Type 3 activities may be conducted in a parent room or family center at the school where parents obtain information, conduct volunteer work, and meet with other parents.

**Challenges.** Challenges for successful Type 3 activities are to recruit volunteers widely so that parents and other family members feel welcome; make hours flexible for parents and other volunteers who work during the school day; provide needed training; and enable volunteers to contribute productively to the school, classroom, and after-school programs. Volunteers will be better integrated in school programs if there is a coordinator who is re-

sponsible for matching volunteers' available times and skills with the needs of teachers, administrators, and students. Another Type 3 challenge is to change the definition of "volunteer" to mean anyone who supports school goals or students' learning at any time and in any place. This includes parents and family members who voluntarily come to school as audiences for students' sports events, assemblies, and musical or drama presentations, and for other events that support students' work. It also includes volunteers who work for the school at home, through their businesses, or in the community. A related challenge is to help students understand how volunteers help their school and to encourage students to interact with volunteers who can assist them with their work and activities.

**Results expected.** If tasks are well designed, and if schedules and locations for volunteers are varied, more parents, family members, and others in the community will assist elementary, middle, and high schools and support students as members of audiences. More families will feel comfortable with the school and staff; more students will talk and interact with varied adults; and more teachers will be aware of and use the time, talents, and resources of parents and others in the community to improve school programs and activities. Specifically, if volunteers serve as attendance monitors, more families will assist students to improve attendance. If volunteers conduct a "hall patrol" or are active in other locations, school safety will increase and student behavior problems will decrease because of a better student–adult ratio. If volunteers are well-trained as tutors in particular subjects, student tutees will improve their skills in those subjects; and if volunteers discuss careers, students will be more aware of their options for the future.

**Type 4—Learning at home.** Type 4 activities involve families with their children in academic learning activities at home that are coordinated with students' classwork and that contribute to student success in school. These include interactive homework, goal-setting for academic subjects, and other curricular-linked activities and decisions about courses and programs.

**Sample practices.** Among many Type 4 activities, elementary, middle, and high schools may provide information to students and to parents about the skills needed to pass each class, course, or grade level and about each teacher's homework policies. Schools also may implement activities that can help

families encourage, praise, guide, and monitor their children's work by using interactive homework strategies; student–teacher–family contracts for long-term projects; summer home-learning packets; student-led at-home conferences with parents on portfolios or folders of writing samples or work in other subjects; goal-setting activities for improving or maintaining good report card grades in all subjects; and other approaches that keep students and families talking about schoolwork at home. Family fun and learning nights are often used as a starting point to help parents and students focus on curricular-related topics and family interactions. These meetings require parents to come to the school building. A systematic approach to increasing academic conversations at home is found in the Teachers Involve Parents in Schoolwork (TIPS) interactive homework for the elementary and middle grades.

**Challenges.** One challenge for successful Type 4 activities is to implement a regular schedule of interactive homework that requires students to take responsibility for discussing important things they are learning, interviewing family members, recording reactions, and sharing their work and ideas at home. Another Type 4 challenge is to create a schedule of activities that involve families regularly and systematically with students on short-term and long-term goal-setting for attendance, achievement, behavior, talent development, and plans for college or careers.

**Results expected.** If Type 4 activities are well designed and implemented, student homework completion, report card grades, and test scores in specific subjects will improve; and more families will know what their children are learning in class and how to monitor, support, and discuss homework. More students should complete required course credits, select advanced courses, and take college entrance tests. Students and teachers will be more aware of families' interest in students' work.

**Type 5—Decision-making.** Type 5 activities include families in developing schools' mission statements and in designing, reviewing, and improving school policies that affect children and families. Family members become active participants on school improvement teams, committees, PTA/PTO or other parent organizations, Title I and other councils, and advocacy groups.

**Sample practices.** Among Type 5 activities, elementary, middle, and high schools may organize and maintain an active parent association and include

family representatives on all committees for school improvement (e.g., curriculum, safety, supplies and equipment, partnerships, fund-raising, postsecondary college planning, career development). In particular, along with teachers, administrators, students, and others from the community, parents must be members of the “Action Team for Partnerships,” which plans and conducts family and community involvement activities linked to school improvement goals. Schools may offer parents and teachers training in leadership, decision-making, policy advocacy, and collaboration. Type 5 activities help to identify and provide information desired by families about school policies, course offerings, student placements and groups, special services, tests and assessments, annual test results for students, and annual evaluations of school programs.

**Challenges.** One challenge for successful Type 5 activities in all schools is to ensure that leadership roles are filled by parent representatives from all of the major race and ethnic groups, socioeconomic groups, and neighborhoods that are present in the school. A related challenge is to help parent leaders serve as effective representatives by obtaining information from and providing information to all parents about school issues and decisions. At the high school level, a particular challenge is to include student representatives along with parents in decision-making groups and in leadership positions. An ongoing challenge is to help parents, teachers, and students who serve on an Action Team for Partnerships or other committees learn to trust, respect, and listen to each other as they collaborate to reach common goals for school improvement.

**Results expected.** If Type 5 activities are well implemented in elementary, middle, and high schools, more families will have input into decisions that affect the quality of their children’s education; students will increase their awareness that families and students have a say in school policies; and teachers will increase their understanding of family perspectives on policies and programs for improving the school.

**Type 6—Collaborating with the community.** Type 6 activities draw upon and coordinate the work and resources of community businesses; cultural, civic, and religious organizations; senior citizen groups; colleges and universities; governmental agencies; and other associations in order to strengthen school programs, family practices, and student learning and development. Other Type 6 activities enable stu-

dents, staff, and families to contribute their services to the community.

**Sample practices.** Among many Type 6 activities, elementary, middle, and high schools may inform students and families about the availability of community programs and resources, such as after-school recreation, tutorial programs, health services, cultural events, service opportunities, and summer programs. This includes the need to assist students and families to gain access to community resources and programs. Some schools work with local businesses to organize “gold card” discounts as incentives for students to improve attendance and report card grades. Collaborations with community businesses, groups, and agencies also strengthen the other five types of involvement. Examples include enhancing Type 1 activities by conducting parent education workshops for families at community or business locations; increasing Type 2 activities by communicating about school events on the local radio or television stations, and at churches, clinics, and supermarkets; soliciting volunteers from businesses and the community to strengthen Type 3 activities; enriching Type 4 activities by offering students learning opportunities with artists, scientists, writers, mathematicians, and others whose careers link to the school curriculum; and including community members on Type 5 decision-making councils and committees.

**Challenges.** One challenge for successful Type 6 activities is to solve problems associated with community-school collaborations, such as “turf” problems of who is responsible for funding, leading, and supervising cooperative activities. The initial enthusiasm and decisions for school-community partnerships must be followed by actions that sustain productive collaborations over the long term. Another Type 6 challenge is to recognize and link students’ valuable learning experiences in the community to the school curricula, including lessons that build on students’ nonschool skills and talents, their club and volunteer work, and, in high school, their part-time jobs. A major challenge is to inform and involve families in community-related activities that students conduct. Related challenges are to help students understand how community partners help their school and to engage students, themselves, as volunteers and in service-learning in their own schools, in other schools, and in the community.

**Results expected.** Well-implemented Type 6 activities will increase the knowledge that families, students, and schools have about the resources and programs in their community that could help them reach important goals. Well-designed community connections will increase student access to and participation in community programs. Coordinated community services could help many students and their families prevent health, social, and educational problems or solve problems before they become too serious. Type 6 activities also should support and enrich school curricular and extracurricular programs.

**Summary.** The six types of involvement create a comprehensive program of partnerships in elementary, middle, and high schools, but the implementation challenges for each type of involvement must be met in order for programs to be effective. The quality of the design and content of the involvement activities directly affect the expected results. Not every practice that involves families will result in higher student achievement test scores. Rather, practices for each type of involvement can be selected to help students, families, and teachers reach specific goals and results. The examples above include only a few of hundreds of suggestions that can help elementary, middle, and high schools develop strong programs of partnerships.

### **How Partnerships Link to Other Aspects of Successful Schools**

Good schools have qualified and talented teachers and administrators, high expectations that all students will succeed, rigorous curricula, engaging instruction, responsive and useful tests and assessments, strong guidance for every student, *and* effective school, family, and community partnerships. In good schools, these elements combine to promote students' learning and to create a school climate that is welcoming, safe, caring, stimulating, and joyful for all students, educators, and families.

All of the elements of successful schools are interconnected. It is particularly important for educators to understand that partnerships are not extra, separate, or different from the "real work" of a school, but that they contribute to the quality of a school's program and to student success. Two examples help clarify the links of family and community involvement to the success students experience in schools' academic and guidance programs.

**Family and community involvement may contribute to the quality of schools' academic programs**

**and student learning.** National and local surveys indicate that students and their families have very high aspirations for success in school and in life. Fully 98 percent of a national sample of eighth-grade students planned to graduate from high school, and 82 percent planned at least some postsecondary schooling, with over 70 percent aiming to complete college. Tenth- and twelfth-grade students had similar high ambitions. In order to help students reach their aspirations, educators and families must work better together to help students: succeed at every grade level, pass the courses they need to complete high school, and initiate actions to attend college. Schools, with families' support, also must provide some students with extra help and more time to learn in coaching classes, extra-help courses, summer school, and tutoring, mentoring, and other responsive programs.

Families need good information about their children's curriculum each year; the teachers' instructional approaches; extra help available to students; and the nature of tests and assessments in order to be able to discuss important academic topics with their children at home. Families also need to understand how their children are progressing in each subject, how to help students set and meet learning goals, and how to work with students to solve major problems that threaten course or grade-level failure. Some elementary, middle, and high schools create individual student educational plans and conferences with all students and parents.

Many schools use new and varied teaching strategies that are unfamiliar to most families. These may include group activities, problem-solving processes, prewriting techniques, student-as-historian methods, interactive homework, and other innovative approaches to promote learning. Families and others in the community also need to know about major tests, report card criteria, and other state and local standards that schools use to determine students' progress and pathways through school. Some schools' Action Teams for Partnerships design daytime or evening workshops for parents to learn about and try items on new performance-based assessments.

With clear information about all aspects of schools' academic programs, more families could guide their children's decisions about courses, homework completion, studying for tests, and taking steps toward college or work. If classroom teachers, students, and parents communicate clearly and frequently about students' academic programs,

progress, and needs, more students will succeed at high levels and fulfill their own and their families' high expectations.

**Family and community involvement may contribute to the quality of schools' guidance programs and students' attitudes and behavior.** School guidance and support services are stronger and serve students better if educators, students, and families are well connected. Students need to know that their guidance counselors and teachers understand and appreciate their families' cultures, hopes, and dreams. As students proceed through the grades, they struggle to balance their love for their family, need for guidance, and need for greater independence. Educators and parents can help students see that these seemingly contradictory pressures can co-exist.

Guidance counselors, school social workers, and school psychologists in elementary, middle, and high schools should meet with students' families and serve as key contacts for parents to call if questions arise about students' academic progress, behavior, peer relations, or interactions with teachers. In some middle and high schools, guidance counselors are members of interdisciplinary teams of teachers who meet with parents and students on a regular schedule. In all schools, guidance counselors could contact parents *before* students are at serious risk of failing courses because of absence, attitudes, classwork, or homework in order to devise collaborative approaches to help students succeed in school.

Families need to know about the formal and informal guidance programs at their children's schools. This includes knowing the names, phone or voice-mail numbers, and e-mail addresses of their children's teachers, counselors, advocates, and administrators in order to reach them with questions about their children's progress or problems. This is particularly important at times of transition when students move into elementary school, or from elementary to middle or middle to high school. With good information, parents and other family partners become and remain more involved in their children's education, and more of them can assist students to adjust successfully to their new schools.

When students, guidance counselors, teachers, and parents communicate well about students' social and emotional development and special needs, more students are likely to succeed each year and stay in school.

## **How Schools Can Develop and Sustain a Productive Partnership Program**

Many schools are demonstrating how to design, implement, and sustain strong programs of school, family, and community partnerships. These schools are using the framework of six types of involvement to ensure that families are well informed about and engaged in their children's education at school and at home. They are using the research base summarized above, and they are being supported and assisted by school principals, district administrators and key staff, state leaders, and others.

In well-designed partnership programs, each school forms an Action Team for Partnerships consisting of teachers, parents, administrators, and others. Each team writes an annual action plan for partnerships, implements and oversees activities, maintains an adequate budget, evaluates the quality of partnerships, and improves plans and activities from year to year. In excellent programs, activities to involve families and community partners are linked to school improvement goals to produce the kinds of results described above. For example, family and community involvement activities may be selected to increase the support that all students receive at home, at school, and in the community to help students improve reading skills, math scores, attendance, behavior, and other indicators of school success. To aid this process, the National Network of Partnership Schools at Johns Hopkins University provides research-based guidelines, training, and ongoing assistance and professional development to schools, districts, and states that want to establish and sustain effective partnership programs.

Many research studies have helped answer the three questions posed at the beginning of this entry. By drawing on the growing research base, educators, parents, and community leaders can work together, think about, talk about, and take action to develop comprehensive programs of school, family, and community partnerships in their schools. Annual plans should include family and community involvement activities that support school improvement goals and that contribute to the success of elementary, middle, and high school academic programs and guidance services for all students. This can be done with new and useful research-based tools, materials, and networks to establish and continually improve programs and practices of partnerships.

Despite important advances since the 1980s in research and in practice on school, family, and community partnerships, there still are many questions that must be addressed to inform and productively involve all families in their children's education. Studies are needed at all grade levels to identify which family and community involvement activities significantly improve students' reading, math, and other skills and attitudes; and which involvement activities are particularly helpful to families and students at times of transitions to new schools. There are important questions to address on how to reach families with diverse cultural and language backgrounds, and how to integrate all families to create a strong, supportive school community. Also needed is more knowledge about how to involve fathers more effectively in their children's education; how community resources can be tapped to assist students, families, and school programs; and how to increase students' understanding of their roles and responsibilities in facilitating partnership activities that link home, school, and community.

Notably, this field of study has successfully linked research results to the development of educational policy and school practice. As new questions about school, family, and community partnerships are systematically addressed, knowledge will accumulate that should continue to improve the connections of home, school, and community to benefit students.

*See also:* COMMUNITY-BASED ORGANIZATIONS, AGENCIES, AND GROUPS; COMMUNITY EDUCATION; FAMILY COMPOSITION AND CIRCUMSTANCE; PARENTAL INVOLVEMENT IN EDUCATION; PARENTING.

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JOYCE L. EPSTEIN

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## FAMILY SUPPORT SERVICES

### OVERVIEW

Jacquelyn McCroskey

### INCOME SUPPORT SERVICES FOR CHILDREN AND FAMILIES

Susan E. Smith

## OVERVIEW

Most schools encourage parents to become involved in their children's education, and some may even require parent participation in school activities. Most teachers and educational administrators, however, realize that parents who are working several jobs to make ends meet or struggling with complicated

health or family problems may not be able to help their children learn. Those who are recent immigrants or who did not do well in school themselves may not know how to help or may feel intimidated by school. The challenges of daily life can be so overwhelming—especially for poor families living in dangerous or decrepit inner-city neighborhoods or those living in far-flung rural areas with few resources—that educational success for children may not seem to be a realistic family priority.

In response, many schools are increasing their efforts to support families and to assure that both parents and children get the social and health services they need. Theories and models of how to do this effectively vary widely, and experts have suggested a number of different approaches. Some schools focus on assuring referral to outside agencies providing services for families and children, others on partnering with these allied agencies to bring services on or near school campuses, and still others on increasing support services offered by the school itself. These programs are designed to increase access to needed services, to improve academic performance, and to help parents prevent or resolve problems, develop new skills, and learn how to participate more effectively in their children's education.

Such programs draw from a century of reform efforts on two parallel, but often interrelated, tracks—education reform and neighborhood-based social services. In 1995 David Tyack and Larry Cuban described some of the ways that these ideas have overlapped:

Prodded by a variety of lay reformers to expand social and health services, educational administrators added programs of physical education and recreation and gave instruction in health. Hundreds of cities added vacation schools (later called summer schools), school lunch programs, and medical and dental care, especially for the children of working-class immigrant families. States and urban districts began creating special schools or classes for physically or emotionally handicapped students—the number of separate state or district schools for such children increased from 180 in 1900 to 551 in 1930. Cities also created new categories of classes for “misfits”—children who were too “backward” to proceed at the normal rate in graded classrooms or too

unruly for the teachers to handle. (pp. 20–21)

Late-nineteenth-century settlement houses offer one of the earliest examples of how neighborhood-based services for families can supplement the work of overcrowded inner-city schools. For example, the first Hull-House (established in Chicago in 1889 by Jane Addams and her associates) developed programs such as a day nursery and kindergarten for the children of “hard-driven mothers who went out to work all day, sometimes leaving the little things in the casual care of a neighbor, but often locking them into their tenement rooms” (Addams, p. 127). Hull-House also sponsored “clubs” for the “large number of children who leave school the very week they are fourteen years old, only too eager to close the school-room door forever on a tiresome task that is at last well over” (Addams, p. 86).

While settlement houses offered many ideas about how to support families, another approach was taken in the late nineteenth century by Charity Organization Societies, which developed case-by-case methods of aiding poor and troubled families. During the last century, ideas about how to help poor families and children swung back and forth between these twin poles of casework and neighborhood-based social services. One end of the continuum suggests that problems are primarily within the individual or family (requiring individualized casework) and the other that they are social, structural, or economic (requiring neighborhood and community solutions). Recent interest in orienting family support services around neighborhood schools can be seen, at least in part, as another generation's “reinvention” of neighborhood-based support services for families and their children.

### **Conflicting Values about How Schools Should Support Families**

Some argue that schools need to focus on educational issues, leaving social issues to families, religious, civic, and community institutions. Others believe that children who come to school hungry, sick, or frightened cannot learn, no matter how thoughtful the curriculum or how accomplished the teacher. Opinions on how schools should interact with families are varied and deeply felt, based on individual experiences, values, and perceptions.

While questions about whether and how schools should be involved in supporting families are debat-

ed in forums across the country, however, most schools already provide a broad range of nonclassroom “support services” designed to promote academic achievement. Because each school district or local educational authority sets its own policies in response to local expectations and conditions, there is a very wide range in the nonclassroom-based supports and services offered across school districts or even between schools in the same district. Some schools have many such services whereas others have very few—and some do a better job than others of tracking and organizing the resources they do have. For example, distress over there being “no services” for the children in one inner-city school in Los Angeles in the mid-1990s led to a count of the different kinds of programs already in place to provide support services to students. When the counters found that seventeen different kinds of “school support services personnel” were already working in the school, everyone agreed that the first priority was a “resource coordinating council.” Coordinating the support services that were already available was an essential first step, but the next steps included assessing the other needs of teachers, students, and parents and developing partnerships with local allied agencies to provide some of the services most needed in the community.

### **What Are Family Support Services?**

All families need help and support in raising their children. Some can get by with the informal support of family and friends, employment-related benefits such as health insurance, and fee-for-service arrangements to purchase child care or other needed services. Many families, however, will also need help from public, nonprofit, and community-based agencies that provide services to children and families on a free or low-cost basis. The service delivery systems that provide these services are organized somewhat differently in each community, but the services needed by families generally include child care, parent education, income support, and health and mental health services. Some families also need help in dealing with dependent (abused or neglected) or delinquent youth.

In some communities (often suburbs or relatively homogenous smaller urban areas), the established public and private human service systems work reasonably well, information about and referral to different kinds of services is available, and families find the help they need. In too many other

communities, however, families face serious barriers to accessing and using services. In rural areas, the services may be far away or not available at all. In dense urban areas—especially poor inner-city neighborhoods with large numbers of immigrants and families with multiple needs—human service delivery systems tend to be chaotic, overwhelmed, and confusing. Sometimes even the most knowledgeable people do not know where to find key child and family agencies, much less how families get access to different kinds of specialized services.

Schools are the most visible neighborhood institutions serving families and children, but many school personnel do not know about many community resources so they cannot guide parents who need help. Some school employees are reluctant to get involved in family troubles or to try to bridge complex institutions, and others are frustrated when their efforts to help do not work. Despite these difficulties, however, in many rural areas and inner-city communities where the needs of children and families are most visible and urgent, partnerships between schools, allied public and private agencies, and community-based groups are flourishing.

In some places, reform efforts have led schools to better define and mobilize their internal resources or to develop connections with services offered by allied agencies. In others, schools have opened their buildings and playgrounds after the school day ends to external organizations that provide after-school activities, parent education, and many other family support services. In some jurisdictions, school leaders have actively engaged in partnerships to change local policies to assure that the services families need are available through allied agencies. Assuring that these allied agencies are ready and able to help families can free schools to attend to their primary purpose, as Lisbeth B. Schorr suggested in a 1997 description of Missouri’s Caring Communities program:

teachers who had once been kept at arm’s length by human service professionals, were trained to spot signs of trouble in their pupils—from slumps in classroom performance to depression—and to convey their concerns to Caring Communities coordinators. “The greatest accomplishment of Caring Communities is that I feel relieved of responsibility for social problems,” said one teacher. “I can really teach.” (p. 288)

Because conditions are so different in each community, there are many ways to approach the question of what schools can and should do to support families and assure that children are not so hungry, sick, or troubled that they cannot pay attention to learning. The answers are being invented (and sometimes reinvented) in communities across the country. The solutions devised are as varied and numerous as the communities served, but the following critical issues have received special attention from professionals in the field:

1. How to prevent family problems from developing in the first place
2. How to assure that young children are ready for school
3. How schools can more effectively connect families to specialized treatment services
4. How to improve training for and the evaluation of family support services

### Preventing Family Problems

While the idea of supporting families is not new, discussions took on a different tone in the early 1980s with the establishment of the Family Resource Coalition, later called Family Support America. This national organization serves as a catalyst to assure that families have access to the support they need in welcoming surroundings in their own communities, where knowledgeable and respectful staff speak the family's language and understand its cultural traditions. These services are designed to recognize and build on family strengths, increase family stability, prevent problems, improve parenting skills, and enhance child development.

Whether they are based in schools, child-care centers, social agencies, or medical clinics, preventively oriented family support programs should be guided by shared principles, which include: (1) staff and families work together in relationships based on equality and respect; (2) families are resources to their own members, to other families, to programs, and to communities; (3) programs affirm and strengthen families' cultural, racial, and linguistic identities and enhance their ability to function in a multicultural society; (4) programs advocate with family members for services and systems that are fair, responsive, and accountable; and (5) programs are flexible and responsive to emerging family and community issues. Guided by such principles, the "family support movement" is working to change

professional attitudes and practices, encouraging more egalitarian, flexible, respectful, and responsive interactions with families.

### School Readiness

Guided by the family support movement, many people have focused on providing effective early childhood intervention programs to enhance child development and help children and parents get ready for school. After analyzing results from a number of the most rigorously evaluated early intervention programs, RAND researchers in 1998 concluded that these programs can provide significant benefits, especially for disadvantaged children and their families.

The significance of early childhood experiences in later learning was reaffirmed by the National Research Council and the National Institute of Medicine in a 2000 analysis of the extensive scientific evidence:

A fundamental paradox exists and is unavoidable: development in the early years is both highly robust and highly vulnerable. Although there have been long-standing debates about how much the early years really matter in the larger scheme of lifelong development, our conclusion is unequivocal: What happens during the first months and years of life matters a lot, not because this period of development provides an indelible blueprint for adult well-being, but because it sets either a sturdy or fragile stage for what follows. (Shonkoff and Phillips, pp. 4–5)

Their summary of the evidence affirms the positive effects of high-quality early childhood programs on school performance, and suggests that a number of different kinds of preschool programs can be effective: "Taken together, the follow-up literature provides abundant evidence of intervention-control group differences in academic achievement during middle childhood, but no consistent or distinctive pattern of preschool curriculum or program format" (Shonkoff and Phillips, p. 351).

Recognizing the salience of early development, more programs are being developed to help both preschool children and their parents—assuring that children and parents are ready to get the most from school. For example, school-linked family support services can help parents find affordable, high-

quality child care, improve parenting skills through parent education information and experiences, and help ease the transition between child care and school. At the same time, leaders in communities around the country have also realized that significant changes may be needed to help schools get ready for the changing population of children and families.

### Connecting Families to Specialized Treatment Services

Many schools have focused on identifying children with problems so that they can be referred for testing, special education, or treatment. Even with more access to early childhood development and prevention services, specialized treatment for children and youth with behavior and health problems will still be needed. In this area too, there are enormous local differences in the availability, cost, and quality of specialized treatment services. Not surprisingly, problems are most likely to be found in poor rural districts where families have little access to services and in large inner-city districts where there are not enough resources to go around.

Partnerships between schools and allied public agencies responsible for providing health and mental health services, intervening in cases of child abuse and neglect, and responding to juvenile violence and delinquency are working effectively in some communities. For example, evaluation of California's Healthy Start Initiative, a statewide effort designed to help schools build bridges to allied public and community-based agencies that serve the same families and children, has demonstrated significant improvements in child and family outcomes. The long-term goal of many such reform efforts is to restructure existing child and family services systems so that they are less fragmented and more integrated, less intimidating and more accessible, and less confusing and more understandable to families. Unfortunately, that goal remains a dream in most places.

### The Challenges of Training and Evaluation

Efforts to develop and sustain school-community partnerships present a number of challenges. Two questions require immediate attention.

First, how can education and training be improved to build connections? The possibilities of training different kinds of professionals to form effective interprofessional teams, and to collaborate more effectively with families, are being explored in

university-community pilot projects throughout the country. Most university-based training for teachers and health and human services professionals, however, is still based in separate specialties that do not prepare professionals for work across disciplinary and organizational boundaries. Most of the people who work in school-community partnerships must learn on the job, and only a few have the time, energy, or resources to share the important lessons they are learning.

Second, how can the effectiveness of all kinds of school-community partnerships be continuously evaluated? The people involved in such partnerships should be able to document the costs and benefits of different approaches to family support services. Targeted evaluation research can help to refine and improve programs, to improve planning, and to document results for participants, school boards, principals, teachers, and taxpayers. While some data is available on the outcomes of these efforts, a great deal more information is needed to guide further development of the field.

*See also:* FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; FAMILY SUPPORT SERVICES, *subentry on* INCOME SUPPORT SERVICES FOR CHILDREN AND FAMILIES; WELFARE REFORM.

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#### INTERNET RESOURCE

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### INCOME SUPPORT SERVICES FOR CHILDREN AND FAMILIES

Because of a combination of demographic trends and inadequate income supports, children comprise the demographic group at greatest poverty risk in the United States. In the mid-1970s, there was grave concern about elderly poverty, as nearly one in three elderly adults lived in poor households. Since then, the indexing of social security benefits to inflation has allowed benefits to better keep up with living costs. As a consequence, the elderly are now less likely to be poor than most other Americans. Alongside this success story of social policy ameliorating poverty, however, is the unfortunate fact that children have replaced the elderly at the low end of the U.S. economic ladder.

While the percent of children living in single-parent homes increased from 10 percent in 1960 to 31 percent in 1998, in 2000 more than half of poor families were headed by unmarried mothers. A minority of children will experience a childhood in which both parents are present, and, though mothers are more likely than ever to be employed, many are the only earner in their household. Mother-only families not only rely on lower wages than those typically earned by males but also must manage child-care and other parenting responsibilities alone. Income supports become increasingly important in these instances.

As more middle-class mothers become employed, income support for parents has increasingly required work participation. This trend culminated in the passage in 1996 of the Personal Responsibility and Work Opportunity Reconciliation Act, which created the principal program for poor families,

Temporary Assistance to Needy Families. Cash support for families is limited. In response to concerns over work disincentives and fraud, in-kind benefits have become more common than cash. These in-kind benefits, particularly food stamps, health insurance, and health care, are available to more families than are income supports.

### Specific Income Support Programs

There are six family income support programs, divided into cash supports and tax benefits. The Earned Income Tax Credit (EITC) blurs the line between the two categories. No program alone raises families from poverty, but the EITC, coupled with full-time work, can raise a small family just above the poverty line. To make ends meet, low-earning, single-parent families must often supplement income supports with child-care and housing subsidies, medical assistance, and food stamps.

**Temporary Assistance to Needy Families (TANF).** The TANF program, which is the best-known income support program, is often generically referred to as “welfare.” This program replaced Aid to Families with Dependent Children (AFDC) as part of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996. TANF provides time-limited cash support to families with minor children. While states have discretion in defining program details, particularly benefit levels, states may not use federal money to offer families cash grants for more than two consecutive years or for more than five years over their lifetime. Adult recipients are also mandated to participate in work, or work-related activities, for at least thirty-two hours per week. Certain provisions exempt a small number of parents, such as those with newborns or those caring for children or relatives with disabilities.

**Supplemental Security Income (SSI).** SSI provides cash assistance to elderly persons or persons with disabilities whose income falls below the federal poverty line. Originating as Aid to the Blind and Aid to the Aged, part of the Social Security Act of 1935, then as Aid to the Disabled in 1950, SSI was created in 1972 from the consolidation of existing programs for the disabled and indigent elderly. Eighty-nine percent of SSI recipients also receive Social Security. Children with disabilities are also eligible for SSI.

SSI funding comes solely from the federal government, and it is administered by the Social Security Administration. As a result, benefits and eligibility

are uniform across states. The maximum allowable annual federal SSI benefit in 1999 was \$6,000. Overall, SSI income support is about 75 percent of the poverty level.

**General Assistance (GA).** While no federal program exists to aid able-bodied adults under sixty-five years of age, most states and localities offer minimal cash grants. Most recipients are single adults, but others receiving benefits may include parents with children in public custody, parents previously convicted of a felony (making them ineligible for TANF), and parents who have timed off of TANF. GA grants are generally intended to offset minimal living expenses, not as a substitute for work, and offer support well below the poverty level. In 1992, forty-one states offered GA programs. Since then, there have been severe cutbacks in GA programs, with some states, such as Michigan, eliminating the programs altogether.

**Earned Income Tax Credit (EITC).** The EITC program was originally established in 1975 to address a major criticism of AFDC—that it encouraged single parenting and discouraged work by limiting eligibility to nonworking single parents. The EITC, which is administered by the Internal Revenue Service, functions like a negative income tax, supplementing the earnings of low-income workers who have children. While tax policy is more often used to assist middle-class families, in the form of mortgage deductions and business credits, the EITC uses tax policy for a program targeting low-income families.

In 1996 a family with one child with earnings of up to \$25,000 per year would be eligible for a tax refund under the EITC program. The tax credit has survived several important revisions over the years. Eligibility has expanded to include nearly all low-income families with children. The credit can be paid in installments throughout the year, instead of as a year-end refund. The maximum grant is paid to minimum-wage, full-time workers, with the consequence of lifting their wage up to poverty level. Proponents argue that the credit must be sufficient to ensure that full-time workers, even at minimum wage, do not have to raise their families in poverty.

**Tax deductions and credits.** Nearly all families benefit from tax code provisions, most often from the \$600 per child tax credit and the \$2,900 per person tax exemption. Tax code also allows for the deduction of certain child-care expenses. Unlike most benefits to families and children, these are universal

supports to families regardless of income. Other tax policies, such as mortgage interest deductions, disproportionately assist middle- and upper-income families.

*See also:* POVERTY AND EDUCATION; WELFARE REFORM.

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SUSAN E. SMITH

### FAWCETT, HAROLD P. (1894–1976)

Professor of mathematics education at Ohio State University, Harold P. Fawcett was best known for his work on pedagogy in geometry, particularly the teaching of reasoning and proof. Fawcett was born in Upper Sackville, New Brunswick, Canada. In 1914 he received an A.B. from Mount Allison University and obtained a high school teaching position in a New England village. After World War I service with the United States Army in France, Fawcett taught in the home study division of the New York Young Men's Christian Association (YMCA) schools (1919–1924). He was awarded an A.M. in 1924 by Columbia University and continued doctoral work while teaching in Columbia's extension division. In 1937 he received a Ph.D. in mathematics education from Teachers College, Columbia University. Faw-

cett joined the faculty at Ohio State University in 1932, where he rose to full professor (1943), served as chair of the Department of Education (1948–1956), and retired with emeritus rank (1964). During his early years at Ohio State, Fawcett also taught at the affiliated University School, where he served three years as associate director. In 1958 he was elected to a two-year term as president of the National Council of Teachers of Mathematics (NCTM).

The most enduring contribution by Fawcett to the field of mathematics education was the thirteenth yearbook of the National Council of Teachers of Mathematics, *The Nature of Proof* (1938). The publication was, essentially, his doctoral thesis, which drew upon his experiences and experiments in teaching high school geometry at the University School. Fawcett believed that, with respect to geometry, contemporary classroom practice was incongruous with the new emphasis on the development of critical and reflective thought advocated by national committees and influential mathematicians. If asked, Fawcett asserted, many teachers would express agreement with the new emphases for demonstrative (proof-oriented) geometry to introduce students to the nature of deductive reasoning and to develop in them an understanding of what proving something really means. Fawcett's experience, however, suggested to him that, rather than emphasizing the role of logical processes in developing and establishing a geometrical system, most teachers taught geometry as a given set of definitions and theorems to be memorized.

Fawcett's approach was based upon four assumptions: (1) high school students enter a geometry course with practical experience in reasoning accurately; (2) students should be permitted to use their own approaches to reasoning in geometry; (3) the students' logical processes, not those of the teacher, should guide development of the subject; and (4) students need opportunities to apply the deductive method to situations that have clear relevance to their own lives. These assumptions reflect the influence of broader educational trends of the 1930s, including student-centered pedagogy, an investigation–discovery orientation, the incorporation of experiences external to school, and a concern for transfer of skills to areas outside mathematics.

Classroom implementation of Fawcett's pedagogical approach was unique at the time. Virtually nothing was given to the students. Rather than re-

ceiving a published textbook, students developed their own notebooks, with individuality welcomed. Students decided which terms should be undefined and which needed definition. The definitions were developed and refined by the students after discussion, and then entered into their notebooks. If a proposition appeared obvious to the students, it was taken as an assumption. Instead of being given a statement to prove, students were presented with a figure and encouraged to identify properties of the figure that might be assumed. Following this, they were to discover the implications of these properties. With guidance from the teacher, important implications were generalized into theorems, resulting in a limited, but richly understood, structure. In effect the students developed the geometry curriculum themselves, through a process of questions, discussion, and reasoned reflection.

Criteria of success for Fawcett's program was based on its effect on students' behaviors in approaching problem tasks. For example, did students first seek to clarify definitions or conditions of the problem situation? Fawcett's own investigation suggested that his approach, emphasizing reasoning processes rather than skills, improved reflective thinking more than did the traditional course, without significant loss of competence in subject matter knowledge. In light of his ideas on the pedagogy of geometry, Fawcett was invited to join the Committee on the Function of Mathematics in General Education, appointed by the Progressive Education Association's Commission on the Secondary School Curriculum. His work influenced the sections of the committee report that dealt with logic and proof. Renewed interest in Fawcett's pedagogical approach to geometry and his emphasis on helping students to develop critical, reflective thinking processes led the National Council of Teachers of Mathematics to reissue the *Nature of Proof* in 1995.

Although Fawcett championed the role of the student in developing deductive mathematical systems, he viewed the teacher as an indispensable guide to move students toward self-directed, independent learning. He believed that a geometry course could provide opportunities to gain knowledge and develop understanding of deductive reasoning; however, only the teacher could provide the classroom environment in which original and creative thinking could flourish. From his early days as a student in a small Canadian school with an enrollment of just two dozen, Fawcett never forgot the im-

portant part of the new mathematics teacher who arrived at the school when he was fourteen years old. He credited her with taming his rebelliousness and inspiring him to pursue a career in education by engaging his intellect in adventurous pursuit of geometric understanding. It became for Fawcett a lifelong quest.

*See also:* MATHEMATICS EDUCATION, PREPARATION OF TEACHERS; MATHEMATICS LEARNING.

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EILEEN F. DONOGHUE

## FEDERAL EDUCATIONAL ACTIVITIES

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#### HISTORY

Elizabeth H. DeBray

#### SUMMARY BY AGENCY

Jason L. Walton

#### HISTORY

The roots of federal participation in education lie deep in American history, beginning in the days of the Confederation. When it became clear in 1777 that the soldiers of the Continental Army lacked necessary competence in mathematics and military regimen, instruction was provided in these areas. Soon thereafter it became evident that the nation's safety required a corps of trained military officers. Despite the general fear of a standing army, the national leaders united to establish the U.S. Military Academy at West Point in 1802. These actions in the interest of national defense were the first in which the federal government set up and operated its own educational

programs. Support of education in the individual states began in 1785 when the Congress of the Confederation adopted an ordinance concerning public lands in the Western Territory. This ordinance provided that one section of land owned by the national government be set aside in each township for the endowment of schools.

In the Northwest, the Ordinance of 1787 granted Ohio two townships as an endowment for a university—the first instance of federal support for higher education. Beginning with the admission of Ohio to the Union in 1802, Congress established the policy of granting federally owned lands to new states at the time of admission for the endowment of public education. In addition, as new states were created, Congress granted them 15 percent of the receipts from sales of federal lands within their areas. Of the twenty-nine states receiving such funds, sixteen were required to turn them to the support of education, and after 1889 all new states were required to do so.

### **Aid to Higher Education**

With the passage of the Morrill Act of 1862, higher education became the first major beneficiary of federal educational assistance, and it remained the major beneficiary for more than fifty years. The Morrill Act was passed to provide support and endowment for colleges established, as the act states, “to teach such branches of learning as are related to agriculture and the mechanics arts, in such manner as the legislatures of the States may respectively prescribe.” Perhaps the wartime influence accounted for the requirement that the beneficiary schools, later called land-grant colleges, teach military science. The Morrill Act granted 30,000 acres of federal lands to each state for each senator and representative in Congress from that state. This land was to be sold to provide an endowment for at least one college. When federal lands were insufficient to meet this obligation, the states were granted scrip. The Second Morrill Act of 1890, as amended in 1907, established a new pattern of money grants for the support of instruction in a wide variety of subjects, and none of the money was to go for buildings or land.

The first major support for higher education through student-aid programs came with the passage of the Servicemen’s Readjustment Act of 1944. This act provided stipends and tuition assistance to practically all veterans. Under its provisions, close to 8 million servicemen were able to attend college be-

fore the educational provisions of the act terminated in 1956.

Pell Grants are the major source of grants for college for economically disadvantaged students. Other grant and loan programs include the College Work-Study program, Supplemental Educational Opportunity Grants, and Stafford and Perkins Loans. The Leveraging Educational Assistance Partnerships program matches each dollar that states commit to need-based aid. Other key federal higher education programs such as GEAR UP (Gaining Early Awareness and Readiness for Undergraduate Programs) help prepare middle school students from low-income families for college.

Title IX of the Higher Education Act of 1972 stated that “no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance.” Exempted were single-sex undergraduate institutions, religious institutions, and military academies. Title IX’s enforcement has brought federal regulation onto every public and private campus in the nation.

**Impact aid.** In 1941 the federal government began a program of assistance to local school districts whose local tax bases are adversely affected by the presence of defense installations and by other federal activities such as public-housing projects and Indian reservations. The program was set up under the Lanham Act of 1940. Although the full-scale operation of this program to meet the needs of wartime activity ceased in 1946, the expansion of federal activities in the postwar period made it necessary to continue appropriations. The annual appropriation for Impact Aid is approximately \$864 million.

**Aid to elementary and secondary education.** In 1917 the passage of the Federal Vocational Education Act (also known as the Smith-Hughes Act) launched the federal government into a new educational policy arena: for the first time, federal funds were to be used in a specific area of precollege education. The act provided funds both for vocational courses in public schools and for the training of teachers for these courses.

The largest single program is Title I of the Elementary and Secondary Education Act (ESEA), signed into law by President Lyndon B. Johnson in 1965 with the goal of providing compensatory education to economically disadvantaged students. The

proposed budget appropriation for 2003 for Title I is \$11.4 billion, a substantial increase over its prior level of \$8.2 billion. The 1994 reauthorization of the ESEA was an important one in policy terms, as it required states to develop and adopt systems of academic standards, assessments, and accountability. The ESEA was reauthorized by the Congress and signed into law by President George W. Bush in 2002 as the No Child Left Behind Education Act. The law contains provisions for identifying schools that fail to narrow the racial achievement gap, and calls for every state to test all students annually in grades three through eight. Thus Title I is still evolving from a funding stream to a program with specified performance targets for schools.

**The standards movement.** In 1983 Ronald Reagan's Secretary of Education, Terrell Bell, released a commission report entitled *A Nation at Risk*, which asserted that the U.S. elementary and secondary educational system was failing gravely. In the aftermath of the report's release, many states strengthened their graduation course-taking requirements. The report began a movement that was a high federal priority in the 1990s: the educational standards movement. President George Bush, in 1990 following the Charlottesville, Virginia governors' summit on education, proposed an initiative called America 2000. The bipartisan National Education Goals Panel was created to monitor the country's progress toward the six goals by the year 2000. It was not until President Bill Clinton's term, however, that the National Education Goals were enacted into law in 1994 as part of the Goals 2000: Educate America Act. As one of the national goals was that all students demonstrate proficiency in math, science, history, and English/language arts, a variety of federal activities to encourage the development of standards and assessments in those content areas were initiated. The Office of Educational Research and Improvement in the early 1990s made grants to various universities and professional associations to develop standards that states and localities could adopt. In 2002 the National Education Goals Panel was shut down, as its function of monitoring goals was considered obsolete.

**Department of Defense Education Activity (DoDEA) Schools.** Founded after World War II, the overseas elementary and secondary school system created to educate children of military personnel is the Department of Defense Dependent Schools (DoDDS). The Department of Defense Domestic

Dependent Elementary and Secondary Schools (DDESS) serve children of personnel stationed in the United States. In 2001 both parts of the DoDEA system served approximately 112,000 students.

**Students with disabilities.** The Individuals with Disabilities Education Act (IDEA) was funded at \$9.7 billion in the 2002 budget. The federal government provides approximately nine percent of the total funding on special education in the United States. In 1975, the Education for All Handicapped Children Act was created to ensure equal access to education for students with disabilities. The law required that each such child receive an "Individualized Education Program," which encompassed instructional goals and evaluation procedures for determining whether the goals had been reached. The 1997 reauthorization of the IDEA strengthened the requirement for children with disabilities to have access to schools' general education curriculum.

### Vocational Education

The Vocational Rehabilitation Act of 1918 was the first educational program for veterans, providing vocational rehabilitation to any honorably discharged veteran of World War I. The program terminated in 1928. The Vocational Rehabilitation Act of 1943 provided a similar program for World War II veterans; rehabilitation of disabled veterans was separately provided for in the Servicemen's Readjustment Act of 1944. The Carl D. Perkins Vocational-Technical Education Act of 1998 provides basic grants to states for career and technical education for secondary school students. The School-to-Work Opportunities Act of 1994 provided grants for states to build high school learning systems for further education and careers through "work-based learning." A new office was created to administer the program, combining staff from the Departments of Education and Labor. The act expired in 2001.

### U.S. Office of Education

For several years prior to the Civil War, associations of educators had recommended that an agency be established in the federal government for the promotion of education throughout the United States. In 1867 Congress responded by creating an independent department of education under direction of a commissioner. The department began with an authorized staff of four and an appropriation of \$25,000; its stated objectives were the dissemination of educational statistics and promotion of the cause

of education. From 1869 to 1939 the agency was located in the Department of the Interior. In 1939, the Office of Education became part of the new Federal Security Agency, which in turn became the Department of Health, Education, and Welfare (HEW) in 1953. The U.S. Office of Education was reorganized within HEW in 1965.

### U.S. Department of Education

In 1979 the Carter administration created the U.S. Department of Education. While President Ronald Reagan initially sought to dismantle the agency in 1981, it remained intact. Its programmatic offices include the Office for Civil Rights, the Office of Elementary and Secondary Education, and the Office of Indian Education. The federal budget for discretionary education programs, including postsecondary education, was \$48.9 billion in fiscal year 2002.

Research remains one of the primary activities of the federal role in education. The National Institute of Education was created in 1972 during the Nixon administration to oversee a program of studies and data collection. Total funding for the Office of Educational Research and Improvement grew tenfold between 1980 and 2000, but the percentage of those dollars supporting studies fell sharply in the 1980s and by 2002 was approximately just 15 percent. Federally funded educational development activities such as the National Diffusion Network have effectively ceased to exist. The National Center for Education Statistics is the bureau that collects and disseminates data and statistics.

### National Science Foundation (NSF)

The National Science Foundation (NSF) was established by Congress as an independent agency in 1950. Its original programs were concerned with supporting basic research and awarding graduate and postdoctoral fellowships in the sciences. By 1968 approximately 90 percent of NSF's expenditures were directly or indirectly in support of research and education. During the 1990's, NSF's precollegiate strategy was "systemic initiative grants" to states and school districts to help them overhaul their science and mathematics programs.

### International Activities

Under terms of a treaty signed at Buenos Aires in 1936, the United States began a continuous exchange of two graduate students per year with each of the sixteen signatory nations among the Latin

American republics. Later the program was expanded to include exchange of trainees in government and industry as well as exchanges of teachers, professors, and specialists with all the Latin American republics. The Department of Education participates in several international activities. In 2001 these included data collection activities, such as those with the Asia-Pacific Economic Cooperation, and the Organisation for Economic Co-operation and Development's study of school performance and school system characteristics.

*See also:* COLLEGE FINANCIAL AID; FEDERAL FUNDING FOR ACADEMIC RESEARCH; FEDERAL FUNDS FOR HIGHER EDUCATION; IMPACT AID, PUBLIC LAWS 815 AND 874; GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF; U.S. DEPARTMENT OF EDUCATION.

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## SUMMARY BY AGENCY

An extensive network of departments and agencies has developed over the course of American history in response to the needs of the government and the nation. In 2001 the executive departments numbered fourteen. The most recent addition was in 1989 when the Veterans Administration was elevated to department-level status and renamed the Department of Veterans Affairs. The president shares the burden of implementing the policies and laws of the nation with these departments and a vast array of other agencies that deal with specific areas of national and international affairs. All departments are headed by a secretary, with the exception of the Department of Justice, which is headed by the attorney general. These department heads, who make up the president's cabinet, must first be nominated by the president and then confirmed by the Senate. These departments can be broken down into divisions, bureaus, offices, and services operating in thousands of locations both in the United States and abroad. The educational activities of these departments and other major agencies can be divided into two categories: those that serve employees of the government and those that serve people outside the government.

### Legal Foundations of Government Employee Training

Government departments and agencies have always had the authority to deliver their own training programs. There are, however, a number of legal references that make up the foundation for government employee training and education. The Government

Employee Training Act of 1958 (GETA) first outlined how departments and agencies would plan, develop, establish, implement, evaluate and fund these activities, which were designed to improve the quality and performance of the government workforce. This act has been amended many times since 1958. Legislative acts that prescribe action by federal departments and agencies are codified and published shortly after passage. Title 5 of the U.S. Code is dedicated to human resource issues, with chapter 41 being devoted to training.

In 1967 Executive Order No. 11348 provided agency and department heads information on how GETA should be carried out. This was amended in 1978 by Executive Order No. 12107, which provided further direction and clarification.

The Code of Federal Regulations (C.F.R.) is the collected general and permanent rules published in the Federal Register by executive departments and agencies. Part 410 of Title 5 of the C.F.R. details the general and specific policies and requirements for training in government agencies. Part 412 of the same title addresses the development of supervisors, managers, and executives. Parts 410 and 412 were both substantially restructured in 1996 to reflect changes to chapter 41 of Title 5 of the U.S. Code.

### Department of Agriculture

The Department of Agriculture assists American farmers and ranchers while providing a number of other services to the general public. The Farm and Foreign Agricultural Services (FFAS) Mission Area comprises three entities, which are designed to protect the interests of American farmers and ranchers amid market and weather uncertainty: the Farm Service Agency, the Foreign Agricultural Service, and the Risk Management Agency. These organizations attempt to strengthen the agricultural economy through delivery of commodity, credit, conservation, disaster, and emergency assistance. FFAS also promotes expansion of export sales to foreign markets. Wide-ranging crop insurance programs and risk management tools are also offered.

The Food, Nutrition, and Consumer Service (FNCS) administers the federal food assistance programs while coordinating policy and research on nutrition. The FNCS comprises two organizations: the Food and Nutrition Service (FNS) and the Center for Nutrition Policy and Promotion (CNPP). Under the FNS umbrella are the following programs:

- Food Stamps Program

- School Breakfast Program
- School Lunch Program
- After-School Snacks Program
- Special Milk Program
- Summer Food Service Program
- Child and Adult Care Food Program
- Special Supplemental Nutrition Program for Women, Infants, and Children (popularly known as WIC)
- Farmer's Market Nutrition Program, Food Distribution, and Team Nutrition

The CNPP was created in 1994 to link research with the nutritional needs of the public.

The Food Safety and Inspection Service (FSIS) works to ensure that meat, poultry, and egg products are safe, wholesome, and accurately labeled. FSIS also works to provide resources on food safety for consumers, educators and health professionals.

The Natural Resources and Environment (NRE) Mission Area is responsible for ensuring the health of the land through sustainable management. The NRE is composed of the Forest Service (FS) and the Natural Resources Conservation Service (NRCS). Each of the agencies assists with rural development and renders aid relative to natural resource concerns like erosion control, watershed protection, and forestry.

The Research, Education, and Economics (REE) Mission area disseminates information resources. The REE includes four services: the Agricultural Research Service, the Cooperative State Research, Education, and Extension Service, the Economic Research Service, and the National Agricultural Statistics Service.

## Department of Commerce

The Department of Commerce and Labor was created on February 14, 1903. Ten years later, separate department designations for labor and commerce were established. Through its numerous and diverse bureaus the modern Department of Commerce (DOC) has evolved to perform an widely varied range of education-related foreign and domestic services.

The Bureau of Export Administration (BXA) is involved in many areas of national security and high technology. Among other activities, the BXA provides technical assistance to Russia and other newly

emerging countries to develop effective export control systems and to help convert their defense industries. Assisting foreign supplier countries establish export control systems helps ensure that U.S. industries will not be undercut.

The Economic and Statistics Administration (ESA) is responsible not only for producing and analyzing some of the nation's most important demographic and economic data, but also for the dissemination of that data to the American public. Major offices under the ESA are the Bureau of the Census, the Bureau of Economic Analysis, and STAT-USA. The Bureau of Census conducts the decennial census of population and is a world leader in statistical research and methodology. The Bureau of Census makes its statistics available in a variety of media and offers assistance to data users from its headquarters in Suitland, Maryland, as well as through the twelve other regional offices. The Bureau of Economic Analysis (BEA) generates a number of important economic reports including a monthly "Survey of Current Business," a quarterly report on Gross Domestic Product, and regional, domestic, and international economic accounts. The BEA also generates occasional reports on travel, tourism, and international transactions.

The Economic Development Administration (EDA) targets economically distressed communities to generate new employment, industry, and commerce. A portion of these efforts involves skill training as well as job retraining.

The International Trade Administration (ITA) is the lead unit for trade in the DOC. The Trade Development area of ITA is organized by industry and provides analysis and advice on trade and investment issues to U.S. businesses, counseling U.S. exporters and service providers about marketing their products globally, and provides literature centers and seminars. The U.S. Foreign and Commercial Service employs trade specialists that assist companies wishing to enter into new markets. These specialists also lend support through alerting businesses to distribution channels, pricing, relevant trade shows, and available trade finance programs.

The Minority Business Development Agency (MBDA) promotes growth and competitiveness of the nation's minority and Native American-owned businesses. The agency has counseling centers located in areas with large concentrations of minority populations and businesses, offering management

and technical assistance in all areas of establishing and operating a business.

The National Oceanic and Atmospheric Administration (NOAA) is dedicated to predicting and protecting the environment. NOAA has five divisions: the National Weather Service (NWS), the Office of Oceanic and Atmospheric Research (OAR), the National Environmental Satellite, Data and Information Service (NESDIS), the National Ocean Service (NOS), and the National Marine Fisheries Service (NMFS). The National Weather Service (NWS) works with federal, state, and local agencies to protect life and property as the official source of all watches and warnings of severe weather for the United States. The NWS also provides data, products, and services to private meteorologists. NOAA funds scientists and university researchers through the National Sea Grant College Program and the National Undersea Research Program to solve critical weather-related environmental problems such as tornadoes, hurricanes, El Niño-driven storms, solar storms, and other severe weather. The National Ocean Service conducts research on the health of the U.S. coasts and provides expertise during oil and hazardous chemical spill cleanup operations, as well as other duties.

The National Telecommunications and Information Administration (NTIA) assists the administration, Congress, and other regulatory agencies by addressing diverse technical and policy questions relative to telecommunications. The agency comprises six offices: the Office of Policy Coordination and Management (OPCM), the Office of Policy Analysis and Development (OPAD), the Office of International Affairs (OIA), the Office of Spectrum Management (OSM), the Institute for Telecommunication Sciences (ITS), as well as the Telecommunications Information Infrastructure Assistance Program (TIIAP). Employees of this agency include policy analysts, computer scientists, electronic engineers, attorneys, economists, mathematicians, and other specialists. The ITS office serves as the federal government's primary research laboratory for telecommunications science and engineering.

The Office of the Inspector General (OIG) was established in 1978 to protect the American public's interests and investments in the Department of Commerce. The office is authorized to conduct audits, investigations, and an array of inspections, systems evaluations, and other reviews of the Department of Commerce. The OIG provides time-

ly, useful, and reliable information and advice to department officials.

The Patent and Trademark Office (PTO) is the federal mechanism that protects new ideas and investments. The PTO encourages innovation in American industry through providing patent and trademark protection. A substantial portion of this protection results from the clerical functions of the office, which includes preservation, classification, and distribution of information. Since its establishment in 1790, the PTO has accumulated the largest collection of applied technical information in the world. The Patent Office Search Room and the Trademark Office Search Room are both located in Arlington, Virginia, and are open to the public. In addition, the PTO publishes *Basic Facts About Patents*, *Basic Facts About Trademarks*, along with weekly publications describing registered patents and trademarks.

The Technology Administration (TA) was established in 1988 and consists of the National Institute for Standards and Technology (NIST), the National Technical Information Service (NTIS), and the Office of Technology Policy (OTP). NIST laboratories specialize in electronics and electrical engineering, manufacturing engineering, chemical science and technology, physics, materials science and engineering, building and fire research, and information technology. NTIS is the repository for all U.S. government research and development results. The NTIS collection is in excess of 3 million titles. These titles are organized, maintained, and disseminated in a variety of media formats. NTIS has also developed an online information dissemination system called FedWorld, which is recognized as a comprehensive electronic source for government information.

### Department of Defense

The Department of Defense (DoD), so named in 1949, evolved from the Department of War, which was established by the first Congress. The mission of the DoD is to "provide military forces needed to deter war and to protect the security of our country." The DoD consists of three military departments, fourteen defense agencies, nine unified combatant commands, and seven field activities. The three military departments are the army, the navy, and the air force (the Marine Corps is a second armed service in the Department of the Navy).

The National Defense University (NDU) is the nation's premier joint professional military educational institution. Its component colleges and centers include the following: the Joint Forces Staff College, the Industrial College of the Armed Forces, the Information Resources Management College, the Institute for National Strategic Studies, the National War College, and the Center for Hemispheric Defense Studies. The NDU also offers a variety of other educational programs separate from these colleges and centers.

Military service academies provide officer education through precommission and reserve training. These academies include the U.S. Military Academy, the U.S. Naval Academy, the U.S. Air Force Academy, the U.S. Coast Guard Academy, and the U.S. Merchant Marine Academy.

Ongoing education and training opportunities for individuals are available immediately upon enlistment in any of the armed services. Military education typically begins with eight to thirteen weeks, depending upon the service, of basic training and continues afterwards with individual job training, which continues throughout enlistment. As men and women are promoted within their job specialty, training becomes more sophisticated. In 2001 there were more than 300 military training centers offering more than 10,000 courses (of which 68 percent were certified for college credit) to train men and women in some 4,100 separate job specialties (of which 88 percent had civilian counterparts).

The military also offers a wide variety of programs that help recruits earn college credit, attend college while in the service, and/or provide cash for college tuition. Department of Defense statistics indicate that in 1999 more than 26,000 military members participated in Servicemember Opportunity Colleges (SOC), which is a group of approximately 1,400 colleges and universities that agree to transfer credits among themselves for military members and their families. In addition, most Base Education Centers will grant course credit to enlisted men and women who can pass available examinations and tests on subjects ranging from mathematics to Western civilization.

The Community College of the Air Force (CCAF) allows its enlisted personnel to earn an associate degree in a job-related field. Beyond one's job specialty, each CCAF degree requires coursework in leadership, management, military studies, general education, and physical education.

Programs of educational financial support include tuition assistance, Montgomery G.I. Bill, college fund programs, and loan repayment programs. The terms and amounts of financial assistance from these programs differ slightly depending on one's branch of service and military status.

The DoD also offers pre-kindergarten through twelfth-grade education through a system of schools in the United States and abroad for dependents of military personnel and civilian employees of the military. This activity is divided between two programs: the Domestic Dependent Elementary and Secondary Schools (DDESS) and the Department of Defense Dependents Schools (DoDDS). The DDESS serves an estimated 36,000 students in seventy schools across seven states, Guam, and Puerto Rico. The DoDDS serves an estimated 76,000 students in 154 schools in thirteen countries.

### Department of Education

One of the Department of Education's earliest historical roles that has remained prominent involves collecting and sharing information on education. Since 1966 the department has operated the Educational Resources Information Center (ERIC), which is the world's largest education database. ERIC is accessible through the Department of Education website. Prominent annual publications include the *Digest of Education Statistics* and the *Condition of Education*. The department funds the National Assessment of Educational Progress (NAEP), which serves as "the nation's report card." The department also funds ten regional educational laboratories aimed at assisting state and local decision makers by providing the most recent teaching and learning knowledge.

Federal financial assistance for postsecondary education is a significant area of department activity. The department prints and processes the Free Application for Federal Student Aid (FAFSA), which students use to apply for financial assistance. Federal aid comes in a variety of formats and is administered through a assortment of programs including the Federal Pell Grant Program, the William D. Ford Direct Loan Program, the Federal Family Education Loan Program, the Federal Perkins Loan Program, the Federal Supplemental Educational Opportunity Grant Program, and the Federal Work-Study Program.

The department manages the distribution of many formula-based grants that target districts and

students with special educational needs. Most federal funding of education is authorized under either the Elementary and Secondary Education Act (ESEA) of 1965 or Part B of the Individuals with Disabilities Education Act Amendments of 1997. Funding for advancement and innovation in elementary, secondary, and postsecondary education are made available through competitive grant programs.

The department provides vocational and lifelong learning opportunities through an assortment of programs developed to maintain American competitiveness in an emerging global economy. These program activities range from providing localities with School-to-Work Opportunities Act seed money designed to prepare students for a first job, to awarding state grants to fund vocational training and rehabilitation. Additional grant programs target literacy, high-school equivalency certification, and English language proficiency.

### **Department of Energy**

The educational activities of the Department of Energy (DOE) are aligned with its longstanding goals of dissemination of energy-related information and increasing the American science and technology base. Department of Energy partnerships with schools such as the Energy Smart Schools Program focus on increasing awareness of energy-related issues, reducing energy consumption, and reinvesting energy cost savings.

The department's website serves as the chief portal for energy-related education resources. The DOE website offers teachers and students from elementary to postsecondary levels links to topics such as energy efficiency, alternative fuels, atmospheric research, and the Human Genome Project. The department serves as an information clearinghouse on internships and fellowships in all areas of endeavor in science and technology. The DOE also sponsors energy-related contests and competitions.

### **Department of Health and Human Services**

The Department of Health and Human Services (HHS) is the primary healthcare and social service agency of the federal government. The department is divided among twelve major operating divisions, which administer more than 300 programs covering a wide range of activities. In fiscal year 2001 the agency employed more than 63,000 employees, provided in excess of 60,000 grants, and had a budget in exceeding \$429 billion.

The Administration for Children and Families (ACF) is the division responsible for the economic and social well being of children, individuals, families, and communities. Programs in the ACF target welfare, refugee assistance, repatriation, foster care, adoption assistance, independent living assistance, low-income energy needs, mental retardation, family preservation, family support, child abuse, child-care, child support enforcement, developmental disabilities, and Native Americans. The most prominent ACF education-related activity is the national Head Start program. Grants are awarded to public or private nonprofit entities at the local level to provide comprehensive developmental services to children between the ages of three and five from low-income families. Legislation in 1994 created the Early Head Start program, expanding the benefits to include children under three and pregnant women. American Indian Head Start and Migrant Head Start offer identical services, but modify delivery of services to better meet the needs of these special populations.

The Administration on Aging (AOA) is the division charged with administering various programs mandated by the Older Americans Act of 2000. In keeping with the many titles of this act, the division is the primary federal advocate for older Americans and their concerns. The educational activities of this division include making resources available on the following: caregiver support, antifraud initiatives, elder abuse prevention, long-term care, retirement information, finance counseling, job vacancies, disaster assistance, and legal advice. The AOA also compiles, storehouses, and disseminates information and statistics on aging.

The Health Care Financing Administration (HCFA) is the division responsible for administering Medicare, Medicaid, and the State Children's Health Insurance Program. The HCFA offers a number of learning resources on its Internet site relative to health insurance. These resources inform interested parties of changes and progress in the range of coverage offered through HCFA. One such resource is the Medicare Learning Network, which provides health care professionals and others appropriate information on topics such as proper submission of Medicare claims and appropriate payment to Medicare beneficiaries for services rendered. Medicare Learning Network users may also subscribe to an array of electronic mailing lists that provide emerging information on specific areas of health coverage.

Two of the more prominent public health divisions are the Food and Drug Administration (FDA), which protects the public's health by screening consumer products before they reach the market using a blend of law and science, and the National Institutes of Health (NIH), which attempts to uncover new knowledge through the research and training conducted at its multiple centers and institutes. The National Library of Medicine is also under the NIH umbrella.

Six of the seven remaining divisions are also considered public health divisions designed to meet the physical and mental health needs of the population. They include the Centers for Disease Control and Prevention (CDC), the Substance Abuse and Mental Health Service Administration (SAMHSA), the Health Resources and Services Administration (HRSA), the Indian Health Service (IHS), the Agency for Healthcare Research and Quality (AHRQ), and the Agency for Toxic Substances and Disease Registry (ATSDR).

The twelfth working division of HHS is the Program Support Center (PSC); it serves the various administrative functions of the department.

### **Department of Housing and Urban Development (HUD)**

While HUD was created as a cabinet-level position within the executive branch of the federal government in 1965, its history extends all the way back to the passage of the National Housing Act of 1935. Aside from orientation of department personnel, education and training activities conducted by HUD are products of its awarding of grants whose scope of activity fulfills the mission of the department. Several examples of such activities during the decade of the 1990s follow.

Youthbuild was authorized as the "Hope for Youth" program as a part of the Housing and Community Development Act of 1992. The program provides HUD grants on a competitive basis to nonprofit organizations assisting high-risk youth between the ages of sixteen to twenty-four to learn housing construction skills. The program also helps participating youth complete their high school education. Skills development takes place as participants assist in the construction of housing for low-to-moderate-income persons.

HUD provided the Philadelphia Housing Authority with an Apprenticeship Demonstration

Grant to provide hands-on training in the removal of asbestos, in lead abatement, and for driver's education training. Participants were eighteen to twenty-four years old and high school dropouts. This grant was coordinated with the welfare-to-work initiatives of the Department of Labor. That same housing authority received additional funding to conduct nurse's assistant training and adult basic education.

HUD has also provided training in the K-12 arena. An education advocacy project was funded through Wright State University in Dayton, Ohio. Tutors were trained to provide academic remedial and enrichment services in the critical areas of reading, mathematics, and science to improve the academic performance of students from low-income groups and ethnic minority groups who have consistently experienced low academic achievement. Tutors were taught techniques for supporting students in their grasp of procedural, declarative, and conditional knowledge.

### **Department of the Interior**

The Department of Interior is composed of eight bureaus and more than twenty-five offices and committees. Education initiatives generated within the department range from the operation of support of local tribal school systems to support for minority higher education institutions to K-12 programs.

The Office of Educational Partnerships was established in 1994 to advance support of minority higher education institutions and the Goals 2000: Educate America Act and other related activities that support K-12 education.

The most extensive education initiative undertaken by Department of the Interior is through the Bureau of Indian Affairs (BIA). Present statutory law allows the BIA to either support local tribal school systems or to actually operate the education enterprise for the local tribal government.

The Department of Interior also conducts management development programs to provide upgrade training to bureau personnel in a variety of occupational specialties who have limited field experience. Orientation programs are also conducted within the various bureaus and departments. Several of the bureaus provide training for foreign personnel in such diverse fields as irrigation project operation and topographic mapping.

## Department of Justice

The Department of Justice represents the citizens of the United States in enforcing the federal laws that have been passed in the public interest. There are thirty-eight components within the department, and a number of those components have specialized education and training responsibilities. Such programs include employee training, programs for inmates of penal and correctional institutions, and training of law enforcement officers. Many of the training and technical assistance initiatives are designed to bring about changes in the law enforcement profession and to enhance the effectiveness of the criminal justice system.

One of the major training activities undertaken by the Department of Justice is the operation of the FBI National Academy through the Federal Bureau of Investigation. The FBI carries the charge of providing leadership and law enforcement assistance to federal, state, local, and international agencies. The academy provides initial training of all new special agents as well as refresher training for all agents. It also provides specialized, needs-based training for full-time law enforcement officials from local, county, and state levels. Officials from the District of Columbia and Puerto Rico are also provided opportunities for training.

Like the FBI, the Immigration and Naturalization Service operates training programs for its border patrol law enforcement personnel. These law officers are charged with maintaining the integrity of the borders of the United States from illegal immigration. The U.S. Federal Marshals Service conducts training of U.S. marshals and provides other training opportunities through regional meetings and conferences.

The Federal Bureau of Prisons is charged with the responsibility of developing and operating correctional programs that are balanced between punishment, deterrence, incapacitation, and rehabilitation. Inmate programs range from high school equivalency to college level courses to help provide for successful reintegration of inmates into society. Vocational training in semiskilled to skilled trades is coordinated by the Federal Prison Industries, Inc., a wholly owned government corporation founded in 1934. Additionally, the National Institute of Corrections is charged with the responsibility of providing training to state and local correctional agency personnel to advance a broad agenda of correctional practices.

The Community Relations Service is the single federal agency with the responsibility to help state and local government agencies, public and private organizations, and community groups resolve and prevent community racial conflicts. Technical assistance is provided to help communities address conflicts arising out of actions, policies, and practices perceived to be discriminatory.

The Office of Justice Programs, created in 1984, is responsible for providing training and technical assistance to state, local, and tribal governments and community groups. Assistance is designed to reduce crime, enforce drug laws, and improve the function of the criminal justice system.

The Office of Community Oriented Policing Services (COPS) is charged with creating change in the police profession. The Training and Technical Assistance Division operates through Regional Community Policing Institutes, the Community Policing Consortium, targeted training initiatives, and training conferences and workshops.

## Department of Labor

In addition to the Office of the Secretary, the Department of Labor includes more than twenty additional agencies, one independent corporation, and related committees and commissions. A variety of education and training programs are made available to both federal employees and private sector workers and employers.

The Occupational Safety and Health Administration (OSHA) was created to advise and assist the Secretary of Labor on all matters related to the policies and programs that are designed to assure safe and healthful working conditions for the working men and women of the nation, and to provide executive direction to the occupational safety and health program. OSHA education and training services include federal agency personnel, programs and assistance for small businesses, and training of workers in nonprofit organizations. The primary scope of all such training is to train individuals to recognize, avoid, and prevent safety and health hazards. Programs in the nonprofit sector are conducted under Susan Harwood Training Grants. Grantees develop pertinent training and educational programs that address OSHA-selected topics. Federal agency training is conducted through a number of educational centers that include the Naval Safety Training Center, the Air Force Safety School, and NASA sites na-

tionwide. The OSHA Outreach Training Program authorizes individuals completing the training to teach courses in general industry or construction safety and health standards. The primary arm within OSHA for coordinating education and training programs is the Office of Education and Training.

The Bureau of Labor Statistics provides a fellowship program in conjunction with the American Statistical Association (ASA), under a grant from the National Science Foundation (NSF). The Senior Research Fellow Program's objective is to bridge the gap between academic scholars and government social science research.

The Office of the Assistant Secretary for Administration and Management conducts the Senior Executive Service (SES) Forum Series. The Senior Executive Service provides convenient, cost-effective learning opportunities for top-level government officials. Forums cover a wide range of topics relevant to the major missions and programs of federal departments and agencies.

The Employment and Training Administration operates programs for both adults and youth. Adult programs include training programs for Native American populations. Programs are also provided for migrant and seasonal workers. Apprenticeship training for industry is designed to assist industry in developing and improving apprenticeship programs. Welfare-to-work services are also provided to assist the hard-to-employ and noncustodial parents to get and keep jobs. Training is provided for workers affected by shutdowns and downsizing and for workers over fifty-five years of age. Youth programs include school-to-work, Job Corps, and apprenticeship programs authorized under the Workforce Investment Act of 1998.

The Women's Bureau sponsors workshops and joint initiatives with other governmental agencies on gender discrimination. Other programs are marked by collaborative efforts that encourage girls to study and pursue careers in information technology, engineering, math, and science. Trade conferences are conducted to highlight the contributions of women in the trades.

The Mine Safety and Health Administration's (MHS) Directorate of Educational Policy and Development implements MHS's education and training programs that are designed to promote safety and health in the mining industry.

## Department of State

The Department of State is the nation's lead foreign affairs agency. The Bureau of Educational and Cultural Affairs and the Foreign Service Institute carry out the Department of State's educational activities.

The Bureau of Educational and Cultural Affairs (ECA) offers an array of international educational and training programs aimed at promoting understanding between the United States and other countries. The bureau promotes personal, professional, and institutional ties among individuals and organizations, and presents overseas audiences with U.S. history, society, art, and culture.

The Fulbright Program, which is sponsored by ECA, was introduced in 1946 under legislation sponsored by Senator J. William Fulbright of Arkansas. The Fulbright Program offers cultural exchange opportunities to individuals from the United States and abroad who have demonstrated leadership potential. The Fulbright program operates in 141 countries and awards approximately 4,500 grants annually.

The Office of Global Education Programs is charged with the administration of three major Fulbright exchange activities. They include the Teacher Exchange Program, the Humphrey Fellowship Program, and various university linkage programs.

The Fulbright Teacher Exchange program arranges exchange opportunities for U.S. and foreign college faculty members, teacher trainers, secondary-level teachers, and school administrators. Many teachers elect to teach their native languages at host institutions. A limited number of semester and shorter-term initiatives are also available.

The Hubert H. Humphrey Fellowship Program is a Fulbright exchange activity. Established in 1978 to honor the late senator and vice president, the program brings accomplished midlevel professionals from foreign countries for one year of study and professional experience.

The university linkage programs enables U.S. colleges and universities to partner with institutions overseas to pursue specific mutually beneficial goals. Projects typically last three years and consist of exchange of teachers, administrators, and graduate students.

The Educational Information and Resources Branch of the ECA offers U.S. educational opportunities to foreign students and scholars and serves as

a resource to U.S. institutions wanting to strengthen international educational exchange. Overseas, the branch provides international students and scholars information on the U.S. educational system through a worldwide network of approximately 450 educational advising centers. Domestically, the branch administers a study abroad scholarship program for U.S. students and connects educational advisers overseas with counterparts at U.S. educational institutions.

ECA also administers a variety of degree and nondegree academic exchange programs for Russia and the new independent states, which include the following:

- Freedom Support Act Undergraduate Program
- Bosnia and Herzegovina Undergraduate Development Program
- Edmund S. Muskie Graduate Fellowship Program
- Ron Brown Fellowship Program
- Community Connection Program
- Russia–U.S. Young Leadership Fellows for Public Services Program
- Regional Scholar Exchange Program
- Freedom Support Act in Contemporary Issues
- Junior Faculty Development Program
- Internet Access and Training Program

The Office of English Language Programs is responsible for U.S. government English teaching activities outside the United States. The office offers a number of products and services primarily in the capital cities of host countries through American embassies.

The Study of the U.S. Branch of ECA promotes better understanding of the United States by offering summer institutes to foreign university faculty. One of the projects of primary importance offered by this branch is the maintenance and dissemination of the American Studies Collection. The collection was established by a congressional endowment to promote a better understanding of the United States abroad. This collection is designed expressly for university libraries outside the United States. The core of the collection consists of 1,000 titles selected by leading American scholars on a wide variety of disciplines germane to the study of American culture.

The ECA International Visitor Program operates under the authority of the Mutual Educational and Cultural Exchange Act of 1961. This program

brings foreign professionals with potential for leadership in the areas of government, politics, media, education, and other fields to meet and confer with their professional counterparts and to experience the United States.

The ECA Office of Citizen Exchanges makes grants available to nonprofit American organizations to develop professional, cultural, and youth programs. The objective is for foreign participants to see how Americans deal with issues of professional interest and for American participants to receive a similarly cross-cultural perspective. The office has three geographic divisions, which include Europe/Asia, the Middle East, and South Asia/Africa.

The ECA International Cultural Property Protection program was established as a result of the 1970 United Nations Educational, Scientific and Cultural Organization (UNESCO) Convention on the Means of Prohibiting and Preventing the Illicit Import, Export, and Transfer of Ownership of Cultural Property. In accordance with the convention's precepts, the requests of foreign countries are accepted for import restrictions on archaeological or ethnological artifacts, whose removal or display might jeopardize the national cultural history of those countries.

The ECA Au Pair Program is a one-year educational and cultural exchange program with a strong emphasis on childcare. Au pairs are put through a screening and selection process and then matched with American families. The au pair provides forty-five hours of childcare per week. Au pairs are also required to attend an institution of higher learning during their stay to earn at least six hours of credit. Host families are required to pay the au pair minimum wage for child care and \$500 for education-related costs.

The Foreign Service Institute is responsible for training all officers and support personnel of the U.S. foreign affairs community. The National Foreign Affairs Training Center in Arlington, Virginia, offers approximately 500 courses, including classes in 60 foreign languages to members of the foreign affairs community from the Department of State, the military service branches, and other government agencies. Course range in length from one day to two years and designed to promote success within professional assignments, ease transitions, enhance leadership and management, and prepare families for a mobile lifestyle and living abroad. Training and

professional development are also available specific to professional assignment.

### **Department of Transportation**

The Department of Transportation (DOT) was created in 1967 when a number of transportation-related agencies, services, and functions that were dispersed throughout the government were combined into one department. In the early twenty-first century the department works to further the vital national transportation interests through promotion of the following broad strategic goals: safety, mobility, economic growth and trade, human and natural environment protection, and national security. The components of the department include the Office of the Secretary, the Transportation Administrative Service Center, the Surface Transportation Board, and eleven major operating divisions.

The U.S. Coast Guard (USCG) is responsible for ensuring safe transportation on American waterways and protection of the marine environment. During times of war and conflict the USCG comes under the control of the Department of Defense. Traditional education-related functions of this division have included marine safety, boating safety, oil spill response, and emergency training.

The most prominent educational component of the division is the U.S. Coast Guard Academy, which is located in New London, Connecticut. The Coast Guard Academy is unique among federal service academies because admission is based on a competitive nationwide application process rather than congressional nomination. Applicants who are accepted to the program are given full four-year scholarships. Founded in 1876, the academy provides cadets a four-year bachelor of science program in eight majors including naval architecture and marine engineering, civil engineering, mechanical engineering, electrical engineering, operations research, marine and environment science, government, and management. Cadets who demonstrate a high level of academic performance can qualify to participate in the academy's honors program or take elective course work at nearby Connecticut College. A range of student government and athletic opportunities are also made available to cadets. Summers are spent in military and professional training, except for three weeks of vacation. Each academy graduate receives a commission as an ensign in the U.S. Coast Guard and is required to serve a minimum of five years of active duty.

Leadership training for both cadets and civilian employees of the USCG is provided through the Leadership Development Center (LDC). Schools which form the LDC include the Chief Petty Officer Academy, the Leadership and Quality Institute, the Chief Warrant Officer Indoctrination, Officer Candidate School, Officer-in-Charge School, Command and Operations School, and the Unit Leadership Training Program.

The Federal Aviation Administration (FAA) was established in 1958 by the Federal Aviation Act, which combined the Civil Aeronautics Administration and the Airways Modernization Board. Although the FAA predates the DOT, it became one of the major operating divisions when the DOT was established in 1967. The FAA is responsible for administering the federal aviation system, which includes activities such as certifying pilots and aircraft, promoting all aspects of aviation safety, enhancing airport security, maintaining the federal air traffic control system, and assisting in the development of commercial and space transportation.

The FAA Aviation Education Program is maintained in fulfillment of the Congressional Mandates of the Airport and Airway Development Act of 1970. The congressional intent of the Aviation Education Program is to maintain America's preeminence in the world of aviation by supporting the growth of aviation through education. This includes increasing the public's knowledge of the dynamics of aviation and its key role in improving America's economic and social well being. The FAA is also congressionally mandated to acquaint young people with the full potential of a career in aviation. An information distribution program in each of the nine FAA regions provides expertise and informational materials on civil aviation, aeronautics, and air commerce safety to state and local administrators, college and university officials, and officers of civil and other interested organizations.

The FAA also hosts a number of educational outreach resources and initiatives including curriculum, activities, summer camps, scholarships, grants, aviation career guides, an online resource library, and a listing of aviation schools and universities.

The Federal Highway Administration (FHWA) is responsible for coordinating highway transportation programs among states and other partners. The FHWA organization comprises the Washington Headquarters, four resource centers, fifty-two oper-

ating federal aid division offices, and three federal lands highway divisions.

The education-related activities include offering training and technical expertise to transportation agency managers at the state and local level, partner agency employees, and to FHWA staff. Training topics cover a range of highway transportation concerns such as snow and ice technology, seismic bridge design, and civil rights contract compliance. Technical expertise is offered in the following areas: roadway and bridge design, construction methods, highway planning and policy, safety, maintenance, environmental protection, innovative financing, and land acquisition.

Nationwide public service announcements are produced in print, audio, and video to educate and inform the public concerning FHWA safety initiatives. Seed money is provided through grants to state and local transportation agencies to promote FHWA safety programs.

FHWA also supports highway-related research, development, and technology transfer through promotion of initiatives such as the Intelligent Transportation Systems. The Intelligent Transportation Systems program partners FHWA with government, industry, and research community partners to develop, test, and implement the latest technological advancements in the transportation system. These technology-infused transportation applications seek to move people and goods more smoothly, safely, and efficiently.

The Federal Railroad Administration (FRA) promotes safe and environmentally sound rail transportation. Much of the educational activity of the FRA revolves around its longstanding responsibility of ensuring railroad safety throughout the nation. The FRA Office of Safety provides the public with safety data on rail incidents, accidents, and inspections. The FRA conducts research, development, tests, evaluations, and projects to support its safety mission and enhance the railroad system as a national transportation resource. The FRA also makes railroading curriculum, presentation aids, and safety resources available to teachers online. Students are offered links rail transportation-related career development links as well as links to an online railroad library.

The National Highway Traffic Safety Administration (NHTSA) is responsible for promoting and implementing effective educational, engineering,

and enforcement programs to end preventable tragedies and reduce economic costs associated with vehicle use and highway travel. NHTSA provides the public with information on motor vehicle safety recalls, child safety seat recalls, seat belts, air bags, antilock breaks, highway safety statistics, federal motor vehicle safety standards, vehicle crash test reports, vehicle safety ratings, vehicle theft ratings, and traffic safety educational materials.

The Federal Transit Administration (FTA) is responsible for providing financial and technical assistance to local transit systems and their forms of mass transportation including buses, rail vehicles, commuter ferryboats, trolleys, inclined railways, and subways.

The National Transit Library is the FTA repository of reports, documents and data generated by professionals and laypersons. The intent of the library is to facilitate document sharing within the transit community.

The FTA Office of Safety and Security offers a range of programs to achieve the highest practical level of safety and security among all modes of mass transit. This office assists in the development of guidelines and best practices, and performs system safety analysis and review. Training is provided through regularly offered courses, conferences, and seminars.

Transit City, U.S.A., is a mythical American city accessible through the FTA homepage, which serves as an online resource for students of all ages, to assist in the development and enhancement of knowledge, skills, and abilities through use of the transit medium.

The University Transportation Center Program, enacted in 1998 under the Transportation Equity Act for the 21st Century, established thirty-three university transportation centers. Of the thirty-three centers, ten were designated as regional centers. The intent of the program is to offer a multidisciplinary program of course work to advance transportation technology and expertise through the mechanisms of education, research, and technology.

The St. Lawrence Seaway Development Corporation (SLSDC) is a corporation wholly owned by the federal government and created by statute in 1954 to construct, operate, and maintain that part of the St. Lawrence Seaway between Montreal and Lake Erie, within the limits of the United States. Education-related services of the SLSDC include publi-

cation of transit regulations for vessels, trade reports, traffic reports, special information newsletters, seminars, workshops, and marketing advice for entities importing to or exporting from the Great Lakes region.

The Maritime Administration (MARAD) promotes the development and maintenance of an adequate, well-balanced, U.S. merchant marine, sufficient to carry the nation's domestic waterborne commerce and a substantial portion of its waterborne foreign commerce, and capable of serving as a naval and military auxiliary in time of war or national emergency.

MARAD administers the U.S. Merchant Marine Academy (USMMA), which is located in Kings Point, New York. The purpose of the academy is to educate young men and women to become officers in the American merchant marine. Cadets are offered a range of professional degree and credential options including: a bachelor of science degree, a U.S. Coast Guard (USCG) license as deck or engineering officers, a commission in the U.S. Naval Reserve, or another uniformed service. USMMA graduates must meet service obligations upon graduation.

MARAD provides financial assistance to six state maritime academies to train merchant marine officers pursuant to the Maritime Education and Training Act of 1980. State maritime academy cadets who participate in the Student Incentive Payment (SIP) Program receive an annual stipend to offset school costs. State Maritime Academy students are obligated to meet service requirements upon successful completion of their program.

MARAD provides supplemental training for seafarers in basic marine firefighting, advanced marine firefighting, defense readiness, hostage threat prevention, piracy, and Chemical Biological and Radiological Defense (CBRD).

The Adopt-a-Ship plan is sponsored through the Propeller Club of the United States. The plan provides the opportunity for a school classroom (fifth through eighth grade) to adopt a ship of the American Merchant Marine and exchange correspondence with it. MARAD also compiles and makes available through both print and electronic sources a comprehensive repository of maritime publications and statistics.

The Research and Special Programs Administration (RSPA) is unique among the major operating

divisions of the DOT because of its multimodal mandate. It was established in 1977 to administer those programs that did not fit within the mandates of the other operating divisions. The educational activities of the RSPA include advancing intermodal transportation and technology, conducting transportation research, and delivering training and technical assistance in transportation safety.

The RSPA's Volpe National Transportation Systems Center in Cambridge, Massachusetts, works on a broad range of transportation projects to enhance the nation's transportation capabilities and meet future requirements. The center serves as a federal bridge between industry, academia, and other government agencies. The Volpe Center receives no appropriation from Congress. It is completely funded through a fee-for-service structure.

The Transportation Safety Institute of the RSPA is located in Oklahoma City, Oklahoma. The institute provides training in aviation safety, hazardous materials, pipeline safety, transit safety and security, highway traffic safety, Coast Guard container inspection, automotive sampling, and other specialized programs.

The Bureau of Transportation Statistics (BTS) is the lead division of the DOT charged with developing and coordinating intermodal transportation statistics. The Bureau of Transportation Statistics compiles and makes available highly detailed national-level data on the all aspects of the U.S. transportation system including economic performance, safety records, energy use, and environmental impacts.

The Federal Motor Carrier Safety Administration (FMCSA) was established as a working division of the DOT on January 1, 2000, pursuant to the Motor Carrier Safety Improvement Act of 1999. Formerly a component of the FHA, the new division's primary mission is to prevent commercial motor vehicle-related fatalities and injuries. The Motor Carrier Research and Development (MCR&D) program is organized into eight focus areas designed to support the commercial carrier industry: crash causation and profiling, regulatory evaluation and reform, compliance and enforcement, hazardous material and cargo tank integrity, commercial driver training and performance management, driver alertness and fatigue, driver physical qualifications, and car-truck proximity. The FMCSA also maintains publications on commercial carrier safety regulations, rules, compliance issues, and notices.

### Department of Treasury

The Department of Treasury is organized into two major components. Departmental offices are primarily responsible for the formulation of policy and overall management of the department. Operating bureaus carry out the specific operations assigned to the department. Including the Office of the Secretary, there are thirty offices and bureaus within the treasury department.

Education and training activities are provided by the Federal Law Enforcement Center. Established in 1970, FLETC instructs agents and officers from various governmental law enforcement agencies. Within the treasury department itself, the center trains agents for the U.S. Secret Service, the U.S. Custom Service, and the Bureau of Alcohol, Tobacco, and Firearms. Nondepartmental agencies whose personnel receive training include the Immigration and Naturalization Service and the U. S. Park Police.

One other departmental component has a training responsibility for non-law enforcement personnel. The Office of the Assistant Secretary (Management) Chief Financial Officer is charged with the responsibility of conducting training necessary to meet the demands of the department's overall mission.

### Department of Veterans Affairs

The Department of Veterans Affairs oversees two areas of program services that provide education and training benefits to veterans. The benefits program for which VA is best known comes under the umbrella of its Education Service. The Education Service administers the Montgomery G.I. Bill for active duty personnel. The MGIB program provides up to thirty-six months of education benefits for degree and certification programs, flight training, apprenticeship and on-the-job training, and correspondence courses. Remedial, deficiency, and refresher courses may be approved under limited circumstances. General MGIB benefits are payable for up to ten years following release from active duty.

Tuition assistance is provided by an amendment to the Montgomery G.I. Bill-Active Duty education program. This amendment permits VA to pay a tuition assistance top-up benefit that is equal to the difference between the total cost of a college course and the amount of the tuition assistance that is paid by the military for the course.

In addition to the MGIB-Active Duty program, there is a program under the Montgomery G.I. Bill

for selected reserve personnel, including the Army Reserve, Navy Reserve, Air Force Reserve, Marine Corps Reserve, and Coast Guard Reserve. It also includes the Army National Guard and the Air National Guard. MGIB-Selected Reserve benefits are similar to active duty benefits.

The Vocational Educational Assistance Program may be used by those veterans who contributed a portion of their military pay to participate in the program. Benefits are similar to those for MGIB-active duty personnel.

Survivors' and Dependents' Educational Assistance provides education and training opportunities to eligible dependents of veterans, if the veteran is permanently or totally disabled due to a service-related condition, or to the surviving dependents of veterans who died on active duty as a result of a service-related condition. Benefits are similar to MGIB-active duty personnel.

Education benefits are also provided under the Educational Assistance Test Program. This program was created by the Defense Authorization Act of 1981 to encourage enlistment and reenlistment in the armed forces.

The Work-Study Program is available to any student receiving VA education benefits who is attending school three-quarter time or more. Work-study students are employed in VA offices and facilities or at approved state employment agencies. Students are paid either the state or federal minimum wage, whichever is greater. The Department of Veterans Affairs also provides tutorial assistance for students receiving VA benefits who are enrolled at least half-time and have a deficiency in a subject, making tutorial necessary.

The Office of Vocational Rehabilitation and Employment, for those veterans who have service-connected disabilities, provides a number of vocational counseling and planning services, coupled with on-the-job training and nonpaid work experience. If needed, the disabled veteran may also qualify for education training leading to a certificate or to a two-year or four-year degree.

*See also:* FEDERAL FUNDS FOR HIGHER EDUCATION; FEDERAL SCHOOLS AND COLLEGES; GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF; LIFE-LONG LEARNING; MILITARY TRAINING DOCTRINE, PHILOSOPHY AND PRACTICE; U.S. DEPARTMENT OF EDUCATION.

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JASON L. WALTON

## FEDERAL FUNDING FOR ACADEMIC RESEARCH

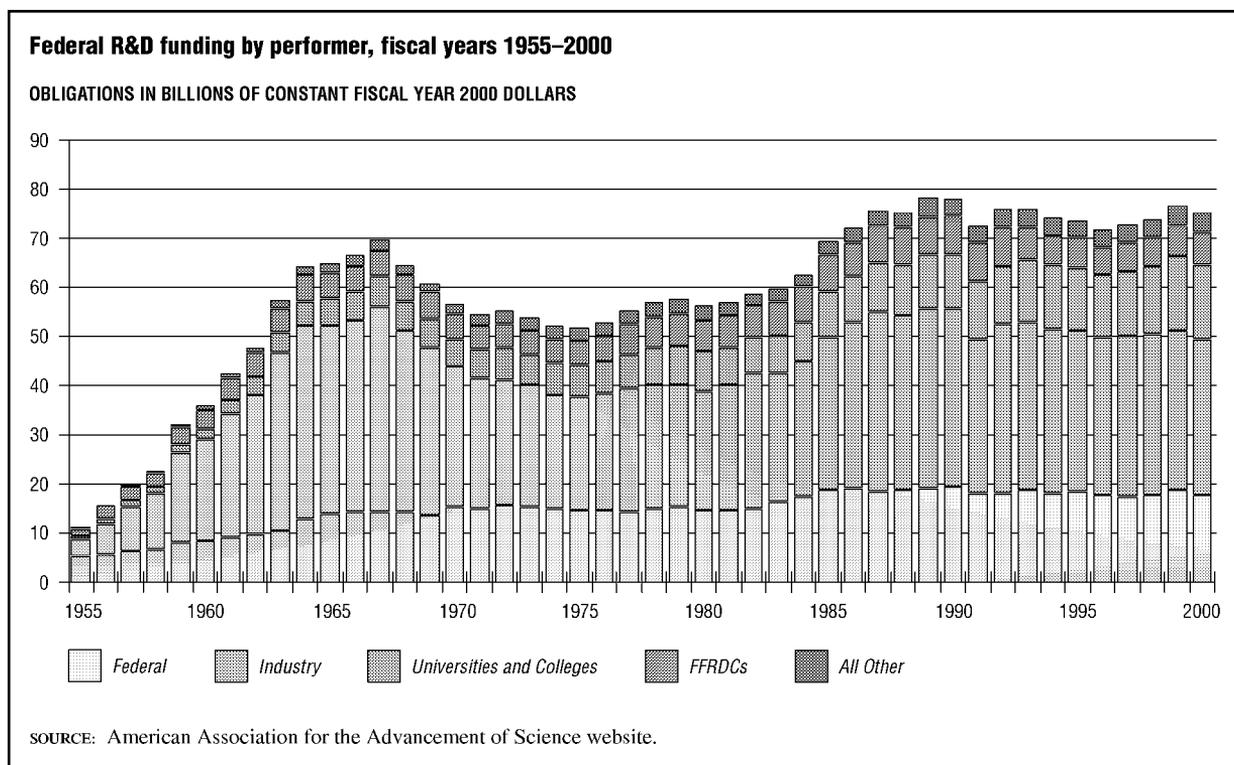
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The federal government's role in supporting research and development (R&D) in the United States has grown from a very minor one for much of the nation's history to one that was dominant during much of the twentieth century, and finally to one that at the beginning of the twenty-first century is

still significant and essential but has been eclipsed in scale by industry-supported R&D. Federal support for R&D in colleges and universities paralleled this pattern in the first half of the twentieth century but has remained the primary source of R&D funding for these institutions.

Why does the federal government support R&D at all, especially if the private sector invests so much in it? First, the federal government supports R&D that clearly serves important national needs, for example, in areas such as national defense, health, energy, the environment, natural resources, and agriculture. Second, the federal government supports most of the nation's basic or fundamental research—research that is not directed toward any practical problem but is focused on gaining knowledge or understanding phenomena irrespective of any specific application. History is full of examples of such apparently abstract, undirected research providing the basis for applications that prove to be extremely important—for example, disease-fighting medicines, weapons for national defense, and the growth of information technology. According to Albert H. Teich, basic research is "the primary source of the new knowledge that ultimately drives the innovation process" (p. 6). Historically, however, such fundamental research has not been supported on a significant scale by the private sector. Private firms anticipate that they will not be able to appropriate sufficient benefits from basic research to make sizable investments in it cost-effective. Nevertheless, such research is acknowledged by all to be vital to long-term national interests, and so its support is undertaken by the federal government.

Industry and federal research laboratories rank ahead of colleges and universities in terms of federal R&D funding received (see Figure 1). Yet despite their relatively small share of federal R&D support, colleges and universities historically have played an essential role in the nation's overall R&D efforts, for several reasons. First, much of the nation's greatest scientific and technical talent is in these institutions. Second, colleges and universities are particularly well-suited for performing basic research, although they perform a great deal of applied research as well. In 2000 basic research accounted for 69 percent of all college and university R&D. Third, federally funded research at colleges and universities (whether basic or applied) plays a crucial role in educating the next generation of scientists and engineers. It is an investment in the nation's most highly skilled work-

**FIGURE 1**

force, which in turn will be the backbone of an innovative, growing national economy.

### A Brief History of Federal Involvement in University-Based Research

The development of federal involvement in university-based R&D is intertwined with the broader issue of federal involvement in science and technology (S&T) in the United States. Federal involvement in scientific or technical matters was explicitly provided for in the U.S. Constitution only in the provisions for a system of patents and for a census to be held every ten years. For decades in the early history of the country, the doctrine of states' rights (preventing a concentration of authority in the federal government) together with a strain of populist antielitism and a faith in the indigenous development of pragmatic technologies kept the nation from realizing either Thomas Jefferson's vision of strong federal support for science, largely through agriculture, or Alexander Hamilton's advocacy of government subsidies for the advancement of technologies to the benefit of industry. From time to time, the U.S. Congress would deviate from this stance and invest in limited operations in support of exploratory or commercial interests, such as the Lewis and Clark expe-

dition or the establishment of the Coast Survey, both in the early 1800s.

In the 1840s, two events—the establishment of the Smithsonian Institution under federal auspices and the creation of the American Association for the Advancement of Science—highlighted the growing visibility of S&T and foreshadowed the later development of a more significant federal involvement in science and technology. These events, together with what William G. Wells Jr. called a “tide of technological developments . . . in industry, in agriculture, in communications, and in transportation” (p. 8) in the 1850s, set the stage for a qualitative change in the federal role in these areas; this change came in the 1860s as a result of several events. First, the Civil War provided the first of several recurring examples of war focusing the government's attention and resources not just on technology but on the science underlying the technology. Second, the creation of the National Academy of Sciences in 1862 put the elite of American scientists, most of them in universities, at the service of governmental needs. Third, the passage of the Morrill Act and the creation of the U.S. Department of Agriculture, both of which occurred in 1862, established the land-grant

college system, heavily focused on agriculture and the mechanical arts, and developed government bureaus related to agricultural research, in a symbiotic relationship that, by the end of the nineteenth century, approached the Jeffersonian vision of a century earlier.

Meanwhile, in the late nineteenth and early twentieth centuries, the forerunner of the National Institutes of Health was established and undertook programs of research aimed at public-health problems, although much of this work took place in government rather than in university laboratories. Additional initiatives putting governmental resources in the service of S&T-based activities in the areas of conservation, industry, and (to a limited extent) aviation took place in the first two decades of the twentieth century. These did not yet involve significant amounts of university-based R&D, but their importance was that, with the curious exception of military applications, the essential infrastructure of federal government involvement in S&T was firmly in place by the 1920s, and, according to A. Hunter Dupree, “a government without science was already unthinkable” (p. 288). Belief in the importance of research had become infused throughout much of the U.S. economy, and industrially based R&D was becoming established in certain industries.

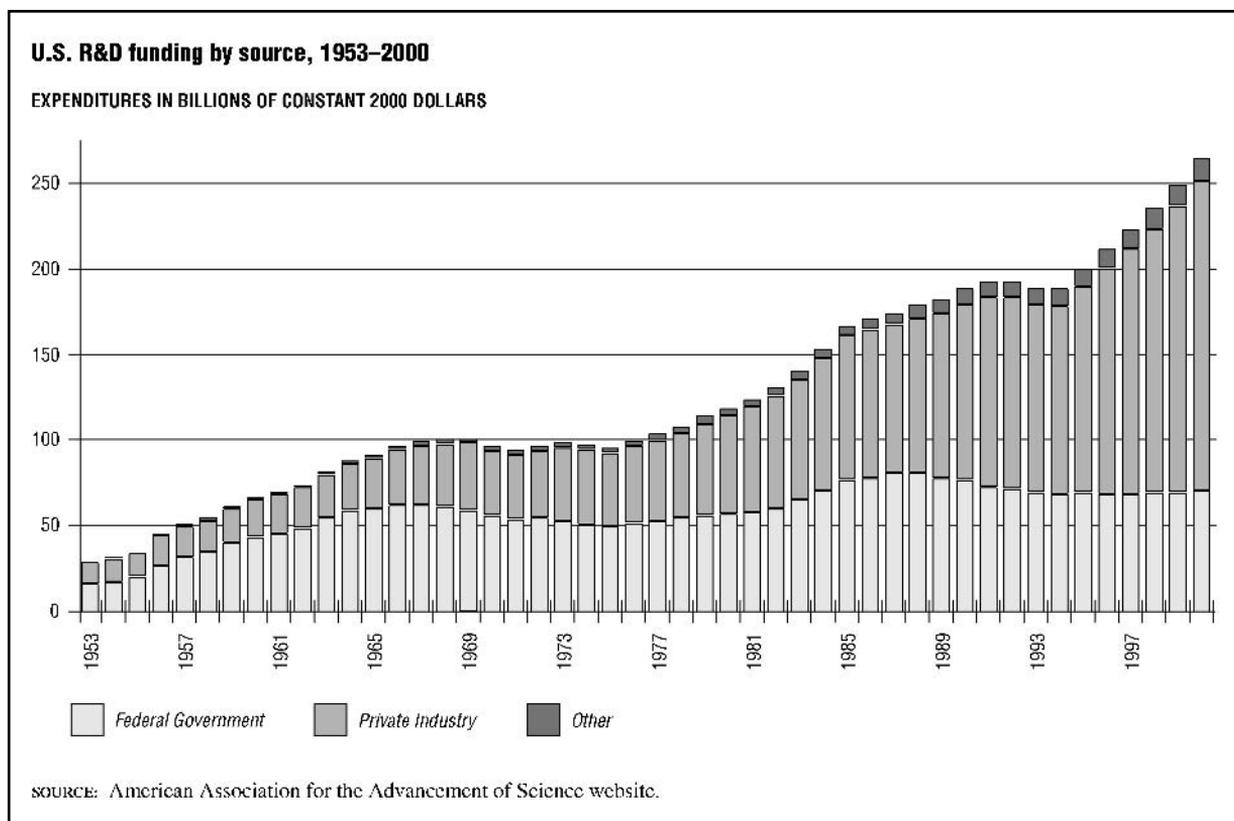
Science, like nearly all other programs, was significantly affected by government cutbacks during the Great Depression. But it was World War II (1939–1945) that was to provide the major turning point in the relationship between the federal government and S&T in the twentieth century. With the establishment by executive order of the National Defense Research Committee in June 1940 and its expansion into the Office of Scientific Research and Development (OSRD) in July 1941—both prior to the attack on Pearl Harbor and the formal entry of the United States into the war—the groundwork was laid for a historically incomparable system for mobilizing science for a war effort. The OSRD, headed by Vannevar Bush, was responsible for developing “a wide range of militarily decisive marvels” (Wells, p. 23), such as radar, medical drugs, and, of course, atomic weapons. This performance demonstrated beyond any doubt the power and effectiveness of federal support for R&D on a large scale, a lesson that carried over into the postwar era and that continued into the twenty-first century. Much of this research took place in university settings, and the massive expansion of federal R&D in the period fol-

lowing World War II included large increases in the amount of federal funds flowing to academically based R&D (see Figure 1).

Vannevar Bush’s report, *Science—the Endless Frontier: A Report to the President on a Program for Postwar Scientific Research*, produced at the close of World War II, set the framework for the “social contract” between science and government that would last for decades, whereby government would provide funds for science but, wherever feasible, leave to scientists the decisions about what projects would be supported and how the research would be conducted. This, it was argued, was the surest path not only to breakthroughs in basic science but also indirectly to the development of products for more direct societal benefit. Bush, in writing it, had clearly in mind the idea that much of that research would be conducted in colleges and universities. In the period immediately following the war, a number of major new S&T agencies were created in the federal government, including the National Science Foundation (NSF), the Atomic Energy Commission, and the Office of Naval Research (ONR); in addition, the National Institutes of Health (NIH) was reformulated and significantly expanded. These agencies—particularly ONR, NIH, and NSF—were soon to become mainstays of federal support for academically based R&D.

Much of the rapid growth in federal R&D in the decades following World War II was driven by cold war concerns and was militarily oriented. The launch of the *Sputnik* satellite by the Soviet Union in 1957 shook U.S. assumptions of technical superiority and fueled an even greater increase in defense- and space-related R&D. In the 1950s and 1960s the federal government was clearly the dominant source for national R&D, although by the early 1970s industrial R&D had caught up and was to move clearly ahead in total investments in R&D over the next three decades (see Figure 2).

Figure 3 illustrates the remarkable growth of R&D support received by colleges and universities over the latter half of the twentieth century. (The figures have been adjusted for inflation, using fiscal year 2002 as the standard, and so represent actual growth in “purchasing power” of those R&D dollars.) The figure dramatically shows not only the overall growth in academic R&D support from all sources but also that this growth was fueled primarily by the growth in federal support. The federal government has been the primary source of support for

**FIGURE 2**

R&D in colleges and universities since the post-World War II days, and it continues to be so.

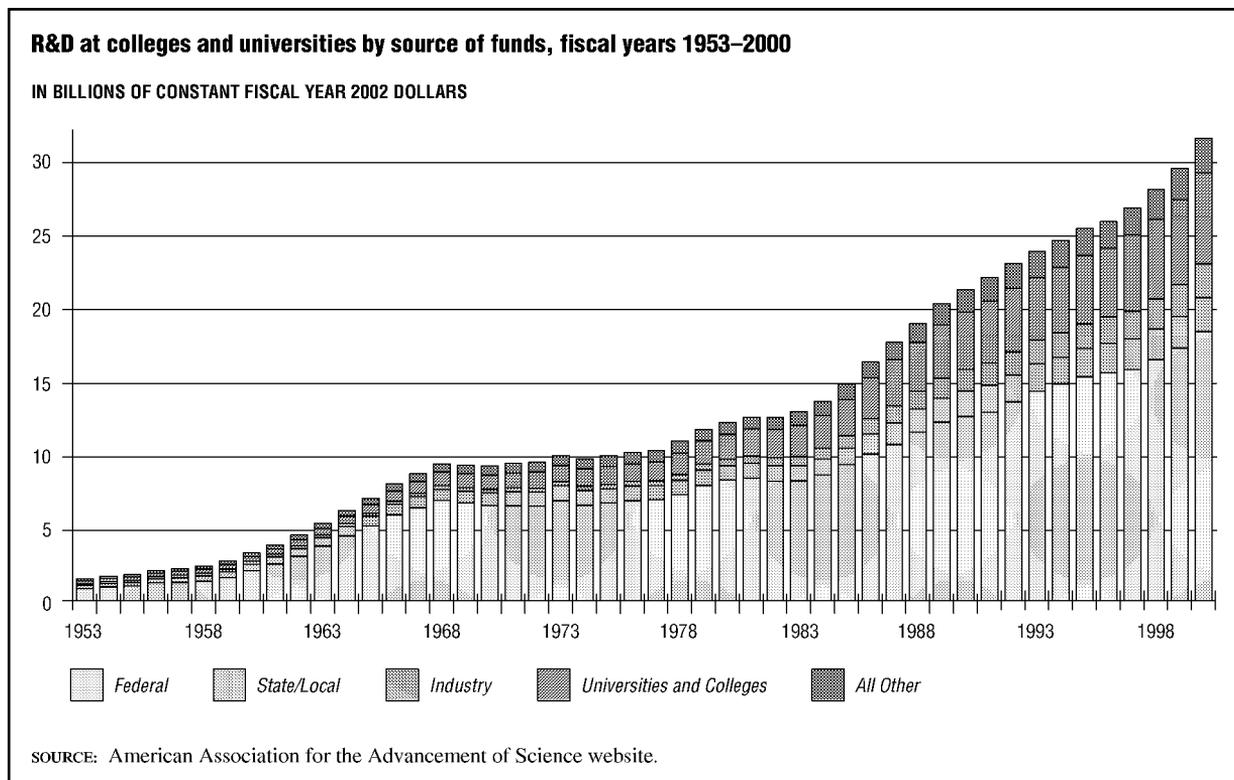
The 1980s saw an important step in federal government–university relations, with the passage (in 1980) and subsequent amendment (in 1984) of the Bayh-Dole Act. This act revised federal patent policy to give recipients of federal funds who invented or developed a product or process with that funding the opportunity to hold title to the item and to realize gains from transferring it into commercial channels. Previously, the federal government had reserved for itself the title to products developed with federal funds, but that policy was seen as bottling up potentially useful and commercializable inventions. Opinions differ about the act's full impact, but it clearly facilitated the growth of activities within universities for retaining intellectual property in items developed under university-based research and for trying to realize income from outside commercial use of those items.

The last two decades of the twentieth century saw the clear movement of research universities into a prominent place in the “knowledge-based econo-

my.” Research support from all sources, not simply federal agencies, became much more aggressively sought, and university R&D portfolios were much more carefully managed with revenue and even commercial goals in mind. It became common knowledge that one of the key elements to commercial development of a region through technology-driven change was the presence of an active, high-quality research university. Consequently, more than ever before, a university's neighbors feel that they have an important stake in that institution's success in securing research funds. Furthermore, according to Teich, “policymakers regard universities as catalysts for high-tech economic development both through entrepreneurial activity that spins off from their research and through the concentrations of highly trained human resources they attract and generate” (p. 5).

Table 1 helps to place federal funding for academic R&D in an overall national context at the beginning of the twenty-first century. Federal R&D funding accounted for \$69.6 billion (roughly 26%) of the national total of \$264.6 billion for R&D in 2000. Colleges and universities received \$30.2 billion

FIGURE 3



from all sources in 2000, which accounted for just over 11 percent of the national totals. The intersection of these two patterns—the federal level of support for R&D in colleges and universities—was \$17.5 billion, a figure that represented 58 percent of all academic R&D support. (It also represented just over 25 percent of total federal R&D support to all R&D performers.) The next section provides further detail about particular agencies and their levels of academic R&D support.

### Key Federal Agencies

Federal support for R&D in colleges and universities in the United States is concentrated in six agencies, which together accounted for 95 percent of the totals in 1999. These six are summarized briefly below, in decreasing order of support. The first three agencies listed—NIH, NSF, and the Department of Defense—alone accounted for 83 percent of college and university R&D from federal sources in 1999. (See Figure 4 for historical trends in support from these agencies.)

The National Institutes of Health, within the Department of Health and Human Services, is by far the largest source of federal support for academic

R&D, providing \$8.2 billion to colleges and universities in 1999—58 percent of federal support to these institutions. The NIH's mission is to advance knowledge promoting improvements in human health, and it does this by supporting biomedical and other fundamental research related to health and disease. The major fields supported by NIH are overwhelmingly in the life sciences (89% of its academic support in 1997), principally microbiology and medical sciences. Other fields that receive NIH support are psychology (4%), the physical sciences (1.5%), and the social sciences (1%). NIH's domination of academic R&D support has shifted the balance among the disciplines in universities' R&D portfolios, with engineering and the physical sciences accounting for smaller shares than in previous years.

The National Science Foundation ranks second in R&D support to colleges and universities, furnishing \$2.2 billion in 1999, or 15 percent of federal totals. NSF is unique among federal agencies, being the only one whose mission is fundamental research and education in all major scientific and engineering fields. Thus, NSF's support is more evenly balanced among the disciplines than most of the mission agencies. The distribution in 1997 was: physical sci-

TABLE 1

	Sources of Funds				Total
	Federal Government	Industry	Colleges and Universities <sup>2</sup>	Non-Profit Institutions	
<b>National Patterns of R&amp;D, 2000</b>					
<b>Preliminary expenditures, in thousands, 2000</b>					
Performers:					
Federal	19,143	—	—	—	19,143
Industry	19,635	177,645	—	—	197,280
Colleges and Universities	17,475	2,310	8,166	2,203	30,154
FFRDCs <sup>1</sup>	9,294	—	—	—	9,294
Nonprofits	4,079	1,085	—	3,586	8,750
TOTAL	69,627	181,040	8,166	5,789	264,622
<b>Percent change in constant dollars (1999 to 2000)</b>					
Performers:					
Federal	2.3%	—	—	—	2.3%
Industry	-4.6%	8.6%	—	—	7.1%
Colleges and Universities	3.7%	6.1%	4.7%	4.5%	4.2%
FFRDCs <sup>1</sup>	1.4%	—	—	—	1.4%
Nonprofits	7.5%	8.9%	—	5.8%	7.0%
TOTAL	0.8%	8.6%	4.7%	5.3%	6.2%
<sup>1</sup> Federally funded research and development centers. Includes all FFRDCs (administered by industry, nonprofits, and universities).					
<sup>2</sup> Includes an estimated \$2.2 billion in state and local government funds provided to university and college performers.					
SOURCE: American Association for the Advancement of Science website.					

ences, 22 percent of NSF academic support; engineering, 21 percent; environmental sciences, 17 percent; life sciences, 16 percent; computer sciences and mathematics, 15 percent; and the social and behavioral sciences, 4 percent.

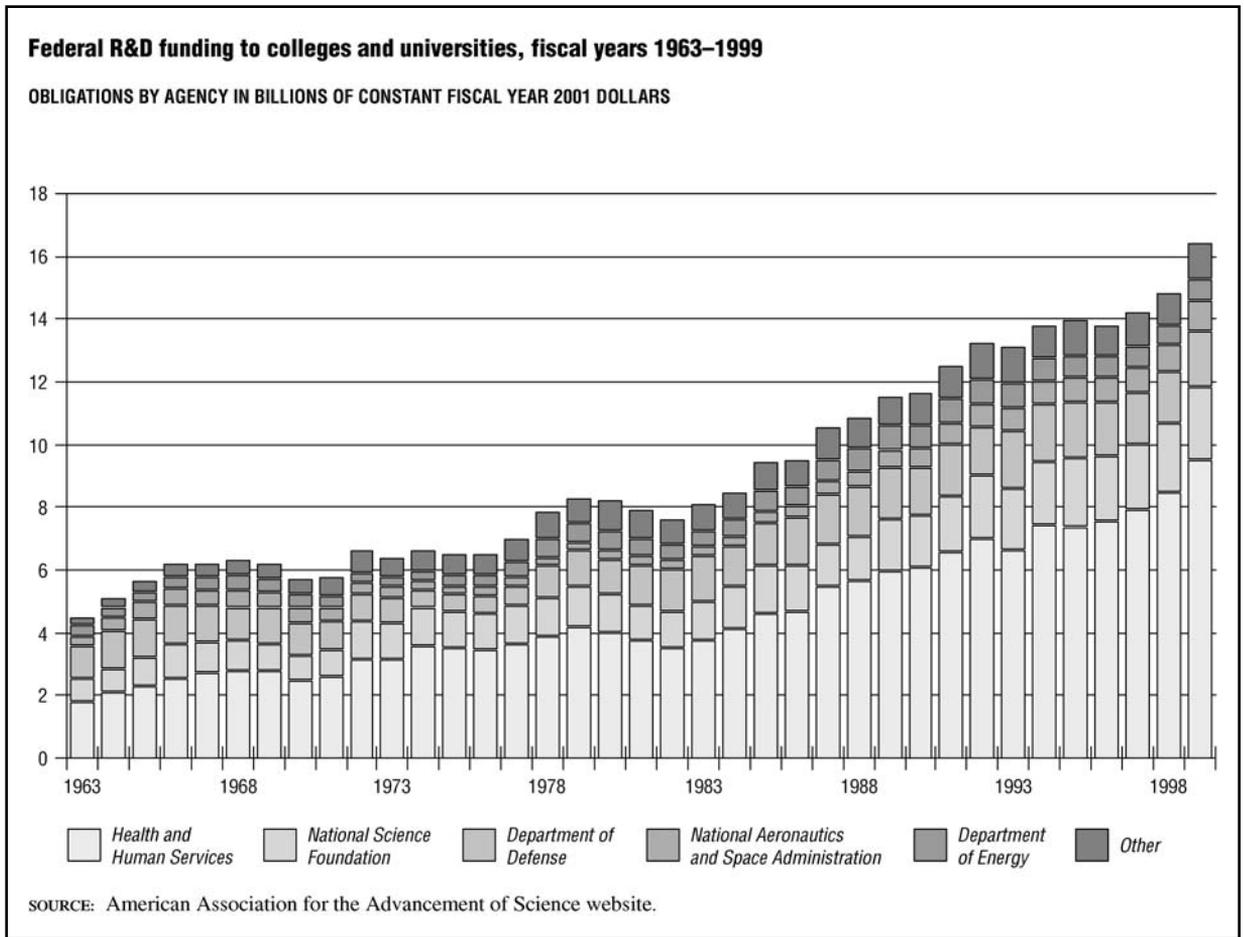
The Department of Defense (DoD) is the third-largest federal agency in terms of support for academic R&D, providing \$1.4 billion in 1999, or 10 percent of federal totals to colleges and universities. DoD is the mission agency par excellence, being responsible for providing the military forces needed to deter or win wars and to protect the security of the country. DoD is by far the largest supporter of R&D among the federal agencies. Most of its R&D, however, is devoted to the development, testing, and evaluation of weapons systems, and only about 12 percent of its R&D has gone for actual research (both basic and applied) in recent years. The major fields supported by DoD academic R&D funds are engineering (40% of DoD academic support in 1997), computer sciences (23%), physical sciences (11%), and life sciences and environmental sciences (at about 10% each).

After the above three, the levels of support by other agencies drop off noticeably. The National Aeronautics and Space Administration (NASA) provided \$719 million in support to colleges and uni-

versities in 1999, which was about 5 percent of federal totals to these institutions. NASA's mission is to undertake aeronautic and space research and activities for the benefit of all humankind. The major fields receiving NASA academic R&D support were physical sciences (37%—principally astronomy), environmental sciences (29%—mostly atmospheric science), engineering (15%), and life sciences (9%).

The Department of Energy contributed \$598 million toward R&D in colleges and universities in 1999, about 4 percent of federal support for them. The Energy Department's mission is much broader than simply energy, and even its R&D programs have several components, including energy research, support for fundamental physical science research, and research involving nuclear security in support of the nation's defense function. The physical sciences (dominated by physics) received 59 percent of Department of Energy support to academic institutions, followed by life sciences, engineering, and environmental sciences, each with about 13 percent.

The U.S. Department of Agriculture (USDA) supported R&D in colleges and universities with \$400 million in 1999, nearly 3 percent of federal totals to such institutions. The USDA's mission is also broad but centers on its responsibility for the ade-

**FIGURE 4**

quacy and safety of the nation's food supply and for developing and expanding markets, both domestically and abroad, for agricultural products. Its academic R&D support, not surprisingly, went overwhelmingly (77%) to the life sciences, comprised largely of agricultural sciences (39%), non-environmental biology (21%), and environmental biology (15%). The next highest supported fields were the social sciences (12%), primarily economics.

All other federal agencies combined accounted for \$739 million of support to academic institutions in 1999, or about 5 percent of the federal totals. This is not to diminish their importance, however. The Departments of Commerce, Transportation, Interior, and Education and such agencies as the Environmental Protection Agency support appreciable amounts of research in colleges and universities, and they rely upon those institutions to provide important research and expertise relevant to their respective missions.

### Advantages and Disadvantages of Federal Research Support

Not surprisingly, research support from federal sources has both advantages and disadvantages. The chief advantage is the sheer scale of support—for most fields, there is simply more money potentially available from federal agencies than from any other source. The decentralized nature of federal R&D support sometimes makes it possible for principal investigators (those submitting proposals) to have more than one potential sponsor to which to submit their ideas. Another advantage is that the researcher usually has greater autonomy with federal support in comparison with support from industry. For most grants (as opposed to private contracts), federal agencies have a relatively hands-off stance regarding the researchers and their work.

Because both the scale of support and the relative autonomy afforded researchers attract large numbers of proposals from researchers, most agen-

cies are quite selective in what they support and pride themselves on supporting only the highest quality work. To ensure this level of excellence, many agencies rely upon “peer review” or “merit review” (review of proposals by those most knowledgeable in the relevant areas of research). In addition, the managers of particular research programs within the agencies are often highly accomplished and knowledgeable researchers in their own right. Thus, there is a certain prestige attached to researchers whose work is supported by certain federal agencies, particularly NSF and NIH. This prestige can carry over not only to the researchers’ own careers generally but also to their home institutions.

On the other hand, federal support has disadvantages as well. The forces that make winning support from the “better” agencies more prestigious—because of the sheer number of applicants relative to the available resources—also make it less likely. Success rates for proposals to NSF and NIH since 1990 and perhaps earlier have been in the 20 and 30 percent range. Eventual success often comes only through resubmitting proposals after revising them based on feedback from the first round of reviews. The high number of applicants also means that grants, even if obtained, may be inadequately funded to complete the proposed research.

In addition to these daunting considerations, the paperwork requirements for submitting proposals to federal agencies are formidable. Researchers spend inordinate amounts of time and effort writing proposals, often with unfavorable chances of success. (As some agencies have shifted to electronic submission of proposals, “paperwork” may no longer be the operative word, but the burden of documentation in proposals remains very high.) Apart from the paperwork burden, the task of dealing, over the several months required for decisions on proposals, with inherently cautious, often ponderous federal bureaucracies can be draining for researchers. Finally there is often a lack of stability in funding levels for some areas of research, resulting from the vagaries of the annual budget process and from changes in policymakers’ enthusiasm for particular areas.

The cumulative effect of these difficulties can extend to the point of discouraging some students from pursuing scientific careers. For many, if they could simply do their science, they would be happy. But when they see that they will also have to expend so much effort in trying to obtain funding, with so

little chance of success, some may turn to other career options.

There is no question that both the nature and the scale of federal funding for R&D has transformed colleges and universities over the past century, especially in the last several decades. The relationship has always been, and continues to be, a dynamic one, filled with both rewards and tensions. A central question for the future is whether that relationship can continue to be a productive one, in which each partner can grow and adapt while also retaining the core of its purpose and identity, in ways that clearly benefit the public.

*See also:* FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF; FACULTY ROLES AND RESPONSIBILITIES; RESEARCH UNIVERSITIES.

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STEPHEN D. NELSON

## FEDERAL FUNDS FOR HIGHER EDUCATION

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The federal government plays a critical role in providing financial support for higher education. In fiscal year 1996 approximately \$40 billion, or one-fifth of the total revenue received by degree-granting institutions of higher education, originated from the federal government (National Center for Education Statistics). These funds generally are provided in two forms: through direct support to colleges and universities, generally for research or facilities; and through grants and loans made to students enrolled in postsecondary institutions.

This support inevitably comes with political strings attached. The federal government, as does any political entity, establishes program and policy priorities, and expends funds in support of those priorities. The provision of federal funds generally brings along with it rules and regulations that govern how the funds can be used. Recipients of these funds, whether higher education institutions or their students, must agree to comply with these regulations as a condition of their receipt. Throughout history, the relationship between the federal government and higher education has changed, and along with it has been a change in the priorities and regulations with which federal funds are provided to higher education.

### History

Throughout U.S. history, overriding federal policies on higher education have been noteworthy chiefly by their absence. Federal policies have usually been implemented through appropriations rather than general rules and regulations and have thus affected

only selected kinds of institutions, programs, students, and faculty. Even the unrestricted grants of four million acres of federal land, which helped to support universities in seventeen of the twenty-one new states established before the Civil War, were confined to public institutions.

The Morrill Act of 1862 strengthened the budding network of state universities by granting public lands (or the equivalent in scrip) to every state for "the endowment . . . and maintenance of at least one college where the leading object shall be . . . to teach such branches of learning as are related to agriculture and the mechanic arts . . . in order to promote the . . . education of the industrial classes." By 1890 at least twenty new public institutions had been established under the act, and another twenty institutions had expanded or had been placed under public control. The Second Morrill Act of 1890 provided additional annual grants to certain fields of practical instruction but not to the other scientific and classical studies that the 1862 act had embraced.

Gradually, between the Civil War and World War I the principles that continue to govern many federal programs developed: (1) the annual subvention of designated kinds of education and research; (2) the retention by the federal government of the authority to review proposed plans before committing funds, to place conditions on their use, and to audit expenditures; and (3) the encouragement of practical studies and public service activities.

The next major expansion in federal programs came during the Great Depression, when federal outlays rose from \$21 million in 1930 to \$43 million in 1936. This represented an increase of from 4 to 9 percent of institutions' total annual income. In 1937 federal aid to students reached its peak during this era, when 139,000 students (11% of all students) received an average of \$12 per month for undergraduates and \$20 per month for graduate students as part of the National Youth Administration's work-study program.

Federal support for higher education expanded greatly during World War II, increasing to over \$300 million in 1944. The bulk of this expansion was due to research spending in support of the war effort, though colleges and universities also supported the military by providing training courses to over 315,000 army and navy trainees.

Although military research slowed down with the close of World War II, the Servicemen's Read-

justment Act of 1944 (more commonly known as the G.I. Bill) provided a new revenue stream for colleges and universities. In 1948 the federal government supported more than 1 million veterans in college, with payments for tuition totaling approximately \$365 million, and another \$1.3 billion provided to the veterans themselves for subsistence costs. As returning G.I.'s completed their postsecondary education and reentered the workforce, federal support for higher education began to decline. After peaking at \$1.9 billion in 1949 (including subsistence funds for veterans), federal support declined and did not reach this level again until 1963.

The late 1950s saw the creation of the first generally available student loan program through the passage of the National Defense Education Act in 1958. This legislation, passed in response to the launching of the *Sputnik* satellite by the Soviet Union, sought to promote access to higher education as a means toward increasing the technological capabilities of the United States. Now called Perkins Loans, these loans were funded by providing capital directly to colleges, which in turn lent the money to students at highly subsidized interest rates. This era also saw a resurgence in federal support for research, particularly military research to support the cold war efforts of the nation.

The next major milestone in federal support for higher education was the passage of the Higher Education Act of 1965. Title IV of this legislation created the student grant and loan programs that still provided the foundation of financial aid support for students at the beginning of the twenty-first century. Provision of this support was based on the financial need of the students and their families; the aid—both grants and loans—was targeted at the nation's neediest students. In addition to the broad-based student aid programs, the Higher Education Act also provided direct funding for college libraries, historically black colleges and universities, and a number of smaller, specialized programs. The Higher Education Act has undergone reauthorization approximately every five years since its initial passage. With every reauthorization has come changes to how financial aid is provided to students and institutional support to colleges and universities.

Federal support for research has also grown since 1965. According to the National Center for Education Statistics, research support provided to educational institutions (the great majority of which

goes to postsecondary institutions) has grown from \$1.8 billion in 1965 to \$21 billion in fiscal year 2000.

### Federal Support for Students

Since the passage of the Higher Education Act of 1965, financial aid for students has been central to federal support for postsecondary education in the nation. In fiscal year 2000 the federal government provided \$47.7 billion in financial aid to college students at both the undergraduate and graduate levels, a sum that represented 70 percent of all aid available that year. Just over half of this amount (\$24.2 billion) was in the form of private loans guaranteed and subsidized by the federal government; the remaining amount was in the form of grants, work-study, and loan capital provided directly by the federal government. Federal funds for student aid more than doubled in constant dollars between 1975 and 2000, far outpacing the growth in enrollments of 28 percent during the same period.

The Higher Education Act has as one of its goals the equalization of educational opportunity for all students in the United States, seeking to remedy “the appalling frequency with which a student is presently forced to forego the opportunity of postsecondary education because of inability to meet the costs” (Mumper, p. 78). The provision of aid under Title IV of the act has been made almost exclusively based on the financial need of the student and his or her family. In the early years, the emphasis was on meeting the college access needs of poor students through the use of grants. When first fully funded in fiscal year 1975, Pell Grants, the foundation grant program, provided more than 80 percent of the cost of attendance (tuition, room, board, books, and other expenses) at a typical public, four-year institution. Loans were available for students who wanted to attend a more expensive institution.

Over the ensuing twenty-five years, the Pell Grant program did not keep pace with the rise in college costs. By fiscal year 2000 the maximum Pell Grant provided only 40 percent of the cost of attendance at a public four-year institution. While total Pell Grant spending had grown 691 percent over the preceding twenty-five years, federal loan volume had increased 2000 percent over the same period, thus shifting the foundation of the Title IV programs from grants to loans.

The loan programs, which like Pell Grants had initially been targeted at students from financially

needy families, were opened up to all students in 1978. While Congress and the Reagan administration rescinded this change three years later, the income limits in the loan programs (and the limits on the amount of loans that could be taken out) were liberalized again in the 1992 amendments to the Higher Education Act.

Another important milestone in federal funding for higher education students was the passage of the Taxpayer Relief Act of 1997. This legislation, which created the Hope and Lifetime Learning tax credits for college tuition, was initially estimated to cost the government \$40 billion in foregone tax revenue in its first five years, or slightly more than the estimate for Pell Grant spending during that period. Unlike Pell Grants, which are targeted at the nation's neediest students (those from families making less than \$45,000 per year in 2000), the tax credits were made available to families with incomes of up to \$100,000. The structure of the tax legislation helped shift even more federal resources away from the neediest college students and toward middle- and upper-income students.

The changes in the provision of federal support for college students since the passage of the Higher Education Act in 1965 can best be characterized as a shift away from meeting the college access needs of poor students to subsidizing college affordability for students from wealthier families. While the Pell Grant program continues to receive much attention in Congress and on college campuses, its position as the cornerstone of federal support for postsecondary education has been usurped by the emphasis on the use of loans and tax credits as alternative means for providing federal funding to students and their families.

### **Federal Support for Research**

As noted earlier, federal support for research at educational institutions grew to reach a level of more than \$21 billion in fiscal year 2000. These expenditures are generally tightly coupled with national priorities. For example, during the latter half of the 1970s, when the nation faced an energy crisis due primarily to the OPEC oil embargo, there was an expansion of funding for energy-related research. In the 1980s the focus turned back towards military research, as the Reagan administration and Congress created new defense initiatives. In the latter half of that decade, with the end of the cold war and the

aging of the American populace, funding for health-related research grew fastest.

These changing priorities can be demonstrated by examining the amount spent by individual departments and agencies as a percentage of total federal research. In 1965 the Department of Defense represented 24 percent of all federally sponsored research at educational institutions. It dropped to approximately 10 percent of the total in the 1970s, before recovering in the 1980s to 15 percent. In fiscal year 2000 it stood at less than 8 percent of the total (National Center for Education Statistics). In contrast, spending by the Department of Health, Education, and Welfare in 1965 represented approximately 26 percent of total federal research. This share grew steadily (represented by the successor Department of Health and Human Services), reaching 44 percent of the total in 2000.

University-based research tends to follow the priorities established by the federal government. Most federally sponsored research is highly targeted, so that academic researchers need to adjust their research programs to attract federal dollars. Federal research dollars also bring with them support for indirect costs, those expenses associated with operating a large, complex university that cannot be directly attributed to specific research projects. Included in indirect costs are such items as library operations, plant maintenance, repair and operations, administrator salaries, and the costs of managing sponsored research on the campus.

Federally sponsored research has the effect of influencing not just the research agendas of faculty members, but also the decisions of students to enroll in doctoral programs. Doctoral students in most large research universities, particularly those in the sciences and engineering, commonly receive fairly generous fellowships and stipends. Most institutions depend upon sponsored research to support these students. As research dollars flow from sponsors, particularly the federal government, into and out of particular fields, financial support for students also varies. These dollars have the effect of influencing the decisions of students to enroll in specific fields, as well as the ability of universities to support them.

Through its financial support of both students as well as colleges and universities, the federal government has played an influential role in shaping the growth of the higher education industry throughout history. Even though the political and management

control of institutions remains in the hands of states and private boards of trustees, the influence of federal funds for higher education is strongly felt by almost all of the institutions and by most students throughout higher education.

*See also:* COLLEGE FINANCIAL AID; FEDERAL EDUCATIONAL ACTIVITIES, *subentries on* HISTORY, SUMMARY BY AGENCY; FEDERAL FUNDING FOR ACADEMIC RESEARCH; G.I. BILL OF RIGHTS.

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DONALD E. HELLER

## FEDERAL INTERAGENCY COMMITTEE ON EDUCATION

The Federal Interagency Committee on Education (FICE) is mandated to ensure "effective coordination of Federal education programs." It was first established by Executive Order 11185, issued by President Lyndon B. Johnson on October 16, 1964, and subsequently amended by Executive Order 11260 (1965) and by Executive Order 11761, issued by President Richard M. Nixon in 1974.

FICE was included in section 214 of Public Law 96-88, the Department of Education Organization Act. The act designates the U.S. Secretary of Education as the chair of FICE. On January 12, 1982, President Reagan issued a memorandum to the Secretary of Education stating that "senior policy making offi-

cial from the following agencies, commissions and boards should be assigned to the committee: the U.S. Department of Education; National Endowment for the Arts; National Endowment for the Humanities; National Science Foundation; and the Departments of Agriculture, Defense, Interior, Labor, Health and Human Services, Housing and Urban Development, Transportation, Treasury, and Veterans Affairs."

Subsequently, FICE membership grew to include representatives from the Department of Justice, Federal Emergency Management Agency, Environmental Protection Agency, The GLOBE Program, Institute of Museum and Library Services, Library of Congress, National Aeronautics and Space Administration, Peace Corps, Smithsonian Institution, and U.S. Commission on Civil Rights.

In these acts of legislation, Congress recognized the importance of coordination of federal education programs. FICE assists the Secretary of Education in providing a mechanism to ensure coordination between the Department of Education and other federal agencies that administer education programs. The Department of Education's Office of Intergovernmental and Interagency Affairs is the office responsible for managing FICE.

In the late 1960s and 1970s FICE made recommendations on a variety of postsecondary issues including expanded federal support for graduate study, federal support of historically black colleges and universities, and consumer protection for postsecondary education. These activities led to better interagency cooperation in these areas. FICE's work in consumer protection for postsecondary education led to legislation to protect consumers from the questionable activities of some postsecondary institutions.

Other accomplishments have included planning for an International Conference on Environmental Education in 1987, and making recommendations for research on rural education. The latter were summarized in a 1991 article (later published as a pamphlet) entitled "An Agenda for Research and Development on Rural Education."

In 1999 FICE began an important project to catalog all federal education programs. The committee began with a pilot to test the feasibility of compiling an inventory of federal education programs. The Departments of Education, Treasury, Interior, and Agriculture combined with the National Science Foundation to form a subcommittee that developed

a definition of an education program and inventoried programs meeting the definition within Interior, Agriculture, and the National Science Foundation. This resulted in a report entitled *Single Source: Towards an Inventory of Federal Education Programs*. Since the completion of the report, seven additional agencies have compiled inventories based on the definition.

The Department of Education's interagency team presented *Single Source* to the department in December 2000. After departmental review, several changes were made to the definition of an education program. These changes were presented to and adopted by FICE. All participating agencies were expected to utilize the definition to compile their inventories by the end of fiscal year 2001. FICE defined an education program as one that comprised activities backed by a congressional authorization and current appropriation, with the main purpose of providing support to, or strengthening education at, pre-K through graduate levels. Adult education is included in the definition, but activities such as employment training or public information efforts are excluded. Additional activities that fall under the definition of an education program are development of instructional methods and materials, professional enhancement and utilization of educational technology in schools, provision of assistance to students, upgrading of physical and educational school facilities, and research that has a goal of improving education.

FICE members participate in a number of Department of Education activities and initiatives. In the future, the inventory and list of education activities will provide a better understanding of the depth and breadth of the federal effort to improve education.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; U.S. DEPARTMENT OF EDUCATION.

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## FEDERAL SCHOOLS AND COLLEGES

The U.S. federal government operates, financially supports, or has chartered a number of schools and colleges to meet a variety of specific educational needs thought to be best addressed at the national level. Traditionally, elementary and secondary schools in the United States are primarily the responsibility of local school districts. Two- and four-year institutions of higher education are supported by state and local governments and by private entities. Private nonprofit and religious schools also play an important role in providing K-12 education, and there is a more recent rise in the number of for-profit businesses delivering education and educational services. In several instances, however, based on historical and geographical circumstances, the federal government complements these more customary means of providing education.

### Overview

In elementary and secondary education, the federal government directly operates school systems serving children of personnel living on military bases, and systems serving Native Americans and Native Alaskans living on reservations and in native villages. Within higher education, the federal government provides substantial assistance toward supporting schools for deaf, African-American, Native American, and other students. Several institutions of higher education are also directly operated by the federal government, including the U.S. Military Academy at West Point, the U.S. Naval Academy, and the U.S. Air Force Academy, among others. In addition to operating schools directly, the federal government also provides numerous financial and other incentives aimed at advancing elementary, secondary, and higher education outcomes.

### Elementary and Secondary Schools

Because of the large, diverse, and mobile nature of military deployment, the Department of Defense Education Activity (DoDEA) program operates two elementary and secondary school systems for the children of military and civilian personnel. Children of department employees within the United States, Guam, Puerto Rico, and Cuba are served by the Domestic Dependent Elementary and Secondary Schools (DDESS) system, while dependents living abroad are served by the Dependents Schools (DoDDS) system. Together, these systems enrolled more than 100,000 students in more than 200 schools in the year 2000. If these DoDEA schools were classified as a single state school district, it would rank among the twenty-five largest school districts, based on enrollment, in the United States.

The Bureau of Indian Affairs, within the U.S. Department of Interior, also operates a sizable school system serving Native Americans. The federal responsibility for providing education for Native Americans has been established historically through a succession of laws, treaties, and court decisions. As a result, the Office of Indian Education Programs (OIEP) directly operates nearly 70 schools, and provides grants and contracts to tribes to operate 116 additional schools. These schools enroll more than 50,000 students.

These military and Native American schools maintain curricula, standards, and educational goals that correspond to those found in local public school districts nationally. In addition, they also address unique educational aspects facing the populations they serve. Because military service requires frequent movement, for example, DoDEA teachers and counselors on military bases must be especially aware of how these numerous changes in environment and classmates may affect students academically and personally. In addition, DoDEA schools maintain a consistency of curriculum, which facilitates students' continuum of study and learning despite frequent geographical transfers. At the same time, each locality where students attend school also presents unique opportunities for them to learn local culture and language, which is encouraged in DoDEA schools. Within schools on reservations, efforts are made to maintain native and tribal cultures and languages as aspects of the curriculum. In fact, over the past decades and with the encouragement of the U.S. Congress and the OIEP, more and more schools on reservations are being operated by tribes and tribal

school boards, rather than directly by the federal government, supported through the federal grants and contracts administered by OIEP.

Students from military families living off-base, or on bases with insufficient numbers to support a federally operated school, generally attend local public schools, as do children living on other federal land. These students often comprise a substantial share of the local community's school population, however. To compensate for the financial impacts incurred as the result of this federal presence, the federal Impact Aid Program provides funds to affected local school districts. The basis for this aid is that the federal employees, especially those who live on federal land or military bases, diminish the tax base that traditionally supports local school districts. Local revenues are lost, for example, because personnel living on federal property pay no property taxes, and often shop in stores on bases that generate no local sales tax revenue. Impact Aid also is provided to some school districts enrolling students who live in low-rent housing, and additional students who live on Indian reservations.

In addition to operating schools directly, or providing funds to schools directly affected by its presence, the federal government supports many educational programs and activities geared toward serving populations that have been, or are likely to be, at risk or underserved by traditional educational mechanisms. Federal funds partially support, for example, such students through Title I, Part A of the Elementary and Secondary Education Act of 1965, the Individuals with Disabilities Education Act (formerly the Education for All Handicapped Children Act), and the Head Start programs. Federal assistance is also provided to school systems in the commonwealths of Puerto Rico and the Northern Mariana Islands, and the territories of American Samoa, Guam, and the U.S. Virgin Islands, both through their participation in programs funded partially by the federal government (including those for at-risk students), and through the Department of Defense schools and Impact Aid. Federal revenues for public elementary and secondary schools alone range from nearly 80 percent of all school funding in American Samoa, to 25–30 percent in the Northern Mariana Islands and Puerto Rico, and less in the Virgin Islands and Guam.

## Institutions of Higher Education

Although the federal government does directly operate a number of educational institutions such as the military service academies, it more commonly facilitates the formation of, and provides significant funding support for, schools and colleges established under its auspices, while leaving their organization and management to the institutions themselves.

Two institutions of higher education directly chartered by Congress are Gallaudet University and Howard University, both in Washington, D.C. In 1864, at the height of the Civil War, President Abraham Lincoln signed the bill authorizing Gallaudet University to grant college degrees. Efforts by Amos Kendall, an influential Washington writer and politician, led to the formation in 1857 of a school to serve deaf and blind children, officially known as the Columbia Institution for the Instruction of the Deaf, Dumb, and Blind. Believing that the school should grant college degrees and open the opportunity for higher education to deaf students, Kendall and the school's first president, Edward Miner Gallaudet, presented their case to Congress. They noted that higher learning for deaf individuals was possible with sign language, and that sign language enabled such education to be on a par with that obtained through spoken language. The initial emphasis of this college was to train teachers to work in the growing number of state schools for the deaf, and since these schools were spread across the United States, the federal government was asked to support a postsecondary institution to provide this training. By 1865 the school served only deaf students in both a pre-college school and in the college (blind students were transferred to a state school for the blind). Gallaudet College became Gallaudet University in 1986, and maintains the Kendall Demonstration Elementary School and the Model Secondary School for the Deaf on its campus.

Only a few years after the Civil War ended, the need also became clear for the establishment of a comprehensive institution of higher education serving the four million freed slaves and several hundred thousand free African Americans in the United States. The initial plan was to establish a theology school—an effort led by members of the First Congregational Society, a prominent Washington, D.C., church. General Oliver O. Howard, at the time the Commissioner of the Freedmen's Bureau in the U.S. War Department, was a member of this group and supported the idea. Soon afterwards, the plan was

expanded to create a school for both theological training and to train teachers. While not the first college for African Americans (there is some evidence that Cheyney University in Pennsylvania was the first), the comprehensive plan for the new university soon grew to include programs in the arts, sciences, medicine, and law. These efforts culminated in the signing of the charter for Howard University by President Andrew Johnson in 1867. Although the charter of Howard University indicated the institution was for all individuals, there was no doubt that the intent was to serve freed slaves and other African Americans.

Both Gallaudet University and Howard University were established in times when there was great debate about whether deaf individuals and freed slaves (and freemen) were capable of achieving higher education. At the start, both universities had an initial goal of training teachers for the growing number of deaf institutions and in schools where freed slaves were obtaining public education for the first time. Both universities, although chartered to grant degrees by the federal government and receiving substantial shares of their revenues from the federal government, are private, nonprofit institutions, governed by boards of trustees. While there is some federal review of their policies, they continue to maintain the independence to determine their own academic and strategic planning objectives. Both universities continue to be national in scope, are fully accredited, and enroll both undergraduate and graduate students from across the United States in unique educational, cultural, and social environments. The importance of these two federally chartered schools is similarly seen in their impact on the wider communities they serve.

**Deaf education.** Gallaudet University is the only institution of higher education for deaf and hard of hearing students in the world. As such, it is a center for the study of deaf culture, history, and language. It is also the only institution of higher education where all communication between students, faculty and staff is direct and in sign language. A great majority of deaf teachers for deaf children obtained their bachelor's degree at the university, as have leaders in business, science, the arts, and other endeavors. In 1988, spurred by a student movement, Dr. I. King Jordan was named the university's first deaf president, an event that further served to encourage deaf students around the world to raise their aspirations and expectations for their futures.

**African-American education.** Howard University sets a national standard for the education and aspirations of African-American students in the United States. Established nearly 100 years before the passage of the Civil Rights Act in 1964, it has provided unique and diverse opportunities for African Americans in an era of segregation and discrimination. Howard University's mission continues to emphasize the history, culture, education, and societal role of African Americans, as well as other historically disenfranchised groups. Dr. Mordecai Johnson was named as the university's first African-American president in 1926.

Howard University is one of more than one hundred historically black colleges and universities (HBCUs) in the United States. These colleges and universities were all established prior to 1965, at which time Congress agreed to provide increased financial support to them, compensating for past lapses in federal aid. Subsequent Presidential Executive Orders strengthened the federal role in providing financial and educational support for HBCUs. Among the diverse group of HBCUs are Clark Atlanta University, Florida A&M, Grambling State University, Hampton University, and Southern University. Similarly, the federal government continues its support for additional study by deaf students through funding for the National Technical Institute for the Deaf (NTID) at the Rochester Institute of Technology in New York.

**Native American education.** The first institution of higher education for Native Americans, Diné College (formerly Navajo Community College), opened on the Navajo Reservation in Arizona in 1968, more than one hundred years after the federal government's first impetus to assist the then educationally disenfranchised groups of deaf and African-American students. The founding of this first tribal college was supported by funds from the federal Office of Equal Opportunity, with federal funds continuing to play a crucial role in the ongoing success of this and more than thirty other tribal colleges in the United States. Most of these schools are two-year colleges, but a growing number are adding four-year and graduate degrees, with South Dakota's Oglala Lakota College and Sinte Gleska University being among the first to do so.

The educational environments and philosophies in these comparatively new tribal colleges are strikingly similar to those of their century-old counterparts serving deaf and African-American students.

Chartered by tribal governments, these institution's curricula highlight native culture, language, and traditions. Academic and developmental programs are geared towards the specific needs of the indigenous student populations. The colleges not only serve those on each reservation, but also are resources for the entire reservation and for members of tribal communities nationally. Most tribal college presidents are Native Americans, further encouraging aspirations of future generations in higher education.

### Funding

In addition to direct support to institutions of higher education, the federal government provides many other types of funding for students and organizations as well. Aid to individuals, for example, is given through student financial assistance programs, loans to individuals and families, work-study grants, and other incentives. Colleges and universities also receive aid through research and development grants, and additional federal funds support education at a variety of research facilities. In addition, an institution affiliated with the federal government but receiving no direct U.S. government funding, the U.S. Department of Agriculture Graduate School, offers programs geared towards the needs of federal workers and managers. Although this institution operates on a self-supporting basis, much of its funding is derived through federal agency tuition payments. Further, the government provides training for its senior executives at the Federal Executive Institute and Management Development Centers, as well as training opportunities at various public and private colleges and within federal agencies.

### Goals

A more direct federal role in supporting schools and colleges within the otherwise state, local, and private educational mandate in the United States is presented here; however, in a broader sense, the federal role in education encompasses an extensive range of programs established to promote a wide variety of goals. These goals include improving academic achievement, expanding knowledge, providing equality of educational opportunity, collecting and disseminating education data, encouraging research and development, fostering health, advancing national security, and maintaining international relations. Viewed this way, spending for all types of educational activities accounted for approximately 10 percent of all federal expenditures in fiscal year 2000.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES, *subentry on* SUMMARY BY AGENCY; FEDERAL FUNDS FOR HIGHER EDUCATION; U.S. WAR COLLEGES.

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#### FEMALE STUDENTS

*See:* AMERICAN ASSOCIATION OF UNIVERSITY WOMEN; GENDER ISSUES, INTERNATIONAL; INDIVIDUAL DIFFERENCES, *subentry on* GENDER EQUITY AND SCHOOLING; SINGLE-SEX INSTITUTIONS; TITLE IX; WOMEN'S STUDIES.

#### FINANCE, HIGHER EDUCATION

OVERVIEW  
Scott L. Thomas

## COMMUNITY AND JUNIOR COLLEGES

Richard L. Alfred

**OVERVIEW**

While many college-bound students and their families view higher education as a means to professional success and economic security, this end belies the myriad of contributions that America's colleges and universities make to the broader society. Although such social benefits often defy precise measurement they nonetheless establish the rationale for the public support of higher education. By any measure, public support of higher education is huge. In fiscal year 1996, federal, state, and local governments gave well in excess of \$75 billion to degree-granting institutions of higher education (calculated from data generated by the National Center for Education Statistics). Tens of billions more dollars were provided indirectly through student financial assistance in the form of scholarships, grants, loans, and tax deductions.

Higher education is a massive enterprise with fiscal year 1996 expenditures of just more than \$190.4 billion. Taking into account further expenditures of \$20.9 billion in additions to physical plant value, combined expenditures on higher education comprised roughly 2.7 percent of the nation's gross domestic product during that year. By all accounts it is expected that higher education will continue to grow throughout the first part of the twenty-first century.

**Expenditures**

Higher education expenditures fall into two general categories: capital outlay (land, buildings, and equipment) and annual operating expenses. Annual operating expenses—or current-fund expenditures—occur in four distinct areas: educational and general expenses, auxiliary enterprises, hospitals, and independent operations.

In fiscal year 1996, colleges and universities devoted roughly \$20.9 billion to capital outlays with the largest expenditure area (60.1% of total) being buildings, followed by expenditures on equipment (36.1%) and land (3.8%). Thus, capital expenditures made up roughly 10 percent of total higher education expenditures in this year. The percentage of all expenditures devoted to capital additions has fluctuated within 1.5 percentage points since the early 1980s.

The remaining 90 percent of higher education expenditures are devoted to education and general expenses—items such as instruction, research, libraries, administration, campus operations and maintenance, institutional scholarships and fellowships, auxiliary enterprises (e.g., residence halls, food services, intercollegiate athletics), independent operations (usually research and development centers), and university hospitals. Almost four-fifths of current-fund spending is accounted for by education and general expenditures. Costs associated with instruction (including faculty salaries) constitute just under one-third of annual expenditures and represent the single largest expense category in the higher education budget. Research expenses and institutional support costs (for example, general administrative services, legal and fiscal operations, community relations) each account for just under 10 percent of current-fund expenditures.

Outside of the educational and general expenditure area, institutions of higher education may devote significant resources to auxiliary services, independent operations, or hospitals. Such expenditures are generally revenue generating (although not always revenue neutral) and therefore have some capacity to be self-supporting. Roughly 20 percent of current-fund expenditures are directed at such units.

While these numbers are helpful in providing a very general description of higher education expenditures, they will vary dramatically across different types of campuses, generally in accordance with size and institutional mission. Relatively few campuses, for example, support hospitals or independent research centers.

**Revenues**

Public investment in higher education is based on the belief that colleges and universities provide social benefits to society that individual students cannot capture. To the degree that this belief is correct, the demand for higher education by individual students would be less than the social demand and an underproduction of higher education would inevitably result. Public subsidies are therefore used to address this imbalance in demand. Historically colleges and universities have been controlled and financed by state as opposed to federal government. While the federal government and students themselves provide a substantial amount of revenue to institutions of higher education, state revenues are the single largest

source of government support for public institutions.

Capital projects on U.S. campuses are supported by revenues from a variety of sources. These most often take the form of private gifts, grants, and loans from the federal government, appropriations by state or local legislative bodies, general obligation bond issues by states or localities, borrowing by state building authorities or similar public corporations, and institutional issues of revenue bonds by the institutions themselves.

Current-fund revenue for higher education—money received during any given fiscal year from revenue that can be used to pay current obligations due, and surpluses reappropriated for the current fiscal year—also comes from many different areas and in many different forms. The majority of current-fund revenue received by institutions of higher education comes from students (through tuition) and federal, state, and local governments. Almost 28 percent of revenues in fiscal year 1996 came from students and their families while federal, state, and local governments combined provided 38 percent during this year. State governments provide the largest share of public funds directed to institutions (comprising roughly 60% of public funds in 1996), followed by the federal government (32%), and local governments (8% of total government support). The remaining 34 percent of current-fund revenues was made up from private sources, endowment income, and sales and services during this fiscal year.

This pattern of support has changed significantly since the early 1990s, with tuition revenue surpassing the amount of state appropriations to higher education institutions. The proportion of current-fund revenues received from each of these sources varies dramatically by sector, with private colleges and universities much more reliant upon tuition revenues. Table 1 shows that most revenues for higher education come from one of four distinct sources: the federal government, state governments, students (through tuition), and the sales of goods and services that are incidental to the conduct of research, instruction, or public service.

### Federal Support

Since the Northwest Ordinance legislation in 1787 authorized land grants for the establishment of educational institutions, the federal government has been a major player in the financing of higher educa-

tion. The first Morrill Act (1862) set the stage for the development of the nationwide system of land-grant colleges and universities to which the United States owes much of its extraordinary agricultural productivity since the late nineteenth century. Subsequent federal legislation supporting higher education has helped ensure the nation's military and industrial dominance for most of the twentieth century.

The U.S. government provides funds directly to institutions as well as to students in the form of financial aid. Most federal support comes through categorical aid programs administered by various departments within the executive branch or through independent agencies of the federal government. Of those funds provided directly to institutions of higher education, the bulk of federal support comes through such categorical programs in the form of restricted or unrestricted grants and contracts. The remainder of federal institutional support is provided either as direct appropriation or through independent operations usually involving major federally funded research and development centers (see Table 2).

Federal grants and contracts have long played an important role the advancement of science and engineering in the country. The National Defense Education Act of 1958 and grants and contracts provided through the Higher Education Act of 1965 and subsequent reauthorizations are good examples of this historic commitment. Toward the end of the twentieth century attention has been drawn to the increasing tendency of federal lawmakers to provide generous earmarks directly to institutions in their respective states. Scientists and college officials across the country have voiced concerns that the purely political distribution of funds traditionally awarded on competitive bases tends to erode the efficient provision of federal support aimed at leveraging the largest advances in knowledge and access to higher education.

While substantial funds flow from the federal government directly to institutions of higher education, the major portion of federal support for higher education comes in the form of student financial aid. Dramatic shifts in the economics of higher education and in policies defining the composition and delivery of student aid occurred between 1972 and 2001.

Civil rights-era ideals of federal student aid programs (largely falling under Title IV of the Higher

TABLE 1

## Percentage of current revenue fund for higher education institutions, 1981 and 1996

	Public Institutions			Private Institutions		
	1980-1981	1995-1996	Percent change	1980-1981	1995-1996	Percent change
Tuition and fees	12.9	18.8	45.7	36.6	43.0	17.5
Federal government	12.8	11.1	-13.3	18.8	13.8	26.6
State government	45.6	35.8	-21.5	1.9	1.9	-
Local government	3.8	4.1	7.9	0.7	0.7	-
Private gifts, grants, and contracts	2.5	4.1	64.0	9.3	9.1	2.2
Endowment income	0.5	0.6	20.0	5.1	5.2	2.0
Sales and services	19.6	22.2	13.3	23.3	21.0	-9.9
Other sources	2.4	3.3	37.5	4.2	5.3	26.2

SOURCE: U.S. Department of Education, National Center for Education Statistics. 2001. *Digest of Education Statistics*. Washington, DC: U.S. Department of Education.

Education Act) focused on providing need-based grant aid to ensure that low-income youth would not face a greater economic burden than their peers from more affluent backgrounds. These progressive ideals were soon eroded by the economic and political realities of the mid- to late 1970s, realities that radically altered the funding environment for higher education programs across the country. Marked gains in lower-income student access and persistence associated with Title IV were diminished as the need-based grant aid ideal was nudged toward the margins by more cost-effective and politically palatable loan programs.

The trend away from the need-based ideals outlined in the early Title IV programs was followed by a series of federal policy actions across the 1980s that devolved federal responsibility for a wide variety of public programs down to the state level. This devolution effectively relieved an exploding federal budget from a large share of the funding burden associated with a number of traditionally federally sponsored programs, including numerous high cost health and welfare programs.

One consequence of shifting responsibility to the states was that many states began experiencing severe financial strains—strains associated with unfunded mandates concomitant with the reassignment of many of these high cost federal programs. Strains on state budgets throughout the 1980s and early 1990s, combined with a serious economic recession in the early part of the 1990s, ultimately led to cutbacks in state general fund expenditures directed at public higher education which in turn fueled a run-up in tuition prices in the public postse-

condary education sector. A slightly different but no less malignant set of forces undergirded an even more dramatic tuition escalation in the private sector across this period.

### State Support

States serve as the locus of control for higher education and are the single largest government funding source for public institutions. Any effective consideration of state support for higher education requires the separate treatment of public and private institutions. While public institutions receive generous state appropriations designed to subsidize the real costs of instruction, private institutions are generally less likely to receive such subsidies and are therefore much more reliant on tuition revenues (see Table 3).

**Public institutions.** Appropriations to institutions of higher education were made largely on the basis of political decisions in the post-World War II expansion. This strictly politically driven mode of funding had largely given way to funding based on enrollment-driven formulas by the late 1970s. Throughout the 1970s and 1980s the formulas used by state officials became much more refined to better reflect the varied missions, structures, and histories of state institutions. Many states during the 1980s adopted various forms of budgeting based on performance measures that usually affected a small portion of the overall funding. By the 1990s the mixed results from adherence to these various forms of budgeting led many states to abandon formula-based allocations and attempts to distribute funds on the basis of performance. Those states turning

away from these earlier budgeting schemes began to develop policies that take into account previous allocations then making adjustments for inflation and changes in enrollment.

Similar to the federal government, states provide revenue to institutions directly in the form of appropriations, unrestricted grants and contracts, and restricted grants and contracts. And like the federal government, states provide financial aid to students that is then redirected to the institutions at which they enroll to cover the price of attendance. State student aid has taken many forms over the last half of the twentieth century. Although most programs were initially merit-based, many states had developed need-based aid programs by the mid-1960s. Need-based state aid programs were widely adopted by the mid-1970s to take advantage of the federal State Student Incentive Grant program passed in the 1972 reauthorization of the federal Higher Education Act. In the early twenty-first century, contractions in federal and state spending and political sensitivity to the dismay of middle- and upper-middle class families over spiraling tuition costs are driving state aid programs back toward the merit-based (as opposed to need-based) model.

**Private institutions.** States have long recognized the contributions of private higher education to enhancing the quality of life of its citizens. In addition to providing a greater diversity of higher education opportunity and enhancing states' economic and cultural richness, state leaders realize that these institutions also absorb the subsidization costs of students who would have otherwise attended a public institution in the state. Moreover, private institutions play an important role in the expansion of higher education opportunity in many states that would otherwise be hard pressed to underwrite such growth. Consequently, many states make significant public investments in these institutions.

While some states have chosen to provide direct institutional aid to private colleges and universities, others target their support at specific high need programs or at the development of research and technological capacity. Another important source of state revenue for private institutions comes through state student aid programs. Student aid programs in which students enrolling in private institutions can participate have become ubiquitous. In addition, many states have developed tuition equalization grant programs to encourage access to this sector.

**TABLE 2**
**Current-fund federal revenue of degree granting institutions, fiscal year 1996**

Type of federal revenue	1995–1996 amount (in thousands)	Percentage of federal funds
Appropriations	2,036,948	8.5
Unrestricted grants and contracts	3,652,186	15.3
Restricted grants and contracts	14,713,289	61.5
Independent operations	3,536,653	14.8
Total federal revenue	23,939,076	100.0

SOURCE: U.S. Department of Education, National Center for Education Statistics. 2001. *Digest of Education Statistics*. Washington, DC: U.S. Department of Education.

State allocations to private institutions remain relatively modest however when compared to state contributions to institutions in the public sector (roughly 3% of state institutional support goes to the private sector). Differences in the types of funds made available to private institutions are also noteworthy. While more than 90 percent of state funds provided to public institutions are in the form of straight appropriations, almost three-quarters of state support allocated for private institutions is provided in the form of restricted grants and contracts (see Table 3).

### Tuition Support

Public and private institutions have become more reliant upon tuition revenues than on any other single source. Most institutions chose to raise tuition charges paid by students and their families as revenues from state and federal sources declined throughout the latter part of the twentieth century. Escalating tuition prices during this period resulted in intense political pressure and close scrutiny of college costs. Many, especially those from lower- and middle-class families, expressed fear that they were being rapidly priced out of higher education.

The resultant political pressure combined with a strong economic recovery by the mid-1990s in most states allowed an easing of tuition increases over the course of the last several years. This hiatus, however, appears to be short lived as states come to grips with long-term structural budget deficits that will erode their ability to continue to provide revenue at current levels, let alone fund the further expansion necessary to accommodate the growing

TABLE 3

## Current-fund state revenue of degree granting institutions, public and private, fiscal year 1996

Type of state revenue	Public Institutions		Private Institutions	
	1995–1996 amount (in thousands)	Percentage of state funds	1995–1996 amount (in thousands)	Percentage of state funds
Appropriations	40,081,437	90.6	241,864	16.7
Unrestricted grants and contracts	924,837	2.1	166,095	11.4
Restricted grants and contracts	3,236,272	7.3	1,042,168	71.9
Total state revenue	44,242,546	100.0	1,450,127	100.0

SOURCE: U.S. Department of Education, National Center for Education Statistics. 2001. *Digest of Education Statistics*. Washington, DC: U.S. Department of Education.

demand for higher education across the country. Many experts have concluded that this is not a cyclical pattern and that state spending on higher education is being permanently altered.

With the continued escalation of public sector costs in areas such as K–12 education, health, welfare, and prisons, higher education's claim on public funds is becoming increasingly tenuous. Most experts agree that as the federal and state governments struggle to meet the demands in areas outside of higher education, tuition revenues will continue to become an ever larger source of revenue for all institutions, public and private.

### Sales of Services, Private Giving, Endowment, and Other Support

As competition for government funds increases, institutions of higher education are becoming increasingly reliant upon other sources of support. Throughout the early 1990s rapid increases in tuition charges highlighted one strategy for replacing funds traditionally provided by state and federal governments. Recognizing that sustained tuition increases such as those in the 1990s were eroding access and would eventually affect demand, higher education leaders began to more aggressively encourage the cultivation of less dominant revenue sources. Colleges and universities are resorting to selling goods and services that were historically provided at no or little cost; faculty and staff are increasingly and openly encouraged to be more entrepreneurial when thinking about their research and teaching; and few institutions, public and private alike, lack coordinated fund-raising mechanisms (despite the reality that only the most prestigious institutions realize much from this source). Such activities are likely to become more pronounced

throughout the early part of this century as higher education leaders struggle to balance the burgeoning demand and dramatic declines in levels of public support.

*See also:* ACCOUNTING SYSTEMS IN HIGHER EDUCATION; COLLEGE FINANCIAL AID; FEDERAL FUNDING FOR ACADEMIC RESEARCH; FEDERAL FUNDS FOR HIGHER EDUCATION; STATES AND EDUCATION, *sub-entry on* STATE GOVERNMENTS IN HIGHER EDUCATION.

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SCOTT L. THOMAS

## COMMUNITY AND JUNIOR COLLEGES

Comprehensive two-year colleges emerged at the beginning of the twentieth century during a period of experimentation in all sectors of American education. In keeping with the spirit of the time, the community college—initially known as the junior college—developed as a result of increasing demand by the American public for accessible and affordable education. This unique institution, in which the associate degree is most commonly the highest degree awarded, quickly became a bridge between work and further education for traditional and adult learner populations. Throughout this entry, the term *community college* will be used to refer to public comprehensive two-year colleges. Included in this designation will be publicly supported associate degree institutions, technical colleges, and branch campuses. Private two-year colleges, usually recognized as junior colleges, are not included in this designation.

### Historical Background

Beginning with Joliet Junior College in 1901, community colleges evolved in three distinct ways: as an upward extension of public school systems, as a downward extension of the university, and through voter approval. In the first half-century, most community and junior colleges were influenced in structure and operation by the public school systems and boards of education of the states in which they were located. According to a 2000 report from the American Association of Community Colleges, growth was steady during the first half of the twentieth century, with 648 institutions enrolling 168,000 students in 1950. With the expansion of the economy following World War II and growing public need for access to

postsecondary education, community college campuses and enrollments grew at an explosive pace. By 1975, the number of two-year colleges (known variously as community colleges, junior colleges, technical colleges, associate degree institutions, branch campuses, etc.) had grown to 1,230 institutions enrolling 3,836,000 students. In fall 1999, the latest year for which official statistics are available, two-year colleges numbered 1,600 institutions and enrolled 5,339,000 students—one out of every two students enrolling in college on a first-time basis and 44 percent of all undergraduate students enrolled in American colleges and universities.

Although much of this growth has been attributed to changing demographic and economic conditions, it was also a product of public sentiment that favored the development of community colleges as a distinct educational entity within a local service region. Citizens committed to the idea of an affordable college within easy reach approved bond and tax referenda that provided capital and operating support at a record pace between 1960 and 1990. Local support not only paved the way for large-scale growth, it also positioned community colleges as a different type of institution from other postsecondary institutions. Public community colleges in most states receive significantly more support from local tax funds than do for-profit and baccalaureate degree granting institutions. And, as a reflection of their status as community-based institutions emphasizing access and convenience, tuition and student fees are typically lower than student charges at other institutions.

### Financing Community and Junior Colleges

In significant ways, the financing of community and junior colleges is similar to college and university finance. All two-year institutions charge tuition and fees. They generate support from gifts and grants and the proportion of support they get from state funds is more like that received by baccalaureate colleges than K-12 school systems. State funds are often distributed to public community colleges by formula rather than by direct appropriation from the state legislature, which is the typical procedure used for state financing of four-year colleges and universities. Private junior colleges, of course, rely much more heavily on tuition than do public community colleges. In this respect, they are more like privately controlled four-year colleges and universities.

By looking at the methods of financing community and junior colleges over the six-year period from academic year 1991–1992 through academic year 1996–1997, one can gain an understanding of both the sources of funding for these colleges and the shifts that have occurred over time. Inclusion of funding data for four-year colleges and universities in the analysis provides a framework for comparison of resources allocated to different institutions by source over a common reporting period.

**Sources of revenue.** The status and methods of financing current operations between 1991–1992 and 1996–1997 for community and junior colleges and four-year colleges are illustrated in Table 1. (In interpreting these data, it is important to note that Pell revenue is not included in tabulations of support from the federal government.) Several observations of note can be gleaned from this information. One is that public community colleges are holding steadily to the principle that funds from state appropriations, local tax, and student payments in the form of tuition should be the primary sources of revenue in support of operations. For independent junior colleges—smaller in number and enrollment—tuition and fees are the primary source of operating income. When public and private two-year colleges are considered together, state, local, and student sources of income constitute, in combined form, more than 80 percent of the operating income. It appears that tuition and local tax are providing a proportionally greater share of support for operations in 1996–1997 compared to their level in 1991–1992 and that state appropriations are declining as a source of support for operations. The percentage of revenue through state appropriations shows a shift from 45 percent in 1991–1992 to 42 percent in 1996–1997. Student tuition and fees accounted for 21 percent of operating revenue in 1991–1992 and 23 percent in 1996–1997. In 1991–1992, local tax constituted 17 percent of operating revenue; by 1996–1997, it had increased to 18 percent.

Support provided through the federal government remained stable at roughly five percent between 1991–1992 and 1996–1997 for community and junior colleges. Gifts, private grants, and contracts account for only one percent of the revenue received by community colleges. This income source has become increasingly important to two-year colleges, however, as indicated in the 24 percent gain registered between 1991–1992 and 1996–1997.

Finally, the table illustrates the great variation in proportion of funding from different sources for public community colleges and four-year colleges. Public and private four-year colleges show a markedly higher reliance on student tuition and fees to support operations in comparison to community colleges. Additionally, they rely more on the federal government, auxiliary enterprises, private gifts and grants, and other revenue to finance their operations. Public community colleges, in contrast, rely more on local tax support. The information in Table 2 shows the proportion of operating revenues from different funding sources on a state-by-state basis for two-year colleges in 1996–1997. Public community colleges in thirty-five states received local tax support for their operations ranging from \$.02 per capita in Washington to \$56.57 per capita in Arizona. Public community colleges in states like Arizona, Wisconsin, California, and Illinois received a healthy portion of their operating revenue—in excess of one-third—from local tax while colleges in states like Connecticut, Indiana, Massachusetts, and Utah relied exclusively on state appropriations and student charges for operating support.

An interesting sidebar to the data in Table 1 is the basic difference in the way public and private two-year colleges are financed. Detailed information showing the distribution of revenue by source and type of institution for 1996–1997 (Table 3) reveal that private junior colleges get about two-thirds of their operating revenue from student tuition and fees. The only other significant sources of operating funds are private gifts, grants, and contracts and revenue earned through auxiliary enterprises. This pattern is similar to that found in privately controlled four-year colleges and universities, but even here significant differences are noted. Private four-year colleges and universities receive only about 43 percent of their income from student tuition and fees and more than one-third of their total revenue from gifts, grants, and contracts and other sources such as endowment. Clearly, private junior colleges have much smaller endowments than private four-year colleges on which to draw to support their current operations.

**Open access.** Student charges are an important source of revenue for all postsecondary institutions. For public community colleges, however, the cost of education is an important part of their mission. Access to educational opportunity is a defining characteristic for them and keeping

TABLE 1

## Distribution of revenue by type of institution, 1991–1992 to 1996–1997

	Community Colleges			Four-Year Colleges			Total All Colleges
	Public	Independent	Total	Public	Independent	Total	
<b>1991–1992</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
Private grants, gifts, and contracts	0.9%	9.5%	1.1%	4.6%	8.3%	6.1%	5.5%
Tuition and fees	19.9%	59.6%	21.1%	16.4%	40.5%	26.0%	25.5%
Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other Revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%
<b>1992–1993</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
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Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other Revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%
<b>1993–1994</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
Private grants, gifts, and contracts	0.9%	9.5%	1.1%	4.6%	8.3%	6.1%	5.5%
Tuition and fees	19.9%	59.6%	21.1%	16.4%	40.5%	26.0%	25.5%
Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other Revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%
<b>1994–1995</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
Private grants, gifts, and contracts	0.9%	9.5%	1.1%	4.6%	8.3%	6.1%	5.5%
Tuition and fees	19.9%	59.6%	21.1%	16.4%	40.5%	26.0%	25.5%
Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other Revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%
<b>1995–1996</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
Private grants, gifts, and contracts	0.9%	9.5%	1.1%	4.6%	8.3%	6.1%	5.5%
Tuition and fees	19.9%	59.6%	21.1%	16.4%	40.5%	26.0%	25.5%
Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%
<b>1996–1997</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
Private grants, gifts, and contracts	0.9%	9.5%	1.1%	4.6%	8.3%	6.1%	5.5%
Tuition and fees	19.9%	59.6%	21.1%	16.4%	40.5%	26.0%	25.5%
Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other Revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%
<b>Percentage Change, 1991–1992 to 1996–1997</b>							
Federal (1)	4.7%	5.4%	4.7%	11.5%	9.6%	10.8%	10.1%
State	46.2%	5.2%	45.1%	36.7%	2.4%	23.0%	25.5%
Local	18.1%	0.1%`17.6%	0.6%	0.6%	0.6%	2.6%	
Private grants, gifts, and contracts	0.9%	9.5%	1.1%	4.6%	8.3%	6.1%	5.5%
Tuition and fees	19.9%	59.6%	21.1%	16.4%	40.5%	26.0%	25.5%
Auxiliary enterprises	6.6%	14.2%	6.8%	10.0%	10.5%	10.2%	9.8%
Other revenue	3.5%	6.0%	3.6%	20.1%	26.0%	23.3%	21.0%

(1) Excludes Pell revenue, which is included in other categories.

SOURCE: National Center for education Statistics, Integrated Postsecondary Education Data System data files.

TABLE 2

## Total and per capita state and local appropriations estimates for community colleges by state, 1996–1997

State	Total Appropriations			Population Estimate (7/1/97)	Per Capita Appropriations		
	State Appropriations	Local Appropriations	State and Local Appropriations		State Appropriations	Local Appropriations	State and Local Appropriations
Alabama	\$176,996,016	\$1,784,242	\$178,780,258	4,291,110	\$41.25	\$0.42	\$41.66
Alaska	\$1,582,472	\$647,231	\$2,229,703	605,212	\$2.61	\$1.07	\$3.68
Arizona	\$95,145,602	\$237,165,054	\$332,310,656	4,432,202	\$21.47	\$53.51	\$74.98
Arkansas	\$85,116,084	\$3,567,117	\$88,683,201	2,505,073	\$33.98	\$1.42	\$35.40
California	\$1,524,127,485	\$1,355,032,602	\$2,879,160,087	31,762,190	\$47.99	\$42.66	\$90.65
Colorado	\$103,276,470	\$29,260,539	\$132,537,009	3,813,778	\$27.08	\$7.67	\$34.75
Connecticut	\$126,515,164	\$0	\$126,515,164	3,263,910	\$38.76	\$0.00	\$38.76
Delaware	\$44,352,601	\$0	\$44,352,601	727,113	\$61.00	\$0.00	\$61.00
Florida	\$699,173,526	\$51,521	\$699,225,047	14,424,868	\$48.47	\$0.00	\$48.47
Georgia	\$206,401,221	\$5,251,855	\$211,653,076	7,334,183	\$28.14	\$0.72	\$28.86
Hawaii	\$59,028,596	\$0	\$59,028,596	1,187,283	\$49.72	\$0.00	\$49.72
Idaho	\$22,025,536	\$10,519,868	\$32,545,404	1,186,239	\$18.57	\$8.87	\$27.44
Illinois	\$191,134,665	\$433,746,427	\$624,881,092	11,933,597	\$16.02	\$36.35	\$52.36
Indiana	\$106,777,197	\$0	\$106,777,197	5,827,423	\$18.32	\$0.00	\$18.32
Iowa	\$131,266,683	\$28,003,977	\$159,270,660	2,848,603	\$46.08	\$9.83	\$55.91
Kansas	\$61,703,882	\$109,985,553	\$171,689,435	2,584,650	\$23.87	\$42.55	\$66.43
Kentucky	\$82,609,500	\$0	\$82,609,500	3,882,545	\$21.28	\$0.00	\$21.28
Louisiana	\$46,450,326	\$2,909,491	\$49,359,817	4,339,871	\$10.70	\$0.67	\$11.37
Maine	\$25,984,078	\$0	\$25,984,078	1,238,003	\$20.99	\$0.00	\$20.99
Maryland	\$112,606,413	\$138,775,085	\$251,381,498	5,057,839	\$22.26	\$27.44	\$49.70
Massachusetts	\$195,507,454	\$0	\$195,507,454	6,082,910	\$32.14	\$0.00	\$32.14
Michigan	\$259,563,437	\$207,744,700	\$467,308,137	9,733,774	\$26.67	\$21.34	\$48.01
Minnesota	\$292,916,312	\$0	\$292,916,312	4,648,081	\$63.02	\$0.00	\$63.02
Mississippi	\$147,198,512	\$30,349,674	\$177,548,186	2,710,022	\$54.32	\$11.20	\$65.52
Missouri	\$109,236,958	\$76,950,691	\$186,187,649	5,368,911	\$20.35	\$14.33	\$34.68
Montana	\$10,286,300	\$3,554,319	\$13,840,619	876,734	\$11.73	\$4.05	\$15.79
Nebraska	\$39,467,710	\$56,416,306	\$95,884,016	1,648,041	\$23.95	\$34.23	\$58.18
Nevada	\$61,329,000	\$0	\$61,329,000	1,600,345	\$38.32	\$0.00	\$38.32
New Hampshire	\$19,685,762	\$0	\$19,685,762	1,159,546	\$16.98	\$0.00	\$16.98
New Jersey	\$100,679,103	\$160,277,905	\$260,957,008	8,007,905	\$12.57	\$20.01	\$32.59
New Mexico	\$103,708,351	\$42,603,450	\$146,311,801	1,707,902	\$60.72	\$24.94	\$85.67
New York	\$398,551,177	\$290,152,657	\$688,703,834	18,142,162	\$21.97	\$15.99	\$37.96
North Carolina	\$492,626,079	\$85,528,237	\$578,154,316	7,308,656	\$67.40	\$11.70	\$79.11
North Dakota	\$20,414,848	\$339,966	\$20,754,814	642,805	\$31.76	\$0.53	\$32.29
Ohio	\$270,094,215	\$71,481,654	\$341,575,869	11,169,546	\$24.18	\$6.40	\$30.58
Oklahoma	\$115,575,836	\$18,571,666	\$134,147,502	3,295,928	\$35.07	\$5.63	\$40.70
Oregon	\$162,027,806	\$85,297,437	\$247,325,244	3,195,409	\$50.71	\$26.69	\$77.40
Pennsylvania	\$132,604,581	\$84,822,173	\$217,426,754	12,033,856	\$11.02	\$7.05	\$18.07
Rhode Island	\$29,068,571	\$0	\$29,068,571	988,130	\$29.42	\$0.00	\$29.42
South Carolina	\$137,506,927	\$26,823,088	\$164,330,015	3,736,947	\$36.80	\$7.18	\$43.97
South Dakota	\$3,435,029	\$0	\$3,435,029	737,227	\$4.66	\$0.00	\$4.66
Tennessee	\$162,328,911	\$10,199	\$162,339,110	5,307,222	\$30.59	\$0.00	\$30.59
Texas	\$739,000,412	\$301,995,771	\$1,040,996,183	19,032,987	\$38.83	\$15.87	\$54.69
Utah	\$73,851,839	\$0	\$73,851,839	2,022,234	\$36.52	\$0.00	\$36.52
Vermont	\$1,230,900	\$0	\$1,230,900	586,333	\$2.10	\$0.00	\$2.10
Virginia	\$191,595,631	\$2,110,487	\$193,706,118	6,667,373	\$28.74	\$0.32	\$29.05
Washington	\$377,742,094	\$103,643	\$377,845,737	5,518,801	\$68.45	\$0.02	\$68.47
West Virginia	\$14,503,249	\$0	\$14,503,249	1,820,261	\$7.97	\$0.00	\$7.97
Wisconsin	\$122,757,255	\$293,208,039	\$415,965,294	5,174,348	\$23.72	\$56.67	\$80.39
Wyoming	\$44,975,312	\$14,013,010	\$58,988,322	480,060	\$93.69	\$29.19	\$122.88
<b>Total</b>	<b>\$8,736,958,254</b>	<b>\$4,210,744,050</b>	<b>\$12,947,702,304</b>	<b>264,650,148</b>	<b>\$33.01</b>	<b>\$15.91</b>	<b>\$48.92</b>

SOURCE: National Center for Education Statistics, Integrated Postsecondary Education Data System data files; and U.S. Bureau of the Census, Population Estimates files.

the door to opportunity open through low tuition is both a philosophical premise and a practical necessity.

Comparative student charges for two-year colleges and four-year colleges are shown in Table 4. Over the 22-year period from academic year 1976–

**Distribution of revenue by source and type of institution, 1996–1997**

In thousands.

	Community Colleges			Four-Year Colleges			Total All Colleges
	Public	Independent	Total	Public	Independent	Total	
Federal appropriations	\$110,987	\$0	\$110,987	\$1,815,781	\$204,721	\$2,020,501	\$2,131,488
Federal grants and contracts (1)	\$1,125,283	\$34,595	\$1,159,878	\$10,955,577	\$5,900,043	\$16,855,620	\$18,015,498
<b>Federal Total</b>	<b>\$1,236,270</b>	<b>\$34,595</b>	<b>\$1,270,865</b>	<b>\$12,771,357</b>	<b>\$6,104,764</b>	<b>\$18,876,121</b>	<b>\$20,146,986</b>
State appropriations	\$8,740,787	\$798	\$8,741,585	\$33,834,348	\$248,366	\$34,082,714	\$42,824,299
State grants and contracts	\$1,211,264	\$42,848	\$1,254,112	\$2,913,510	\$1,113,903	\$4,027,413	\$5,281,525
<b>State Total</b>	<b>\$9,952,051</b>	<b>\$43,646</b>	<b>\$9,995,697</b>	<b>\$36,747,858</b>	<b>\$1,362,269</b>	<b>\$38,110,127</b>	<b>\$48,105,824</b>
Local appropriations	\$4,209,056	\$260	\$4,209,316	\$196,796	\$3,171	\$199,967	\$4,409,283
Local grants and contracts	\$169,382	\$879	\$170,261	\$491,448	\$307,618	\$799,066	\$969,327
<b>Local Total</b>	<b>\$4,378,437</b>	<b>\$1,140</b>	<b>\$4,379,577</b>	<b>\$688,244</b>	<b>\$310,789</b>	<b>\$999,033</b>	<b>\$5,378,610</b>
Tuition and fees	\$4,917,379	\$519,595	\$5,436,974	\$19,784,053	\$31,134,456	\$50,918,509	\$56,355,483
Private gifts, grants, and contracts	\$241,385	\$90,864	\$332,249	\$5,346,254	\$6,856,636	\$12,202,891	\$12,535,139
Endowment income	\$19,243	\$18,605	\$37,848	\$775,243	\$3,794,211	\$4,569,454	\$4,607,302
Sales and services of educational activities	\$161,404	\$6,799	\$168,203	\$3,726,429	\$1,995,386	\$5,721,815	\$5,890,018
Auxiliary enterprises	\$1,345,971	\$90,055	\$1,436,027	\$10,942,491	\$7,416,382	\$18,358,873	\$19,794,900
Hospital revenues	\$0	\$0	\$0	\$12,682,554	\$6,564,759	\$19,247,313	\$19,247,313
Other sources	\$710,446	\$36,361	\$746,807	\$3,623,587	\$3,728,850	\$7,352,437	\$8,099,244
Independent operations	\$7,443	\$795	\$8,239	\$265,359	\$3,049,606	\$3,314,965	\$3,323,204
<b>Total current fund revenue</b>	<b>\$22,970,030</b>	<b>\$842,455</b>	<b>\$23,812,485</b>	<b>\$107,353,428</b>	<b>\$72,318,110</b>	<b>\$179,671,538</b>	<b>\$203,484,023</b>
<b>Percentage Distribution</b>							
Federal appropriations	0.5%	0.0%	0.5%	1.7%	0.3%	1.1%	1.0%
Federal grants and contracts (1)	4.9%	4.1%	4.9%	10.2%	8.2%	9.4%	8.9%
<b>Federal Total</b>	<b>5.4%</b>	<b>4.1%</b>	<b>5.3%</b>	<b>11.9%</b>	<b>8.4%</b>	<b>10.5%</b>	<b>9.9%</b>
State appropriations	38.1%	0.1%	36.7%	31.5%	0.3%	19.0%	21.0%
State grants and contracts	5.3%	5.1%	5.3%	2.7%	1.5%	2.2%	2.6%
<b>State Total</b>	<b>43.3%</b>	<b>5.2%</b>	<b>42.0%</b>	<b>34.2%</b>	<b>1.9%</b>	<b>21.2%</b>	<b>23.6%</b>
Local appropriations	18.3%	0.0%	17.7%	0.2%	0.0%	0.1%	2.2%
Local grants and contracts	0.7%	0.1%	0.7%	0.5%	0.4%	0.4%	0.5%
<b>Local Total</b>	<b>19.1%</b>	<b>0.1%</b>	<b>18.4%</b>	<b>0.6%</b>	<b>0.4%</b>	<b>0.6%</b>	<b>2.6%</b>
Tuition and fees	21.4%	61.7%	22.8%	18.4%	43.1%	28.3%	27.7%
Private gifts, grants, and contracts	1.1%	10.8%	1.4%	5.0%	9.5%	6.8%	6.2%
Endowment income	0.1%	2.2%	0.2%	0.7%	5.2%	2.5%	2.3%
Sales and services of educational activities	0.7%	0.8%	0.7%	3.5%	2.8%	3.2%	2.9%
Auxiliary enterprises	5.9%	10.7%	6.0%	10.2%	10.3%	10.2%	9.7%
Hospital revenues	0.0%	0.0%	0.0%	11.8%	9.1%	10.7%	9.5%
Other sources	3.1%	4.3%	3.1%	3.4%	5.2%	4.1%	4.0%
Independent operations	0.0%	0.1%	0.0%	0.2%	4.2%	1.8%	1.6%
<b>Total current fund revenue</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

(1) Excludes Pell revenue, which is included in other categories.

SOURCE: National Center for Education Statistics, Integrated Postsecondary Education Data System data files.

TABLE 4

## Average tuition and fees by type of institution in constant 1997–1998 dollars, 1976–1977 to 1997–1998

Academic Year	Community Colleges			Four-Year Colleges		
	Public	Independent	Total	Public	Independent	Total
1976–1977	\$774	\$4,352	\$946	\$1,687	\$6,927	\$3,329
1977–1978	\$782	\$4,362	\$967	\$1,675	\$6,904	\$3,301
1978–1979	\$760	\$4,256	\$955	\$1,599	\$6,876	\$3,248
1979–1980	\$727	\$4,221	\$923	\$1,511	\$6,602	\$3,097
1980–1981	\$720	\$4,441	\$968	\$1,480	\$6,657	\$3,090
1981–1982	\$741	\$4,445	\$1,007	\$1,551	\$7,018	\$3,254
1982–1983	\$778	\$4,950	\$1,111	\$1,697	\$7,634	\$3,520
1983–1984	\$836	\$4,904	\$1,155	\$1,817	\$8,059	\$3,709
1984–1985	\$890	\$5,314	\$1,252	\$1,872	\$8,472	\$3,914
1985–1986	\$953	\$5,459	\$1,320	\$1,959	\$9,099	\$4,139
1986–1987	\$956	\$5,335	\$1,299	\$2,048	\$9,643	\$4,406
1987–1988	\$982	\$5,787	\$1,125	\$2,138	\$9,901	\$4,452
1988–1989	\$969	\$6,396	\$1,300	\$2,185	\$10,253	\$4,610
1989–1990	\$957	\$6,581	\$1,239	\$2,254	\$10,633	\$4,813
1990–1991	\$991	\$6,701	\$1,308	\$2,271	\$10,927	\$4,823
1991–1992	\$1,094	\$6,715	\$1,385	\$2,474	\$11,411	\$5,135
1992–1993	\$1,161	\$6,863	\$1,445	\$2,661	\$11,661	\$5,383
1993–1994	\$1,242	\$7,033	\$1,545	\$2,801	\$12,091	\$5,652
1994–1995	\$1,280	\$7,422	\$1,597	\$2,878	\$12,325	\$5,787
1995–1996	\$1,294	\$7,411	\$1,590	\$2,975	\$12,790	\$6,045
1996–1997	\$1,298	\$7,358	\$1,569	\$3,037	\$13,098	\$6,221
1997–1998	\$1,318	\$7,536	\$1,582	\$3,110	\$13,392	\$6,329
<b>Percent Change</b>						
1976–1977 to 1997–1998	70%	73%	67%	84%	93%	90%
1987–1988 to 1997–1998	34%	30%	41%	45%	35%	42%
1992–1993 to 1997–1998	14%	10%	9%	17%	15%	18%

SOURCE: National Center for Education Statistics, 1999.

1977 to academic year 1997–1998, tuition and fees in two-year colleges have, on the average, amounted to one-quarter of those for four-year colleges. This differential has widened over time as state appropriations to four-year colleges and universities have diminished in periods of economic fluctuation and tuition has increased to reduce the gap between income and expenditures. In 1976–1977, for example, the average cost of tuition and fees for a full-time student in two-year colleges (\$946) approximated 28 percent of the average cost for students enrolled in four-year colleges (\$3,329). By 1997–1998, the disparity had increased with the cost of tuition and fees in two-year colleges (\$1,592) averaging 25 percent of those for four-year colleges (\$6,329). When private two- and four-year colleges are removed from the analysis leaving only public institutions, the cost differential diminishes considerably with tuition and fees at public community colleges (\$1,318) averaging 42 percent of those at public colleges and universities (\$3,110).

**Expenditures.** Generally speaking, budgets and financial reports of colleges and universities are devel-

oped and analyzed according to categories of educational and general expenses. Subdivisions are commonly used to organize and report expenditures; the most common are instruction, research, public service, academic support, student services, institutional support, plant maintenance and operations, scholarships and fellowships, and transfers.

The information in Table 5 shows that public community colleges employ all nine expenditure subdivisions. As would be expected in any educational institution, the largest category of expenditure is instruction with 43 percent of all educational and general expenditures classified in this category in 1996–1997. When costs for academic support, student services, and institutional support are added to instructional cost, they account for more than three-quarters of all expenditures. These costs, for the most part, are attributable to personnel, which is why two-year colleges, and colleges and universities in general, are described as labor intensive organizations.

It is interesting to note that the categories of cost fluctuate as a percentage of expenditures as cost allo-

TABLE 5

## Public community college expenditures in current and constant 1996–1997 dollars, 1991–1992 to 1996–1997

	Current Dollars		Constant, 1996–1997 Dollars		Percentage Distribution
	Total Expenditures (in millions)	Expenditures per FTE Student	Total Expenditures (in millions)	Expenditures per FTE Student	
<b>1991–1992</b>					
Instruction	7,977	2,565	\$9,158	\$2,945	45.8%
Salaries and wages for instruction	5,863	1,885	\$6,731	\$2,164	33.7%
Research	23	7	\$26	\$8	0.1%
Public service	358	115	\$411	\$132	2.1%
Academic support	1,292	415	\$1,483	\$477	7.4%
Student services	1,616	520	\$1,855	\$597	9.3%
Institutional support	2,408	774	\$2,765	\$889	13.8%
Operation and maintenance of plant	1,641	528	\$1,884	\$606	9.4%
Scholarships and fellowships	1,772	570	\$2,034	\$654	10.2%
Mandatory transfers	95	31	\$109	\$35	0.5%
Non-mandatory transfers	228	73	\$261	\$84	1.3%
Total educational and general expenditures	17,411	5,598	\$19,988	\$6,427	100.0%
<b>1992–1993</b>					
Instruction	8,449	2,686	\$9,412	\$2,992	45.5%
Salaries and wages for instruction	6,275	1,995	\$6,991	\$2,222	33.8%
Research	27	9	\$30	\$10	0.1%
Public service	391	124	\$436	\$138	2.1%
Academic support	1,371	436	\$1,527	\$485	7.4%
Student services	1,759	559	\$1,960	\$623	9.5%
Institutional support	2,528	803	\$2,816	\$895	13.6%
Operation and maintenance of plant	1,711	544	\$1,906	\$606	9.2%
Scholarships and fellowships	2,045	650	\$2,279	\$724	11.0%
Mandatory transfers	107	34	\$120	\$38	0.6%
Non-mandatory transfers	186	59	\$207	\$66	1.0%
Total educational and general expenditures	18,574	5,904	\$20,691	\$6,577	100.0%
<b>1993–1994</b>					
Instruction	8,855	2,858	\$9,614	\$3,103	44.8%
Salaries and wages for instruction	6,499	2,097	\$7,057	\$2,277	32.8%
Research	29	9	\$32	\$10	0.1%
Public service	425	137	\$462	\$149	2.2%
Academic support	1,478	477	\$1,605	\$518	7.5%
Student services	1,868	603	\$2,028	\$654	9.4%
Institutional support	2,709	874	\$2,941	\$949	13.7%
Operation and maintenance of plant	1,850	597	\$2,008	\$648	9.3%
Scholarships and fellowships	2,256	728	\$2,449	\$790	11.4%
Mandatory transfers	121	39	\$132	\$42	0.6%
Non-mandatory transfers	196	63	\$213	\$69	1.0%
Total educational and general expenditures	19,788	6,386	\$21,484	\$6,933	100.0%
<b>1994–1995</b>					
Instruction	9,145	2,968	\$9,654	\$3,133	44.5%
Salaries and wages for instruction	6,674	2,166	\$7,046	\$2,287	32.5%
Research	29	9	\$31	\$10	0.1%
Public service	433	140	\$457	\$148	2.1%
Academic support	1,502	487	\$1,586	\$515	7.3%
Student services	1,980	643	\$2,091	\$679	9.6%
Institutional support	2,866	930	\$3,026	\$982	13.9%
Operation and maintenance of plant	1,917	622	\$2,024	\$657	9.3%
Scholarships and fellowships	2,334	758	\$2,464	\$800	11.4%
Mandatory transfers	130	42	\$137	\$45	0.6%
Non-mandatory transfers	225	73	\$238	\$77	1.1%
Total educational and general expenditures	20,561	6,674	\$21,707	\$7,045	100.0%

[continued]

cations change over time. For example, total expenditures for instruction increased by 25 percent between 1991–1992 and 1996–1997 whereas expen-

ditures for academic support increased by 40 percent, expenditures for student services by 38 percent, and expenditures for instructional support by 39

**TABLE 5 [CONTINUED]**

	Current Dollars		Constant, 1996–1997 Dollars		Percentage Distribution
	Total Expenditures (in millions)	Expenditures per FTE Student	Total Expenditures (in millions)	Expenditures per FTE Student	
<b>1995–1996</b>					
Instruction	9,622	3,165	\$9,885	\$3,252	43.9%
Salaries and wages for instruction	6,960	2,290	\$7,150	\$2,352	31.7%
Research	23	8	\$24	\$8	0.1%
Public service	471	155	\$484	\$159	2.1%
Academic support	1,675	551	\$1,721	\$566	7.6%
Student services	2,150	707	\$2,209	\$727	9.8%
Institutional support	3,090	1,016	\$3,174	\$1,044	14.1%
Operation and maintenance of plant	2,053	675	\$2,109	\$694	9.4%
Scholarships and fellowships	2,450	806	\$2,517	\$828	11.2%
Mandatory transfers	153	50	\$157	\$52	0.7%
Non-mandatory transfers	241	79	\$248	\$82	1.1%
Total educational and general expenditures	21,929	7,214	\$22,529	\$7,411	100.0%
<b>1996–1997</b>					
Instruction	9,970	3,251	\$9,970	\$3,251	43.1%
Salaries and wages for instruction	7,019	2,289	\$7,019	\$2,289	30.4%
Research	25	8	\$25	\$8	0.1%
Public service	511	167	\$511	\$167	2.2%
Academic support	1,811	590	\$1,811	\$590	7.8%
Student services	2,221	724	\$2,221	\$724	9.6%
Institutional support	3,335	1,088	\$3,335	\$1,088	14.4%
Operation and maintenance of plant	2,127	694	\$2,127	\$694	9.2%
Scholarships and fellowships	2,629	857	\$2,629	\$857	11.4%
Mandatory transfers	183	60	\$183	\$60	0.8%
Non-mandatory transfers	287	93	\$287	\$93	1.2%
Total educational and general expenditures	23,109	7,536	\$23,109	\$7,536	100.0%
<b>Change 1991–1992 to 1996–1997</b>					
Instruction	25.0%	26.8%	8.9%	10.4%	-5.8%
Salaries and wages for instruction	19.7%	21.4%	4.3%	5.7%	-9.8%
Research	8.9%	10.4%	-5.2%	-3.8%	-18.0%
Public service	42.6%	44.6%	24.2%	26.0%	7.5%
Academic support	40.2%	42.1%	22.1%	23.8%	5.6%
Student services	37.5%	39.4%	19.7%	21.4%	3.6%
Institutional support	38.5%	40.4%	20.6%	22.3%	4.3%
Operation and maintenance of plant	29.6%	31.4%	12.9%	14.5%	-2.3%
Scholarships and fellowships	48.4%	50.5%	29.3%	31.1%	11.8%
Mandatory transfers	92.2%	94.9%	67.4%	69.8%	44.8%
Non-mandatory transfers	25.9%	27.7%	9.7%	11.2%	-5.1%
Total educational and general expenditures	32.7%	34.6%	15.6%	17.2%	0.0%

SOURCE: National Center for Education Statistics, Integrated Postsecondary Education Data Systems data files.

percent. This could be a reflection of the tendency of community colleges to shift more of the instructional workload to part-time faculty as a method for decreasing fixed costs and increasing flexibility. Proportionally larger costs for academic support could indicate that more resources are needed to acquire advanced technology in support of classroom instruction and to provide tutorial assistance to students experiencing academic difficulty. Rising costs for student services and institutional support could be a result of more extensive efforts by community colleges to market programs and services to a wide

array of audiences and to make more and better services available using technology and specialized support staff.

Out of these trends a greater focus is emerging on using resources more effectively through strategic planning. In this approach to allocating resources, priorities are determined through gathering and analyzing information about trends in the external environment and internal capabilities. Resources are allocated to these priorities in the operating budget and institutions measure their performance against achievement criteria established for each priority as

a method for determining their progress in reaching stated goals. The fiscal impact that each priority has on expenditure categories in the operating budget is then analyzed to determine cost benefits and additional resource requirements. What are the costs of implementation associated with each priority? How much revenue did the priority generate? What additional resources need to be allocated to fully achieve the priority?

### Critical Issues

A number of important finance and finance-related issues will challenge public community colleges, and to some extent private junior colleges, in the decade ahead. These issues can be organized and described in four categories: limits to institutional development, changing market conditions, new sources of support, and accountability.

**Limits to institutional development.** Public community colleges have been criticized in past years for having an unfocused mission—for being “all things to all people.” As their mission has expanded to encompass new activities such as workforce development and corporate training, the requirement for resources to support these activities, in addition to a comprehensive battery of current programs and services, has stretched to a breaking point. Where will new and additional resources come from to support an expanding mission? Will contraction be necessary to free up resources for new activities? How will institutions support a comprehensive mission in a period when resources are drying up? Planning will become important to institutions in the future as a method to make better decisions with fewer resources.

**Changing market conditions.** Shifting economic conditions and resulting impacts on programs and services are a fact of life for community colleges. In forty-three states, state revenues lag behind projections; governors and legislatures in states including California, Florida, Virginia, and Washington are faced with filling budget holes of \$1 billion. In most states, deep cuts in state expenditures once again mean higher education is facing a sharp-edged budget ax. Cuts in higher education will be used to balance overall state budgets in the short-term.

Demography will exert further pressure on states. By 2020, the retirement of baby boomers will cause an exodus from the workforce of 46 million workers with at least some postsecondary education.

Replacing these workers will be an estimated 49 million new adults with at least some college education—a net gain of 3 million. But this gain of 3 million will not be nearly enough. The Bureau of Labor Statistics projects a 22 percent increase in jobs that will require at least some college by 2008. If the trend holds through 2020, roughly 15 million new jobs that require postsecondary-educated workers will be created. In sum, the nation faces a deficit of approximately 12 million workers with at least some college education by 2020. Community colleges will be expected to address this shortage by providing new and additional programs and services. In a tight economy, however, where will the resources come from to develop and sustain new services?

**New sources of support.** As state spending for higher education declines in periods of economic recession, new sources of revenue will need to be found or community colleges will face the uncomfortable task of reducing their operating budgets. Many colleges are ill-prepared for budgetary reduction: systems for review of programs and services are not in place, performance information is not available, and the culture of most institutions is focused on growth, not decline. To avoid the trauma of reduction, many colleges will turn to new sources of revenue such as training dollars from the corporate sector and private gifts and grants. Resources in these arenas are historically tight, however, in periods of economic recession. What new sources of support will be available to community colleges to finance growth? When will colleges develop a capability to contract—to grow smaller through program and service reductions—as a method to allocate resources to new programs and services?

**Accountability.** Community colleges, and colleges and universities in general, have been criticized for performing quite poorly over time in reporting performance and cost information to the public. Legislators are reluctant to provide blank checks to institutions that are not accountable for what they do or how they spend public money. What is the effect of poor or weak reporting systems on institutional credibility? What new standards will elected officials put in place to improve accountability? What steps will institutions take to improve cost and performance reporting in a way that will help the public understand what they do?

## The Future

What does the future hold for finance in two-year colleges? In the public sector, the long-standing reliance on state appropriations and local tax funds and on student tuition and fees as primary sources of operating income will change dramatically. As economic conditions fluctuate, private sources of revenue will become more important as part of the operating budget. Institutions will seek to establish partnerships as a method for acquiring new revenue and reducing costs.

Community colleges in the twenty-first century will be more complex than their predecessors. At the same time, they will have less mass; many of the functions now handled in-house will be performed through alliances and networks. Shifting market opportunities and continuously evolving external networks will make these organizations dynamic. The power of an institution's "brand" will become increasingly important and new approaches to planning and budgeting will develop around the idea of brand. Budgeting will take on strategic importance as a method for transforming institutions in a turbulent market.

*See also:* COLLEGE FINANCIAL AID; COMMUNITY COLLEGES; FEDERAL FUNDS FOR HIGHER EDUCATION; STATES AND EDUCATION, *subentry on* STATE GOVERNMENTS IN HIGHER EDUCATION.

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RICHARD L. ALFRED

## FINANCIAL AID

*See:* COLLEGE FINANCIAL AID.

## FINANCIAL SUPPORT OF SCHOOLS

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### HISTORY

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 CAPITAL OUTLAY IN LOCAL SCHOOL SYSTEMS  
 John G. Augenblick  
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 STATE SUPPORT  
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### HISTORY

School finance history is characterized by varying degrees of local, state, and federal support. Throughout history, local support of schools has suffered from glaringly inequitable tax structures resulting in wide variations in funding. State intercession has reduced local control but increased equalization in funding through regulations based on conditions associated with state aid. Federal financial activity evolved rapidly in the latter half of the twentieth century with contributions reaching their highest levels in the 1970s and again in the late 1990s. Federal-level rhetoric about support of education reemerged at the beginning of the twenty-first century, but the levels of funding and programmatic efforts were fractured along political divisions. These trends may be viewed within a historical perspective that encompasses five periods, beginning in 1607.

### The Colonial Period

The colonial period began with the establishment of the permanent settlement at Jamestown and ended with the conclusion of the Revolutionary War in 1783. During this period, support and control of schooling were exclusively a local matter. Local support, grounded in either the church or the home, grew from limited support of European investors. Monies that were earmarked for education were often redirected to other community needs, such as the building of hospitals. Schooling in the southern colonies was based on apprenticeships or the use of pauper schools. Wealthier areas in the Northeast supported community-financed grammar schools. The wide disparity in a revenue base for schooling mirrored similar disparities in quality of teaching, buildings, and curricula.

Once agreement had been reached to build and finance a school, local communities identified revenue sources that included subscriptions (specified amounts paid by townspeople), rents, donations, bequests, land grants from the British Crown, and other efforts made from the resources of the town. Puritan-Calvinist New England supported taxation to support an education system of common schools for all students, Latin schools for upper grades, and a college for ministerial preparation. A different system evolved in the mid-Atlantic colonies because these colonies did not have a church majority. Parochial schools dominated, despite their inevitable decline because of a lack of state regulation. State interference was resented and opposed. The state had no role or obligation to support such schools. The dominant trend emerging from the colonial period was that public education should not be limited to poor children or require tuition.

### **The National Period**

The national period began with the close of the Revolutionary War and extended through the end of the Civil War. Publicly supported and controlled education was implemented slowly. Financing of schools suffered because of needs associated with national security, the economy, and a significantly rapid increase in population. Local schools became less accessible due to westward expansion. Greater dispersion of the general population resulted in town decentralization and the establishment of the school district. Creating districts extended the concept of local control but resulted in poorer financing and reduced quality. Despite such limitations, the idea of the common school prospered between 1830 and 1865. The idea of tax-supported schools for all children also prospered. The driving mechanism for the common school movement was an expanding national economy based on manufacturing, trade, and industry.

Tax support during this period took a tremendous step forward. The designation in the western territories of sixteenth section township revenue increased support to common schools. (Revenue from the sixteenth section of each township was earmarked for the support of the township's common school.) Revenue obtained from two other sections within each township was also set aside to endow a university. States from the original colonies that did not have township revenue looked to other methods of tax support including literary funds (New York,

Maryland, and New Jersey); liquor-license fees (Connecticut); and state lotteries (New York). Bank taxes were also used between 1825 and 1860. States that did not use direct taxation looked to the property tax, but widespread use of this form of taxation was hard-won. Critics of pauper schools argued that the segregation of the poor into special schools did not represent the American ideal of an egalitarian democracy. Free schools also came under attack, because many were not actually free. In many cases, these schools were supported by rate bills that required a family to pay a tuition based on the number of children attending the school.

One of the main outcomes of the national period was an increase in state supervision with accompanying state requirements. Both outcomes were based on conditional state aid, a tactic also followed by the federal government. Government aid through land endowments to church schools was effectively ended. An outcome of the increase of sectarian control (loss of church dominance) over education was a decrease in the quality of local education and school attendance. This condition continued until state supervision over local outcomes began to increase.

### **The Post-Civil War Period**

The post-Civil War period began with the Reconstruction era and continued until 1905. The Civil War slowed educational expansion in the North, and completely stalled it in the South. Not until 1900 did southern educational standards come to meet the standards of 1860. In the South, education was in such a dilapidated state that the average value of a school building in 1900 was about \$100. The South was the last region to establish tax support because of slow improvement in the southern economy and it took the South a much longer time to generate a sufficient revenue stream to meet the needs of a public education system. The North, on the other hand, benefited from rapid urbanization, a vigorous economy, and an increased demand for skilled workers. Taxation reflected earlier trends, with nontax revenues used when possible and the property tax serving as the foundation for securing local support. State funding, when available, was characterized by a wide disparity in levels of aid to wealthy and poor areas.

### **The Early Reform Period**

Beginning in 1905, the early reform period witnessed increases in the general population, the number of

students attending school, average daily attendance (ADA), the number of teachers, and programs for handicapped children. Greater revenue was available for maintenance, operations, capital outlay, and transportation. Competition for tax dollars increased due to the growing number of lobbyists for special interest groups. Taxes, while more acceptable, were no more popular, and tax dollars were not automatically available for school support. Of great concern during this time was the idea of finding a fair and equitable means of distributing school funds and of maintaining local control.

This was also the era that witnessed the birth of school finance theory. The evolution of school finance theory can be traced through the work of a handful of scholars. As early as 1905, Ellwood Cubberly argued that the states should be responsible for ensuring that local communities establish and maintain local schools, for requiring employment of qualified teachers for a minimum annual period of time, and for setting requirements for educational outcomes. In 1922 Harlen Updegraff promoted the idea of rewards for local effort, incentive grants, equalization aid, and a variable level foundation program of state assistance based on local tax effort. George Sturgis followed in 1923 with proposed penalties for noncompliance with minimum state standards. Sturgis used a minimum, uniform tax levied for each school district and a level of state aid based on the difference between revenue acquired by a wealthy and a poor district. In 1924 Paul Mort defined a satisfactory minimum program and developed a measure of financial need based on a weighted pupil-typical teacher method that used such factors as ADA, educational level, and size of district. Henry Morrison argued that earlier efforts had failed and proposed a full state support model based on the fact that under law education is a state responsibility. The practical foundation for establishing state support through various aid formulations was created through the work of such theorists.

### The Modern Reform Period

The modern reform period began in 1965 when President Lyndon B. Johnson signed the Elementary and Secondary Education Act (ESEA) as part of his War on Poverty. Although this period is known for a diversity of finance-related reforms such as improved property assessment and inclusion of income in district wealth determination, ESEA was the signal event in the evolution of federal financial activity.

ESEA enacted a wide range of programs such as Title I, which pushed states to do more to serve their most needy students. Separately, Head Start services were provided for underprivileged preschoolers. Many laws followed ESEA targeting special needs groups including the Bilingual Education Act, the Native American Education Act, and the Education for All Handicapped Children Act (later renamed the Individuals with Disabilities Education Act). Federal aid reached a twentieth-century zenith under the Carter administration (adjusting for inflation), dropped slightly during the Reagan administrations, and resurged again during the two Clinton administrations. Education funding remains a key political issue in the twenty-first century for both Republicans and Democrats, despite their parties' very different views on the funding priorities.

*See also:* FINANCIAL SUPPORT OF SCHOOLS, *subentries on* CAPITAL OUTLAY IN LOCAL SCHOOL SYSTEMS, STATE SUPPORT.

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### CAPITAL OUTLAY IN LOCAL SCHOOL SYSTEMS

Construction of facilities, including major renovation, additions, and upgrades for technology, is a major expenditure for public schools. Historically these expenses were borne primarily by local school districts, through the issuance of municipal bonds. In the last decade of the twentieth century, states took on a greater role in paying for capital and debt service costs of school districts. The federal govern-

ment, in a departure from its traditional role, has begun to consider providing a significant amount of support for facilities. This change is stimulated by growing enrollment, the deteriorating condition of buildings, litigation over state funding for facilities, and a desire by lawmakers to equalize funding for facilities as they have done for operating expenditures. States use a variety of approaches to distribute aid for capital, with some states providing a fixed amount per student, some reimbursing districts for a portion of their costs, and some providing support based on a review of the districts' needs. Few components of the school finance system are changing as rapidly as the one focused on facilities.

### **The Magnitude of Capital Costs**

Public elementary and secondary education is provided in more than 91,000 schools nationwide. The majority are elementary schools with enrollments of less than 500 pupils. With the median cost of building a school between \$12,500 and \$17,000 per student, or \$11 million to \$26 million per building depending on the school's grade-span, the cost of constructing facilities is a significant component of public school expenditures. In 1997–1998, school districts spent nearly \$36.2 billion in capital outlay and debt service, about 9 percent of all expenditures.

### **Growth in Student Population**

Although enrollment in public schools declined in the 1970s and 1980s, from 45.6 million in 1969 to 40.5 million in 1989, enrollment rose in the 1990s and was expected to continue to rise for long into the future. By 1999, enrollment was 46.8 million and projected enrollment for 2009 is 47.1 million. This growth varies from state to state and, more importantly, within states, placing a dramatically different burden on different school districts.

The buildings constructed to accommodate the last wave of enrollment growth have reached the end of their useful lives. Because of the location of population growth and the cost of renovating existing facilities, many new buildings are needed while older buildings are likely to be torn down or used for other purposes.

### **The Condition of Buildings**

Nationally, 76 percent of all public schools require work to bring all school features into good overall condition. Fifty percent have at least one building feature rated less than adequate, and 43 percent of

the buildings rate at least one environmental feature less than adequate. Between 1999 and 2001, 51 percent of all U.S. public schools had at least one major repair, renovation or replacement planned. In 1999, 20 percent of public schools had life safety features that rated less than adequate.

More than \$5.8 billion in renovations and an additional \$5.5 billion in school building additions were scheduled to be completed in 2001. New projects started in 2001 decreased slightly, with \$4.6 billion in renovations planned and \$5.4 billion in additions. More than 50 percent of all building upgrades planned for 2001 involved electrical overhaul, accommodating new demands for educational technology needs. Of the new middle and high schools constructed in 2001, 100 percent included security equipment. Of all renovations undertaken, more than 89 percent were changes designed to put buildings in compliance with the Americans with Disabilities Act of 1990.

Many studies have been conducted regarding how the atmosphere and environment of buildings affect student learning. These studies examined furniture arrangement, classroom density, noise, and effect of renovation. Furniture arrangement and floor plan reportedly influences student behavior and attitudes toward school. Studies demonstrate that students in high-density classrooms tend to be more aggressive and less socially integrated. Continued exposure to high noise from external sources, such as airports or traffic, correlates with lower reading scores. Children in classrooms with external noise also exhibit greater distractibility, lack of task persistence, and have significantly higher blood pressure than children in quieter settings. Another study showed that elementary school children exposed to noise had lower reading scores and poorer language acquisition. A study comparing performance of children in newly remodeled facilities to those in facilities that had not been renovated reported a positive correlation between parental involvement and condition of school building, and between upgraded school facilities and math achievement.

### **Litigation**

In some states, lawsuits have led to an increase in state funding for capital. A case in Colorado, *Giardino v. State Board of Education*, resulted in a settlement whereby the state agreed to increase assistance to local districts. This case argued that requir-

ing students to attend less than adequate facilities violated their right to due process, and that the funding system in place created too much variation among public schools, denying a thorough and uniform educational opportunity required by the Colorado Constitution. *Roosevelt v. Bishop*, an Arizona case, led the state supreme court to require state funding of all facilities to a minimum standard. The court there determined that the state school facilities board must set “minimum adequacy requirements,” which every school facility must meet. In response to this decision, three funds were established, providing approximately \$1.3 billion in capital funding. The court also set a date by which facilities must achieve the standard. A 2001 Wyoming state supreme court decision, *State of Wyoming v. Campbell County School District*, found the entire school finance system unconstitutional, but spoke specifically of capital construction, stating that “all facilities must be safe and efficient.” It went on to provide a specific definition of safe and efficient, and provided that “the legislature must fund the facilities deemed required by the state” for all students in Wyoming.

### State Aid for Capital Purposes

Historically, states played a limited role in paying for school construction. Until the 1980s, the primary role of the state was facilitating the use of bonds by school districts to incur debt for construction; states placed limits on the extent of debt districts could have, typically a proportion of their property value, and required that a supermajority of voters approve the issuance of debt. Some states provide an amount per pupil for capital purposes, others provide loans to school districts, reimburse a fixed percentage of annual debt service, or attempt to pay all capital costs. Some states provide no state aid for school facilities. However, an increasing number of states have implemented new forms of state assistance to supplement local funds. In at least four states, lottery ticket sales are put toward capital expenditures. Florida school districts receive funds from a tax on automobile licensing. California taxes new development to help pay for school construction. Other states have loan, reimbursement, or grant programs that allow local districts to supplement or replace money from local budgets with funds from the state. The state of Arizona, in response to the court ruling, pays for nearly all capital construction in order to ensure a uniform, minimal standard of quality.

### The Federal Role

The federal government has provided little support for the capital needs of school districts. During World War II the government provided support to school districts with military installations. This program has continued into the twenty-first century and expanded to include other districts impacted by federal interests. As federal aid for pupils with disabilities expanded after 1965, the government restricted most of its funds to assure that resources were focused on the instructional needs of students. Since the closing years of the twentieth century, attention has been devoted to developing new ways federal aid might be distributed to assist school districts in meeting facilities needs. These include the use of the tax system, through tax credits and tax waivers, to stimulate investment while avoiding direct expenditures. While the federal government is concerned about the condition of buildings and the need for new facilities, it may need to recognize that some of the other policies it promotes, from expanded use of technology to smaller class size, have implications for facilities.

### Other Capital Issues

A variety of other issues have implications for capital funding in the future. One issue is class size. Many states are considering requiring smaller class sizes, particularly in early grades, in light of the literature that supports such a policy. If states do require smaller classes, not only would more teachers be needed but more classrooms would be required as well, creating a major impact on elementary schools. Another issue is the expanding use of schools for preschool as well as for learning opportunities for parents. As more states consider moving to full-day kindergarten or providing preschool activities, the demand for space will increase. Schools may respond to this demand in the same way that some have dealt with playgrounds, athletic facilities, and libraries: by sharing their use with municipalities, which allows costs to be shared.

Another issue is technology. As more schools invest in hardware and software, several issues emerge: (1) the capacity to handle the telecommunications wiring and space needs for technology; (2) sufficient equipment to assure access to technology for all students; and (3) the frequency of upgrading technology. This last issue raises the distinction between current operating expenditures—costs consumed in one year—and capital expenditures, which typically

have a period of use over which costs may be depreciated. Many technological supplies and materials might be expected to last three to five years, creating a new category of expenditures.

A final issue is emerging from both the states' use of new accountability systems, and the expanding use of technology. As more students can fulfill graduation requirements without actually attending school, and more students use technology to take courses and do homework, the concept of a school may change. If schools serve as a place where students meet with teachers periodically, rather than a place they spend a specific amount of time each day, school buildings, particularly high schools, could take on a new look and become smaller than they are now. The cost of these buildings could decrease substantially. At a minimum, the internal organization of schools might change, reducing the need for libraries, laboratories, and auditoriums, which would lower their cost in communities that had those facilities available in other buildings.

*See also:* FINANCIAL SUPPORT OF SCHOOLS, *subentries on* HISTORY, STATE SUPPORT; SCHOOL FACILITIES.

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#### STATE SUPPORT

School finance involves the interrelated issues of raising, distributing, allocating, and using revenues for the purpose of educating children. Early in the twentieth century, local school districts were primarily responsible for providing funds—mostly through property taxes—for schools. Considerable disparities in the per pupil property wealth of school districts led to dramatic differences in both local property tax rates and in the amount of money available for schools. It was not uncommon to find districts with very low tax rates and high expenditures as well as districts with high tax rates and low expenditures.

In 1968 plaintiffs in California filed the first successful legal challenge, known as the *Serrano* case, to such school funding systems. The California state supreme court held that such inequities were unconstitutional and ordered the state to equalize spending differences based on property wealth. Challenges have been filed in most other states and have been successful in about half of these cases. In the late 1980s, plaintiffs began to challenge state funding systems by arguing that they do not provide adequate resources for education. These cases have been successful in a number of states, most notably in Kentucky, Ohio, and Wyoming.

Faced with such court rulings, or in many cases simply faced with a legal challenge, states have increased the level of support for schools. Whereas in 1920, local property taxes accounted for nearly 90 percent of school district revenues, by 2001, the federal government provided about 6 percent of school revenues with the remaining 94 percent shared approximately equally between states and local school districts. Although these percentages vary considerably from state to state, the general pattern of in-

creased state involvement in the funding of schools is clear.

States rely on two major types of intergovernmental grants to school districts and use a variety of distribution formulas to actually allocate funds to each district. The two major types of grants are *general aid* and *categorical grants*.

### General Aid

General—or unrestricted—aid represents the largest source of state revenue for local school districts in all of the states. General aid is money distributed to school districts with relatively few strings attached. This money, combined with local resources, usually represents between 70 and 90 percent of a district's budget and is spent for such things as teacher salaries, administrators, operations, and maintenance, instructional support, and the general operations of the schools. Much of this money is distributed to school districts in inverse relation to the local property wealth per pupil, with the intended consequence of equalizing differences in revenue capacity. States use the following mechanisms to allocate general aid to school districts.

**Flat grants.** A flat grant is a fixed amount of money given to each school district regardless of need. Popular in the early twentieth century, flat grants, if they are used at all, are relatively small today. Flat grants have lost favor because of their disequalizing impact and the fact that they provide assistance to districts regardless of local property wealth.

**Foundation programs.** Under a foundation program, the state establishes a base—or foundation—level of revenue that each district should maintain. It also establishes a required tax rate that each district must levy. The state then provides resources to each school district to make up the difference between the foundation level and how much is raised by that school district though the required property tax rate. If a district raises more than the required amount some states take those additional funds and use them to finance the state's share in other districts. This process is known as *recapture*. A foundation program works well in states where the court has ruled that some minimum level of funding is necessary to insure adequate educational opportunities.

**Guaranteed yield.** Another approach is to guarantee each district the ability to raise money as if it had a specified level of property wealth. The state estab-

lishes a guaranteed wealth level and as under the foundation program, districts with per pupil property wealth below that guarantee are given state aid so that at any tax rate they can raise as much revenue as the district whose wealth is equal to the guarantee. As before, wealthy districts are able to raise more than the guarantee. Some states recapture this difference and others do not.

The principle difference between foundation programs and guaranteed yield programs is that under a foundation program all districts are required to level a fixed tax rate and have the same revenue guarantee. This provides for considerable equity across districts, but limits local choices over how much to spend. Districts seeking to spend more than the foundation guarantee must do so with unequalized local property taxes. To the extent that the foundation level defined by the state does not grow as fast as school district revenue needs, larger portions of total revenue will become unequalized. This problem occurred in many states in the last half of the twentieth century.

Guaranteed yield programs specify a wealth guarantee. This gives districts more flexibility in determining how much they wish to spend, and insures that all districts (whose wealth is less than or equal to the guaranteed level) have access to the same level of per pupil revenue with equal tax rates. This approach allows for more local choice, but if the wealth guarantee does not keep up with growth in property values in the state, it too can lead to substantial portions of local revenue not being equalized.

A common solution to this problem is a two-tiered approach to distributing general aid to school districts. The first tier is a traditional foundation program requiring all districts to levy a minimum property tax and guaranteeing funding at a minimum level. The second tier relies on a guaranteed yield system, offering districts an equal amount of revenue per pupil for each increment in property tax rate above the foundation required tax rate. This guarantee often is capped at some level. Some states even allow districts an unequalized property tax above the second tier.

### Categorical Grants

Not all students have the same needs. Some children have disabilities that require special assistance to help them learn. There is also considerable evidence

that children from low-income homes are at a disadvantage in learning compared to children from higher-income families. Therefore, simply providing an equal level of revenue for each child may not offer equal educational opportunities. In addition, the characteristics of school districts may lead to differences in cost structures that must be compensated for if all children are to have equal access to educational services. Categorical grants are generally used by states to compensate for these differences in student and district characteristics. Among the categorical approaches most frequently in place are the following.

**Pupil weighting.** Something of a hybrid between general and categorical aid, the practice of pupil weighting counts students with special needs more than once before general state aid is distributed to school districts. For example, a child with a learning disability may receive an additional weight of one, meaning he or she is counted as two students for the purpose of state aid distribution. This has the effect of reducing the districts per pupil property wealth and hence increasing the state aid per pupil, and of providing that state aid for that child twice. It is assumed that the additional revenues will be used to meet the needs of the children who generate the funds, although not all states actually require that.

**Program-specific grants.** An alternative approach, program-specific grants give districts additional money based on child or district characteristics. For example, grants could be provided to help fund the special educational needs of children with disabilities. This can come in the form of direct reimbursements, or paying a fixed amount of money for each child so identified. In the case of compensatory education (money for children from low-income homes), additional revenue is often provided to enhance educational opportunities. Generally it is required that the funds be spent on the children who generated the funds in the first place.

States also provide categorical funds to assist districts with programs where costs may vary for reasons that are out of the control of the district. For example, geographically large but sparsely populated districts generally have higher transportation costs per pupil than do more densely populated urban districts. Many states provide separate transportation assistance to districts to compensate for these differences.

**Geographic cost differences.** In addition to the cost differences that school districts experience described

above, across most states there are substantial differences in the costs of the personnel, supplies and materials that schools purchase. Some states have begun to make adjustments to state aid formulas to accommodate these differences. For example, the costs of housing may be higher in large urban areas of a state compared to rural areas. In addition, there may be more competition for individuals with high levels of education and training (such as teachers) in some areas of a state. As a result, it may cost a district more to provide exactly the same services different parts of any state. Therefore, a geographic cost adjustment could be included in the state aid formula to adjust for those differences. These adjustments are often controversial and frequently poorly understood by state policy makers. Their intent is to equalize differences in costs faced by school districts that are out of their control. But legislators faced with allocating more money to other parts of the state often have difficulty supporting such adjustments and as a result they are only infrequently used today.

It is likely that over time, as lawsuits focused on school funding adequacy grow in importance, the state share of support for public education will grow. How states elect to distribute funds to local school districts will not only continue to be an important policy issue, but its importance will grow over time.

*See also:* FINANCIAL SUPPORT OF SCHOOLS, *subentries on* HISTORY, CAPITAL OUTLAY IN LOCAL SCHOOL SYSTEMS; SCHOOL FACILITIES; STATES AND EDUCATION.

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LAWRENCE O. PICUS

### FLEXNER, ABRAHAM (1866–1959)

Author of the monumental survey *Medical Education in the United States and Canada* (1910), Abraham Flexner contributed to a period of reform in

American medical education that hastened the closing of commercial medical schools and strengthened university-affiliated institutions adopting scientific approaches. A Louisville, Kentucky, native who earned his A.B. degree at Johns Hopkins University, Flexner established his own preparatory school in Louisville. However, he gained prominence as an educator through his critical essays, surveys, and reports about American educational institutions and practices. Throughout the early twentieth century, Flexner's ideas wielded influence through the sponsorship and largesse of powerful corporate foundations. Finally, from 1930 through 1939, Flexner designed and directed the Institute for Advanced Study at Princeton.

### Early Learning and Teaching Experiences

Born into a poor but ambitious family, Flexner developed an appetite for reading and studying outside of school. The endorsement of a Johns Hopkins alumnus sent Flexner to Baltimore in 1884, and an older brother's modest business income provided funds for his college tuition and expenses. Although inexperienced in the prerequisite studies of Latin and Greek, Flexner exercised industry and gained mastery of the classical languages. Against the norm, Flexner earned his bachelor's degree in two years.

Flexner returned to Louisville and secured employment in the Louisville High School, where he taught primarily Greek and Latin for four years. Supplementing his salary through private tutoring after school proved challenging and lucrative, however, and in 1890 Flexner opened his own school. This endeavor allowed Flexner to practice a rigorous and progressive student-centered pedagogy without the customary rules, tests, and reports. "Mr. Flexner's School" earned the reputation for preparing wealthy and sometimes troublesome boys for college. Furthermore, Flexner's work caught the attention of college presidents in the Northeast, who noticed that Flexner's students outperformed graduates of eastern prep schools. Flexner's pedagogical authority increased through articles he authored about his work in *The Educational Review* and *The International Journal of Ethics*.

### Attaining Status as Educational Expert

In 1904 Abraham Flexner closed his school and left Kentucky with his wife, Anne Crawford Flexner, to pursue advanced study at Harvard University. Despite Flexner's initial enthusiasm, he left the univer-

sity after a year, disappointed in his professors and assistantship. Never to earn an advanced degree, Flexner embarked instead upon an extended period of observation of all types of schools and universities both in New York and Europe. In his study and travel, Flexner benefited from sponsors and social acquaintances, including those of his brother Dr. Simon Flexner of the Rockefeller Institute for Medical Research. Thus, Flexner enjoyed unequalled access to institutions and introductions to professors, researchers, and foreign ministers. Settling at the University of Berlin and later Heidelberg, Flexner penned his first book, *The American College: A Criticism*, an overall critique of Harvard, which was based upon his personal experiences, including a scathing indictment of the elective system. This book, published in 1908 upon Flexner's return to America, received little notice except by the president of the Carnegie Foundation for the Advancement of Teaching, Dr. Henry S. Pritchett. Pritchett soon offered Flexner the opportunity to conduct the survey of medical schools that elevated him to national prominence.

To Henry Pritchett, Abraham Flexner was a "layman educator" capable of completing a key assignment in the Carnegie Foundation's larger institutional classification scheme, (i.e., differentiating colleges from secondary schools; universities from colleges, and accounting for appropriate work at each level). A vanguard force in the early-twentieth-century movement to increase standardization, efficiency, effectiveness, and the use of scientific methods, Pritchett deemed the Carnegie Foundation a champion of the public good. Pritchett presumed that Flexner's exhaustive survey of medical schools would improve American medical care by exposing society's overabundance of poorly trained physicians and the inferiority of its commercial medical schools. In combination with other social trends, Flexner's observations and scathing critique nurtured the scientific and professional practice of medicine. Specifically, schools labeled inferior eventually closed, the competing practice of homeopathy lost momentum, the admissions standards for prospective medical students increased, and the professional authority and status of university-trained physicians soared. Flexner's report earned him accolades and afterward he conducted a complete study of medical education in Europe.

Flexner continued to be a part of the elite circles of foundation administrators and consulted often in

matters of benefaction. In 1913 Flexner's foundation role became formalized through an appointment as assistant secretary to another Rockefeller-funded philanthropy, the General Education Board (GEB). Flexner worked for the GEB until 1929, having advanced to the position of executive secretary and member of the board. Importantly, Flexner's "expertise" as an educational reformer achieved new significance, with the philanthropy of the GEB behind him as a powerful incentive for institutional change. For example, from his studies of medical education Flexner advocated full-time appointments for clinical teachers in medical schools. Thus, those university medical schools first willing to require full-time clinical staffs (e.g. Johns Hopkins, Yale, Chicago, Cornell, Vanderbilt, and Iowa) received large foundation grants.

However, Flexner's GEB work was not limited to medical education. Flexner continued to practice sponsorship by offering financial support to promising scholars for research and travel. Also, Flexner directed extensive surveys and evaluations of public school systems. Maryland, Delaware, North Carolina, Indiana, and Kentucky, to name a few, contracted with the GEB for these services. Finally, Flexner created and established the Lincoln School at Teachers College, Columbia University, through a GEB endowment gift. Highly regarded for its experimental pedagogy, the Lincoln School eschewed the classical curriculum for modern languages, science, and social studies.

#### **Retirement and the Institute for Advanced Study**

Upon his retirement from the GEB, Flexner accepted the prestigious invitation for residence at Oxford for the Rhodes Trust Memorial Lectures, which later he published as *Universities: American, English, German* in 1930. Extolling the intellectual vigor of the German research tradition, this work became institutionalized as Flexner obtained a gift of \$5 million to create and direct the Institute for Advanced Study at Princeton. Ironically, the intellectual life of Flexner's institute benefited from the increasing repression of German universities, as foreign scholars, most notably Albert Einstein, found a place for research in the United States. Flexner left the institute in 1939 to spend his final years producing his autobiography and several other books.

*See also:* EDUCATION REFORM, *subentries on* OVERVIEW, REPORTS OF HISTORICAL SIGNIFICANCE;

GRADUATE SCHOOL TRAINING; MASTER'S DEGREE, THE; MEDICAL EDUCATION.

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## **FOREIGN LANGUAGE EDUCATION**

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Foreign language education in the United States at the beginning of the twenty-first century is energized by some of the most dramatic developments in its modern history. Proficiency movement and standards initiatives have changed the focus of language instruction and assessment. Implications of emerging brain research have fueled renewed interest in early and intensive language learning for children in the first years of formal schooling, as well as programwide emphasis on meaningful use of language in authentic contexts. The resources of the Internet and other technology tools provide new opportunities for students to have direct experiences with the target language and its cultures, both within and beyond the school setting.

#### **Proficiency**

The American Council on the Teaching of Foreign Languages (ACTFL) Proficiency Guidelines, first published in 1986, shifted the emphasis in language instructional goals from what learners know *about*

language to what they can *do with* the language they have learned, and at the same time they established a common metric for measuring student performance. The Proficiency Guidelines describe student performance in listening, speaking, reading, and writing at the novice, intermediate, advanced, and superior levels. They were adapted from guidelines developed in U.S. government language schools and have made “proficiency-oriented instruction” a part of the vocabulary of every language teacher. The 1986 guidelines were subsequently reevaluated and revised, beginning with the 1999 document “ACTFL Proficiency Guidelines—Speaking” and with the 2001 document “Preliminary Proficiency Guidelines—Writing.”

### Standards

The *Standards for Foreign Language Learning in the Twenty-First Century*, introduced in 1996 and revised in 1999, created the bold vision of a long sequence of language instruction for all learners, beginning in kindergarten and continuing through grade twelve and beyond. Eleven content standards were clustered within five major goals:

- Communication: Communicate in Languages Other than English
- Cultures: Gain Knowledge and Understanding of Other Cultures
- Connections: Connect with Other Disciplines and Acquire Information
- Comparisons: Develop Insight into the Nature of Language and Culture
- Communities: Participate in Multilingual Communities at Home and Around the World

Sample performance indicators were provided for grades four, eight, and twelve, and sample learning scenarios described classroom activities that reflect the standards. After introduction of the general standards in 1996, supporting documents were developed for nine languages and were included in the 1999 edition.

ACTFL Performance Guidelines for K–12 Learners, devised in 1998, support the content standards with descriptions of student performance. Based on both the Proficiency Guidelines and the *Standards* document, the Performance Guidelines reinforce the vision of the K–12 sequence and dramatize the idea that proficiency development requires time and intensity of language instruction.

### Assessment

The Oral Proficiency Interview (OPI) is the tool by which trained interviewers place foreign language speakers on a proficiency continuum from novice to superior. By focusing on the ability to use the language to accomplish communicative tasks of increasing complexity, the OPI has influenced curriculum, teaching, and assessment, as well as standards for licensure of language teachers.

The application of the proficiency model to the other language skills of writing, reading, and comprehension created a new focus in assessment on performance tasks rather than linguistic manipulation. Teachers create contexts and rubrics for evaluating student performance and portfolios of student work, in addition to more traditional tests of accuracy and grammatical competence.

Because of the usefulness of performance assessments, adaptations of OPI-based assessments have been developed for use in K–8 settings and for articulation between high school and college programs. The Center for Applied Linguistics developed an oral interview for students in immersion and other elementary school language programs called the Student Oral Proficiency Assessment. Similar to the OPI, this test uses contexts and environments more appropriate to the child in grades three to five. Another test, the Early Language Listening and Oral Proficiency Assessment, was subsequently developed for language learners from pre-K to grade two. These tests are intended primarily for program evaluation, although they give teachers feedback on effectiveness of teaching and student progress, as well as tools for constructing their own classroom oral assessments.

### Technology

The growing use of technology throughout society has had an impact on foreign language instruction as well, especially at the middle and high school level. The language labs of the 1960s and 1970s have become multimedia learning laboratories. Students and teachers supplement their textbooks with CD-ROMs, access foreign-language websites, hold online conversations with students in other countries, and interact regularly with their “key pals,” often in the target language. Many students keep electronic portfolios and build culminating projects using Internet resources and multimedia software such as PowerPoint or HyperStudio. They may create individual or class web pages, and outstanding student work may

appear on the school web page. Teachers use the web to post activities and information, to communicate with parents and the community, and to provide resources for students, parents, and other teachers. In many respects the Internet is the realization of a long-held dream: Students can be in regular contact with authentic foreign language resources, both at school and at home, and they can use the target language for meaningful, personal purposes.

Technology can also help teachers and school districts provide foreign language instruction even in remote and isolated settings. Interactive television has made it possible for one Spanish teacher in North Dakota, for example, to reach students in schools many miles away. Interactive television can bring a Russian or a Japanese class to one or two high school students who would otherwise have to wait until college to enroll in the language of their choice. Distance learning is the only option for language education for some rural and isolated school districts. Because of the popularity of distance learning and the special conditions necessary for its success, the National Council of State Supervisors of Foreign Language issued a position paper on the topic in 2002.

### Support for Foreign Language Teachers

K–12 foreign language teachers of the early twenty-first century have unprecedented support and resources available to them. Each of the major languages has a national organization that provides guidelines, resources, and sometimes funding to assist teachers and programs. The American Council on the Teaching of Foreign Languages (ACTFL) serves as an umbrella organization for all languages, and in this role it has initiated major projects such as the ACTFL Proficiency Guidelines, the *Standards*, and the ACTFL Performance Guidelines for K–12 Learners. Teachers also have access to state and national conferences sponsored by these organizations, as well as regional conferences such as the Northeast Conference on the Teaching of Foreign Languages, the Southern Conference on Language Teaching, the Southwest Conference on Language Teaching, and the Central States Conference on Teaching Foreign Languages. Most sessions at these conferences focus on curriculum and pedagogy for the K–12 level.

The Center for Applied Linguistics provides research and information about K–12 language learning, and its Educational Resources Information Center (ERIC) Clearinghouse on Languages and

Linguistics offers a wide range of resources in foreign language education. The language resource centers were established by Congress in 1989 to serve as resources to improve the nation's capacity to teach and learn foreign languages effectively. One of these, the K–12 Foreign Language Resource Center at Iowa State University, is focused specifically on issues of curriculum, assessment, and teacher development for K–12 programs.

Listserves provide teachers with the opportunity to post questions about programs, materials, or methodology and share their ideas with colleagues from all over the country. Two of the most popular are FLTeach, used especially by middle and high school teachers, and Nandu, the early language listserv for K–8 teachers. Many other listservs address the needs of specific languages and topic areas.

### Elementary School Foreign Language Programs

Paul Garcia, then president of the ACTFL, was asked in a 2000 interview in *Curriculum Technology Quarterly* about new trends in foreign language education. He identified the continuing growth of foreign language programs for primary school learners as the most important trend and made special note of immersion education within that development. After a surge in the 1960s and a steep decline in the 1970s and early 1980s, interest in early language learning accelerated and sustained momentum through the turn of the century.

National reports played a strong role in this re-awakening of interest. These reports included:

- *Strength through Wisdom*, a 1979 report of the President's Commission on Foreign Language and International Studies, which specifically recommended that language learning begin in the elementary school and continue throughout a student's schooling.
- *A Nation at Risk*, a 1983 report of the National Commission on Excellence in Education, which ranked foreign language education at the same level as the "basic academic fields."

Such reports emphasized the national and economic importance of attaining a level of proficiency in a foreign language that could only be accomplished over a long period of study.

Further impetus for early language learning came from results and interpretation of brain research, brought to popular awareness through reports in *Newsweek* in 1996 and *Time* in 1997. In the

*Time* article, J. Madeline Nash wrote, "The ability to learn a second language is highest between birth and the age of six, and then undergoes a steady and inexorable decline. . . . What lessons can be drawn from the new findings? Among other things, it is clear that foreign languages should be taught in elementary school, if not before" (p. 56).

A number of states responded with mandates for teaching languages at the elementary school level, in some cases without funding to support the new programs. By 2002 there were mandates for foreign languages in the elementary school curriculum in at least eight states: Arizona, Arkansas, Louisiana, Montana, New Jersey, North Carolina, Oklahoma, and Wyoming. Other states worked without a mandate to increase and promote elementary school foreign language offerings.

In 1997 there were foreign language programs in 31 percent of all public and private elementary schools surveyed by the Center for Applied Linguistics, up from 22 percent in 1987. Spanish was taught in 79 percent of the programs, followed by French at 27 percent. Programs in German, Latin, Japanese, and Spanish for Spanish speakers were also well represented.

Elementary school foreign language programs generally fit into three major categories: immersion, FLES (foreign languages in elementary schools), and FLEX (foreign language exploration or experience).

**Immersion education.** Foreign language immersion programs, in which the content of the school curriculum is taught in the foreign language, are among the most influential innovations of the final decades of the twentieth century. Immersion goals are twofold: fluency in the foreign language and mastery of the content of the school curriculum. Most immersion programs begin in kindergarten or grade one, and many continue through the middle and high school levels. The first North American public school immersion program began in 1965 with a kindergarten in St. Lambert, a suburb of Montreal, Canada. Supported and advised by researchers from McGill University in Montreal, this French program was shaped by sound professional advice and carefully researched as it progressed from one grade to the next. Longitudinal research validated the effectiveness of immersion in meeting both language and content goals and served to inspire new immersion programs across Canada and in the United States.

The first U.S. immersion program was established in Spanish in Culver City, California, in 1971.

In 1974 a total immersion program in French began in Montgomery County, Maryland, and partial immersion programs in French, Spanish, and German began in Cincinnati, Ohio. Other programs soon followed, and by 1993 approximately 28,200 students were enrolled in nine languages in 139 programs, in twenty-five states and Washington, DC. Spanish was the most frequently taught language, followed by French, Japanese, and German. By 1999 the total number of immersion schools had risen to 278, with approximate 46,000 students enrolled, in eleven languages. More than half the programs were in Spanish.

In *total immersion* programs all instruction during the school day is conducted in the target language, beginning with four- or five-year-olds in kindergarten, and children learn to read first in their new language. English language instruction is usually introduced in grade two or three, commonly for a half hour per day, and is gradually increased each year until by grade five or six, 20 to 40 percent of the day is taught in English.

*Partial immersion* programs deliver the curriculum in the English language for approximately half the school day and in the foreign language for the other half of the day. Children learn to read in both languages simultaneously or in English first and then in the new language. This balance of English and foreign language instruction continues from the beginning of schooling until grade five or six.

Both total immersion and partial immersion are designed primarily for native speakers of English, although native speakers of other languages are also successful immersion students. In most cases the teacher is the only fluent language model for the students in the classroom. *Two-way immersion*, or *bilingual immersion*, is a model that grew rapidly after its introduction in 1963. In this approach, native speakers of English and the target language learn together, half a day in one language and half a day in the other. Each group of students is learning in its new language during half the school day, and student native speakers serve as language models for one another. By 2000 there were 260 programs in twenty-three states, most of them in Spanish. This model depends on the presence of a stable population of native speakers of both languages, and the growing Spanish population in the United States creates ideal conditions for two-way Spanish immersion programs.

**FLES (foreign languages in elementary schools) programs.** FLES programs have a long history in the

United States, with a notable surge in popularity in the 1960s and a resurgence in the late 1980s. As generally defined, FLES programs are part of a long sequence of language study, beginning before middle school, that lead to continuing courses at the middle and high school levels. The programs of the late 1980s emphasized integrated, thematic planning and a close connection with the general elementary school curriculum. Some “content-based” or “content-related” programs make a special effort to reinforce student learning in other content areas. Class periods range from ten to forty minutes in length, from once to five times per week.

This variability of starting points, instructional time, and degree of content orientation has made it very difficult to evaluate the overall results of FLES programs. The task force that developed the “ACTFL Performance Guidelines for K–12 Learners” addressed this problem by recommending that “the accomplishment of such content standards (in the ACTFL *Standards* document) required students to be enrolled in elementary programs that meet from 3–5 days per week for no less than 30–40 minutes per class” (Swender and Duncan, p. 482).

The Georgia ESFL (elementary school foreign language) model programs, established in 1992 with state funding, provide a clear picture of what is possible in a FLES program. Georgia model programs were designed to provide optimum conditions for language learning and to serve as a case study for the amount of language proficiency children can attain after six years of language study. Program guidelines require participating schools to offer a foreign language for thirty minutes per day, five days per week, beginning in kindergarten and continuing at least through grade five. Instruction is delivered in the target language, and teachers are expected to teach no more than eight classes per day. Testing in 1996, 1998, and 2001 by the Center for Applied Linguistics affirmed the outstanding results of these programs in all the languages represented—French, German, Japanese, and Spanish—and the 2001 report commended the program as a model for the entire United States.

**FLEX programs (foreign language exploration or experience).** Some school districts that find it impossible to fund more intensive foreign language programs for all students offer short-term programs that give learners a sample of one or more languages over a limited period of time. In 1994 Helena Curtain and Carol Ann Bjornstad Pesola characterized

FLEX programs as “frequent and regular sessions over a short period of time or short and/or infrequent sessions over an extended period of time” (p. 30). These programs have limited goals, usually stated in terms of interest and awareness, and in some cases they are taught mostly in English. Sometimes FLEX programs are offered as a way of helping students choose which language they will later study in depth. When carefully designed and well taught, FLEX programs can serve to enhance cultural awareness and motivate future language study, but they do not claim measurable language skills as an outcome.

### Middle School Programs

Middle school programs face several major challenges. The first is the learners themselves, who have developmental characteristics that require instructional materials and strategies that are different both from those appropriate for the elementary school and from those effective with high school students. These needs are not adequately met by simply extending textbook instruction over two years instead of one, a typical program format. Second, as elementary school programs continue to grow, the middle school is literally caught in the middle of the long sequence, with a responsibility to coordinate with both elementary school and high school programs. Experienced language learners need continuation courses in the same language learned in the elementary school, and they also benefit from the option to begin a third language in the middle school. Middle schools that receive students from immersion programs or K–5/6 FLES programs sometimes offer content courses taught in the target language, especially mathematics and social studies. Third, middle schools have very limited time available for electives, and so long as foreign language classes are viewed as electives, they are often in competition with such attractive options as music, art, and applied arts.

Exploratory programs, long a popular approach for the middle school, fit well with the philosophy of exploration that has been a hallmark of the middle school curriculum. While FLEX programs may equip students to make an experience-based choice of a language for further study, they do not fit well with the projected K–12 sequence of the *Standards* document, nor with the recommendations of the task force for the ACTFL Performance Guidelines, which call for “middle school programs that meet daily for no less than 40–50 minutes” (Schwender and Duncan, p. 482). These programs also do not

meet the needs of learners who have spent four to seven years in an elementary school FLES or immersion program.

A typical middle school format before the advent of proficiency and the *Standards* document included one semester to one year of the language in grade seven, followed by one semester to one year in grade eight, both considered to be “Level One.” Students entering grade nine would then be eligible to enroll in “Level Two” of the language. This format, often preceded by a one-semester or one-year exploratory program, continues to be typical at the beginning of the twenty-first century.

Clearly the variety of programs at the middle school level, ranging from nothing to a continuation of an effective elementary school program, made the *Standards* vision of a K–12 foreign language sequence difficult to attain. As Myriam Met pointed out in 1996, “Foreign language instruction in middle schools will be critical to the success of long sequences in the coming years” (p. 1).

### High School Programs

The curriculum at the high school level has continued to be textbook-driven, although proficiency and the *Standards* have had a growing impact on textbooks, methodology, and student success. Teachers use partner and group work to help students develop strong communication skills. Influenced by the *Standards*, many teachers build units thematically, focus them on culminating projects, and integrate content from the general curriculum.

As with the middle school level, there is a vast variability across the country in terms of access to foreign language instruction at the high school level. Students in districts with well-developed K–12 programs emerge with impressive levels of proficiency from full five- to six-year programs spanning middle school and high school. At the same time there are other students, often in rural areas, who have virtually no access to foreign language instruction. Some schools have addressed the problem of access through the use of interactive television or by encouraging summer enrollment in various college or camp offerings.

Block scheduling in many schools has challenged teachers to rethink how they involve students with learning over class periods lasting ninety minutes and longer. Lack of continuity in language study, common in block scheduling, can create ob-

stacles to the attainment of proficiency goals and place added stress on students and teachers.

In years three to five of the high school curriculum, a number of programs offer courses leading to the International Baccalaureate (IB), a schoolwide program that entitles graduates to enter universities around the world. Other programs offer Advanced Placement (AP) classes, which prepare students to take examinations that can result in college credit. Both IB and AP classes tend to focus on literature. Some states offer college-in-the-schools programs that allow advanced students to take college courses in their high school environment.

Many schools offer travel programs for foreign language students, often during spring or summer breaks, and in some cases a partner school in the target culture also sends students to the United States. These opportunities for authentic language practice are popular with students and teachers. Even short programs help to solidify language skills and motivate further language study. Other authentic language opportunities are found in popular weekend and summer language camps, such as the Concordia Language Villages in northern Minnesota.

### Foreign Language Programs in Other Countries

A study of nineteen countries on six continents completed by the Center for Applied Linguistics in 2000 identified a number of contrasts between U.S. programs and those elsewhere. Most of the countries surveyed require the study of at least one foreign language, beginning in elementary grades. Some countries require two languages in the course of schooling, and Israel requires three languages—Hebrew plus two others. In countries of the European Union, foreign language study is moving earlier and earlier in the curriculum, and many countries begin in first grade.

Another contrast with the United States is the presence of strong language policy in many of the surveyed countries. Such policies include compulsory foreign language education, a national curriculum or curriculum framework, and designated amounts of time required for foreign language instruction. In many of the countries surveyed foreign languages are considered to be core subjects. In Germany, for example, languages command the same status and time commitment as mathematics, reading, and social studies. All of these policies stand in sharp contrast to the U.S. school setting.

The influence of immersion education and content-based instruction is notable in Europe and Australia, as increasing numbers of programs use the target language as a tool and not only a focus of instruction. Canada continues to show leadership in the development of and research into immersion programs, mainly for English-speaking learners of French. Two-way immersion programs are proliferating in Germany and Australia.

Communicative language teaching methods have been increasingly evident in Europe. As political and economic barriers among European countries have dropped away, the need to function in several languages has increased sharply, and priority has been placed on proficiency in written and spoken language. These priorities are reflected in both materials and teaching approaches. The Goethe Institute, a German government organization that provides German language instruction throughout the world, has been a leader in the development and dissemination of communicative teaching methodologies.

### Challenges for K–12 Foreign Languages

As teachers work toward the vision of K–12 language programs and performance-based curriculum and instruction, several major challenges await them. First, developing smooth transitions from elementary to middle to high school, and then from high school to colleges and universities, will be a high priority. Making time for languages in the crowded middle school curriculum will be a major obstacle. Using the resources of technology to stretch the potential of the language classroom will be a constant challenge, especially as the technology continues to provide new opportunities. Teachers continue to be in short supply at all levels. Finally, there is the fundamental challenge: claiming a secure place in the school day and in the K–12 curriculum for foreign language instruction.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; LANGUAGE ACQUISITION; SCHOOL REFORM; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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## FOSTER CARE

*See:* FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* FOSTER CARE.

## FRATERNITIES AND SORORITIES

*See:* SOCIAL FRATERNITIES AND SORORITIES.

## FREIRE, PAULO (1921–1997)

Paulo Reglus Neves Freire was a Brazilian educator whose revolutionary pedagogical theory influenced educational and social movements throughout the world and whose philosophical writings influenced academic disciplines that include theology, sociology, anthropology, applied linguistics, pedagogy, and cultural studies. He was born to a middle-class family in Recife, in the state of Pernambuco in the northeast of Brazil. His early work in adult literacy—the most famous being his literacy experiments in the town of Angicos in Rio Grande do Norte—was terminated after the military coup in 1964. That year he went into exile, during which time he lived in Bolivia; then Chile where he worked for the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Chilean Institute for Agrarian Reform, and where he wrote his most important work, *Pedagogy of the Oppressed* (1970); Mexico; the United States where he held a brief appointment at Harvard University's Center for

Studies in Development and Social Change; and Switzerland where he worked for the World Council of Churches as the director of their education program. He also served as an adviser for various governments, most notably the government of Guinea-Bissau. In 1980 he returned to Brazil to teach and later to serve as secretary of education for São Paulo. He worked as a consultant for revolutionary governments such as the New Jewel Movement in Grenada, the Sandinista government in Nicaragua, and the government of Julius K. Nyerere in Tanzania. From 1985 until his death in 1997, Freire served as the honorary president of the International Council for Adult Education. Freire's conception of education as a deeply political project oriented toward the transformation of society has been crucial to the education of revolutionary societies and societies undergoing civil war, as well as established Western democracies. Freire's work has exercised considerable influence among progressive educators in the West, especially in the context of emerging traditions of critical pedagogy, bilingual education, and multicultural education.

Freire's revolutionary pedagogy starts from a deep love for, and humility before, poor and oppressed people and a respect for their "common sense," which constitutes a knowledge no less important than the scientific knowledge of the professional. This humility makes possible a condition of reciprocal trust and communication between the educator, who also learns, and the student, who also teaches. Thus, education becomes a "communion" between participants in a dialogue characterized by a reflexive, reciprocal, and socially relevant exchange, rather than the unilateral action of one individual agent for the benefit of the other. Nevertheless, this does not amount to a celebration of the untrammelled core of consciousness of the oppressed, in which the educator recedes into the background as a mere facilitator. Freire conceived of authentic teaching as enacting a clear authority, rather than being authoritarian. The teacher, in his conception, is not neutral, but intervenes in the educational situation in order to help the student to overcome those aspects of his or her social constructs that are paralyzing, and to learn to think critically. In a similar fashion, Freire validated and affirmed the experiences of the oppressed without automatically legitimizing or validating their content. All experiences—including those of the teacher—had to be interrogated in order to lay bare their

ideological assumptions and presuppositions. The benchmark that Freire used for evaluating experiences grew out of a Christianized Marxist humanism. From this position, Freire urged both students and teachers to unlearn their race, class, and gender privileges and to engage in a dialogue with those whose experiences are very different from their own. Thus, he did not uncritically affirm student or teacher experiences but provided the conceptual tools with which to critically interrogate them so as to minimize their politically domesticating influences.

### Conceptual Tools

**Banking education.** Freire criticized prevailing forms of education as reducing students to the status of passive objects to be acted upon by the teacher. In this traditional form of education it is the job of the teacher to deposit in the minds of the students, considered to be empty in an absolute ignorance, the bits of information that constitute knowledge. Freire called this *banking education*. The goal of banking education is to immobilize the people within existing frameworks of power by conditioning them to accept that meaning and historical agency are the sole property of the oppressor. Educators within the dominant culture and class fractions often characterize the oppressed as marginal, pathological, and helpless. In the banking model, knowledge is taken to be a gift that is bestowed upon the student by the teacher. Freire viewed this false generosity on the part of the oppressor—which ostensibly aims to incorporate and improve the oppressed—as a crucial means of domination by the capitalist class. The indispensable soil of good teaching consists of creating the pedagogical conditions for genuine dialogue, which maintains that teachers should not impose their views on students, but neither should they camouflage them nor drain them of political and ethical import.

**Problem-posing method.** Against the banking model, Freire proposed a dialogical *problem-posing method* of education. In this model, the teacher and student become co-investigators of knowledge and of the world. Instead of suggesting to students that their situation in society has been transcendently fixed by nature or reason, as the banking model does, Freire's problem-posing education invites the oppressed to explore their reality as a "problem" to be transformed. The content of this education cannot be determined necessarily in advance, through the expertise of the educator, but must instead arise

from the lived experiences or reality of the students. It is not the task of the educator to provide the answer to the problems that these situations present, but to help students to achieve a form of critical thinking (or *conscientization*) that will make possible an awareness of society as mutable and potentially open to transformation. Once they are able to see the world as a transformable situation, rather than an unthinkable and inescapable stasis, it becomes possible for students to imagine a new and different reality.

In order, however, to undertake this process, the oppressed must challenge their own internalization of the oppressor. The oppressed are accustomed to thinking of themselves as "less than." They have been conditioned to view as complete and human only the dominating practices of the oppressor, so that to fully become human means to simulate these practices. Against a "fear of freedom" that protects them from a cataclysmic reorganization of their being, the oppressed in dialogue engage in an existential process of dis-identifying with "the oppressor housed within." This dis-identification allows them to begin the process of imagining a new being and a new life as subjects of their own history.

**Culture circle.** The concrete basis for Freire's dialogical system of education is the *culture circle*, in which students and coordinator together discuss generative themes that have significance within the context of students' lives. These themes, which are related to nature, culture, work, and relationships, are discovered through the cooperative research of educators and students. They express, in an open rather than propagandistic fashion, the principle contradictions that confront the students in their world. These themes are then represented in the form of codifications (usually visual representations) that are taken as the basis for dialogue within the circle. As students decode these representations, they recognize them as situations in which they themselves are involved as subjects. The process of critical consciousness formation is initiated when students learn to read the codifications in their situationality, rather than simply experiencing them, and this makes possible the intervention by students in society. As the culture circle comes to recognize the need for print literacy, the visual codifications are accompanied by words to which they correspond. Students learn to read these words in the process of reading the aspects of the world with which they are linked.

Although this system of codifications has been very successful in promoting print literacy among adult students, Freire always emphasized that it should not be approached mechanically, but rather as a process of creation and awakening of consciousness. For Freire, it is a mistake to speak of reading as solely the decoding of text. Rather, reading is a process of apprehending power and causality in society and one's location in it. Awareness of the historicity of social life makes it possible for students to imagine its re-creation. Literacy is thus a "self-transformation producing a stance of intervention" (Freire 1988, p. 404). Literacy programs that appropriate parts of Freire's method while ignoring the essential politicization of the process of reading the world as a limit situation to be overcome distort and subvert the process of literacy education. For Freire, authentic education is always a "practice of freedom" rather than an alienating inculcation of skills.

### Philosophy of Education

Freire's philosophy of education is not a simple method but rather an organic political consciousness. The domination of some by others must be overcome, in his view, so that the humanization of all can take place. Authoritarian forms of education, in serving to reinforce the oppressors' view of the world, and their material privilege in it, constitute an obstacle to the liberation of human beings. The means of this liberation is a *praxis*, or process of action and reflection, which simultaneously names reality and acts to change it. Freire criticized views that emphasized either the objective or subjective aspect of social transformation, and insisted that revolutionary change takes place precisely through the consistency of a critical commitment in both word and deed. This dialectical unity is expressed in his formulation, "To speak a true word is to transform the world" (Freire 1996, p. 68).

Freire's educational project was conceived in solidarity with anticapitalist and anti-imperialist movements throughout the world. It calls upon the more privileged educational and revolutionary leaders to commit "class suicide" and to struggle in partnership with the oppressed. Though this appeal is firmly grounded in a Marxist political analysis, which calls for the reconfiguring of systems of production and distribution, Freire rejected elitist and sectarian versions of socialism in favor of a vision of revolution from "below" based on the work of autonomous popular organizations. Not only does

Freire's project involve a material reorganization of society, but a cultural reorganization as well. Given the history of European imperialism, an emancipatory education of the oppressed involves a dismantling of colonial structures and ideologies. The literacy projects he undertook in former Portuguese colonies in Africa included an emphasis on the reaffirmation of the people's indigenous cultures against their negation by the legacy of the metropolitan invaders.

Freire's work constitutes a rejection of voluntarism and idealism as well as determinism and objectivism. The originality of Freire's thought consists in his synthesis of a number of philosophical and political traditions and his application of them to the pedagogical encounter. Thus, the Hegelian dialectic of master and slave informs his vision of liberation from authoritarian forms of education; the existentialism of Jean Paul Sartre and Martin Buber makes possible his description of the self-transformation of the oppressed into a space of radical intersubjectivity; the historical materialism of Karl Marx influences his conception of the historicity of social relations; his emphasis on love as a necessary precondition of authentic education has an affinity with radical Christian liberation theology; and the anti-imperialist revolutionism of Ernesto Che Guevara and Frantz Fanon undergird his notion of the "oppressor housed within" as well as his commitment to a praxis of militant anticolonialism.

Freire's pedagogy implies an important emphasis on the imagination, though this is not an aspect that has been emphasized enough in writings about him. The transformation of social conditions involves a rethinking of the world as a particular world, capable of being changed. But the reframing proposed here depends upon the power of the imagination to see outside, beyond, and against what is. More than a cognitive or emotional potential, the human imagination, in Freire's view, is capable of a radical and productive envisioning that exceeds the limits of the given. It is in this capacity that everyone's humanity consists, and for this reason it can never be the gift of the teacher to the student. Rather, educator-student and student-educator work together to mobilize the imagination in the service of creating a vision of a new society. It is here that Freire's notion of education as an ontological vocation for bringing about social justice becomes most clear. For Freire, this vocation is an endless struggle because critical awareness itself can only be a neces-

sary precondition for it. Because liberation as a goal is always underburdened of a necessary assurance that critical awareness will propel the subject into the world of concrete praxis, the critical education must constantly be engaged in attempts to undress social structures and formations of oppression within the social universe of capital without a guarantee that such a struggle will bring about the desired results.

### Criticism

Since its first enunciation, Freire's educational theory has been criticized from various quarters. Naturally, conservatives who are opposed to the political horizon of what is essentially a revolutionary project of emancipation have been quick to condemn him as demagogic and utopian. Freire has faced criticism from the left as well. Some Marxists have been suspicious of the Christian influences in his work and have accused him of idealism in his view of popular consciousness. Freire has also been criticized by feminists and others for failing to take into account the radical differences between forms of oppression, as well as their complex and contradictory instantiation in subjects. It has been pointed out that Freire's writing suffers from sexism in its language and from a patriarchal notion of revolution and subjecthood, as well as a lack of emphasis on domination based on race and ethnicity. Postmodernists have pointed to the contradiction between Freire's sense of the historicity and contingency of social formations versus his vision of liberation as a universal human vocation.

Freire was always responsive to critics, and in his later work undertook a process of self-criticism in regard to his own sexism. He also sought to develop a more nuanced view of oppression and subjectivity as relational and discursively as well as materially embedded. However, Freire was suspicious of postmodernists who felt that the Marxist legacy of class struggle was obsolete and whose antiracist and anti-sexist efforts at educational reform did little to alleviate—and often worked to exacerbate—existing divisions of labor based on social relations of capitalist exploitation. Freire's insights continue to be of crucial importance. In the very gesture of his turning from the vaults of official knowledge to the open space of humanity, history, and poetry—the potential space of dialogical problem-posing education—Freire points the way for teachers and others who would refuse their determination by the increasingly enveloping inhuman social order. To believe in that

space when it is persistently obscured, erased, or repudiated remains the duty of truly progressive educators. Freire's work continues to be indispensable for liberatory education, and his insights remain of value to all who are committed to the struggle against oppression.

*See also:* EDUCATION REFORM.

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PETER MCLAREN  
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## FROEBEL, FRIEDRICH (1782–1852)

The German educator Friedrich Froebel is significant for developing an Idealist philosophy of early childhood education and establishing the kindergarten, a school for four- and five-year-old children that is found worldwide.

## Biography

Friedrich Wilhelm August Froebel was the youngest of five sons of Johann Jacob Froebel, a Lutheran pastor at Oberweissbach in the German principality of Schwarzburg-Rudolfstadt. Froebel's mother died when he was nine months old. When Friedrich was four years old, his father remarried. Feeling neglected by his stepmother and father, Froebel experienced a profoundly unhappy childhood. At his father's insistence, he attended the girls' primary school at Oberweissbach. From 1793 to 1798 he lived with his maternal uncle, Herr Hoffman, at Stadt-Ilm, where he attended the local town school. From the years 1798 to 1800 he was as an apprentice to a forester and surveyor in Neuhaus. From 1800 to 1802 Froebel attended the University of Jena.

In 1805 Froebel briefly studied architecture in Frankfurt. His studies provided him with a sense of artistic perspective and symmetry he later transferred to his design of the kindergarten's gifts and occupations. In 1805 Anton Gruener, headmaster of the Pestalozzian Frankfurt Model School, hired Froebel as a teacher. To prepare him as a teacher, Gruener arranged for Froebel, now twenty-four years old, to take a short course with Johann Heinrich Pestalozzi at Yverdon. Froebel believed Pestalozzi's respect for the dignity of children and creation of a learning environment of emotional security were highly significant educational elements that he wanted to incorporate in his own teaching. He also was intrigued by Pestalozzi's form, number, and name lessons, which would form a basis for his later design of the kindergarten gifts. After his training with Pestalozzi, Froebel taught at Gruener's Model School until he returned to Yverdon in 1808 for two more years of study with Pestalozzi.

From 1810 to 1812 Froebel studied languages and science at the University of Göttingen. He hoped to identify linguistic structures that could be applied to language instruction. He became particularly interested in geology and mineralogy. From 1812 to 1816 Froebel studied mineralogy with Professor Christian Samuel Weiss (1780–1856) at the University of Berlin. Froebel believed the process of crystallization, moving from simple to complex, reflected a universal cosmic law that also governed human growth and development.

In 1816 Froebel established the Universal German Educational Institute at Griesheim. He moved the institute to Keilhau in 1817 where it functioned

until 1829. In 1818 Froebel married Henrietta Wilhelmine Hoffmeister (1780–1839), who assisted him until her death. In 1831 Froebel established an institute at Wartensee on Lake Sempach in Switzerland and then relocated the school to Willisau. Froebel next operated an orphanage and boarding school at Burgdorf.

Froebel returned to Germany, where in 1837 he established a new type of early childhood school, a child's garden, or kindergarten, for three- and four-year-old children. Using play, songs, stories, and activities, the kindergarten was designed as an educational environment in which children, through their own self-activity, could develop in the right direction. The right direction meant that, in their development, children would follow the divinely established laws of human growth through their own activity. Froebel's reputation as an early childhood educator increased and kindergartens were established throughout the German states.

In 1851 Karl von Raumer, the Prussian minister of education, accused Froebel of undermining traditional values by spreading atheism and socialism. Despite Froebel's denial of these accusations, von Raumer banned kindergartens in Prussia. In 1852, in the midst of the controversy, Froebel died. Although kindergartens existed in the other German states, they were not reestablished in Prussia until 1860. By the end of the nineteenth century, kindergartens had been established throughout Europe and North America.

## Froebel's Kindergarten Philosophy

Froebel shaped his educational philosophy during the high tide of German philosophical Idealism that was marked by the work of Johann Gottfried Herder (1744–1803), Immanuel Kant (1724–1804), and Georg Wilhelm Hegel (1770–1831). In the *Education of Man* (1826), Froebel articulated the following idealist themes: (1) all existence originates in and with God; (2) humans possess an inherent spiritual essence that is the vitalizing life force that causes development; (3) all beings and ideas are interconnected parts of a grand, ordered, and systematic universe. Froebel based his work on these principles, asserting that each child at birth has an internal spiritual essence—a life force—that seeks to be externalized through self-activity. Further, child development follows the doctrine of preformation, the unfolding of that which was present latently in the individual. The kindergarten is a special educational environ-

ment in which this self-active development occurs. The kindergarten's gifts, occupations, and social and cultural activities, especially play, promote this self-actualization.

Froebel was convinced that the kindergarten's primary focus should be on play—the process by which he believed children expressed their innermost thoughts, needs, and desires. Froebel's emphasis on play contrasted with the traditional view prevalent during the nineteenth century that play, a form of idleness and disorder, was an unworthy element of human life.

For Froebel, play facilitated children's process of cultural recapitulation, imitation of adult vocational activities, and socialization. He believed the human race, in its collective history, had gone through major epochs of cultural development that added to and refined its culture. According to Froebel's theory of cultural recapitulation, each individual human being repeated the general cultural epoch in his or her own development.

By playing, children socialize and imitate adult social and economic activities as they are gradually led into the larger world of group life. The kindergarten provided a milieu that encouraged children to interact with other children under the guidance of a loving teacher.

### The Kindergarten Curriculum

Froebel developed a series of gifts and occupations for use in kindergartens. Representing what Froebel identified as fundamental forms, the gifts had both their actual physical appearance and also a hidden symbolic meaning. They were to stimulate the child to bring the fundamental concept that they represented to mental consciousness. Froebel's gifts were the following items.

- Six soft, colored balls
- A wooden sphere, cube, and cylinder
- A large cube divided into eight smaller cubes
- A large cube divided into eight oblong blocks
- A large cube divided into twenty-one whole, six half, and twelve quarter cubes
- A large cube divided into eighteen whole oblongs: three divided lengthwise; three divided breadthwise
- Quadrangular and triangular tablets used for arranging figures
- Sticks for outlining figures

- Whole and half wire rings for outlining figures
- Various materials for drawing, perforating, embroidering, paper cutting, weaving or braiding, paper folding, modeling, and interlacing

As a series, the gifts began with the simple undifferentiated sphere or circle and moved to more complex objects. Following the idealist principle of synthesis of opposites, Froebel's cylinders represented the integration of the sphere and the cube. The various cubes and their subdivisions were building blocks that children could use to create geometrical and architectural designs. Using the sticks and rings to trace designs on paper, children exercised the hand's small muscles, coordinated hand and eye movements, and took the first steps toward drawing and later writing.

The occupations were items such as paper, pencils, wood, sand, clay, straw, and sticks for use in constructive activities. Kindergarten activities included games, songs, and stories designed to assist in sensory and physical development and socialization. Froebel published *Mutter-und-Kose-lieder*, (Mother's songs, games, and stories), a collection of kindergarten songs, in 1843.

### Diffusion of the Kindergarten

Kindergartens were established in Europe and North America. In the United Kingdom, Bertha Ronge, a pupil of Froebel's, established several kindergartens. In the United States, German immigrants introduced the kindergarten. In Watertown, Wisconsin, Margarethe Meyer Schurz established a kindergarten for German-speaking children in 1856. In New York, Matilda H. Kriege introduced and marketed kindergarten materials imported from Germany.

Henry Barnard, the first U.S. Commissioner of Education, popularized Froebel's philosophy in his *Common School Journal*. Elizabeth Palmer Peabody (1804–1894) established a kindergarten in Boston, translated several of Froebel's books into English, organized an educational organization called the Froebel Union, and established an institute to train kindergarten teachers.

Superintendent of Schools William Torrey Harris, (1835–1909) incorporated the kindergarten into the St. Louis, Missouri, public school system in 1873. Harris was assisted by his associate, Susan Elizabeth Blow (1843–1916), a dedicated Froebelian, who wrote *Letters to a Mother on the Philosophy of Froebel* in 1899 and *Kindergarten Education* in 1900.

In the early twenty-first century, kindergarten teachers continue to emphasize Froebel's ideas of developing the social side of a child's nature and a sense of readiness for learning. The important outcome for the kindergarten child is readiness for the intellectual learning that will come later in his educational career.

*See also:* EARLY CHILDHOOD EDUCATION; BLOW, SUSAN; EDUCATIONAL PSYCHOLOGY; PESTALOZZI, JOHANN.

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## FULL-SERVICE SCHOOLS

According to David Tyack, writing in 1992, there is a long history in the United States of providing remediation services to children in a school setting. Early programs attempted to provide health and so-

cial services in the school setting. The intent of these early efforts was to assist immigrant children in adjusting to their new culture. Locating these services in the school changed the focus from serving the family to serving the individual child.

The following quote, from social reformer Robert Hunter, writing in 1904, is indicative of the environment in which full-service schools have evolved:

The time has come for a new conception of the responsibilities of the school. The lives of youth are desperate, parents bring up their children in surroundings which make them in large numbers vicious and criminally dangerous. Some agency must take charge of the entire problem of child life and master it. (Kronick, p. 23)

In a similar vein, William Wort, the superintendent of schools in Gary, Indiana, in 1923 stated:

The school should serve as a clearinghouse for children's activities so that all child welfare agencies may be working simultaneously and efficiently, thus creating a child's world within the city wherein all children may have a wholesome environment all of the day and everyday. (Kronick, p. 23)

The modern history of full-service schools must be traced to Joy Dryfoos. Her work is one of central importance for all who want to understand and implement full-service schools. Her 1994 book *Full-Service Schools: A Revolution in Health and Services for Children, Youth, and Families* is a landmark piece on the concept of full-service schools. She continues to write and advocate for full-service schools, and her writings and presentations are a critical force in the history and continued development of full-service community schools. According to Dryfoos, what is important in the historical evolution of full-service schools is that many disparate groups were working toward the goal of creating such schools, but they did not know what each other was doing. These groups include the Charles Stewart Mott Foundation, the Children's Aid Society, Communities and Schools, and the Tennessee Consortium for the Development of Full Service Schools. The following definition of a full-service school evolved out of discourse between Dryfoos and those working with her to try to develop full-service schools.

A full-service school is a school that has broadened its mission and vision to meet the needs of all

of its students. The school is where health, mental health, and other services are provided. The emphasis is on *prevention*. The full-service school is a new environment where a *systems* approach to change is used. It is not a school where human services are an add-on. Collaboration thus becomes a key process in the school. Input from the community determines what special services will be provided. By meeting the noncurricular needs of children and families, the full-service school ensures that learning will happen for all students in the school.

### Community

Full-service schools have been around conceptually for quite some time. After all, the American philosopher and educator John Dewey (1859–1952) talked about the school as the community and the community as the school. Thus, community has been at the heart of full-service schools from the beginning. The concept of community is important to full-service schools in several ways. First, the school is a piece of real estate the community owns. This leads to the importance of building use after the end of the school day. The idea is that the sense of community increases as schools become better, and as schools improve the sense of community becomes stronger. At the same time each local community determines the needs for each school. Hence, the after-school needs may range from adult education to laundry services.

The importance of community is why full-service schools are often called full-service community schools. Other names include “lighted schools” and “beacons.” The central idea, regardless of name, is that all children have the right to learn and the right to the best curriculum feasible. No learning will go on, however, if the children and their families’ noncurricular needs are not met first. These needs might include alcohol and drug counseling, conflict resolution, general mental health issues, and many others. Research has found that the main need for the children and families is mental health care. It is impossible for children to learn when they come to school tired, hungry, and/or abused. Full-service schools support the notion that it is not whether the school will be a parent or not, but whether it will be a good parent.

### Prevention

Along with community, prevention is another central tenet of full-service schools. Keeping students in

school and learning is clearly a way of preventing them from going on welfare or becoming incarcerated in a correctional or mental health facility. In her 1994 book, Dryfoos asserted that one in four children in America drinks or does drugs, has early unprotected sex, and/or drops out of school. This statistic alone should make prevention a priority.

In many states corrections and mental health consume an undue amount of the state budget because not enough time, money, and effort has been spent on prevention. The best place for conducting prevention programs is in schools, because that is where the children and the families are. Full-service schools, by working to meet the ecological needs of children and families, begin prevention and intervention at an early age and seek to diminish the inequities that exist between the haves and the have-nots.

The philosophy of starting full-service schools is to begin where the need is the greatest. The thought is that if those who are on the bottom move up, all will benefit. The rising boat benefits all. In some schools, 90 percent of the students qualify for the free and reduced lunch program. The mobility of these students and their families is very high, resulting in a high turnover rate. Oftentimes the whereabouts of these people is unknown. More is known about migratory birds than is known about migratory people.

### Collaboration

Dryfoos noted that a universal call has been issued for one-stop, unfragmented, health and social service systems that are consumer oriented, developmentally appropriate, and culturally relevant. Full-service schools can be seen as central institutions in the community to provide an important if not critical organizing focus for the coordination and integration of service.

Full-service schools are seamless organizations in which educators and human service workers work collaboratively. The goal is to meet the needs of the child. Collaborators must set aside their own agendas and work for the benefit of the child. Collaboration as a bare minimum requires communication, trust, and clear agreements. It is much more complicated than coordination or cooperation.

### Systems Change

The full-service school is a new environment in which a systems approach to change is used. Full-

service schools collaborate with human service agencies in a systems approach. Blaming the child for not being able to learn appropriately is replaced by a problem-solving approach that does not seek to push the child out of school. A focus on systems emphasizes the interconnection of health, welfare, and educational forces in the child's life. The full-service school program watches for and tries to prevent push-outs and dropouts. There is a definite difference between the two.

The focus on systems emphasizes the importance of education and human service collaboration. This focus strongly asserts that human services cannot be add-ons at the school. Add-ons ensure only failure. Tinkering with schools but not making thoroughgoing changes courts failure. The full-service school is thus about thoroughgoing change.

### Controversies

Current controversies address the following issues: (1) Should the services be school based or school linked? (2) How should these services be integrated so that they are more than add-ons? (3) How can turfism be addressed? and (4) Do these support services water down academics?

**School-based versus school-linked services.** School-based or school-linked services are concerned with colocation of services as well as pay and the sources of pay. School-based services have the advantage of immediacy of response, collegiality, and teamwork. They have the disadvantage of being associated negatively with the school if the child and parent have a bad perception of the school. School-based services help deal with the problems of transportation and fragmentation of services.

**Integration of the services.** One of the strongest arguments for full-service schools is that they will cut down on the fragmentation of existing services. In one full-service school project, which was launched in 1999, this proved to be the case within three years of launching. Helping professionals and educators, who at most schools normally do not work with each another, are sharing and collaborating. This school's experiences with school-linked services is that they are nothing more than what currently exists. The coordinator of services has reduced fragmentation.

There must be collaboration between schools and human service personnel. School principals play a critical role in this process. Schools that operate in a human relations frame, where communication is

bottom up, horizontal, and top down, are more successful than those that are bureaucracies where communication is top down only. When people actually know each other they are more likely to trust one another.

**Turfism.** In dealing with a complex issue such as interprofessional collaboration, turfism arises as one of the thorniest issues to try to solve. The first problem here is responsibility. How do teachers and human service workers, who have historically not collaborated, work together harmoniously? This collaboration is well beyond the traditional working relationships between teachers and school social workers, school counselors, or school psychologists. The human service workers who are working in full-service schools are community personnel, and the collaboration with them is much more complex than those same professionals who are employed by school systems. Thus the second major issue of pay arises. Who is this worker actually working for, the school or the community agency? Is this worker a school system employee or a community service employee? This issue will be continually debated for quite some time. At the same time it is not an unsolvable problem.

**Do these services water down academics?** The final controversy is whether these services should be provided at the school, and if so, how will these services affect academics? Research answers the question in such a way that for a certain portion of school-age children, these support services must be offered for these children to have any chance at all for learning. To not provide these services yields the onerous option of the creation and continuation of a permanent underclass.

A related question, however, is what happens to the gifted child, in comparison to the average child? The money for education is fixed and not likely to expand. Thus the perennial question remains, can excellence and equity coexist? Excellence and education are not mutually exclusive. No, the idea is that full-service schools will not require education moving, but rather the moving of human service workers into school.

### Evaluation

To those familiar with full-service schools it is not news that the evaluation process is lacking. Evaluation of the programs is essential in order to acquire funding, grants, and community support. Past at-

tempts at documentation of success of the full-service school model have fallen drastically short of their goals because of poor planning and lack of data regarding the programs that constitute the school. Record-keeping may be the key to a successful school evaluation. This is a difficult task, especially so for the full-service school, because of the nature of the model. Because a full-service school consists of multiple components, such as a health clinic, after-school programs, adult education classes, and mental health services, an evaluation of the whole model must include all of the subcomponents. Turnover of students also affects the evaluation process. In many inner-city schools student turnover is upwards of 30 percent each school year. It is impossible to get an accurate reading of school improvement with such a loss of data.

Finally, time should be considered when evaluating a full-service school. These programs develop slowly and improve and change based on school and community needs. Therefore, it may take several years for the full effects on students and their families to become evident. Consequently a one- or two-year evaluation may not leave sufficient time for all the benefits to manifest. All these factors should be considered before an evaluation of a full-service school can take place.

One way to control many of the problems that will be encountered is for the evaluators to be involved from the conception of the program. Therefore they can establish the criteria for an evaluation and determine what data need to be tracked and for how long. Working intimately with the principal is essential to evaluation success. Also helpful is to employ an activities coordinator to oversee and keep documentation on all components of the school. This responsibility is too cumbersome for the principal to undertake and should not be pushed off onto already overworked teachers. Making good use of the position of activities coordinator will help the full-service school be seen as a unified institution, thereby making evaluation more effective.

### The Future

In the early twenty-first century, democratic communities are needed more than ever. The schoolhouse can be the place for discourse on important international events that will affect the educational system for many years to come. The schoolhouse, as stated at the outset, belongs to the community. The full-service school has not been used a great deal in-

ternationally, but at the Community Schools Conference (March 2001, Kansas City, Missouri) there were architects from Japan present. Japan is very interested in learning how architects can help develop schools that can be used by students for both academic and nonacademic pursuits. Urban/city planners are also coming into the planning and development of full-service schools. Hence, nontraditional professionals are now entering the fray, trying to see that all children are educated, and the full-service school is certainly one way to do this.

*See also:* COMMUNITY EDUCATION; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; FAMILY SUPPORT SERVICES; HEALTH SERVICES, *subentry on* SCHOOL.

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ROBERT F. KRONICK

## FUTURE FACULTY PREPARATION PROGRAMS

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Future faculty preparation programs provide a smooth transition between graduate school and faculty positions by preparing graduate students to meet the demands and expectations they will face as faculty members in U.S. colleges and universities. By examining the multiple roles and responsibilities that faculty hold—including research, teaching, and service—these programs extend beyond the parameters of standard graduate education, which empha-

sizes research, and teaching assistant (TA) development or graduate teaching certification programs, which emphasize present or future teaching alone. Instead, future faculty preparation programs view graduate school as a time for professional development in all areas and emphasize the need for finding and maintaining balance among the wide range of roles future faculty will encounter. At core, these programs share a commitment to cooperatively supporting graduate education in a more holistic way, giving graduate students firsthand experience with appropriate mentoring. This process relies on cooperation and effective communication between diverse institutions, between institution and faculty, and between faculty and graduate students. Most importantly, future faculty preparation programs offer a new model of graduate student development—one not merely supplementary to existing graduate student education or TA development, but one that considers professional development as inherent to graduate schooling.

### **Impetus and Development**

Future faculty preparation programs evolved from the TA training programs that proliferated between 1960 and 1990. Prior to the 1960s no formal training for teaching assistants existed; however, as colleges and universities began to depend on TAs more regularly to teach introductory courses, and as students, as well as the general public, began criticizing the resulting quality of their undergraduate educations, higher education institutions responded by organizing the first formal TA training programs. TA development programs were initially departmental in scope and designed to help TAs perform their graduate teaching tasks effectively, but they were not necessarily designed to equip students for their future roles as faculty members.

The 1986 National Consortium on Preparing Graduate Students as College Teachers initiated a public dialogue focusing on both the important role TAs played in undergraduate education and the lack of formal training to prepare them for faculty positions. This and subsequent biannual conferences provided a forum for new research on TAs' developmental stages and encouraged the proliferation of campus-wide, centralized training programs. By the mid-1990s, after legislators, public officials, and investigative reporters entered the conversation about TA training, the conference began to include broader issues of professional development for graduate students.

These conferences, together with Ernest Boyer's publication of *Scholarship Reconsidered: Priorities of the Professoriate* (1990), served as the real impetus for the development of future faculty preparation programs as entities distinct from TA training programs. The conferences prompted further inquiry into the state of TA training, and Boyer's book provoked discussion and debate about the meaning of scholarship and the relationship between teaching and learning. Both encouraged a deliberate focus on the issue of preparing graduate students to meet future professional challenges, "not as a by-product of TA development, but rather as an integral part of their doctoral studies" (Tice et al., p. 276). As this statement attests, although many future faculty programs developed out of TA training programs, they differ from them in their effort to prepare participants for the professoriate by exposing them to all aspects of their future occupations.

Future faculty preparation programs developed as an outgrowth of the public conversations about academic work introduced by Boyer and these TA conferences; this dialogue primarily addressed the frequently reported discrepancy between graduate training and the duties of junior faculty, particularly as many graduate students assumed jobs with very different responsibilities than those at the research university where they received their degree. By providing holistic professional development, early future faculty preparation programs also acknowledged that faculty at most institutions were increasingly expected to demonstrate both strong teaching skills as well as continued research. Growing dissatisfaction with the job readiness skills of doctoral students led to the recognition that graduate students were being trained for research but not for the multiple demands of teaching, research, and the administrative tasks accompanying academic jobs at various institutions. In 1996, for example, fewer than 10 percent of new Ph.D.s received faculty positions at research universities while the majority of the recipients of doctoral degrees took teaching jobs at institutions having very different combinations of mission, student populations, and expectations for faculty.

The launching of the Preparing Future Faculty (PFF) program in 1993 marked, according to its website, the first sustained "national initiative to transform doctoral education." The PFF program began as a collaboration between the Association of American Colleges and Universities (AACU), the

Council of Graduate Schools (GSC), and Pew Charitable Trusts. PFF programs bring “the *consumers* of Ph.D. programs into contact with the *producers* and provide opportunities for graduate students to gain personal experience with different types of institutions, faculty cultures, and student bodies” (Gaff and Pruitt, p. 1). PFF programs orchestrate this cooperation between the “consumer” (hiring institutions) and “producers” (doctoral degree-granting programs) by organizing partnerships, or *clusters*, between doctoral-granting institutions and diverse partner institutions or departments. These partners often include public and private four-year baccalaureate colleges, comprehensive state universities, and community colleges to give graduate students a sense of the different roles and responsibilities faculty have at these various institutions.

The explosion of future faculty preparation programs established in the late 1990s could only have happened because of the programs funded as part of PFF. The seventeen clusters of eighty-eight institutions funded in 1993 grew to seventy-six clusters at forty-six doctoral-granting institutions with more than 295 partner institutions by 2000. PFF programs funded between 1993 and 2002 developed in four distinct phases. The first two phases focused on developing model programs (1993–1996) and institutionalizing and spreading these as part of a national initiative (1997–2001). The next two phases shared an emphasis on discipline-specific future faculty preparation primarily through the provision of grants for disciplinary associations and professional groups to form departmentally based PFF programs. With support from the National Science Foundation and a private donor, AACU and GSC collaborated with disciplinary associations and professional groups to develop model programs in the sciences and mathematics (1998–2000) and in the humanities and social sciences (1999–2002).

Since 1993 many institutions have created future faculty preparation programs similar to the PFF model. These programs emphasize that graduate education should provide opportunities for graduate students to learn about and experience all aspects of faculty responsibilities: teaching, research, and service. As with the PFF model, which allows participating institutions to create their own programs to meet graduate student needs and relative stages of development, these programs attempt to anticipate changing faculty needs and expectations, to provide graduate students with training and professional de-

velopment to help them meet these needs and expectations, and to heighten awareness among established faculty about the changing expectations for faculty and graduate students.

### Characteristics of Programs

While they share a common mission, future faculty preparation programs vary in structure, as diverse models have arisen in response to differing participant needs and institutional climates. The impetus for developing the future faculty preparation program, whether as an outgrowth of a TA development program or an initiative to redefine graduate education, often dictates where the program is administered and how it is funded. Future faculty preparation programs are commonly developed and supported in one of three locations: graduate schools, academic departments, or TA development centers. On many campuses, these three units work in concert to offer a combination of centralized and departmentally based activities. Regardless of where they are housed, having a programmatic or financial connection to the graduate school or graduate dean generally fosters support among faculty on the home campus and helps to build collaborations with partner institutions. Many programs further expand their support base through advisory committees consisting of faculty and graduate students.

Where and how the future faculty preparation program is administered usually determines variables such as participant eligibility and length of time to complete activities. Some programs admit students only from certain participating departments, while others enroll participants from across the university. A few also include postdoctoral fellows. In some faculty preparation programs, students go through an application/selection process and participate in the program for a defined time period—often one to two semesters. Upon completion, they earn a graduate teaching certificate or some other honor. Other programs have structured activities that participants complete in stages as part of their graduate education and some allow participants to engage in various components of the program at any time during their graduate career. These latter models tend to have an open enrollment and do not selectively admit candidates to the program. Time commitments typically range from attendance at various short workshops to enrollment in a semester-long course or frequent travel to partner institutions.

While no generic faculty preparation program template exists, many programs offer some combination of the following components.

**Courses, seminars, and workshops.** These may last a few hours or a semester, with the longer ones often receiving course credit. Topics include comprehensive surveys of teaching techniques, specific pedagogical issues, academic job-market information, professional development tips, and issues in higher education. Some programs offer a cognate in college teaching, a master of science degree for teachers, or a graduate teaching certificate upon completion of certain courses or activities.

**Development of materials.** Materials for a teaching portfolio and/or web page showcasing their research and teaching are often required of participants. These materials usually include a curriculum vitae, cover letters, and other documents necessary for an academic job search, along with course syllabi, lesson plans, and various materials used to teach a course.

**Collaborations with partner institutions.** Collaborations are a key feature of many future faculty preparation programs, since they provide opportunities for participants to meet faculty at other institutions. Opportunities range from a one-day visit to shadowing a professor for a day, guest lecturing, or teaching a course at the partner institution. In some cases, participants can sit in on departmental and school committee meetings. These collaborations allow participants to experience the diversity of faculty roles and responsibilities that exist at different types of institutions.

**Experiential activities.** These provide opportunities for participants to get hands-on practical experience teaching, giving job talks, serving on committees, working with undergraduates, or networking with colleagues. These experiences take place on both the home campus and at the partner institutions.

**Mentoring opportunities.** These programs give graduate students the opportunity to work with a variety of mentors so that they learn about the varied duties of faculty. Mentors can include faculty and staff at the home campus and partner institution, recent alumni, and experienced future faculty preparation program participants.

**Coverage of contemporary issues in higher education.** Contemporary issues are often addressed through various activities and usually include a focus on the use of technology in teaching, increasing stu-

dent diversity, university governance, or changing trends in higher education.

### Future Trends

In general, faculty preparation programs encourage a more holistic approach to graduate education. Ideally, the mission and goals of these programs will eventually become part of the ethos of departments and institutions, particularly as the distinct activities and opportunities they provide become fundamental to the graduate curriculum, rendering separate faculty preparation programs obsolete. This transformation depends on the participation of all members of the academic community—from senior faculty and staff to undergraduates—as well as the strengthening of collaborations among diverse institutions so that hierarchical divisions fade away.

The development of future faculty preparation programs signals the beginning of a movement to re-examine, if not radically alter, graduate education. Program directors are beginning to think broadly about the set of skills that future faculty need in order to meet the changing demands of higher education institutions and to create opportunities for them to develop these skills and be leaders in this change. At the same time, many faculty preparation programs now realize that their responsibilities may lie outside the narrow scope of preparing graduate students to be faculty, and instead encompass a broader range of career options for graduate students, both within and outside of academia.

*See also:* COLLEGE TEACHING; GRADUATE SCHOOL TRAINING.

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DEANDRA LITTLE  
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# G

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## GANGS

*See: ADOLESCENT PEER CULTURE, subentry on GANGS.*

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## GARY SCHOOLS

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The Gary, Indiana, public schools, founded in 1906, were developed by Superintendent William A. Wirt from 1907 to 1938 and quickly expanded into an illustrious example of Progressive education through the 1920s. Born on a farm in eastern Indiana in 1874, Wirt attended nearby Bluffton High School, graduated from DePauw University, and returned to Bluffton as school superintendent in 1899. His school innovations, particularly a more diversified elementary curriculum and flexible schedule, as well as improved facilities, paved the way for his selection as Gary's first professional superintendent. Founded by U.S. Steel Corporation in 1906, Gary grew quickly and attracted a heterogeneous population. Heavily influenced by the ideas of the American philosopher and educator John Dewey, as well as his own rural, Protestant background, Wirt believed that public schools should provide salvation for the children as well as the community.

The Gary Plan, Work-Study-Play, or Platoon School Plan, as it was variously known, focused on establishing two central characteristics in the elementary grades. First, because of a concern for efficiency, Wirt believed in maximizing school facilities by constant use of all classrooms, including nights (for adults), weekends, and summers. Second, he expanded the curriculum to include manual training (numerous shops for the boys and cooking for the

girls, for example), recreation, nature study, daily auditorium activities (including public speaking, music lessons, and movies), and other subjects beyond traditional academic concerns. The plan theoretically organized students into two platoons. During the morning, Platoon A students occupied the specialized academic classrooms (mathematics, science, English, history, etc.), while Platoon B students were in the auditorium, shops, gardens, swimming pools, gym, or playground. They switched facilities during the afternoon. The students, busy every day, were supposed to develop their mental, social, cultural, and physical abilities. Gary's large schools, first Emerson, then Froebel, and a few others built in the 1920s and 1930s, were unique because they were unit schools including all grades, K–12, which allowed for a more efficient use of space and building funds. By the late 1920s about half of the system's 22,000 students were attending such schools, with the remainder in the smaller elementary buildings.

The Gary Plan, highly developed by World War I, quickly attracted national publicity because of its apparent efficiency and diversified curriculum. By 1929, now promoted by the National Association for the Study of the Platoon or Work-Study-Play School Organization, 202 cities had over 1,000 platoon schools. It also generated much controversy, with New York City, for example, rejecting it in 1917 after a three-year experiment. While the Gary schools, in many ways, captured the positive spirit of Progressive education, they also incorporated some troubling aspects. There was the perception in New York and elsewhere that the inclusion of manual training classes was designed to channel the working classes (the majority of Gary's students) into vocational

trades; while the high school enrollment increased, most students did not graduate. The schools were also racially segregated, closely following the northern urban model. The 2,759 black children in 1930 mostly attended all-black elementary schools or the integrated (but internally segregated) Froebel School. The situation worsened as black enrollment increased to 6,700 by 1949 (34% of the student population), despite the school board's attempt in 1946 to promote building integration. By 1960, 97 percent of the 23,055 black pupils (over half of the 41,000 students) were in eighteen predominantly or exclusively black schools, with primarily black teachers and administrators, and the trend would continue as the black population increased and the white population decreased over the following decades.

The Gary work-study-play schools barely survived the depression years, when budgets were severely cut (and most platoon schools were abandoned throughout the country), and then Wirt's death came in 1938. Following an external study in 1940, which recommended dismantling the system, now considered old-fashioned and academically weak, the Gary schools began the slow process, not completed until the 1960s, of instituting the contained classroom, single-teacher model in the elementary grades (which were separate from the eight high schools by 1960). For the remainder of the century, with the mass exodus of whites, along with much of the business community, Gary's troubled schools managed to survive. They had long since lost their progressive luster, as the 25,000 African-American students (there were few others by 1990) from struggling families, an aging teacher corps, and shrinking federal dollars meant that the schools faced numerous problems into the foreseeable future.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; INSTRUCTIONAL STRATEGIES; SECONDARY EDUCATION, *subentry on* HISTORY OF.

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RONALD D. COHEN

## GAY AND LESBIAN STUDIES

Gay and lesbian studies are academic programs dedicated to the study of historical, cultural, social, and political issues of vital concern to lesbian, gay, and, increasingly, bisexual and transgendered individuals. The focus of such programs is on lesbian and gay lives and social institutions, as well as about homophobia and oppression related to sexual orientation. Gay and lesbians studies programs have encouraged many traditional disciplines to reassess their theoretical and political grounding and to consider sexuality and sexual diversity as critical facts determining social behaviors and political structures.

### Goals

The goals of gay and lesbian studies programs are as varied as the programs themselves. The general goals include discovering and recovering the history and culture of homosexuality and bringing homosexuality to the forefront of academic studies, away from being an unspeakable or untouchable subject. The existence of gay and lesbian studies programs helps to challenge the invisibility of homosexuality in society and to expose students to gay and lesbian oppression as it has existed historically. Another goal of lesbian and gay studies is to explore the lives of lesbian and gay people through investigation of identity issues, experiences of oppression, and struggles for recognition. The programs seek to find a common understanding and language in which homosexuals and heterosexuals can better understand gay and lesbian lives. Many programs have an activist agenda that includes such goals as critiquing and transforming the social, political, cultural, economic, ethnic, and gender situations that continue to oppress gay and lesbian people.

In 2000 Jeffery Weeks, a professor of sociology at the University of London, identified five additional goals for gay and lesbian studies. The first is to find ways for society to learn to live with differences in sexual orientation and to provide a forum for discussing differences. The second is to adopt political and cultural stances that work toward sexual justice,

which involves seeking fairness and equity in the treatment of all sexual orientations. The third goal is to challenge heterosexual norms that have been created throughout history. By addressing the second and third goals, homosexuality can be validated and affirmed while heterosexual norms are questioned so that equality of sexual orientations can be reached. The fourth goal is to question the existing body of knowledge related to sexual orientation, especially addressing who has the right to speak authoritatively on gay and lesbian issues. The fifth goal is to create spaces for debate, analysis, negotiations, disagreements, and finding common ground regarding issues of sexual orientation.

### History

Gay and lesbian studies emerged from the civil rights movement, yet the roots of this discipline stretch back to the middle of the twentieth century. The Kinsey studies of human sexuality in the 1940s and 1950s challenged scientific assumptions related to sexuality and, by raising the visibility of homosexuality, provided a platform for gay and lesbian studies. Gay and lesbian studies, although taking place in academia, have been strongly influenced by the political and cultural development of gay and lesbian communities, especially in urban areas throughout the United States. As the political and cultural environment within society changed during the latter half of the twentieth century, so too did the frameworks in which gay and lesbian intellectuals and scholars worked. Specifically, during the 1950s and 1960s the homophile movement, combined with the gay liberation and lesbian feminism movements that began after the riots at the Stonewall Inn in 1969, helped to create the political climate that allowed for the development of the early stages of lesbian and gay studies in the 1970s. Additionally, the AIDS crisis in the 1980s added yet another layer that helped mature gay and lesbian studies. In 1991 the Center for Lesbian and Gay Studies (CLAGS) was founded at the City University of New York Graduate School. CLAGS is the first and only university-based research center in the United States dedicated to the study of historical, cultural, and political issues of concern to lesbian, gay, bisexual, and transgendered individuals.

Another way of understanding the historical development of gay and lesbian studies is to consider the focus of scholarly activity and its diversification during the last three decades of the twentieth century.

Jeffrey Escoffier, deputy director for policy and research of the Office of Gay and Lesbian Health in New York City, in 1992 identified several different interdisciplinary paradigms that arose during that period. The first, "Search for Authenticity, 1969–1976," was formed by the Stonewall generation as an effort to encourage research and writing from gay liberation and feminist perspectives. For example, during this period the Gay Academic Union was formed in New York City with the goal of confronting homophobia in academia. Although the union lasted only a short while, it did provide a forum for academics interested in issues related to sexual orientation and led to further organizing and eventually to program development.

"Social Construction of Identity, 1976–present" focuses on homosexual identity and how this identity is shaped and formed not only by homosexual behavior but also by cultural and societal action. "Essentialist Identity: Lesbian Existence and Gay Universals, 1975–present" is the complement to the socially constructed aspect of identity and concentrates on the structures and similarities in the gay and lesbian experience that span historical periods. "Difference and Race, 1979–present" addresses how culture, ethnicity, and race combine with homosexuality. One of its many concerns is that gay and lesbian studies and scholarship not remain focused on white culture, but rather emphasize the diversity of experience in gay and lesbian lives. The final paradigm, "The Pursuit of Signs: The Cultural Studies Paradigms, 1985–present," builds on the social construction of identity paradigm to include all forms of texts, cultural codes, signifying practices, and modes of discourse that form attitudes toward homosexuality.

### Current Configurations

At the beginning of the twenty-first century, gay and lesbian studies programs vary widely in terms of focus, structure, and connections with other academic units. Most programs are at large institutions, both public and private, and most of these institutions are in urban areas. There are few programs at small, private, rural liberal arts colleges. Most programs are gay and lesbian specific while some also include the general categories of gender and sexuality. Others have expanded to include emphases on bisexuality, transgender issues, and queer theory. The majority of the lesbian and gay studies programs offer undergraduate minors or certificate programs.

Few institutions offer undergraduate majors or graduate degrees strictly in gay and lesbian studies. Some institutions offer undergraduate programs in which lesbian and gay studies can be combined with a traditional major (e.g., a major in history with a focus on gay and lesbian studies); others offer the opportunity to create degree programs through individualized learning or liberal studies programs; and some institutions offer dual or integrated graduate degree programs where lesbian and gay studies can be combined with programs in other disciplines.

Because lesbian and gay studies focuses on a group of subjects instead of a concept, it is difficult to place the field within a specific academic discipline. Therefore, virtually all programs are interdisciplinary in nature, working with other departments on campus covering a wide span of disciplines including biology, anthropology, anatomy, cultural anthropology, English, literature, film and video, history, art history, political science, psychology, religion, sociology, ethnic studies, and women's studies. Additionally, lesbian and gay studies programs are most often linked to or coupled with women's studies or gender studies.

The disadvantages of interdisciplinarity include diffused academic power and influence, constrained resources, and a lack of a disciplinary home. The advantage of interdisciplinarity is that once established, lesbian and gay studies programs are difficult to isolate and sequester. Interdisciplinary study then results in a change in how gay and lesbian lives, experiences, and reality are experienced, studied, and understood. It forces scholars to integrate the often-fragmented disciplines into which the academic experience has been sorted. Scholarship and study in separate disciplines makes it easier to ignore diversity and complexity and allows important questions to go unasked, a few chosen issues to be raised, select individuals to be studied, and leaves a large portion of the lesbian and gay population ignored. Interdisciplinarity reinforces the fact that no longer are there only the categories of heterosexual and homosexual, but that there are many variations in between. Interdisciplinary study encourages a constant questioning of the assumptions underlying theories that are being used and why they are being used.

Two growing areas under the rubric of lesbian and gay studies are lesbian studies as a self-contained unit and queer theory. There have been some efforts to separate lesbian studies from gay studies and women's studies because of concerns about sexism

(in gay studies) and heterosexism and homophobia (in women's studies). The argument is that lesbian oppression has been ignored and needs to be investigated from the perspective of multiple disciplines separate from gay studies.

The category of queer theory first appeared in the early 1990s. Teresa de Lauretis is the theorist often credited with inaugurating the phrase. Queer theory expands the focus of lesbian and gay studies from socially constructed or essentialist identities to sexual practices and sexual representations. Queer theorists view sexuality along a continuum and question whether it is ever fixed at one point. Queer theory challenges all identity categories, such as heterosexual, homosexual, male, and female and analyzes the power imbalances that are inherent in them.

*See also:* SEXUAL ORIENTATION.

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PATRICK LOVE

## GENDER ISSUES, INTERNATIONAL

Many benefits accrue to investments in women's schooling, which range from social payoffs (such as lower fertility rates, improved children and women's health, greater life expectancy for women and men, and higher schooling attainment by new generations) to individual improvements (such as older age at marriage, reduced teen pregnancy, greater participation and productivity into the labor force, and a greater sense of independence in economic and political decisions). For education to have a positive effect, particularly in wages, it appears that women must reach a threshold of attainment between four years of primary-level schooling and completion of primary schooling.

### Access to Schooling

Women's access to schooling is far from equal to that of men, with considerable variation among developing regions. Official statistics for enrollment tend to underestimate the dimension of this problem; nonetheless they indicate that there are between 120 million and 150 million children ages six to eleven out of school. This group is mostly poor, and about two-thirds are girls. In South Asia, the Arab region, and sub-Saharan Africa, about 600 million boys and girls attend school, but 42 million fewer girls than boys are enrolled at the primary level and 33 million fewer at the secondary school, as reported in 1999 by Shanti Conly and Nada Chaya. Due to low access to basic education when young, two-thirds of the 900 million illiterates are women. The literacy gender gap has been narrowing over time, except in South Asia.

If educating girls is such a win-win proposition, why are there not more girls in school? Cultural factors such as notions of a girl's proper age for marriage, anxiety about the sexuality and sexual safety

of daughters, and the division of labor at home (with women in charge of domestic and childcare tasks) affect girls' enrollment and both primary and secondary school completion. In India and many sub-Saharan countries, where strong cultural norms require early marriage, parents often consider puberty as the cutoff for schooling.

Many countries in the developing world face heavy external debts, which forces governments to give priority to economic matters (industrial or manufactured production) over welfare or social justice. Across countries, completion of girls' schooling is at risk because poor parents are more willing to invest in boys since boys (when adults) will be expected to support parents while girls will follow their husbands' families. Another economic factor of importance is the immediate value of girls through their domestic work. Since parents tend to withdraw daughters from school when they do not perform well, girls are not allowed to repeat school as boys would, especially in sub-Saharan Africa. About 150 million of those currently enrolled in primary school will drop out before completing four years of education according to Kevin Watkins's 1999 study. The losses are greatest among girls who belong to poor families or marginalized ethnic groups. Finally, political factors also intervene when governments find it is easier to maintain the status quo than to risk antagonizing opposing groups.

### What Is Learned in School

In developing countries some rural families are reluctant to send their daughters to school for fear they will learn new values, becoming less inclined to accept domestic work and more interested in joining salaried occupations. But formal education—both in developing and industrialized countries—tends to convey messages and experiences that reproduce traditional views of femininity and masculinity, with the consequence that girls do not acquire knowledge that makes them question the status quo and boys do not learn to appreciate girls' needs and conditions. The school curriculum in some subject areas avoids dealing with issues considered social taboos. Thus, sexual education does not consider the social relations of sexuality but emphasizes knowledge of reproductive organs and, now that AIDS has become an illness of major proportions, information about avoiding risky sexual practices, primarily via sexual abstinence. Discussion of sexual orientation, a major concern in adolescence, is especially avoided for fear

of promoting homosexuality. Serious and widespread issues such as domestic violence and rape are usually sidestepped in the school curriculum.

Activism by the women's movement and some research about textbooks led to the improvement of content of many school materials. Most of the changes have dealt with incorporating a more inclusive language (referring not only to men but also to women), including more balanced roles between women and men, and displaying a greater presence of women as examples or significant historical actors. Yet, although studies of current textbooks are limited, evidence indicates that the changes do not question the existence of sexism in society, nor challenge girls and boys to confront everyday practices at home, school, and other institutions that sustain conventional gendered ways in which society is organized.

A major weakness in the efforts to make schools become venues for gender contestation has been the limited provision of teacher training (either in institutions that prepare new teachers or through in-service training) on issues of gender in society and education. As a result, teachers—many of whom are women—do not have a solid understanding of how gender operates in their lives and in the lives of others. Classroom behaviors by teachers favoring the intellectual development of boys and fostering the compliance of girls go unchecked. Outside the classroom, spaces where the reproduction of prejudicial gender beliefs and norms occurs, such as sports, the playground, and extracurricular activities, are seldom considered for examination and transformation.

### **Public Policies on Gender and Equity**

Many governments have made public commitments to increasing the access of girls to schooling, reducing the gap in schooling between girls and boys, and reducing illiteracy, especially among women. Such commitments are seldom met. For example, the Education For All (EFA) initiative sought to provide universal education for all by the year 2000. By 2000 this goal had been deferred to 2015, with no firm promise that previous obstacles to policy implementation would be removed. Major international assistance agencies (notably the World Bank and the U.S. and Japanese bilateral development agencies) continue to justify support for girls' education for its value as an economic investment, downplaying reasons of social justice and individual autonomy. A

number of pilot studies attempted in several developing countries have demonstrated the power of interventions such as the provision of tuition subsidies or scholarships for girls to offset their economic value to families. Unfortunately, only a handful of countries have brought these interventions to nationwide application (scholarships for secondary schoolgirls in Bangladesh, family stipends to families with daughters in primary school in Guatemala, and subsidies to rural families in Mexico). Most governments are willing to uphold the importance of girls' and women's education, but fail to acknowledge the impact of ideological factors shaping definitions of masculinity and femininity, which in turn determine men's and women's unequal roles in society. When women shy away from male-dominated fields of study and occupations (particularly in science and technology), and as they give priority to family over professional or occupational responsibilities, their decisions are interpreted as entirely individual choices.

Schools throughout the world are undergoing major structural and substantive reforms. Efforts to decentralize the public school system and to foster the creation of private schools abound. It is not clear how community participation in the decentralized schools will favor gender equity if the parents themselves are not educated to understand the dynamics of gender reproduction and transformation. Privatization may further constrain girls' participation if the economic conditions of families do not improve. Substantive reforms of schools are focused on improving quality, but this objective is defined in narrow terms, emphasizing the preparation of future workers, rather than future citizens. Math and science are seen as the key curriculum subjects to the detriment of other disciplines. Evidence from Latin America indicates that current reforms express concern for issues of "productivity" and "competitiveness" but much less so for those of equity and social justice (Task Force on Education Reform in Central America, 2000). They seek to promote decentralization and nationwide assessments of student achievement to compare their performance within and across countries. They also seek differentiated pay for teachers on the basis of their performance, which will act as a mechanism to further concentrate on math and reading.

Concerned with the slow progress to improve education in general and the education of girls in particular, a number of nongovernmental organiza-

tions (NGOs) in developed countries have become active in advocating major financial resources for education in the Third World. It is estimated in Watkins's 1999 study that closing the gender gap by 2005 would require U.S. \$9.5 billion in recurrent expenditures in the fifty-one countries with the largest gender differentials. As of the early twenty-first century, the quantity and content of girls' education is best described as being at an impasse, in which forces capable of implementing nationwide action are concentrating on the economic ends of schooling and seeing it as a gender-neutral institution, while forces for transformation, particularly those that could be carried by women's groups, are not receiving the support they need.

*See also:* INDIVIDUAL DIFFERENCES, *subentry on* GENDER STUDIES AND GENDER DEVELOPMENT; MODERNITY AND EDUCATION; POPULATION AND EDUCATION.

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NELLY P. STROMQUIST

## GENERAL EDUCATIONAL DEVELOPMENT TEST

The General Educational Development Test (GED) is a battery of tests designed to measure the educational level of people who did not formally complete high school. Candidates who successfully pass the five subject area tests are awarded a high school equivalency certificate recognized by state education departments. The American Council on Education (ACE) offers the GED and preparation guidance across the United States and worldwide. Other organizations, such as the National Institute for Literacy, also offer Adult Basic and Secondary Education programs designed to aid adults in completing the GED successfully. Developed during World War II to assist veterans who had left high school before graduation to enlist in the military, the GED test battery underwent revisions for 2002, which were designed to make the test comparable to standards-of-learning tests compulsory in most states since the mid-1990s.

### History

After World War I, veterans who had left high school to enlist in the armed services were awarded diplomas in exchange for their service to the nation. After World War II, however, returning soldiers were required to pass a test before being given their high school equivalency certificates. The U.S. Armed Forces Institute examination staff first constructed the GED test in 1942. In 1945 ACE established the Veterans' Testing Service (VTS), and beginning in 1947 tests were distributed to civilian institutions where veterans were applying for employment or college admission. By 1959 more civilians than veterans were being given the GED test, and in 1963 the VTS changed its name to the General Educational Development Testing Service to reflect this shift in test-taking populations. Early tests were designed so that most veterans would pass, and more than 90 percent did. The test was revised in 1988 to include an essay section, and remained essentially unchanged until January 2002, when a series of revisions went into effect. At the turn of the twenty-first

century, more than 860,000 people take the tests annually, and one in seven people who finish high school earns the credential by passing the GED test. High school graduation rates published by the U.S. Census Bureau include GED holders, and the certificate is seen as interchangeable with a high school diploma for most employers and colleges. Although researchers debate the success of the GED in helping individuals attain meaningful careers, it is clear that the GED is an important part of the American educational landscape.

### Changes at the Start of the Twenty-First Century

The General Educational Development test questions and norms have been revised beginning in 2002 as a response to the standards movement in American secondary education. The overall impact of the revisions is to make the test more difficult. The previous test was structured to provide a failure rate of about one in three; however, revised cutoff scores are now designed so that 40 percent of high school seniors would not pass. The designers of the revised GED tests responded to complaints from colleges and employers about poorly educated GED holders by developing questions geared to identify and measure practical knowledge and life skills. Information sources such as product labels and legal documents are used to generate questions and answers. The revised GED tests are designed to be an improved measurement of a student's practical skills, dispositions, and abilities.

### Test Description

Like other standardized tests, the GED is primarily a multiple-choice test in each content area. The General Educational Development questions fall into five test areas similar to those of public secondary standards-based assessments: writing skills, literature and arts, mathematics, social studies, and science. The writing test is divided into two sections: the first presents sentences that may or may not include errors that require correction. These questions are similar to those of the SAT Test of Standard Written English (as administered prior to 1994) and the Test of English as a Foreign Language (TOEFL). The second writing skills test is to construct an essay of about 200 words on one of several topics provided by the test makers.

Like the PSAT and SAT essays, the GED writing test is holistically scored on a scale from one to six. Graders emphasize clarity of composition, support

for ideas, and sentence mechanics. The revised, two-part mathematics section tests skills in arithmetic operations, algebra, and geometry. Test takers respond to equations, word problems, and data displayed on charts and graphs. Sample questions provided by ACE emphasize real-world numeric texts, such as federal tax allocations, personal earnings, and nutritional values charts. All mathematics questions were formerly in the multiple-choice form; in 2002, 20 percent require fill-in responses and students are allowed to use calculators. The social studies section tests knowledge in economics, political science, geography, and the behavioral sciences (anthropology, psychology, sociology). Social studies questions are different in Canadian versions of GED tests than in the United States. Science questions are based on information typically taught in earth science, biology, physics, and chemistry. Students are asked to analyze charts, graphs, drawings, or questions, and identify the best solution to the practical problems presented. Sample GED science question topics include the principles of buoyancy, displacement, spectrum heat absorption comparison, and chart-reading skills. The literature and the arts section of the test once emphasized reading comprehension only in the areas of popular and classical poetry, fiction, nonfiction prose, and drama. The revised test includes passages from other real-world text sources such as tax documents and commentaries.

### Resources

The American Council on Education provides test preparation materials and sample questions in each content area, as well as a comprehensive preparation guide. The GED Testing Center also includes a directory of adult education and GED prep classes. The GED tests are available in Spanish and French for qualified applicants, and special accommodations are available for candidates with disabilities. Accommodations include an audiocassette edition, large-print edition, braille edition, extended time, use of a scribe, talking calculators, private room use, one-on-one testing at a candidate's home, vision-enhancing technologies, video equipment, sign-language interpreter, or other accommodation in cases where circumstances warrant.

*See also:* DROPOUTS, SCHOOL; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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JAMES B. TUTTLE

## GENERAL EDUCATION IN HIGHER EDUCATION

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As American higher education moved from institutions that promoted learning for learning's sake to institutions that prepare individuals for work and careers, new approaches in college and university curriculum development became necessary. One significant evolution was the movement away from the classical, European model of liberal education to the development of a narrower, more selective model of liberal studies, that has become known in American colleges and universities as *general education*.

### The Difference between Liberal Education and General Education

The original mission of American higher education was to provide a liberal education based on the European model of classical education. In the liberal education model, college students became well versed in classic literary works, philosophy, foreign languages, rhetoric, and logic. This model stressed the importance of a broad base of education that encouraged an appreciation of knowledge, an ability to think and solve problems, and a desire to improve society. American liberal arts colleges and universities most closely resemble this traditional model of liberal education.

In the late eighteenth century, however, social forces in American society began calling for a more

utilitarian and practical education that would prepare students for work upon graduation. State normal schools emerged to prepare teachers for jobs in American schools. In addition, business schools and other vocational preparation programs became more popular. In 1862 the Morrill Act further pushed this utilitarian model by providing federal money to land-grant institutions chosen to develop agricultural and technical programs. By the late 1800s, students on many campuses had the ability to choose courses freely, without requirements, and could now choose a concentration, or major, in one particular field of study. By the late nineteenth and early twentieth centuries, many work-oriented fields such as teaching, business, engineering, and nursing had made their way into the four-year college and university curriculum. Vocational and practical education was now a major component of American higher education.

In the mid-twentieth century, a new movement for the revitalization of liberal education began. A great debate emerged between those in higher education who supported the movement toward specialized and vocational preparation and those who felt that this push to focus on a particular field was leading to overspecialized and narrow areas of study that would be of little use as careers and technology changed. Many supporters of liberal education also argued that specialized study did not contribute positively to the development of society. In 1947, as the debate became more heated, the President's Commission on Higher Education called for the development of a balance between "specialized training on the one hand, aiming at a thousand different careers" and a general curriculum that fosters "the transmission of a common cultural heritage toward common citizenship on the other" (p. 49).

Recognizing the importance of vocational training but still valuing the significance of classical education, many colleges and universities began to develop a series or set of courses that all students attending their institution would take prior to graduation. This set of courses became known as general education, sometimes referred to as a core curriculum. This model of curriculum has come to exist as a fundamental component of American higher education. According to Joan Stark and Lisa Lattuca, the American Council on Education found that in 1990 over 85 percent of American colleges and universities required all students to complete some sort of general education requirements.

## The Goals of General Education

General education emerged in response to changing societal needs and the tension between classical liberal education and more practical or specialized education. The primary goal of general education is to provide a broad, yet focused, survey of courses that will promote critical thinking and increase students' awareness of the world around them. On many campuses, general education's purpose serves as a foundation for technical or vocational training, fostering in students the ability to think beyond their areas of specialization. Many faculty members and administrators on college and university campuses hope that requiring a set of specific courses will encourage students to make connections across disciplines and between formal course instruction and informal learning experiences outside the classroom.

General education requirements vary significantly from one institution to another. These expectations, however, often stem from the way in which different institutions answer the same guiding questions, such as: ideally, what knowledge, skills, values, and attitudes should graduates of the institution possess upon completion of their degree? And, how should the curriculum be designed to meet this goal? The variation in general education requirements stems from the broad array of institutional missions and goals and, accordingly, the many ways these broad questions are answered by the hundreds of American colleges and universities.

More important than specific requirements for general education is the time given by institutions to intentional thought, discussion, and development of general education curriculum. Ernest T. Pascarella and Patrick T. Terenzini (1991) affirmed this notion when they discovered that the greatest gains in students' ability to think critically were found at institutions with courses specifically designed to meet general education requirements. Even knowing this, however, extensive disagreement continues to exist among members of college and university communities regarding the identification of fundamental components and requirements of a general education curriculum. This continuing disagreement can lead to a tedious and lengthy debate, resulting in slow and difficult change on most campuses. The importance of general education was affirmed in a national study conducted by Ernest Boyer for the Carnegie Foundation for the Advancement of Teaching (1987). Boyer and his colleagues found that approximately 75 percent of undergraduates in

American colleges and universities felt that general education courses "added to the enrichment of other courses" and "helped prepare [them] for life-long learning" (p. 85).

A final goal, espoused by many supporters of general education, is that all students should have a common experience or be exposed to a particular set of knowledge. It is not uncommon in the early twenty-first century to find colleges and universities that provide required reading lists to all incoming students. These readings are often incorporated in the general education curriculum and provide a common foundation and experience for that cohort of students. These common learning experiences often emerge in discussions throughout students' experiences at that institution and continue into their lives beyond the collegiate experience. This approach to general education relates to the primary goal of general education stated earlier: to make connections between formal course instruction and informal learning experiences outside the classroom.

## Typical Characteristics of General Education

Although specific requirements may vary among American colleges and universities, there are characteristics common to general education across institutions. Typically, general education does not emphasize practical knowledge or research skills. The emphasis of general education is to help students understand that they are not individuals who stand apart from society but rather one person living in community with others in a greater society. As Boyer eloquently wrote, general education "is significant when it shows us who we are as individuals and as citizens, and touches the hopes and fears that make each of us both unique beings and a part of corporate humanity" (p. 98). This level of understanding is often achieved through the weaving of courses across a variety of disciplines.

In order to foster this understanding of a broad picture of society and to lay a foundation upon which all else is built, general education requirements are often taken during the first few semesters of the college experience. Students on many campuses are given a set of courses from which they can choose specific classes that will fulfill specific requirements. Some general education requirements, however, become prerequisites for upper level courses so that students enter these classes with a common level of knowledge and understanding. An additional benefit of general education courses is

that students tend to recognize others taking the same courses and establish friendships during those first few semesters that extend beyond the classroom and often last a lifetime.

With an increasing number of students attending two-year institutions and more students transferring to and among four-year colleges and universities, it has become more critical for colleges and universities to recognize and identify courses that fulfill general education requirements. Usually, courses such as English, mathematics, and foreign languages are transferable across institutions. Some courses directly align with and meet general education requirements, while other courses are accepted as electives but still count toward graduation credit. This change has made it easier and more financially possible for students to move among institutions without penalty. Many colleges and universities, however, do limit the total number of credits that they allow to transfer in order for students to receive the quality education desired by the institution.

### Typical Requirements

A broad array of choices exist in general education across American colleges and universities. Some institutions follow a very prescribed and specific set of courses, whereas many others offer a broad spectrum of courses from which students select “some of these and some of those,” a method often referred to as *cafeteria-style*.

One specific requirement that tends to remain constant across most institutions is a proficiency in English. Most colleges and universities agree that a fundamental component of being well educated is the ability to read and write. Thus, regardless of students’ chosen fields, almost every college and university requires coursework in English literature and composition. Even professors of mathematics and engineering have stressed the importance of students being able to express themselves in the written and spoken word. Beyond this one component, requirements do vary with some overlapping expectations among colleges and universities.

According to Stark and Lattuca, by the mid-1980s most students in American colleges and universities (over 60%) were required to take courses in English and mathematics. Additionally, 45 percent of all institutions require courses in Western or world civilizations. Beyond these more common requirements, some institutions also require course-

work, at least at an introductory level, in laboratory sciences such as biology or chemistry, and in social sciences such as psychology, sociology, or political science. Some also require the study of a foreign language.

As noted earlier, over 85 percent of American colleges and universities have some sort of general education requirements for their undergraduate students. Stark and Lattuca noted that typical students at four-year institutions spend 33 to 40 percent of their studies meeting general education requirements. And, although debate continues regarding which courses should be considered critical in the development of educated graduates prepared for life beyond college, general education itself is firmly grounded in the modern American collegiate experience. Some colleges maintain a broad array of choices that satisfy general education requirements, whereas others are very specific with their curriculum. Many institutions have also been very successful at creating interdisciplinary courses that incorporate material and perspectives from a wide variety of disciplines; some of these courses have become quite popular and successful at institutions across the United States. Regardless of institutional choice, with such varying expectations from one institution to another, it is critical that students understand what is expected of them in order to develop a successful approach to their college studies.

*See also:* ACADEMIC MAJOR, THE; CURRICULUM, HIGHER EDUCATION, *subentry on* NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM.

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## **GEOGRAPHY, TEACHING OF**

Geography, like history, is not defined by the uniqueness of its content; rather, both gain their distinction by the way in which they organize and analyze the data they collect regarding particular aspects of the human experience. History compares and contrasts information within the framework of chronology, while geography organizes its information within the context of the spatial environment. Today, the focus of geographic inquiry is generally conceded to be on spatial interactions, that is, the geographer seeks to understand the significance of human activity within a spatial framework. Where historians report their findings primarily through written narratives, geographers present their data primarily through the construction of maps.

Until the advent of the Progressive movement in American life, beginning in the decades following the Civil War, geography was taught as a separate subject. Memorization of the names of important cities, physical features, and relational facts dominated instruction. Recognition of the temporary shelf life of that kind of information taught in rote fashion led Progressive educators to deemphasize the acquisition of facts and to instead emphasize the role of reasoning and problem solving in learning. Under this program, the traditional subjects of geography, history, and civics were fused. In this context the teaching of geography began to lose its identity as a unique area of study.

### **Effectiveness of Instruction**

Whether taught as a separate subject or fused in some way with subject matter drawn from other fields of the natural and social sciences, there is a long history of ineffectiveness of instruction in the teaching of geography. From the first attempt to assess the effectiveness of instruction in geography, in the 1840s in Boston's public schools, to the most recent efforts, notably the National Assessment of Educational Progress (NAEP), there is a continuing record of what most consider to be substandard results. A much more sophisticated assessment tool than those of past years, the NAEP results have shown, for example, that secondary students learn more geographic information in history classes than in those classes devoted exclusively to the study of geography. Although one can decry such a seeming incongruity, the historical knowledge displayed by students on these tests was equally dismal.

How is it that geographic instruction appears to be so ineffective? One reason may be that teachers generally are not themselves geographically literate. One teaches what one knows, and today's teachers are as much a product of their schooling as anyone else. It might be hoped that professional geographers would be able to communicate the nature of geographic literacy and would be effective in educating teachers for the task of teaching geographic concepts. Unfortunately, the number of professional geographers is limited—hardly a drop in the bucket when compared to the number of professional historians, for example—so it is to be expected their ability to help teachers will also be limited. However, there are many geographers who are devoted to the task of teacher education and are actively involved in remediating this problem, which is coordinated to the extent possible through a professional organization, the National Council for Geographic Education.

A second reason that geographic instruction is not as effective as it might be is because not enough is known about how students acquire geographic concepts. There is, however, a body of information that is suggestive of that process. Swiss psychologist Jean Piaget (1896–1980) is the towering figure in the development of research techniques and in broadening understandings about the fashion in which spatial concepts develop. Rather than being interested in a child's ability to give a correct response to direct questions, he sought to understand the reasoning process that led children to give incorrect answers to the broader tasks he set before them to solve. As well, instead of attempting to secure answers in a third-person setting in which the correct answers were foretold—the paper-and-pencil test so familiar in American schools—he asked youngsters to talk their way through the solution to a particular spatial problem irrespective of “correctness.”

Piaget's pioneering research, and that of many researchers who followed his lead in exploring the emergence of spatial concepts, tells us that the intellectual progression in the ability to comprehend spatial properties moves from perceived space to conceived space, from experiencing space only in the most direct sense to conceptions of space in which the child's thoughts, at first quite primitive, gradually become abstract and based on Euclidean (mathematical) conceptions. The development of a reasonably mature ability to comprehend spatial interactions appears not to be available to the student

until early adolescence. If this is so, then the importance of providing direct environmental experience, especially in the elementary school, would be required for the development of the kind of thinking that is basic to the mature comprehending of spatial interactions. That school environments largely preclude direct experiencing of the spatial environment means that the development of geographic literacy faces some significant hurdles, and it also explains why the focus on “where-is-it,” “what-is-it” kinds of questions persist in the school curriculum.

### Maps and Spatial Concepts

Since the map provides the basic tool for reporting spatial interactions, the ability to read maps meaningfully is a primary objective of instruction. Map reading can be viewed as a more complex form of print reading—the reading of books, newspapers, and so forth—in which the number of symbols and their positions in relation to one another are both consistent and limited. Map reading, in contrast, requires the reader to develop meanings for a wide variety of symbols, some conventional print but others of varying degrees of abstraction, all arranged in a relational two-dimensional environment. The reading process, regardless of the symbol systems employed, requires the creation of meanings, which in turn are dependent upon the reader’s conceptual base, that is, what the reader understands the symbols are intended to represent. There has long been controversy over how the reading process, regardless of the complexity of the symbol system involved, is initiated. Many believe that initial skills should be taught in a more or less arbitrary fashion and that the development of meanings follows. Others, and that is the argument here, believe that form follows function, that concepts, in this case of spatial relationships, are basic to the process of creating meanings in response to apprehending textual material.

As in learning to read conventional print, it is argued that the most constructive route to fluent reading involves much writing based on one’s own experience. If map reading is, as it appears, similar to reading print in its more conventional form, but complicated by the presence of a variety of symbols representing different sets of meanings arranged in a two-dimensional plane (as well as an abstraction of the world’s three-dimensional reality), then learning to read maps with some degree of sophistication must depend upon prior experiences in constructing maps out of one’s personal experience. Taking this

view, an important activity throughout the school curriculum for both elementary and secondary schools should entail an emphasis on a developmental sequence that takes the student from first creating maps directly out of one’s own experience and going onward from there toward learning how the mathematics of map making results in the kind of representations seen in classrooms and the world at large.

Studies of children’s conceptions of spatial interactions indicate the progression toward some degree of intellectual maturity in this regard is much slower than commonly perceived. For example, concepts of political entities (towns, states, nations, etc.), notions of boundary lines, slope, and elevation seem to commence their emergence late—in early adolescence at best. The argument that television and various forms of virtual reality, abstractions even at their best, have expanded student’s views such that they are much more aware of the world they live in begs further examination. It is to be regretted in this regard that Piagetian research protocols have not been updated and applied to furthering our knowledge. The admittedly little evidence we do have suggests that we be cautious in coming to any conclusions about the efficacy of media, including the Internet, in promoting geographic understandings because the emergence of mature geographic understanding appears to be so highly dependent upon prior firsthand experiencing of the immediate environment.

### Evaluating Geographic Learning

How, then, does one evaluate geographic learning? Geographers are not in agreement regarding the approach instruction should take and, consequently, how to judge whether significant learning has occurred. The major traditions of geographic inquiry, which might be used as the basic framework for making such judgments, have been defined as the *spatial tradition*, the *areas studies tradition*, the *man-land tradition*, and the *earth science tradition*. These are the traditional categories employed in developing college curricula. Geographers more interested in defining geography appropriate to elementary and secondary schools have argued for what they call the *five themes of geography*: location, place, relationships within places, movement over the earth, and regions.

Whichever set of criteria one uses for developing test items, and despite the popularity of paper-and-pencil multiple-choice questions, easily evaluat-

ed by mechanical means, it is now widely accepted that evaluation procedures, to be valid, must include questions requiring the student to demonstrate reasoning abilities for reaching a particular conclusion about spatial interrelationships. Evaluating responses that demonstrate reasoning powers along with knowledge of specifics requires more time than current test practice provides and will, therefore, not be widely used until there is a broader acceptance of in-depth analyses of knowledge as the better indicator of students' progress toward geographic literacy.

*See also:* CURRICULUM, SCHOOL; HISTORY, *subentry on* TEACHING OF; SOCIAL STUDIES EDUCATION.

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MALCOLM P. DOUGLASS

## G.I. BILL OF RIGHTS

On June 22, 1944, U.S. President Franklin D. Roosevelt signed into law the Servicemen's Readjustment Act of 1944, also known as the G.I. Bill of Rights. The purpose of the act was to help the nation reabsorb millions of veterans returning from overseas who had been fighting in World War II. During the decades since its enactment, the law and its amendments have made possible the investment of millions of dollars in education and training for a vast number of veterans. The nation has earned many times its investment in return, through increased tax revenues and a dramatically changed society.

A myriad of forces converged to bring about the successful passage of the G.I. Bill. The end of the war brought reduced demand for the production of wartime goods and fueled fears of the type of economic slowdown that followed previous wars. The influx of potential laborers created apprehension regarding job security and economic stability. The bill addressed these and other problems by providing six benefits, the first three of which were administered by the Veterans Administration (VA).

- Education and training
- Loan guarantees for a home, farm, or business
- Unemployment pay of \$20 per week for up to fifty-two weeks

- Job-location assistance
- Building materials for VA hospitals as a priority
- Military review of dishonorable discharges

In enacting the legislation, lawmakers demonstrated that they had learned from the mistakes made by the United States government during the period following the World War I, when war veterans marched on the nation's capital in a crusade for increased compensation from the government. During the last years of World War II, the federal government began a period of activity designed to smooth the transition of society as a whole, and individual veterans in particular, to the postwar era. The economic stability provided by these federal efforts, the centerpiece of which was the G.I. Bill of Rights, boosted Americans' confidence and changed the way individuals lived, worked, and learned.

Initial expectations for the number of veterans who would utilize the educational benefits offered by the G.I. Bill were quite inaccurate. Projections of a total of several hundred thousand veterans were revised, as more than 1 million veterans were enrolled in higher education during each of 1946 and 1947, and well over 900,000 during 1948. Veterans represented between 40 and 50 percent of all higher education students during this period.

The increasing numbers of veterans in higher education created several changes on American college and university campuses. New facilities were constructed to accommodate the surging enrollments. New programs evolved, ones that were geared to the vocational and professional emphases that veterans sought from the classroom. The veteran was among the most successful of all college students academically, and this phenomenon generated a psychological shift for many within American society: no longer was the college campus seen as the exclusive preserve of elite sons and daughters. Once veterans were welcomed inside the college classroom, the irreversible trend began of more and more people, from all groups within society, being able to secure a stable and successful future through the pursuit of higher education and training.

Out of more than 15 million American veterans from World War II, more than 7,800,000 used the G.I. Bill to receive education in the years after the war. One primary reason for the program's success is the flexibility that it gave to veterans, who were able to spend their annual tuition stipend on a wide range of options, ranging from training in specific vocations to enrollment on Ivy League campuses.

This younger generation of Americans aspired to a way of life that was considerably different from that of their parents. Coupled with assistance for housing costs, the educational benefits of the G.I. Bill made possible a middle-class lifestyle that was characterized by white-collar work, home ownership, and life in the suburbs. War-weary citizens were finished with the sacrifices that had been necessary during both depression and wartime; the savings that had accumulated during the war could be spent without reservation, for the financial stability offered by the G.I. Bill's provisions allayed fears of postwar economic disruptions.

The empowerment of the individual veteran by the G.I. Bill helped to create the expectation that all Americans can and must have an opportunity to share in the dreams of a college education and a successful, middle-class lifestyle. In the decades following World War II, the federal government pursued initiatives designed to extend this opportunity to minorities, to women, and to the disabled within American society. The successes of the G.I. Bill encouraged legislators to create educational opportunities for individuals in these groups as a means of redressing past social and economic inequities.

This emphasis on advanced education and training for the masses has facilitated the development of America's knowledge-based economy and society. More than ever, Americans see knowledge and training as vital to each individual's future economic success and position within society. Though not entirely eradicated, barriers to accessing this knowledge and training have diminished in many areas of American society, due in large part to the efforts of the federal government. The G.I. Bill proved the ability of the federal government to promote social and economic advancement through educational attainment and training, and millions of veterans can attest to the importance in their own lives of the opportunities that welcomed them following the completion of their military service.

Subsequent legislation includes the following.

- The Veterans Readjustment Act of 1952, approved by President Truman on July 16, 1952, for those serving in the Korean War
- The Veterans Readjustment Benefits Act of 1966, signed into law by President Lyndon B. Johnson on March 3, 1966, for post-Korean War veterans and Vietnam-era veterans
- The Post-Vietnam Era Veterans' Educational Assistance program (VEAP) for individuals that

entered active duty between December 31, 1976, and July 1, 1985

- The Montgomery G.I. Bill for individuals initially entering active duty after June 30, 1985
- The Montgomery G.I. Bill: Selected Reserve Educational Assistance Program for members of the Selected Reserve, including the national guard
- The Survivors' and Dependents' Educational Assistance Program, the only VA educational assistance program for spouses and children of living veterans

*See also:* FEDERAL FUNDS FOR HIGHER EDUCATION.

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DEBORAH A. VERSTEGEN  
CHRISTOPHER WILSON

## GIFTED AND TALENTED EDUCATION

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The term *gifted and talented* is often used in tandem to describe both a wide range of human exceptional

performance, and people who display such high levels of competence in culturally valued domains or socially useful forms of expression. For children to be identified as gifted and talented, they need to demonstrate outstanding potential or promise rather than mature, expert performance. Thus different standards are used when the term is applied to children as opposed to adults. The term *gifted children* has a connotation that the outstanding potential they demonstrate is largely a natural endowment. However, the term *gifted* as used in educational contexts (e.g., gifted child or gifted performance) is descriptive rather than explanatory. Although efforts have been made to differentiate the two terms, with giftedness referring to natural (spontaneously demonstrated) abilities, and talents referring to systematically developed abilities, such differentiation proves difficult, if not impossible, in practice, as no reliable measures exist to tease apart the constitutional and acquired parts of individual differences in human abilities.

#### The Nature and Identification

The phenomenon of gifted and talented children is easier to describe than explain. Some scholars in the field attribute children's outstanding performance on IQ or culturally defined domains largely to their constitutional makeup (e.g., a neurological advantage), reminiscent of the position of Francis Galton (1822–1911), an early pioneer of behavioral genetics and intelligence testing. Other scholars are more cautious about bestowing the title of *gifted and talented* for some children by mere virtue of their test performance while treating the rest as nongifted. Rather, they emphasize the emergence of gifted and talented behaviors among children in more authentic contexts as a result of both genetic and environmental influences, involving motivational as well as cognitive processes. Still others point out that, to the extent that the phenomenon of the gifted and talented is subject to different interpretations and assessment strategies based on one's values and beliefs, consequently with different criteria and outcomes, it reflects a social construction rather than an objective reality.

One way of analyzing the research underlying conceptions of giftedness is to review existing definitions along a continuum ranging from conservative to liberal. Conservative and liberal are used here not in their political connotations, but rather according to the degree of restrictiveness that is used in deter-

mining who is eligible for special programs and services.

Restrictiveness can be expressed in two ways. First, a definition can limit the number of specific performance areas that are considered in determining eligibility for special programs. A conservative definition, for example, might limit eligibility to academic performance and exclude other areas such as music, art, drama, leadership, public speaking, social service, and creative writing. Second, a definition can limit the degree or level of excellence that one must attain by establishing extremely high cutoff points.

At the conservative end of the continuum is Lewis Terman's 1926 definition of giftedness as "the top 1 percent level in general intellectual ability as measured by the Stanford-Binet Intelligence Scale or a comparable instrument" (p. 43). In this definition, restrictiveness is present in terms of both the type of performance specified (i.e., how well one scores on an intelligence test) and the level of performance one must attain to be considered gifted (top 1 percent). At the other end of the continuum can be found more liberal definitions, such as the following one by Paul Witty in 1958: "There are children whose outstanding potentialities in art, in writing, or in social leadership can be recognized largely by their performance. Hence, we have recommended that the definition of giftedness be expanded and that we consider any child gifted whose performance, in a potentially valuable line of human activity, is consistently remarkable." (p. 62)

Although liberal definitions have the obvious advantage of expanding the conception of giftedness, they create two dilemmas. First, they introduce a values issue by forcing educators to delineate potentially valuable lines of human activity. Second, they introduce even greater subjectivity in the measurement and assessment of children's potentialities.

In recent years the values issue has been largely resolved. There are very few educators who cling tenaciously to a "straight IQ" or purely academic definition of giftedness. Multiple talents and multiple criteria are almost the byproduct words of the present-day gifted education movement, and most people would have little difficulty in accepting a definition that includes almost every socially useful form of human activity.

The problem of subjectivity in measurement and assessment is not as easily resolved. As the defi-

nition of giftedness is extended beyond those abilities that are clearly reflected in tests of intelligence, achievement, and academic aptitude, it becomes necessary to put less emphasis on precise estimates of performance and potential and more emphasis on the opinions of qualified judges in making decisions about admission to special programs. The crux of the issue boils down to a simple and yet very important question: How much are we willing to sacrifice purely objective criteria in order to allow recognition of a broader spectrum of human abilities? If some degree of subjectivity cannot be tolerated, then our definition of giftedness and the resulting programs will logically be limited to abilities that can be measured only by objective tests. A balance between the reliance on measurement technology and expert judgment seems to be the most reasonable course of action.

### Goals and Purposes

Although Lewis Terman launched the first large-scale effort to identify gifted children in the United States, it was Leta Stetter Hollingworth in 1942 who shifted the focus of the gifted child movement to educational issues. However, a full-fledged gifted education movement was rather triggered by the launching of the satellite *Sputnik* by the Soviet Union in 1957 and the ensuing space race. The ensuing decline of targeted services in the second half of the twentieth century was closely related to political and economic circumstances and apparently inadequate educational conditions, as reflected in the reports by the National Commission on Excellence in Education 1983 (*A Nation at Risk*) and by the U.S. Department of Education in 1993 (*National Excellence: A Case for Developing America's Talent*). For example, by citing evidence of declined academic achievement and poor showing of American students compared to other industrialized nations, Joseph Renzulli and Sally Reis in 1991 proposed that a major goal of gifted education was to "provide the best possible education to our most promising students so that we can reassert American prominence in the intellectual, artistic, and moral leadership of the world" (p. 26). The general education curriculum, which is tailored to average students, is inadequate to provide such an education, thus necessitating special educational provisions for gifted and talented students.

Other educators and researchers of the gifted and talented have advanced an alternative argument for a special service for the gifted and talented. In

line with Hollingworth, they emphasize the uniqueness of gifted and talented students' cognitive development, social-emotional experiences, and corresponding educational needs. Therefore, gifted and talented education is aimed not at advancing national or societal interests but at promoting individual gifted children's welfare, academically as well as socially and emotionally, not unlike special provisions for the mentally retarded or learning disabled.

A more recent approach to gifted and talented education focuses on talent development. This movement is largely a result of dissatisfaction with the notion of giftedness as unidimensional (i.e., high general intelligence) and the traditional gifted programs that are frequently short-term based, limited to school subjects, and typically do not address individual children's unique strengths, interests, and long-term development. The talent development approach, based on related psychological research that cumulated in the 1980s and 1990s, attempts to nurture talents among a more diverse group of children and address their unique needs with their long-term talent development in mind.

There are two main strategies to serve gifted children: acceleration and enrichment. With accelerated curriculum, gifted children can learn at a pace commensurate with their learning ability. This allows them to progress to high-level materials much faster for their age norms or grade levels. The constant challenges not only suit these advanced learners' intellectual levels, but also keep them motivated. Enrichment activities, on the other hand, provide gifted children with opportunities to explore topics and issues from (or beyond) regular curriculum in greater breadth and depth, to engage in independent or collaborative inquiry that cultivates their problem solving abilities, research skills, and creativity, and inspire their desire for excellence. Acceleration and enrichment, facilitated by various forms of grouping arrangement, constitute the core instructional adaptations to meet the educational needs of gifted and talented children. From a talent development perspective, both acceleration and enrichment can be used to provide individualized educational programs that aim at promoting long-term development and accomplishment in one's chosen area of human endeavor.

### **Programs and Their Effectiveness**

Specific programs for the gifted and talented can be conceptualized as a continuum from activities that

can be arranged in regular classrooms, sometimes with the participation of all students, to arrangements that are exclusively tailored to the needs of the gifted and talented. These programs encompass enrichment and acceleration services that take place (1) within regular classrooms or clusters from one or more grade levels; (2) during special grouping arrangements within classrooms, across grade levels, or in after-school and out-of-school programs; (3) in special schools such as magnet schools or high schools that focus on advanced learning opportunities in particular curricular areas; and (4) through arrangements made for individual students at colleges, summer programs, internship opportunities, or mentorship programs. Age and grade levels play a role in making decisions about special services. Students' abilities, interests, and learning styles tend to become more differentiated and more focused as they grow older. There is, therefore, more justification for interest and achievement level grouping as students progress through the grades. The nature of the subject matter and the degree to which classroom teachers can reasonably differentiate instruction also play a role in making decision about differentiation. For example, acceleration is a more viable option for subjects that are highly structured and linear-sequential in content (e.g., algebra, chemistry, physics). Within-class differentiation in literature is easier to accomplish at the elementary or middle school levels, but an advanced literature class is a more specialized option at the high school level.

With respect to the issue of effectiveness, gifted students in pull-out, separate class, and special school programs performed better than their gifted peers in the within-class arrangements or in schools without gifted programs. Academic gains from acceleration and various benefits regarding content, process and product aspects of objectives as well as positive affective and motivational effects are also reported for enrichment programs. Meta-analyses of the outcomes of these programs reveal quite compelling positive effects. Among other issues, concerns about social-emotional adjustment for students accelerated to higher grade levels or college, about the impact of the gifted label on social interaction, and about self-concept change when placed with equally competent peers, have also been addressed in research.

The effectiveness of gifted and talented programs is not easy to determine for many reasons. Difficulty in finding appropriate control groups, as

well as in controlling extraneous variables, poses many threats to internal validity. Ceiling effects constitute another problem. In addition, some criteria (e.g., problem solving, creativity) for evaluating the effectiveness of gifted programs are not as amenable to reliable measurement as those typically used in general education. Because of these difficulties, there is a lack of high-quality research on the effectiveness of various gifted and talented programs. More systematic, methodic (instead of piecemeal) program evaluation is sorely needed.

Two issues about the effectiveness and equity of gifted programs remain controversial. The first one involves the argument that what is good for gifted students is good for most students. Such an argument is a double-edged sword. On the one hand, gifted education can be and has been a viable laboratory for educational experimentation. What is shown to be effective in gifted education may inform and facilitate reform in general education. On the other hand, however, it is preposterous to assume that only gifted children would benefit from such an education. Many critics who argue that gifted education is elitist hold such a view. Two responses have been advanced to address this concern. First, some components of gifted programs may indeed be applicable to general education, such as enrichment or inquiry-based learning, while other components are only suitable for gifted children, such as acceleration and some high-level curricular materials. Second, even though instructional principles and strategies appropriate for gifted learners may also be appropriate for other learners, there are differences in the pace and levels of learning and understanding that impose constraints on the effectiveness of implementation of these principles and strategies. In 1996 Carol A. Tomlinson identified nine dimensions along which to differentiate curriculum and instruction: foundational to transformational, concrete to abstract, simple to complex, few facets to multifacets, smaller leap to greater leap, more structured to more open, clearly defined or fuzzy, less independence to greater independence, slower to quicker.

The second issue is whether gifted education is nothing but “fluff,” with fancy rhetoric but not much substance. This concern reflects the fact that the quality of gifted programs varies from school district to school district and that programs meet the needs of their constituents. There are many factors contributing to effectiveness or ineffectiveness of gifted programs, such as administrative support and

staff training. In general, gifted education needs to continue to develop and implement individualized programs rather than a one-size-fits-all gifted curriculum, integrating what students receive from regular classrooms and what they get from pull-out programs. Based on their extensive review of the literature, Bruce Shore and Marcia Delcourt in 1996 suggested that effective gifted programs (1) congregate gifted children at least part of the time; (2) address children at a high intellectual level; (3) use acceleration when warranted; (4) address real and challenging problems; (5) include well-supervised independent study; (6) place educational experiences in a life-span context for the learner; (7) build substantially upon opportunities for individualization; (8) include well-trained and experienced teachers; and (9) support the cognitive and affective needs of all gifted students.

### Issues, Controversies, and Trends

Because the term *gifted and talented* is an umbrella concept meant to encompass various facets of excellence or potential for excellence, its meaning is an object of constant debate within and outside of the field. What is the basis for the phenomenon of gifted and talented performance: general mental power or highly specific abilities or talents, or both? Even though most experts in the field accept the notion of diverse expressions of excellence, they have their own leanings, ranging from the most traditional conception of giftedness as high general intelligence as indicated by IQ test scores, to the most pluralistic definition that defies any terms of psychometric measurement.

A related question is do gifted and talented manifestations reflect fundamental attributes of some children (hence gifted children) that set them apart from other children, or emergent developmental qualities of the child as a result of interaction with the environment? Is it a fixed or fluid condition? Major ideological differences exist in the field between those who believe that gifted children are a distinct group of exceptional children who share certain unique cognitive and social-emotional characteristics (i.e., being gifted made them different from the rest of children), and those who believe that gifted and talented performance or behavior should be understood in a more dynamic context in which it occurs, and can be attributed to contextual influences as much as personal characteristics. These differences have profound implications for identifi-

cation. Should we develop a fixed formula for finding the right gifted child or should we instead focus on nurturing and facilitating the emergence of gifted behaviors among children, while holding flexible but “soft” identification criteria?

From an assessment perspective, the traditional approach, deeply rooted in the intelligence testing movement, focused on a set of static attributes or traits. On the other hand, a dynamic assessment approach affords a closer look at processes, strategies, insights, errors, and so on, and is thus more informative and explanatory. A contrast has been made between a static (trait) approach and a dynamic (process) approach that involves micro-level analysis and clinical insights regarding children’s superior performance. This reinforces the issue of subjectivity in measurement and assessment. Time will tell whether a dynamic assessment will supplement, or even replace, the traditional way of identifying gifted and talented children. A better understanding of the nature and improved assessment of potential for talent development will also help address other derivative issues such as multipotentialities, multiple exceptionalities, and underachievement among highly able children.

Because of different understandings of the phenomenon in question and concerns about equity, some experts suggest that we abandon the term *gifted* altogether to avoid the arbitrary bifurcation of the gifted and nongifted, and that we should label services instead of labeling the child, whereas others view this movement as abandoning the very *raison d’être* for gifted programs. The social-emotional impact of labeling aside, the issue is also that of restrictiveness discussed earlier: how inclusive and flexible gifted programs can be. On the one hand, programs such as Talent Search are highly selective in nature; some cutoffs (e.g., ninety-ninth percentile) are necessary to determine one’s qualification, and intensive programs can be implemented with relatively high efficiency. On the other hand, various forms of enrichment and high-end learning can be open to a larger pool of able students, even to all students, and qualification can be determined in a flexible manner to maximize opportunities for participation, with gifted programs justified on the basis of needs (e.g., substituting regular curriculum with more advanced materials) rather than status (being identified as gifted), as is the case with the Revolving Door Identification Model.

As mentioned above, various forms of grouping are necessary to provide special services for gifted and talented children. It is not difficult to justify grouping as a way of providing an optimal educational environment for gifted and talented children. The challenge is justifying the services within the context of the whole educational system. Ability grouping practices are vulnerable to charges such as favoritism or elitism in a democratic society and egalitarian culture. The problem is exacerbated by the fact that ethnic minority (except Asian-American) students and students from families of low social economic status are underrepresented in gifted education programs in the United States. Until gifted education is well integrated into the whole education system, its identity and functions become better defined, and its pursuit of excellence is balanced with concerns over equity, it will continue to be the target of criticism.

On a positive note, gifted education has proven to be a vital force in American education. In many respects, programs for the gifted have been the true laboratories of our nation’s schools because they have presented ideal opportunities for testing new ideas and experimenting with potential solutions to long-standing educational problems. Programs for high potential students have been an especially fertile place for experimentation because such programs usually are not encumbered by prescribed curriculum guides or traditional methods of instruction. It was within the context of these programs that the thinking skills movement first took hold in American education, and the pioneering work of notable theorists such as Benjamin Bloom, Howard Gardner, and Robert Sternberg first gained the attention of the education community in the 1980s. Other developments that had their origins in special programs are currently being examined for general practice. These developments include a focus on concept rather than skill learning, the use of interdisciplinary curriculum and theme-based studies, student portfolios, performance assessment, cross-grade grouping, alternative scheduling patterns, and perhaps most important, opportunities for students to exchange traditional roles as lesson-learners and doers-of-exercises for more challenging and demanding roles that require hands-on learning, first-hand investigations, and the application of knowledge and thinking skills to complex problems.

Research in a variety of gifted education programs has fostered the development of instructional

procedures and programming alternatives that emphasize the need (1) to provide a broad range of advanced level enrichment experiences for all students, and (2) to use the many and varied ways that students respond to these experiences as stepping stones for relevant follow-up on the parts of individuals or small groups. These approaches are not viewed as new ways to identify who is or is not gifted. Rather, the process simply identifies how subsequent opportunities, resources, and encouragement can be provided to support continuous escalations of student involvement in both required and self-selected activities. This orientation has allowed many students opportunities to develop high levels of creative and productive accomplishments that otherwise would have been denied through traditional special program models. Practices that have been a mainstay of many special programs for the gifted are being absorbed into general education by reform models designed to upgrade the performance of all students. This integration of gifted program know-how is viewed as a favorable development, since the adoption of many special program practices is indicative of the viability and usefulness of both the know-how of special programs and the role gifted education can and should play in total school improvement. This broader and more flexible approach reflects a democratic ideal that accommodates the full range of individual differences in the entire student population, and it opens the door to programming models that develop the talent potentials of many at-risk students who traditionally have been excluded from anything but the most basic types of curricular experiences. This integration of gifted and talented education into the general education system is beginning to redefine the ways in which we develop the many and various potentials of the nation's youths.

*See also:* COUNCIL FOR EXCEPTIONAL CHILDREN; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## GLOBALIZATION OF EDUCATION

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In popular discourse, *globalization* is often synonymous with *internationalization*, referring to the growing interconnectedness and interdependence of people and institutions throughout the world. Although these terms have elements in common, they have taken on technical meanings that distinguish them from each other and from common usage. Internationalization is the less theorized term. Globalization, by contrast, has come to denote the complexities of interconnectedness, and scholars have produced a large body of literature to explain what appear to be ineluctable worldwide influences on local settings and responses to those influences.

Influences of a global scale touch aspects of everyday life. For example, structural adjustment policies and international trading charters, such as the North American Free Trade Association (NAFTA) and the Asia-Pacific Economic Cooperation (APEC), reduce barriers to commerce, ostensibly promote jobs, and reduce the price of goods to consumers across nations. Yet they also shift support from "old" industries to newer ones, creating dislocations and forcing some workers out of jobs, and have provoked large and even violent demonstrations in several countries. The spread of democracy, too, is part of globalization, giving more people access to the political processes that affect their lives, but also, in many places, concealing deeply rooted socioeconomic inequities as well as areas of policy

over which very few individuals have a voice. Even organized international terrorism bred by Islamic fanaticism may be viewed as an oppositional reaction—an effort at *deglobalization*—to the pervasiveness of Western capitalism and secularism associated with globalization. Influences of globalization are multi-dimensional, having large social, economic, and political implications.

A massive spread of education and of Western-oriented norms of learning at all levels in the twentieth century and the consequences of widely available schooling are a large part of the globalization process. With regard to the role of schools, globalization has become a major topic of study, especially in the field of comparative education, which applies historiographic and social scientific theories and methods to international issues of education.

### Globalization Theory

Globalization is both a process and a theory. Roland Robertson, with whom globalization theory is most closely associated, views globalization as an accelerated compression of the contemporary world and the intensification of consciousness of the world as a singular entity. Compression makes the world a single place by virtue of the power of a set of globally diffused ideas that render the uniqueness of societal and ethnic identities and traditions irrelevant except within local contexts and in scholarly discourse.

The notion of the world community being transformed into a *global village*, as introduced in 1960 by Marshall McLuhan in an influential book about the newly shared experience of mass media, was likely the first expression of the contemporary concept of globalization. Despite its entry into the common lexicon in the 1960s, globalization was not recognized as a significant concept until the 1980s, when the complexity and multidimensionality of the process began to be examined. Prior to the 1980s, accounts of globalization focused on a professed tendency of societies to converge in becoming modern, described initially by Clark Kerr and colleagues as the emergence of *industrial man*.

Although the theory of globalization is relatively new, the process is not. History is witness to many globalizing tendencies involving grand alliances of nations and dynasties and the unification of previously sequestered territories under such empires as Rome, Austria-Hungary, and Britain, but also such events as the widespread acceptance of germ theory

and heliocentrism, the rise of transnational agencies concerned with regulation and communication, and an increasingly unified conceptualization of human rights.

What makes globalization distinct in contemporary life is the broad reach and multidimensionality of interdependence, reflected initially in the monitored set of relations among nation-states that arose in the wake of World War I. It is a process that before the 1980s was akin to *modernization*, until modernization as a concept of linear progression from traditional to developing to developed—or from *gemeinschaft* to *gesellschaft* as expressed by Ferdinand Toennies—forms of society became viewed as too simplistic and unidimensional to explain contemporary changes. Modernization theory emphasized the functional significance of the Protestant ethic in the evolution of modern societies, as affected by such objectively measured attributes as education, occupation, and wealth in stimulating a disciplined orientation to work and political participation.

The main difficulty with modernization theory was its focus on changes within societies or nations and comparisons between them—with Western societies as their main reference points—to the neglect of the interconnectedness among them, and, indeed, their interdependence, and the role played by non-Western countries in the development of the West. Immanuel Wallerstein was among the earliest and most influential scholars to show the weaknesses of modernization theory. He developed *world system theory* to explain how the world had expanded through an ordered pattern of relationships among societies driven by a capitalistic system of economic exchange. Contrary to the emphasis on linear development in modernization theory, Wallerstein demonstrated how wealthy and poor societies were locked together within a world system, advancing their relative economic advantages and disadvantages that carried over into politics and culture. Although globalization theory is broader, more variegated in its emphasis on the transnational spread of knowledge, and generally less deterministic in regard to the role of economics, world system theory was critical in shaping its development.

### The Role of Education

As the major formal agency for conveying knowledge, the school features prominently in the process and theory of globalization. Early examples of edu-

cational globalization include the spread of global religions, especially Islam and Christianity, and colonialism, which often disrupted and displaced indigenous forms of schooling throughout much of the nineteenth and twentieth centuries. Postcolonial globalizing influences of education have taken on more subtle shapes.

In globalization, it is not simply the ties of economic exchange and political agreement that bind nations and societies, but also the shared consciousness of being part of a global system. That consciousness is conveyed through ever larger transnational movements of people and an array of different media, but most systematically through formal education. The inexorable transformation of consciousness brought on by globalization alters the content and contours of education, as schools take on an increasingly important role in the process.

**Structural adjustment policies.** Much of the focus on the role of education in globalization has been in terms of the structural adjustment policies of the World Bank and other international lending organizations in low-income countries. These organizations push cuts in government expenditures, liberalization of trade practices, currency devaluations, reductions of price controls, shifts toward production for export, and user charges for and privatization of public services such as education. Consequently, change is increasingly driven largely by financial forces, government reliance on foreign capital to finance economic growth, and market ideology.

In regard to education, structural adjustment policies ostensibly reduce public bureaucracies that impede the delivery of more and better education. By reducing wasteful expenditures and increasing responsiveness to demand, these policies promote schooling more efficiently. However, as Joel Samoff noted in 1994, observers have reported that structural adjustment policies often encourage an emphasis on inappropriate skills and reproduce existing social and economic inequalities, leading actually to lowered enrollment rates, an erosion in the quality of education, and a misalignment between educational need and provision. As part of the impetus toward efficiency in the expenditure of resources, structural adjustment policies also encourage objective measures of school performance and have advanced the use of cross-national school effectiveness studies. Some have argued that these studies represent a new

form of racism by apportioning blame for school failure on local cultures and contexts.

**Democratization.** As part of the globalization process, the spread of education is widely viewed as contributing to democratization throughout the world. Schools prepare people for participation in the economy and polity, giving them the knowledge to make responsible judgments, the motivation to make appropriate contributions to the well being of society, and a consciousness about the consequences of their behavior. National and international assistance organizations, such as the U. S. Agency for International Development and the United Nations Educational, Scientific and Cultural Organization (UNESCO), embrace these objectives. Along with mass provision of schools, technological advances have permitted distance education to convey Western concepts to the extreme margins of society, exposing new regions and populations to knowledge generated by culturally dominant groups and helping to absorb them into the consumer society.

A policy of using schools as part of the democratization process often accompanies structural adjustment measures. However, encouraging user fees to help finance schooling has meant a reduced ability of people in some impoverished areas of the world to buy books and school materials and even attend school, thus enlarging the gap between rich and poor and impeding democracy. Even in areas displaying a rise in educational participation, observers have reported a reduction in civic participation. Increased emphasis on formalism in schooling could plausibly contribute to this result. An expansion of school civics programs could, for example, draw energy and resources away from active engagement in political affairs by youths, whether within or outside of schools. Increased privatization of education in the name of capitalist democratization could invite greater participation of corporate entities, with the prospect of commercializing schools and reducing their service in behalf of the public interest.

**Penetration of the periphery.** Perhaps the most important question in understanding how education contributes to globalization is, what is the power of schools to penetrate the cultural periphery? Why do non-Western people surrender to the acculturative pressure of Western forms of education?

By mid-twentieth century, missionaries and colonialism had brought core Western ideas and practices to many parts of the world. With contemporary

globalization, penetration of the world periphery by means of education has been accomplished mainly in other ways, especially as contingent on structural adjustment and democratization projects. Some scholars, including Howard R. Woodhouse, have claimed that people on the periphery are “mystified” by dominant ideologies, and willingly, even enthusiastically and without conscious awareness of implications, accept core Western learning and thereby subordinate themselves to the world system. By contrast, there is considerable research, including that of Thomas Clayton in 1998 and Douglas E. Foley in 1991, to suggest that people at the periphery develop a variety of strategies, from foot dragging to outright student rebellion, to resist the dominant ideology as conveyed in schools.

Evidence on the accommodation of people at the periphery to the dominant ideology embodied in Westernized schooling is thus not consistent. Erwin H. Epstein, based on data he collected in three societies, proposes a *filter-effect theory* that could explain the contradictory results reported by others. He found that children in impoverished areas attending schools more distant from the cultural mainstream had more favorable views of, and expressed stronger attachment to, national core symbols than children in schools closer to the mainstream. In all three societies he studied, globalization influences were abrupt and pervasive, but they were resisted most palpably not at the remote margins, but in the towns and places closer to the center, where the institutions representative of the mainstream—including law enforcement, employment and welfare agencies, medical facilities, and businesses—were newly prevalent and most powerfully challenged traditional community values.

Epstein explained these findings by reasoning that it is easier for children living in more remote areas to accept myths taught by schools regarding the cultural mainstream. By contrast, children living closer to the mainstream cultural center—the more acculturated pupils—are more exposed to the realities of the mainstream way of life and, being more worldly, are more inclined to resist such myths. Schools in different areas do not teach different content; in all three societies, schools, whether located at the mainstream center or periphery, taught an equivalent set of myths, allegiances to national symbols, and dominant core values. Rather, schools at the margin are more effective in inculcating intended political cultural values and attitudes because they

operate in an environment with fewer competing contrary stimuli. Children living in more traditional, culturally homogeneous and isolated areas tend to be more naive about the outside world and lack the tools and experience to assess objectively the political content that schools convey. Children nearer the center, by contrast, having more actual exposure to the dominant culture, are better able to observe the disabilities of the dominant culture—its level of crime and corruption, its reduced family cohesion, and its heightened rates of drug and alcohol abuse, for example. That greater exposure counteracts the favorable images all schools convey about the cultural mainstream, and instead imbues realism—and cynicism—about the myths taught by schools.

In other words, schools perform as a filter to sanitize reality, but their effectiveness is differential; their capacity to filter is larger the farther they move out into the periphery. As extra-school knowledge progressively competes with school-produced myths, the ability and inclination to oppose the dominant ideology promoted by schools as part of the globalization process should become stronger. This filter-effect theory could clarify the impact of schools as an instrument of globalization and invites corroboration.

*See also:* INTERNATIONAL EDUCATION AGREEMENTS; INTERNATIONAL EDUCATION STATISTICS; RURAL EDUCATION, *subentry on* INTERNATIONAL CONTEXT.

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*Compare* 17:121.

ERWIN H. EPSTEIN

## GOALS 2000: EDUCATE AMERICA ACT

*See:* EDUCATION REFORM; SCHOOL REFORM; STANDARDS FOR STUDENT LEARNING; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

### GODDARD, HENRY H. (1866–1957)

Director of research at the New Jersey Home for the Education and Care of Feeble-Minded Children in Vineland, Henry H. Goddard used and elaborated Alfred Binet’s intelligence tests for use with American students. Goddard made a number of important contributions in special education, including his guiding role in the establishment of the first state law mandating special education services. He is remembered, however, primarily for his work in popularizing Alfred Binet’s approach to psychological testing in the United States and studying the hereditary roots of feeble-mindedness in his book, *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness* (1912).

#### Background and Education

Goddard grew up in a devout Quaker family, and his initial educational experiences occurred at Haverford College, a Quaker institution in Pennsylvania. At various points during his education, he took teaching and administrative positions in Quaker schools. At one point, he lectured at the newly founded University of Southern California—where he held the distinction of being that university’s first football coach. But Goddard’s interests in psychology lured him to Clark University to study with G. Stanley Hall, where Goddard gained an appreciation for scientific approaches to studying human behavior.

Upon graduation with his doctorate, Goddard worked for several years at a teacher’s college in Pennsylvania, where he became frustrated by the lack of emphasis on scientific psychology and peda-

gogy. As a result, in 1906 he accepted the position of director of research at the New Jersey Home for the Education and Care of Feeble-Minded Children in Vineland, a small town in the southern, rural part of the state. Although Goddard is best known for his work at the Vineland School, he also held two major positions in Ohio before his retirement.

#### Intelligence Testing

Early in the twentieth century, Goddard was concerned with separating, in his terms, the retarded—who suffered from poor health or environment and required remedial help—from the feeble-minded—who suffered from decreased mental capacity and required a special curriculum. Goddard believed that the Binet-Simon intelligence tests, recently developed in France, could aid in assessing the nature of this problem and began to advocate for the use of the scales in the United States.

About this time, American educators became concerned with the percentage of students who were older than would be expected given their grade. When the question of grade versus age became a major issue in American education, Goddard saw that the Binet scales with which he was already working could be used to study this issue. Goddard’s advocacy for the Binet tests was enthusiastic and exhaustive. Well-connected in areas as diverse as medicine, education, psychology, and law, he championed the use of the tests in several venues. For example, he taught or organized courses for teachers on administration of the Binet tests at several institutions. These teachers proceeded to use the tests in educational settings throughout the United States. In addition, he advocated the value of test results as legal evidence. Goddard was also highly involved in the U.S. army psychological testing program during World War I, further legitimizing this particular approach to mental testing.

Goddard’s advocacy of the Binet tests had two important outcomes. The mental testing approach gained popularity relative to the qualitatively different techniques used by Francis Galton and others who relied upon physical and physiological measures to estimate intelligence. Also, various forms of the Binet test, primarily revisions by Goddard and especially Lewis Terman, remain in use, and a majority of contemporary intelligence tests are based on similar methodologies. Without Goddard’s influence, early-twenty-first century testing and related educational practices might look quite different.

## The Kallikak Family Study

Goddard's other major contribution was his study of feeble-mindedness. Goddard's field-based research resulted in many publications, with the best known being *The Kallikak Family: A Study in the Heredity of Feeble-Mindedness*. Although Goddard and his assistants studied hundreds of families, the Kallikak family remains the most famous. The family was that of a Vineland student, Deborah. The name *Kallikak* is actually a pseudonym created from the Greek words *kallos* (beauty) and *kakos* (bad). The Kallikak family was divided into two branches—one "good" and one "bad,"—both of which originated from Deborah's great-great-great grandfather, Martin Kallikak. When Kallikak was a young soldier, he had a liaison with an "unnamed, feeble-minded tavern girl." This tryst resulted in the birth of an illegitimate son, Martin Kallikak Jr., from whom the bad branch of the family descended. Later in his life, Martin Kallikak Sr. married a Quaker woman from a good family. The good branch descended from this marriage.

Goddard's genealogical research revealed that the union with the feeble-minded girl resulted in generations plagued by feeble-mindedness, illegitimacy, prostitution, alcoholism, and lechery. The marriage of Martin Kallikak Sr. to the Quaker woman yielded generations of normal, accomplished offspring. Goddard believed that the remarkable difference separating the two branches of the family was due entirely to the different hereditary influences from the two women involved with the senior Kallikak.

Goddard's work had a powerful effect. Scholars were generally impressed by the magnitude of the study, and *The Kallikak Family* became very popular. Critical reaction in the popular press was positive, with more muted reaction within the scientific community. For example, James McKeen Cattell praised the contribution and conclusions but criticized the research design. The Kallikak study was a powerful ally to eugenicist movements, including that of the Nazi party, and contributed to the atmosphere in which compulsory sterilization laws were passed in many states.

## Controversy

Controversy followed Goddard throughout his career. However, the Kallikak study and Goddard's eugenicism in the 1910s created the most serious problems. For example, Goddard concluded *The*

*Kallikak Family* with recommendations of forced sterilization and segregation of the feeble-minded in isolated colonies. His work also had a strong anti-immigrant tone at a time when immigrants were seeking citizenship in record numbers. Goddard later admitted that many of his recommendations on social policy had been misguided, but his controversial role earlier in the twentieth century helped to place his work in low regard by the 1940s.

By the end of the twentieth century, Goddard's research once again came under fire. A photographic expert suggested that some of the Kallikak photographs—those of the bad branch of the family—were retouched. Critics charged that the modifications were made by Goddard to give a more disturbing appearance. However, several researchers have concluded that fraud appears to be unlikely. As Leila Zederland noted, a main thrust of Goddard's work was to show that feeble-minded people looked normal and were often quite attractive; he was advocating for mental testing, not visual inspection, to determine feeble-mindedness.

## Contribution

Henry Goddard made substantial contributions to American education, including the popularizing of mental testing, compulsory special education, and gifted education. His research into the hereditary nature of feeble-mindedness and related eugenicist activities, however, has helped to paint the rather negative picture many people continue to hold of Goddard and his work.

*See also:* ASSESSMENT TOOLS, *subentry on* PSYCHOMETRIC AND STATISTICAL; BINET, ALFRED; INTELLIGENCE, *subentry on* MEASUREMENT; SPECIAL EDUCATION.

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## GOODMAN, PAUL (1911–1972)

Social and educational critic Paul Goodman was referred to by his biographer, Taylor Stoehr, as a "prophet." Revered by the youth movement in the 1960s, his ideas on education and youth were extremely appealing to many people on the political left.

Goodman was born in New York, and raised amid the urban, Jewish intellectual community. He graduated from City College of New York in 1931. Goodman earned his Ph.D. at the University of Chicago, but moved back to New York and lived with his wife Sally until his death. His major works on education were *Growing Up Absurd*, *Community of Scholars*, and *Compulsory Mis-Education*, but he also wrote many articles that dealt with de-schooling, alternative education, mini-schools, and free universities.

The publishing of *Growing Up Absurd* in 1960 brought Goodman to the public as a social/educational critic. The book was rejected seventeen times before a publisher accepted it, after Norman Poderhotz serialized it in the then leftist *Commentary*. Goodman spent the last twelve years of his life teaching courses at universities in New York, speaking on campuses throughout the country, and as a visiting professor at San Francisco State University and the University of Hawaii. Goodman never held a tenure track appointment. *Growing Up Absurd* was adopted in education and sociology courses throughout the country. The book was read as a condemnation of the alienation and oppression in American society and schools, and was a forerunner

to the educational criticism of John Holt, Herb Kohl, Jonathan Kozol, and Edgar Friedenberg. For sixties activists, as well as liberal educators, the book provided an analysis of the wrongs of American society and education.

Goodman published *Compulsory Mis-Education* and *Community of Scholars* as a single volume in 1962. The books were assigned reading in education courses and initiated thoughtful educational criticism. *Compulsory Mis-Education* became somewhat of a blueprint for de-schoolers as well as for the alternative school movement in the late 1960s and 1970s. Critical of education from kindergarten through the university, the work led seamlessly into *Community of Scholars*, which emphasized Goodman's endless quest for community while criticizing the status quo. Goodman spent much of his time in his final years bringing his philosophy on education to college campuses. He was actively antiwar, but he warned student activists of the danger in "action for the sake of action." He continued to write, mostly about educational criticism.

*Decentralizing Power*, Taylor Stoehr's biographical work on Goodman, is a collection of Goodman's writing on social and educational criticism. The general theme of the work is community life. Goodman's initial discussion of the issues and problems of youth analyzes the youth movement—both idealism and alienation—with the latter being predominant. He speaks of power-beating community, coining the phrase "school monks." The theme of community is also prevalent in his important essay on children's rights. Goodman laments the lack of community and gently criticizes both Maria Montessori and A. S. Neill for educational practices that ask children to become adults too quickly.

At the same time, he lauds Neill's school, Summerhill, for delaying socialization and protecting the wildness of childhood. Goodman discusses schools as therapeutic communities, where children can escape from bad homes and bad cities. Goodman also offers a plan to abolish high schools and to replace them with apprenticeships, academies, youth houses, and therapeutic free schools—in fact, it is a de-schooling plan that preceded Ivan Illich's book, *De-schooling Society*.

Although Goodman was philosophical, and asked searching questions about people's relationship with the world, his educational proposals were practical and simple. As a teacher, his classroom was

an interactive laboratory. His proposals asked that education allow the same for young children, adolescents, and adults.

*See also:* ALTERNATIVE SCHOOLING; COMMUNITY EDUCATION; EDUCATION REFORM.

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ALAN WIEDER

### GOSLIN, WILLARD E. (1899–1969)

A nationally acclaimed school superintendent, Willard E. Goslin became a symbol of the end of educational progressivism, when he was forced to resign from the Pasadena, California, schools in November 1950. Goslin's ouster was a victory for citizens' groups that deemed his support of racial understanding, outdoor education, child guidance, and mental health as evidence of subversive, un-American values.

Goslin was raised on a Missouri farm. He began teaching in the rural schools of Boone County, Missouri, in 1916. After receiving a B.S. degree from Northeast Missouri State Teachers College (later, Truman State University) in 1922, he was appointed principal (1922–1923) and superintendent (1923–1928) in Slater, Missouri. He earned an M.A. degree from the University of Missouri in 1928 and served as superintendent of Webster Groves, Missouri, from 1930 to 1944. In 1944 Goslin was named superintendent of Minneapolis schools. During his tenure there he was named one of the five outstanding public school administrators in the country. In 1948, while serving as Minneapolis's superintendent, he concurrently held the office of president of the American Association of School Administrators. That year he also accepted the superintendency of the Pasadena (California) Public Schools, a move

that was to bring him considerable fame as well as disappointment.

As a Progressive educator, he soon found himself the center of criticism from a vigorous and reactionary minority of Pasadena's residents, who criticized him not only for his advocacy of Progressive education, but also for his "ideological" support of the United Nations Educational, Scientific and Cultural Organization (UNESCO), his inclusion of sex education in the curriculum, his concern for African Americans, and his advocacy of racial integration of the schools.

In June 1950 Goslin and the Pasadena School Board proposed an increased tax levy, which was soundly defeated by a two-to-one vote. From then on, both the board and the superintendent experienced increasing difficulties. Goslin endeavored to prune the budget and carry on. The forces that, in the closing hours of the tax election campaign, had indulged in a number of misrepresentations and attacks on the superintendent, had created a rupture between the administration and the lay board. Early in November the board asked for his resignation. After a few weeks of discussion, private and public, which David Hulburd describes as "Turmoil in Pasadena," Mr. Goslin resigned from his position.

Although public criticism ultimately forced him to resign from his position, an action that stunned professional educators throughout the country, it was the lack of press support that became an important factor in his eventual ouster from the school board. Educators' interest in such an event is obvious, but the situation offered enough drama to stimulate a great deal of interest for the public as well. The forced resignation of Willard Goslin as superintendent of Pasadena schools had enough appeal to warrant prominent attention in the national press as in, for example, *Life* magazine.

At least two careful investigations found Goslin's dismissal to result largely from the demands of a comparatively small but very vocal group of critics. Goslin had received a warm welcome as the new superintendent. The end of the honeymoon period began with the defeat of a tax proposal to provide additional educational funds. The organization that had spearheaded the campaign to defeat the tax proposal went on to denounce as leftist and educationally unsound the "Progressive Education" that Goslin was alleged to represent. Among the charges hurled at Goslin by the Pasadena unit of Pro-

America and others were his association with W. H. Kilpatrick and the "Columbia [Teachers College] cult of progressive educators," and his support of a program alleged "to sell our children on the collapse of our way of life" (Hulburd, p. 89).

Despite untruths and what appears to be an absence of justice, the Goslin case involved events that transpired while he was superintendent. Not all attacks on schools of the day reached such a dramatic and pronounced climax, but even in more typical cases, where school personnel were not threatened to such an extent, intense assaults had widespread ramifications among school employees. For instance, a severe undermining of teachers' morale during the attack on Goslin took place in Pasadena. A 1955 survey conducted by the National Education Association's Defense Commission substantiated the effects of attacks on schools of the day. The study noted "various morale problems, and numerous resignations by teachers as well as by administrators" (p. 20).

Responding to criticisms of the public schools during this period, educators faced a familiar dilemma. On the one hand, the public schools belong to the people and should never be exempt from critical examination and appraisal by the people; nor should educators be unduly defensive or smug about claimed achievement for schools. On the other hand, the attacks on the schools were incited and supported by a minority and were often manifestly unfair and distorted.

Following the Pasadena crisis, Ernest O. Melby, dean of the School of Education at New York University, wrote *American Education under Fire: The Story of the 'Phony Three-R Fight*. Issued as one of the Freedom Pamphlets of the Anti-Defamation League of B'nai B'rith and sponsored by the American Education Fellowship, the John Dewey Society, and two constituent bodies of the National Education Association, this publication analyzed the methods used by the organizations that systematically attacked public schools of the day, particularly Allen Zoll's National Council for American Education. Over and above this Melby's discussion focused on identifying the characteristics of a "good education" and outlining procedures by which critics and criticism may be properly answered. His concluding section demonstrates how educators and interested citizens can cooperate to secure better schools.

In September 1951 Goslin became head of the Division of School Administration and Community

Development at George Peabody College for Teachers. The National Education Association gave him their American Education Award for 1952. In 1953 Goslin contributed a chapter to the Association for Supervision and Curriculum Development's 1953 yearbook, *Forces Affecting American Education*. His chapter, titled "The People and Their Schools," drove home the idea that the success with which public schools do their job depends upon the interest, support, and participation of all the citizens of every community and their understanding of educational principles and practices. In 1961, Seoul University awarded Goslin an honorary doctorate for his work as coordinator of a Korean teacher education project, hailing him as "the father of modern education in Korea" (*New York Times*, p. 27).

Goslin's work with Peabody College's "Multi-Year Project" in Korea was a capstone of his professional activities at Peabody. However, his seminars and regular classes were his true love. He specialized in teaching "foundations of education" and history of education, as well as teaching a colloquium on the superintendency each semester. It has been reported that his classes sometimes reached 80 to 100 students. Students and colleagues remember him as an excellent orator, having a "Will Rogers" kind of demeanor. He retired from teaching in 1966 at the age of sixty-seven, but remained actively involved with his students on a daily basis until his death in 1969.

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ROBERT C. MORRIS

## GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES

There is no single or generally accepted definition of governance, as it has been described as structures, legal relationships, authority patterns, rights and responsibilities, and decision-making patterns. One commonly given definition of governance is the way that issues affecting the entire institution, or one or more components thereof, are decided. It includes the structure and processes, both formal and informal, of decision-making groups and the relationships between and among these groups and individuals. What distinguishes governance from administrative decisions is that governance tends to be early on in the process and establishes policies. Much of what happens later is administration.

Governance of higher education institutions around the world varies from nation to nation, ranging from direct and detailed control by the central government to *laissez-faire*, private profit-making enterprises, with many other arrangements in between. This entry will focus on governance patterns of colleges and universities that have emerged in the United States. One of the distinctive features of U.S. governance is the great diversity of forms that have emerged in contrast to other countries, which tend to have great uniformity. Each governance pattern reflects the unique history of the sector and the needs of those specific institutional types. There are several reasons for this diversity within the governance system, which include the absence of a centralized authority for education, strong public and private interests, a lay citizen governing board, and responsibilities that vary for trustees, presidents, and departments among institutions. The distinctive feature of governing boards has allowed for a decentralized system of governance where power and autonomy is distributed. Also, the U.S. governance

system has followed the general societal patterns for governance in a democracy—representative or collective decision-making often termed *shared governance*.

### Shared Governance

The definition of shared governance has changed slightly over time, but the commonly accepted definition is from the 1966 Statement on Government of Colleges and Universities. It identified governance as the joint efforts in the internal operations of institutions, but also characterized certain decisions as falling into the realm of different groups. This statement was jointly formulated by the American Association of University Professors (AAUP), the American Council on Education (ACE), and the Association of Governing Boards of Universities and Colleges (AGB).

The statement, although not intended to serve as a blueprint for institutional decision-making, outlines roles for the president, faculty, administrators, and trustees in academic governance decisions. For example, it suggests that issues such as managing the endowment fall to the trustees, maintaining and creating new resources to the president, and developing the curriculum to the faculty. Not all decisions neatly fall into the domain of one of the three groups. It notes that much of governance is (or should be) conducted jointly. In other words, the statement argues that multiple members of the campus should have input on key decisions, a process termed *shared governance*. Questions over general education policy, the framing and execution of long-range plans, budgeting, and presidential selection should be decided jointly.

This open definition of shared governance is meant to respect the wide differences in history, size, and complexity of American higher education. For example, governance processes at liberal arts colleges are distinctive in that the whole faculty is often involved in governance; at larger institutions such as doctoral- and masters-granting institutions, governance tends to be a representative process through a faculty senate and joint committees. At community colleges, unions are also a key factor in the process. Although academic governance has changed over time, becoming highly participatory in the 1960s and more hierarchical in the 1980s, it has historically retained the notion of the importance of consultation and participation of campus constitu-

ents in major decision-making, reflecting democratic principles.

### Governance Structure

The governance process is complex and includes many different layers (or groups). Each group differs in levels of responsibility by type of institution, culture of the campus, and historical evolution. Thus, there is no single organizing approach for governance. Trustees and boards have been delegated authority by college and university charters from the state legislature for oversight and decision-making. The legal requirements for boards are typically very loose; they need to assemble with a quorum periodically and oversee certain broad responsibilities. In the eighteenth and nineteenth centuries, boards dominated decision-making, and faculty had little involvement. However, as faculty professionalized in the late 1800s, there was a concerted effort among faculty to obtain greater authority within the decision-making process. As Robert Birnbaum notes, “the reality of governance today is much different than the strict legal interpretation would suggest” with boards having total authority (p. 4).

Even though governance is shared, trustees, governors, boards, or visitors play a significant role. Although holding different titles, these individuals maintain a similar function: to protect and ensure the interest and trust of the institution for the public or for a private group such as a church. The differing names reflect the different sectors and regional traditions. Trustees are more likely to play a custodial role over property and funds, being less involved with academic matters. Governors’ roles tend to be more comprehensive and include academic matters. In general, board (this generic term will be used throughout the entry to designate these several different authority groups) responsibilities vary from clarifying mission, assessing president’s performance, fund-raising, ensuring good management, and preserving institutional independence. Many boards have authority for ratifying institutional decisions, which can allow them to become involved in administrative details. Board authority varies by institution; thus to understand a particular campus it is necessary to obtain their charter and by-laws. Also, board members can be elected in public institutions or appointed in private institutions. Boards of private institutions tend to be larger than public ones.

Most boards report to another entity; for example, boards of trustees might report to a church while regents report to the legislature of a state. Today, most states have a system-wide coordinating board that campus governors or regents report to rather than directly to the legislature. Up until World War II, 70 percent of public colleges reported to their own board. However, when enrollments increased and there was major growth in the number of higher education institutions, state systems of governance developed. By the mid 1970s, only 30 percent of public colleges answered only to their governing boards.

Boards, trustees, and regents can be made up of very different types of individuals. Trustees are often alumni of the institution, whereas regents are often elected officials representing political party or district interests. Therefore, the perspective brought to the task of governing can vary greatly.

Another key player in governance is the president, who administers the policies set by the board. Presidents’ and other administrators’ role in governance is to make recommendations to the board and to implement policies. Faculty members, as noted above, became an integral part of governance around the turn of the twentieth century. In 1915 the American Association of University Professors developed a set of principles related to faculty rights, one of which is the right to offer input concerning institutional governance on matters related to academic decisions. Faculty members typically have input on decisions in such areas as employment, research, degrees and degree requirements, courses, evaluating programs, evaluation of faculty, admission, advising, and criteria for obtaining degrees.

Students’ involvement in governance also varies by institution. Some boards have student membership. Some states, such as California, now have a law providing for student board membership. Also, most campuses have a student assembly or senate in which members are chosen by election. This body can operate as a governance body, providing recommendations to the president, administration and board. But it is rare for student assemblies to have any formal authority; rather, they are considered as part of the shared governance process.

Campus senates are the most common mechanism for faculty involvement in governance in a systematic way. Senators are elected to their positions from each college or school, making the campus sen-

ate a representative body. Most campus senates operate primarily through committees, and are only allowed to make recommendations to the president/administration and board about institutional matters. Several campuses have developed other formal governance structures in order to codify decision-making processes and input. Some campuses have developed joint committees of faculty, students, and administrators that develop recommendations for action on key institutional issues.

What are the areas in which governance decisions tend to be made? Policy setting areas tend to include mission, strategic direction, and selection processes for administrators, faculty, and staff; budgeting and expending funds; procedures related to construction of buildings; academic programs including degrees, course, admission, and graduation; promotion, tenure and salary increments; athletic programs; student matters; research, grants, and contracts; parking, security, and other services; and public relations.

### **External Influences**

Although not formally part of campus governance, outside forces such as state governments, alumni, donors, federal government, accreditors, and associations often affect governance processes through funding, persuasion, policy, and guidelines. These other groups are important to acknowledge, even if their influence is infrequent and not formally defined by a charter, statement, or set of principles. Legislatures use budget allocation as a way to influence campus decision-making outside the formal governance processes. Individual donors might ask to have a say in certain institutional decisions in exchange for a monetary contribution to the institution. The federal government can establish rules and regulations that indirectly affect campus decision-making. For example, regulations about affirmative action have had an effect on campus admissions decisions and policies. Accreditors and associations probably have the least direct influence on campus governance. Accreditors, for example, can define requirements for a certain field of study. These requirements influence the decision-making processes at campuses that want to retain their accrediting status.

### **Trends in Governance**

There are several trends in governance that are important to highlight: (1) the growth of external influ-

ences; (2) inability to respond to external challenges; (3) the lack of prominence and move away from shared governance; and (4) decreasing participation. These forces are related: The growth of external influences is coupled with institutions' trying to alter decision-making processes that were originally internally oriented to be more externally oriented. The lack of participation, among faculty in particular, is related to a move away from the tradition of shared governance.

Many commentators have noted that external agents are less reluctant to enter the decision-making process than in the past, even at the final stages. In addition, higher education is in the midst of a shift from its tradition of informal, consensual judgments to standardization, litigation, and centralization. Societal and legislative expectations have been altered, focusing more on accountability, quality, and efficiency. As Kenneth Mortimer and Thomas McConnell note, "the increased influence of state coordinating boards and system level administration in the last twenty years has moved decisions further away from campus based constituents." (p. 165). Boards and presidents now find themselves acting more as buffers to outside forces than in the past.

The intense environmental demands on higher education place great responsibility and strain on institutional leaders to make difficult decisions in a timely manner. The substance of academic governance has changed; traditional "maintenance" decisions, which include items such as the allocation of incremental budgets, modifications to the curriculum, and issues of faculty life, are being replaced with "strategic policy-making" decisions. These new decisions are high stakes challenges related to the changing nature of scholarship, prioritizing among programs, choosing among new opportunities, and reallocating either shrinking or unchanging (not growing) budgets. Current decision-making systems (e.g., academic senates) were not created to cope with these types of decisions and demands. These traditional academic governance structures are facing a cascade of criticism, describing them as being slow and ineffective. Campus senates and other joint administrative-faculty committees need to design processes to resolve unprecedented problems from the changing environment.

Although shared governance has been the norm for the last century, several commentators have noted that there are problems with shared governance that can no longer be ignored, including the

following: (1) it does not actually represent or describe governance patterns in the majority of institutions; (2) it ignores the conflict of interests and adversarial decision-making practices inherent in a major new governance structure—collective bargaining; and (3) it takes in little account of the external forces. It is noted that shared authority only exists at a few elite institutions with powerful faculty, and that administrative authority is foremost at most institutions. Also, it is noted that there are few shared goals at most institutions, the principle that shared governance is built upon. Faculty and students are divided into different interest groups, making self-governance difficult with minimal consensus on issues. Thus, in practice, shared governance is usually not possible.

At the same time, academic governance is becoming less participatory, as fewer individuals care about or are involved in academic governance. Current trends work against widespread academic governance participation—fewer full-time faculty are employed, participation is not rewarded, other demands take precedence, and faculty allegiances favor disciplines rather than institutions. There is concern about institutional effectiveness, morale, and the quality of decision-making. Because of the complexity of institutional issues, well-considered decisions should be based on a high degree of input and thought, usually achieved through participation of multiple constituents. Institutions may jump to poor conclusions since decisions do not benefit from a thorough examination of the issues or multiple perspectives.

There are many challenges in governance that need to be resolved in the twenty-first century: perhaps new structures and governance forms will be applied to higher education, as developed in the last century, with the emergence of shared governance, campus senates, and state-wide coordinating boards.

*See also:* BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY SENATES, COLLEGE AND UNIVERSITY; PRESIDENCY, COLLEGE AND UNIVERSITY.

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ADRIANNA KEZAR

## GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF

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Since about 1990 the assumption that the public sector should be responsible for all aspects of education has been increasingly questioned, in both developed and developing countries, for four main reasons. First, there have been doubts about the effectiveness and efficiency of public education. Second, there are doubts about the equity and accountability of public education, which particularly affect the poor. Third, there is an increasing awareness of initiatives by educational entrepreneurs, and evidence to suggest that competitive pressures can lead to significant educational improvements. Fourth, there has been a need to restrain public expenditure in order to reduce budget deficits and external debts, and, consequently, a need to find alternative sources of educational funding.

About the fourth reason little more can be said, apart from the fact that this has motivated governments and international agencies to look to the possibility of an increasing private sector role. But potentially countering each of the other three reasons is the notion that education is a public good, and hence requires government intervention for its provision. Before reviewing relevant arguments, it is important to stress that the whole issue is controversial. Consequently, it is worth noting at the outset some recent overviews of the whole debate.

Largely unsympathetic to an increasing role for the private sector are philosopher Harry Brighouse, sociologists such as Stephen Ball, the Karl Mannheim professor of sociology of education at the University of London, and the journalist Alex Molnar. Brighouse, who is affiliated with both the American and the British reform movements, presents philosophical arguments against extending educational choice, particularly stressing how they will promote inequity. He is, however, sympathetic to some arguments about the way private sector could raise standards and be more efficient. Ball and his colleagues

have explored the way market reforms have occurred in to England, and they suggest the evidence points to a deleterious impact on equality of opportunity. Finally, Molnar has explored the increasing commercialization of American schools, and he argues that the profit motive and education should not be allowed to mix.

For the alternative perspective, a good place to start is with the economic historian Edwin G. West's seminal work *Education and the State* (1994), followed by the work of Andrew Coulson and James Tooley. West suggests that before the government got involved in education in England and Wales and the United States, there was widespread private provision of education, which was crowded out by the intervening state. Coulson takes up the historical case in ancient Greece (among other places), and providing detailed economic and conceptual arguments to support the case for markets in education, and he challenges the idea that public education can promote social cohesion and equality of opportunity. Tooley takes up similar themes, conducting a thought experiment to explore historical, philosophical, and economic arguments that suggest the desirability for an increased role for the private sector in education—including addressing the objections to for-profit education.

Playwright George Bernard Shaw once quipped that the Americans and the British are divided by a common language. Nowhere is this more obvious than when we speak of the role of government in education. The British, for reasons buried in historical time, call their most elite private schools *public schools*, and other countries such as India followed this usage. To avoid confusion, this article will follow the more logical American usage, where *public schools* are those funded by government, and *private schools* are those that are not.

### Education As a Public Good

It is often argued that education is a *public good*, and that this implies a particular role for government. Economists define a public good as satisfying up to three conditions: (1) indivisibility, (2) nonrivalry, and (3) nonexcludability. Indivisibility can be illustrated by the example of a bridge over a river, which can be used by anyone without extra costs being incurred. Nonrivalry is virtually the same, except that it is the benefits available to every member of the public that are not reduced, rather than the amount of the good. For example, the good of hiking in the

Grand Canyon could be, to a large extent, indivisible, in that many millions of people could do it without thereby hindering others also doing it. However, the greater the number of people who hike, the lower the enjoyment of those who wish to be in an empty wilderness—in which case the good is not nonrival. Finally, nonexcludability pertains when it is not feasible to exclude any individual members of the group from consuming the good. The classic economic example is of a lighthouse.

It would seem that education satisfies none of these conditions. It is clearly not nonexcludable, for a particular child can be excluded from a classroom or any other educational opportunity. The situation is similar for nonrivalry and indivisibility, for it is the case that if some children have the attention of an excellent teacher, then that teacher has less time for others, who therefore can obtain less benefit from the teacher. Indeed, it seems likely that it was precisely because of this nonrivalry or indivisibility that reformers wanted government to intervene in education—to alleviate this inequality of access.

However, if it is not a public good in this sense, education does seem likely to have *neighborhood effects*, or *externalities*—defined by economists as when an activity undertaken by one party directly affects another party's utility. That is, there are likely to be benefits to the community or society at large (if there are educational opportunities available) in terms of equality of opportunity, social cohesion, democratic benefits, law and order, economic growth, and so on. Crucially, these externalities are likely to exhibit a large degree of nonexclusion (it is costly to exclude people from these benefits or costs) and there are usually considerations relating to nonrivalry or indivisibility (the external benefits or costs are likely to be available to all with near zero marginal costs). For example, a society lacking in equality of opportunity could be a dissatisfied, lawless society. One could exclude oneself from the problems of such a society, but only at the expense of burglar alarms, bodyguards, high fences, or by restricting one's movements. It is in this sense that education could be referred to as a public good; and it is in this sense that it could legitimately be argued that education needs government intervention to ensure its provision and obtain these externalities.

From these considerations, the discussion would need to focus on the perceived effectiveness, efficiency, and equity of public education, and the presence, or lack, of private initiatives. These con-

cerns bring us squarely back to the major reasons adduced earlier for questioning the role of government in education. So, what of these reasons?

### Standards and Efficiency

As far as the first reason is concerned, while doubts have arisen in many countries about standards in public schools, it is not until comparisons are made with private schools in the same countries that the role of government is significantly questioned. This comparative approach started with an 1982 American study by James Coleman, Thomas Hoffer, and Sally Kilgore, which predicted the score on a standardized test for an average public school student if he or she were to attend a private school. The study found that private schools were more effective at developing the cognitive abilities of students. After responding to criticisms that innate ability had not been controlled for, a follow-up study substantially confirmed the results.

Numerous studies since then have been carried out across a wide range of middle- and lower-income countries, all of which have found that private schools not only are more effective educationally (when controlled for socioeconomic factors), but are also more efficient. For instance, studies from the World Bank began by looking at achievement in verbal ability in Thailand, following up with studies of achievement in language and mathematics in Colombia, the Dominican Republic, the Philippines, Tanzania, and Thailand again. The studies explored the proportional gain in achievement score if a randomly selected student, with the characteristics of an average public school student, were to attend a private rather than a public school, holding constant the student's socioeconomic background. While there was a large range, the studies all showed the superiority of private education in terms of raising these cognitive abilities. In Colombia the results showed that private schools were 1.13 times more effective than public schools, averaging for verbal and mathematical achievement. In the Dominican Republic private schools were about one-and-a-half times more effective in raising achievement in mathematics; and in Thailand, again for mathematics, private schools were 2.63 times more effective than the public schools.

One obvious objection was that private schools can succeed where public schools cannot because of increased resources. However, when the same researchers probed this issue, they found the opposite

to be the case. Comparing the cost per student in a private and a public school gave results ranging from a low of 39 percent in Thailand to a high of 83 percent in the Philippines. Combining these two sources of information, the researchers were then able to gain an answer to the question: “For the same per-pupil cost, how much more achievement would one get in private than in public schools?” The answer ranged from 1.2 times (Philippines) to a massive 6.74 times more achievement (Thailand) in the private than in the public schools.

Finally, Geeta Kingdon’s evidence from India reveals similar findings. Kingdon controlled for twenty-one potentially confounding variables—including parental and family income, number of years of mother’s education, number of books in the home, and student aptitude—for her study of a stratified random sample of schools in urban Lucknow, Uttar Pradesh. She found that the (unaided) private schools were 27 percent more effective at teaching mathematics, and slightly more effective at teaching language, than the public schools. But when per-pupil costs are brought into the equation, the results become quite striking. In the (unaided) private schools the per-pupil cost was less than half that in the public schools (38 rupees compared to 80 rupees).

### Equity and Accountability

Doubts about public education that inform the debate about the role of government in education also focus on the fairness of public provision, although this is countered by doubts that privatization could be more equitable. In many countries, however, it has been observed that, despite public expansion of funding and provision, the expansion has not reached all members of society equally. Particularly acute is the wide gap in terms of educational provision offered to urban and rural populations. In Indonesia, for instance, only 3 percent of urban children of primary school age did not receive any schooling; while in the rural areas this figure rises to 10 percent. These comparison figures also obscure the fact that gender disparities in rural areas are even more severe. In Pakistan, for instance, while 73 percent of urban females age seven to fourteen have ever attended school, this figure plunges to 40 percent for rural females in the same age group.

In the poorest countries, it might be thought that spending on basic education would be a government priority, since these have yet to achieve univer-

sal primary-school enrolment. However, this often does not happen. In Africa, for instance, per-student spending on higher education is about forty-four times higher than on primary education. In most African nations, the poorest 20 percent of the population get significantly less than 20 percent of public education subsidy, while the richest 20 percent receive significantly greater than 20 percent. Most dramatically, in Nepal, the richest quintile gets almost half of total public spending on education.

Some of the most dramatic evidence of the inequity of public provision, which also raises the issue of accountability, comes from India. The PROBE Team’s *Public Report on Basic Education in India* (1999) looked at primary education in four states, where it surveyed a random sample of villages in which there were a total of 195 government and 41 private schools. The report outlines some of the “malfunctioning” that is taking place in government schools for the poor in these four states. The schools suffer from poor physical facilities and high pupil-teacher ratios, but what is most disturbing is the low level of teaching activity taking place in them. When researchers called unannounced, only in 53 percent of the schools was there any teaching activity going on. In fully 33 percent, the head teacher was absent. The PROBE survey reported many instances of “plain negligence,” including “irresponsible teachers keeping a school closed or non-functional for months at a time” and a school where “only one-sixth of the children enrolled were present” (p. 63). Significantly, the low level of teaching activity occurred even in those schools with relatively good infrastructure, teaching aids, and pupil-teacher ratios. Even in such schools, “teaching activity has been reduced to a minimum, in terms of both time and effort. And this pattern is not confined to a minority of irresponsible teachers—it has become a way of life in the profession” (p. 63).

These problems highlight the “deep lack of accountability” in the public schools, for these problems were not found in the private schools. The PROBE Team found a considerably higher level of teaching activity taking place in the private schools, even though the work environment is not better in these schools. For the researchers, this “brings out the key role of accountability in the schooling system. In a private school, the teachers are accountable to the manager (who can fire them), and, through him or her, to the parents (who can withdraw their children). In a government school, the chain of ac-

countability is much weaker, as teachers have a permanent job with salaries and promotions unrelated to performance. This contrast is perceived with crystal clarity by the vast majority of parents” (p. 64).

All of this evidence is leading some governments and international agencies to wonder whether or not public education can reach the poorest in society, or whether some form of public-private partnership—perhaps with publicly funded vouchers being available for use at any school, public or private—would be a better role for government to play if reaching the poor is its aim.

### Private Sector Alternatives

The existence of private schools for the poor in India might come as a surprise. In fact, this is a growing phenomenon throughout the developing world, and relates to the third major reason for the growing questioning of the role of government in education, the emergence of apparently viable private-sector alternatives. Schools for the poor are commonplace across a range of countries, including in India, where recent research has revealed a whole range of schools charging about \$10 to \$20 per year for each student, run on commercial principles and not dependent on any government subsidy or philanthropy. These fees are affordable by families headed by rickshaw pullers and market-stall traders. Even so, many of these schools also offer significant number of free places (up to 20 percent) for even poorer students, allocated on the basis of claims of need checked informally in the community. Similar schools have been reported in many African countries as well.

The emergence of private education alternatives is not only about the poor, of course. Recent research has uncovered a whole range of interesting examples of educational entrepreneurs who are creating innovative and effective private alternatives. The International Finance Corporation found for-profit education companies in developing countries that had created chains of schools and colleges, often operated on a franchise basis, with strict quality control procedures in place (including using the international standards of ISO 9000 series). These companies invest in research and development to explore new ideas in pedagogy and curriculum. Examples include Objetivo/UNIP in Brazil, which has over half a million students from kindergarten to university level across its 500 campuses around Brazil; and NIIT, based in New Delhi, which offers computer education and training in its forty owned

centers in the metropolitan areas, and about 1,000 franchised centers across India. It also has a global reach, with centers in the United States, Europe, Japan, Central Asia, Africa, and the Asia-Pacific region.

Notably, private entrepreneurs have harnessed information technology to the learning process. There has been a rapid growth of for-profit private-sector providers in education at all levels, creating e-learning opportunities in developing as well as developed countries. Many of these are in direct competition with traditional public-sector providers, such as the University of Phoenix, with 90,000 students across thirty-two campuses and seventy-one learning centers. However, many traditional universities have also responded to the challenge by either creating for-profit subsidiaries themselves—New York University, for instance, set up its NYOnline arm, and Columbia University created a for-profit arm, Fathom Knowledge Network Inc., in partnership with Cambridge University Press, the New York Public Library, and the University of Chicago. Other for-profit companies are emerging to provide e-learning for the K–12 market, including the appropriately named k12.com, led by William J. Bennett, the secretary of state for education during the Reagan administration.

The emergence and strength of these private-sector alternatives has impressed many governments looking to improve the quality and efficiency of public schooling. The British government is currently engaged in a process of contracting out failing schools and local education authorities to the private sector, trying to find best-value service wherever it can be found. But this process is not confined to developed countries. One notable example comes from India, where the Tamil Nadu state government wanted computer education in all high schools. Significantly, although allocating extra funds to this endeavor—about U.S. \$22 million over five years—it didn’t look to the public sector to provide this, but instead developed a model to contract out the delivery to private companies, who provide the software and hardware, while the government provides an electricity supply and the classroom. Significantly, companies that have won these contracts, such as NIIT, can also use the classroom as a franchised center, open to the school children and teachers during the day and open to the general public in the evenings and on weekends. The contracting out of curriculum areas such as this represents an important

step forward in relationships between the public and private sectors, and provides an interesting model worth watching and emulating.

## Conclusion

The debate will continue about the changing role of government in education, but there is considerable practical innovation and experimentation taking place globally that points to an acceptance of the changing role for government in educational delivery. Three types of reform can usefully be distinguished.

The first is the *contracting out* model, in which a state school has some or all of its educational functions contracted out to the private sector under accountability guidelines established by the local and/or central government. Education management companies such as Edison Schools in the United States and 3Es in England fit into this model, where all of the educational functions—pedagogy, curriculum, school management and improvement—are taken over by the private company.

Second, there is the *demand-side financing* model, which allows students to exit state schools—often when these are failing—and move to private schools through state-funded vouchers. Such schemes are found all around the world, including in the United States, Chile, Colombia, and the Ivory Coast, to name a few.

Third, there is the *state-funded private school* model, where either private schools are allowed to opt-in to state funding (as in Denmark and Holland), or new independent schools are specially created under government regulations to receive state funding, (as with charter schools in America, Canada, and China, and City Academies in England and Wales).

In Denmark for instance, the first private schools gained state subsidies in 1899. Now, any group of parents can claim the right to create a private school. Once established and running, the state guarantees to provide 80 to 85 percent of expenditures in the school. Some of these free schools are religious schools, but the majority are not: instead they are Rudolf Steiner schools, German minority schools, or simply independent academically-minded schools. Such private schools are becoming increasingly attractive to parents, with enrollments rising from 8 percent in 1982 to 12 percent in 1998.

*See also:* EDUCATION DEVELOPMENT PROJECTS; FEDERAL EDUCATIONAL ACTIVITIES; FEDERAL FUNDS FOR HIGHER EDUCATION; FEDERAL INTERAGENCY COMMITTEE ON EDUCATION; STATES AND EDUCATION.

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JAMES TOOLEY

## GRADE RETENTION

*See:* SOCIAL PROMOTION.

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## GRADING SYSTEMS

SCHOOL

Thomas R. Guskey

HIGHER EDUCATION

Howard R. Pollio

## SCHOOL

Few issues have created more controversy among educators than those associated with grading and reporting student learning. Despite the many debates and multitudes of studies, however, prescriptions for best practice remain elusive. Although teachers generally try to develop grading policies that are honest and fair, strong evidence shows that their practices vary widely, even among those who teach at the same grade level within the same school.

In essence, grading is an exercise in professional judgment on the part of teachers. It involves the collection and evaluation of evidence on students' achievement or performance over a specified period of time, such as nine weeks, an academic semester, or entire school year. Through this process, various types of descriptive information and measures of students' performance are converted into grades or marks that summarize students' accomplishments. Although some educators distinguish between *grades* and *marks*, most consider these terms synonymous. Both imply a set of symbols, words, or numbers that are used to designate different levels of achievement or performance. They might be letter grades such as *A, B, C, D, and F*; symbols such as  $\sqrt{+}$ ,  $\sqrt{}$ , and  $\sqrt{-}$ ; descriptive words such as *Exemplary, Satisfactory, and Needs Improvement*; or numerals such as *4, 3, 2, and 1*. Reporting is the process by which these judgments are communicated to parents, students, or others.

### A Brief History

Grading and reporting are relatively recent phenomena in education. In fact, prior to 1850, grading and reporting were virtually unknown in schools in the United States. Throughout much of the nineteenth century most schools grouped students of all ages and backgrounds together with one teacher in one-room schoolhouses, and few students went beyond elementary studies. The teacher reported students' learning progress orally to parents, usually during visits to students' homes.

As the number of students increased in the late 1800s, schools began to group students in grade levels according to their age, and new ideas about curriculum and teaching methods were tried. One of these new ideas was the use of formal progress evalu-

ations of students' work, in which teachers wrote down the skills each student had mastered and those on which additional work was needed. This was done primarily for the students' benefit, since they were not permitted to move on to the next level until they demonstrated their mastery of the current one. It was also the earliest example of a narrative report card.

With the passage of compulsory attendance laws at the elementary level during the late nineteenth and early twentieth centuries, the number of students entering high schools increased rapidly. Between 1870 and 1910 the number of public high schools in the United States increased from 500 to 10,000. As a result, subject area instruction in high schools became increasingly specific and student populations became more diverse. While elementary teachers continued to use written descriptions and narrative reports to document student learning, high school teachers began using percentages and other similar markings to certify students' accomplishments in different subject areas. This was the beginning of the grading and reporting systems that exist today.

The shift to percentage grading was gradual, and few American educators questioned it. The practice seemed a natural by-product of the increased demands on high school teachers, who now faced classrooms with growing numbers of students. But in 1912 a study by two Wisconsin researchers seriously challenged the reliability of percentage grades as accurate indicators of students' achievement.

In their study, Daniel Starch and Edward Charles Elliott showed that high school English teachers in different schools assigned widely varied percentage grades to two identical papers from students. For the first paper the scores ranged from 64 to 98, and the second from 50 to 97. Some teachers focused on elements of grammar and style, neatness, spelling, and punctuation, while others considered only how well the message of the paper was communicated. The following year Starch and Elliot repeated their study using geometry papers submitted to math teachers and found even greater variation in math grades. Scores on one of the math papers ranged from 28 to 95—a 67-point difference. While some teachers deducted points only for a wrong answer, many others took neatness, form, and spelling into consideration.

These demonstrations of wide variation in grading practices led to a gradual move away from per-

centage scores to scales that had fewer and larger categories. One was a three-point scale that employed the categories of *Excellent*, *Average*, and *Poor*. Another was the familiar five-point scale of *Excellent*, *Good*, *Average*, *Poor*, and *Failing*, (or *A*, *B*, *C*, *D*, and *F*). This reduction in the number of score categories served to reduce the variation in grades, but it did not solve the problem of teacher subjectivity.

To ensure a fairer distribution of grades among teachers and to bring into check the subjective nature of scoring, the idea of grading based on the normal probability, bell-shaped curve became increasingly popular. By this method, students were simply rank-ordered according to some measure of their performance or proficiency. A top percentage was then assigned a grade of *A*, the next percentage a grade of *B*, and so on. Some advocates of this method even specified the precise percentages of students that should be assigned each grade, such as the 6-22-44-22-6 system.

Grading on the curve was considered appropriate at that time because it was well known that the distribution of students' intelligence test scores approximated a normal probability curve. Since innate intelligence and school achievement were thought to be directly related, such a procedure seemed both fair and equitable. Grading on the curve also relieved teachers of the difficult task of having to identify specific learning criteria. Fortunately, most educators of the early twenty-first century have a better understanding of the flawed premises behind this practice and of its many negative consequences.

In the years that followed, the debate over grading and reporting intensified. A number of schools abolished formal grades altogether, believing they were a distraction in teaching and learning. Some schools returned to using only verbal descriptions and narrative reports of student achievement. Others advocated *pass/fail* systems that distinguished only between acceptable and failing work. Still others advocated a *mastery* approach, in which the only important factor was whether or not the student had mastered the content or skill being taught. Once mastered, that student would move on to other areas of study.

At the beginning of the twenty-first century, lack of consensus about what works best has led to wide variation in teachers' grading and reporting practices, especially among those at the elementary level. Many elementary teachers continue to use tra-

ditional letter grades and record a single grade on the reporting form for each subject area studied. Others use numbers or descriptive categories as proxies for letter grades. They might, for example, record a 1, 2, 3, or 4, or they might describe students' achievement as *Beginning*, *Developing*, *Proficient*, or *Distinguished*. Some elementary schools have developed *standards-based* reporting forms that record students' learning progress on specific skills or learning goals. Most of these forms also include sections for teachers to evaluate students' work habits or behaviors, and many provide space for narrative comments.

Grading practices are generally more consistent and much more traditional at the secondary level, where letter grades still dominate reporting systems. Some schools attempt to enhance the discriminatory function of letter grades by adding pluses or minuses, or by pairing letter grades with percentage indicators. Because most secondary reporting forms allow only a single grade to be assigned for each course or subject area, however, most teachers combine a variety of diverse factors into that single symbol. In some secondary schools, teachers have begun to assign multiple grades for each course in order to separate achievement grades from marks related to learning skills, work habits, or effort, but such practices are not widespread.

### Research Findings

Over the years, grading and reporting have remained favorite topics for researchers. A review of the Educational Resources Information Center (ERIC) system, for example, yields a reference list of more than 4,000 citations. Most of these references are essays about problems in grading and what should be done about them. The research studies consist mainly of teacher surveys. Although this literature is inconsistent both in the quality of studies and in results, several points of agreement exist. These points include the following:

**Grading and reporting are not essential to the instructional process.** Teachers do not need grades or reporting forms to teach well, and students can and do learn many things well without them. It must be recognized, therefore, that the primary purpose of grading and reporting is other than facilitation of teaching or learning.

At the same time, significant evidence shows that regularly checking on students' learning prog-

ress is an essential aspect of successful teaching—but checking is different from grading. Checking implies finding out how students are doing, what they have learned well, what problems or difficulties they might be experiencing, and what corrective measures may be necessary. The process is primarily a diagnostic and prescriptive interaction between teachers and students. Grading and reporting, however, typically involve judgment of the adequacy of students' performance at a particular point in time. As such, it is primarily evaluative and descriptive.

When teachers do both checking and grading, they must serve dual roles as both advocate and judge for students—roles that are not necessarily compatible. Ironically, this incompatibility is usually recognized when administrators are called on to evaluate teachers, but it is generally ignored when teachers are required to evaluate students. Finding a meaningful compromise between these dual roles is discomforting to many teachers, especially those with a child-centered orientation.

**Grading and reporting serve a variety of purposes, but no one method serves all purposes well.** Various grading and reporting methods are used to: (1) communicate the achievement status of students to their parents and other interested parties; (2) provide information to students for self-evaluation; (3) select, identify, or group students for certain educational paths or programs; (4) provide incentives for students to learn; and (5) document students' performance to evaluate the effectiveness of instructional programs. Unfortunately, many schools try to use a single method of grading and reporting to achieve all of these purposes and end up achieving none of them very well.

Letter grades, for example, offer parents and others a brief description of students' achievement and the adequacy of their performance. But using letter grades requires the abstraction of a great deal of information into a single symbol. In addition, the cut-offs between grades are always arbitrary and difficult to justify. Letter grades also lack the richness of other, more detailed reporting methods such as narratives or standards-based reports.

These more detailed methods also have their drawbacks, however. Narratives and standards-based reports offer specific information that is useful in documenting student achievement. But good narratives take time to prepare and as teachers complete more narratives, their comments become increas-

ingly standardized. Standards-based reports are often too complicated for parents to understand and seldom communicate the appropriateness of student progress. Parents often are left wondering if their child's achievement is comparable with that of other children or in line with the teacher's expectations.

Because no single grading method adequately serves all purposes, schools must first identify their primary purpose for grading, and then select or develop the most appropriate approach. This process involves the difficult task of seeking consensus among diverse groups of stakeholders.

**Grading and reporting require inherently subjective judgments.** Grading is a process of professional judgment—and the more detailed and analytic the grading process, the more likely it is that subjectivity will influence results. This is why, for example, holistic scoring procedures tend to have greater reliability than analytic procedures. However, being subjective does not mean that grades lack credibility or are indefensible. Because teachers know their students, understand various dimensions of students' work, and have clear notions of the progress made, their subjective perceptions can yield very accurate descriptions of what students have learned.

Negative consequences result when subjectivity translates to bias. This occurs when factors apart from students' actual achievement or performance affect their grades. Studies have shown, for example, that cultural differences among students, as well as their appearance, family backgrounds, and lifestyles, can sometimes result in biased evaluations of their academic performance. Teachers' perceptions of students' behavior can also significantly influence their judgments of academic performance. Students with behavior problems often have no chance to receive a high grade because their infractions overshadow their performance. These effects are especially pronounced in judgments of boys. Even the neatness of students' handwriting can significantly affect teachers' judgments. Training programs help teachers identify and reduce these negative effects and can lead to greater consistency in judgments.

**Grades have some value as rewards, but no value as punishments.** Although educators would undoubtedly prefer that motivation to learn be entirely intrinsic, the existence of grades and other reporting methods are important factors in determining how much effort students put forth. Most students view

high grades as positive recognition of their success, and some work hard to avoid the consequences of low grades.

At the same time, no studies support the use of low grades or marks as punishments. Instead of prompting greater effort, low grades usually cause students to withdraw from learning. To protect their self-image, many regard the low grade as irrelevant and meaningless. Other students may blame themselves for the low mark, but feel helpless to improve.

**Grading and reporting should always be done in reference to learning criteria, never “on the curve.”** Although using the normal probability curve as a basis for assigning grades yields highly consistent grade distributions from one teacher to the next, there is strong evidence that it is detrimental to relationships among students and between teachers and students. Grading on the curve pits students against one another in a competition for the few rewards (high grades) distributed by the teacher. Under these conditions, students readily see that helping others threatens their own chances for success.

Modern research has also shown that the seemingly direct relationship between aptitude or intelligence and school achievement depends on instructional conditions. When the quality of instruction is high and well matched to students' learning needs, the magnitude of this relationship diminishes drastically and approaches zero. Moreover, the fairness and equity of grading on the curve is a myth.

Relating grading and reporting to learning criteria, however, provides a clearer picture of what students have learned. Students and teachers alike generally prefer this approach because they consider it fairer. The types of learning criteria teachers use for grading and reporting typically fall into three general categories:

1. *Product criteria* are favored by advocates of standards-based approaches to teaching and learning. These educators believe the primary purpose of grading and reporting is to communicate a summative evaluation of student achievement and performance. In other words, they focus on what students know and are able to do at a particular point in time. Teachers who use product criteria base grades exclusively on final examination scores, final products (reports or projects), overall assessments, and other culminating demonstrations of learning.

2. *Process criteria* are emphasized by educators who believe product criteria do not provide a complete picture of student learning. From this perspective, grading and reporting should reflect not just the final results but also how students got there. Teachers who consider effort or work habits when reporting on student learning are using process criteria. So are teachers who count regular classroom quizzes, homework, class participation, or attendance.
3. *Progress criteria*, often referred to as *improvement scoring*, *learning gain*, or *value-added grading*, consider how much students have gained from their learning experiences. Teachers who use progress criteria look at how far students have come over a particular period of time, rather than just where they are. As a result, grading criteria may be highly individualized. Most of the research evidence on progress criteria in grading and reporting comes from studies of differentially paced instructional programs and special education programs.

Teachers who base their grading and reporting procedures on learning criteria typically use some combination of these three types. Most also vary the criteria they employ from student to student, taking into account individual circumstances. Although usually done in an effort to be fair, the result is a “hodgepodge grade” that includes elements of achievement, effort, and improvement.

Researchers and measurement specialists generally recommend the use of product criteria exclusively in determining students' grades. They point out that the more process and progress criteria come into play, the more subjective and biased grades are likely to be. If these criteria are included at all, they recommend reporting them separately.

### Conclusion

The issues of grading and reporting on student learning continue to challenge educators. However, more is known at the beginning of the twenty-first century than ever before about the complexities involved and how certain practices can influence teaching and learning. To develop grading and reporting practices that provide quality information about student learning requires clear thinking, careful planning, excellent communication skills, and an

overriding concern for the well-being of students. Combining these skills with current knowledge on effective practice will surely result in more efficient and more effective grading and reporting practices.

*See also:* ASSESSMENT, *subentry on* CLASSROOM ASSESSMENT; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SOCIAL ORGANIZATION OF SCHOOLS.

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## HIGHER EDUCATION

Over the course of an academic career the average student will be exposed to a variety of grading systems and procedures. Although some of these systems may be qualitative in nature, such as an annual or semiannual written narrative, the vast majority are quantitative and depend upon numerical or alphanumerical metrics. Perhaps the most familiar of these involves the letters “A” through “F,” where “A” is usually given a value of 4.0 and is characterized in words as *outstanding* or *excellent* and “F” is given a value of 0.0 and is described as *unsatisfactory* or *failing*. The grades of A through F are usually derived from some more differentiated quantitative value such as test score, in which the specific nature of the relationship between grade and test score may take a variety of different forms: (e.g., an A is defined by a score of 90% or better or by a value that falls in the top 5–10% of scores independent of absolute value, and so on). Regardless of the specific translation of test performance into letter grade, the point to keep in mind is that the A–F scale defines the most frequent grading system used in higher education over the past half century or more.

### Variations in the Grading System

Like all prototypes, the A–F system admits many variations. These often take the form of pluses and minuses, thereby producing a scale having the possibility of fifteen distinct units: A+, A, A–, B+, B, . . . F–. In actual practice, the grade of A+ is scarcely ever used and the same is true for D+ and D– and F+ and F–, thereby yielding a scale of between eight to ten units. Generally speaking, the greater the number of units in the grading system the more precisely does it hope to quantify student performance. What is interesting in this regard are fluctuations in the actual number of units used in different historical eras. Without going too deeply into the relevant historical facts, it is clear that certain historical periods, such as the 1960s, reduced the grading system to two or so units—Pass, No Credit (P/NC)—whereas other periods, such as the 1980s, expanded it to ten, eleven or twelve units.

Variations in the breadth of the grading system would seem to have significant educational implications. At a minimum, these differences may be taken to imply that scales having a large number of units indicate a relative comfort in making precise distinctions, whereas those having fewer units suggest a rel-

ative discomfort in making such distinctions. In the case of more differentiated systems, distinctions and rankings are significant, and individual achievement is emphasized; in the case of less differentiated systems, distinctions and rankings are de-emphasized and interstudent competition is minimized. To some degree, it is possible to view fluctuations in American grading systems as reflecting a more general ambivalence the society has in regard to competition and cooperation, between individual recognition and social equity. Educational institutions sometimes emphasize strict evaluation, competition, and individual achievement, whereas at other times they emphasize less precise evaluation, cooperation, and sympathetic understanding for students of all achievement levels.

Another property of grading systems is that individual class grades often are combined to produce an overall metric called the grade point average or GPA. Unlike its constituent values, which usually are carried to only one (or no numerically significant places), the GPA presents a metric of 400 units yielding the possibility that a GPA of 3.00 will locate the student in the category of “good” whereas a value of 2.99 will exclude him or her from this category. In the same way, honors, admission to graduate school, preliminary selection for interviews by a desirable company, and so forth, may be defined by a single point difference on the GPA scale (e.g., 3.50 versus 3.49 for Phi Beta Kappa, etc.).

Because GPAs are significant in categorizing student performance, a number of evaluations have been made of their reliability and validity. One issue to be addressed here concerns field of study, where it is well documented that classes in the natural sciences and business produce lower overall grades than those in the humanities or social sciences. What this means is that it is unreasonable to equate grade values across disciplines. It also suggests that the GPA is composed of unequal components and that students may be able to secure a higher GPA by a judicious selection of courses.

Although other factors may be mentioned aside from academic discipline (such as SAT level of school, quality and nature of tests, etc.) the conclusion must be that the GPA is a poor measure and should not be used by itself in coming to significant decisions about the quality of student performance or differences between departments and/or educational institutions. The GPA is also a relatively poor basis on which to predict future performance, which

perhaps explains why such attempts are never very impressive. In fact, a number of meta-analyses of this relationship, conducted every ten years or so since 1965, reveals that the median correlation between GPA and future performance is 0.18; a value that is neither very useful nor impressive. The strongest relationship between GPA and future achievement is usually found between undergraduate GPA and first-year performance in graduate or professional school.

Despite such difficulties in understanding the exact meanings of grades and the GPA, they remain important social metrics and sometimes yield heated discussions over issues such as grade inflation. Although grade inflation has many different meanings, it usually is defined by an increase in the absolute number of As and Bs over some period of years. The tacit assumption here seems to be that any continuing increase in the overall percentage of “good grades” or in the overall GPA implies a corresponding decline in academic standards. Although historically there have been periods in which the number of good grades decreased (so-called grade deflation), significant social concerns usually only accompany the grade inflation pattern. This one-sided emphasis suggests that grade inflation is as much a sociopolitical issue as an educational one and depends upon the dubious equating of grades with money. What really seems of concern here is a value issue, not a cogent analogy that reveals anything significant about grades or money.

### How Grades Are Produced

Grading systems represent just one aspect of an interconnecting network of educational processes, and any attempt to describe grading systems without considering other aspects of this network must necessarily be incomplete. Perhaps the most important of these processes concerns the procedures used to produce grades in the first place, namely, the classroom test. Here, of course, are purely formal differences; for example, between multiple choice and essay tests, or between in-class and take-home tests or papers. Also to be included are the quality of test items themselves not only in terms of content but also in terms of the clarity of the question and, in the case of multiple choice tests, of the distractors.

One way to capture the complexity of possible ways in which grades are produced is to consider the set of implicit choices that lie behind an instructor’s use of a specific testing and/or grading procedure.

Included here are such questions as: What evaluation procedure should I use? Term papers, classroom discussions, or in-class tests? If I choose tests, what kind(s)? Essay, true/false, fill-in-the-blank, matching, or multiple-choice? If I choose multiple-choice, what grading model should I use? Normal curve, percent-correct, improvement over preceding tests? If I choose percent-correct, how many tests should I give? Final only, two in-class tests and a final, one midterm and one final? How should I weight each test if I choose the midterm-final pattern? Midterm equals final, midterm is equivalent to twice the final exam grade, final equals twice the midterm grade? What grade report system should I use? P/F; A, B, C, D, F; or A+, A, A–, B+, . . . F? An examination of this collection of possible choices suggests that instructors have a large number of options as to how to go about testing and grading their students.

Any consideration of the ways in which testing and grading relate to one another must also deal with the ways in which one or both of these activities relate to learning and teaching. The relationship between learning and testing is a fairly direct (if neglected) one, especially if tests are used not only to evaluate student achievement but also to reinforce or promote learning itself. Thus it is easy to develop a classroom question or exercise that requires the student to read some material before being able to answer the question or complete the exercise. Teaching, on the other hand, would seem to be somewhat further removed from issues of testing and grading, although the specific testing and grading plan used by the instructor does inform the student as to what constitutes relevant knowledge as well as what attitude he or she holds toward precise evaluation and academic competition.

Students are not immune to testing and grade procedures, and educational researchers have made the distinction between students who are grade oriented and those who are learning oriented. Although this distinction is surely too one-dimensional, it does suggest that for some students the classroom is a place where they experience and enjoy learning for its own sake. For other students, however, the classroom is experienced as a crucible in which they are tested and in which the attainment of a good grade becomes more important than the learning itself. When students are asked how they became grade (or learning) oriented, they usually point to the actions of their teachers in emphasizing grades as a signifi-

cant indicator of future success; alternatively, they describe instructors who are excited by promoting new learning in their classrooms. When college instructors are asked about the reason(s) for their emphasis on grades, they report that student behaviors—such as arguing over the scoring of a single question—make it necessary for them to maintain strict and well-defined grading standards in their classrooms. The ironic point is that both the student and the instructor see the “other” as emphasizing grades over learning, and neither sees this as a desirable state of affairs. What seems missing in this context is a clear recognition by both the instructor and the student that grades are best construed as a type of communication. When grades (and tests) are thought about in this way, they can be used to improve learning. As it now stands, however, the communicative purpose of grading is ordinarily submerged in their more ordinary use as a means of rating and sorting students for social and institutional purposes not directly tied to learning. Only when grades are integrated into a coherent teaching and learning strategy do they serve the purpose of providing useful and meaningful feedback not only to the larger culture but to the individual student as well.

*See also:* COLLEGE TEACHING.

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## GRADUATE EDUCATION

*See:* BUSINESS EDUCATION; DENTISTRY EDUCATION; DIVINITY STUDIES; DOCTORAL DEGREE; ENGINEERING EDUCATION; GRADUATE SCHOOL TRAINING; GRADUATE STUDY; LAW EDUCATION; MEDICAL EDUCATION; NURSING EDUCATION; POSTDOCTORAL EDUCATION.

## GRADUATE MANAGEMENT ADMISSION TEST

*See:* BUSINESS EDUCATION.

## GRADUATE RECORD EXAMINATION

Every year, thousands of students prepare for, and take, the Graduate Record Examination (GRE)—a standardized test that measures the aptitude of promising graduate students. In 1998, 364,554 potential graduate students, a number that includes one-third of all bachelor degree recipients, took the GRE, according to the National Center for Education Statistics. Why does this test draw thousands of students? GRE scores are required for acceptance into most graduate programs. As a result, the exam, designed to assist graduate schools with their admissions decisions, also succeeds in sending would-be graduate students into a panic, raises questions of the efficacy of standardized testing, and funds a lucrative “test-prep” industry. Despite such side effects, it has proven useful to those it intends to serve—graduate schools. The GRE provides these institutions with a universal ruler against which applicants can be measured.

Administered by the Educational Testing Service (ETS), the GRE takes three basic forms: the General Test, Subject Tests, and the Writing Assessment. The General Test, most often referred to as the GRE, measures verbal, quantitative, and analytical reasoning skills. The Subject Tests measure achievement in eight disciplines. The Writing Assessment

consists of two analytical writing tasks. Graduate institutions and departments independently determine which GRE test, or combination of tests, will be required for admission.

### Genesis of the GRE General Test

Created in the early 1930s, the Graduate Record Examination General Test has been assessing college student aptitude for nearly seven decades. The Carnegie Foundation for the Advancement of Teaching funded the project, unaware of the vital part the test would soon play in graduate education. Widespread use of the GRE General Test began after World War II, when colleges and universities selected the test to help in the evaluation of the larger, more diverse pool of students applying to graduate programs. From this point forward, GRE test results have been used to evaluate students' capacity to succeed in graduate programs. Today, the Educational Testing Service and the GRE Board define the test as "a measure of knowledge and skills that members of the graduate community have identified as important for graduate study" (GRE 2001a, p. 2).

### General Test

The Graduate Record Examination General Test's three parts—verbal, quantitative, and analytical—are designed to measure examinees' reading comprehension, mathematical, interpretative, and logical reasoning skills. Taken in a timed, proctored setting, the multiple-choice written test causes stress for many students. Though anxiety over the test has not changed, the format has. On April 11, 1999, the option to take the exam in written form was eliminated (except in developing countries). Today, the Computer Based Test (CBT), which replaces the pencil and paper version, is offered daily in centers around the world. Soon-to-be test-takers, and GRE test preparation companies, such as Kaplan Incorporated and The Princeton Review, have had to adjust to the features of the new design. In the past, paper-based GRE questions were identical: presented and weighted equally for all test-takers. Now, the "adaptive" CBT presents students with unique combinations of questions tailored to their skill level. Students complain about early questions on the computer-based test having greater bearing on their final scores and about the inability to answer questions out of sequence. Many agree, however, that the benefits of CBT, including instant scoring, continuous availability, and better data analysis capabilities,

far outweigh the disadvantages. Research indicates that scores from the paper-based tests are comparable to those of the computer-based test. Each section of the test yields a separate score ranging from 200 to 800. Scoring may change in October 2002 when one of the multiple-choice analytical sections will be replaced by a writing component.

### Subject Tests

The GRE Subject Tests, offered in both paper and computer-based formats, are designed to help graduate school admission committees and fellowship sponsors assess applicants' preparation for graduate work in specific disciplines. The Subject Tests, offered in Biochemistry, Cell and Molecular Biology; Biology; Chemistry; Computer Science; Literature in English; Mathematics; Physics; and Psychology are required by select programs. Subject Test scores can range from 200 to 990.

### The Writing Assessment Test

Launched in 1999, the Writing Assessment comprises two analytical writing tasks: one an opinion piece on an issue of the Educational Testing Service's choosing, the other a critique of a presented argument. The "tasks" are meant to complement each other, providing evidence of the examinees' ability to both make and analyze arguments. Like the Subject Test, this test can be taken on paper or electronically. Writing assessment scores range from 0 to 6.

### Use of GRE Scores in Graduate Program Admissions Decisions

At every education level, controversy surrounds the use of standardized tests. According to the Business Council for Effective Literacy "objections [to standardized tests] tend to fall into two broad categories: their intrinsic defects and their misuse" (p. 6). At the turn of the twenty-first century national attention has turned to the Education Testing Service's GRE, with questions about GRE scores' assumed correlation with success in graduate school and issues of test fairness.

According to ETS, the Graduate Record Examinations measure general skills acquired over time. The scores have been validated for use in graduate admissions, fellowship selection, and other assessments related to graduate study. When interpreted and applied properly, GRE test scores can be helpful in admissions decisions. In the United States, master's and doctoral level admissions decisions are

often based on a number of factors, including grade point averages (GPAs), transcripts from previously attended higher education institutions, GRE General Test scores, letters of recommendation, personal statements, self-reported information, and in some cases GRE Subject Tests, Writing Assessments, and personal portfolios. Problems arise when departments and colleges heavily rely on GRE scores, rather than considering all the information available on the student. As Judith Toyama states, “All too often, [GRE] scores, because they are numerical, [thus quantifiable], are given more importance” (p. 34). As a result of this pervasive misuse, the GRE is seen as a “gatekeeper” of minority and female—typically lower-scoring groups—access to graduate education. Many graduate schools use a combination of the verbal and quantitative section scores when considering applicants. How well does this composite predict academic success in graduate school? Peter Sacks, using data compiled by ETS, states, “Data from 1,000 graduate departments covering some 12,000 test-takers show that GRE scores could explain just 9 percent of the variation in grades of first year graduate students.” Some studies have shown, however, that a combination of GRE scores and grade point averages can be indicative of student success.

Another controversial aspect of the GRE is that disparity in scores between ethnic groups points to the possibility of an intrinsic bias, or unfairness, in the General Test. Data analysis of GRE General Test scores reveals differences in the mean scores earned by racial, ethnic, and gender groups. According to the Graduate Record Examination Board, data from the 1999–2000 testing year shows the following: (1) white men scored at least 100 points higher, on average, than minority men and both minority and non-minority women; (2) self-classified whites, Asian/Pacific Islanders, and “others” received higher scores on the verbal and analytical sections than other ethnic groups; and (3) within ethnic groups, men scored higher than women. In response to concerns over such performance gaps, the Educational Testing Service and the GRE Board instituted practices to reduce GRE test bias. Faculty have been included in the test design, review process, and analysis of differential item functioning (DIF) when the percentage of correct answers on the same test question differs between groups. Despite these efforts, differences still occur along ethnic and minority lines. ETS stresses, however, that differences

should be expected as “test results cannot be judged in isolation from the unequal outcomes produced by our educational, economic, and social systems” (2001a, p. 2).

### Evaluation

Within our culturally, economically, and socially diverse population, no one measure could equitably evaluate individuals’ promise. Even the GRE, a vetted, long-standing standardized test, has difficulty producing a fair measure of the diverse students that flock to test-taking centers each year. Moreover, when admissions committees make GRE scores the primary basis for their decisions, they overlook many characteristics and qualifications that are not measured on the test and are proven factors in student success, such as drive, passion, determination, and charisma. The use of GRE scores in the appraisal of students’ ability in the tested areas is merited. The scores are inadequate, however, when applied as sole predictors of success. Students, scholars, and the ETS agree, the Graduate Record Examinations are valuable, as long as graduate school admissions committees exercise good judgment, and use the scores to supplement other admissions criteria.

*See also:* DOCTORAL DEGREE, THE; GRADUATE SCHOOL TRAINING; MASTERS DEGREE, THE.

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LORI J. CAVELL

## GRADUATE SCHOOL TRAINING

Graduate and professional education is the continuation of academic study beyond the baccalaureate degree. Graduate education is distinguished from professional education in that the graduate student is preparing for a career in academia, the government, or other professions. Those continuing in professional education are in degree programs that will prepare them for work in law, medicine, or other professional fields. Both graduate and professional education have been well established in the United States for over 100 years; however it was only in the latter part of the twentieth century that the face of graduate education began to change as the higher educational system became more diversified through such developments as the proliferation of women and minority graduate students.

In the early nineteenth century, German universities were the leading force of graduate education. Leadership in this area passed to the United States in the twentieth century as American universities advanced their programs. Three universities—Harvard, Yale, and Johns Hopkins—are credited with the adaptation of post-baccalaureate education. While Harvard took the lead, in 1847 Yale developed a model that made the distinction between undergraduate and graduate education. Johns Hopkins University was the first institution to be founded primarily as a graduate education institution.

## The Master's Degree

Graduate education is divided into two main areas: the master's degree and doctoral study. Obtaining a master's degree typically requires a minimum of thirty credit hours past the baccalaureate degree, although some programs may require more or less depending on the university and discipline requirements. At the completion of class work, either a comprehensive exam is administered or a written thesis is submitted, and either of these may be followed by an oral defense where the student is posed questions by the department faculty. This is the typical pattern of master's degree study, with most programs requiring two years of coursework. However, there are hundreds of different types of master's degrees offered in the United States and it is not unusual for each program to have unique characteristics and requirements.

The traditional master's degrees grounded in the arts and sciences curriculum are the master of arts (M.A.) and the master of science (M.S.). Examples of other master's degrees that have a more practical or professional approach are the master of business administration (M.B.A.), the master of education (M.Ed.), and the master of engineering (M.Eng.). While there are still a significant number of students who attend graduate school immediately following their undergraduate experience, more students are choosing to return for a master's degree several years after entering the work force. For these more mature students, the master's degree is considered a stepping-stone for career advancement. Many individuals have the added bonus that more businesses now make it possible for their employees to attend graduate school by offering tuition reimbursement and time off from work for educational purposes. At the same time, universities are offering more options for students who choose to remain employed while pursuing their master's degree. Examples include offering evening or weekend classes and conducting classes in the work environment rather than on the college campus.

Additionally, the proliferation of master's programs being offered by colleges and universities is increasing the options of those who choose to re-enter academia. Rather than graduate education being offered only at universities, liberal arts colleges are adding one or more master's programs to their curriculum. At the same time, they are targeting the more mature student as well as the student who would prefer the liberal arts college environment to

the larger university. With the increased availability and visibility of master's education, the number of master's degrees awarded in the United States continues to grow each year.

### The Doctoral Degree

A doctoral program is considered the basis for socialization into the professoriate. It has always been regarded as a beginning for developing skills, knowledge, and competencies associated with teaching and research. For this reason, there are some general requirements for doctoral degrees that apply to most institutions in the United States. While there are differences with course requirements and completion rates, the basic doctoral degree begins with one to two years of course work and ends with the oral defense of the dissertation. Some students, particularly those who enter a doctoral program without a master's degree, will earn their master's degree while pursuing the doctorate. In this case, course work could take more than two years to complete. In addition to these basic requirements, many doctoral students hold research or teaching assistantships in addition to taking classes. Likewise, faculty members are encouraged to and often include doctoral students in research projects. Both the assistantships and the mentor relationships with faculty are preparation not only for the dissertation but for the professorial role many will enter into upon completion of their degrees.

Allen R. Sanderson and Bernard Dugoni identified fifty-two different research doctorates in their 1997 summary report of doctoral recipients from United States universities. Traditionally, the non-professional doctoral degree most often awarded is the doctor of philosophy (Ph.D.), although other degrees such as the doctor of education (Ed.D.), doctor of arts (D.A.), and the doctor of science (D.Sc. or Sc.D.) are now being offered in greater numbers. Professional doctoral degrees such as the jurist doctorate (J.D.) and the medical doctorate (M.D.) also indicate that ending of advanced education but the requirements for these doctoral degrees differ from the Ph.D. and its equivalent.

Course work for a doctoral degree is most often individually tailored based on the student's background, interests, and professional goals. In addition to completing class work prior to the dissertation, doctoral students are required to take comprehensive exams. Depending on the program, a student may be required to take more than one comprehen-

sive exam throughout the course of study. Typically, a comprehensive exam is administered immediately following completion of course work and the exam itself may take various forms such as a day-long session where students answer questions based on knowledge obtained in their studies. In most circumstances this is a closed book exam and, after faculty members have had the opportunity to grade the exam, doctoral students must defend their responses orally before a faculty panel.

The dissertation is an original body of research conducted by a student in her final years as a doctoral student. A typical dissertation completed by a Ph.D. candidate will include five chapters: the first is a general introduction, the second chapter is a thorough literature review of the subject, the third chapter contains the methodology or how the research is to be conducted, the fourth chapter shows the findings from research, and the final chapter is a discussion of the findings with suggestions for possible future research.

Prior to conducting the dissertation research, the graduate student must defend his proposal to a dissertation committee which is generally made up of three to five members. The proposal is typically the first three chapters of the dissertation. After the proposal is approved the doctoral student may begin their research and move to completing the dissertation. After the research has been conducted and data analyzed, doctoral students must again orally defend the dissertation before their committee. Each Ph.D. candidate must show a thorough knowledge of the subject being studied along with the presentation of original research and findings that add to the body of knowledge for their discipline.

The Ph.D. (doctor of philosophy) is the typical doctoral degree awarded at universities although the areas of study range from the basic humanities to the sciences and education. Those receiving Ph.D.s have traditionally gone on to faculty positions at colleges or universities. It is not uncommon today, though, for Ph.D. recipients to go immediately into careers outside of academia. Not only do many choose to forego teaching or research opportunities, many are forced to look elsewhere for work due to the lack of available faculty positions. With the proliferation of doctoral recipients, it is natural to assume that not all Ph.D.s will find the ideal job at a college or university.

Other doctorates are available for those selecting a course of study that leads to careers outside ac-

## GRADUATE STUDY IN EDUCATION

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ademia. Some examples are the educational doctorate, which may be pursued by those with careers in K–12 classroom teaching or school administration, and the doctor of engineering, for candidates working in areas of technology or applied sciences. It is normal for these graduate students to focus their studies and dissertations on practical topics, rather than theoretical ones, that have immediate relevance to their field of work.

### Professional Graduate Education

Professional doctoral education, as previously mentioned, is post-baccalaureate study in the professions. Two of the most established professional education fields are medicine and law. The requirements for obtaining an M.D. or J.D. are rigid and do not vary greatly at different universities, unlike programs for research doctoral programs, which offer more flexibility to students in their individual courses of study. Professional doctoral students enter their graduate program as a cohort, take the same classes as others who entered the program with them, and graduate within the recommended time period, unless serious circumstances delay their progress. The curriculum focuses on applied areas of study. Unlike a Ph.D., where the dissertation is the culmination of study, often after the professional doctoral education is completed, graduates are required to take state-regulated exams in order to practice their professions, as in medicine, law, or nursing.

*See also:* BUSINESS EDUCATION; DOCTORAL DEGREE, THE; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY ROLES AND RESPONSIBILITIES; LAW EDUCATION; MASTER'S DEGREE, THE; MEDICAL EDUCATION.

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PATRICIA A. HELLAND

Graduate programs in the field of education are offered in U.S. colleges and universities at the master's, specialist, and doctoral levels. Like graduate programs in other disciplines and fields of study, graduate programs in education require baccalaureate degrees as a prerequisite. Degrees are typically awarded after students complete specified program requirements.

From 1997 to 1998 education was the most popular field of study at the master's and doctoral level. According to the U.S. Department of Education, slightly more than one-quarter (114,691) of the 430,164 master's degrees awarded in 1997 to 1998 were in the field of education, and at the doctoral level, approximately 15 percent (6,729) of the 46,010 doctoral degrees awarded were in education. Men earned slightly fewer than one-quarter of the master's degrees (24%) awarded in 1997 to 1998 and at the doctoral level men earned 37 percent of the degrees. Whites represented 77 percent of the master's degree recipients in 1997 to 1998, followed by black non-Hispanics (9%), Hispanics (4%), non-resident aliens (3%), Asian or Pacific Islanders (2%) and American Indian/Alaskan Natives (1%), with students who did not report their race/ethnicity representing 5 percent of master's degree recipients. At the doctoral level, whites earned 71 percent of the doctoral degrees, followed by black non-Hispanics (11%), nonresident aliens (8%), Hispanics (4%), Asian or Pacific Islanders (2%), American Indian/Alaskan Natives (1%) and students who did not report their race/ethnicity represented 3 percent.

### Education Degrees

Similar to psychology and social work, but unlike many other graduate-level fields of study, students who enroll in education graduate programs choose between a research path and a professional practice path and in some cases, a path that combines research and practice. Traditionally, the research path is designed for people who want to examine and evaluate educational practices and research, with the goal of preparing students to become college faculty or researchers, while the professional path is designed for people who wish to practice in the field in positions such as school principal, school superintendent, chief financial officer within a primary or secondary school, a dean of admissions, or a dean of

student affairs at a college or university. This difference between the applied and the research-oriented degree is reflected in the types of degrees. The master of education (Ed.M.), the specialist in education (Ed.S), a degree intended for teachers, counselors, and administrators who wish to pursue graduate study beyond the master's level, and the doctor of education (Ed.D.) programs prepare students to apply knowledge and scholarship toward addressing problems in educational settings. In contrast the master of arts (M.A.), the master of science (M.S.), the master of arts in teaching (M.A.T), the master of science in education (M.S.Ed.), the doctor of arts (D.A.), which is intended to develop pedagogical skills along with scholarly achievement and research excellence, and the doctor of philosophy (Ph.D.) programs prepare students to engage in research and scholarship on education to create knowledge.

Certificate programs are yet another post-baccalaureate educational option. Examples of some of the certificates include a post-baccalaureate certificate program (nondegree) and a Certificate of Advanced Graduate Study (CAGS). Most candidates for the CAGS have earned a master's degree. The CAGS often serves one of the following two purposes: (1) an end goal for individuals who seek advanced training without having the pressure or the time commitment of a doctoral degree program or (2) an intermediary step before students formally apply to a doctoral program.

Graduate education instructional programs cover the spectrum of the educational landscape from pre-kindergarten to adult education. The National Center for Education Statistics Classification of Instructional Programs has classified fifteen program of instruction areas in education:

- education, general
- bilingual, multilingual, and multicultural education
- curriculum and instruction
- educational administration and supervision
- educational/instructional media design
- educational assessment, evaluation, and research
- international and comparative education
- social and philosophical foundations of education
- special education and teaching
- student counseling and personnel services

- teacher education and professional development: specific levels and methods
- teacher education and professional development: specific subject areas
- teaching English or French as a second or foreign language
- teaching assistants/aides
- education, other

Within each of these sixteen categories are finer classifications of areas of instruction.

### Admission to Education Graduate Programs

Unlike undergraduate admissions in which students apply to a college or university's central admissions office, which then reviews all students' application materials, admissions decisions at the graduate level are usually handled by a faculty committee at the education graduate school or the specific graduate program within the school (e.g. curriculum and instruction, or educational administration and planning). The typical application materials submitted for admission include the following: (1) academic transcripts from all prior colleges or universities attended; (2) an application for admissions; (3) an essay or statement of purpose and goals (4) an application fee; (5) letters of recommendation; and (6) admissions test scores.

There are three primary admissions tests accepted by graduate schools of education: Graduate Record Examination (GRE), Miller Analogies, and the Test of English as a Foreign Language (TOEFL). The GRE General Test has three parts: verbal, quantitative, and analytical. These parts are not related to any specific field of study, but rather are intended to assess the abilities of applicants to graduate school in mathematical reasoning, literacy, and analytical thinking. Scores for each section of the GRE General Test range from 200 to 800. A two-part writing assessment is also available to measure student abilities to articulate complex ideas clearly and effectively and to support their ideas with relevant reasons and examples. The writing assessment has one combined score. The GRE also includes eight subject area tests. Some graduate programs require students who are applying to educational psychology programs to take the GRE psychology test, which measures the extent of knowledge of psychology that would be acquired primarily in undergraduate psychology curricula. Subject test scores range from 200 to 990. The Miller Analogies Test consists of 100 partial analogies that

are completed in fifty minutes. Miller Analogy score reports present three MAT Scores: a student's raw score (the number answered correctly), the percentile based on intended major, and the percentile based on the general population of MAT examinees. The TOEFL measures the ability of nonnative speakers of English to use and understand North American English.

Graduate school admission committees typically review several parts of an applicant's admission record:

- the reputation of their undergraduate institution
- undergraduate grade point average (UGPA), both overall and in some instances their GPA in their undergraduate major
- admission test scores
- personal statement
- work history if applicable
- letters of recommendation
- how student's research interests match faculty research interests.

The weight that each graduate program assigns to these components varies from program to program. Particularly at the doctoral level, admissions decisions may also be based on the amount of funds that are available to support students who are applying. Some programs do not admit more students than they anticipate being able to fully fund for the duration of their graduate career, while others seek to provide initial support to attract students, and assume that students will find a niche along with support after they are engaged in the process.

Students apply for financial aid for graduate school simultaneously with their application for admission. There are three primary types of financial assistance at the graduate level. The first is a fellowship. When a student receives a fellowship, she/he typically receives money without an obligation to perform any work in exchange for the money. Assistantships are the second form of financial assistance. There are three types of assistantships: teaching, research and administrative. Teaching assistantships usually require students to perform teaching duties in exchange for tuition and a stipend. Research assistantships usually require students to work with faculty on their research in exchange for tuition and a stipend. Administrative assistantships require students to work with administrative offices

on programs or projects in exchange for tuition and a stipend. In both the cases of fellowships and assistantships, students may or may not receive health benefits. The third form of financial assistance is a loan. Loans require students to repay the money typically with interest. The exact terms of the loans vary depending upon the originating source of the loan. A less prevalent form of paying for graduate school is the use of employer tuition assistance plans. Graduate level financial aid awards may be made on the basis of academic credentials (e.g., test scores, undergraduate grades, if a an applicant's area of interest is related to one of the faculty's areas of interest), academic promise, or on the basis of financial need.

### Degree Requirements

Students may be enrolled either full-time or part-time. Graduate programs may offer classes during the traditional academic year, during the summer, or in a two-day weekend format offered monthly throughout the calendar year. Graduate education programs are typically delivered in two formats. The traditional delivery method is in person where faculty meet students at the main campus or at a satellite campus location. Satellite locations may be either in-state or out-of-state. The other medium involves distance education technology.

Graduate degrees in education are typically awarded after students complete specified program requirements. Course work requirements are a basic degree requirement. Course requirements may include a set number of courses or credit hours as well as a distribution requirement. The distribution requirement may include courses within the education graduate program as well as courses in other related disciplines or fields of study offered at the institution. At the master's level students may be required to complete a culminating exercise ranging from creative projects to a master's thesis. Master's students may also be required to complete a field experience practicum.

At the doctoral level, students complete a qualifying or preliminary examination at the end of their course work. The structure of the exercise will vary from program to program and may be dependent upon whether the student is pursuing an Ed.D. or a Ph.D. After passing the qualifying or preliminary examination, the doctoral student is typically required to write and defend a dissertation. The requirements of the dissertation may vary depending upon the terminal degree. The Ed.D. dissertation

may require doctoral students to examine an issue in education, while the Ph.D. dissertation requires the doctoral student to pursue original research.

*See also:* DOCTORAL DEGREE, THE; GRADUATE SCHOOL TRAINING; MASTER'S DEGREE, THE; TEACHER EDUCATION.

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CATHERINE M. MILLETT

## GRADUATION CEREMONY

*See:* COMMENCEMENT.

### GRAY, WILLIAM SCOTT (1885–1960)

William S. Gray, as author of the popular “Dick and Jane” series, arguably helped to define the field of reading education in the United States. Gray received a bachelor’s degree from the University of Chicago in 1913, a master’s degree from Teachers College, Columbia University, in 1914, and a Ph.D. from the University of Chicago in 1916. He was associated with the University of Chicago from the time he became an instructor in 1915 to his retirement as professor emeritus in 1950. Always interested in the education of teachers, he was dean of the college of education from 1917 to 1930 and head of the university’s teacher preparation committee from 1933 through 1945.

Conducting and analyzing research studies to improve reading instruction was Gray’s passion, and his work impacted virtually every aspect of the field. During his lifetime he authored more than 500 publications that examined the characteristics of all ages

of readers, from young children to adults, as well as teaching procedures appropriate for the characteristics. He also developed a standardized reading test in 1915, which continues to be used into the twenty-first century, and he pioneered the diagnostic/remedial approach to reading difficulties.

#### Influence of Reform Movements

The underpinnings of Gray’s approach to research and practice were formed in the first two decades of the twentieth century when his work and education brought him into contact with the reform movements transforming American education. In 1908, to prepare to become a teacher, he entered the Illinois State Normal School, the center of the Herbartian movement in North America: Charles De Garmo and Frank and Charles McMurry were among those who had taught or studied there. Herbartianism at the turn of the century was a scientific approach to education based on principles of learning. Gray adopted Herbartian principles and had the opportunity to apply them when he became principal of the training school at Illinois Normal following his graduation in 1910. The experience led to Gray’s first publications: twelve articles on the teaching of geography, based on the principles of Herbartianism, which appeared in *The School Century* from May 1911 through June 1912.

Gray’s incipient interest in a scientific approach to education was nurtured at the University of Chicago, where he worked primarily with Charles Judd, head of the department of education. Judd was a psychologist as well as educator who utilized scientific methods and measurement techniques to study education. While at Teachers College Gray worked with Edward L. Thorndike, who, even more so than Judd, was applying scientific principles, measurement techniques, and statistical procedures to education. Gray’s life-long interest in reading assessment began to focus at this time. Thorndike was developing achievement scales in various subject areas, and Gray, for his master’s thesis, developed a scale for reading. The test, *Standardized Oral Reading Paragraphs, Grades 1–8*, was published in 1915. This test continued to be used with only minor revisions until 1963; in 2001 the fourth edition of the *Gray Oral Reading Test* was issued.

Gray returned to the University of Chicago to study for a Ph.D. and immediately began to work for Judd, who was participating in a survey of the Cleveland schools. The survey was a major reform effort

to bring scientific principles to bear on school improvement, and Judd asked Gray to assess reading achievement in the Cleveland schools. The experience gave Gray the opportunity to observe reading instruction in many classrooms and to refine his skills in reading assessment. He received his Ph.D. degree with a dissertation entitled "Studies of Elementary School Reading through Standardized Tests." His dissertation was published in 1917 as the first number in the *Supplementary Educational Monographs of the University of Chicago*.

During the "Economy of Time" reform movement in the second decade of the twentieth century, Gray, by then dean of the college of education at the University of Chicago, used scientific methods to determine the most successful method of teaching reading. Gray identified the following components: (1) selecting content of interest and significance to students; (2) developing independent word-recognition skills by word study and phonetic analysis after the student has acquired a basic vocabulary through content reading; and (3) providing a system of phonics that will naturally lead to accurate analysis of longer words encountered past the second grade. Gray became an advocate of the sight method of teaching reading, and had the opportunity to directly impact classroom practice in 1930 when he became a coauthor, with William H. Elson, of a popular basal reading series titled the *Elson Basic Readers*, published by Scott, Foresman and Company. In 1936 these became the *Elson-Gray Basic Readers*; in 1940 he became first author of the renamed *Basic Readers*. These "Dick and Jane" readers became widely used throughout America.

### Literacy Efforts

Gray's assessment experience made him aware of student reading difficulties and the necessity to fit instruction to the perceived weaknesses of students. In 1922 this led to an influential book titled *Remedial Cases in Reading: Their Diagnosis and Correction*. This book marked the beginning of a diagnostic/prescriptive approach to individual differences that remained in practice at the beginning of the twenty-first century.

Gray had a continuing interest in adult literacy, publishing *The Reading Interests and Habits of Adults* in 1929 and *Maturity in Reading: Its Nature and Appraisal* in 1956. He was also involved with literacy on an international level, working particularly with the United Nations Educational, Scientific and Cultural

Organization (UNESCO). This led to *The Teaching of Reading and Writing: An International Survey*, first published in 1956. He was also a founder of the International Reading Association, serving as its first president in 1955–1956.

Biographical information and a complete list of Gray's publications are included in a 1985 publication of the International Reading Association: *William S. Gray: Teacher, Scholar, Leader*, edited by Jennifer A. Stevenson. This document is also available as ERIC No. ED255902.

*See also:* LITERACY AND READING; READING; THORNDIKE, EDWARD.

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## GROUPING PATTERNS AND PRACTICES

*See:* SOCIAL ORGANIZATION OF SCHOOLS.

## GROUP PROCESSES IN THE CLASSROOM

Classrooms are social settings; teaching and learning occur through social interaction between teachers

and students. As teaching and learning take place, they are complicated processes and are affected by peer-group relationships. The interactions and relationships between teachers and students, and among students, as they work side by side, constitute the group processes of the classroom.

Group processes are especially significant in twenty-first century schools. Group projects and cooperative teamwork are the foundations of effective teaching, creative curriculum, and positive classroom climate. Interpersonal skills, group work, and empathy are important ingredients of modern business, where employees must communicate well for their business to be productive and profitable. Group processes are also significant in modern global communities, where citizens must work together for a safe and secure world. Thus, along with teaching academic curriculum, teachers are expected to help students develop the attitudes, skills, and procedures of democratic community.

### Classroom as Group

A group is a collection of interdependent, interacting individuals with reciprocal influence over one another. *Interdependent* means the participants mutually depend on one another to get work done; the teacher's part is to teach as the students strive to learn. *Reciprocal influence* refers to mutual effects exchanged and felt by the same people. In classrooms as few as two people can form groups, as long as the paired individuals have reciprocal influence through communication and mental contact. When the teacher engages the whole class in a learning activity common to all, then everyone forms into a single group, or as Herbert A. Thelen wrote, a "miniature society." Although the teacher and students of one class can be a whole group or from time to time many subgroups, groups are not simply people in proximity, such as a host of screaming students at a concert, or categories of individuals with something in common, such as the blondes and redheads of a school.

A group is also defined by its goals and structures. Goals are jointly held outcomes toward which group members work; structures are group roles taken regularly by members as they carry out the work. Groups seek to accomplish task or work goals and social-emotional or morale goals. Classroom groups become more successful as they pursue both task and social-emotional goals.

In most classrooms learning academic subject matter is a valued task goal, while developing a positive climate is a valued social-emotional goal. The class that accomplishes both is stronger than the class that reaches only one. In a parallel way group structures are made up of formal or official roles and informal or unofficial roles. Many classrooms have the formal roles of teacher, aide, student, administrative supporter, and parent helper along with the informal roles of leader, follower, friend, isolate, and rejectee. Classes with clear and understandable formal roles and nurturing and supportive informal roles are stronger than classes with just one or the other.

### A Social-Psychological View

Social-psychological research helps one form an understanding of the place of group processes in the classroom. The students of a class form a miniature society with peers, teacher, and aides in which they experience interdependence, interaction, common striving for goals, and structure. Many subgroups in the class affect how the larger classroom society works and how individuals relate to one another. Students interact, formally and informally, with teachers, aides, and one another. The informal interactions usually are not discussed even though they can be very important to everyone. Students work on the curriculum in the physical presence of one another to grow intellectually, behaviorally, and emotionally. Their informal roles of friendship, leadership, prestige, and respect affect how they carry out formal aspects of the student role. The informal relationships among students can be charged with emotion; an interpersonal underworld of peer-group affect is virtually inevitable for all students.

While the class develops, informal relationships with peers increase in power and poignancy; the students' definitions and evaluations of themselves become more vulnerable to peer-group influence. Each student's self-concept is susceptible to change within the classroom society, where informal peer interactions can be either threatening or supportive. In particular, the social motives of affiliation, achievement, and power have to be partly satisfied for each student to feel comfortable and secure. The negative conditions of loneliness and rejection, incompetence and stupidity, powerlessness, and alienation arise when these three motives are frustrated. The more supportive peer relations are in satisfying these motives, the more likely students' learning and behavior

will be enhanced. Having students work interdependently toward jointly established goals in supportive, cooperative learning groups can increase their compassion for one another, self-esteem, positive attitudes toward school, and academic learning.

### **Classroom Climate**

Classroom climate refers to the emotional tones associated with students' interactions, their attitudinal reactions to the class, as well as to students' self-concept and their motivational satisfactions and frustrations. Climate is measured by observing physical movements, bodily gestures, seating patterns, and instances of verbal interaction. Do students stand close or far away from the teacher? Are students at ease or tense? How frequently is affective support communicated by smiles, winks, or pats on the back? Do students move quietly with measured steps to their desks, or do they stroll freely and easily, showing the class feels safe? Are students reluctant to ask the teacher questions? How do students relate to one another? Are they quiet, distant, and formal, or do they walk easily and laugh spontaneously? How often do students put a peer down or say something nice to one another? Do students harass or bully other students? How often does fighting erupt? How often does peacemaking occur? Are sessions run primarily by the teacher or do students also take the lead? Do seating patterns shift from time to time, or do they remain the same, regardless of the learning activity? Are students working together cooperatively?

A positive climate exists when the following are present: (1) leadership occurs as power-with rather than power-over; (2) communication is honest, open and transactional; (3) high levels of friendship are present among classmates; (4) expectations are high for the performance of others and oneself; (5) norms support getting academic work done well and for maximizing individuals' strengths; and (6) conflict is dealt with constructively and peacefully. Although each of these six properties of climate can be important by itself, positive climate is an ensemble of all of them. Climate describes how each property is integrated with the others. It summarizes group processes that a teacher develops when interacting with students and how the students themselves relate with one another. Climate is what the behavioral actions are in working toward curriculum goals; it is how curriculum materials are used through human exchange; and it is styles of relating among members

of the classroom group. In classrooms with positive climates we find students and teachers collaborating to accomplish common goals along with feelings of positive self-esteem, security, and warmth. We also find students influencing the teacher and their peers, high involvement in academic learning, and strong attraction for one's classmates, curriculum, and school.

### **Teaching Strategies**

Ronald Lippitt and Ralph White, with guidance from Kurt Lewin, observed effects on youth of three leadership styles: autocratic, democratic, and laissez faire. Autocratic leaders made all decisions about group goals and work procedures. Democratic leaders specified group goals, but urged group members to decide among alternative ways of working. Laissez-faire leaders abdicated authority, permitting youth to work as they pleased. Groups with democratic leaders performed best with high quality work output and high morale. Autocratically lead groups had high quality work output, but low morale. Groups with laissez-faire leaders performed worst overall. Classroom research has shown that although autocratic teachers can get students to accomplish high amounts of academic work, they also create conformity, competition, dependency, and resentment. Students of democratic teachers accomplish both a great deal of excellent academic work, and establish positive social climates.

Effective communication is key in understanding differences between autocratic and democratic teachers. Autocratic teachers use one-way communication in persuading students to accept learning goals and procedures as well as rules for classroom behavior; such unilateral direction giving is often an ineffective way of transmitting information. Democratic teachers use two-way communication often to encourage students to participate in making decisions for themselves and in establishing group agreements for classroom procedures. By using transactional communication whereby students and teachers reciprocate in trying to understand one another, democratic teachers help build a climate that is participatory, relaxed, personal, and supportive. Attributes of democratic teachers who are effective transactional communicators are receptiveness to students' ideas, an egalitarian attitude, openness, warmth, respect for students' feelings, sensitivity to outcasts, a sense of humor, and a caring attitude.

Such participatory teachers understand that friendships in the classroom peer group cannot be separated from teaching and learning; friendly feelings are integral to instructional transactions between teachers and students and among students. Students who view themselves as disliked or ignored by their peers often have difficulty in performing up to their academic potential. They experience anxiety and reduced self-esteem, both of which interfere with their academic performance. As outcasts they might seek revenge, searching for ways to be aggressive toward teachers and peers. By watching their teacher interact with the class, students learn who gets left out and who gets encouragement and praise. Teachers can help rejected students obtain peer support by giving them an extra amount of encouragement and praise in front of their peers, and by assigning them to work cooperatively with popular classmates. Teachers with friendly classes see to it that they talk and attend to every student rather than focusing on a few, and often reward students with specific statements for helpful and successful behavior; they seek to control behavioral disturbances with general, group-oriented statements.

Also central to positive climate are the expectations that teacher and student hold for one another. Teachers' expectations for how each student might behave are particularly important because they affect how teachers behave toward that student. Thus, teachers should engage in introspection and reflection to diagnose their expectations, and obtain feedback from colleagues about how they are behaving toward particular students. Teachers should also use diverse information sources to understand what makes their students behave as they do. In particular, teachers should reflect on their expectations and attributions toward blacks and whites, girls and boys, students of different social classes and ethnic groups, and at-risk or students with disabilities. Teachers should deliberately seek new information about student strengths in order to free themselves of stereotypes.

Classroom norms form when most students hold the same expectations and attitudes about appropriate classroom behaviors. Although norms guide students' and the teacher's behavior, they are not the same as rules. Rules are regulations created by administrators or teachers to govern students' behavior; they might or might not become group norms. Student norms frequently are in opposition to teachers' goals, and can become counterproduc-

tive to individual student development. Teachers should strive to help students create formal group agreements to transform preferred rules into student norms. In particular, cooperative peer-group norms enhance student self-concept and academic learning more than do norms in support of competition.

Conflict, natural and inevitable in all groups, exists when one activity blocks, interferes, or keeps another activity from occurring. Conflicts arise in classrooms over incompatible procedures, goals, concepts, or interpersonal relationships. The norms of cooperation and competition affect the management of conflict differently. With cooperative norms students believe they will obtain their self-interest when other students also achieve theirs. Teachers should strive, therefore, to build a spirit of teamwork and cooperation in their classes, so that students will feel that it is in their self-interest to cooperate with their peers. When a competitive spirit exists, particularly when students are pitted against each other to obtain scarce rewards, a student succeeds only when others lose. In the competitive classroom, interpersonal conflict will arise frequently between students.

For teachers to build and maintain successful classrooms with high student achievement and positive social climate, they should attend to their leadership style, communication skills, friendliness and warmth, expectations and stereotypes of students, tactics for establishing student group agreements, and their skills in managing conflict.

*See also:* ADOLESCENT PEER CULTURE; CLASSROOM MANAGEMENT.

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## GUIDANCE AND COUNSELING, SCHOOL

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School counselors help to make learning a positive experience for every student. They are sensitive to individual differences. They know that a classroom environment that is good for one child is not necessarily good for another. Counselors facilitate communication among teachers, parents, administrators, and students to adapt the school's environment in the best interests of each individual student. They help individual students make the most of their school experiences and prepare them for the future.

### A Brief History of School Guidance and Counseling in the United States

The history of school counseling formally started at the turn of the twentieth century, although a case can be made for tracing the foundations of counseling and guidance principles to ancient Greece and Rome with the philosophical teachings of Plato and Aristotle. There is also evidence to argue that some of the techniques and skills of modern-day guidance counselors were practiced by Catholic priests in the Middle Ages, as can be seen by the dedication to the concept of confidentiality within the confessional. Near the end of the sixteenth century, one of the first texts about career options appeared: *The Universal Plaza of All the Professions of the World*, (1626) written by Tomaso Garzoni. Nevertheless, formal guidance programs using specialized textbooks did not start until the turn of the twentieth century.

The factors leading to the development of guidance and counseling in the United States began in the 1890s with the social reform movement. The difficulties of people living in urban slums and the widespread use of child labor outraged many. One of the consequences was the compulsory education movement and shortly thereafter the vocational guidance movement, which, in its early days, was concerned with guiding people into the workforce to become productive members of society. The social and political reformer Frank Parsons is often credited with being the father of the vocational guidance movement. His work with the Civic Service House led to the development of the Boston Vocation Bureau. In 1909 the Boston Vocation Bureau helped outline a system of vocational guidance in the Boston public schools. The work of the bureau influenced the need for and the use of vocational guidance both in the United States and other countries. By 1918 there were documented accounts of the bureau's influence as far away as Uruguay and China. Guidance and counseling in these early years were considered to be mostly vocational in nature, but as the profession advanced other personal concerns became part of the school counselor's agenda.

The United States' entry into World War I brought the need for assessment of large groups of draftees, in large part to select appropriate people for leadership positions. These early psychological assessments performed on large groups of people were quickly identified as being valuable tools to be used in the educational system, thus beginning the standardized testing movement that in the early twenty-first century is still a strong aspect of U.S. public education. At the same time, vocational guidance was spreading throughout the country, so that by 1918 more than 900 high schools had some type of vocational guidance system. In 1913 the National Vocational Guidance Association was formed and helped legitimize and increase the number of guidance counselors. Early vocational guidance counselors were often teachers appointed to assume the extra duties of the position in addition to their regular teaching responsibilities.

The 1920s and 1930s saw an expansion of counseling roles beyond working only with vocational concerns. Social, personal, and educational aspects of a student's life also needed attention. The Great Depression of the 1930s led to the restriction of funds for counseling programs. Not until 1938, after a recommendation from a presidential committee

and the passage of the George Dean Act, which provided funds directly for the purposes of vocational guidance counseling, did guidance counselors start to see an increase in support for their work.

After World War II a strong trend away from testing appeared. One of the main persons indirectly responsible for this shift was the American psychologist Carl Rogers. Many in the counseling field adopted his emphasis on “nondirective” (later called “client-centered”) counseling. Rogers published *Counseling and Psychotherapy* in 1942 and *Client-Centered Therapy* in 1951. These two works defined a new counseling theory in complete contrast to previous theories in psychology and counseling. This new theory minimized counselor advice-giving and stressed the creation of conditions that left the client more in control of the counseling content.

In 1958 the National Defense Education Act (NDEA) was enacted, providing aid to education in the United States at all levels, public and private. Instituted primarily to stimulate the advancement of education in science, mathematics, and modern foreign languages, NDEA also provided aid in other areas, including technical education, area studies, geography, English as a second language, counseling and guidance, school libraries, and educational media centers. Further support for school counseling was spurred by the Soviet Union’s launching of *Sputnik* and fears that other countries were outperforming the United States in the fields of mathematics and science. Hence, by providing appropriate funding for education, including guidance and counseling, it was thought that more students would find their way into the sciences. Additionally, in the 1950s the American School Counselor Association (ASCA) was formed, furthering the professional identity of the school counselor.

The work of C. Gilbert Wrenn, including his 1962 book *The Counselor in a Changing World*, brought to light the need for more cultural sensitivity on the part of school counselors. The 1960s also brought many more counseling theories to the field, including Frederick Perl’s gestalt therapy, William Glasser’s reality therapy, Abraham Maslow and Rollo May’s existential approach, and John Krumboltz’s behavioral counseling approach. It was during this time that legislative support and an amendment to the NDEA provided funds for training and hiring school counselors with an elementary emphasis.

In the 1970s the school counselor was beginning to be defined as part of a larger program, as opposed to being the entire program. There was an emphasis on accountability of services provided by school counselors and the benefits that could be obtained with structured evaluations. This decade also gave rise to the special education movement. The educational and counseling needs of students with disabilities was addressed with the passage of the Education for All Handicapped Children Act in 1975.

The 1980s saw the development of training standards and criteria for school counseling. This was also a time of more intense evaluation of education as a whole and counseling programs in particular. In order for schools to provide adequate educational opportunities for individuals with disabilities, school counselors were trained to adapt the educational environment to student needs. The duties and roles of many counselors began to change considerably. Counselors started finding themselves as gatekeepers to Individualized Education Programs (IEP) and Student Study Teams (SST) as well as consultants to special education teachers, especially after passage of the Americans with Disabilities Act in 1990.

The development of national educational standards and the school reform movement of the 1990s ignored school counseling as an integral part of a student’s educational development. The ASCA compensated partially with the development of national standards for school counseling programs. These standards clearly defined the roles and responsibilities of school counseling programs and showed the necessity of school counseling for the overall educational development of every student.

### Major Roles and Functions for School Counselors

The roles of a school counselor are somewhat different at various grade levels.

**Elementary school level.** In elementary schools, counselors spend their time with children individually, in small groups, or in classrooms—thus having some connection with every student in the school. With the advent of systems thinking, the elementary school counselor now has a working relationship with students’ families and with community social agencies. Although the roles of school counselors vary among settings, common tasks include individual counseling, small-group counseling, large-group or classroom presentations, involvement in school-

wide behavior plans for promoting positive and extinguishing negative behaviors, and consulting with teachers, parents, and the community. Additional duties might include developing classroom management plans or behavior plans for individual students, such as conducting SST and IEP meetings.

**Middle and high school level.** Like elementary school counselors, the roles of middle and high school counselors vary depending on the district and the school administrators. Counselors deal with a vast array of student problems—personal, academic, social, and career issues. Typically, these areas get blended together when working with a student on any one topic; hence, it is impossible to separate the duties of a counselor on the basis of a particular problem. Counselors in middle and high school have experience with all these areas and work with others in the school and community to find resources when a need arises. It is common for a school counselor to be the first person a student with a difficulty approaches. The school counselor then assesses the severity of the problem in order to provide appropriate support. School administrators sometimes assign counselors such responsibilities as class scheduling, discipline, and administration. These tasks can be integrated with the goals of school counseling but can also dilute the time available for helping individuals.

### Training Requirements

The requirements for the credentialing (in some locations called certification, licensure, or endorsement) of professional school counselors vary from state to state. All states and the District of Columbia require a graduate education (i.e., completion of some graduate-level course work), with forty-five states and the District of Columbia requiring a master's degree in counseling and guidance or a related field. A majority of states also require that graduate work include a certain number of practicum hours, ranging from 200 to 700, in a school setting. Additionally, a majority of states require applicants to have previous teaching experience. Some of these states allow students to gain experience through the graduate program by means of internships.

Half of the states require standardized testing as part of the credentialing process. Many of these tests simply cover basic mathematics, writing, and reading skills, while some states require more specialized tests covering the field of guidance and counseling. Nineteen states require a minimum number of

course credit hours specifically related to guidance and counseling. Fourteen states require students to take courses in other subject areas, such as education of children with disabilities, multicultural issues, substance abuse, state and federal laws and constitutions, applied technology, and identification and reporting of child abuse. Thirty-eight states recognize credentials from other states. Another thirty-eight states require applicants to undergo a criminal background check.

### Major Trends, Issues, and Controversies

Among the many issues facing the school counseling profession are the following three: what the professional title should be, how counselors should be evaluated, and to what extent counselors should work on prevention instead of remediation.

**Professional title.** Some professionals in the field prefer to be called *guidance counselor*, while an increasing number prefer the term *school counselor*. The growing trend is for counselors to be seen as professionals in a large system, working fluidly with all aspects within the system. The expected duties are more extensive than those practiced by vocational guidance counselors of the past, hence the feeling of many school counselors that the name of the profession should reflect its expanded roles.

**Evaluation.** A major trend in education is the demand for accountability and evaluation. School counselors have not been immune to this demand. Since the early 1970s there has been a growing concern with this issue and numerous criteria have been developed to help school counselors evaluate their specific intervention techniques.

The National Standards for Professional School Counselors was adopted by ASCA in 1997. Similar to the academic standards used nationally by state departments of education, the counseling standards provide a blueprint of the tasks of and goals for school counselors. The standards have not been adopted by every state. The average state student-counselor ratio varies from a high of about 1,250 to a low of about 400, so the evaluation of counselor performance with different workloads is a difficult undertaking.

**Prevention versus remediation.** A growing trend in the field of counseling is the focus on prevention instead of remediation. In the past it was not uncommon for counselors to have interactions with students only after some crisis had occurred. There

is now a shift for school counselors to intercede prior to any incidents and to become more proactive in developing and enacting schoolwide prevention plans. The schools, community, and families are requesting assistance in preventing students from being involved with many difficulties, such as participating in gangs, dropping out of school, becoming a teenage parent, using drugs, and participating in or becoming victims of acts of violence.

**Gangs.** Students as early as third grade are being taught gang-type activities. Students are more likely to end up in a gang if family members and peers are already involved in gang activity. It is difficult for children to leave a gang once they have been actively involved. Antigang resources are often focused on fourth and fifth graders—an age before most students join a gang. Counselors are in a position to ascertain whether a child is “at risk” of gang-type activity. The counselor can also be influential in working with the family to help the child avoid gang activity.

**Dropouts.** In many large metropolitan school districts, over 25 percent of students do not complete their high school education. Premature school termination is becoming an increasingly more difficult problem as more careers require education well beyond the high school level. Counselors are in a unique position to assist students with career guidance and help them establish meaningful goals including the completion of a basic education.

**Teen pregnancy.** Teen pregnancy continues to be a societal concern. Precipitating factors are visible prior to middle school. Counselors are often the liaison with community agencies that work to prevent student pregnancy and assist with students who do become pregnant.

**Substance abuse.** Drugs, including alcohol and tobacco, continue to be a serious problem for youth. Despite national efforts to eradicate these problems, many students still find their way to these mind-altering chemicals. Counselors are trained to understand the effects of different drugs and can assist with interventions or community referrals. The counselor is also essential in developing substance abuse prevention programs in a school.

**School violence.** School violence can range from bullying to gunfire. Counselors have training to assist teachers and students in cases of violence and to establish violence prevention programs. Counselor leadership in making teasing and bullying unaccept-

able school behaviors is a powerful way to provide a safer and more inclusive environment for students.

**Diversity.** Tolerance of diversity is an important goal in a multicultural society. School counselors help all students to be accepting of others regardless of sex, age, race, sexual orientation, culture, disability, or religious beliefs.

**Child abuse.** Many states have mandatory reporting laws concerning child abuse. Students in all grades are susceptible to abuse by others, and the counselor is often the first person to discover these deplorable acts and then report them to the proper authorities.

**Terrorism.** Terrorism is becoming an increasingly difficult problem in the world of the early twenty-first century. Children are affected, directly and indirectly, by both massive and small-scale acts of terrorism. Counselors are able to ascertain the extent to which a student or teacher may be adversely affected by terrorist acts. In these cases the counselor can either intervene or direct the person to more intensive interventions.

### School Counseling around the World

How are other countries providing counseling? It is clear that school counseling has made significant progress in the United States. Political, social, and cultural factors are deeply embedded in the way a given country addresses the educational needs of its populace. Following are brief examples of how school counseling is practiced in some other countries.

In Japan, the goal of high school counseling is to “help every student develop abilities of self-understanding, decision-making, life planning, and action-taking to be able to adjust in the career options he or she decides to pursue” (Watanabe-Muraoka, Senzaki, and Herr, p. 101). In France, secondary school counseling was started in 1922 and by the late 1930s was adopted by the educational system and seen as a necessary part of the institution. School counselors assist students with vocational guidance.

In Thailand, school counseling often incorporates advice-giving by teachers. In Israel, school counselors devote one-third of their time to classroom instruction and the rest to personal and social counseling. Career counseling is somewhat curtailed because students are required to enlist with the armed services after high school. In Hong Kong, school counseling and guidance is becoming more

of a service that is incorporated into the whole school with an emphasis on prevention. Turkey has a fifty-year history of counseling development. There is a professional association that publishes a journal and sponsors conferences. Many secondary schools have counseling services and receive support from the Ministry of National Education.

All countries benefit from professional dialogue and a continual exchange of information. In Europe the Transnational Network of National Resource Centres for Vocational Guidance was established to share information, include businesses and social agencies, and improve counseling methods and materials. The Internet is being used widely as a mechanism for disseminating information. Spain, Portugal, Denmark, Belgium, Finland, France, Italy, the Slovak Republic, and Norway are among many countries using the web to make career and counseling information available to guidance experts. As school counseling continues to define itself as a profession and to show its usefulness empirically, counseling services in schools are likely to expand worldwide in an effort to improve everyone's life satisfaction.

*See also:* ADOLESCENT PEER CULTURE, *subentry on GANGS*; PSYCHOLOGIST, SCHOOL; RISK BEHAVIORS; ROGERS, CARL; VIOLENCE, CHILDREN'S EXPOSURE TO.

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## HAHN, KURT (1886–1974)

Progressive educator Kurt Hahn established a system of international schools and programs that even after his death are alive and expanding.

Hahn, a German of Jewish origin who subsequently became a Christian and naturalized English citizen, was born in Berlin as son of a wealthy industrialist. After graduation from the Royal Wilhelm gymnasium in Berlin (1904), he studied philosophy and the classics at Christ Church College, Oxford, and at the universities of Berlin, Heidelberg, Freiburg, and Göttingen with the firm intention of becoming an educator and school reformer in the tradition of Cecil Reddie and Hermann Lietz. In 1910, Hahn published a novel *Frau Elses Verheissung* (Mrs. Else's promise) in which he pondered his experiences as a schoolboy. Another book *Gedanken über Erziehung* (Ideas on education) drew heavily on Plato, Kant, and William James, but was never finished.

Unfit for military service, Hahn served during World War I as specialist for English affairs in the German foreign office and in the political office of the German High Command under General Ludendorff. He wrote commentaries, held lectures, attended international conferences to strive for the democratization of the German political system and for the termination of the unnecessary war at acceptable conditions for all. When Prince Max of Baden was appointed the first parliamentarian German prime minister, Hahn became his private secretary and closest political advisor. After the war, he initiated the "Heidelberger Vereinigung," an association of influential politicians, scientists, industrialists (among them Max Weber), to promote a "peace of

justice and agreement." At the Peace Conference in Paris, Hahn served as secretary and ghost writer for the German minister of foreign affairs, Graf Brockdorff-Rantzau.

In 1919 Hahn moved to Salem castle near Lake Constance in order to realize his educational dream. Together with Prince Max, he founded a *landerziehungsheim* (boarding school), which soon became the largest and most prominent boarding school in Germany. Still politically active, Hahn supported the foundation of the German Institute of International Affairs (1923), wrote the main parts of the *Memoirs* of Prince Max of Baden (1927), and voiced his opposition to Hitler and the rising national socialism. When Hitler came to power, Hahn was imprisoned, but released through the intervention of influential British friends—among them Prime Minister Ramsay Macdonald. Nevertheless Hahn was dismissed as principal of Salem, banned from the state of Baden, and forced to emigrate to the United Kingdom. In 1934 he founded a new public school called British Salem Schools at Gordonstoun, near Elgin in Scotland, which flourished as quickly as its sister school had done. As political refugee Hahn wrote articles, memoranda, and letters to oppose the appeasement policy of the British government, publicize the horrors of the concentration camps, and organize support for the resistance movement in Germany. During World War II he served as translator and advisor for the British foreign office.

Hahn believed that young people are exposed to six declines: (1) the decline in fitness due to modern methods of locomotion; (2) the decline in initiative and enterprise due to the widespread disease of "spectatoritis"; (3) the decline in memory and imagination due to the confused restlessness of Western

civilization; (4) the decline in skill and care due to the weakened tradition of craftsmanship; (5) the decline in self-discipline due to the ever present availability of stimulants and tranquilizers; and (6) the decline in compassion due to the unseemly speed with which modern life is conducted. To counter these social diseases, Hahn conceived a preventive cure called *Erlebnistherapie* (experience therapy) which offered listless and lawless adolescence the opportunity to discover healthy passions, like the zest for exploration and the love for art and music, that would absorb the child completely. Hahn's experiential education program consisted of four elements: (1) physical fitness—exercising the body and keeping free from cigarettes, alcohol, and drugs; (2) expedition—exploring the world by sea and land under difficult conditions, alone or in groups; (3) project work—planning and executing an enterprise in research, art, or construction; and, most important, and (4) social service—helping the injured, sick, old, and handicapped in hospitals, homes, and rescue stations.

Hahn wanted his educational program to develop active citizenship, social responsibility, and international understanding, and he wanted his experience therapy to be available for every boy and girl, whatever their age, social background, and national origin. Thus he provided for scholarships, initiated courses for short-term and long-term education, and founded institutions which are operating on all five continents. The schools and schemes Hahn originated can be arranged into four categories: (1) boarding schools (since 1920, united in the Round Square Conference, about twenty worldwide by 2002); (2) Outward Bound Schools (since 1941, short-term schools of three to four weeks for students and young workers; about thirty by 2002, many of them in the United States); (3) International Award for Young People (since 1956, the most well known is the Duke of Edinburgh Award, about 100,000 boys and girls of 14 to 25 years of age participate in more than 100 countries each year experiencing the fourfold program in their spare time); (4) United World Colleges (since 1962, international two-year colleges in England, Canada, the United States, Italy, Germany, Venezuela, Swaziland, Singapore, Hong Kong).

Hahn received many honors for his political and educational activities. After his death several prizes were instituted to his memory: the Kurt Hahn Award of the American Association for Experiential

Education (since 1983); the Kurt Hahn Scholarships of the University of Cambridge (since 1986); and the Outward Bound Award of the University of Lüneburg (since 1990).

*See also:* PROGRESSIVE EDUCATION.

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MICHAEL KNOLL

### HALEY, MARGARET (1861–1939)

Margaret Angela Haley was the formative leader of America's first teacher union. In her forty years of leadership with the Chicago Teachers Federation, Haley advocated teachers' right to be involved in school decision-making, the promotion of Progressive educational practice, and the expansion of protective legislation for teachers.

Margaret Haley was born in Joliet, Illinois, of working-class Irish immigrant parents and she attended local rural schools. She developed an early interest in politics from her father, who was a labor activist in the Knights of Labor and the Farmers' Grange. At age sixteen, as she recalled in her autobi-

ography, she was “catapulted” into teaching by her father’s persistent financial troubles, and she began to teach at local country schools. She continued her education at local teacher training institutes where she learned principles of the “new education” that rejected old-fashioned rote memory learning and promoted problem solving and close analytical work.

### Early Career

At the end of her fifth year of teaching, Haley made a further commitment to her education by registering for a four-week summer session at the Normal School at Illinois State University where she studied under leading proponents of Herbartian curriculum theory. But indicative of Haley’s emerging interest in school politics, her favorite class at Illinois was not about pedagogy but about political economy. Her favorite teacher was Edmund Janes James, a scholar of education and economics whose research interests included the labor movement, tax reform, and school finance. In James’s economics class, Haley read Henry George’s recently published *Progress and Poverty* (1879), a book that was revolutionizing liberal American economic theory with its proposal for a single tax system that would allow a more egalitarian and benevolent operation of the capitalist system. George’s theory, Haley recalled, opened up to her “a wide world” of economic restructuring for social improvement and helped her develop her own ideas about teachers’ responsibility to engage in social change.

In 1883 Haley moved with her family to Chicago, and from 1884 to 1900 she taught sixth grade in an elementary school in the Stockyards district. During this time, she studied Progressive child-centered education under Francis Parker at the Cook County Normal School, where she paid particular attention to Parker’s ideas about the role of the teacher. Along with his influential ideas about pedagogy, Parker believed that the individual classroom teacher needed to have the authority of a policymaker—a novel role for female elementary schoolteachers. In later years, Haley studied Progressive pedagogy again at the Buffalo School of Pedagogy in New York State, where she heard William James deliver his “Talks to Teachers on Psychology.” In another summer, she attended a Catholic summer school in Wisconsin that was part of the liberal social movement of the American Catholic church designed to expose parochial and public school teachers to contemporary social prob-

lems and secular intellectual debates. From these varied educational experiences in different parts of the Progressive education movement, Haley learned about the importance of academic freedom, the professional role of the teacher, and the value of shaping the school as a community.

Contrasting with these ideals was Haley’s experience as a teacher in one of Chicago’s poorest school districts. For sixteen years, Haley taught sixth grade in the Hendricks school in the heart of the poverty-stricken meatpacking district of Chicago. Her students were the poorest of the city’s immigrant children, and her classrooms were crowded, underserved, and for most of her students, the last education they would ever experience. By her late thirties, Haley had merged her Progressive educational training with her readings in labor and political theory to develop a strong belief about teachers’ right to shape and control their own workplace, and about the responsibility of the state to support public schools.

### The Chicago Teachers Federation

In 1897 Haley joined the Chicago Teachers Federation, which was recently organized by a group of women elementary teachers to defend a legislative attack on a newly instituted pension law. She quickly rose to district vice president of the federation and began an investigation of the board of education’s claim that a shortage of school funds necessitated a freeze on a promised salary increase for teachers. Haley found that the shortage was due to the tax underassessment of a number of Chicago’s largest corporations, and she led a successful lawsuit in state courts to assess the corporations their full value and assure the promised salary increase. Haley’s leadership of the tax equity battle gained national attention, drawing the praise of a wide variety of social, political, and educational reformers. The fight also spurred teacher membership to the federation so that by 1900 more than half of all Chicago elementary school teachers were members of the federation, making it the largest women’s union in the country.

Haley quickly molded the federation into a powerful political force in Chicago politics. She shared the leadership with another Irish-American elementary teacher, Catharine Goggin, who balanced Haley’s aggressive and legalistic mind with more politic organizing skills. Under their leadership, the federation developed a weekly news bulletin, teacher education programs, and a well-oiled

political organization of teachers across the city. With the federation, Haley consistently advocated for a stable pension plan and tenure laws, arguing that the single women who made up the bulk of the elementary teaching staff were in particular need of job and pension security. She battled repeated attacks on federation authority in the state house, and directed a relentless publicity campaign that kept the federation in the public eye.

### **American Federation of Teachers**

To strengthen the federation's authority, she negotiated an unprecedented affiliation with organized labor by joining the predominately female federation with the industrial Chicago Federation of Labor in 1902. In 1916 the federation became Local 1 of the newly formed American Federation of Teachers.

Haley also fought for women teachers' rights in the National Education Association (NEA), which she accused of being administratively biased, excluding the voice and interests of elementary teachers. In 1901 she became the first woman and first elementary school teacher to speak at a public forum of the NEA, and she promoted the reorganization of NEA elections to facilitate the election of candidates who were women classroom teachers. In her notorious 1904 speech before the NEA, "Why Teachers Should Organize," Haley laid out her reform proposals not only for the organization of protective unions for teachers, but also for an expanded notion of teacher professionalism that included the opportunity to develop progressive pedagogy, improve educational practice, and promote the democratic participation of teachers in school administration. In 1910 she orchestrated the election of Chicago school superintendent Ella Flagg Young as the first woman president of the NEA.

### **Politics**

Haley's individual politics took her across a wide spectrum of the American Left. She supported women's suffrage, child labor laws, direct primaries, and tax reform, and was a member of the Women's Trade Union League. She lived and worked in a wide circle of women political leaders, including Ella Flagg Young, Jane Addams, and Catharine Goggin. A self-educated legal scholar and political tactician, Haley was a popular consultant to fledgling teachers' organizations and women's groups.

Yet Haley's persistent commitment to women teachers' rights kept her on the margins of other so-

cial reform movements. She was excluded from much of middle-class Protestant women's reform because of her class and religious background, and because of her staunch affiliation to labor. Yet male-dominated labor groups also marginalized Haley and her teachers, holding them out as white collar feminized workers who threatened the solidarity of the industrial working class. Haley's refusal to align with more radical groups, including socialists, anarchists, and African Americans, also limited her power. Furthermore, Haley's strong identification of the federation as an elementary teachers' group for women kept her apart from newer organizations. As a broader teacher union movement grew in the 1920s, Haley was left behind by other groups that sought to include secondary teachers, male teachers, and teachers of color.

### **Haley's Contribution**

Haley's federation was at its peak influence between 1909 and 1915 when federation friend Ella Flagg Young was superintendent of the Chicago schools. In 1915 a city law prohibiting teachers from joining labor unions forced Haley to withdraw the federation from the Chicago Federation of Labor. In 1916 her long-time colleague Catharine Goggin was killed in a traffic accident. Through the antilabor 1920s the federation declined in power, and Haley's influence faded through the 1930s as a new generation of teacher union leaders joined the American Federation of Teachers. Jealously guarding the authority of the federation, Haley refused to merge with the new groups. Her strong and opinionated character furthered her marginalization during the difficult economic years of the Great Depression, when she opposed the militant street tactics of the striking teachers in Chicago's American Federation of Teachers. To younger teachers, she may have appeared an outdated bossy spinster of a previous century.

Although Haley was a swaggering giant in Chicago and educational politics, in physical appearance she was a petite and stylishly attired woman. Haley could disarm her opponents by her quick wit and charm that she used to maneuver loyalties among city, labor, and education officials. Margaret Haley never married, and she left almost no personal records with which historians could describe her private life. Clearly, however, she led an intense and peripatetic life in which her professional life doubled as her private life. Throughout her career with the

Teachers Federation, she lived with various women federation members, including Goggin. Her few recorded words of personal affection are about her parents and her five younger brothers and sisters, with whom she felt a deep affection and almost mystical connection throughout her life. She died January 5, 1939, at age 77. She is buried next to her sister Eliza, a fellow teacher and federation member, in Joliet.

*See also:* AMERICAN FEDERATION OF TEACHERS; TEACHER UNIONS, *subentry on* HISTORY; URBAN EDUCATION; YOUNG, ELLA FLAGG.

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KATE ROUSMANIERE

### HALL, G. STANLEY (1844-1924)

The "father of adolescence," G. Stanley Hall is best known for his prodigious scholarship that shaped adolescent themes in psychology, education, and popular culture. Granville Stanley Hall was born in a small farming village in western Massachusetts, and his upbringing was modest, conservative, and puritan. He began his scholarly work in theology,

but traveled to Germany to study physical psychology. He would produce over 400 books and articles and become the first president of Clark University, in Worcester, Massachusetts, but his greatest achievement was his public speaking about child-centered research, education, and adolescence to a society in transition.

With the 1883 publication of "The Contents of Children's Minds," Hall established himself as the leader of the "child-study" movement, which aimed to utilize scientific findings on what children know and when they learn it as a way of understanding the history of and the means of progress in human life. Searching for a source of personal and social regeneration, Hall turned to the theory of evolution for a biologically based ideal of human development, the optimum condition of which was health. His pure and vigorous adolescent countered the fragmented, deadening, and routinized qualities of urban industrial life. Hall theorized adolescence as the beginning of a new life and welded this vision to a scientific claim that this new life could contribute to the evolution of the race, if properly administered.

Hall's work lent scientific support to the "muscular Christian" approach to education, an intersection of morals, physical health, and economic productivity that was popular among the reformers who started the Young Men's Christian Association (YMCA), Boy Scouts, and other character-building organizations. Central to this view of health attainment was a rational inventory and investment of limited energies in profitable activities. The reformers of boys were vigilant in their denunciation of masturbation as wasteful sexual activity. As president of Clark University, Hall sponsored Freud's visit to the United States in 1909 and likely accepted Freud's ideas about sexuality, motivation, and the problems of repression. However, Hall also believed that freely expressed sexuality would too often lead to debauchery, so the sexualized energies of boys needed to be promoted yet protected, managed, and channeled.

Fittingly, Hall recommended schooling that mixed Rousseau's emphasis on covert control of male pupils with a strict social efficiency attachment to education for future lives and roles. Hall's educational prescriptions for adolescents emphasized the following six areas:

- Differentiated curricula for students with different futures, that is, an efficient curriculum, in-

cluding an education for girls that emphasized preparation for marriage and motherhood

- The development of manhood through close supervision of the body, emphasizing exercise and team sports and minimizing draining academic study
- An education that drew upon and utilized the expression of (boy-stage) emotions through emphases on loyalty, patriotism, and service
- A curriculum sequence informed by recapitulation theory or cultural epochs (i.e., study of the stages believed to have been key developmental points of the race. A cultural epochs curriculum focused upon “great scenes”: sacred and profane myths and history, from folklore and fairy tales to Robinson Crusoe and bible studies, ending with St. Paul and Luther and the powerful stories of reformation and nationalization. Stories of great men would be used throughout to draw boys into the tales and to build on their natural interest.)
- A school program that kept boys as boys and discouraged precocity or assuming sexual adult roles at a young age
- An administrative gaze schooled to watch youthful bodies

Hall and other “boyologists” identified play as central to creating young men who had disciplined spirit and would obey superiors. Play was revered for making children and adolescents moral and strong via direct and efficient processes, unlike the passive, unfocused, and feminized school curriculum. Cognitive approaches to civilized behavior were deemed unsatisfactory. Play invoked muscles directly, and muscles were believed to be the location of automatic, instinctual morality. Muscles, if properly prepared, carried civilized morality, instantly accessible. Expertly organized play would promote discipline and control, qualities lacking in the immigrant children who were the play reformers’ main targets. The play reformers, like the Boy Scouts, consciously nurtured peer relations to replace “unsatisfactory” families and extend expert influence by promoting boys watching over other boys.

At the beginning of the twentieth century, public schools, private philanthropic endeavors, Boy Scouts, Girl Guides, and juvenile courts participated in an enlarged and intensified discourse about adolescence. Modern facts of adolescence, produced by G. Stanley Hall and his colleagues and students,

emerged in a social context of worries over degeneracy and progress. Although adolescence had been demarcated before the late 1800s, the youth/adult boundary became sharper, more intently watched, and democratically applied to all youth. Hall emphasized adolescence as a new birth and the last chance for race improvement. Slow, careful development at adolescence must be vigilantly guarded; precocity had to be prevented. He and his colleagues issued “pedagogical imperatives,” that is, disciplinary and instructional techniques that were essential for each stage of boyhood and adolescence. Thus, laissez-faire approaches to youth were deemed likely to lead to moral anarchy, and the administrative gaze of teachers, parents, psychologists, play reformers, scouting leaders, and juvenile justice workers was cultivated everywhere.

Hall’s work has commonly been assessed as discredited and outdated, buried along with recapitulation theory by the 1930s. However, Hall’s ideas and their applications in education, scouting, and team sports remain foundational. Hall’s work defined adolescents in modern, scientific terms, that is, as natural and outside of social relations and history. The shapers of the modern, scientific adolescent made growing bodies and sexuality primary foci and the measures to prevent precocity enhanced youth’s economic dependence. At a time when movie theaters, dance halls, and other new, urban pleasures beckoned, public focus on youth revolved around misuse of leisure time. Finally, Hall contributed to scientific knowledge about adolescents that catapulted youth ever more firmly into their peers’ company (expertly guided by psychologists, social workers, and teachers). Hall’s ideas continue to shape contemporary discussions of adolescent biology, growing bodies, peer-orientation, and problematic leisure time.

*See also:* ADOLESCENT PEER CULTURE; EDUCATIONAL PSYCHOLOGY.

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NANCY LESKO

## HANDWRITING, TEACHING OF

Since the advent of the typewriter, penmanship has been increasingly devalued, even ignored, in the curriculum. Despite the ubiquity of computers, handwriting is still an important means of note taking and communication. Bad handwriting, it has been shown, leads to lower grades in school. Bad handwriting skills may cause the writer physical pain and mental distress. An inappropriate grip on the writing instrument may lead to cramps and an inability to write with speed. This inability to keep up with one's thoughts leads to frustration, which may, in turn, inhibit a child's learning to compose. Illegible handwriting is a failed attempt at communication.

Qualities sought in penmanship are legibility, speed, ease, and individuality. Handwriting is a physical skill that is best learned early, and requires "a competent level of instruction in the components of the physical task." (Alston and Taylor, p. 2). Extra help given to those having trouble at an early stage can often prevent failure in later years. Unfortunately, modern teachers are not usually taught how to teach handwriting. Nor do they have enough class time to work with children individually, which is the proper way to diagnose individual problems and counter them.

Penmanship was, with the rising importance of commerce in the eighteenth century, and before typewriters, an essential job skill. The teaching of handwriting was a major task of education. It is helpful to look at the changes in styles, materials, and teaching methods over time to see the evolution of the current state of handwriting in American education.

### The Eighteenth Century

Early colonists brought with them the hands and teaching methods of their native lands. A variety of hands were taught to be used in various occupations (e.g. law, accounting), or by different groups of people (e.g. university students, women, gentlemen, clerks). Instruction in reading came first; for many who came to the New World, the ability to read the Bible was necessary for all. The ability to write was required only of professionals, the well-born and their secretaries, and merchants and their clerks.

Teaching was accomplished by the rote copying of exemplars set for each student by the writing master. As demand for training increased with the burgeoning economy, a lack of skilled masters led to the use of printed exemplars.

Late in the eighteenth century, a backwoods American teacher named John Jenkins revolutionized the teaching of handwriting by breaking all lower case letters down into six principal pen strokes, which were learned separately and then combined into letters. This method, plagiarized and modified, was used for decades, both in the United States and in Europe. The hand was still the basic English Round hand (often termed *copperplate*), used throughout Europe for commercial purposes since the mid-seventeenth century.

Jenkins's analytical system also required the student to memorize a dialogue about the principal strokes and the letters formed from them before actually writing letters with ink on paper. This memorization persisted through much of the nineteenth century; decades later, Platt Rogers Spencer would still require students to memorize an oral analysis of letters. Another of Jenkins's innovations was the inclusion in his writing manuals of detailed recommendations on teaching methods.

### The Nineteenth Century

Copy slips, with each exemplar printed on a separate piece of paper, grew into copybooks, with blank lines

below the text for the student to imitate the exemplar, thus requiring a new book for each student. By the 1870s there were graded series of books, with accompanying teacher's manuals, wall charts, and other teaching aids. Competition intensified in the nineteenth century, as city, town, or state school boards began selecting textbooks, including penmanship systems, for entire school systems.

An ever-increasing emphasis on speedy handwriting for commercial needs was met by modifications to the letterforms taught and the introduction of new methods of movement. Fewer hands were being taught by the beginning of the century. By 1805 beginners started with a large-sized Round hand, then moved into a *running hand*, similar to the Round hand but faster, because every letter within words was joined. Also offered was a miniaturized version of the cursive, thought suitable for girls.

The letterforms would degenerate throughout the century in two conflicting streams: the stronger current moving toward simpler, faster, more colorless letterforms; and a contradictory cross-current created by the exploration of the decorative possibilities inherent in the use of the flexible steel pen point. These pens, which replaced quills for general use in the 1830s, made possible the extreme thick-and-thin lines in mid-century letterforms. Spencer was the most famous exponent of these attenuated forms.

B. F. Foster introduced "muscular movement," derived from Joseph Carstairs in England, into the classroom in the 1830s. This technique depended on forearm movement, although finger movement was allowed after the student reached a certain level of proficiency. From this point, handwriting practice became more group-based, involving classroom drills.

The famous Spencerian handwriting and the similar system of Spencer's main competitors, Payson, Dunton, and Scribner, returned to the more logical combined use of arm, forearm, and hand movements. These systems still relied heavily on classroom drills and timed instruction.

All the eighteenth- and nineteenth-century systems were taught by copying and correction, so that each student would achieve an exact imitation of the style being taught. Teaching individual handwriting style was not an issue until the typewriter took over business writing and made handwriting newly personal.

Toward the end of the nineteenth century, doctors in Europe, concerned about what would now be called the ergonomics of writing, grew disturbed with the postures and methods of penmanship. A new style, Vertical Writing, unslanted and with simplified letterforms, was introduced to the United States from England and widely adopted by all the publishers of penmanship manuals, including the heirs of Spencer. The copybooks claimed that it was natural and more like print, and so it served as a foreshadowing of manuscript writing.

### The Twentieth Century

The Palmer Method was the dominant system of the twentieth century. A. N. Palmer introduced his system in the 1880s; by 1928, three-quarters of all schoolchildren in the United States were being taught by the Palmer method. The simple, unshaded letterforms were built for speed, taught by drill to establish "kinesthetic memory," and written with a new technique based on arm movement alone (i.e., no finger movement). Unfortunately, while the students remembered the drills all their lives, their handwriting was not particularly successful. Tamara Thornton suggests that the penmanship drill was used especially in cities as lessons in conformity, to assimilate immigrants into mainstream citizenry.

### Manuscript Writing and Other Systems

In 1913 the English calligrapher Edward Johnston gave a lecture at a teachers' conference in which he recommended that the student use a broad-nibbed pen and, starting from simple, rounded, Roman letterforms, achieve a formal italic hand, which would develop into a decent, useful, everyday handwriting. Inspired by the lecture, a group of educators developed *manuscript writing* (also known as *ball-and-stick* or *print-script*), simplified letterforms based on circles and straight lines. This system was, however, not quite what Johnston had in mind.

Until this time, it should be emphasized, children started writing a cursive script from the beginning. Marjorie Wise, an English educator, brought manuscript writing to the United States in 1922, where it was first adopted by progressive schools, and rapidly increased in popularity to the extent that manuscript writing was included in the Palmer company materials. A major advantage of the system was that children could start learning to write at a younger age, with less developed motor skills. With manuscript writing, reading and writing were taught

in parallel for the first time. Also, the introduction of manuscript writing was associated with the idea that children want to learn to write to communicate, although creative writing would not be standard until the 1950s.

There is still controversy over manuscript writing in the early twenty-first century; advocates say it is closer to modern type styles and so easier for the beginner to learn; critics point out the difficulty of transition from print-script to cursive, or the disadvantages of never taking up cursive at all, a system which also has its advocates. There is a wide variety of manuscript writing programs and styles. The early ones had the disadvantage of pairing their geometric print-scripts with contemporary cursives (Palmer in the United States and Vere Foster in Britain), which were quite different. Schemes were developed with more developmental logic between print and cursive, including Marion Richardson's in the United Kingdom and Donald Neil Thurber's D'Nealian in the United States.

Some advocate starting with cursive, citing advantages for early writers in not needing to think where to start each letter, and a clearer division between words. This new idea (which is, of course, an old one) is the standard method in France and Germany. In France's carefully thought-out system, children start preparatory exercises at age three, and are surrounded by signs and texts in a nationally standardized script, all of which help the student learn handwriting earlier and with more success (but less individuality) than American practices.

Calligraphers and other historians of letterforms, including Alfred Fairbank in England, Paul Standard in New York, and Lloyd Reynolds in Oregon, have been advocating italic forms since the 1930s. Italic forms have the simplest transition from basic letterforms to mature cursive writing, and allow for considerable individualization.

Participants in the debate over handwriting education in the twentieth century included not only calligraphers and publishers of the educational materials, but also academics, including statisticians and psychologists. The scientists developed quantitative handwriting scales to evaluate handwriting starting in 1909, but their advice that handwriting required the use of not just Palmerian arm movements, but also the coordinated movements of finger, hand, and wrist, were ignored for decades.

Throughout the twentieth century, both publishers and researchers concentrated on reading

rather than writing. Classroom teachers, often left with little official encouragement and training, pursued their own ways.

Contemporary handwriting research has focused on issues such as type of script, the use of evaluative scales, handedness, ergonomics (grip and posture), tools (writing instrument and paper), and, occasionally, teaching methods, including teacher training and use of pre-writing activities. While no one writing style or approach has been shown to be "the best," consistency of model through early grades does appear to be important, as long as the system is well thought-out.

Left-handedness is no longer disapproved of; instruction in this field concentrates on the different techniques needed to aid the left-handed writer, especially with appropriate grip and paper position. Some individual variation in grip is now considered appropriate for both right- and left-handed writers; however, it is important for the teacher to know which grips will lead to handwriting dysfunctionality, including cramps and lack of speed.

A variety of writing implements is also now considered appropriate, with the student and teacher choosing the one that feels best. Fat pencils used by early writers may lead to an inappropriate grip. Rubber or other pencil prosthetics may help students trying to overcome a bad grip.

Much work has centered on the use of lined versus unlined paper; there is some suggestion that first writers work best with unlined, but there are a variety of research results supporting other opinions.

A variety of pre-writing activities have been recommended, including drawing, painting, threading beads, building blocks, and play dough, aimed at encouraging better pencil hold, and helping to develop isolated finger movements, kinesthetic memory, and upper limb muscle tone. Montessori methods, including writing in sand, tracing letters on sandpaper, and other sensory techniques, have also proved useful.

Much attention has been paid to the handwriting training of dyslexic and learning disabled (LD) students, who need more early intervention to prevent formation of bad writing habits. It has been suggested that it might be easier for these students to start with cursive rather than manuscript writing, both because it is easier physically to write joined letters, and to forestall the switchover from print to cursive. Inconsistent models and teaching methods

within a school make progress particularly difficult for less able children.

Handwriting continues to be an important skill, a building block for success in personal expression. Teaching the teacher to diagnose and remedy problems is vital. Individual attention to students, although often difficult or impossible given large classes, is necessary to achieve good results—pupils with writing that is legible, flowing, and individual.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; LANGUAGE ARTS, TEACHING OF.

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JANE RODGERS SIEGEL

### HANNA, PAUL R. (1902–1988)

An educator initially trained in elementary education, Paul R. Hanna gained his greatest fame in both social studies and international education.

Hanna was born in Sioux City, Iowa, his father a Methodist minister and his mother the daughter of Swiss immigrants. He entered Hamline College (now Hamline University), and upon graduation in 1924 he enrolled at Teachers College, Columbia, from which he earned an M.A. in 1925 and a Ph.D. in 1929. He served as superintendent of schools in West Winfield, New York, from 1926 through 1927. On the faculty of Teachers College from 1929 through 1934, Hanna then joined the Stanford University School of Education, from whence he retired in 1967, having served a brief term as acting dean in 1963. After retiring he was a senior research associate at the Stanford-based Hoover Institution for War, Revolution and Peace and he continued his extensive work in international education, which he had begun while at Stanford.

Hanna was a pioneer in a number of areas of school curriculum. In the 1930s he explored the notion of the expanding environments model for elementary social studies, and beginning in the 1950s he popularized this model through his editing and writing of the Scott Foresman social studies textbook series. Hanna initiated a strong research component that focused on generalizations identified from the social sciences that could be used as a content base for the series. This was an issue first broached by the American Progressive educator Harold Rugg in the 1920s and reappears today in the demands for curricular standards in history and the various social sciences. He explored the notion of what is now called *service learning* for young people. With his wife, Jean, Hanna also produced some of the most popular spelling series for school use. These books were based on research that Paul and Jean Hanna did within and outside schools. Hanna's elementary social studies periodical series, *Building America* (coproduced and written with James Mendenhall),

was revolutionary in its approach to topics, reflecting contemporary social concerns. These monthly picture magazines attempted to present what made such issues so important to Americans. Late in life Hanna returned to the social studies as the topic of his writing.

Hanna was also committed to and instrumental in developing international education. Hanna pursued understanding of international issues through education, serving in Latin America in 1940 through 1941 within the Coordinator of Inter-American Affairs Office. Following World War II he was one of a team of educational experts that served in Germany to advise the Office of Military Government for Germany on educational affairs. Hanna was appointed in 1948 as an elementary education and teacher education specialist with the United Nations Educational, Scientific and Cultural Organization's educational mission to the Philippines, ending his term in the summer of 1949. He returned in 1952 as a director of education for the Mutual Security Agency's mission to that country, serving to June of 1953. He also traveled on missions to Burma, the Canal Zone, and Yugoslavia, eventually becoming the founder of a degree program in international education in 1952. This later evolved into the Stanford International Development Education Center (SIDECE), which includes many of the world's educational leaders as alumni.

In his last years Paul Hanna became more active with the Hoover Institution, and he and his wife founded the Paul and Jean Hanna Collection on the Role of Education in the Twentieth Century with a large financial gift in the late 1970s. They continued to add to the gift, and Hanna traveled across the country soliciting materials for the collection. The collection publishes periodic guides and thus is accessible to scholars worldwide.

*See also:* SOCIAL STUDIES EDUCATION.

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MURRY NELSON

## HARPER, WILLIAM RAINEY (1856–1906)

The first president of the University of Chicago, William Rainey Harper was a leading figure in the development of the modern university in the United States. He was born in New Concord, Ohio, and was considered an academic prodigy, enrolling at age ten as a freshman at Muskingum College where he studied language and music. After graduation at age fourteen, he went to Yale and earned a Ph.D. in Philology in three years. While in graduate school he courted Ella Paul, daughter of the president of Muskingum College. They were married a few months after Harper completed his Ph.D.

Following his advanced studies at Yale, Harper was a teacher and principal in Tennessee and Ohio before accepting an instructorship in Hebrew Theology at the original University of Chicago. He became a full professor of divinity in 1880. In 1886 he was named president in the university's final year.

Upon the closing of the university he went to Yale as professor of Semitic languages in the graduate department and instructor in the divinity school. He taught Hebrew, Assyrian, Arabic, Aramaic, and Syrian. He continued to oversee his summer schools, journals, correspondence school, and printing office. Soon he branched out into lecturing, and began giving courses on the Bible to the public, finding a new means by which he could expound on its origins.

## The University of Chicago

Harper's reputation as a prodigious scholar of religion, combined with his Baptist affiliation, attracted the attention of John D. Rockefeller, who was making plans and generous donations for the founding of a university. Harper accepted Rockefeller's invitation to be the first president of the new University of Chicago in 1891, and served fourteen years until his death in 1906 at the age of forty-nine.

Although Harper was impressive as a scholar, his enduring contribution to American higher education was as an organizational genius and innovative leader. He was gregarious, and worked well with civic leaders and donors in Chicago. Harper was unabashedly ambitious in his plans for the new University of Chicago, and transformed that zeal into successful and even ruthless recruitment of talented faculty, students, and administrators. He gained the envy and scorn of college presidents across the nation when he "raided" the faculty of Clark University in order to enhance the behavioral sciences and psychology departments at Chicago. In concert with Professor Albion Small of the sociology department, whom Harper named dean, the University of Chicago pioneered such innovations as an elaborate bureaucracy of academic departments and ranks. In sum, Harper housed a modern, innovative university in the historic motifs of a monumental Gothic Revival campus that was the pride of the city.

Harper was known as Chicago's "Young Man in a Hurry." As president of the University of Chicago, Harper understood and thrived in the setting of a complex, multipurpose institution. He added new features such as a two-year junior college and an extensive summer school. He planned and obtained generous funding for scientific laboratories, an observatory, a university press, a graduate school with numerous Ph.D. programs, research institutes, and a library. At the same time he also emphasized intercollegiate football with a magnificent stadium geared to a large spectator audience. His hiring of Yale's Amos Alonzo Stagg as football coach and athletic director was instrumental in making the University of Chicago Maroons the dominant champions of the Western (Big Ten) conference. And Stagg, with Harper's approval, created the prototype for the highly commercial athletic department that had direct access to the president and the board of trustees, with little accountability to faculty governance.

Although Harper was an historian of religion, as a campus leader he felt no deference to academic tra-

ditions, whether in admissions examinations or degree requirements. He endorsed the coeducation of men and women. He relied on advertising, billboards, and mass mailings to promote all facets of campus programs and activities. He was committed to systematic public relations and fund raising. He served on numerous boards and committees in the city and nation. The University of Chicago was to be a young, modern university that was central to a dynamic metropolitan area, and that created the national prototype for a truly great American university.

## Contribution to Academia

In 1905 Harper's doctors discovered that he had cancer. In his final months he published a book about education; revised two scriptural articles; published a biblical text; and finished his greatest piece of scholarly work, his *Commentary on Amos and Hosea*. With his characteristic energy, Harper even on his death bed was busy making plans for his elaborate funeral procession, including detailed instructions for Chicago faculty to march wearing full academic regalia.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; UNIVERSITY OF CHICAGO.

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JASON R. EDWARDS  
JOHN R. THELIN

## **HARRIS, WILLIAM T. (1835–1909)**

An important educational philosopher and statesman of the late nineteenth century, William Torrey Harris served as the chief administrator of the St. Louis Public Schools from 1868 to 1880 and as the United States Commissioner of Education from 1889 to 1906.

Beginning his career in 1857 as an elementary school teacher in the St. Louis public school system, Harris progressed through the ranks, becoming superintendent in 1868. During this same period, his life as a philosopher flourished. He founded the *Journal of Speculative Philosophy* in 1867, and became an important part of a small group of scholars and educators who studied the German philosopher Georg William Friedrich Hegel, a community that would become known as the St. Louis Philosophical movement.

Like Horace Mann, Harris was an advocate of the free common public school. He was an egalitarian who helped to extend the reach of the school, and provided a national model in St. Louis for the kindergarten in the school system. He believed in the separation of church and state in public schooling and reinvented the nature of school discipline by criticizing corporal punishment and favoring self-discipline that was based on internalized moral values. He made the library a normal feature of the school's infrastructure, expanded foreign language education in the curriculum, defended the importance of coeducation, was open minded about new pedagogical ideas (including Pestalozzi's object teaching), and emphasized the importance of perpetual self-education. He worked to universalize public education across class, gender, and racial lines, seeing the school as fundamentally a child-saving agency, and served under four different U.S. presidents during his seventeen-year tenure as Unit-

ed States Commissioner of Education. Many of his views on schooling can be discerned from the twelve annual reports he wrote for the St. Louis public schools during his time in the superintendent's office and from the various reports he authored as U.S. Commissioner of Education.

His philosophical life overlapped with his actions as a school leader. A dutiful follower of Hegel, Harris's philosophy of education elevated the importance of freedom and reason—and self-direction as it was guided by the institutions of civilization. Schooling was one of the processes that allowed youth to rise above their inborn savagery and to participate in a civilizing life. The school was supposed to bring students face-to-face with the accumulated wisdom of humanity and to teach them to find their place in the spiritual nature of all existence. The core philosophical tenets in Harris's life not only played a significant role in his handling of school matters, but also kept him quite busy with philosophical disquisitions, writing essays such as "Goethe's Theory of Colors," "The Phenomenology of Spirit," and "Aristotle's Teleology." These were certainly not typical writings for a professional school administrator. The *Journal of Speculative Philosophy*, which Harris founded and edited, produced a very real contribution to philosophical discourse, highlighting the work of various important thinkers over its twenty-one year run, including John Dewey, William James, Charles Pierce, Josiah Royce, G. Stanley Hall, and George S. Morris. It also featured much of Harris's most gritty philosophical essays, an output of more than 35 articles over the life of the journal. In 1879, Harris became a faculty member at A. Bronson Alcott's Concord School of Philosophy, where he taught primarily on the topic of Hegel. He stayed there until 1888, when the school closed because Alcott died.

Harris sided squarely with a subject-centered view of learning, believing that the wisdom of humanity resided in modern academic subjects and that, for democracy to flourish, public schools had to bring this civilizing insight to the experience of all American youth. This was a prejudice reflected in Harris's influence over the Committee of Ten and the Committee of Fifteen reports, which both helped to crystallize the subject curriculum in the school. Harris, in fact, established the foundational principle of bringing the common academic curriculum to the common school, not for preparation for college but for life in a self-governing democracy.

To Harris, the nature of course study in the public school was largely reducible to what he saw as the five great divisions in the life of civilization, which he labeled “the five windows of the soul.” Two of the windows (or areas of inquiry), mathematics and geography, were committed to humanity’s conquest and comprehension of nature. The other three, literature, grammar, and history, were more connected to human life: literature speaking to literary works of art; grammar, to the study and the use of language; and history, to a multifaceted understanding of the nation’s institutions. Harris reflected these ideas in his various circles of influence. He was, for instance, the main author of the Committee of Fifteen 1895 report, which was designed to offer a course study blueprint for the American elementary school. Harris maneuvered against the American Herbartians, who sought to unify the course work in the elementary school around German philosopher Johann Herbart’s idea of curriculum concentrations, where one subject, usually literature, is made the central core of the learning experience, and other subjects are organized around on the basis of their interrelations to the core’s main features. Harris did not accept this idea of concentration, believing that the five windows of the soul would be weakened when made subordinate to one core area. Instead, he called for a kind of coordination, where each subject is given a definite place and equal attention. The Committee of Fifteen report bears the unmistakable stamp of Harris’s five windows of the soul and is an early example of the kind of subject-centeredness that would mark Harris’s ideas on the curriculum.

Harris’s dedication to the common cultural canon eventually earned him the tag of conservative among some historians, a label that some modern-day scholars have found to be unnuanced and not nearly appreciative enough of the many progressive ideas that Harris also supported. Yet, Harris was undoubtedly among the most effective critics of educational progressivism in his day. He was especially critical of ideas that failed to capture what he believed to be the intellectual and civilizing qualities of the subject curriculum. Harris held in low regard the Progressive ideas embodied in the American child study movement, American Herbartianism, and the expansion of the curriculum into manual or vocational arts instruction. For him they were essentially anti-intellectual endeavors largely wasted on youth. In this sense, Harris became the subject-centered foil

to the prevailing child-centered views favored by Progressives at the turn of the nineteenth century.

*See also:* ACADEMIC DISCIPLINES; COMMON SCHOOL MOVEMENT; MANN, HORACE; PHILOSOPHY OF EDUCATION.

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PETER HLEBOWITSH

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## HARVARD UNIVERSITY

Harvard University, the oldest educational institution in the United States, was founded sixteen years after the arrival of the Pilgrims at Plymouth, Massachusetts. Established by the Massachusetts Bay Colony in 1636 and later chartered in 1650 in what is now the oldest corporation in the Western Hemisphere, Harvard University was named for its first benefactor, John Harvard of Charlestown, Massachusetts, who, on his death in 1638, left his library and a portion of his estate to the school. In 1640 Henry Dunster became the first president and also constituted the entire faculty. For more than fifty years Harvard remained the only college in America.

It has been said that “when Harvard speaks, the country listens,” and throughout its history Harvard, as the country’s premier university, shaped the direction of education in the United States. John Harvard’s bequest was the first of the private gifts for education in America, and the act of the colony in 1636 marks the beginning of state aid to higher education in the United States. *New England’s First Fruits*, an anonymous tract celebrating the establishment of higher education in the colonies, was published in London in 1643. Among the influential colonists were a number of Cambridge (hence Harvard’s city name) and Oxford graduates who were eager to replicate the English college in the American frontier. During its early years, Harvard College offered a classic academic course based on the English university model merged with the prevailing Puritan philosophy of the early colonists. Harvard College was loosely affiliated with the Congregationalist church; not surprisingly most of its first graduates became ministers throughout New England, while other graduates entered government service or private business.

### Curriculum

Harvard College’s course of study was similar to the curricula of Cambridge and Oxford universities. Unlike the English model, Dunster first created a curriculum for Harvard that only lasted three years, but in 1652 a fourth year was added. The Harvard core curriculum became a model for American education institutions to follow, not only colleges but also grammar schools and academies that prepared students for higher learning and collegiate studies. The curriculum from its founding through the eighteenth century was theological; early nineteenth-century studies expanded the curriculum to include Latin, Greek, mathematics (including astronomy), English composition, philosophy, theology, natural philosophy, and either Hebrew or French. This prescribed course of study established a pattern for American liberal arts colleges. The most common forms of instruction were oral exercises—the lecture, the declamation, and the disputation.

Charles W. Eliot, who served as president from 1869 to 1909, transformed the college into a modern university, a feat accomplished primarily by transforming the curriculum. Although course electives existed at Harvard throughout the nineteenth century, Eliot became an unrelenting advocate of the elective system, which in turn permitted him to initiate

institutional reform where college studies could accommodate broader as well as more specialized interests of students. The elective system permitted Harvard to become more responsive to the many evolving democratic, technological, and vocational needs of society. By the turn of the twentieth century, Harvard’s elective system was the freest in the country with no subject requirements for studies beyond the first year.

### Faculty

With the expansion of the curriculum, Eliot increased the Harvard faculty from 60 to 600 members. During Eliot’s administration Radcliffe College was established for women. Eliot and others refused to admit women to Harvard but were willing to create a coordinate college that would provide a similar education for women. In 1894 the Commonwealth of Massachusetts chartered Radcliffe College; Elizabeth Cary Agassiz served as this institution’s first president. She was followed by LeBaron Russell Briggs, the former dean of students and a professor of rhetoric at Harvard.

President Abbott Lawrence Lowell, who served from 1909 to 1933, refocused the undergraduate course of study to ensure that a liberal education would include concentration on a single field as well as a distribution of course requirements among other disciplines. James Bryant Conant, who served as Harvard president from 1933 to 1953, initiated the examination of general education, which in turn served to redefine the concept of *core curriculum*, a course of study that delineated breadth in interdisciplinary fields outside the student’s major field of study. Conant’s General Education Committee, which released in 1945 the legendary Harvard Redbook, *General Education in a Free Society*, set the direction for American college and secondary curriculum for the later part of the twentieth century. Under Conant’s leadership, in 1943 Harvard and Radcliffe agreed to enroll women students in Harvard classrooms for the first time. But women would not earn Harvard degrees until the 1970s.

Recent presidents Nathan M. Pusey, Derek Bok, and Neil L. Rudenstine have each contributed significantly toward strengthening the quality of undergraduate and graduate education at Harvard while at the same time maintaining the university’s role as a preeminent research institution. “Harvard has shaped the world of higher education,” said the late Ernest Boyer, president of the Carnegie Foundation

for the Advancement of Teaching. "It's the cathedral that provides inspiration for all the others."

*See also:* ELIOT, CHARLES; GENERAL EDUCATION IN HIGHER EDUCATION; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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#### INTERNET RESOURCE

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ROBERT A. SCHWARTZ  
CRAIG KRIDEL

## HAVIGHURST, ROBERT J. (1900–1991)

Best known for his conceptualization of human development as mastery of a series of age-related cultural tasks, Robert J. Havighurst was an avid researcher, a prolific writer, and a civil rights activist. As a researcher, he conducted cross-sectional and longitudinal studies of the social, emotional, and moral development of children and adolescents in

various American subcultures (including Native Americans) as well as in several other countries. To illustrate his writing proficiency, a student pushed a large wheelbarrow filled with Havighurst's publications into the banquet hall during a celebration of his sixty-fifth birthday. His 1964 survey of the Chicago public schools drew national attention for its far-sighted yet controversial plan for school and community integration. Many of the twenty-two recommendations offered by the committee concerned the need for organizational and structural changes in the Chicago public schools. A key recommendation called for extensive decentralization of authority; another, for the creation of the modern day equivalent of "schools-within-schools."

A member of a distinguished academic family, Robert J. Havighurst was born the son of Freeman Alfred Havighurst, who was on the faculty of Lawrence College, and Winifred Weter Havighurst, who had been on the faculty until her marriage. He was the oldest of five children—four boys and one girl—and attended public schools in college towns in Wisconsin and Illinois. Following high school he attended Ohio Wesleyan University, receiving his B.A. degree in 1921. He enrolled at Ohio State University, receiving his Ph.D. in chemistry in 1924. Following receipt of his Ph.D., he went to Harvard University as a postdoctoral fellow, studying the structure of the atom and publishing papers in journals of physics and chemistry. He then spent a year on the faculty of chemistry at Miami University.

In 1928, he accepted a position as assistant professor of physics at the University of Wisconsin. He also served as an adviser in the Experimental College there. Largely as a result of his experience with the Experimental College, his interest in the problems of adolescents grew, eventually surpassing his interest in teaching the natural sciences. He left the University of Wisconsin in 1932, taking a faculty position in education at the Ohio State University Laboratory School.

In 1934 he became the assistant director for programs in science education for the General Education Board of the Rockefeller Foundation. It was here, under the guidance of Lawrence Rank, that he became involved in the study of children and adolescents. Within three years, Havighurst became the director of the board. In that role he was instrumental in the funding of research programs in child development at major universities and research centers in the United States. He was also able to provide funds

to enable refugee European scholars to resettle in the United States. Among those assisted were Bruno Bettelheim, Peter Blos, Erik Erikson, and Fritz Redl.

In 1941 Havighurst was appointed professor of education and executive secretary of the Committee of Human Development at the University of Chicago. For the next forty years, Havighurst conducted research and wrote on a variety of topics and issues.

From 1948 to 1953 he developed his highly influential theory of human development. The centerpiece of this theory was the developmental task. He defined a developmental task in the following manner:

A development task is a task which arises at or about a certain period in the life of the individual, successful achievement of which leads to his happiness and to success with later tasks, while failure leads to unhappiness in the individual, disapproval by society, and difficulty with later tasks. (1953, p. 2)

As a concept development tasks were able to merge the relative influences of nature and nurture. As Havighurst wrote:

Nature lays down wide possibilities in the developing of the human body, and which possibilities shall be realized depends on what the individual learns. This is true even of such crude biological realities as feeding habits and sexual relations, while the more highly social realities of language, economic behavior, and religion are almost completely the product of learning at the hands of society. (1953, p. 1)

To foster development, then, educators had to introduce students to these critical tasks at the "right time." This "right time" was described as the "teachable moment." "When the body is ripe, and society requires, and the self is ready to achieve a certain task, the teachable moment has come" (1953, p. 5).

In the 1950s and 1960s Havighurst directed a decade-long study of middle and old age. The results of this study, combined with his subsequent research, altered conventional wisdom about the aging process. His interest in life-span development continued throughout his life. He studied changes in the sex role behavior of men and women over fifty, the adaptation to the retirement process by male sociologists and psychologists, and alternative work schedules for older workers.

From 1967 through 1971, Havighurst directed the National Study of Indian Education, which was funded by the U.S. Office of Education. Native Americans were involved in planning the study as well as in the field work and data analysis. The results indicated that education for Indian youth across the United States varied widely according to numerous factors such as sources of funding, location, curriculum, faculty, degree of isolation, and cultural differences. Recommendations included finding ways for Indians to have an increased voice in their education and the establishment of a national Commission on Indian Education.

In the late 1960s and 1970s, Havighurst focused his attention on the problems of urban education. He conducted a study of public high schools in the forty-five largest cities in the United States, examining educational goals, school structure and organization, staff characteristics, curriculum, student activities, student activism, and school-community relations. He concluded that there was more and deeper segregation and separation of high school students of different socioeconomic and ethnic groups in 1969 to 1970 than there was ten or twenty years before. In 1977, at age seventy-seven, he coedited a book in which he developed a series of policies and practices for the improvement of big-city schools based on his research.

Havighurst continued to engage in research and writing well into his eighties, publishing six journal articles between 1980 and 1986. In his last published article, "The Challenge: 1985–2000," he argued that the challenge for the future of a democratic society is to develop educational programs that foster development in the areas of race and ethnic relations, civil rights, international relations, and gender role. At age eighty-six, there were still new developmental tasks. And, at age eighty-six, Havighurst was still looking toward the future.

*See also:* DEVELOPMENTAL THEORY; EDUCATIONAL PSYCHOLOGY; MORAL DEVELOPMENT; URBAN EDUCATION.

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LORIN W. ANDERSON

## HEAD START

See: COMPENSATORY EDUCATION, *subentry on* UNITED STATES.

## HEALTH AND EDUCATION

The twentieth century saw extraordinary and dramatic improvements in human health. Life expectancy more than doubled, with most of the increase within the century's second fifty years. Improved income, higher levels of education, more and better food, better sanitation, public sewage systems, and new knowledge underpin these gains. This entry focuses on the effect of male and female education levels within the context of this broader range of determinants. The general discussion is illustrated with a more specific treatment of the child mortality rate across countries for the three decades from 1960 to 1990. Child mortality rate is defined as the number of deaths per 1,000 live births between birth and exact age five years; at the start of the twenty-first century the rate varies from less than 10 per thousand for high income countries to over 200 in some poor countries.

Education level has been constantly found to be related to the health status at the levels of individual, household, and country, usually with a stronger effect than that of income. Based on Jia Wang and Dean Jamison's 1997 estimations, one additional year of education for the female population can avert six deaths per thousand in child mortality rates. John Peabody and colleagues found that child

mortality rates in 1993 and 1994 Bangladesh varied across the mothers' education level: 134 deaths per thousand for mothers with some primary education; 105 for mothers who completed primary education; and 90 for mothers with secondary or higher education.

In consequence, one way governments can improve health is to expand investment in schooling, particularly for girls. The World Bank's 1993 World Development Report concluded that education increases the opportunities for households, particularly for mothers, to seek access to information and to make better use of the financial resources to shape the diets, fertility, health care, and other lifestyle choices that have a crucial impact on the health of household members. Children's health is affected much more by the mother's education level than the father's. Educated mothers tend to marry and start families later, factors that diminish the child health risk associated with early pregnancies. Educated mothers are also more likely to use preventive care and delivery assistance, maintain better household hygiene, seek immunization more frequently, and have better use of medical services. According to the World Bank study, a 10 percent increase in female literacy rates in thirteen African countries in the period of 1975 through 1985 reduced child mortality rates by 10 percent, while a 10 percent increase in male literacy rates had little to no effect in decreasing child mortality (p. 42).

To give a sense of the methods and recent results of analyses of education's impact at the country level, it may be valuable to provide a brief illustration. Improved data sets now exist that include the following variables on individual countries at different points in time:

- Child mortality rates for all children, for girls, and for boys
- Real gross domestic product (GDP) per capita adjusted for purchasing power parity, expressed in 1985 U.S. dollars
- Education level for the female population and for the male population, calculated as the average number of years of education for the population aged 15 and over, according to Robert Barro and Jong-Wha Lee.

These variables are measured at a five-year interval for the period of 1960 through 1990 and they are available for 94 countries. The average years of education for the female and male population are 4 and

4.9 years for the period of 1960 to 1990. The mean child mortality rate is 75 deaths per 1,000 live births for boys, 69 deaths for girls, and 63 for both boys and girls. The income per capita has a mean of \$2,368.

Education, income, and time (as a proxy for technical progress) are used by Anthony Bryk and Steve Raudenbusch as determinants of child mortality measures using hierarchical linear modeling (HLM). Jamison and Wang's 2001 study gives detailed information on data and methodology.

Three sets of analyses, with male education, female education, and both female and male education levels as the education measure, were done to assess gender differences in the effect of education on child mortality. Jamison and Wang found that an additional year of male education level is associated with a 3 to 4 percent reduction in child mortality. But the magnitude of the effect is statistically insignificant, whether it is child mortality for the whole population, for girls only, or for boys only. Female education level, on the other hand, has a statistically significant effect on all three measures of child mortality rates. The effect is about a 10 to 11 percent reduction in child mortality. Interestingly when the effect of time (or technical progress) is allowed to be country-specific the estimated effects of income and education on child mortality decline. That said, there is historical evidence to suggest that prior to major gains in medical science in the twentieth century, education had much less of an effect on mortality than today. The effects of new knowledge and of education appear to work together to contribute to the decline in child mortality.

This example confirms the existing literature on health and education in finding that higher education levels are associated with better health. A more careful look, however, finds that female education level has a much stronger effect in reducing child mortality rates than male education level, independent of whether it is the child mortality for boys only, for girls only, or for both.

*See also:* GENDER ISSUES, INTERNATIONAL; INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION, *subentry on* UN AND INTERNATIONAL AGENCIES.

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## HEALTH CARE AND CHILDREN

The United States has the most sophisticated and advanced medical care in the world, attracting people from around the globe for treatment of complex and difficult health conditions. The extent to which individuals living in this country benefit from this care, however, depends to a great degree on whether they have health insurance. Studies consistently show that persons without health insurance are far less likely to use health services than those with health insurance. In addition, the number of people without health insurance is on the rise, providing more cause for concern. More than 42 million Americans under the age of sixty-five were completely uninsured in 1999.

While children's access to care is a function of a wide range of factors, including family characteristics and the organization of the health system, financial barriers such as lack of health insurance play a significant role. Health insurance is by far the most important predictor of whether children will receive needed health care. Uninsured children receive fewer aggregate annual physician visits than their insured counterparts, and they are significantly less likely than publicly insured poor children to identify a usual source of routine care.

Despite the predominant role of health insurance in access to health care, sizable numbers of children in this country are uninsured. While no age group is immune from the threat of losing health insurance, children make up a significant proportion of the uninsured. In 1999, 10 million children, nearly 14 percent of all children in the United States, were uninsured.

### The Importance of Access

Most children are healthy. Some may ask, therefore, why it is important for children to have access to health care. In fact, despite relatively good health, children do need access to regular health care, as well as access to special services when acute or chronic conditions occur. Moreover, children are distinct from other age groups in several important ways. For one thing, they are entirely dependent on their adult caregivers for health services. Children are incapable of making decisions about health care, purchasing services or insurance, or making judgments about the appropriateness of services. Children are also unable to voice preferences or to influence decisions made on their behalf. Thus, it is the responsi-

bility of adults to represent their interests and to ensure that their needs are met.

Children's health needs are also significantly different from those of adults. By nature, children grow and develop at rapid rates, placing them at special risk of being affected by illness and injury. If health problems are not identified and treated, they can affect a child's cognitive, physical, behavioral, and emotional development. It is therefore essential to identify and treat health conditions early to prevent or minimize the impact on overall growth and development.

Finally, the type, severity, and frequency of health conditions that children experience also differ from adults. Children generally experience a wider variety of health problems, but of less severity. Conversely, adults are more likely to have chronic degenerative conditions than children. But certain childhood conditions, though relatively mild in single instances, have the capacity to lead to long-term disabilities in children. For example, chronic otitis media (ear infections), if unchecked, can lead to hearing loss, and possibly learning disabilities. Other rare but severe conditions, such as spina bifida and sickle cell disease, manifest themselves early and require ongoing monitoring and expensive, tertiary care.

### The Role of Insurance

The groups most at-risk of being uninsured are adolescents, minorities, children living with a single parent, and children in poor and near-poor families (especially working families living at the near-poverty level). Family income and ethnicity are the factors most associated with being uninsured. In 1990, Hispanic children were more than twice as likely to be uninsured as non-Hispanic white children. Similarly, children in poor and near-poor families were more than twice as likely to be uninsured as children in more advantaged families.

The percentage of children without health insurance grew sizably during the late 1970s and the 1980s. Between 1977 and 1987, the percentage of children without any form of health insurance rose by 40 percent. Since then, the overall percentage of uninsured children has remained relatively stable, though the distribution of children within various sources of insurance has dramatically shifted. Between 1987 and 1993, the proportion of children covered by private, employment-based insurance

declined 12 percent, from 60.7 percent to 53.6 percent. Meanwhile, the proportion of children covered by Medicaid increased from 15.6 percent to 23.9 percent, and the number of children covered by Medicaid climbed from 10.0 million in 1988 to 20 million in 1999, reflecting a fundamental shift in the type of insurance children hold.

A number of factors account for this dramatic shift in the distribution of children's insurance coverage. A nationwide recession, in addition to the rising cost of medical care, affected the ability of insurance companies to provide increasingly expensive health insurance benefits. A rapid shift of jobs away from industries such as manufacturing, which typically have generous benefits, to service jobs industries, which typically offer few, if any, benefits, also contributed to changes in children's insurance status.

The large increase in the number of children covered by Medicaid is the result of legislative changes enacted by the Congress and the states in the middle and late 1980s, as well as the recession that pushed more families into poverty during the early 1990s. Following more than a decade of retrenchment in Medicaid eligibility at the state and federal levels, Congress enacted a series of Medicaid expansions between 1984 and 1990. These laws were designed to gradually cover additional low-income children and pregnant women, and to increase uniformity in income-eligibility levels across states. Virtually all poor children (with incomes below the federal poverty level) are eligible for Medicaid (with the exception of those who are undocumented).

These Medicaid expansions have produced important results. Numerous studies demonstrate that the availability of Medicaid has resulted in improved access to care among low-income children. Poor children with Medicaid were far more likely than poor uninsured children to have access to care, based on multiple dimensions of access, including the presence of a usual source of care, frequency of unmet health needs, and the use of medical services. Among adolescents, the impact of Medicaid has been even more dramatic. Although poor adolescents were 35 percent more likely than nonpoor adolescents to have waited two or more years between physician contacts, poor adolescents with Medicaid coverage used physician services at rates similar to nonpoor adolescents. The availability of Medicaid has also led to improvements among children in terms of the use of preventive services. A full year of

Medicaid increases the chances that a child will have a well-child visit by 17 percent, and also increases compliance with national guidelines from the American Academy of Pediatrics by 13 percent.

The State Children's Insurance Program (SCHIP), established in 1997, provides additional assistance to low-income children. This program is designed for uninsured children who are not eligible for Medicaid because their families' incomes are too high, but for whom private insurance is unaffordable. Close to 90 percent of these uninsured children have at least one parent who works, but for many of these families affordable health coverage is not offered through their employer. As of 2000, nearly 2 million children were enrolled in the program nationwide.

Unfortunately, both Medicaid and SCHIP suffer from under-enrollment. Of the 10 million uninsured children in the United States, more than half are likely eligible for either program. Studies show a variety of reasons for under-enrollment, including negative views about public insurance programs, confusion about eligibility, and complex enrollment processes. In addition, studies show that potential enrollees associate Medicaid with burdensome eligibility requirements, difficult enrollment processes, demeaning attitudes of eligibility workers, and inadequate services by health care providers. Other research has found that some immigrants fail to enroll in public programs because of their fear of potential ramifications for their immigration status. There may also be problems associated with communicating clear information about the programs. Research indicates that many low-income parents have not heard of SCHIP or are confused about their children's eligibility. Whatever the reasons, improvements in access to health care cannot be reasonably expected as long as eligible children are not enrolled in available programs.

### **The Limitations of Insurance**

Extending health insurance to low-income children has a beneficial impact on access. However, simply providing insurance does not mean that children will necessarily have full access to health care, especially among low-income children. Indeed, insured low-income children use fewer services than more affluent, insured children. Moreover, poor children with insurance are less likely to go to a private physician's office and more likely to utilize community health centers, compared to nonpoor children with

insurance. There are a number of reasons for these differences. The families of poor children with insurance face nonfinancial barriers to health care that insurance cannot address, such as lack of transportation, lack of child care, inconvenient location of services, and service hours that conflict with work. Children of immigrant families may face additional barriers, such as an inability to communicate in their primary language, fear of deportation, and cultural conflicts with Western medicine. For these reasons, providing insurance without developing a delivery system to serve the needs of low-income children does not produce the desired outcome of improved access to quality health care.

### Conclusion

All children need health care, whether for regular check-ups, for episodic health problems such as ear infections, or for chronic conditions. Because health services are relatively expensive, children's access to care is largely dependent on whether or not they have health insurance. Unfortunately, far too many children are not covered and therefore, do not receive needed care. One solution is to assist eligible children to enroll in public programs like Medicaid and SCHIP. As indicated, approximately half of all uninsured children are eligible for these programs. To achieve this goal, the process by which children enroll must be simplified, eligibility rules clarified, and any negative stigma about public programs removed.

Other efforts will also be required for uninsured children who are not eligible for these programs. Many of these children are undocumented, which means that rules preventing them from participating in Medicaid and SCHIP would need to be revised, or special programs must be created for them.

**See also:** HEALTH AND EDUCATION; HEALTH EDUCATION, SCHOOL; HEALTH SERVICES, *subentry on* SCHOOL; MANAGED CARE AND CHILDREN.

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## HEALTH, CHILDREN'S PHYSICAL

*See:* HEALTH EDUCATION, SCHOOL; HEALTH SERVICES; IMMUNIZATION AND CHILDREN'S PHYSICAL HEALTH; NUTRITION AND CHILDREN'S PHYSICAL HEALTH; SLEEP AND CHILDREN'S PHYSICAL HEALTH.

## HEALTH EDUCATION, SCHOOL

School health programs are said to be one of the most efficient strategies that a nation might use to prevent major health and social problems. Next to the family, schools are the major institution for providing the instruction and experiences that prepare young people for their roles as healthy, productive adults. Schools can—and invariably do—play a powerful role in influencing students' health-related behaviors. Elementary, middle, and secondary schools are therefore prime settings for public health programming: in 1999, nearly 99 percent of young people ages seven through thirteen and 96 percent of those between fourteen and seventeen were enrolled in school in the United States. Appropriate school interventions can foster effective education, prevent destructive behavior, and promote enduring health practices. For many young people in their formative years, school may, in fact, be the only nurturing and supportive place where they learn health information and have positive behavior consistently reinforced.

In addition, health and success in school are inextricably intertwined. Good health facilitates chil-

dren's growth, development, and optimal learning, while education contributes to children's knowledge about being healthy. Studies of young people have found that health-risk behaviors negatively affect: (1) education outcomes, including graduation rates, class grades, and performance on standardized tests; (2) education behaviors, including attendance, dropout rates, behavioral problems, and degree of involvement in school activities such as homework and extracurricular pursuits; and (3) student attitudes, including aspirations for postsecondary education, feelings about safety at school, and positive personal attitudes.

Schools cannot achieve their primary mission of education if students and staff are not healthy and fit physically, mentally, and socially. Children who are sick, hungry, abused, using drugs, who feel that nobody cares, or who may be distracted by family problems are unlikely to learn well. One child's lack of progress can impede the learning of the other children in the classroom as well. Education reform efforts are bound to be of limited effectiveness unless health-related barriers to learning are directly addressed. As Harriet Tyson writes, "First among those barriers are poor physical and mental health conditions that prevent students from showing up for school, paying attention in class, restraining their anger, quieting their self-destructive impulses, and refraining from dropping out" (p. 2). When surveyed, most parents and members of the general public consistently rate health as an important topic that schools should address.

Although reliable data on the implementation of school health programs are lacking, there are indications that few schools operate comprehensive, coordinated programs designed to systematically address the nation's major health risks. For example, 71 percent of high school students surveyed in 1999 did not attend a daily physical education class, and 44 percent were not even enrolled in a physical education class. Only 72 percent of the nation's schools participated in the federal School Breakfast Program during the 1999-2000 school year, despite the well-documented health and educational benefits of doing so. In 1994 health education staff were involved in joint activities or projects with staff from other components of the school health program in only 65 percent of middle and high schools. Health services facilities were not available in 32 percent of all middle and high schools in 1994. During the 1998-1999 school year, 76 percent of public high

schools and 55 percent of public middle schools operated vending machines, most of which were located in or near the cafeteria. The most common types of food offered in school vending machines are soft drinks, chips, desserts, and candy. Few schools are known to sponsor health promotion activities for staff.

Educators should work to ensure that every elementary, middle, and high school establishes and maintains comprehensive, well-coordinated school health programs. The American Public Health Association (APHA) supports the definition offered by the Institute of Medicine: “A comprehensive school health program is an integrated set of planned, sequential, school-affiliated strategies, activities, and services designed to promote the optimal physical, emotional, social, and educational development of students. The program involves and is supportive of families and is determined by the local community, based on community needs, resources, standards, and requirements. It is coordinated by a multidisciplinary team and accountable to the community for program quality and effectiveness . . .” (p. 2). There is no single ‘best’ comprehensive school health program model that will work in every community. Programs must be designed locally, and collaboration among all stakeholders in the community is essential if programs are to be accepted and effective.

### Characteristics of Effective Programs

There are eight elements that characterize high-quality school health programs. These elements are described below.

**1. A focus on priority behaviors that affect health and learning.** School health programs were initiated early in the twentieth century, in large part to address the numerous infectious diseases afflicting children. At the beginning of the twenty-first century, the etiology of health risks facing young people—and the adults they will become—are most often social or behavioral. The Division of Adolescent and School Health (DASH) of the Centers for Disease Control and Prevention (CDC) documents that six health-risk behaviors account for nearly two-thirds of the morbidity and mortality in adolescents. These behaviors are tobacco use; unhealthful dietary behaviors; inadequate physical activity; alcohol and other drug use; sexual behaviors that may result in HIV infection, other sexually transmitted diseases, or unintended pregnancy; and behaviors that may result in intentional injuries (i.e., violence and sui-

cide) and unintentional injuries (e.g., motor vehicle crashes).

The leading causes of death among adults—including cardiovascular disease, cancer, and diabetes—are closely linked to these health-risk behaviors. In addition, these behaviors tend to co-occur, they tend to be established in youth, and they are preventable. Children and adolescents need to learn, and to practice, making health-enhancing choices before health-damaging behaviors are initiated or become ingrained.

CDC’s Youth Risk Behavior Surveillance System provides reliable national data on the prevalence of specified behaviors. Most states, and some large cities, also conduct the Youth Risk Behavior Survey. Results from these state and city surveys, and other available state and local data from education and health agencies, can be used to plan school health program activities.

**2. A foundation of support for every child and adolescent.** Whether a student engages in health-debilitating or health-enhancing behaviors depends on the interplay of assets and deficits in the influential support systems surrounding the student, including friends, peers, family, community, and schools. Three protective factors have been found to frequently help young people overcome stress and adversity to become healthy competent adults with a sense of purpose: (1) caring and supportive relationships, (2) high expectations for success, and (3) active participation in school and community activities. For example, the ongoing National Longitudinal Study of Adolescent Health has found that students who feel “connected” to schools are more likely to adopt health-enhancing behaviors (respectful and caring teachers are among the factors related to students feeling connected). Applying a “positive youth development” approach, schools should aim to develop a full range of “life competencies” among students—not only academic and vocational competencies but also healthful living skills, personal and social skills, ethics, and citizenship.

**3. A complete set of program components.** Many national organizations and membership associations, as well as CDC’s DASH, promote a school health program model consisting of eight mutually reinforcing components that communities can shape to fit their needs and circumstances. These eight basic components are health education; school health services; a healthy school environment; physi-

cal education; school nutrition services; counseling, psychological, and social services; health-promotion programs for staff; and family and community involvement.

*Health education* consists of a planned, sequential curriculum taught daily in every grade (pre-kindergarten through twelve) that addresses the physical, mental, emotional, social, and spiritual dimensions of health and is designed to motivate and help students maintain and improve their health, prevent disease, and avoid health-related risk behaviors. A quality curriculum allows students to develop and demonstrate increasingly sophisticated health-related knowledge, attitudes, skills, and practices while addressing a variety of topics, including personal health, family health, community health, consumer health, environmental health, sexuality education, mental and emotional health, injury prevention and safety, nutrition, prevention and control of disease, and substance use and abuse. The National Health Education Standards, jointly developed in 1995 by APHA, the American Cancer Society (ACS), the American School Health Association (ASHA), the American Association for Health Education (AAHE), and the Society of State Directors of Health, Physical Education and Recreation (SSDH-PER), provide useful guidance for curriculum development, instruction, and assessment of student performance. Well-implemented health education has been shown to improve the adoption of health enhancing behaviors and school achievement.

*School health services* are provided for students and are designed to appraise, protect, and promote health. These services are designed to ensure access and/or referral to primary health care services, foster appropriate use of primary health care services, prevent and control communicable diseases and other health problems, provide emergency care for illness or injury, promote and provide optimum sanitary conditions for safe school facilities and environments, and provide educational and counseling opportunities for the promotion and maintenance of individual, family, and community health. Services should be provided by qualified professionals such as physicians, nurses, dentists, and other allied health personnel. Health services via school-based clinics that are linked with enhanced academic services have been associated with reduced absenteeism, improved academic achievement, and improved health status.

Although only 53 percent of states required schools to offer school nurse services in 1994, nearly every school had provisions for administering first aid (99%), administering medications (97%), and conducting vision, hearing, and height/weight screenings (89%). However, fewer schools provided less traditional services, such as mental health counseling (56%) or conducting health-risk appraisals to help students determine their lifestyle practices (36%). School-based or school-linked health centers are becoming more common, however, and many of these centers offer a wide range of physical and mental health services. A national survey identified a total of 1,157 school-based health centers that provided in-school care to children during the 1997–1998 school year. Thirty-seven percent were housed in high schools, 16 percent in middle schools, 34 percent in elementary schools, and the remainder were off-site.

A *healthy school environment* attends to the physical and aesthetic surroundings and to the school's psychosocial climate and culture, thus protecting the health and safety of students and staff and promoting health-enhancing behaviors. Physical environmental concerns include indoor and outdoor safety hazards, biological or chemical agents that might be detrimental to health, air temperature and quality, water quality, sanitation, precautions for infection control, lighting, noise levels, and access for persons with disabling conditions. The psychological environment includes the interrelated physical, emotional, and social conditions that affect the well-being and productivity of students and staff, including physical and psychological safety, positive interpersonal relationships, recognition of needs and successes of the individual, and support for building self-esteem in students and staff. In considering the school environment, there are things that both large and small schools can implement. In fact, a large body of research in the affective and social realms overwhelmingly affirms the superiority of schools with small enrollments.

Bullying and harassment can have damaging effects on students' health and well-being. Those who manage school environments also need to actively encourage health-enhancing behaviors by assuring that nutritious foods are available as an affordable option whenever food is served or sold, providing convenient and appealing opportunities for physical activity, enforcing tobacco-free policies, and con-

ducting educational campaigns to promote positive health behaviors.

*Physical education* is a planned, sequential curriculum and program of physical activity taught daily in every grade. Cognitive content and learning experiences should be provided in a variety of activity areas, such as basic movement skills; physical fitness, rhythms and dance; games; team, dual, and individual sports; tumbling and gymnastics; and aquatics. Quality physical education should promote lifetime activities and sports that students can enjoy and pursue throughout their lives. The National Standards for Physical Education developed by the National Association for Sport and Physical Education (NASPE) provide useful guidance for curriculum development, instruction, and appropriate assessment of student performance.

Physical education needs to be taught by qualified teachers. Studies have found that well-prepared physical education specialists teach longer and higher-quality lessons than those not professionally prepared in physical education. Elementary schools also need to provide daily periods of supervised recess, and middle schools and high schools should provide multiple opportunities for all students to voluntarily participate in intramural programs, sports and recreation clubs, and interscholastic athletics. Links with community-based sports, recreation, and fitness programs should also be sought and fostered.

Studies among adolescents have demonstrated that physical activity is consistently related to higher self-esteem and to reduced levels of anxiety and stress. Conversely, low levels of physical activity are associated with high-risk behaviors such as cigarette smoking and marijuana use. Studies have found that students who participate in extracurricular programs tend to have higher grade point averages, better attendance records, lower dropout rates, and fewer discipline problems than students generally.

*School nutrition services* promote the health and education of students through access to a variety of nutritious and appealing meals, nutrition education, and a school environment that encourages students to make healthy food choices. The school food-service program can provide opportunities for students to practice healthful eating on a daily basis—more than half of the young people in the United States get one of their three major meals from school food programs, and 10 percent get two of their three main meals at school.

Sound school food-service programs reflect the current U.S. Dietary Guidelines for Americans (DGA) and other quality criteria necessary to achieve nutrition integrity. These programs provide pleasant eating areas for students and staff with adequate time for unhurried eating, offer opportunities for students to experience learning laboratories for classroom nutrition and health education, and serve as resources for linkages with nutrition-related community services.

Services should be provided by qualified child nutrition professionals. Studies have shown that chronically undernourished children attain lower scores on standardized achievement tests, especially tests of language ability. These children are also more likely than other children to become sick, to miss school, and to fall behind in class. Undernourished students are often irritable, have difficulty concentrating, and have low energy. School nutrition services have been associated with increases in learning, and studies of low-income elementary school students have shown that students who participate in the federal School Breakfast Program have greater improvements in standardized test scores and math grades, and reduced rates of absence, tardiness, and psychosocial problems, than children who qualify for the program but do not participate.

*Counseling, psychological, and social services* provide broad-based individual and group assessments, interventions, and referrals that attend to the mental, emotional, and social health of students in a range of school and community settings. Organizational assessment and consultation skills of counselors and psychologists contribute to the overall health of students, and to the health of the school environment. Services are provided by professionals, such as certified school counselors, psychologists, and social workers.

One in five visits to school-based health centers is related to mental health. In a 1999 report on mental health, the U.S. Surgeon General estimated that 21 percent of U.S. children ages nine through seventeen have a diagnosable mental or addictive disorder, yet studies indicate that approximately 70 percent of children and adolescents in need of treatment do not receive mental health services. Of those young people who do receive mental health services, about 70 percent receive services offered in school settings, compared to 40 percent using mental health specialists and 11 percent using the health sector (a young person might access more than one resource).

The report also acknowledges that private and public health insurance coverage for such services is often lacking. Schools can make efforts to enter into collaborative relationships with other service providers for help with the resource burden.

Some of the burdens students face include inadequate basic resources, such as food, clothing, housing; and a sense of security at home, at school, and in the neighborhood. Psychosocial problems include difficult relationships at home and at school; emotional upset; language problems; sexual, emotional, or physical abuse; substance abuse; delinquent or gang-related behavior; and psychopathology. Additional stressful situations, such as being unable to meet the demands made at school or at home, inadequate support systems, and hostile conditions at school or in the neighborhood, have also been identified. In addition, crises and emergencies such as the death of a classmate or relative, a shooting at school, or natural disasters such as earthquakes, floods, or tornadoes are becoming commonplace. Life transitions, such as the onset of puberty, entering a new school, and changes in life circumstances (moving, immigration, loss of a parent through divorce or death) also affect the health of the student.

*Health promotion programs for staff* are designed to promote the physical, emotional, and mental health of school employees through health assessments, health education, health-related fitness activities, and employee assistance programs. Evaluations have found that participation in staff health-promotion programs can increase morale, improve absenteeism rates, increase participation in vigorous activity, improve physical fitness, facilitate weight loss, lower blood pressure, and improve stress-management skills. Teachers who become interested in their own health have been found to take a greater interest in the health of their students and become more effective teachers of health.

Staff can influence student behaviors by being powerful role models for healthy lifestyles. Private industry has found that staff health-promotion programs can improve productivity, improve morale, reduce health insurance costs, and are usually well worth the cost: More than 81 percent of U.S. businesses with fifty or more employees have some form of health promotion program.

*Family and community involvement* promotes an integrated school, family, and community approach that establishes a dynamic partnership to enhance

the health and well-being of students. Involving family members and the community has been linked with improvements in students' health knowledge and behaviors. Numerous studies link parent/family involvement to their children's achievement, academic standing, and decreased school failure and grade repetition, and a number of studies have shown that involving families enhances the effects of school health-promotion efforts. School health programs should be designed to actively solicit family involvement and assist and support families to effectively reinforce children's healthful habits and behaviors. The National PTA has developed the National Standards for Parent/Family Involvement Programs, which provide PTAs, schools, and communities with voluntary guidelines and quality indicators for effective parent/family involvement programs.

Schools should be encouraged to engage community resources and services to respond more effectively to the health-related needs of students. State and local government agencies, private businesses, youth-serving organizations, and other organizations in the community can be valuable additions to school health programs by serving as resources for student learning, offering opportunities for student service, coordinating community health-promotion efforts with school programs, raising funds to support specific activities, and providing expert advice and assistance to school health program planners. The *full-service school* model involves locating a variety of family and youth services at school to improve families' access to the services. New Jersey and Kentucky have pioneered statewide programs of linking schools with community agencies. Providing these kinds of services does not necessarily require an increase in the school's budget: typically, many of these services already exist, but in a fragmented manner that some families find difficult to use.

**4. Multiple interventions.** As the Carnegie Corporation has stated, "Given the complex influences on adolescents, the essential requirements for ensuring healthy development must be met through the joint efforts of a set of pivotal institutions that powerfully shape adolescents' experiences. These pivotal institutions must begin with the family and include schools, health care institutions, a wide array of neighborhood and community organizations, and the mass media" (p. 23).

Because the health problems facing students have a multifactorial etiology, a single health message delivered by one teacher during the year, particularly when there are so many competing messages from friends, family, and the media, is rarely sufficient to promote the adoption or maintenance of health-enhancing behaviors. Consistent and repeated messages delivered by several teachers, school staff, peers, and families are more effective.

A health promotion model that uses a variety of interventions in addition to instruction to promote the adoption of health-enhancing behaviors among children and youth is needed. Interventions that have been successful include policy mandates, environmental changes, direct interventions (screening, referral, and treatment), social support/role modeling, and media. The number of interventions necessary to address any one problem is unknown. Larry Green and Marshall Kreuter suggest that a minimum of three interventions be employed for each behavior that is targeted, and John Elder states that “true progress will be realized by using multi-component packages which include multilevel and multiple-channel generalization efforts and appropriate evaluation criteria” (p. 31).

**5. Program coordination and oversight.** The value of a coordinated approach has been noted by numerous individuals. A variety of options have been proposed to implement and manage a coordinated school health program, including school health coordinators, school health advisory councils, interdisciplinary work committees and work teams, and interagency coordinating councils or networks. Health-program coordination can help reduce ambiguity about responsibilities and tasks, which often impedes program implementation, and can help ensure that the various program components are mutually reinforcing each other’s efforts. School health advisory councils can involve a variety of health and education professionals, parents, and other community members who can mobilize community resources, represent the diverse interests within the community, provide school personnel and families with a sense of program ownership, and provide guidance to the school board. A 1994 national survey found that 33 percent of school districts and 19 percent of secondary schools had such councils.

Others advise that a more formalized structure, such as a coordinating council, is inherently more effective than an advisory group, as committed leadership has been found to be critical to the success of

school-linked comprehensive services. In 2000 the American Cancer Society began conducting a national leadership program designed to train individuals to become school health coordinators, including the development of school health councils, and to replicate the training program in their respective regions of the nation. Responsibilities of a coordinating council can include assessing needs and resources, establishing program goals, developing a community plan, coordinating school programs with community programs and resources, providing leadership and assistance for local schools, and assuring continuous improvement through evaluation quality assurance mechanisms. The Institute of Medicine (IOM) recommends that a school health coordinator and a coordinating council are an integral part of the infrastructure needed to support a coordinated school health program.

**6. Systematic program planning.** Every organizational group that is part of the school health program (e.g., school work teams, school health committee, school-community coordinating council) needs to use a programming process to assure continuous improvements in programming. Included in the process is the need to involve all stakeholders, define the problem from a local perspective (a needs assessment), set realistic goals and objectives, identify priority strategies to be used in the action plan to attain goals and objectives, implement the plan, evaluate the results, and use the results to start the process over again. DASH has produced the *School Health Index for Physical Activity and Healthy Eating: A Self-Assessment and Planning Guide*, which schools can use to improve school health programs. Differences in health status among distinct regions and groups argue for the need to base policies on local data that might be available from public health departments. Planners should conduct needs assessments with community input; adapt activities to the interests and preferences of different ethnic, religious, and social groups; and foster effective school-community collaboration.

**7. Ongoing staff development.** To assure effective programming, there is a need for staff development programs. Many teachers received their training at a time when the problems and issues facing students were much different. Staff development increasingly is approached as the day-to-day fostering of continuous improvement in one’s professional practice, and not as a workshop that occurs in isolation. Phyl-

lis Gingiss has identified five concepts that those planning staff development need to consider:

- Teachers respond to innovations in developmental stages.
- A multiphase approach to staff development is necessary to assist teachers during each stage.
- Staff development requires opportunities for teacher collaboration.
- Approaches to staff development must fit the stage of teacher development.
- The organizational context for staff development is critical to its success.

Critical organizational and environmental factors that must be addressed before providing staff development programs include a positive school climate, administrative support, and supportive policies. Those schools that encourage teacher experimentation enhance the willingness of teachers to try new methods and programs. A meta-analysis of staff-development training revealed that the utilization of theory, demonstration, practice, and feedback produced meaningful differences in the faculty's acquisition attitudes, knowledge, and skills. However, for meaningful differences to occur in the transfer of training to the practitioners' practice in the classroom, peer coaching had to be added to the above mix of effective interventions. Without peer follow-up and peer coaching after training, transfer effects are negative to minimal.

The National Council for Accreditation of Teacher Education (NCATE) has developed various sets of standards for teacher preparation programs, in association with numerous professional organizations, including the American Association for Health Education (AAHE), the National Association for Sport and Physical Education (NASPE), and the National Association of School Psychologists (NASP). Many states and professional preparation programs have adopted or adapted the NCATE standards.

To ensure that students are taught by well-prepared and well-qualified teachers, health education and physical education professional associations suggest that state licensure agencies should: (1) establish separate teaching licenses for health education and physical education; (2) offer licenses for different levels (e.g., preschool and early elementary school, elementary school, middle school, high school); (3) require that all generalist teachers (preschool, elementary school, middle school) pass

courses or demonstrate their competence at applying the skills required to effectively teach health education; and (4) allow schools to assign teachers to courses they are not properly certified to teach only when a licensed teacher cannot be found and only on a temporary basis with the stipulation that such teachers receive the necessary training if they are to continue teaching the class.

**8. Active student involvement.** Peer instruction has proven effective in disseminating knowledge and changing behaviors. Students are more likely to turn to peers for advice, and change is more likely to occur, if someone similar to them recommends the change. In addition, peer instruction has been effective in improving decision-making and problem-solving skills, which may be prerequisites for implementing behavior change. Role modeling and peer support systems represent additional benefits of peer-education programs.

Peer involvement may occur in a variety of ways, such as peer counseling, peer instruction, peer theater, youth service, and cross-age mentoring. The elements of a successful peer program include positive interdependence, face-to-face interaction, individual accountability, training in social skills, time for group processing, heterogeneous composition, having each child be a helper, adequate duration, and involvement of participants in program implementation.

## Conclusion

Because the health of students is inextricably linked to educational achievement, it is critical that schools promote health. Schools can provide the nurture and support needed to facilitate the adoption of health-enhancing behaviors. This helps assure that the educational gains achieved by a student will be maximized by a long and healthy life as an adult. A comprehensive, well-coordinated school health program can promote the optimal physical, emotional, social, and educational development of students.

*See also:* ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; GUIDANCE AND COUNSELING, SCHOOL; HEALTH SERVICES, *subentry on* SCHOOL; PHYSICAL EDUCATION; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS; RISK BEHAVIORS.

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## HEALTH SERVICES

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Provision of public school health services in the United States has been sporadic, reflecting the tenor of the times, and influenced by pressure groups, vested interests, and resistance to change by those in administrative positions.

The initial justification for provision of school-based health services was primarily to control com-

municable diseases in order to cut down on school absenteeism. At the turn of the twentieth century, physicians were appointed as public school health officers. The first school nurse was employed by the New York City Board of Education in 1902, for the express purpose of controlling communicable diseases, particularly infectious skin diseases. Even though the number of physicians who were employed by schools outnumbered the number of nurses employed by schools by approximately three to one, school nurses were the main providers of school health services. Because of prevailing social mores, hygiene instruction in the late 1800s and early 1900s centered on a physiological and anatomical study of the negative effects of alcohol, tea, coffee, and tobacco.

Administrative responsibility for health services was often assigned to a specifically established department within the school, which was often under the direction of a local physician who was accountable to a school superintendent. In other instances, the responsibility for this service was assumed by a community health agency under the direction of a local health officer. These remained accepted practices even into the twenty-first century.

As new scientific knowledge emerged, new movements for improved personal and community health became popular. Addressing health problems of children and youth required a multidimensional approach. School health services only focused on medical related services, not environment or education. It became clear that the school needed to be concerned about not only school health services but also about the school environment and health education. Further, school health services, provision of a healthful school environment, and health education needed to function in a coordinated context in order to be effective. This set the foundation for the development of the school health program.

The original school health program model consisted of school health services, healthful school living, and health education. The goal of the school health program was to provide opportunities for every child to reach their full potential as a student as well as a contributing member of society. The major objective of the school health program was the promotion of physical, mental, social, and emotional well being. This model prevailed for years.

School health services as a part of the overall school health program provided health and medical

services to students. These services tended to be one of three types: basic, expanded, or comprehensive. Basic health services include such things as immunizations, hearing and vision screenings, scoliosis screening, sports physicals, health counseling, and nutritional screenings. Expanded health services included health promotion/disease prevention, mental health counseling, substance abuse counseling, family life/sex education, and care of special needs children. Finally, comprehensive health included reproductive health care, primary care, chronic illness management, and prenatal care.

### CDC Model

The services, environment, instruction focused model of the school health program worked well but still was not inclusive or comprehensive enough to meet the needs and interests of students. A more comprehensive model was needed. The concept of the Centers for Disease Control and Prevention (CDC) comprehensive school health programs model was first proposed in a landmark work published by Diane Allensworth and Lloyd Kolbe in 1987. The model employed the use of eight components. These include the following:

1. Health education: classroom instruction addressing physical, mental, and social dimensions of health; developing health knowledge, attitudes, and skills; and tailored to each age level. Designed to motivate and assist students in maintaining and improving their health, prevent disease, and reduce the number of health-related problem behaviors they exhibit.
2. Physical education: planned, sequential instruction that promotes lifelong physical activity. Designed to develop basic movement skills, sports skills, and physical fitness as well as to enhance mental, social, and emotional abilities.
3. School health services: preventive services, education, emergency care, referral, and management of acute and chronic health conditions. Designed to promote the health of students, identify and prevent health problems and injuries, and ensure care for students.
4. School nutrition services: integration of nutritious, affordable, and appealing meals; nutrition education; and an environment that

- promotes healthy eating behaviors for all children. Designed to maximize each child's education and health potential for a lifetime.
5. School counseling, psychological, and social services: activities that focus on cognitive, emotional, behavioral, and social needs of individuals, groups, and families. Designed to prevent and address problems, facilitate positive learning and healthy behavior, and enhance healthy development.
  6. Healthy school environment: the physical, social, and emotional climate of the school. Designed to provide a safe physical plant, as well as a healthy and supportive environment that fosters learning.
  7. School-site health promotion for staff: assessment, education, and fitness activities for school faculty and staff. Designed to maintain and improve the health and well-being of school staff, who serve as role models for students.
  8. Family and community involvement in school health: partnerships among schools, families, community groups, and individuals. Designed to share and maximize resources and expertise in addressing the healthy development of children, youth, and their families.

### Components to School Health Services

Every current comprehensive approach to school health includes at least the eight components of the CDC model. The School Health Services component is generally structured around preventive services, education, referral, emergency care, and management of acute and chronic conditions.

**Preventive services.** Activities typically included in preventive services are educating teachers on the signs and symptoms of health problems of students and health screenings. Teachers are in a unique position to observe health problems among students. They have an advantage in that they can compare students and notice differences that might indicate a potential health problem. Even parents do not have this strategic advantage. It requires that teachers be trained to identify health related issues that may be noticeable during their daily observations of students. This training is often included in a pre-professional course or through in-service instruction offered by the school or school district. The goal of teacher observation is not diagnosis but referral.

Preventive services also include health screenings of students. The most common health screenings conducted in schools include vision, hearing, growth and development, blood pressure, cholesterol, and dental health screenings. Often the school will establish a partnership with a local public health department. The health department's professional staff is responsible for conducting the screenings. The purpose of screening is not to diagnose but to identify a potential health problem and refer the student for a more complete evaluation.

Referral and follow-up represent the culmination of teacher observation and screening. The referral process is initiated in one of two ways: First, a teacher makes an observation that indicates a student might have a health problem, and refers the student to the school nurse or the person in the school responsible for health concerns. Second, if a student does not pass a particular health screening, the student is referred again to the school nurse or the person in the school responsible for health concerns. What follows is a series of conferences, such as teacher/nurse, nurse/parent, and student/nurse.

**Emergency care.** Unintentional injuries are the leading cause of death in children and youth ages one through twenty-one; for every childhood death caused by injury, there are approximately 34 hospitalizations, 1,000 emergency room visits, and many more visits to private physicians. Because of the magnitude of injuries to children and youth, and because many injuries occur in the school, it is important that schools as a part of health services address safety and emergency care.

Safety and emergency care is normally addressed in two ways: written policies including legal aspects and preparations for handling emergencies. All schools should have written policies, which reflect a sound philosophy of safety and emergency care and specific procedures for school personnel to follow in both prevention of accidents and the protocol in dealing with accidents and emergencies.

**Management of acute and chronic conditions.** School health services are concerned with both acute and chronic health conditions of students. Acute conditions are normally communicable diseases and chronic conditions are such things as diabetes, asthma, and juvenile arthritis.

It is extremely difficult if not impossible to prevent the spread of common communicable diseases in school settings. Such illnesses as colds and influ-

enza will run their epidemiologic course. School health services must include policies on how to handle communicable diseases; in other words, when to allow students back in school or sending students home who are sick. Further, schools health services must have documentation that students are up-to-date on immunizations. Schools will typically partner with local public health departments to receive guidance in how to handle communicable disease in the school setting.

Education and universal precautions are two important pieces in the management of acute conditions. Spread of communicable disease can be prevented through sound health practices, even as simple as washing hands. Schools must educate both personnel and students on the importance of sound health practices.

At times, a student will have an injury, perhaps resulting in their bleeding or vomiting. Both blood and vomit, as well as other body fluids, can contain pathogens and disease can be transmitted. Blood can contain HIV and the viruses responsible for viral hepatitis. Following universal precautions will limit the likelihood of transmission of disease through exposure to body fluids. Universal precautions are those activities designed to deal with body fluids and include use of gloves, masks, and proper receptacles for placing materials used to clean up body fluids. Schools are required to have an exposure control plan and have materials readily available for use when dealing with body fluids.

### Issues and Trends

Numerous health problems that were once largely family and community problems now impact the school. Violence, drug use, teen pregnancy, sexually transmitted diseases, and poverty all have tremendous implications for school health services, yet because of the political and economic environment, there is, in general, less funding for programs to deal with these issues. Further, the complexity of the health problems and issues makes citizens question what the exact role of the school is in trying to solve or manage problems that are a result of powerful cultural influences. There seem to be two major perspectives, both with political implications. One is that the role of the school is to teach basic skills, such as reading, writing, math, and history, and health-related issues are a family problem or at best a community problem. The opposite perspective is that the government and by extension the school should play

a major role with regard to student health problems and work closely with students in any way possible.

Perhaps the most controversial trend is the implementation of school-based health centers or clinics located in the school. School-based health centers were first established in the early 1970s. They were implemented as a response to health problems such as sexually transmitted diseases, unplanned teenage pregnancy, and substance abuse.

Funded by the federal government and private foundations, school-based health centers are located in forty-five states and the District of Columbia. As of 2000, approximately one-half of the health centers are located in high schools, one-quarter are located in elementary schools, and the remainder are located in other settings. The majority of the centers are located in poor urban and rural areas where coordinated medical and social services are lacking or where there are many uninsured children/parents, making access to services difficult.

Services provided by school-based health centers include but are not limited to primary care (diagnosis and treatment of simple illness), primary prevention (health education programs, vaccinations), and secondary prevention (early detection). These services range from diagnosing such maladies as colds, flu, and sexually transmitted diseases to substance abuse counseling. Services offered vary among communities and from community to community.

School-based health centers face an uncertain future primarily because they rely so heavily on external funding. As the nation grapples with the issue of providing access to health care for all Americans, school-based health centers need to be well positioned to meet the care and prevention needs of children and youth.

Given the political, cultural, and economic climate of the United States two future scenarios emerge. First, with the increasing emphasis on providing access to health care to all Americans it is possible that there will be a greater role for the school in providing health services to students, especially in medically underserved areas. Second, with the increasing shift to managed care it may prove more cost-effective for third-party payers to underwrite health services delivered in a school setting rather than in a community private sector setting.

*See also:* FAMILY AND CONSUMER SCIENCES EDUCATION; FULL-SERVICE SCHOOLS; GUIDANCE AND

COUNSELING, SCHOOL; HEALTH EDUCATION, SCHOOL; PHYSICAL EDUCATION; SCHOOL-LINKED SERVICES, *subentry on* TYPES OF SERVICES AND ORGANIZATIONAL FORMS; SEX EDUCATION.

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## COLLEGES AND UNIVERSITIES

College health-service programs provide low-cost, primary medical care for students on college cam-

puses. Kevin Patrick estimated in 1988 that 80 percent of America's more than fourteen million college students received primary health care from campus health programs. Just as modern medicine has changed, so too has the scope of services college health centers provide. Medical developments allow for most injuries and illnesses to be treated by ambulatory clinics, and this same trend is seen in most college health centers. These centers often provide care for acute illnesses and injuries on an outpatient basis, while also meeting the needs of students with continued and chronic illnesses and providing wellness education to the campus community.

In addition to meeting the basic and most common needs of the students they serve, campus health-service programs also act as referral agents for students to connect with medical providers, as needed, in the local community. College health services are continually evolving and changing in order to best provide treatment and education for the campuses they serve.

### Staffing

College health-service staffs vary widely in the range and level of services they provide. Once directed mainly by full-time medical doctors, most college health centers are now lead by Licensed Nurse Practitioners (LPNs), Registered Nurses (RNs) or Physician Assistants (PAs). Some health centers continue to have full-time physicians on staff (particularly at larger universities and institutions with medical centers), while others maintain part-time relationships with local doctors to staff particular hours each week. Health centers with less comprehensive services (usually at smaller, private colleges) often act as a link to services in the immediate community.

### Services

College health-service programs tend to have three primary areas of responsibility: physical, mental, and educational. Medical services range from basic care in the form of treatment for colds, viruses, and minor injuries at less comprehensive centers to thorough lab tests, X rays, specialists, and pharmacies at the most comprehensive centers. Many college health programs also provide counseling services. Some counseling services are limited to basic intervention and referral for long-term care, while others provide extensive and long-term psychotherapy.

The most common, and a primary focus of college health-service programs, is that of intervention

and health, or wellness, education. Although all student health centers concern themselves with the immediate healing of ill students, most will also work to educate students about approaches to healthier lifestyles in order to prevent future illness or injury. Wellness themes exhibited on many college campuses are health and nutrition, stress management, eating disorder awareness, smoking cessation and prevention, time management, alcohol abuse prevention, strategies to avoid depression, and issues around sexually transmitted diseases and their prevention. Some colleges maintain twenty-four-hour care for students; however, most colleges maintain regular weekly hours during the academic year with a system for emergency assistance when needed.

### Payment

Many college health centers are funded through fees students pay to the college or university and subsidized with institutional resources. Sometimes these fees are included within the tuition charges of a college or university, while other institutions may charge a separate student health fee in addition to the college tuition. Prepayment for student health services ensures that students have access to the treatment and services needed while at school. At many colleges, basic and most common services are offered to full-time students at little or no charge. Many college health centers will provide, as needed, over the counter medications free of charge; however, they will charge for, or send students to a pharmacy for, prescription medications. Students will usually incur charges for lab work, other diagnostic tests, and services provided by referrals made to outside physicians and specialists. Most colleges and universities require students to have and maintain health insurance. Although many students may continue on their parent's health insurance plans, other students may need to purchase individual health insurance, and can usually do so through programs offered at their college or university.

### Requirements

Most, if not all, colleges and universities require that undergraduate students complete health history forms prior to their arrival on campus. This information assists health center staff to prepare for any special needs identified on the form and to have a recorded history in case information is needed to properly treat a student. In addition to the form, all students are required to have current immunizations

per state law and institution policy. Documentation of these immunizations must be provided in order to attend the institution.

### Confidentiality

Services provided by college health centers are deemed confidential. Health center staff work in partnership with students to get well, make good choices, and develop healthy living habits. The responsibility of informing parents falls to the student in most cases. Only when a condition warrants notification will health services staff break the confidence of the relationship, usually with the permission of the student unless there is concern about harm to self or others.

*See also:* DRUG AND ALCOHOL ABUSE, *subentry on COLLEGE*; PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS.

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MOLLY BLACK DUESTERHAUS

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## HEARING IMPAIRMENT

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### SCHOOL PROGRAMS

Susan Dalebout

### TEACHING METHODS

Elizabeth A. Martinez

Daniel P. Hallahan

### SCHOOL PROGRAMS

Hearing loss occurs along a broad continuum ranging in degree from slight to profound. Individuals with severe and profound hearing loss generally are characterized as *deaf*, whereas individuals with lesser degrees of impairment, including those with unilat-

eral hearing loss (i.e., involving only one ear), are characterized as *hard of hearing*. Childhood hearing loss of any type and degree, if unmanaged, is likely to have a negative impact on the development of spoken and receptive language, the ability to read and write, and academic achievement. For example, a 1998 study of 1,218 children with minimal hearing loss showed that 37 percent had failed a grade. Similarly, studies have shown that children with unilateral hearing loss are ten times more likely than normally hearing children to fail a grade. The vast majority (94–96%) of children with hearing loss are hard of hearing rather than deaf. For these children, speech may be *audible* (i.e., detectable) but not *intelligible* enough to allow them to hear one word as distinct from another.

There are approximately 50,000 school-age deaf children in the United States, a figure representing a dramatic decline since the early 1970s. An additional 5 million school-age children are permanently hard of hearing and at educational risk. An estimated 1.5 million more suffer from conductive, usually temporary, hearing loss. Inclusion of preschool children could put the total number of children with hearing loss close to 10 million.

### Historical Overview

Historically, approaches to educating children who are deaf have been based on emotion and personal philosophy rather than positive outcome; in contrast, the education of children who are hard of hearing has largely been ignored. Educational practices in the United States can be linked directly to the teachings of European educators active during the eighteenth and nineteenth centuries. Of note, in 1770 French cleric Charles-Michel de l'Épée founded a school in which he emphasized the use of sign language and finger spelling (i.e., a *manual* approach). Around the same time, schools were established in England by members of the Braidwood family, who emphasized the use of spoken language and speechreading without sign language (i.e., an *oral* approach).

In the United States, the father of Alice Cogswell, who lost her hearing at an early age, commissioned Thomas Hopkins Gallaudet to travel to Europe and learn methods for teaching deaf children. Refused help by the Braidwoods, Gallaudet learned de l'Épée's manual method. In 1817 Gallaudet opened a school in the United States based on the manual approach (now the American School for

the Deaf). Gallaudet's son became president of the first college for deaf students in the United States, now known as Gallaudet University.

Oralism took root years later when another young girl from a prominent family, Mabel Hubbard, lost her hearing. In 1867 her father helped establish an oral school. As an adult, Hubbard married Alexander Graham Bell, who became a passionate advocate for oralism. During the late nineteenth century, Bell and Gallaudet often engaged in debate about the merits of the oral and manual approaches. The debate would continue well into the twentieth century.

### Education of and Services for Hearing-Impaired Children

Children in the United States who are deaf or hard of hearing are legally entitled to a free and appropriate education. Federal law requires a continuum of educational options, ranging from placement in a self-contained classroom with other children who are deaf to full-time placement in a regular education classroom with normally hearing peers. Most often, the placement involves a variation or a combination of the two extremes. An alternative placement is attendance at a residential school, in which the child can participate fully in the deaf culture.

Perhaps the most important educational decision is the communication method that will be used. The choice lies with the parents, and the best decision is specific to each child and family. Most children who are deaf use one or some combination of three communication modes: American Sign Language, a manual language that is distinctly different from English (i.e., a person does not sign and speak at the same time); a system of manually coded English (i.e., a signed version of English); or hearing and spoken language. A relatively smaller number of children use Cued Speech, a system in which hand gestures enhance speechreading.

Children with hearing loss require support services in order to benefit maximally from a free and appropriate education. For example, it is essential that they receive services from an audiologist, including management of their hearing aids, classroom listening devices, and listening environments. Poor listening conditions can render a hard of hearing child functionally deaf.

## Trends and Research Findings

The education of children who are deaf will be revolutionized by two dramatic changes. First, legally mandated neonatal hearing-screening programs are changing the average age at identification from approximately three years to approximately three months. Research has shown that when appropriate hearing aids and early intervention are in place by six months of age, a child is likely to have age-normal language and learning milestones at kindergarten entry. In this light, the most important educational years are the child's very first years, when the family participates in parent-infant programming. Second, cochlear implants are being made available to increasingly younger children. These surgically implanted devices convert sound into electrical current, which then bypasses much of the hearing mechanism to stimulate surviving nerve elements directly. The coded electrical current creates sensations, which the brain, with considerable listening training, can learn to interpret as sound. Research suggests that children who use cochlear implants surpass children with similar degrees of hearing loss who use hearing aids in the areas of speech recognition, speech production, language content and form, and reading.

Children who benefit from early intervention and improved hearing technology, including cochlear implants, are likely to enter kindergarten ready for the educational mainstream. In the absence of additional disabilities, and with appropriate support services, it is possible that these children may never require special education placements and will choose to use sign language only if it is their cultural preference.

*See also:* HEARING IMPAIRMENT, *subentry on* TEACHING METHODS; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH.

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SUSAN DALEBOUT

## TEACHING METHODS

According to Lou Ann Walker, "the first real efforts to educate deaf people began around 1550 when Pedro Ponce de León, a monk from Spain, taught deaf children in a monastery in San Salvador" (p. 11). Seventy years later, Juan Pablo Bonet, a follower of Ponce de León, published the first book on the education of people who are deaf. In it he explained that he used a one-handed manual alphabet to build language. In 1700 Johann Ammons, a Swiss doctor,

devised a method to teach speech and lipreading (now more accurately referred to as speechreading) to people who are deaf. In the mid-1700s, schools for deaf children were established in Scotland, Germany, and France. Teaching methods, according to Walker, focused, for the most part, on a combination of *oralism*—teaching students speech and speechreading—and *manualism*—teaching students a manual alphabet. Schools for the deaf did not reach the United States until 1817, when Thomas Hopkins Gallaudet, a divinity student, and Laurent Clerc, a deaf student of the National Institute of France, opened the American School for the Deaf (originally named the Connecticut Asylum for the Education and Instruction of Deaf and Dumb Persons) in Hartford, Connecticut. Many teachers trained at the American School, which focused on American Sign Language.

The controversy surrounding how to teach children with hearing impairment, sometimes referred to as the oralism-manualism debate, began centuries ago and continues into the twenty-first century. Opponents of oralism contend that denying children sign language is tantamount to denying them a language to communicate. However, children who can learn language orally are better prepared for a hearing world. Most educational programs at the turn of the twenty-first century involve a *total communication* approach—a blend of oral and manual techniques; however, some members of the deaf community contend that it is inadequate, and they prefer a bicultural-bilingual approach, whereby students learn about the history of deaf culture after learning American Sign Language and English. A controversial piece of this approach is the focus on American Sign Language—a true language that has evolved over generations but one that does not follow the same word order as spoken English. Proponents of American Sign Language contend that it is natural, fluent, and efficient, whereas signing English systems, which correspond with spoken English, are cumbersome and awkward. To date, however, few public schools use American Sign Language.

Regardless of teaching method, students with hearing impairment experience difficulties acquiring the language of the hearing society. Educators pay very close attention to the age of onset of the hearing impairment and the degree of hearing loss because each is closely associated with the severity of language delay. The earlier the hearing loss occurs and

the more severe the hearing loss, the more severe the language delay. For many years, professionals believed that deficiencies in language among individuals with hearing impairment were related to deficiencies in intellectual ability; this is not the case. Unfortunately, results of research indicate that students with hearing impairment are behind their hearing peers in terms of academic achievement. Reading is the academic area most affected, wherein students with hearing impairment experience only one-third the reading growth of their hearing peers. They also lag behind their peers in mathematics. According to 1999 figures from the National Center for Health Statistics, “approximately 1.3 percent of all school-age students, ages six to twenty-one, who received special education services during the 1996–1997 school year were served under the disability category of hearing impairment” (Schirmer, p. 20). It is important to note, however, that estimates of the number of children with hearing impairment can differ markedly depending, for example, on definitions used, populations under investigation, and accuracy of testing.

Students with hearing impairment receive services in a variety of settings, from the general education classroom to residential schools. Parents and many professionals have not embraced the current controversial trend toward policies of inclusion (i.e., placing students with disabilities in general education classrooms for most or all of the school day). They caution that the general education classrooms are not necessarily the most appropriate placement for students with hearing impairment. However, some students with hearing impairment experience academic and social success in general education settings. This indicates that the preservation of the continuum of placements, whereby placement decisions can be made on individual bases, is in the best interest of students with hearing impairment.

*See also:* HEARING IMPAIRMENT, *subentry on SCHOOL PROGRAMS*; SPECIAL EDUCATION, *subentries on CURRENT TRENDS, HISTORY OF.*

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## HERBART, JOHANN (1776–1841)

German philosopher Johann Friedrich Herbart is the founder of the pedagogical theory that bears his name, which eventually laid the groundwork for teacher education as a university enterprise in the United States and elsewhere. Herbart was born in Oldenburg, Germany, the only child of a gifted and strong-willed mother and a father whose attention was devoted to his legal practice. Herbart was tutored at home until he entered the gymnasium at the age of twelve, from which he went on as valedictorian to the University of Jena at a time when such stellar German intellectuals as Johann Gottfried Herder, Johann Gottlieb Fichte, Johann Wolfgang von Goethe, and Friedrich von Schiller were associated with that institution. It was apparently Schiller's *Briefe über die ästhetische Erziehung des Menschen* (Letters concerning the aesthetic education of man), then in progress in 1795, that influenced Herbart to devote himself to philosophy and education.

### Career

In 1797 and almost against his will Herbart was persuaded by his mother to accept a position as tutor to the sons of the regional governor of Interlaken in Switzerland. During his three years of work with these three very different boys, aged fourteen, ten, and eight when their relationship began, Herbart confronted in earnest the problems of teaching children, reporting monthly to their father on his methods and the results achieved. During his Swiss sojourn, he was also influenced by the thinking of Johann Heinrich Pestalozzi, whose school at Burgdorf he visited and whose ideas he systematized in 1802 in his *Pestalozzi's Idee eines ABC der Anschauung untersucht und wissenschaftlich ausgeführt* (Pestalozzi's idea of an ABC of sense impression investigated and laid out scientifically).

Returning to Germany in 1800, Herbart completed his remaining doctoral work at the University of Göttingen, receiving his degree in 1802. He remained there as a lecturer in both philosophy and pedagogy until he received an appointment as professor of philosophy in 1805. Chief works related to education from his Göttingen period are *Über die ästhetische Darstellung der Welt als das Hauptgeschäft der Erziehung* (On the aesthetic representation of the world as the main concern of education), published in 1804, and *Allgemeine Pädagogik aus dem Zweck der Erziehung abgeleitet* (General pedagogy deduced from the aim of education), published in 1806. He also published on metaphysics and psychology.

In 1809 Herbart accepted the chair of pedagogy and philosophy at the University of Königsberg, formerly occupied by Immanuel Kant, and began a period of great productivity, ranging across the full spectrum of philosophical investigations. In the midst of work in metaphysics and psychology he also organized a pedagogical seminar for advanced students, attached to a demonstration school in which he and his students attempted to implement his pedagogical ideas, which were then critiqued and revised through the seminar discussions. This seminar, widely imitated by his later disciplines in Germany and elsewhere, was a first step toward trying to approach educational work scientifically.

Herbart left Königsberg in 1833, apparently because of disagreements with the Prussian government over his educational views in relation to state and church power. He returned to the University of Göttingen, where he remained for the last eight years of his life, producing his *Umriss von pädagogischen Vorlesungen* (Outlines of pedagogical lectures) in 1835, in which he attempted to connect more directly his early pedagogical theory and his later psychological work. He gave his last lecture two days before he died of a stroke on August 14, 1841.

### Contribution

The legacy of Herbart to education was mediated through two major German disciples, Karl Volkmar Stoy and Tuiskon Ziller, who sought to implement his theories with varying degrees of alteration. Stoy was inspired by Herbart's early lectures in philosophy and pedagogy at the University of Göttingen and, upon qualifying as a lecturer at the University of Jena in 1842, took charge of a local private school that soon attracted students from all over Europe. In 1845 he was appointed professor at the university,

then he moved in 1865 to the University of Heidelberg, establishing at nearby Bielitz a normal school based upon Herbartian principles. He returned to Jena in 1874 and established there the pedagogical seminar that would be taken over upon his death in 1885 by Wilhelm Rein, and brought to international renown by the end of the nineteenth century both for its practices and for its incorporation of teacher education into the university. It was there that the majority of Herbartians from other countries, including the United States, developed their ideas.

Rein had studied with the second major disciple of Herbart, Ziller, who had pursued a career in law, being appointed a lecturer at the University of Leipzig in 1853. Like Herbart, a period of teaching during his doctoral work led Ziller to investigate educational questions, and his first works, published in 1856 and 1857, were direct extensions and applications of Herbart's ideas. He established at the University of Leipzig a pedagogical seminar and practice school modeled after that of Herbart at Königsberg. Ziller was instrumental in founding the *Verein für wissenschaftliche Pädagogik* (Society for Scientific Pedagogy) in 1868, which published a quarterly that disseminated Herbartian ideas, and spread all over Germany as local clubs for the study of Herbartian approaches to educational problems. Ziller wrote *Grundlegung zur Lehre vom erziehenden Unterricht* (Basis of the doctrine of instruction as a moral force), published in 1865, and his *Vorlesungen über allgemeine Pädagogik* (Lectures on general pedagogy), published in 1876, five years before his death. These works provided the Herbartian legacy that Wilhelm Rein as a student of Ziller at Leipzig brought to his work when Rein resuscitated the pedagogical seminar at the University of Jena in 1886, a year after Stoy's death.

The German tradition of Herbartianism distinguishes between the Stoy and Ziller schools, the former being considered truer to Herbart's own ideas and the latter an extension of them more or less justified. Scholarship on both schools continues, centered at the University of Jena since its international conference, *Der Herbartianismus: die vergessene Wissenschaftsgeschichte* (Herbartianism: the forgotten history of a science), in 1997. The investigation of, or even attention to, the fine points of Herbartian theory, was notably lacking in American Herbartianism, although the central ideas remained intact. First and foremost was the development of moral character as the central aim of education. Second was the

adoption of Herbart's notion of apperception as the dynamic of learning: the ideas already configured in the mind are stimulated into activity by new information and either integrate that new information through meaningful connections or let it pass if such connections are not made. The essential unity of the ideas present in the mind is reflected in the theory of concentration as a principle for organizing the curriculum, which in relating several subjects to one another in the course of instruction also nurtures the many-faceted interest that is essential to full intellectual and thus spiritual development. Ziller added to these basic ideas the notion of the cultural-historical epochs as a curriculum principle that responds to the recapitulation in the individual of the psychic and cultural development of his group.

Rein and others developed a full eight-year course of study built upon this principle, which was translated and adapted to American use by Charles A. McMurry, one of the major disseminators of Herbartianism in the United States and a student with Rein. Charles DeGarmo, on the other hand, brought back to the United States the more conservative Herbartianism of Stoy, whose ideas were mirrored in the secondary schools of the *Franckische Stiftungen* in Halle established for orphans by August Hermann Francke in 1695 and under the directorship of Otto Frick during DeGarmo's doctoral study at the University of Halle. DeGarmo also provided for American readers the most thorough survey of the German Herbartians and Herbartian concepts in his *Herbart and the Herbartians*, published in 1895. It joined a substantial number of translations of work by Herbart and various German Herbartians made available in the 1890s.

American Herbartianism enjoyed a brief burst of national attention in the 1890s because of attempts by U.S. Commissioner of Education William Torrey Harris to stop its spread and the formation of the National Herbart Society in 1895 in response to those efforts. Within seven years the National Herbart Society had become the National Society for the Study of Education and its yearbooks had lost any obvious association with Herbartianism. Within that period at least eight universities were offering heavily Herbartian programs, and the demand for American Herbartian texts, particularly those of Charles McMurry, lasted until nearly 1930. Integrated curriculum, elementary school history teaching, and constructivist learning theory are part of the contemporary legacy of Herbartianism.

*See also:* EDUCATIONAL PSYCHOLOGY; INSTRUCTIONAL DESIGN; McMURRY, CHARLES.

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KATHLEEN CRUIKSHANK

## HIGHER EDUCATION CURRICULUM

*See:* CURRICULUM, HIGHER EDUCATION.

## HIGHER EDUCATION IN CONTEXT

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Universities are not ivory towers and never have been. They are subject to pressures and influences from external social forces of many kinds. This is not surprising, in light of the importance of universities to society, as well as the fact that institutions of higher education obtain their funds from external sources such as the government, students and their families, and donors. In the twenty-first century, universities are subject to the pressures of society more than ever, largely because of their importance

to knowledge-based economies, and because more than half the college-age population attends postsecondary institutions.

Influences from external forces come from two basic directions. The first constitutes broad societal factors, such as economic trends and demographic factors, which affect the directions and realities of higher education. The second comes from the specific requirements of funding sources, government agencies, and others to account for, and sometimes control, the expenditure of funds, the nature and scope of research, and other university activities. This entry mainly discusses the broader external factors affecting higher education.

### Economic Factors

Academic institutions, with few exceptions, constantly face financial challenges. All, even the most wealthy, depend on external elements for financial survival, including tuition payments provided by students and their families, funds from the government for operating expenses, research and training grants and contracts from a range of external agencies, charitable donations from alumni and foundations, and income-generating projects (including, for a few, intercollegiate athletics).

In the United States, 80 percent of postsecondary students attend public colleges and universities. For almost all public institutions, financial support from state governments is critical. Indeed, most postsecondary institutions depend on a combination of student tuition and direct support from the state for their financing. Federally backed student loans are also a central financial underpinning for higher education. These grants and loans are provided to individual students, who may use them at any accredited academic institution. Private universities and colleges depend to a much lesser extent on public support. Most are eligible for the student loan programs, and some states provide direct financial support to private institutions. Private institutions can also receive government research funding.

During the last decades of the twentieth century, there was a significant change in government policy concerning funding for postsecondary education. Previously, higher education was seen by most as a *public good*—an investment in human capital that, in the long run, benefited society as well as the individual, and is therefore worthy of public support. However, academic study is increasingly seen as a

*private good*—something that mainly benefits the individual and should be paid for by the individual. Most states are less generous in their funding for higher education, and tuition charges have been raised. Nationally, students and their families are paying a higher proportion of the cost of higher education than was the case in the past. For many public universities, especially the nationally known public research institutions, less than one-third of income now comes from the states, with tuition, research grants, income generation, and donations constituting the majority of income.

Partly as a result of this change in philosophy, and partly because of competing state priorities and a general unwillingness to raise taxes, public higher education has faced financial problems, sometimes even during the boom years of the 1990s. External financial pressures also affect private colleges and universities. While the wealthiest institutions have endowments that provide a measure of financial stability, most private schools depend largely on tuition income. In the 1990s tuition increases were often higher than the level of inflation, and in the early twenty-first century there is resistance from students to high levels of tuition, and especially to rapid tuition increases. Private institutions have been forced to limit tuition increases, and this has had an impact on their financial viability in a competitive environment.

### **An Era of Competition**

Competition has always been an element of academic life—for prestige, for the best students, and for donations, among other things—and competition has become one of the central driving forces in higher education. Competition for the best faculty, for students, for research grants, and for the ever more important rankings by *U.S. News and World Report* and other publications are all central to the contemporary academic enterprise. The most prestigious academic institutions see themselves in a race to provide better dormitories and sports facilities, faster access to computer networks, and improved campus services as part of a competitive struggle with their peers.

A central element of the new competitive environment is that students increasingly see themselves as “buyers” of a higher-education product. They demand that the academic institutions serve their specific needs in terms of curriculum, degree offerings, and facilities. This is an age of student consumerism,

where even the most prestigious and selective institutions must respond to student interests and concerns. Academic institutions have moved to provide flexible degree structures, new majors to meet student demand, and to supply, in many other ways, the educational “product” demanded by an increasingly sophisticated market.

### **Demographic Realities**

This increased competition is partly a result of the changing demographic realities in American higher education. Dramatic changes have taken place that affect academic institutions. With the exception of a brief baby-boom *echo* for a few years at the beginning of the twenty-first century, the number of traditional college-age young people (18–21 year olds) has been modestly declining. Colleges and universities are thus competing for a declining number of potential students. Furthermore, the period of expansion in the proportion of college-age youth attending postsecondary education institutions has largely come to an end as well. The proportion of young people attending college increased from perhaps 20 percent in the period following World War II to more than 60 percent in the 1990s, but it did not increase between 1990 and 2000. Higher education in the United States has reached what sociologist Martin Trow has called “universal access.”

A significant part of the numerical expansion of enrollments in the late twentieth century consisted of nontraditional students—people who are older than the usual college age and who begin or return to study mainly for vocational reasons. Another new population group consists of students who do not possess all of the skills needed for postsecondary study. These students often require remedial courses that colleges and universities must provide. As American higher education has become a mass phenomenon, the academic system has had to adjust to a more diverse student body and a wider array of student interests.

There have been other important changes in the student population that have affected academe. With 14 million students attending the nation’s more than 3,000 colleges and universities, there is unprecedented diversity. Women constitute a majority of the student population, and racial and ethnic diversity has grown dramatically, with African Americans, Latinos, and especially Asian Americans present in large and growing numbers. Higher education is no longer a preserve of the white middle

classes, and many working-class students are able to gain access. Higher education is seen as a passport to economic success, and statistics show that those with a bachelor's degree earn much more over their lifetimes than those without academic qualifications. A majority of students study part-time and the traditional model of a full-time traditional-age student living on campus is no longer valid.

The pressures of demography on the higher-education system have been immense. The dramatic expansion of the student population, increased diversity, and more variation by age, ability, and interest have all transformed the academic landscape.

### **Political, Governmental, and Legal Challenges**

The higher-education system, as well as individual academic institutions, is affected by politics and government. The U. S. constitution stipulates that education is a responsibility of the states, and thus the fifty states have basic responsibility for higher education. As noted earlier, the states provide the bulk of funding for public higher education. They are also responsible for organizing and regulating public university systems, providing a legal structure for these systems, and in most cases providing charters and legal recognition for all higher-education institutions, both public and private. The state governments determine tuition charges, sponsor loan and grant programs, and in some cases determine admissions policy for the public colleges and universities. State authorities appoint governing boards (although in a few cases these boards are elected).

The policies of the fifty states are central to public higher education, though the states differ substantially in their approaches to higher education. Some states, especially in New England, where there is a strong tradition of private higher education, have provided limited support for public colleges and universities and tend to charge high tuition. In Massachusetts, for example, more than half the students attend private colleges—the highest proportion in the United States. In the Midwest and the West, however, states have been more supportive of large, and often excellent, public higher-education systems. California has the largest public higher-education system, and has been a model for shaping state higher education in an era of mass access. A combination of community colleges, four-year schools, and research universities has characterized the California system, and is common in other states. California has always had relatively low tu-

ition, while the New England states typically charge students more. The policies of the state governments concerning student tuition, financial support, access and accountability, and the size and shape of state systems of higher education are all crucial to public higher education. State policies also affect private universities and colleges. In some states, public funds are available for scholarships and other programs for private higher education, and in a few states, such as New York, the state has the power to approve degree programs and other initiatives in the private sector.

The federal government also has a significant impact on higher education. Indeed, the role of the federal government has increased dramatically in the period following World War II. The G.I. Bill, the major federally sponsored scholarship program following the war, enabled millions of returning veterans to attend college and resulted in a wave of expansion in higher education. Stimulated in part by the cold war, the federal government increased funding for research and became the major source of funding for scientific research. In the period of greatest expansion, during the 1960s, federal funds became available to build new facilities and expand libraries. Perhaps most important, the federal student loans programs and the Pell Grant system have become a major part of financing postsecondary education for millions of students.

The federal government regulates certain aspects of higher education, and these regulations reflect the external influences on American colleges and universities. Federal regulations affect such aspects of academic life as athletic programs, which are subject to regulations concerning gender equality and access, the use of human subjects in research, the treatment of animals in laboratories, and access to facilities through the Americans with Disabilities Act. Federal regulatory authority expanded during the 1980s and 1990s. Universities that receive federal funding, which means almost all American academic institutions, are subjects to regulations and reporting requirements. Statistics concerning the composition of the faculty and the student body, statistics on campus crime, and other aspects of academic life must all be submitted to the federal government to comply with regulatory requirements.

The legal system also affects higher education and constitutes an important external societal force for colleges and universities. Court decisions of all kinds directly affect higher education. Of consider-

able importance—and much controversy—have been court decisions concerning affirmative action for both students and faculty. The courts, for example, have limited, and in some cases even eliminated, considerations of race in university admissions and other programs, and they have ruled on faculty hiring and promotion. Courts occasionally intervene in university decisions concerning tenure and promotion if specific complaints are made, and academic decisions are sometimes overturned. Court decisions thus set precedents for academic policy.

Government, at all levels, is a central external force affecting colleges and universities. Because 80 percent of American postsecondary students attend public colleges and universities, governmental policy is especially important. The government provides the bulk of funding for public institutions, which are directly subject to government policy and direction. Although government funding supports a declining proportion of academic budgets, government influence and control remain strong. Higher education is subject to accountability at many levels, and the political, legal, and regulatory system of higher education has a strong influence on higher education at every level.

### Religious Factors

Historically, religion has been a central force in American higher education. Most of the early colleges, including Harvard and Yale, were established by religious organizations with specifically religious purposes in mind. For almost two centuries, religion was one of the major motivations for the expansion of higher education, and a large majority of academic institutions were controlled by religious bodies. The curriculum was a combination of religious and secular subjects, with the religious elements gradually decreasing in importance. Regulations imposed by church sponsors governed extracurricular life, and had an impact on the faculty as well. By the end of the nineteenth century, with the expansion of public higher education, church-related institutions became a smaller part of the higher-education system.

By the end of the twentieth century, religious influences became much less pervasive. Religion plays no significant role in the public colleges and universities in the early twenty-first century. This reduced role is strengthened by the constitutional separation of church and state. Many of the private colleges and universities once sponsored by religious bodies have become secularized. Church groups no longer spon-

sor institutions such as Harvard, the University of Chicago, and Duke. At the same time, there are hundreds of religiously sponsored institutions—there are more than 200 Roman Catholic colleges and universities, and a large number of Protestant institutions. But these schools educate only a small part of the student population, and even they are, in general, less influenced by religious factors than was once the case. It is fair to say that religion is no longer a major factor in American higher education, and that its influence is limited to a small number of private religiously sponsored colleges and universities.

### Societal Influences

Societal trends and developments uniquely influence American colleges and universities. Academe has always been attuned to demands for new curricula, new initiatives, and in general to the interests of external forces. This is in contrast to academe in many other parts of the world, which until recently were mostly elite institutions less influenced by society. Americans historically have established new institutions to meet perceived needs, from the desire of the Puritans to educate clergy, which led to the establishment of Harvard in 1636, to the growth of women's colleges in the nineteenth century to serve the needs of women seeking access to higher education, and to the inclusion of research in university curricula at the end of the nineteenth century to help meet the needs of a developing society.

Academic institutions have also moved quickly to expand and diversify the curriculum to meet new societal needs, whether it be the growth of medical education in the universities or the remarkable expansion of business schools in the post-World War II period. There is an inevitable tension between ideas of autonomy ingrained in academic institutions and pressures from society. In the twenty-first century, external pressures of all kinds—economic, political, and others—characterize the higher-education system.

*See also:* ACADEMIC FREEDOM AND TENURE; CURRICULUM, HIGHER EDUCATION; FEDERAL FUNDING FOR ACADEMIC RESEARCH; FEDERAL FUNDS FOR HIGHER EDUCATION; HIGHER EDUCATION IN THE UNITED STATES.

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PHILIP G. ALTBACH

## HIGHER EDUCATION, INTERNATIONAL ISSUES

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Higher education has developed in numerous ways since the end of World War II. Throughout the world, issues such as autonomy and accountability, the impact of technology, the growing role of markets and the privatization of higher education, the role of research and teaching, various efforts toward curriculum reform, and the massive expansion that has characterized higher education systems in most countries have all played important roles in the development of higher education. Universities are international institutions, with common historical roots, and at the same time are embedded in national cultures and circumstances. It is worthwhile to examine the contemporary challenges to higher education in comparative perspective, as most issues affect academe everywhere.

### Expansion: Hallmark of the Postwar Era

Postsecondary education has expanded since World War II in virtually every country in the world. The growth of postsecondary education has, in proportional terms, been more dramatic than that of primary and secondary education. Writing in 1975, Martin Trow spoke of the transition from *elite* to *mass* and then to *universal* higher education in the industrialized nations. While the United States enrolled some 30 percent of the relevant age cohort (18–21 year olds) in higher education in the immediate postwar period, European nations generally maintained an elite higher education system, with fewer than 5 percent of the population attending postsecondary institutions. By the 1960s many European nations educated 15 percent or more of this age group—Sweden for example, enrolled 24 percent in 1970, with France at 17 percent. At the same time, the United States increased its proportion to around 50 percent, approaching universal access. By the mid-1990s many European countries, including France, Germany, and the United Kingdom, enrolled around 50 percent of the relevant age group, and the proportion in the United States increased to three-quarters. While Europe and North America are now relatively stable, middle-income countries and countries in the developing world have continued to expand at a rapid rate.

In the Third World, expansion has been similarly dramatic. Building on tiny and extraordinarily elitist universities, higher education expanded rapidly in the immediate post-independence period. In India, enrollments grew from approximately 100,000 at the time of independence in 1947 to over 6.5 million in the 1990s—although India enrolls just 7 percent of the relevant age group. China enrolls a similar number, though this represents only 5 percent of its young people. China, especially, is engaged in a dramatic expansion program. Expansion in Africa has also been rapid, with the postsecondary student population growing from 21,000 in 1960 to 437,000 in 1983, but with growth stagnating in the 1990s as a result of the economic and political difficulties experienced by many sub-Saharan African countries. Recent economic difficulties in much of sub-Saharan Africa have meant that per-student expenditure has dropped, contributing to a marked deterioration in academic standards. Enrollment growth has also slowed.

Expansion is also a hallmark elsewhere in the non-Western countries. The situation is complex. In

some countries, including the larger Latin American nations, the Philippines, and some others, enrollment rates have reached 30 percent or more. In most of the low-income nations, however, enrollments lag far behind. However, growth continues to be rapid in much of the Third World, with accompanying strains on budgets and facilities—and deterioration in standards. Expansion in the Third World has, in general, exceeded that in the industrialized nations, at least in proportional terms. It should be noted that there are significant variations among Third World nations—some countries maintain small and relatively elitist university systems, while others have expanded more rapidly. Among the highest rates of expansion, and now of participation, are in those newly industrialized countries such as South Korea and Taiwan.

There are many reasons for the expansion of higher education. A central cause has been the increasing complexity of modern societies and economies, which have demanded a more highly trained workforce. Almost without exception, postsecondary institutions have been called on to provide the required training. Indeed, training in many fields that had once been imparted on the job has become formalized in institutions of higher education. Whole new fields, such as computer science, have come into existence, and many of these rely on universities as a key source of research and training. Nations now developing scientific and industrial capacity, such as Korea and Taiwan, have depended on academic institutions to provide high-level training and research expertise to a greater extent than was the case during the first industrial revolution in Europe.

Not only do academic institutions provide training, they also test and provide certification for many roles and occupations in contemporary society. These roles have been central to universities from their origins in the medieval period, but have been vastly expanded in recent years. A university degree is a prerequisite for an increasing number of occupations in most societies. Indeed, it is fair to say that academic certification is necessary for most positions of power, authority, and prestige in modern societies. This places immense power in the hands of universities. Tests to gain admission to higher education are rites of passage in many societies and are important determinants of future success. Competition within academe varies from country to country, but in most cases an emphasis is also placed on high

academic performance and tests in the universities. There are often further examinations to permit entry into specific professions.

The role of the university as an examining body has grown for a number of reasons. As expansion has taken place, it has been necessary to provide ever more competitive sorting mechanisms to control access to high-prestige occupations. The universities are also seen as meritocratic institutions that can be trusted to provide fair and impartial tests to measure accomplishment honestly and, therefore, determine access. When such mechanisms break down—as they did in China during the Cultural Revolution—or where they are perceived to be subject to corrupt influences—as in India—the universities are significantly weakened. The older, more informal, and often more ascriptive means of controlling access to prestigious occupations are no longer able to provide the controls needed, nor are they perceived as fair. Entirely new fields have developed where no sorting mechanisms existed, and academic institutions have frequently been called upon to provide not only training but also examination and certification.

Expansion has also occurred because the growing segments of the population of modern societies demand it. The middle classes, seeing that academic qualifications are necessary for success, demand access to higher education. Governments generally respond by increasing enrollment. When governments do not move quickly enough, private initiatives frequently establish academic institutions in order to meet the demand. In countries like India, the Philippines, and Bangladesh, a majority of the students are educated in private colleges and universities. At present, there are powerful worldwide trends toward: (1) imposing user fees in the form of higher tuition charges, (2) increasingly stressing private higher education, and (3) defining education as a “private good” in economic terms. These changes are intended to reduce the cost of postsecondary education for governments, while maintaining access—although the long-term implications for the quality of, access to, and control over higher education remain unclear.

In most countries, higher education is heavily subsidized by the government, and most, if not all, academic institutions are in the public sector. While there is a growing trend toward private initiative and management sharing responsibility for education with public institutions, governments will likely con-

tinue to be central to funding postsecondary education, although the private sector is currently the major source of growth worldwide. The dramatic expansion of academic institutions in the postwar period has proved very expensive for governments and has led to a diversification of funding sources. Nonetheless, the demand for access has been an extraordinarily powerful one.

### Change and Reform: Trends since the 1960s

The demands placed on institutions of higher education to accommodate larger numbers of students and to serve expanding functions has resulted in reforms in higher education in many countries. Much debate has taken place concerning higher education reform in the 1960s—and a significant amount of change did take place. It is possible to identify several important factors that contributed both to the debate and to the changes that took place. Without question, the unprecedented student unrest of the period contributed to a sense of disarray in higher education. The unrest was in part precipitated by deteriorating academic conditions that were the result of the rapid expansion. In a few instances, students demanded far-reaching reforms, although they did not always propose specific changes. Students frequently demanded an end to the rigidly hierarchical organization of the traditional European university, and major reforms were made in this respect. The *chair* system, which gave total power to small groups of senior professors, was modified or eliminated, and the responsibility for academic decision making was expanded in some countries to include students. At the same time, the walls of the traditional academic disciplines were broken down by various plans for interdisciplinary teaching and research.

In the 1990s the major trend in restructuring European universities has been on improving the administrative efficiency and accountability of the universities, and many of the reforms of the 1960s were modified or even eliminated. Students, for example, have less power now. In the Netherlands, a national restructuring has increased the power of administrators, reformed the governance system by reducing the power of the senior professors, greatly increased accountability, and shifted more of the financial responsibilities to the academic institutions themselves. Students have little authority in the new arrangements. While the Dutch have implemented the most dramatic reforms, similar trends can be seen in Germany, Sweden, and other countries.

In many industrialized nations structural change has been modest. In the United States, for example, despite considerable debate during the 1960s, there was very limited change in the structure or governance of higher education. Japan, which saw unrest that disrupted higher education and spawned a large number of reports on university reform, experienced virtually no basic change in its higher education system, although several *new model* interdisciplinary institutions were established—such as the science-oriented Tsukuba University near Tokyo. Britain, less affected by student protest and with an established plan for expansion in operation, also experienced few reforms during the 1960s, and some of the changes implemented in the 1960s have since been criticized or abandoned. In Germany, reforms in governance that gave students and junior staff a dominant position in some university functions were ruled unconstitutional by the German courts.

Many of the structural reforms of the 1960s were abandoned after a decade of experimentation, or they were replaced by administrative arrangements that emphasized accountability and efficiency. Outside authorities—including government, but in some cases business, industry, or labor organizations—have come to play a more important role in academic governance. The curricular innovations of the 1960s, as well as later decades, have proved more durable. Interdisciplinary programs and initiatives and the introduction of new fields such as gender studies have characterized changes in many countries.

Vocationalization has been an important trend in higher education change. Throughout the world there is a conviction that the university curriculum must provide relevant training for a variety of increasingly complex jobs. The traditional notion that higher education should consist of liberal, nonvocational studies for elites, or should provide a broad but unfocused curriculum, has been widely criticized for lacking “relevance.” Students, worried about obtaining remunerative employment, have pressed the universities to be more focused. Employers have also demanded that the curriculum become more directly relevant to their needs. Enrollments in the social sciences and humanities, at least in the industrialized nations, have declined because these fields are not considered vocationally relevant.

Curricular vocationalism is linked to another key worldwide trend in higher education: the in-

creasingly close relationship between universities and industry. Industrial firms have sought to ensure that the skills they need are incorporated into the curriculum. This trend also has implications for academic research, since many university-industry relationships are focused largely on research. Industries have established formal linkages and research partnerships with universities in order to obtain help with research in which they are interested. In some countries, such as Sweden, representatives of industry have been added to the governing councils of higher education institutions.

University-industry relations have become crucial for higher education in many countries. Technical arrangements with regard to patents, confidentiality of research findings, and other fiscal matters have become important. Critics have pointed out that the nature of research in higher education may be altered by these new relationships, as industrial firms are not generally interested in basic research. University-based research, which has traditionally been oriented toward basic research, may be increasingly skewed to applied and profit-making topics. There has also been some discussion of the orientation of research, particularly in fields like biotechnology, where broader public policy matters may conflict with the needs of corporations. Specific funding arrangements have also been questioned. Pressure to serve the immediate needs of society, and particularly the training and research requirements of industry, is currently a key concern for universities, one that has implications for the organization of the curriculum, the nature and scope of research, and the traditional relationship between the university and society.

Universities have traditionally claimed significant autonomy for themselves. The traditional idea of academic governance stresses autonomy, and universities have tried to insulate themselves from direct control by external agencies. However, as universities have expanded and become more expensive, there has been immense pressure by those providing funds for higher education (mainly governments) to expect accountability from universities. The conflict between autonomy and accountability has been one of the flashpoints of controversy in recent years. Without exception, autonomy has been limited, and new administrative structures have been put into place in such countries as Britain and the Netherlands to ensure greater accountability. The issue takes on different implications in different parts of

the world. In the Third World, for example, traditions of autonomy have not been strong, and demands for accountability, which include both political and economic elements, are especially troublesome. In the industrialized nations accountability pressures are more fiscal in nature.

### The Twenty-First Century

The university in modern society is a durable institution. It has maintained key elements of the historical models from which it evolved over many centuries, while at the same time it has successfully evolved to serve the needs of societies during a period of tremendous social change. There has been a convergence of both ideas and institutional patterns and practices in higher education throughout the world. This has been due in part to the implantation of European-style universities in the developing areas during and after the colonial era, and in part to the fact universities have been crucial in the development and internationalization of science and scholarship.

Despite remarkable institutional stability over time, universities have changed and have been subjected to immense pressures in the post-World War II period. Many of the changes chronicled here are the result of great external pressure and were instituted despite opposition from within the institutions. Some have argued that the university has lost its soul. Others have claimed that the university is irresponsible because it uses public funds and does not always conform to the direct needs of industry and government. Pressure from governmental authorities, militant students, or external constituencies have all placed great strains on academic institutions.

The period since World War II has been one of unprecedented growth—the dominant trend worldwide has been toward mass higher education. The university is at the center of the postindustrial, knowledge-based society. The problems faced by higher education are, in part, related to growth and expansion. The following issues are among those that will be of concern in the coming decade and beyond.

**Access and adaption.** Although in a few countries access to postsecondary education has been provided to virtually all segments of the population, in most countries a continuing unmet demand exists for higher education. Progress toward broadening

the social class base of higher education has slowed (and in many industrialized countries stopped in the 1970s). With the arrival of democratic governments in eastern Europe, the reemergence of demand in western Europe, and continuing pressure for expansion in the Third World, demand for access continues, fueling an expansion of enrollments in many countries. Often, limited funds and a desire for efficient allocation of scarce postsecondary resources come into direct conflict with demands for access. In addition, demands for access by previously disenfranchised groups will continue to place great pressure on higher education. In many countries, racial, ethnic, or religious minorities play a role in shaping higher education policy.

#### **Administration, accountability, and governance.**

As academic institutions become larger and more complex, there is increasing pressure for a greater degree of professional administration. At the same time, the traditional forms of academic governance are increasingly criticized—not only because they are unwieldy, but also because in large and bureaucratic institutions they are inefficient. The administration of higher education will increasingly become a profession, much as it is in the United States. Academic institutions have become complex bureaucratic structures, requiring managerial expertise to administer. Demands for accountability are growing and will cause academic institutions considerable difficulty. As academic budgets expand, there are inevitable demands to monitor and control expenditures. The appropriate level of governmental supervision of higher education remains contested terrain. The challenge will be to ensure that the traditional—and valuable—patterns of faculty control over governance and the basic academic decisions in universities are maintained in a complex and bureaucratic environment.

**Research and knowledge dissemination.** Research is a central part of the mission of many universities, and of the academic system in general. Contemporary knowledge-based societies depend on research, both basic and applied, for their success, and universities have traditionally been key sources of research. Decisions concerning the control and funding of research, the relationship of research to the broader curriculum and teaching, the uses made of university-based research, and other related issues will all be in contention in future years. Current debates concerning the appropriate role of industry in sponsoring, and perhaps controlling, research, and about the

control of knowledge products, will help to shape the future of academic research.

The system of knowledge dissemination, including journals, books, and computer-based data systems, is rapidly changing, and many questions remain unanswered. Who should control the new data networks? How will traditional means of communication, such as journals, survive in this new climate? How will the scientific system avoid being overwhelmed by the proliferation of data? Who will pay for the costs of knowledge dissemination? In addition, the needs of peripheral scientific systems, including both the Third World and smaller academic systems in the industrialized world, have been largely ignored, but are nonetheless important.

While the technological means for rapid knowledge dissemination are available, issues of control and ownership, the appropriate use of databases, problems of maintaining quality standards in databases, and other related questions are very important. It is possible that the new technologies will lead to increased centralization rather than to wider access. It is also possible that libraries and other users of knowledge will be overwhelmed, both by the cost of obtaining new material and by the flow of knowledge. At present, academic institutions in the United States and other English-speaking nations, along with publishers and the owners of the communications networks, stand to gain. The major Western knowledge producers currently constitute a kind of cartel of information, dominating not only the creation of knowledge but also most of the major channels of distribution. Simply increasing the amount of research and creating new databases will not ensure a more equal and accessible knowledge system.

**The academic profession.** In most countries, the professoriate has found itself under great pressure at the turn of the twenty-first century. Demands for accountability, increased bureaucratization of institutions, fiscal constraints in many countries, and an increasingly diverse student body have all challenged the professoriate. In most industrialized nations, a combination of fiscal problems and demographic factors have led to a stagnating profession. At the beginning of the twenty-first century, demographic factors and a modest upturn in enrollments are beginning to turn surpluses into shortages. In the newly industrializing countries (NICs), the professoriate has significantly improved its status, remuneration, and working conditions. In the poorer nations, however, the situation has, if anything, become

more difficult with decreasing resources and ever-increasing enrollments. Overall, the professoriate will face severe problems as academic institutions change during the twenty-first century. Maintaining autonomy, academic freedom, and a commitment to the traditional goals of the university will be difficult.

In the West, it will be hard to lure the “best and brightest” into academe in a period when faculty positions are again relatively plentiful—in many fields, academic salaries have not kept pace with the private sector, and the traditional academic lifestyle has deteriorated. The pressure on the professoriate not only to teach and do research, but also to attract external grants, do consulting, and the like, is great. In Britain and Australia, for example, universities have become “cost centers,” and accountability has been pushed to its logical extreme. British academics entering the profession after 1989 will no longer have tenure, but will, in the future, be periodically evaluated. In the NICs, the challenge will be to create a fully autonomous academic profession in a context in which traditions of research and academic freedom are only now developing. The difficulties faced by the poorer Third World countries are perhaps the greatest, as they struggle to maintain a viable academic culture under deteriorating conditions.

**Private resources and public responsibility.** In almost every country there has been a growing emphasis on increasing the role of the private sector in higher education. One of the most direct manifestations of this trend is the role of the private sector in funding and directing university research. In many countries private academic institutions have expanded, or new ones have been established. In addition, students are paying an increasing share of the cost of their education as a result of tuition and fee increases, and through loan programs.

Governments try to limit their expenditures on postsecondary education, while at the same time recognizing that the functions of universities are important. Privatization has been the primary means of achieving this broad policy goal. Inevitably, decisions concerning academic developments will move increasingly to the private sector, with the possibility that broader public goals may be ignored. Whether private interests will support the traditional functions of universities, including academic freedom, basic research, and a pattern of governance that leaves the professoriate in control, is unclear. Some of the most interesting developments in private higher education can be found in such countries as

Vietnam, China, and Hungary, where private institutions have recently been established. The growth of a new for-profit private sector in the United States and elsewhere creates an entirely new sector of higher education, and private initiatives in higher education will bring a change in values and orientations. It is not clear, however, that these values will be in the long-term best interests of the university.

**Diversification and stratification.** While diversification—the establishing of new postsecondary institutions to meet diverse needs—is by no means an entirely unprecedented phenomenon, it is a trend that has been of primary importance, and it will continue to reshape the academic system. In recent years, the establishment of research institutions, community colleges, polytechnics, and other academic institutions designed to meet specialized needs and serve specific populations has been a primary characteristic of growth. At the same time, the academic system has become more stratified, and individuals within one sector of the system are finding it difficult to move to a different sector. There is often a high correlation between social class (and other variables) and selection to a particular sector of the system.

To some extent, the reluctance of traditional universities to change is responsible for some of the diversification. Perhaps more important, however, has been the belief that it is efficient and less expensive to establish new limited-function institutions.

One element of diversification is the inclusion of larger numbers of women and other previously disenfranchised segments of the population. Women now constitute 40 percent of the postsecondary student population worldwide—and they are now a majority in U.S. institutions. In many countries, students from lower socioeconomic groups, and racial and ethnic minorities, are entering postsecondary institutions in significant numbers. This diversification will also present challenges in the coming decades.

**Economic disparities.** There are substantial inequalities among the world’s universities—and these inequalities will likely grow. The major universities in the industrialized nations generally have the resources to play a leading role in scientific research—though it will be increasingly expensive to keep up with the expansion of knowledge. Universities in much of the Third World, however, simply cannot cope with the continuing pressure for increased en-

rollments, particularly when combined with budgetary constraints and, in some cases, fiscal disasters. For example, universities in much of sub-Saharan Africa have experienced dramatic budget cuts and find it difficult to function, not to mention to improve quality and compete in the international knowledge system. In the middle are academic institutions in the Asian NICs, where significant academic progress has taken place. Thus, the economic prospects for postsecondary education worldwide are mixed.

### Conclusion

Universities share a common culture and reality. In many basic ways there is an international convergence of institutional models and norms. At the same time, there are significant national differences that will continue to affect the development of academic systems and institutions. It is unlikely that the basic structures of academic institutions will change dramatically; the traditional university will survive, although it will be changed by the forces discussed here. Open universities and other distance education institutions have emerged, and may provide new institutional arrangements. Efforts to save money may yield further organizational changes as well. Unanticipated change is also possible.

The circumstances facing universities in the first part of twenty-first century are not, in general, favorable. The realities of higher education as a "mature industry," with stable, rather than growing, resources in the industrialized countries, will affect not only the funds available for postsecondary education, but also practices within academic institutions. Accountability, the impact of technologies, and the other forces discussed here will all affect colleges and universities. Patterns will, of course, vary worldwide. Some academic systems, especially those in the newly industrializing countries, will continue to grow. In parts of the world affected by significant political and economic change, the coming decades will be ones of reconstruction. The coming period, therefore, holds many challenges for higher education.

**See also:** ACCREDITATION IN AN INTERNATIONAL CONTEXT, HIGHER EDUCATION; DISTANCE LEARNING IN HIGHER EDUCATION; HIGHER EDUCATION IN CONTEXT; RESEARCH UNIVERSITIES.

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PHILIP G. ALTBACH

## HIGHER EDUCATION IN THE UNITED STATES

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### HISTORICAL DEVELOPMENT

John R. Thelin  
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### HISTORICAL DEVELOPMENT

At the start of the twenty-first century, higher education in the United States stands as a formidable enterprise. As an established “knowledge industry” it represents about 3 percent of the gross national product. Virtually every governor and legislature across the nation evokes colleges and universities as critical to a state’s economic and cultural development. Its profile includes more than 4,000 accredited institutions that enroll over fifteen million students and confers in excess of two million degrees annually. Colleges and universities spend about \$26 billion per year on research and development, of which \$16 billion comes from federal agencies. The research universities’ ability to attract expertise is recognized internationally.

This success story of growth and expansion began more than 300 years ago before the United States existed. Beginning in the seventeenth century, the idea of an American higher education grew to fruition throughout the ensuing centuries. At the same time, differences developed with each new era of collegiate growth, but the story has remained one of expanding access.

#### The Colonial Period

Imperial governments usually invested little in colonial colleges. The typical mercantile approach emphasized the exportation of agricultural products

and raw materials from the provinces to the homeland. The British Empire, for instance, responded to Virginia’s request for a seminary to save their souls, with “Souls?!? Damn your souls! Make tobacco.” Despite such hostility, the American colonies generally enjoyed greater independence than the typical British territory. While a succession of kings and queens encouraged the cultivation and exportation of tobacco, rice, indigo, and cotton, colleges also flourished as an unlikely crop in America.

The colonists created institutions for higher education for several reasons. New England settlers included many alumni of the royally chartered British universities, Cambridge and Oxford, and therefore believed education was essential. In addition, the Puritans emphasized a learned clergy and an educated civil leadership. Their outlook generated Harvard College in 1636. Between Harvard’s founding and the start of the American Revolution, the colonists chartered nine colleges and seminaries although only one in the South.

Religion provided an impetus for the creation of colonial colleges. As the First Great Awakening of the 1730s to 1770s initiated growth in a wider variety of Protestant churches, each denomination often desired its own seminary. Furthermore, each colony tended to favor a particular denomination and so the new colleges took on an importance for regional development as well. Presbyterians in New Jersey founded the College of New Jersey (later renamed Princeton). The College of William and Mary in Virginia maintained a strong Anglican orientation, reflecting that colony’s settlement by landed gentry from England. The Baptists, who had been expelled from Massachusetts Bay Colony and settled in Rhode Island, established their own college but in an unusual move did not require religious tests for admission. Other dissenting religious groups, such as the Methodists and Quakers, became enthusiastic college builders after facing hostility in many colleges.

Small in size and limited in scope, colonial colleges rarely enrolled more than one hundred students and few completed their degrees. Yet the young men who attended these colonial colleges made historic and extraordinary contributions to both political thought and action. Also, colleges represented one of the few institutional ventures to receive royal and/or colonial government support and regulation during the eighteenth century. The college’s multipurpose buildings were typically among

the largest construction projects in the colony, matched only by a major church or a capitol.

Though colonial colleges were frontier institutions that expanded access to higher education, by contemporary standards the colonial period remained elite and exclusionary. Only white Christian males were allowed to matriculate. Women and African-Americans were denied participation by statute and custom, but colleges did serve Native Americans in a missionary capacity. The evangelism of the Protestant groups attracted donors, although in time the colonial colleges' devotion to such educational plans waned. In order to keep receiving financial support, however, the colleges argued that by educating young Christian men, missionaries would be available to preach Christianity to Native Americans.

Despite their limitations, the colonial colleges effectively educated a literate, articulate, and responsible American elite. Even though college education was not crucial for the professional and career advancement of sons of prosperous merchants and wealthy planters, the college alumni were disproportionately influential in politics and national affairs. Not only did they lead by action in revolutionary proclamations, but they followed through as military and political leaders. Due in part to a collegiate curriculum that drew from the advanced writings of Scottish and Enlightenment thinkers in political economy, the colonial college alumni designed a system of government destined to serve as a model for the world. The colonial colleges' legacy then was producing a generation of American leaders and thinkers whose combination of decisiveness and thoughtfulness literally turned the world "upside down."

### Higher Education in the New United States

With the founding of the United States of America, governmental policies towards English-chartered colleges became unclear. Wary of centralized power, Americans maintained educational control close to home. Therefore, governance of colonial colleges became almost exclusively the jurisdiction of local and state governments. In actuality the schools enjoyed independence as the Supreme Court's famous *Dartmouth* decision in 1819 demonstrated that the new federal government would protect colleges from state intervention.

With the reputation of colleges remaining high, most state legislatures, particularly in the newer

states west of the Allegheny and Appalachian mountain ranges, looked favorably on chartering colleges as long as the state did not have to provide financial support. Between 1800 and 1850, the United States experienced a "college building boom" in which more than two hundred degree-granting institutions were created. However, since most of these new colleges depended on student tuition payments and local donors, there was also a high closure rate and the schools that did survive typically struggled from year to year.

Although the classical languages and liberal studies of the bachelor of arts degree remained central to the character of American higher education in this era, several new fields gained a foothold in formal study. Engineering and science acquired a presence on the campus. Professional education for law and medicine usually also took place though in separate institutions. Nevertheless, few if any learned professions in the early nineteenth century required academic degrees or certification. Most states reserved the right to set requirements for professional practice, and these were for the most part meager.

Going to college early in the nineteenth century was not particularly expensive. The cost of potential lost opportunities presented a greater concern for students and parents. Employers seldom required college degrees, therefore college presidents faced the perpetual challenge of persuading young adults to delay pursuing their life's enterprises by spending four years on campus. Modest-income families decided whether or not a young man's potential contribution to family labor could be spared while he pursued higher education. The college experience and the college degree did confer prestige and often some professional advantages, but its perceived benefits did not always outweigh the costs.

The United States, for all its deserved acclaim of being a truly "new nation," remained faithful to many of the tenets of English common law. For example, in New England states, the small farms and principle of primogeniture forbade the division of a father's land among numerous sons, so families had to find useful work for those sons not inheriting land. Going to college provided an attractive alternative, especially in subsistence-farming regions. Affordable colleges in rural New England provided an important route to respect and employment in schools and churches. In fact, with the onset of the Second Great Awakening in the early nineteenth century, new denominations once again pushed for

clergy educated in institutions dedicated to their particulars of faith. Their “missionary zeal” led to the founding of new schools and an increase in college attendance. In short, college became useful not just for the elite, but also for sons who had fewer prospects in the new nation. This development resulted in a host of small liberal arts colleges in the Northeast and later in Ohio, Kentucky, and Tennessee that served as an important incubator for a growing middle class.

Educational opportunities for young women followed a comparable pattern. Families often wondered how a young single woman could be self-supporting or contribute to the family welfare. A growing national demand for trained teachers due to the “common-school movement” of the 1830s provided one answer. Women could achieve financial independence and respectability within a rather rigid social structure by attending a normal school or female seminary that provided them with an education for employment as teachers in the ever-expanding nation.

**The mid-nineteenth century.** Variety and growth characterized college building during the mid-nineteenth century. In addition to the conspicuous church-related liberal arts colleges, various groups founded a range of other special interest institutions for advanced study. These included agricultural colleges, proprietary medical schools, freestanding law schools, engineering schools, and scientific colleges. Private philanthropy indicated a growing American interest in founding new institutions concentrated on advanced scientific, technical, and engineering education. Illustrative of this realm was the generous support for such colleges as Rensselaer, Drexel, Cooper Union, and the Massachusetts Institute of Technology.

One of the biggest shifts was the federal government becoming directly involved in higher education, which developed during the Civil War when southern congressmen who opposed the legislation were absent. The Morrill Act of 1862 set in motion an elaborate program whereby states received profits from the sale of an allotted portion of western lands if used to establish programs of agricultural, mechanical, and military sciences, along with liberal arts. The so-called land-grant act thereby stimulated numerous creative proposals and projects. In some cases, states attached their new engineering or agricultural programs to historic colleges. In others, they opted to create new state colleges. Between 1887 and

1914, the land-grant colleges gained support and collective political strength and expanded the definition and scope of university curricula. Legislation such as the Hatch Act and the “Second Morrill Act” of 1890 continued the expansion of federal involvement in education by bringing federal funding and projects to the new land-grant campuses.

Amidst this flurry of federal legislation, African Americans also received attention though the treatment tended to have mixed results. On the one hand, the Morrill Act of 1890 provided funding for African-American education, which led to the creation of Negro colleges in seventeen southern states—a substantial gain in educational opportunities. On the other hand, the guidelines meant that the U.S. government accepted and endorsed state and local practices of racial segregation. By increasing their role in funding higher education, the federal government helped shift the focus of many American colleges.

**Higher education’s gilded age: 1870 to 1910.** Between 1870 and 1910 nearly all institutions of higher education enjoyed a surge in appeal both to prospective students and to benefactors. Some historians have called this period the “Age of the University.” Although accurate, the image remains incomplete. The university ideal certainly took root and blossomed during this period, but the historic undergraduate college also enjoyed growth, support, and popularity. Because of an unprecedented era of commercial and industrial expansion, a new period of philanthropy made possible the founding of well-endowed universities. One enduring sign of this growth came in 1900 when the presidents of fourteen institutions created the Association of American Universities. Its charter members included Johns Hopkins, Columbia, Harvard, Cornell, Yale, Clark, Catholic University, Princeton, Stanford, and the Universities of Chicago, Pennsylvania, California, Michigan, and Wisconsin. Gradually, over the next decades, relatively young state universities in the Midwest, along with private institutions such as Brown, Northwestern, Massachusetts Institute of Technology, and Vanderbilt, would also gain recognition and “university” status for their acceptance into the Association of American Universities.

The creation of the Association of American Universities reinvigorated an ongoing and intense debate over the proper definition and role of a modern American university. Nevertheless, without any official consensus, some general patterns of practice

and aspiration stood out. The new modern university emphasized graduate programs, including the study for and conferral of the doctor of philosophy degree or Ph.D. In fact, the proliferation of varied degree programs connected with professions illustrated a new era in higher education. Many undergraduate programs in agriculture, engineering, business, education, and home economics, along with military training, challenged the old definition of collegiate studies. Medicine, law, and theology, three traditional professions, developed varying relationships with universities and academic standards.

A lack of national academic standards, especially among secondary schools, colleges, and universities, gave rise to the entrance of private agencies into the higher education arena. Such organizations as the Carnegie Foundation for the Advancement of Teaching and the Rockefeller General Education Board adjudicated ratings among American universities. The foundation directors used a combination of coercion and incentives to prompt universities, including professional schools, to adhere to reasonable criteria of admissions, instruction, and certification. On balance, the foundations probably acknowledged and promoted those universities that were already reasonably strong and sound, and raised the floor for others.

Much to the chagrin of “serious scholars,” students shaped the undergraduate world according to their own preferences. It was in the elaborate extracurricular experiences of intercollegiate sports, campus newspapers, collegiate drama, literary societies, alumni groups, and fraternities that students reveled. Student (and public) enthusiasm for these activities grew as the popular media glamorized the social activities rather than scholarly pursuits.

Although the new structure and ethos of the “university” gained attention for its innovation, equally important was the support for and interest in smaller liberal arts colleges. This rising tide for colleges included an extended boom for the founding of women’s colleges. Mount Holyoke Seminary in western Massachusetts transformed itself into a bachelor’s degree-granting institution. Other prominent women’s colleges founded in this era were Smith, Wellesley, Radcliffe, Pembroke, Barnard, and Bryn Mawr. Women also gained access via new co-educational institutions such as the University of Chicago, Stanford University, and many state colleges and universities in the Midwest and the West.

**Higher education between the world wars.** Between 1914 and 1918 the American campus displayed some flexibility to accommodate special programs for the domestic effort during World War I. It included special training programs for military personnel and sporadic but important instances of faculty research leading to direct inventions and innovations in warfare. Projects such as future Harvard president James B. Conant’s efforts to develop mustard gas foreshadowed even greater cooperation between the universities and federal government during World War II.

College enrollments and public enthusiasm surged after World War I. One indicator of this popularity was the proliferation of huge football stadiums—most of which were named “Memorial Field.” Crowds exceeding 50,000 at campus games became standard at many universities. Although popular since the 1890s, intercollegiate athletics soared in commercial appeal during the 1920s. The absence of any substantive national voluntary self-regulation led the Carnegie Foundation for the Advancement of Teaching to publish a highly visible expose of college sports’ excesses in 1929. Some university officials denied the report’s findings, but the Carnegie Study was timely and accurate. The abuses in college sports underscored what Abraham Flexner of the Carnegie Foundation identified as the root source of problems in American higher education: a lack of consensus on clarity of mission and purpose. Unfortunately for Flexner and his colleagues, too many colleges and their constituencies were well served by the amorphous, unregulated nature of American higher education. What was intended as a marketplace of ideas became simply a marketplace, in which students were consumers and sports was the best-seller.

The onset of the Great Depression illustrated an interesting phenomenon: college enrollments increased during times of national financial hardship. While institutions reduced budgets, many worked to sustain American colleges in lean years. Some universities also demonstrated resourcefulness in seeking out business and industrial projects for their faculty in such fields as engineering and physics. These initiatives by such schools as Stanford, Massachusetts Institute of Technology, and California Institute of Technology laid the groundwork for external projects sponsored by both the private sector and the federal government that would come to fruition in the 1940s.

**Higher education's golden age: 1945 to 1970.** Between 1941 and 1945 American colleges and universities participated directly and effectively in a complex national war effort. This track record in times of duress brought long-term rewards and readjustments after the war. In 1947, the President's Commission on Higher Education in a Democracy concluded that federal funding of research should continue even in peacetime. In response to the "problem" of returning military personnel to the domestic economy and as a measure of gratitude, Congress passed the Servicemen's Readjustment Act (1944), popularly known as the "G.I. Bill." For at least a temporary period, this generous and flexible financial aid program enabled an unprecedented number of veterans to attend colleges, universities, and an array of "postsecondary" institutions. This legislation also gave energy to civil rights cases linked with educational access.

In addition to federal funding, growing states with enthusiastic governors and legislatures sought ways to work with their state's educational leaders to accommodate an impending enrollment boom. The rising birth rate and increased migration into selected states, along with a deliberate extension of college admissions, caused this dramatic growth. California led the way in statewide coordination with its Master Plan of 1960. This program aimed at accommodating mass access to affordable higher education by channeling students into tiered institutions.

Among the most conspicuous transformations was the emergence of a network of public junior colleges. Founded in the early 1900s, junior colleges experienced expansion in California during the 1930s. After World War II these institutions carried out two critical functions in mass postsecondary education. First, they developed a "transfer function" in which students could enter colleges or universities after two years of course work at the junior college. They also offered advanced, terminal degree instruction and certification in a range of professional and occupational fields. By the 1960s, the addition of a third function—readily accessible, low-priced continuing education for adults—led to a change in the name from *junior college* to *community college*.

The federal government participated in the expansion of sponsored research and development education during the 1950s and 1960s. Drawing from former MIT President Vannevar Bush's 1945 monograph, *Science: The Endless Frontier*, Congress and a succession of U.S. presidents endorsed federal spon-

sorship of high-level, peer-reviewed national research projects. Federal agencies that became most involved were those requiring applied technical research, specifically defense and agriculture. The behavioral sciences gradually adopted this model for large-scale psychological testing, and then various health care programs also sought funding. Agencies such as the National Institute of Health possessed a limited scope and a miniscule budget in the late 1940s, but acquired an increasing presence over the next four decades. In 1963, Clark Kerr's work *The Uses of the University* summarized this culmination of government patronage in research and development. According to Kerr, about fifty to one hundred institutions had positioned themselves to be "Federal Grant Universities": powerful incubators of advanced scholarship in the sciences possessing the ability to inspire confidence and funding in their research grant applications.

Both public and private universities benefited from governmental concerns about "cold war" defense and competition with the Soviet Union. Fears resulting from an extended definition of "national defense" led to funding for advanced studies in foreign languages, anthropology, and political science as well as the "hard" sciences of physics and chemistry. The transfer of these national programs to higher education institutions increased both the founding of new campuses and the construction of new buildings on older campuses. According to one study in 1986, about 75 percent of American campus buildings were constructed between 1960 and 1985, suggesting that the symbol for higher education during the cold war ought to be the building crane.

Enrollment also surged during the cold war era. Just prior to World War II the state universities with the largest enrollments—namely, the Ohio State University and the University of California at Berkeley—surged far ahead of other institutions with enrollments of around 19,000. Many major state universities prior to World War II had enrollments between 3,000 and 6,000. By 1970, however, the Ohio State University's main campus at Columbus enrolled more than 50,000—comparable to the University of Minnesota. The University of California had expanded its Berkeley campus enrollment to 26,000.

Some states responded to increasing enrollments with complex, multicampus systems. The University of California, for example, had ten campuses, with a total enrollment exceeding 150,000. At

the same time, the network of California state colleges formed its own system, eventually enrolling about two hundred thousand students as well. In addition, California's community colleges further expanded the accessibility to higher education by forming more than one hundred campuses. In New York, education officials and legislators created an expanded system of more than sixty campuses, the State University of New York (SUNY). While individual states pursued some variation of this theme, public community college systems enjoyed the greatest gains in student enrollments and campus expansion. Especially in such populous states as California, Texas, and Florida, the community college systems served a larger and expanding portion of the state's population. Although relative enrollment in private (independent) colleges decreased from approximately 50 percent of college students in 1950 to about 30 percent, this change did not preclude substantial numerical growth. Rather, the construction of new institutions in the public sector was exceptionally brisk.

Prior to the 1970s, the federal government did not venture much into substantial student financial aid programs. Rather, state and local policies produced low tuition rates at public institutions. However, with the passage of the Education Amendments of 1972, the federal government increasingly promoted college access, affordability, and choice. The showcase of this government interest was a commitment to need-based, portable student financial aid. The Pell Grant, officially known as the Basic Educational Opportunity Grant (BEOG), provided entitlements to enrolled college students who demonstrated financial need. These initiatives fueled dramatic enrollment growth. Though initially popular, by 1978 the emphasis on student grants shifted increasingly to providing low-interest student loans.

Expanded access and growing national investment in the higher education infrastructure increased the need for administration and planning both inside and outside the campus. Hence, higher education in the United States underwent a "managerial revolution" in its decision-making and attempts at coordination. On another level this led to the proliferation of an increasingly complex academic bureaucracy. On a second level, it gave rise to a reliance on a prodigious testing industry. Although the College Entrance Examination Board (CEEB) had been in existence since the turn of the century, it gained great influence after World War II with the

development and diffusion of the Educational Testing Service's Scholastic Aptitude Test (SAT). The capacity of the SAT to make determinations about college admissions and projections on college academic performance coexisted with doubts and controversies about the equity and validity of such high stakes tests. The SAT expanded the nationwide search for academic talent, and enabled the historic institutions of New England and the Atlantic Coast to draw a large percentage of students from public high schools (rather than primarily from nearby private prep schools), while attracting students from a wide geographic base. Despite the promise of standardized exams, by the 1960s there would be intense debates over the ability of the SAT and other such tests to identify genuine aptitude without bias toward socioeconomic class or educational experiences.

Questions of social justice and the clash of national laws with local practices came to the fore in the decade following *Brown v. the Board of Education of Topeka, Kansas* (1954) decision. In numerous states where public universities were segregated by race, policies were challenged. The southern campus came to be a real and symbolic focus of civil rights in American life.

**Tensions and transitions: 1970 to 1985.** Although American campuses expanded in the late 1950s and 1960s, many students did not feel they were well served. Crowding, lack of dormitories, and reliance on large lecture halls created the "impersonality of the multiversity." This malaise over the relative lack of attention to undergraduate education, combined with political activism over free speech, the antiwar protests, and issues of civil rights and social justice, spawned unrest on many American campuses between 1968 and 1972. Whether at such conspicuous universities as Berkeley, Columbia, or Michigan, or at quieter campuses, a generation of campus presidents and deans were unprepared to deal with widespread student dissatisfaction. Furthermore, the nation was unprepared for the tragedies that occurred at Kent State and Jackson State in 1970.

What governors and state legislators perceived as administrative failure to keep a campus house in order ultimately led to a loss of public and government confidence in colleges and universities. This change in attitude, combined with a stressed national economy, signaled for the first time in decades a tapering in public support for higher education. Double-digit inflation and an energy crisis, com-

bined with warnings of a decline in college matriculation, left most American colleges and universities in a troubled situation between 1975 and the early 1980s. Postsecondary institutions in the 1970s enrolled an increasingly diverse student body in areas of race, gender, and ethnicity. Less clear, however, was the question of whether the educational experiences within those institutional structures were effective and equitable, as American higher education faced criticisms for charges of tracking lower income students into particular subsets of institutions and courses of study.

**The end of the twentieth century.** A fifteen-year period beginning in 1985 was a financial roller coaster for higher education in the United States despite the underlying growth of the enterprise. By the mid-1980s virtually every gubernatorial candidate ran as an “education governor,” testimony to the hope that states placed in their colleges and universities to stimulate economic development. Ambitious presidents seized the opportunity to “buy the best,” whether it pertained to recruiting faculty, bright students, intense doctoral candidates, or, regrettably, even athletes. This period of opportunity, however, mortgaged institutions’ futures—a situation that became clear to accountants and boards soon after declines in the stock market and state revenues. Between 1990 and 1993 overextension and uncertainty loomed.

Illustrative of the partial gains in equity and meritocracy was the changing profile of females in higher education, especially in graduate and professional students. Whereas in 1970 relatively few women pursued doctorates or degrees in law or medicine, by 2000 women constituted close to half the students entering law school and about forty percent of first-year medical students. Women even constituted a majority of the Ph.D. recipients in biology, literature, and the humanities. At the same time, however, they were substantially underrepresented in such graduate fields as engineering and the physical sciences.

**Connecting past to present.** One theme that pervades higher education in the United States in the second half of the twentieth century is that of a “managerial revolution.” In response to the expanding definition of higher education, the ability to navigate institutions became a preoccupation. It extended to include the development of professional expertise in fund-raising, as colleges and universities acquired voracious appetites for resources while ex-

tending their mission into new fields and even into new roles. Higher education in the United States has succeeded in running its own operations while also considering new roles and constituencies. Its strength has ironically been its major source of weakness. In other words, the aspiration and ability of the American postsecondary institutions to accommodate some approximation of universal access has been its foremost characteristic. Institutions’ shortfalls in completely achieving that aspiration have been the major source of criticism and debate within American higher education. It is the perpetual American dilemma of how achieve both equality and excellence.

Grappling with the questions of educational equality and access has taken on increased urgency for two reasons. First, the widespread embrace of higher education as a means to legitimacy, literacy, and respectability strikes a deep chord in all sectors of American society. Secondly, since higher education has acquired the strength and stability of being a “mature industry,” it must then compete with numerous activities for a share of the public purse and private donations. Maintaining and bolstering widespread trust in postsecondary education will be the central determinant in present and future discussions about ways in which Americans support higher education.

*See also:* COMMUNITY COLLEGES; HISPANIC-SERVING COLLEGES AND UNIVERSITIES; HISTORICALLY BLACK COLLEGES AND UNIVERSITIES; LAND-GRANT COLLEGES AND UNIVERSITIES; LIBERAL ARTS COLLEGES; RESEARCH UNIVERSITIES; SINGLE-SEX INSTITUTIONS; TRIBAL COLLEGES AND UNIVERSITIES.

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## SYSTEM

The higher education system of the United States is not so much a formal system as it is an informal configuration of varied institutions. The development of the American system has been unique when compared with other national postsecondary educational systems around the world. Unlike most other countries, where higher education systems have largely developed outward from a central, government-supported university, the United States has never had such an institution. Instead, the evolution of the U.S. system has been shaped by many different influences, including state and local needs, demographics, religion, and changing social contexts. As a result, postsecondary institutions in the United States mirror the multifaceted complexities of the broader society in which they are embedded and the diversity of the people they serve. Moreover, American higher education is quite disorderly in structure and function in contrast to many national postsecondary systems and even in sharp contrast to the rationally organized American compulsory primary and secondary education system. Postsecondary institutions and the students they serve are diverse and not easily categorized. This disorder is characterized by a variety of individual institutional goals and missions, types of degrees offered, finance and gov-

ernance structures, and even curricula, course contents, and instructional methodologies.

In order to understand how this informal and loosely structured “system” of diverse institutions serves the wide-ranging needs of American society, it is necessary to identify some of the main features that define the major types of institutions found in American higher education. In 1983 Robert Birnbaum noted that institutional diversity can be defined across several categories of institutional features. The most useful of these categories include defining differences in terms of the following dimensions of institutional diversity: systemic, structural, constituent, and reputational.

### Systemic Diversity

Systemic diversity refers to differences in types of institutions with regard to their size and scope of mission. Starting in the 1970s, there have been many attempts to develop classification systems for categorizing postsecondary institutions in this manner. The best-known and most well-established classification system was developed by the Carnegie Foundation for the Advancement of Teaching and has come to be known as the “Carnegie Classification.” Originally developed by Clark Kerr in 1970, this classification system was designed to serve the research analysis needs of the Carnegie Commission on Higher Education. The commission “sought to identify categories of colleges and universities that would be relatively homogeneous with respect to the functions of the institutions as well as with respect to characteristics of students and faculty members” (Carnegie Commission on Higher Education, p. v). The Carnegie Classification was originally published in 1973 and has been updated several times, most recently in 2000. It is the framework most often used in describing institutional diversity in the United States and is relied upon by researchers and educational leaders to ensure appropriate comparisons between and among colleges and universities.

The current classification divides institutions into six main categories: doctoral/research institutions, master’s colleges and universities, baccalaureate colleges, associate’s colleges, specialized institutions, and tribal colleges. Within most categories are subcategories. Doctoral/research institutions can be either extensive or intensive and offer a wide range of undergraduate degrees as well as master’s and doctoral-level graduate degrees. Extensive doctoral/research institutions award more doctorates in

a wider range of fields than do intensive institutions. Master's colleges and universities fall into one of two categories (master's I or II) and typically offer a wide range of undergraduate programs as well as graduate education through the master's degree. Category I master's institutions award more master's degrees in a wider range of disciplines than do their category II peers. Baccalaureate colleges primarily focus on undergraduate education and are divided into three categories: baccalaureate colleges—liberal arts, baccalaureate colleges—general, and baccalaureate/associate's colleges. Liberal arts colleges award at least half of their degrees in liberal arts fields, whereas general colleges award less than half of their degrees in liberal arts fields. Baccalaureate/associate's colleges award both associate and baccalaureate degrees. Colleges and universities identified as specialized institutions in the Carnegie Classification may award degrees ranging from bachelor's to the doctorate, but they award the majority of those degrees in a single field. There are several subcategories of specialized institutions, including theological seminaries and other specialized faith-related institutions, medical schools and centers, other health profession schools, schools of engineering and technology, schools of business and management, fine arts schools, schools of law, teachers colleges, military institutes, and other types of specialized institutions. Tribal colleges are generally tribally controlled and located on reservations.

While the Carnegie classification system is often used in making qualitative distinctions among institutions, the commission denies that this is the classification's purpose. In his foreword to the 1987 edition of the classification, Ernest Boyer emphasized that the classification “is *not* intended to establish a hierarchy among learning institutions. Rather, the aim is to group institutions according to their shared characteristics, and we oppose the use of the classification as a way of making qualitative distinctions among the separate sectors” (Carnegie Foundation, p. 2). Nevertheless, the process of “institutional drift,” in which colleges strive to climb the hierarchy, is well documented in the literature. For example, junior colleges become baccalaureate-granting institutions by grafting another two years onto their programs, while doctoral/research-intensive universities increase funded research activities as they aspire to doctoral/research-extensive status. In the early twenty-first century, the Carnegie Foundation was in the process of reassessing the

classification system, rethinking how to characterize similarities and differences among institutions, and allowing multiple classifications of institutions. This work was expected to be concluded in 2005.

While the Carnegie Foundation's system is the most widely used typology in educational research, other classification schemes exist and are usually used for other purposes, such as providing information to prospective students and their families. For example, *U.S. News and World Report* classifies colleges and universities in several typologies. Institutions are divided into categories by whether they tend to serve a national or a regional population and then are rank-sorted into four “tiers.” Schools are also ranked according to best departments for a particular major and best financial value.

Although such categorization schemes are useful in a system that includes tremendous institutional variety, such simplification hides the true complexity of the higher education system of the United States. For example, an institution categorized as a “research university” may also have its roots in land-grant legislation, or may be single-sex or religiously affiliated. Other key hidden aspects of institutional identity include the institution's historical roots—whether it began as a land-grant college, historically black college or university, Hispanic-serving college, tribal college, or religiously affiliated institution. Additionally, there are less apparent dimensions of institutional difference, such as ratios between part-time and full-time students or residential versus commuter students. Athletic division membership is an important facet of institutional identity, as is location (region, urban, rural, suburban). Hence, it is important to pay attention to other aspects of institutional diversity in order to truly understand the nature of the diverse system of American higher education.

### **Structural Diversity**

Structural diversity focuses on the ways in which institutions are organized and controlled. Structural diversity is most often defined in terms of type of institutional control—public or private. Publicly controlled institutions are funded primarily by the government (usually by state governments) and are typically part of a larger state system. Private institutions are primarily funded by nongovernment sources and tend to be independent with their own private governing boards. There are many more private institutions in the United States than there are

public colleges and universities, although public higher education has grown significantly since the 1960s.

While there is no national system of higher education, all states have developed some type of public postsecondary educational system. There are a number of ways in which these systems are structured and organized. Public colleges and universities differ both in the ways in which they are governed and in the ways in which they are coordinated as part of a larger state system. All states assign responsibility for operating public colleges and universities to governing boards, and there are three main types of governing board structures: consolidated governance systems, segmental systems, and single-institution boards. Consolidated boards are responsible for all public postsecondary institutions in a particular state, although in some states this may apply only to the four-year institutions. Segmental systems have different governing boards for different types of campuses; in some states this may mean that public research universities are governed by one board, comprehensive state colleges by another board, and community colleges by yet another board. States that use single-institution boards grant governance autonomy to each public campus by allowing each to have its own board. Public boards vary in the degree to which they have formal governance authority and the extent to which they merely coordinate activities across the state's public postsecondary educational sector without any substantive decision-making powers.

Public institutions within these systems tend to fall into one of three major categories: universities, state colleges, and community colleges. Public universities typically grant a full range of graduate degrees (master's and doctoral), tend to have a strong research emphasis, and typically have large student enrollments. State colleges are typically smaller, may serve a particular region of a state, and usually offer both bachelor's and master's degrees. Community colleges are two-year colleges that provide associate degrees, preparation for transfer to four-year institutions, vocational and technical education and training, and large numbers of continuing education offerings. Some public institutions have been identified as land-grant institutions. Land-grant institutions were first established by the Morrill Act of 1862, which provided federal funds for establishing universities that (1) were open to all types of students (including women, minorities, and low-

income students), (2) offered degrees in practical and applied fields such as engineering and agriculture, and (3) shared knowledge with citizens throughout their state.

Private institutions are less easily characterized than are their public counterparts. Private institutions cover the full range of missions and structures found in American higher education. The most prestigious and highly selective institutions, whether they be Ivy League research universities or smaller liberal arts colleges, are private; but so too are the least well-known institutions. In fact, Alexander Astin and Calvin Lee noted in 1972 that there are literally hundreds of small colleges scattered across the United States that can be thought of as "the invisible colleges." These are small, private institutions with limited resources. Some are affiliated with a particular religion; others began life as private junior colleges. One of the key distinctions among private colleges is whether they are religiously affiliated or not. Religious affiliation occurs in many forms. A religious denomination or order directly controls some institutions, whereas others have only nominal relationships with religious bodies or sponsors. There are also increasing numbers of proprietary institutions that tend to award specialized degrees or that engage in alternative modes of educational delivery, such as distance learning.

### Constituent Diversity

Institutions also vary by the core constituencies they serve, particularly with regard to the particular types of students served. This type of constituent institutional diversity is manifested in many forms, but some of the most prominent institutions that serve particular types of students are those colleges and universities that provide education primarily for student groups that have been traditionally underserved by the majority of postsecondary institutions. These institutions include historically black colleges and universities (HBCUs), Hispanic-serving institutions (HSIs), tribal colleges, and women's institutions.

HBCUs primarily, although not exclusively, exist to provide postsecondary institutions that primarily serve African-American students. There are currently 109 HBCUs, almost half of which are public. They are concentrated in the southern region of the nation, with a few institutions located in the Northeast and Midwest. HBCUs enroll fewer than 20 percent of African-American undergraduates, yet

produce one-third of all African-American bachelor's degrees. HSIs are institutions in which at least one-quarter of the undergraduates are Hispanic. Rapidly growing as a group, there are well more than 100 such institutions in the early twenty-first century. Tribal colleges tend to be controlled by Native American tribes. There are currently twenty of these institutions in the United States. Women's colleges are primarily private and provide postsecondary educational environments that cater specifically to female students. Although there were hundreds of these institutions at one time, that number has dwindled to approximately seventy-five. There are also a handful of male-only institutions scattered across the country. All of these institutions reflect the diversity found in American society and provide the informal system of American higher education with a means of better serving the diverse groups of individuals that constitute a multicultural society. The existence of such diverse institutions has been noted as a particular strength of the American higher education system.

### Reputational Diversity

Another key feature of American higher education is reputational diversity. It has been noted that higher education institutions in the United States are extremely stratified. In 1956 David Riesman offered the classic characterization of the importance of hierarchy and stratification in American higher education when he described the system of higher education as a "snakelike" procession in which the tail (composed of institutions lower in the hierarchy) and the body (representing institutions in the middle of the hierarchy) of the snake continually try to move up and catch the head (those institutions at the top of the hierarchy that serve as a model for other institutions to follow). Reputation appears to depend on a complex set of factors, including undergraduate selectivity and peer evaluations of graduate programs.

### Advantages of the U.S. System

While the lack of systemwide structure creates a somewhat incoherent system of higher education in the United States where widespread coordination is virtually impossible, there are many advantages to this noncentralized approach to a national higher education system. The large degree of institutional diversity that has arisen from the decentralized nature of American higher education has generated

benefits on three levels: institutional, societal, and systemic. At the institutional level, arguments center on serving students' needs. Diversity in this sense would include variety of student body, institutional size, programs offered, and academic standards. Higher education does not exist in isolation, however. Birnbaum stated that "higher education is intimately connected to, and therefore interacts with, other societal systems" (p. 116). Aside from education and research, institutions of higher education have also long served various political, economic, and social functions. Societal arguments for diversity thus center on issues of social mobility and political interests. From a systems theory perspective, higher education is viewed as an "open system," characterized by diverse inputs and outputs. For example, if colleges and universities in the United States admit students with high levels of racial diversity (input), then the impact on society (output) will be very different from what it would be if the U.S. college student population were more homogeneous. Additionally, diversity in higher education is important because "differentiation of component units . . . leads to stability that protects the system itself" (Birnbaum, p. 121). Such systems are able to sense and respond to environmental pressures more quickly and effectively simply because they encompass such extensive variety. In sum, the diverse system of postsecondary institutions in America reflects the diverse composition and needs of the society it serves.

*See also:* HISPANIC-SERVING COLLEGES; HISTORICALLY BLACK COLLEGES AND UNIVERSITIES; LAND-GRANT COLLEGES AND UNIVERSITIES; LIBERAL ARTS COLLEGES; MILITARY PROFESSIONAL EDUCATION SYSTEM; RESEARCH UNIVERSITIES; SINGLE-SEX INSTITUTIONS; TRIBAL COLLEGES AND UNIVERSITIES.

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## HIGH SCHOOL

See: SECONDARY EDUCATION.

## HISPANIC-SERVING COLLEGES AND UNIVERSITIES

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Hispanics constitute the fastest-growing minority population in the United States. According to the U.S. Census Bureau, Hispanics represented 12.5 percent of the national population of 281 million in 2000. This is also a fairly young population: 36 percent of Hispanics are under eighteen years of age, and only 5 percent are age sixty-five or older. Moreover, only slightly more than half of all Hispanics are high school graduates, and thus are employed more in service and unskilled occupations than are non-Hispanic whites. In light of these statistics, Hispanic-serving institutions (HSIs) have become important colleges and universities for increasing Hispanics' access to college and improving their economic opportunities.

HSIs are still largely unknown and little understood by most educators and policymakers in the

United States. Although HSIs represent almost 6 percent of all postsecondary institutions, they enroll approximately half of all Hispanic students in college, granting more associate and baccalaureate degrees to Hispanic students than all other American colleges or universities combined. Despite these impressive outcomes, a federal definition for HSIs exists only in the Higher Education Act of 1965, under Title V, as amended in 1992 and 1998. The 1998 legislation defines HSIs as accredited, degree-granting, public or private, nonprofit colleges and universities with 25 percent or more total undergraduate, full-time equivalent, Hispanic student enrollment. HSIs with this enrollment must also meet an additional criterion to qualify for Title V funds, which stipulates that no less than 50 percent of its Hispanic students must be low-income individuals.

The recruitment and retention of Hispanics to college has been the subject of long-standing concern among educators, policymakers, and practitioners. Although still largely unknown, HSIs attract and retain Hispanics in larger numbers than all other postsecondary institutions. Specifically, HSIs educate over 1.4 million students in the United States, of which 50 percent are Hispanic and another 20 percent are students from other ethnic backgrounds. In fact, HSIs might also be called minority-serving institutions, in light of the high percentage of diverse student populations they routinely educate.

### The History of HSIs

The vast majority of HSIs were not created to serve a specific population, as historically black colleges and universities (HBCUs) and tribal colleges were, but rather evolved, starting around 1970, due to their geographic proximity to Hispanic populations and to demographic shifts. With the exceptions of Hostos Community College and the four-year institutions of Boricua College and National Hispanic University, HSIs do not have charters or missions that address distinctive purposes and goals for Latinos. On the other hand, HBCUs, which were begun as early as the nineteenth century, and tribal colleges, which were founded after 1970, intentionally serve their target student populations in accordance with their declared mission statements. However, the incredibly rapid growth of Hispanic-serving colleges and universities since the 1970s has conferred on them an ad hoc mission to serve the Hispanic population, and they are recognized as such by Congress and the Higher Education Act.

The designation of HSIs, and the development of a national awareness of HSIs, is essentially due to the Hispanic Association of Colleges and Universities (HACU), which was founded in 1986. The concept of linking all colleges and universities serving high proportions of Hispanics into an association to gain national recognition and resources was the work of a group of prominent Hispanic educators. Working relationships with corporations, foundations, and federal government agencies were formed to increase funding and services to these institutions. These resources led to providing greater professional growth and development opportunities for Hispanic students, faculty, and administrators. In forming the HACU, a national office in San Antonio, Texas, and another in Washington, D.C., were established to parlay the organization into a national player in the educational, political, and policymaking arenas. As an advocate, HACU focuses on educating policymakers and national leaders about Hispanic educational needs and the resulting economic and political implications for a more democratic and just society.

The rise of HSIs has been rather rapid since these institutions were first recognized nationally. Their rapid growth stems primarily from three significant factors. First, the civil rights movement of the 1960s and college outreach efforts opened up educational opportunities to less traditional college-going populations, including Hispanics and others from diverse racial and ethnic backgrounds. This movement was accompanied by the development of federal and state financial aid that made it possible for more students to go to college. Second, Hispanic immigration to the United States has increased, especially in large urban areas and along the southwest border of the nation. Third, Hispanics are continuing to move into communities where other Hispanics already are established and that are geographically near higher education institutions. Migration patterns, however, also indicate that Hispanics are moving into regions of the country where they have not been before as they seek jobs and more affordable housing.

As a result of these factors, there were 195 HSIs in 2000 and 203 in 2001, according to the White House Initiative on Educational Excellence for Hispanic Americans. Of these, 156 are located in 12 states (Arizona, California, Colorado, Florida, Illinois, Kansas, Massachusetts, New Jersey, New Mexico, New York, Texas, and Washington) and 47 in Puerto Rico—geographic areas where large concen-

trations of Hispanics reside. California, with 57, has the most HSIs, followed by Puerto Rico with 47, and Texas with 32. In addition, Kansas, Massachusetts, and Washington each have one HSI. In terms of type and control, there are 96 four-year HSIs, of which 44 are public and 52 are private. Among the 107 two-year HSIs, 94 are public and 13 are private. Thus, the majority of HSIs are community colleges, and these institutions will most likely continue to increase their Hispanic student enrollments. It is not surprising that California has the highest number of HSIs in the nation. Nearly one out of every three residents of California is Hispanic and the state has a vast system of 108 community colleges, the largest in the United States. On the other hand, Florida's representation of only nine HSIs belies the fact that it is home to the largest community college in the nation: Miami-Dade Community College. This institution consists of five separate campuses, with a total combined enrollment of more than 50,000, and two-thirds of its students are Hispanic.

### **HSIs and Latino Educational Attainment**

Hispanic-serving institutions continue to demonstrate remarkable progress in assisting Hispanics to achieve academic and career success by stimulating higher college-attendance rates and higher degree-attainment rates. For example, the national college-attendance rate of Hispanics was 36 percent in 1997, up nearly 8 percent since 1990. However, this relatively low rate continues to be of national concern to educators and policymakers. Nonetheless, comparative U.S. data for college degrees awarded to Hispanics in HSIs and non-HSIs are remarkable. In 1997 Hispanics earned approximately 46 percent of all associate degrees awarded in HSIs, compared to 7.6 in non-HSIs. They received 23 percent of all bachelor's degrees awarded in HSIs, compared to 5.3 percent in non-HSIs; 19.5 percent of all master's degrees, compared to 3.7 percent in non-HSIs; 4.4 percent of all first professional degrees, compared to 4.6 in non-HSIs; and 6.1 percent of all doctorates, compared to 3.7 in non-HSIs. These data offer evidence that HSIs are directly responsible for increasing the educational attainment of Hispanics.

Data suggest that HSIs may also be credited as producers of the highest number of Hispanics who go on to pursue advanced degrees. Two-year HSIs lead the way in producing the highest number of Hispanic transfer students and associate degree recipients. Research studies further reveal that four-

year HSIs with high Hispanic baccalaureate graduation rates point directly back to community college HSIs as the source of a significant number of their transfer students. These studies also show that four-year HSIs are the highest producers of professional and graduate Hispanic students.

Although the term *Hispanic-serving institutions* was recognized by the Higher Education Act in 1992, HSIs are not listed as a distinct institutional type in the latest Carnegie Classification of Institutions of Higher Education, as are tribal colleges. Also, the federal definition of an HSI is the only one used formally, vis-à-vis Title V and by applicants for funds. The HACU promotes a less stringent definition. HACU members must only have a total of 25 percent Hispanic enrollment, and associate members need only a minimum of 1,000 students. Their publication, *The Voice*, their Internet site, and their annual conference all highlight members' activities and HACU's advocacy role in continuing to influence national policy and garnering corporate support. Yet as recently as March 2001, articles in *The Chronicle of Higher Education* still referred to HSIs as "so-called Hispanic-Serving Institutions" (Yachnin, p. A34), indicating that not everyone accepts this distinct designation thus far.

It is important, however, to consider not only what it is that these newcomers to the higher education lexicon are, but how they are successfully educating students in their institutions. Moreover, it is important to consider what lessons can be learned from them that may be applicable to diverse students in other collegiate environments. Public understanding about HSIs can undoubtedly affect their future in terms of educational policy decisions and funding allocations. Despite their large student enrollments and seemingly low resources, HSIs appear to buffer Hispanic students' socialization into college through culturally sensitive programs that facilitate student academic achievement and completion for these and other minority students. Outreach efforts into the local K-12 schools and surrounding communities where Hispanics reside also are part of the holistic approach many HSIs are taking to raising Hispanic educational attainment rates.

## Conclusion

It is clear that HSIs will continue to increase in number nationally from within the identified 3,856 American public and private, two- and four-year institutions of higher education. They will continue to

be important in the twenty-first century in educating Hispanics and other minorities, whose numbers will continue to rise (according to U.S. census projections). These institutions' unofficial, undeclared dual role will continue to be: to help increase Hispanic college participation and completion rates for this population; and to help narrow the educational and economic gaps for Hispanics. It may well be, as Lisa Wolf-Wendel notes in her 2000 study, that "differences in race, ethnicity, social class, and other experiences influence what students need from their campuses and how campuses should respond. While separate examinations of each institution's characteristics are illuminating, it is important to understand that their whole is greater than the sum of their parts . . . . Instead, it is the combination of characteristics—their ethos—that makes them unique, able to facilitate their students' success" (p. 342).

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentries on* HISTORICAL DEVELOPMENT, SYSTEM; HISTORICALLY BLACK COLLEGES AND UNIVERSITIES; MULTICULTURALISM IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE, *subentry on* LATINO GROWTH; TRIBAL COLLEGES AND UNIVERSITIES.

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BERTA VIGIL LADEN

## HISPANIC STUDENTS

*See:* AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; HISPANIC-SERVING COLLEGES AND UNIVERSITIES; LITERACY AND CULTURE; INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; MULTICULTURAL EDUCATION; MULTICULTURALISM IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE.

## HISTORICALLY BLACK COLLEGES AND UNIVERSITIES

Historically black colleges and universities (HBCUs) are institutions that were established prior to 1964 with the mission to educate black Americans. Perhaps one of the greatest struggles faced by blacks in the United States has been the struggle to be educated. This struggle has been guided by the philosophies of black scholars who believed that without struggle there was no progress; black revolutionists who believed that education was the passport to the future; and black clergy who sermonized that without vision the people would perish. Education is now, and always has been, a vital weapon in the black arsenal. Essentially, black Americans used education as their primary source of ammunition in the fight against a segregated society, racism, illiteracy, and poverty. The steadfast desire of the black population to be educated influenced the development of HBCUs, and HBCUs have likewise contributed much to the advancement of the black population.

### The Development of HBCUs

Since the establishment of the first HBCU, there has been a recurrent debate over the role of these institutions within the larger framework of higher education. During the years of strict and legal racial segregation in the United States, HBCUs served as "islands of hope" where blacks could learn to read and write without the fear of being retaliated against. The primary purpose of HBCUs was to educate black Americans, which they did almost exclusively from 1865 to the 1950s. The overwhelming majority

of HBCUs opened after 1865 in response to the need to have institutions to educate newly freed slaves and to avoid admitting those newly freed slaves into the existing white institutions.

The first HBCUs were established in the North and were products of independent religious institutions or philanthropic Christian missionaries. The first two were Cheyney University (Pennsylvania), founded in 1837, and Wilberforce University (Ohio), founded in 1856. However, historically black colleges and universities cannot be examined without revisiting major legislations and court decisions that led to the birth of many and the death of a few. The First Morrill Act (also known as the National Land-Grant Colleges Act of 1862) made postsecondary education accessible to a broader population of American citizens. Ten years after this act was legislated, the Freedman's Bureau was established to provide support to a small number of HBCUs. The Second Morrill Act of 1890 led to the establishment of nineteen HBCUs. Although these three legislative acts provided an atmosphere for change, it was the segregation movement in the South that provided the impetus for black higher education, particularly with the 1896 Supreme Court decision in *Plessy v. Ferguson*, which ultimately established by law the right to set up *separate but equal* schools for blacks. This decision led to the expansion and growth of historically black colleges and universities.

Historically black colleges and universities increased from one in 1837 to more than 100 in 1973. Most of these colleges were founded after the *Plessy v. Ferguson* decision. According to Jacqueline Fleming, "the majority of black public colleges, then, evolved out of state desires to avoid admitting blacks to existing white institutions" (p. 5). On May 17, 1954, the Supreme Court ruled in *Brown v. Board of Education of Topeka, Kansas* that separate education for blacks in public schools was unconstitutional because separate facilities are inherently unequal. This decision, which ended de jure racial segregation in public schools, also impacted higher education, as states were required to dismantle dual systems of higher education. This required predominantly white institutions (PWI) to open their doors to black students, who prior to this time could not attend these institutions.

Interestingly enough, the effects of a decision made in the mid-twentieth century still linger in higher education in the early twenty-first century,

for nowhere are the repercussions from the *Brown* decision more visible than in HBCUs. The dismantling of dual systems in higher education has resulted in mergers and closures of HBCUs because opponents of these institutions view them as segregated colleges and universities. This has led to a series of discussions, debates, and court rulings that underscore the fact that there not enough research has been done on this segment of higher education.

### Academic and Social Experiences at HBCUs

The literature on higher education is scant in the area of HBCUs. These institutions did not become the subject of research studies until the early 1970s. However, researchers have learned a considerable amount about the academic and social experiences of students who attend HBCUs. In 1992, Walter Allen reported that black students who attend HBCUs have better academic performance, greater social involvement, and higher occupational aspirations than black students who attend PWIs. On black campuses students emphasize feelings of engagement, extensive support, acceptance, encouragement, and connection. Allen also found that HBCUs communicate to black students that it is safe to take the risks associated with intellectual growth and development.

Proponents of HBCUs argue that they have served black students with considerable effectiveness. Researchers contend that HBCUs provide assets for black students that are unavailable and unattainable in white institutions. Socially, Donald Smith found that they provide an accepting environment with emotional support. He also found that they serve as repositories for the black heritage. The environment at HBCUs is one of acceptance of students for who they are, and students do not experience social isolation, but rather integration into campus life and extracurricular offerings. HBCUs also foster healthy social relationships, and students form positive relationships with faculty members as well as their peers. It is not uncommon to find formal and informal mentoring relationships developing in this environment. In addition, HBCUs foster ethnic pride and self-esteem.

Academically, HBCUs offer programs designed to meet the unique needs of black students and the black community, and they educate many students with learning deficiencies. Although the facilities are generally modest and resources are limited, numerous studies indicate that HBCUs have done an out-

standing job at educating their clientele. For an extensive period in American history, HBCUs were solely responsible for educating and preparing blacks to live as free people in the South. HBCUs accepted this responsibility and educated many black Americans with very little in the way of financial resources. The academic gains for black students attending HBCUs are high when compared to their counterparts at predominantly white schools. This is due in part to the nurturing campus environment and positive faculty relationships that motivate students to do well academically.

Historically black colleges and universities have been crucial in the development of black professionals. For more than 160 years, these institutions have educated a population that has lived under severe legal, education, economic, political, and social restrictions. Early HBCUs were established to train teachers, preachers, and other community members to remedy the despairs of slavery that scarred African Americans. First and foremost, HBCUs opened the door of educational opportunity for many blacks who were once legally denied an education. Secondly, they provided educational access to those who were educationally underprepared to enter predominantly white institutions. By 1950, HBCUs were responsible for serving 90 percent of black students in higher education. Moreover, HBCUs had produced 75 percent of all black Ph.D.'s, 75 percent of all black army officers, 80 percent of all black federal judges, and 85 percent of all black physicians. In 2001, HBCUs served 14 percent of all black students enrolled in college, but were annually responsible for 26 percent of black baccalaureate degrees.

### Conclusion

It has been stated that HBCUs have a unique chapter in the history of American postsecondary education. Despite the tremendous obstacles that these institutions faced, there are 104 HBCUs as of 2002—approximately 3 percent of U.S. higher education institutions. While there was a period where HBCUs had fallen from the research literature, current research scholars have developed a renewed interest in these institutions. This renewed interest partly stems from the fact that these institutions still play a vital role in American higher education. While black students in the early twenty-first century can choose to attend any type of institution, many are electing to attend an HBCU. While these colleges and universities achieve tremendous success, it is important to

further investigate the unique identity and the diversity they bring to higher education. In 2001, Coaxum called for a separate classification of HBCUs, on in which the diversity of these institutions could be understood within the context of their institutional peers.

*See also:* HIGHER EDUCATION IN THE UNITED STATES.

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JAMES COAXUM III

## HISTORY

### LEARNING

Bruce A. VanSledright

### TEACHING OF

Bruce A. VanSledright

## LEARNING

The learning of history is a complex undertaking. Cognitive research done since 1980, much of it in Great Britain and North America, has indicated that it is more difficult to learn and understand history than previously thought. Before the 1980s it was generally assumed that a gradual process of committing historical narratives—constructed around key events, details, names, and dates (substantive knowledge)—to memory would eventually result in a sturdy understanding of the past. The body of research compiled since 1980, however, demonstrates that learning history, if it is to lead to deeper understanding, involves not only the repeated study of such narratives, but also the acquisition and use of a set of domain-specific cognitive strategies (strategic knowledge). Applying these strategies serves as the means by which the past is learned and understood. Researchers and educators frequently refer to the application of these domain-specific strategies to the process of exploring and interpreting the past as historical thinking. Before examining in more detail the implications of this research for learning history, it is important to understand the nature of the domain that learners are attempting to comprehend.

### History as a Subject Domain

History is a thoroughly interpretive discipline, closer in many ways to the humanities than to the social sciences. To understand the past, learners cannot conduct controlled experiments to recreate it and then study its effects. Nor can they travel back in time to witness events firsthand. And even if time travel were possible, learners would still be required to interpret the complex events that they were witnessing.

Access to the past is thus indirect, largely governed by artifacts and residue left behind by those who lived it. These include diaries, letters, journals, public records, newspapers, archeological artifacts, pictures, paintings, chroniclers' and historians' interpretations of past events, and the like. Those who make a living inquiring into the past divide the artifacts and historical residue into two types, primary

and secondary sources. Primary sources include, among other things, diaries and personal journals compiled by people who actually witnessed or participated in an incident about which they report. Secondary sources include history textbooks or historical narratives written by someone not present at an event but who has studied and interpreted the primary sources that remain. Historical sources form a type of evidence chain or trail that must be painstakingly pieced together into carefully argued interpretations of past events. This piecing-together that learners and inquirers do as they make sense of the past's artifacts and residues has been a central subject of cognitive research studies.

### **Substantive Historical Knowledge and Understanding**

Defining the nature of substantive historical knowledge is rife with debate. Largely, the debate turns on the matter of what constitutes historically significant events and occurrences. For roughly the first half the twentieth century, those who wrote American history, for example, seemed content to concentrate on political, military, and economic achievements in the United States. It was believed that those achievements were the most historically significant. During the 1960s, however, a new generation of historical scholars began to redefine significance in terms of what was often called "history from the bottom up." This generation (sometimes referred to as social historians) began inquiring into the influences on the American past of a variety of sociocultural groups that had often been rendered historically invisible by previous generations of scholars. These groups include antebellum slave communities, labor movements and their leaders, women, immigrants, and small, often marginalized, social organizations. The social historians maintained that these overlooked groups could be seen as powerful participants in, or resistors of, important changes and developments in American history, thus (at least in part) accounting for how change occurred as it did. To ignore such groups would be to misunderstand history. The work of social historians, with their proliferating foci and perspectives on events, has made constructing grand political-military-economic historical narratives less easy to accomplish.

This shifting terrain concerning issues of historical significance has raised difficult questions about what history students should learn. The late twentieth-century increase in the multiculturalization of

the United States, for example, has only added to this concern by also raising questions about *whose* history children should learn. Some participants in the debate, such as Arthur Schlesinger Jr., believe that all U.S. children should acquire the same "common cultural" core of substantive historical knowledge. Schlesinger defines this core largely in terms of those political, military, and economic events that made the United States the most powerful nation on earth. Knowledge of these events would be delivered by traditional, uplifting narratives of American success stories. Current social historians, and those who champion a more multiculturalist portrait of America, consider such definitions of core substantive historical knowledge misleading at best, and dangerous at worst, because they risk characterizing the contributions of those groups of people thought to be less significant as meaningless.

This debate has continued into the twenty-first century. What, and whose, history students have opportunities to learn about in school vary depending on how school officials define what is historically significant. To the extent that they define it in traditional narrative terms, children's opportunities to learn substantive historical knowledge are often determined by the content of school history textbooks, which, for publishers, in their efforts to find a palatable middle ground to bolster sales, means opting in the direction of more traditional narrative treatments. To the extent that a more multiculturalized view of substantive knowledge is in play, students are more apt to study history from multiple sources, such as trade books, historical fiction accounts, and primary sources, that explore the lives of those not frequently included in the more voluminous textbook treatments.

### **Strategic Historical Knowledge**

Much of the cognitive research done since 1980 has centered on the nature of expertise in historical thinking, and on how novices (e.g., grade school students, college undergraduates) differ from experts (e.g., historians). This research indicates that the process of thinking historically that enables deep historical understanding requires certain strategic-knowledge dispositions. These dispositions include the capacity to: (a) read, make sense, and judge the status of various of sources of evidence from the past; (b) corroborate that evidence by carefully comparing and contrasting it; (c) construct context-specific, evidenced-based interpretations; (d) assess

an author's perspective or position in an account being studied; and (e) make decisions about what is historically significant. These capacities are exercised while taking into conscious account the way the learner is, by necessity, also imposing his or her own view on the evidence being interpreted.

Learning to think using these cognitive strategies is no small task. First, as historian David Lowenthal has observed, the past is a foreign country, difficult to penetrate from the locus of the present. Reconstructing historical context is troublesome because it often remains virtually impossible for “moderns” to get inside and understand the experiences of those “ancients.” Second, evidence is often sparse, and thus so open to competing interpretations that understanding events by building context-sensitive, well-corroborated interpretations is tenuous at best. Third, any attempt to construct a history of events operates on a necessary connection between a past reality and present interpretations of that reality. This connection is, however, denied because there is no method for bringing that past reality back to life to establish the full accuracy of a contemporary interpretation. There are only chains of people's interpretations of the past, some more recent than others. Learning to use the strategies of thinking historically that enable an understanding of the past hinges on the cultivation of a number of such counterintuitive cognitive processes.

### **Development of Historical Thinking and Understanding**

Most of the more recent North American research on learning history has focused on either expert-novice studies, as noted, or on the relationship between how teachers teach history and how students learn to think historically. Views on how the historical thinking and understanding develop have largely been extrapolated from the expert-novice research cited above, and from studies that show how teaching can influence development among novices. Educational researchers in Great Britain—who were initially influenced in the 1970s by Piagetian developmental theories, but later abandoned them for the most part—have done considerably more work in this area. One of the more promising lines of research is called Project Chata. *Chata* is an acronym for Concepts of History and Teaching Approaches. The goal of Project Chata is to “map changes in students' ideas about history between the ages of seven and fourteen years. The project focused on second-

order procedural understandings like *evidence* or *cause*” (Lee and Ashby, p. 201).

Preliminary results of the research on the progression of students' ideas about historical evidence and its relationship to the past indicate that naive views of history begin with the understanding that the past is simply a given. As students grow more sophisticated in their understanding, this simplistic view is abandoned, though history remains relatively inaccessible. They follow this with the belief that the past is determined by stories people tell about it. As sophistication grows, students note that reports on the past are more or less biased. This idea gives way to noting that the viewpoint or perspective of a reporter or storyteller becomes important. Finally, students develop an understanding that it is in the nature of accounts to differ, because varying reporting criteria are used by storytellers and chroniclers.

Project Chata researchers have also studied students' development of ideas about causal structure and historical explanations. They observe that: (1) students' ideas about explanation vary widely, with some younger children having more sophisticated ideas than older children; (2) students' ideas about causation in history and their rational explanations of causal structures do not necessarily develop in parallel; (3) student's ideas about causal structures and explanations in history may develop at different intervals, with some ideas occurring in big gains in younger children and others occurring later; and (4) progression in students' ideas about causation and explanation occurred most markedly in schools where history was an identifiable subject matter.

### **Some Pedagogical Implications**

A tentative theory of how to teach learners to think and understand history can be fashioned from the current corpus of research studies. This results in certain propositions. First, learners construct deeper historical understandings when they have opportunities to consciously use their prior knowledge and assumptions about the past (regardless of how limited or naive) to investigate the past in depth. Second, as learners explore the past, attention must be paid not only to the products of historical investigation, but to the investigative process itself. Third, developing historical thinking and understanding necessitates opportunities for learners to work with various forms of evidence, deal with issues of interpretation, ask and address questions about the significance of events and the nature of evidence, wrestle with the

issues of historical agency, and cultivate and use thoughtful, context-sensitive imagination to fill in gaps in the evidence chain when they appear.

Applying this theory in the classroom would mean approaching history effectively from the inside out. Teachers would structure learning opportunities by posing compelling historical questions that have occupied the attention of historical inquirers (e.g., Why did so many colonists starve at Jamestown in the winter of 1609–1610? How did antebellum slave communities construct oral cultures and to what effect?). Students would adopt investigative roles, obtaining and scouring evidence (much of it obtained off the Internet from rich archival sources now online); reading, analyzing, and corroborating that evidence; addressing perspective in accounts; dealing with questions of agency and significance; and building their own interpretations of events as they addressed the questions posed.

*See also:* CIVICS AND CITIZENSHIP EDUCATION; HISTORY, *subentry on* TEACHING OF; LEARNING, *subentry on* CAUSAL REASONING; LITERACY, *subentry on* NARRATIVE COMPREHENSION AND PRODUCTION; TECHNOLOGY IN EDUCATION, *subentry on* TRENDS.

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## TEACHING OF

History has played a dominant role in the broader social studies curriculum in the United States and in other countries for at least the past 100 years. For example, in most school districts in the United States, state, national, or world history is taught in grades four through six, grade eight, and at several points in high school. In England, history forms the backbone of the social studies curriculum from primary through secondary schools. History is also a curriculum staple in continental European countries, among post-Soviet republics, in China, and in such places as post-apartheid South Africa.

History in the school curriculum has not been without a number of recurrent debates and controversies. Many of them stem from disputes over the goals and purposes school history should serve (e.g., political socialization and nationalist identity formation versus teaching historical habits of mind). Other issues arise in connection with questions about how, from the vastness of history itself, to define what constitutes historically significant events that should be taught. The proper role of integrating social science disciplines (e.g., geography, economics, political science) in the teaching of history is also a point of debate. Finally, various parties argue over maintaining a relative balance between transmitting historical knowledge derived from the work of historians and teaching students to learn to think and investigate the past the way historians do. Taking time to do both often creates time-use dilemmas within an already surfeited school curricula. Choosing between them repeatedly pits those who would use history for sociopolitical ends against those who see history's importance as a means of teaching critical reasoning and a fuller understanding of the past.

### Political Socialization of Historical Thinking and Understanding

The interest in securing a firm place for history in the curriculum frequently stems from its sociopoliti-

cal uses. This is especially true in the teaching of national histories. As George Orwell reminded readers in his book, *1984*, control of the present (and the future) depends in good measure on control over the past. In many countries, a principal goal of teaching the nation's history is deeply linked to socializing future citizens, as defined by whomever controls the sociopolitical agenda at the time, conservatives, liberals, revolutionaries, or others. Perhaps no other school subject serves this political socialization purpose more than the study of history.

As political parties change or revolutions occur, new regimes attempt to rewrite history in general, and school history in particular, in order to cast themselves and their new politics and policies in a favorable light. Those disempowered by political change often resist such efforts to recast the past. Various groups use history in an effort to shape (or reshape) the nationalist identities of youth around whatever the prevailing view privileged by those in power is at any given time. In post-Soviet eastern European countries, for example, a major educational agenda has been to rewrite history textbooks and reconfigure the history curriculum since 1990.

Prior to the mid-1970s, little systematic research had been done on how history was taught in schools and what students learned from studying it. Since then, there has been a surge of interest in studying school history teaching and its learning outcomes, particularly among researchers in England and in North America. As a result, a sizable body of scholarship has emerged. Much of it challenges the practice of using school history to advance sociopolitical ends. In general, the research indicates that the sociopolitical use of history in schools warps students' views of what history is as a discipline and a subject matter, tends to turn history into a lifeless parade of someone else's facts, and otherwise drives away students' motivation to learn the subject. History education researchers have attempted to divert the teaching of history away from an exercise in socializing students to particular partisan views; instead suggesting the aim of history as an investigation of the past and the social world.

If one of the principal goals for teaching history is to socialize grade-school students to accept certain views of a nation's accomplishments as defined by those in power, thus shaping their nationalist identities, teaching history should take on a transmission approach. In other words, it is likely that in history classrooms teachers would lecture or tell stories

about the past via lessons drawn from textbooks sanctioned by those in political control. Research bears out this image. For much of the past century, the teaching of history in schools in many places around the world has been dominated by textbook recitations and teacher lectures or storytelling. This has been especially true in the United States.

There have been moments of change in these traditional practices such as during the “New Social Studies” movement in the United States during the 1960s and early 1970s. During this period, historians and social scientists constructed curriculum units that were designed to assist students in learning more about how historical knowledge was constructed in the discipline. Teachers were to guide students in the process of investigating the past via study of primary sources, much the way historians do. However, such efforts to promote pedagogical and curricular change in history typically have not had lasting effects in the United States, and the traditional lecture-textbook-recitation-recall approach has remained dominant.

In England, the Schools Council History project had more lasting results. Educational and instructional changes there during the 1970s and 1980s in some ways mirrored the efforts of historians working under the auspices of the New Social Studies in the United States. The goal was for teachers to learn to teach students the reasoning process of historical investigators. Not only were students to study important ideas in English history, but also to learn how to read primary sources, judge their status relative to other sources, draw inferences about the past from them, and construct historical accounts of their own making. Research on the results of approaching history that way were generally favorable, indicating that students typically progressed in their capacity to learn to think historically as modeled by experts in the discipline itself. Data also indicated that students developed deeper understandings of English history. The project largely succeeded in changing the way teachers taught history because teacher educators and teachers along with education researchers were all involved in changing pedagogical and curricular practices.

In 1988 the Thatcher government attempted to reverse this trend. Alarmed that children in British schools, in their view, were not receiving adequate instruction in the stories of British national and international successes, the education establishment mandated significant changes in the British national

history curriculum. Those changes called for more emphasis on teaching stories drawn, for example, from the days of the British empire. Less stress was to be placed on teaching historical-reasoning processes. The changes brought on by the Schools Council project and by the work of teacher educators and researchers however, had been institutionalized in many places. Reverting back to teaching history in lecture-textbook-recitation fashion became difficult. Many of Great Britain’s history programs in schools therefore remain among the few in which history is taught more as a way of learning to think historically (as a way of knowing) than as a socialization exercise in memorization and recall of a nation’s grand accomplishments and celebrations.

This debate continues. Cognitive scientists interested in history education and researchers in general who study how history is taught and to what result stress the importance of teaching history more closely aligned with the way in which history operates as a distinctive discipline. Researchers such as Peter Lee and Rosalyn Ashby point to gains in students’ capacity to learn important thinking processes and habits of mind as they learn to understand the past more deeply. Those who are more interested in the power of using history to forge particular nationalist identities among youth remain skeptical of teaching history as an exercise in educating thinking processes and critical habits of mind. Generally, they prefer an approach that favors transmission of favored views of the past via lectures and textbook recitations, and a focus on stories that celebrate chosen accomplishments and historical successes.

### **Historical Significance**

The debates about the purposes, goals, and uses of school history are exacerbated by the problem of choosing what constitutes historically significant events worth teaching. The very breadth and vastness of the past from which school history lessons must be chosen coupled with the finiteness of the school day and the press for curricular room by other subjects makes this issue difficult. It would be convenient if those who devise the history curriculum in the schools could turn to the discipline and to historians for help in addressing which events and historical actors of significance to choose. The debate within the discipline over what constitutes historical significance is perhaps even more intense than in school history. This has been especially true since about 1970 and advent of postmodernism with

its deep skepticism about the veracity of Western knowledge-production projects rooted in the scientific method. The issue of historical significance has been further exacerbated by the multiculturalization of many Western societies, rendering questions about “whose” history to teach as important as “which” history.

The problem of defining historical significance leaves history teachers, curriculum designers, educational policymakers, and politicians without much firm ground upon which to anchor their decisions about which or whose history to teach. The inability to resolve this issue, however, gives history education researchers some support in their efforts to press the importance of teaching history primarily as an exercise in habits of mind.

### **Time in the Curriculum**

Teaching history as both knowledge about a nation’s history and its place in world history, and as an approach to learning a way of reasoning about the past requires more time than doing one or the other. Debates between advocates for the importance of subjects other than history can have the effect of reducing the time teaching history might otherwise have in the overall school curriculum. To the extent that politicians exercise greater control of textbooks and history curriculum and assessment approaches (e.g., in states, provinces, or countries where a centralized curriculum dominates), teaching history is often pressed into the service of socialization. History taught as historical reasoning and understanding tends to languish in the context of overabundant time pressures.

### **Interdisciplinarity**

In some countries, educational policymakers and curriculum developers see the teaching of history as an opportunity to integrate the social science disciplines into history syllabi. Issues arise over the right mix and relationships of such disciplines as geography and political science to the teaching of history. Some express concern that such interdisciplinary approaches effectively water down the actual teaching of history, reduce its value for students, and contribute to confusion about how to conduct appropriate assessments of student learning. Others argue that history already draws from the social science disciplines; therefore, calling attention to its interdisciplinarity makes good sense, opening up learning opportunities for students. Much like the controver-

sies over historical significance, this issue of interdisciplinarity has not been resolved. The time factor also plays a role in this debate.

### **Assessments**

The aforementioned issues and debates also intersect with questions about how to properly assess what students learn from being taught history. During the last quarter of the twentieth century, many Western countries moved closer to centralizing assessment practices in many school subjects including history. What consequences these tests hold vary from country to country. In the United States, a national test of history learning (the National Assessment of Educational Progress, or NAEP, which also tests other subject learning as well) was developed in the 1980s. It tests students’ capacity to both recall elements of American history as well as construct short answer responses to written prompts. As of 2001 this test was voluntary and was considered to hold low stakes for participants. However, the U.S. Congress is engaged in a debate to make the NAEP a required national test, thus making it a high-stakes test with sanctions and resource allocations related to outcomes.

Between the late 1980s and 2001 the history portion of the NAEP was given three times. During the administrations of George Bush and Bill Clinton, the data suggested that students in grades four, eight, and twelve recalled low to moderate levels of historical knowledge about the United States. Some critics, such as Diane Ravitch and Chester Finn Jr., argued that this level of recall meant that students effectively knew very little about their country and thus required even heavier doses of American history to overcome the deficits in their knowledge. Based on the growing number of in-depth studies of teaching and learning history, educational researchers such as Linda Levstik countered with the claim that more history, particularly if taught as lecture and textbook recitation, would do little to solve the problem. Reminiscent of the debates described above, the U.S. researchers called for immersing students in a pattern of historical study characterized by investigating history using strategic knowledge borrowed from expertise displayed by historians as a means of developing more powerful substantive understandings about the American past.

This debate over the most productive pedagogical approach to teaching history (e.g., more drill in the substantive knowledge of history versus instruc-

tion into and exercise of historical thinking practices to foster deeper knowledge about history) continues largely unabated.

*See also:* ASSESSMENT, *subentry on* NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION; GEOGRAPHY, TEACHING OF; SECONDARY EDUCATION; SOCIAL STUDIES EDUCATION.

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#### HIV/AIDS

*See:* RISK BEHAVIORS, *subentry on* HIV/AIDS AND ITS IMPACT ON ADOLESCENTS.

## HOLT, JOHN (1923–1985)

John Caldwell Holt was a teacher, educational critic, and early spokesperson for the home-schooling movement. Born in Boston, Massachusetts, the son of well-to-do parents, he was formally educated in private schools in the United States and abroad. He described himself as a “good student in supposedly the best schools.” At Yale University, Holt studied to be an industrial engineer, but found no intrinsic connections between his studies and the world around him. He soon left to join the navy at age twenty, serving for three years aboard the submarine U.S.S. *Barbero* during World War II. Holt later identified his time on this submarine as yielding the first genuine, purposeful educational experiences of his life.

In 1946, immediately following his tour of duty, John Holt found work in New York with the American Movement for World Government, and later with the United World Federalists—an organization devoted to stopping the proliferation of atomic weapons. Between 1952 and 1953 he traveled throughout Europe before settling briefly with his sister in Taos, New Mexico. Holt joined the faculty at the Colorado Rocky Mountain School in Carbonade, despite his complete lack of preparation for or formal knowledge of teaching. Years later Holt characterized himself while at this school as a “perfectly conventional schoolmaster” who flunked numerous students.

After four years of teaching school, John Holt had surmised that students did poorly because they learned to believe that schooling expected them to do poorly. Given this working hypothesis, in 1957 he returned to Massachusetts to teach younger students, hoping to influence them before they learned to expect such failure; he would teach elementary and secondary students for the next ten years.

John Holt found himself struck by the natural learning instincts of children. His perceptions and beliefs rested comfortably with those of earlier “child-centered” educators and philosophers like Johann Heinrich Pestalozzi (1746–1827), Friedrich Wilhelm August Froebel (1782–1852), Johann Friedrich Herbart (1776–1841), Herbert Spencer (1820–1903), and at times, the Progressive educator and pragmatist John Dewey (1859–1952). In his first book, *How Children Fail* (1964), Holt argued that schools maximized compliance and “good work” at the expense of traits like curiosity and creativity.

This position remained solid in *How Children Learn* (1967), in which he made a point of criticizing large class sizes as he believed that children learned best alone or in small groups.

Holt left classroom teaching in 1967 to pursue writing and lecturing. He was among a small but widely read group of neo- or contemporary “romantic” critics of schools (a group that included Jonathan Kozol, George Dennison, James Herndon, Herb Kohl, and later, Ivan Illich). After two years lecturing at Harvard University, the University of California at Berkeley, and elsewhere around the world (while continuing to write and publish about educational reform), Holt’s perspective on both the purpose for and source of needed school reform began to shift. This shift is attributed, in no small part, to his decision to learn more about the thinking of Ivan Illich (who would soon publish his popular *Deschooling Society*) and his visit to Illich’s Intercultural Center of Documentation during the late 1960s. In 1969 Holt became the president of John Holt Associates, Incorporated.

Holt continued to criticize American public schooling, though with the publication of *Freedom and Beyond* in 1972 he had abandoned any hope that teachers, school personnel, or parents and community members could enable such change. Still searching for ways to promote deeply personal, transformative teaching/learning situations like those he experienced in the military, Holt had decided that such encounters would and could never occur within schools as formal, social institutions. Holt returned to his original focus on the learner, ceasing his passionate critique of the social contract inherent in public schooling and calling, instead, for individual families to “teach your own.” In 1977 Holt created a newsletter called “Growing Without Schooling” and published *Instead of Education*, in which he encouraged readers to forego efforts toward changing schools and to embrace his notion of “unschooling” (acknowledging, yet distinguishing himself from, Illich’s “deschooling” concept).

Holt had turned a crucial corner as an educational critic. Consequently, his educational works represent the best and worst elements of child-centered Progressive ideals of the late twentieth century. By the late 1970s he had become a conservative libertarian, dismissing any relationship between the responsibilities of the state and the family with respect to young people’s education. “Growing Without Schooling” became a support group by mail for

the nation's pioneer home schoolers, and Holt became their leader. His longstanding respect for natural learners resonated with increasing numbers of parents who, with Holt's personal encouragement, support and published tales of unschooling success, became the core of the early-twenty-first century burgeoning home-schooling movement in the United States.

Criticized by his former circle of Progressive colleagues, Holt had little interest in such philosophical discussions, spending his remaining days encouraging and helping families through his publication *Teach Your Own* (1981). In his final years, Holt promoted home schooling in numerous popular print forums, including *Harper's*, *Life*, *Look*, *Mother Earth News*, *Ms.*, *The Progressive*, *Psychology Today*, *Redbook*, *Saturday Evening Post*, *Time*, *USA Today*, and *The Wall Street Journal*. Begun before his death, Holt's final book, *Learning All the Time* (1989), was completed posthumously by members of its very audience—Holt's home-schooling colleagues.

*See also:* EDUCATION REFORM; HOME SCHOOLING.

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## HOME ECONOMICS

*See:* FAMILY AND CONSUMER SCIENCES  
EDUCATION.

## HOME SCHOOLING

The term *home schooling* refers to the practice of parents educating a child at home, rather than in a conventional public or private school setting. These children would otherwise be enrolled in elementary or secondary school. The parent responsible for home schooling generally does not work and is rarely a trained teaching professional. Primary concerns for most home schoolers are strengthening family bonds and developing religious values. Technological innovations in the late twentieth century made home schooling an increasingly manageable proposition, as the availability of personal computers and the Internet permitted families to access computer-driven instruction, multimedia resources, and far-flung support networks. Families provide home schooling in many different ways, with tremendous variation in curricula, teaching methods, and technology, and in the amount of peer interaction that children experience. Some home-schooling parents bring their children together for group outings and field trips to provide enhanced socialization, while others have formed cooperative schools or charter schools to support their efforts.

The estimated number of home-schooled children is unreliable, due largely to uneven record-keeping. However, in a 1999 report, the U.S. Department of Education estimated that more than 850,000 children were home schooled in the United States, and scholars purport that the population is increasing at an annual rate of between 7 to 15 percent. Researchers suggest that home educators are generally married couples with one nonworking spouse and more than two children and that their median income is generally comparable to that of all families with school-age children. In approximately one-quarter of home-schooling families, at least one parent is a licensed teacher; however, this is rarely the parent who is specifically responsible for the home schooling. The small amount of existent data suggests that very few minority students are educated through home schooling, and that three-quarters of home-schooling families are primarily motivated by religious concerns.

### History

From the colonial period through the mid-1800s, education was generally delivered through loosely-structured community schools. In the nineteenth century, in efforts that began in the northeast, re-

formers increasingly came to view public schools as a vital means of “Americanizing” the nation’s growing immigrant population and as an opportunity to foster a common American culture. This effort gained momentum after Massachusetts became the first state to adopt a compulsory education law in 1852. The law required parents to send their children to the state’s increasingly systematic public schools. In the early twentieth century, public schooling became an increasingly central component of American culture. Growing numbers of students attended public school and Progressive reformers promoted education as a means of social betterment. As formal public schooling expanded during the first half of the twentieth century, home education became virtually obsolete.

However, by the 1960s, some education critics had begun to voice concerns that public schools were preaching alien values, failing to adequately educate children, or were adopting unhealthy approaches to child development. As a result, a “de-schooling movement” took root in the 1960s and 1970s. Critics of public schooling primarily voiced two distinct ideologies, both emphasizing child-centered learning. Liberal critics of public schooling believed that schools did not adequately respect children as individuals, while conservative critics argued that public schools undermined traditional values.

Starting in the early 1980s, increasing numbers of parents chose to educate their children at home as a growing number of states relaxed their compulsory attendance laws to permit home schooling. Previously, parents who home schooled their children were in violation of compulsory attendance and truancy laws, and were therefore subject to legal action. While Nevada (1956) and Utah (1957) were the only states with home-schooling legislation prior to 1982, thirty-four states passed enabling legislation between 1982 and 1993. By 1998, under the pressure of an increasingly active home-schooling movement, all fifty states had passed home-school laws specifying attendance, subject, teacher, testing, and record-keeping requirements for home educators.

In 2002 state laws regulating home schooling vary widely regarding such matters as teacher licensure, testing, compulsory curriculum, and required paperwork. Some states impose exacting regulations on home schooling, while others legislate few requirements. Nine states place no restrictions on parents’ rights to home school, providing the legal option for any parent who is interested. Ten other

states simply require parents to notify the state when a child is being home schooled. On the other hand, twenty states demand that parents provide test scores or professional assessment to monitor the student’s progress. Finally, eleven states impose stringent requirements that mandate that parents provide the state with test scores or professional assessment to measure the student’s achievement, in addition to other requirements such as regular home visits or professional training.

### Legal Background

American courts have asserted that parents possess significant authority to direct the education of their children. *Meyer v. Nebraska* (1923) was the first case to protect parental educational authority against the incursion of state legislation, establishing a legal precedent when the U.S. Supreme Court found that states may not prohibit foreign language education if schools offer it and parents desire it. Parents’ fundamental right “to direct the upbringing and education of children under their control” was etched more firmly in *Pierce v. Society of Seven Sisters* (1925). The *Pierce* decision stated that parents should be allowed to choose the type of school their children attend, public or private, as Oregon law could not require that parents send their children to public schools. In a 1972 ruling crucial to the home-schooling cause, the Supreme Court held in *Wisconsin v. Yoder* that parents had the right to supersede compulsory education laws if the laws unduly impeded religious freedom. The Court ruled that it was permissible for Amish parents to remove their children from school at age twelve to maintain their way of life and exercise their religious freedom.

Although the courts have protected the rights of parents, they have also defended the right of states to require and extensively regulate educational instruction. Courts have ruled that if a state exempts home schoolers from compulsory attendance laws it is entitled to regulate their activities. States have the right to impose “reasonable” standards on home schoolers. These may include regulations as invasive as administering achievement tests to monitor students’ progress (*Murphy v. State of Arkansas*, 1988). While most state laws include such requirements, enforcement is often sporadic due to the decentralized nature of home schooling and the lack of established overseeing bodies.

Over the course of time, several states have refused to allow home instruction on the grounds that

it would stunt the social development of children and would prevent them from living normal, productive lives. The courts have determined that states are within their rights to make such determinations (*Knox v. O'Brien*, 1950). States may mandate that children must attend school because of the interaction it provides with their peers and the exposure it provides to different types of people (*State v. Edgington*, 1983).

### Legal Trends

In the late 1990s, the parents of home-schooled children began suing schools districts that denied requests for supplemental services, classes, extracurricular activities, and additional services such as lab science instruction that cannot be feasibly provided at home. However, the courts have not mandated that districts provide such additional services. In *Swanson v. Guthrie Independent School District* (1998), a U.S. Court of Appeals ruled that a school board may deny home-schooled children the right to attend public school part-time. Previously, the courts had held in *Bradstreet v. Sobol* (1996) that school districts could require students to be enrolled in public schools in order to be eligible to participate in interscholastic sports.

### Effects

Although no randomized field trials have been conducted, some preliminary research suggests that children who are home schooled may outperform their counterparts in public or private schools. However, given the variety of home-school settings and the uneven nature of preliminary research, it is not yet possible to reach any meaningful conclusions regarding the effectiveness of home schooling. Families who practice home schooling are often different in significant ways than families who do not. These differences, including higher levels of education, larger family size, and divergent child-rearing practices, make comparisons problematic. Moreover, it is advocates of home schooling who conduct of the research on the subject; this raises questions as to the validity and reliability of findings. The largest and most comprehensive as of 2001, conducted by the National Home Education Research Institute, examined over five thousand home-schooled students' scores on national standardized achievement tests for the 1994 through 1995 school year, and found that children who were home schooled outperformed their peers on standardized assessments.

### Future Implications

In the fall of 2000, Patrick Henry College in Purcellville, Virginia, became the first postsecondary institution intended primarily to serve students who had been schooled at home. Of the college's first class of ninety students, eighty had been home schooled. Patrick Henry College's curriculum has a moral focus comparable to many home schoolers' early education and values, and emphasizes traditional Christian values. The college is designed to address the typical challenges that many home schoolers face, as these students do not possess conventional educational records such as transcripts and may not be comfortable with their altered learning environment.

Home schooling poses a radical challenge to the centuries-long project of American public education. It raises important questions about how to balance the rights of family and community, of individual and state. There are no simple answers to these complex legal and ethical questions, and it is unclear the extent to which home schooling will transform educational practice in years to come.

*See also:* ALTERNATIVE SCHOOLING; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; SCHOOL REFORM; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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## HOMEWORK

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Homework is defined as tasks assigned to students by school teachers that are intended to be carried out during nonschool hours. This definition excludes in-school guided study (although homework is often worked on during school), home-study courses, and extracurricular activities such as sports teams and clubs.

### Purpose

The most common purpose of homework is to have students practice material already presented in class so as to reinforce learning and facilitate mastery of specific skills. Preparation assignments introduce the material that will be presented in future lessons. These assignments aim to help students obtain the maximum benefit when the new material is covered

in class. Extension homework involves the transfer of previously learned skills to new situations. For example, students might learn in class about factors that led to the French Revolution and then be asked as homework to apply them to the American Revolution. Finally, integration homework requires the student to apply separately learned skills to produce a single product, such as book reports, science projects, or creative writing.

Homework also can serve purposes that do not relate directly to instruction. Homework can be used to (1) establish communication between parents and children; (2) fulfill directives from school administrators; (3) punish students; and (4) inform parents about what is going on in school. Most homework assignments have elements of several different purposes.

### Public Attitudes toward Homework

Homework has been a part of student's lives since the beginning of formal schooling in the United States. However, the practice has been alternately accepted and rejected by educators and parents.

When the twentieth century began, the mind was viewed as a muscle that could be strengthened through mental exercise. Since this exercise could be done at home, homework was viewed favorably. During the 1940s, the emphasis in education shifted from drill to problem solving. Homework fell out of favor because it was closely associated with the repetition of material. The launch of the satellite *Sputnik* by the Soviet Union in the mid-1950s reversed this thinking. The American public worried that education lacked rigor and left children unprepared for complex technologies. Homework, it was believed, could accelerate knowledge acquisition.

The late 1960s witnessed yet another reversal. Educators and parents became concerned that homework was crowding out social experience, outdoor recreation, and creative activities. In the 1980s, homework once again leapt back into favor when *A Nation at Risk* (1983), the report by the National Commission on Excellence in Education, cited homework as a defense against the rising tide of mediocrity in American education. The push for more homework continued into the 1990s, fueled by increasingly rigorous state-mandated academic standards. As the century ended, a backlash against homework set in, led by parents concerned about too much stress on their children.

### **The Positive and Negative Effects of Homework**

The most direct positive effect of homework is that it can improve retention and understanding. More indirectly, homework can improve students' study skills and attitudes toward school, and teach students that learning can take place anywhere, not just in school buildings. The nonacademic benefits of homework include fostering independence and responsibility. Finally, homework can involve parents in the school process, enhancing their appreciation of education, and allowing them to express positive attitudes toward the value of school success.

Conversely, educators and parents worry that students will grow bored if they are required to spend too much time on academic material. Homework can deny access to leisure time and community activities that also teach important life skills. Parent involvement in homework can turn into parent interference. For example, parents can confuse children if the instructional techniques they use differ from those used by teachers. Homework can actually lead to the acquisition of undesirable character traits if it promotes cheating, either through the copying of assignments or help with homework that goes beyond tutoring. Finally, homework could accentuate existing social inequities. Children from disadvantaged homes may have more difficulty completing assignments than their middle-class counterparts.

### **Extensiveness of Homework**

In contrast to the shifts in public attitudes, surveys suggest that the amount of time students spend on homework has been relatively stable. Data from the National Assessment of Educational Progress suggests that in both 1984 and 1994, about one-third of nine-year-olds and one-quarter of thirteen- and seventeen-year-olds reported being assigned no homework at all, with an additional 5 percent to 10 percent admitting they did not do homework that was assigned. About one-half of nine-year-olds, one-third of thirteen-year-olds, and one-quarter of seventeen-year-olds said they did less than an hour of homework each night. In 1994 about 12 percent of nine-year-olds, 28 percent of thirteen-year-olds, and 26 percent of seventeen-year-olds said they did one to two hours of homework each night. These percentages were all within one point of the 1984 survey results.

A national survey of parents conducted by the polling agency Public Agenda, in October, 2000, re-

vealed that 64 percent of parents felt their child was getting "about the right amount" of homework, 25 percent felt their child was getting "too little" homework, and only 10 percent felt "too much homework" was being assigned.

International comparisons often suggest that U.S. students spend less time on homework than students in other industrialized nations. However, direct comparisons across countries are difficult to interpret because of different definitions of homework and differences in the length of the school day and year.

### **Appropriate Amounts of Homework**

Experts agree that the amount and type of homework should depend on the developmental level of the student. The National PTA and the National Education Association suggest that homework for children in grades K–2 is most effective when it does not exceed ten to twenty minutes each day. In grades three through six, children can benefit from thirty to sixty minutes daily. Junior high and high school students can benefit from more time on homework and the amount might vary from night to night. These recommendations are consistent with the conclusions reached by studies into the effectiveness of homework.

### **Research on Homework's Overall Effectiveness**

Three types of studies have been used to examine the relationship between homework and academic achievement. One type compares students who receive homework with students who receive none. Generally, these studies reveal homework to be a positive influence on achievement. However, they also reveal a relationship between homework and achievement for high school students that is about twice as strong as for junior high students. The relationship at the elementary school level is only one-quarter that of the high school level.

Another type of study compares homework to in-class supervised study. Overall, the positive relationship is about half as strong as in the first type of study. These studies again reveal a strong grade-level effect. When homework and in-class study were compared in elementary schools, in-class study proved superior.

The third type of study correlates the amount of homework students say they complete with their achievement test scores. Again, these surveys show

the relationship is influenced by the grade level of students. For students in primary grades, the correlation between time spent on homework and achievement is near zero. For students in middle and junior high school, the correlation suggests a positive but weak relationship. For high school students, the correlation suggests a moderate relationship between achievement and time spend on homework.

### Research on Effective Homework Assignments

The subject matter shows no consistent relationship to the value of homework. It appears that shorter and more frequent assignments may be more effective than longer but fewer assignments. Assignments that involve review and preparation are more effective than homework that focuses only on material covered in class on the day of the assignments. It can be beneficial to involve parents in homework when young children are experiencing problems in school. Older students and students doing well in school have more to gain from homework when it promotes independent learning.

Homework can be an effective instructional device. However, the relationship between homework and achievement is influenced greatly by the students' developmental level. Expectations for homework's effects, especially in the short term and in earlier grades, must be modest. Further, homework can have both positive and negative effects. Educators and parents should not be concerned with which list of homework effects is correct. Rather, homework policies and practices should give individual schools and teachers flexibility to take into account the unique needs and circumstances of their students so as to maximize positive effects and minimize negative ones.

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HARRIS COOPER

## HONOR SOCIETIES

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- ALPHA CHI  
Dennis M. Organ
- ALPHA MU GAMMA  
Franklin I. Triplett
- ALPHA OMEGA ALPHA  
Edward D. Harris Jr.
- ASSOCIATION FOR WOMEN IN COMMUNICATIONS  
Mary Kay Switzer
- ASSOCIATION OF COLLEGE HONOR SOCIETIES  
John W. Warren
- BETA PHI MU  
Judith J. Culligan
- DELTA KAPPA GAMMA SOCIETY  
Carolyn Guss
- DELTA SIGMA RHO-TAU KAPPA ALPHA  
Herold T. Ross
- KAPPA DELTA PI  
Michael P. Wolfe
- KAPPA OMICRON NU  
Dorothy I. Mitstifer
- LAMBDA IOTA TAU  
Bruce W. Hozeski
- PHI BETA KAPPA  
Meaghan E. Mundy
- PHI DELTA KAPPA INTERNATIONAL  
George Kersey Jr.
- PI KAPPA LAMBDA  
George Howerton
- PI SIGMA ALPHA  
James I. Lingle
- RHO CHI  
Robert A. Buerki
- SIGMA XI  
Meaghan E. Mundy
- TAU BETA PI  
Meaghan E. Mundy

### ALPHA CHI

A college honor scholarship society, Alpha Chi promotes academic excellence and exemplary character

among college and university students and honors those who achieve such distinction. As a general honor society, Alpha Chi admits students from all academic disciplines. A member institution, which must be a regionally accredited, baccalaureate-degree-granting college or university, may invite to membership no more than the top ten percent of the junior and senior classes. Membership recognizes previous accomplishments and provides opportunity for continued growth and service. As the society's constitution states, Alpha Chi seeks to find ways to assist students in "making scholarship effective for good."

Founded on February 22, 1922, by five Texas institutions of higher learning, Alpha Chi was first called the Scholarship Societies of Texas, then the Scholarship Societies of the South (1927), and finally Alpha Chi (1934) when the decision was made to become a national society. By 1955 there were only thirty-six active chapters, all in the south except for two chapters in Nebraska and Massachusetts, but in the 1960s expansion was rapid. By the end of 1971, Alpha Chi had installed chapter number 120 and restructured itself under a new constitution. Growth was strong through the next three decades, with more than 300 active chapters in almost every state by 2000 and an organizational structure of seven geographic regions.

Alpha Chi, legally chartered by the state of Texas, is a 501(c)(3) nonprofit entity with headquarters in Searcy, Arkansas, on the campus of Harding University, one of its member institutions. Its paid staff includes a half-time executive director who is an academic and two full-time professionals overseeing day-to-day operations. The executive director is appointed by the society's governing board, the National Council, made up of twenty-two faculty and students elected by the general membership at regional and national conventions; eight council members are faculty elected at large; the remaining members are seven faculty and seven students elected by their respective regions. The council meets annually, as does the executive committee consisting of the council's president, vice president, and secretary and the executive director. The regions also elect an executive committee consisting of a president, vice president, secretary-treasurer, and student representative. Campus chapters are served by an official faculty sponsor, who is appointed by the institution's president, and by student officers elected by the local membership.

In addition to undergraduate members, who are nominated by the faculty of member institutions, Alpha Chi elects a limited number of honorary members annually. These typically are faculty and administrators of institutions with Alpha Chi chapters or other individuals with acceptable academic credentials who have given special support to Alpha Chi chapters, to the organization as a whole, or to the cause of scholarship in general. After members receive their baccalaureate degrees, they also may choose to maintain an ongoing relationship with the society by paying an annual fee for "active alumni" status. Such members receive invitations to the annual conventions and the society's publications. These publications are the *Recorder*, issued twice yearly (one issue authored by undergraduates and the other, by alumni and others associated with the society); and the *Newsletter*, a bulletin issued three times yearly. Undergraduate members receive these publications through chapter sponsors. The society also publishes a handbook for chapter operations. In 1997 Alpha Chi published *Scholarship and Character: Seventy-Five Years of Alpha Chi*, written by Robert W. Sledge, a long-time leader.

In addition to recognizing students for their academic achievement, Alpha Chi also offers numerous opportunities for their further growth. The society sponsors a competition for scholarships and fellowships totaling more than \$50,000 yearly, mostly at the national level but also at the regional and local levels. Another program involves student scholarly and creative presentations at national and regional conventions. The 2001 national convention, which drew more than 500 students and faculty, featured the work of about 200 students from a wide range of fields. Many local chapters also sponsor programs on campus to promote scholarly activity, and engage in service projects benefiting the campus or the community, often with an academic focus, such as tutoring programs. Finally, students' involvement in leadership at all levels of the society's operation makes Alpha Chi distinctive among similar honor societies and provides excellent opportunities for members to develop their talents beyond the classroom.

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DENNIS M. ORGAN

**ALPHA MU GAMMA**

A national honor society for students of community colleges, four-year colleges, and universities, Alpha Mu Gamma honors achievement in the study of foreign languages. The society strongly believes that such recognition stimulates a desire for linguistic achievement; nurtures and promotes interest in the study of foreign languages, literatures, and civilizations; and fosters a sympathetic understanding of other peoples through the medium of languages.

Alpha Mu Gamma was founded in 1931 by members of the foreign language faculty at Los Angeles City College in Los Angeles, California. A semi-annual publication, the *Scroll*, began production in 1933, and continues today as a newsletter. By 1938 there were chapters in five states: Arizona, California, Kansas, Missouri, and Minnesota. By 2001 there were 318 chapters in virtually every state.

The society annually awards scholarships for foreign language study and for study abroad to outstanding student members. Alpha Mu Gamma is registered in the state of California as a nonprofit educational organization. Its officers consist of a nationally elected president and vice president, regional vice presidents, a national executive secretary, a national treasurer, and an administrative assistant. The officers constitute the National Executive Council, which is responsible for the basic policies of the organization. The chapters must conform to the rules of the society concerning selection and initiation of members, and use of society regalia such as pins and cords; however, each chapter is completely autonomous in every other way.

Alpha Mu Gamma held its thirtieth biennial national convention at Fairfield University, Fairfield, Connecticut, in March 2001. The national convention of Alpha Mu Gamma is organized by member chapters to provide a forum where students and faculty can meet and make presentations related to foreign language teaching, study abroad, and the study of literature and culture. Often, scholars of national or international importance attend the conference as keynote speakers. The national convention also pro-

vides the society with an opportunity to honor its most distinguished student members and to install its nationally elected officers. The selection of a location for the convention is made by the National Executive Council based on proposals submitted by member chapters.

Alpha Mu Gamma derives its income primarily from student initiation fees and charter fees. It provides limited financial assistance to chapters involved in the organization of the national convention.

In January 1957, through the efforts of the eleventh national president, Sister Eloise-Therese of Sigma Chapter at Mount Saint Mary's College in Los Angeles, President Dwight D. Eisenhower proclaimed the third week of February as "National Foreign Language Week," now celebrated during the first full week of March. Every year since, the president of the United States and many of the nation's governors have continued to recognize this event. The National Executive Council annually commissions the design and publication of a poster, which is widely distributed among schools, colleges, and universities throughout the United States.

Alpha Mu Gamma not only provides a milieu for students to meet the high standards of achievement of a national honor society, but also offers students incentives to excel in foreign languages.

FRANKLIN I. TRIPLETT

**ALPHA OMEGA ALPHA**

The mission of Alpha Omega Alpha Honor Medical Society is to encourage high standards of scholarship among medical students, to enhance professionalism within medicine, and to encourage community and university service by all physicians and medical students.

Alpha Omega Alpha was founded in 1902 by a medical student, William Webster Root, and several of his classmates. (Root was also involved in the founding of the Association of College Honor Societies.) Steady growth of the society through the chartering of new chapters was facilitated by the encouragement of medical school faculties and deans. In 2000, Alpha Omega Alpha chapters in the United States, Canada, Puerto Rico, and at the American University of Beirut in Lebanon numbered 123.

Alpha Omega Alpha, a nonprofit society, is governed by a board of directors formed of twelve graduate members and three student members. Every chapter has a faculty councillor, secretary-treasurer, and a student president. The councillor is chosen by the dean. Chapters are organized into sixteen regions, each coordinated by a regional councillor.

Undergraduate medical students are elected by all members (residents, students, and faculty) at each institution. Students ranked academically in the top 25 percent of their graduating class are eligible for election, but only one-sixth of each class can be elected. The criteria, in addition to superior scholarship, include demonstration of collegiality, professionalism, service to the community, and promise for excellence as a practicing or academic physician. In addition to medical student members, each chapter may elect a limited number of faculty, alumni, and resident physicians at the institution. Honorary members may be nominated by any member of Alpha Omega Alpha; a number of those nominated are elected by the board. Honorary members are distinguished individuals not eligible for election by any other mechanism.

Upon payment of annual national dues, a member receives *The Pharos* (the Alpha Omega Alpha quarterly) and participates in supporting national programs. Lifetime membership is open to any member.

Each chapter is encouraged to sponsor service and educational projects within the medical school. The national office of Alpha Omega Alpha, located in Menlo Park, California, administers programs that include the following:

1. Alpha Omega Alpha Student Research Fellowships. These are awarded yearly for investigative and mentored activities for students in medical schools with active chapters.
2. The Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Awards. As many as four outstanding teachers from American medical schools are chosen by committees representing Alpha Omega Alpha and the Association of American Medical Colleges (AAMC). The awards are presented each year at the annual meeting of the AAMC.
3. Alpha Omega Alpha Medical Student Service Project Awards. Any student or group of students at each medical school with an active

chapter may apply for financial support for service projects at the school or in the surrounding community.

4. *The Pharos*. First published by Alpha Omega Alpha in 1938, *The Pharos* is the quarterly publication of Alpha Omega Alpha. Nonfiction, nontechnical articles, poetry, and photography relevant to medicine are reviewed by members of *The Pharos* editorial board.
5. Alpha Omega Alpha Helen H. Glaser Student Essay Award. Any student at a medical school with an active chapter may submit a nonfiction essay on a nontechnical medical subject. Judged by members of *The Pharos* editorial board, winners receive a cash award and the essay is published in the quarterly.
6. Leaders in American Medicine videotape series. Available for loan or purchase are more than 100 interviews of outstanding physicians in American medicine.
7. Alpha Omega Alpha Visiting Professorships. This program is available to all active chapters. A respected physician is invited to spend up to two full days at the medical school, interacting with students and residents on rounds, giving specialty lectures, and often giving a special Alpha Omega Alpha lecture.

The only national honor society for medicine (with chapters at all but five U.S. medical schools), Alpha Omega Alpha continues to play a significant role in providing leadership in academia and the practice of medicine. Membership in Alpha Omega Alpha enhances a medical student's curriculum vitae, a vital part of the application for residency in all specialties.

EDWARD D. HARRIS JR.

## ASSOCIATION FOR WOMEN IN COMMUNICATIONS

In 1909 at the University of Washington in Seattle, seven female students who were enrolled in the country's second academically accredited journalism program decided to establish a women's journalism society. These students—Georgina MacDougall, Helen Ross, Blanche Brace, Rachel Marshall, Olive Mauermann, Helen Graves, and Irene Somerville—founded Theta Sigma Phi, which became the Association for Women in Communications in 1996, and

also began the publication of a special women's edition of the university newspaper, *The Pacific Daily Wave*.

In 1918 Theta Sigma Phi held its first national convention at the University of Kansas. After the convention, alumnae started professional chapters in Kansas City, Des Moines, and Indianapolis.

Despite the fact that women gained the right to vote in 1920, many editors relegated women to composing society pages, not allowing them to cover "hard news." In a 1931 issue of the *Matrix*, the society's quarterly journal, Ruby Black, the Theta Sigma Phi national president and the first manager of an employment bureau for members, noted that female journalists could not get reporting jobs at the same pay as similarly qualified males.

Inaugurating the Headliner Awards in 1939, the society honored Eleanor Roosevelt for her efforts to aid female communicators by closing her news conferences to male reporters. Mrs. Roosevelt also contributed several articles to the *Matrix*. During the 1950s and 1960s there were over forty-seven campus chapters and twenty-nine professional chapters, with the national headquarters in Austin, Texas.

### WICI and AWC

In 1973, during the national convention, Theta Sigma Phi delegates voted to change the name of the organization to Women in Communications, Inc. (WICI). Calling for institutions of higher learning to place more emphasis on affirmative action, to create more positions for female journalism professors, and to remove the discriminatory practices that impeded academic advancement, WICI members joined the national Equal Rights Amendment (ERA) coalition to fight the mounting opposition to the ERA. Accenting the need to promote professional excellence, WICI also created an awards program, which grew into the prestigious and highly competitive Clarion Awards.

In order to monitor legislation, national headquarters were moved closer to Washington, D.C. in 1988. Then, in the fall of 1996, the organization was again renamed—as the Association for Women in Communications (AWC). Increasing its influence on the professional growth of students in the communication fields, AWC moved into an alliance with the Accrediting Council on Education in Journalism and Mass Communications (ACEJMC). This resulted in AWC's participation in the development of

course offerings and requirements for institutions of higher learning.

### Mission and Organization

The AWC mission is to "champion the advancement of women across all communications disciplines by recognizing excellence, promoting leadership, and positioning its members at the forefront of the evolving communications era." By 2001 AWC had fully developed an electronic communication network through the Internet. The AWC website includes several online services, including a membership directory, job bank, listserves, the monthly newsletter *Intercom*, the *Matrix*, and an interactive membership response survey system.

Approaching its hundredth birthday, AWC had a membership of about 10,000 in 2001. Its professional awards include the Clarion Award, the International Matrix Award, the Headliner Award, the Rising Star Award, the Georgina MacDougall Davis Award, the AWC Champion Award, the Chair's First Women in Communications Award, the Chapter Recognition Program, the Lifetime Achievement Award, and the Ruth Wyand Awards. Furthermore, AWC has affirmed its long-standing commitment to education with the Matrix Foundation, which provides scholarships and supports educational research and publications.

AWC members range in age from eighteen through ninety-plus. The average age is forty-one, with most members living in urban or suburban settings in the United States and abroad. About 95 percent are college graduates, with about 47 percent holding advanced graduate degrees or involved in graduate study. Disciplines represented within the AWC membership include print and broadcast journalism, television and radio production, film, advertising, public relations, marketing, graphic design, multi-media design, photography, and related areas. A national conference is held annually, with featured guests and honorees representing a range of professions.

### INTERNET RESOURCE

ASSOCIATION FOR WOMEN IN COMMUNICATIONS. 2001. <[www.womcom.org](http://www.womcom.org)>.

## ASSOCIATION OF COLLEGE HONOR SOCIETIES

The Association of College Honor Societies (ACHS) is a visibly cohesive community of national and international honor societies, individually and collaboratively exhibiting excellence in scholarship, service, programs, and governance. A coordinating agency for these societies in chartering chapters in accredited colleges and universities, the association sets a high priority on maintaining high standards, defining the honor society movement, and developing criteria for judging the credibility and legitimacy of honor societies.

### History

During the first quarter of the twentieth century, higher education witnessed a sporadic evolution of honor societies, resulting in proliferation, duplication, and low standards. In October 1925, six credible honor societies, seeing the urgent need to define and enhance the honor society movement, organized the Association of College Honor Societies. Other legitimate societies soon affiliated, beginning an expanding membership that as of 2001 included sixty-seven societies.

More than seventy-five years of dedication to excellence have produced a highly respected professional organization that gives continuous attention to developing high standards and a process of assuring that members are in compliance with the association's bylaws. The Association of College Honor Societies is the nation's only certifying agency for college and university honor societies.

### Membership

By certifying the quality of member societies, ACHS affirms that elections to honor society membership should represent superior academic achievement. Standards set by the association require membership participation in society governance in electing officers and board members, setting authority in organizational affairs, and keeping bylaws current. To provide guidelines for its diverse membership, the association has classified honor societies into distinctive groups and has set standards for societies in each group to follow in establishing their membership and induction requirements of scholarly achievement and leadership. For general honor societies, scholarship recognition represents the highest 20 percent of the college class no earlier than the

fifth semester, or seventh quarter. For honoring leadership, these societies choose from the highest 35 percent, while specialized societies, representing particular fields, induct students who rank in the highest 35 percent of the college class and have completed three semesters, or five quarters. All these societies may elect superior graduate students.

Association members are academic honor societies, as opposed to college professional and social fraternities. Honor societies recognize superior scholarship and/or leadership achievement either in broad academic disciplines or in departmental fields, including undergraduate and/or graduate levels. According to ACHS bylaws, character and specified eligibility are the sole criteria for membership in an honor society. Membership recruitment is by written invitation and conducted by campus chapters—without applying social pressures such as solicitation or “rushing” to enlist initiates. Likewise, association societies must function without preferences to gender, race, or religion.

### Programs

The association publishes the *ACHS Handbook*, which contains the association's bylaws, society profiles, a list of certified societies, and general information. Annual meetings offer opportunities to review standards, discuss issues of concern in higher education and the honors community, and provide guidance in society governance, operations, and campus activities. Information is available to all members through minutes, special studies, committee reports, or the ACHS website.

Recognition of the association at the national level is evident in the increasing collaboration with university administrators, faculty, educational associations, and other groups. Significant attention is seen in the use of the association's classification of honor societies in *Baird's Manual of American College Fraternities*, and in an action by the U.S. Civil Service Commission on April 13, 1973, stating that honor society membership meets one requirement for the civil service GS-7 level.

### Organization

Meeting annually, a council of sixty-seven affiliate societies governs the association with one vote per society to be cast by each society's official representative. Between meetings, the executive committee conducts all business of the association and administers the policies, programs, and activities formulated

by the council. The executive committee comprises the president, the vice president/president-elect, the secretary-treasurer, the immediate past president, and two members-at-large, elected from the council and representing general and specialized honor societies.

Annual dues from member societies provide the chief source of revenue, while other limited income may derive from vendor participation, annual meetings, and occasional grants.

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JOHN W. WARREN

## BETA PHI MU

Beta Phi Mu is an international honor society that recognizes academic excellence and distinguished achievement in the field of library studies and information science. The society also sponsors and supports professional and scholarly projects, research, and publications related to librarianship, information science, and library studies.

### Program

Every year Beta Phi Mu awards several grants, scholarships, and fellowships to students of library and information science. The Sarah Rebecca Reed Scholarship of \$1,500 and the Blanche E. Woolls Scholarship of \$1,000 are awarded to students who are just beginning graduate studies in information science.

The \$1,000 Harold Lancour Scholarship for Foreign Study is awarded to a professional librarian or library student who wishes to study a foreign library or program, attend a foreign library school, or do research on library science in a foreign country. The \$750 Frank B. Sessa Scholarship for Continuing Professional Education is given to a member of Beta Phi Mu who wants to augment his or her professional skills through additional study. The \$1,500 Beta Phi Mu Doctoral Dissertation Scholarship and the \$3,000 Eugene Garfield Doctoral Dissertation Fellowship are awarded to doctoral students in library and information science who are working on their dissertations. The Society usually awards several dissertation fellowships each year. Individual Beta Phi Mu chapters may also award scholarship, grants, and awards to their own members.

In 1998, in recognition of the society's fiftieth anniversary, Beta Phi Mu inaugurated an annual Distinguished Lecture Series. Each year an outstanding professional member of Beta Phi Mu is invited to present a lecture on a topic of interest to members of the library and information science field. The lecture is usually given during the annual national conference of the American Library Association.

Beta Phi Mu publishes a semiannual national newsletter, which is sent to all members. Some chapters also publish their own newsletters. In 1990, the society began publishing a series of monographs about the history of libraries and library science in America. Profits from monograph sales fund the Beta Phi Mu Distinguished Lecture Series. From 1952 to 1989 the society also published a series of chapbooks intended to provide exemplary examples of graphic artistry, typography, and book binding.

### Organization

Beta Phi Mu is governed by an executive board consisting of a president, vice president, immediate past president, two directors-at-large, and six directors. Board officers are elected annually by mail ballot. Directors are selected by an assembly of representatives from each chapter. The executive board meets twice a year, usually in conjunction with the American Library Association's midwinter meeting and annual conference. An appointed executive director and treasurer carry out the administrative duties of the society. The president and board appoint members to both ad hoc and standing committees.

**Membership.** There are three categories of Beta Phi Mu membership: membership-at-large, member-

ship with chapter affiliation, and honorary membership. Membership requirements include a scholastic average no lower than 3.75 and completion of all requirements leading to a master's degree from a library and information sciences school accredited by the American Library Association. Candidates for membership must also be recommended by the faculty of the school attended. Graduates from schools outside the United States and Canada may be accepted for membership upon the approval of the society's executive board.

The membership initiation fee is the primary source of funding for Beta Phi Mu activities. Members do not pay annual dues to the national society, but individual chapters may levy dues. Revenue is also derived from private donations, from the sale of the society's monograph series, and from the sale of society pins and other products.

### History

Beta Phi Mu was founded in 1948 at an informal gathering of librarians and library school faculty at the University of Illinois. Twelve students from the University of Illinois Library School were invited to consider founding an honor society, with the faculty serving as sponsors. These students became the charter members of Beta Phi Mu, with Rolland Steven serving as the first Beta Phi Mu president and Harold Lancour as the first executive secretary. The founders chose the motto *Aliis inserviando consumer* (Latin for "consumed in the service of others") as the Beta Phi Mu motto to express the professional librarian's ethic of dedicated service. The following year, thirty-four members of the graduating class of the University of Illinois Library School were initiated into the society. In 1969 Beta Phi Mu became a member of American Association of College Honor Societies. Beta Phi Mu became an affiliate of the American Library Association in 1997. By 2001 Beta Phi Mu had forty-three active chapters in the United States and Canada.

### INTERNET RESOURCE

BETA PHI MU: THE INTERNATIONAL LIBRARY AND INFORMATION STUDIES HONOR SOCIETY. 2002. <[www.beta-phi-mu.org](http://www.beta-phi-mu.org)>.

JUDITH J. CULLIGAN

## DELTA KAPPA GAMMA SOCIETY

The Delta Kappa Gamma Society is an international professional organization for women in education and closely allied fields. The largest organized group of women educators in the world, the society's purpose is to improve opportunities, to develop leadership qualities, and to advance the status of women educators employed at every level of education.

### Program

The society annually awards more than twenty scholarships for advanced graduate study, numerous grants-in-aid to undergraduate women students interested in entering the teaching profession, and fellowships to women educators from other countries to pursue graduate study at universities in the United States or Canada. Each year the society sponsors several educational tours abroad. Delta Kappa Gamma also makes a biennial monetary award to the woman author whose educational publication is selected by a committee as the most significant contribution to education during the two-year period. Through conventions, conferences, committee meetings, and seminars, the society provides an outlet for the creativity of women educators and for the exchange of ideas of leaders in all fields of education.

Other Delta Kappa Gamma programs include the Golden Gift Fund, which provides travel grants and special stipends for education research and helps fund seminars and workshops; the Eunah Temple Holden Leadership Fund, which promotes leadership development projects; and the International Speakers Fund, which helps pay travel expenses for speakers invited to give addresses at Delta Kappa Gamma meetings and conferences.

One of the society's most important programs is the Educational Foundation, which encourages standards of excellence in education. It assists and cooperates with schools, colleges, universities, organizations, trusts, funds, or foundations to support, encourage, and improve education. The foundation has made grants to researchers and authors in the field of education, has supplemented the society's scholarship and world fellowship program, and has sponsored numerous study seminars. Delta Kappa Gamma has had continuing interest in fostering international understanding and providing educational services to underdeveloped areas or countries. Educational Foundation ambassadors have visited numerous countries, including Nicaragua, Costa

Rica, Ecuador, Peru, Chile, and Uruguay. Foundation ambassadors recommend and help implement teacher education programs in these countries, recruiting staff and planning courses and facilities.

The society publishes and distributes *The Delta Kappa Gamma Bulletin*, a quarterly professional journal containing articles of general educational interest, and *The Delta Kappa Gamma News*, published eight times a year. Numerous other intrasociety publications facilitate the work of committees and aid the implementation of special projects. Pamphlets and reports of general interest are available to non-members.

### Organization

The Delta Kappa Gamma Society is made up of approximately 3,100 chapters in seventy-five state organizations in fourteen countries. The activities of the society are carried on by twenty standing committees and additional special committees working for teacher welfare, school support, graduate-study scholarships for women, educational research, development of leadership skills, service to children and youth, fellowship with women educators throughout the world, and recognition of women who have given distinctive service. Individuals hold membership in a chapter. Each state has a state organization of chapters within the state. The four regional units are composed of state organizations. The international society comprises the individual chapters and the state and regional units. Chapters meet six to eight times each year. State units usually meet annually, regions meet biennially, and the international society meets biennially.

### Membership

Individuals make up the membership of the chapters and include rural and urban teachers who work at the kindergarten, elementary, high school, and college level. School librarians, administrators, and supervisors are also accepted as members. The requirements for membership include a minimum of five years of successful experience in educational work. Membership is by invitation; individuals are recommended by colleagues and are voted on by the chapters. Honorary membership on the chapter, state, and international levels is extended to women who are not professional educators but who have made significant contributions to education. In 2001 the society had more than 150,000 members.

### History

The Delta Kappa Gamma Society was founded in May 1929 by Professor Annie Webb Blanton and eleven other women educators at the Faculty Women's Club of the University of Texas in Austin. Within its first year, the society was granted a charter and seventeen more chapters were formed. The international Delta Kappa Gamma office is located in Austin, Texas.

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CAROLYN GUSS

*Revised by*

JUDITH J. CULLIGAN

## DELTA SIGMA RHO-TAU KAPPA ALPHA

Delta Sigma Rho-Tau Kappa Alpha is a collegiate honor society devoted to the promotion of public speaking (forensics). It is a member of the Association of College Honor Societies (ACHS), and it seeks to reward excellence and to foster respect for freedom of speech.

### Program

The society maintains high standards for membership and for the establishment and conduct of its campus chapters. Faculty affiliated with the society are expected to supervise extracurricular debates and other public speaking activities in addition to teaching speech-related courses. In addition the society sponsors a variety of regional and national competitions in debate, prepared speech, and extemporaneous speech, and student members are expected to participate. The society publishes a journal, *Speaker and Gavel*, and has produced a textbook for use in public speaking courses: *Argumentation and Debate: Principles and Practices*. Written by David Potter under the auspices of Tau Kappa Alpha in 1954, it was revised and reissued in 1963.

The society seeks to attract promising candidates for membership well before they enter college. To this end the society provides a trophy to the winner of the annual National Forensics League tournament for high-school public speakers. It also awards

a Student Speaker of the Year trophy to a college chapter member who is chosen for the honor by the vote of the entire national membership. Another Speaker of the Year trophy is awarded to a nonmember who, in the view of the society, epitomizes effective, intelligent, and responsible public speaking. Past honorees include LeRoy Collins, Reverend Billy Graham, J. William Fulbright, and Edward W. Brooks.

### Organization and Funding

In 2002 the society had 195 active chapters serving 58,150 members. Campus chapters are organized into ten regions. Each region is administered by a governor chosen by active members of the regional chapters. A national council sets overall society policy, but local chapters enjoy a degree of autonomy in planning activities. The council officers are recruited from active or retired college speech faculty members. Society expenses are offset by an initiation fee charged to each new member and by subscriptions to the society journal. In addition fund-raising activities are held by campus chapters.

### Membership

Eligibility for membership is based on active participation in college-level forensics or original speaking. A prospective member must demonstrate skill in these areas but must also show that he or she has the capability of achieving general academic excellence. Thus the student must have completed three semesters or five quarter terms of college-level study and must have attained a high level of scholastic achievement, demonstrated by a combination of high grade point average and class rank. Membership is for life, contingent on payment of annual dues. New members must pay an initiation fee, which entitles them to a two-year subscription to *Speaker and Gavel* along with the insignia of the society.

### History

Delta Sigma Rho was founded in Chicago, Illinois, on April 13, 1906, by speech faculty from eight Midwestern colleges. Two years later, on May 13, 1908, Tau Kappa Alpha was founded by a similarly interested faculty at Butler University in Indianapolis, Indiana. Tau Kappa Alpha became a recognized member of the ACHS in 1937, and steadily gained chapters over the next two decades, achieving a total of ninety chapters by the fiftieth anniversary of its founding. Delta Sigma Rho, which had extremely

rigid standards for prospective chapters, grew less quickly and was admitted to the ACHS in 1955. A year later it had eighty active campus chapters.

The two separate societies merged in Denver, Colorado, in 1963. The archives of both are maintained at Butler University, along with a research library for the use of scholars of American forensics. The society's official contact is through the Communications Department of the University of Alabama, Tuscaloosa.

HEROLD T. ROSS

*Revised by*

NANCY E. GRATTON

## KAPPA DELTA PI

Kappa Delta Pi, an international honor society in education, was founded on March 8, 1911, at the University of Illinois. Selection as a member of Kappa Delta Pi is based on high academic achievement, a commitment to education as a career, and a professional attitude that assures steady growth in the profession. Kappa Delta Pi is an honor society of, about, and for educators. The society has 60,000 active members (as of 2001) that include outstanding leaders in the KDP Laureate Chapter, National and State Teacher of the Year winners, American Teacher Award winners, National Teacher Hall of Fame members, and Chicago Golden Apple Teachers. Membership in Kappa Delta Pi signifies more than a well-deserved line on a résumé: Members have the responsibility as a recognized honor student and honored educator to maintain the high ideals of the society and to extend the society's influence. Attending chapter meetings, performing service projects, serving as an officer, and modeling the behaviors and attitudes appropriate to the honor bestowed upon members are ways to contribute to the profession. Kappa Delta Pi supports member development through a multitude of member services. Because teaching is a lifelong process and a worthy profession and career, members are urged to renew their membership annually. The society's goal is to provide resources and services at each phase of members' careers.

The society as a whole prospers, and its influence is felt, to the degree that individuals in the chapters develop both personally and professionally. Membership in Kappa Delta Pi involves both privileges and responsibilities. Persons elected to mem-

bership remain members for life; however, active membership is maintained through the payment of annual dues. An active member is invited to attend the meetings of the chapter into which he or she was initiated and the meeting of any other chapter of Kappa Delta Pi. Attendance at conferences and the biennial Convocation is also open to active members. Each member's name is recorded permanently at society headquarters, located in Indianapolis, Indiana, with the name of the initiating chapter. However, any member may become affiliated with any other chapter of the Society and, upon payment of local dues, enjoy all the rights and privileges of membership in that chapter.

### Mission

Kappa Delta Pi is dedicated to scholarship and excellence in education. The Society is a community of scholars dedicated to the following ideals:

- Scholarship and excellence in education
- Development and dissemination of worthy educational ideals and practices
- Continuous professional growth and leadership of its diverse membership
- Inquiry and reflection on significant educational issues
- A high degree of professional fellowship

### Membership Opportunities

The Kappa Delta Pi Educational Foundation and local chapters award more than \$80,000 in scholarship monies to members each year. Kappa Delta Pi sponsors—with the Association of Teacher Educators—the National Student Teacher/Intern of the Year Award Program. It also sponsors—with the American Education Research Association—the Outstanding Young Researcher Award. In addition, the society presents awards to counselors and chapters for outstanding achievements.

**Publications.** The *Kappa Delta Pi Record* is a quarterly journal for all members. It features articles with practical strategies for learning and teaching. The *New Teacher Advocate* is a quarterly newsletter, judged best among U.S. association newsletters by the American Educational Press Association. It features topics and practical strategies important to preservice and beginning teachers. *The Educational Forum* is an award-winning quarterly scholarly journal containing critical analyses of issues and practices that are of great importance to the improvement of education and educators.

**Conferences.** The Kappa Delta Pi Convocation is a biennial conference at which Society business is conducted and professional development workshops are presented. Regional Leadership Forums are daylong training conferences for members to learn leadership and chapter-management skills.

In addition, worldwide study tours and teacher exchanges are offered each summer. Members may access up-to-date information on society activities, job postings, and information on current issues in education at the society's website.

### INTERNET RESOURCE

KAPPA DELTA PI. 2002. <[www.kdp.org](http://www.kdp.org)>.

MICHAEL P. WOLFE

## KAPPA OMICRON NU

The Kappa Omicron Nu Honor Society is dedicated to empowering leaders through scholarship, research, and leadership development and to preparing scholars and researchers to be leaders in society. Kappa Omicron Nu aims to bring leadership to a sizable scholarly community in the human sciences and to emphasize the responsibility of scholars to the family and consumer sciences/human sciences professions and society. By enriching the intellectual environment through its local and national initiatives, Kappa Omicron Nu has provided leadership for collaboration among various organizations within the human sciences in leadership development, in strategic thinking about the future of the field in higher education, and in undergraduate research.

### History

Kappa Omicron Nu was established on February 21, 1990, by the consolidation of Kappa Omicron Phi and Omicron Nu. Following a successful three-year collaboration as an Administrative Merger, Kappa Omicron Nu was structured to realize the synergistic benefits of the two organizations. Kappa Omicron Nu is headquartered in East Lansing, Michigan, close to the Michigan State University campus, which was the founding institution of Omicron Nu.

Omicron Nu was founded in 1912 at Michigan Agricultural College (now Michigan State University). Faculty members were familiar with other honor societies, so Dean Maude Gilchrist and the faculty decided to recognize home economics scholarship.

Promoting scholarship, research, and leadership motivated the expansion of Omicron Nu to campuses across the country.

Kappa Omicron Phi was formed in 1922 at Northwest Missouri State Teacher College, Maryville (now Northwest Missouri State University), with an emphasis on intellectual and scholastic excellence as well as personal development, including intellectual, spiritual, ethical, and aesthetic qualities.

### Governance

Kappa Omicron Nu has adopted a governance model, by which the board of directors achieves its directives and avoids unacceptable circumstances and actions by stating what it will not accept. Policy categories include: (1) ends, (2) executive limitations, (3) board process, and (4) board-staff linkage. The effects of the model are clarity of values, a focus on results rather than administrative process, empowerment of executive authority, and an enhanced board-member relationship.

The Kappa Omicron Nu board includes the chair, chair-elect, vice chair for programs, vice chair for finance, secretary, and three student board members. The executive director is a nonvoting member of the board. The board is elected by active members, and the Biennial Conclave Assembly of Delegates sets authority for organizational affairs.

### Membership

To be considered for membership, undergraduate students must have completed forty-five semester hours (or the equivalent), have a minimum grade point average of 3.0, and rank in the top 25 percent of their class. Graduate students shall have completed twelve semester hours of graduate work (or the equivalent) and have a minimum grade point average of 3.5. Professionals not previously initiated into the honor society and those with degrees outside the profession are also eligible.

### Major Activities

Kappa Omicron Nu awards scholar program grants of between \$150 and \$500 to each chapter once each biennium. In total, fellowships and grants in excess of \$30,000 are awarded each biennium. Chapter programming focuses on a national program theme and scholarly priorities, including undergraduate writing, ethics, mentoring, cultural diversity, leadership, and undergraduate research. The society's website is

designed to support the development of a learning community. The Leadership Academy sponsors innovative programs and leadership development, including online courses. In collaboration with the Undergraduate Research Community for the Human Sciences, Kappa Omicron Nu sponsors an annual undergraduate research conference.

The society publishes *Kappa Omicron Nu FORUM*, a refereed, thematic scholarly journal, and *Kappa Omicron Nu Dialogue*, a substantive newsletter containing issue discussion, program themes, announcements, and awards. *FORUM* has featured a series titled "Legacies for the Future," which tells the stories of leaders who helped to develop the field of human sciences. Other stories have focused on the concepts of community, collaboration, empowerment, and leadership. *FORUM* is also available online, and an online newsletter, *Kappa Omicron Nu Spotlight*, serves as the annual report of Kappa Omicron Nu activities.

### INTERNET RESOURCE

KAPPA OMICRON NU. 2002. <[www.kon.org](http://www.kon.org)>.

DOROTHY I. MITSTIFER

## LAMBDA IOTA TAU

An international honor society, Lambda Iota Tau recognizes and promotes excellence in the study of literature in all languages.

Lambda Iota Tau was founded at Michigan State University on December 3, 1953, and was incorporated in 1954 by representatives of chapters at Aquinas College, Baldwin-Wallace College, Eastern Michigan University, Marygrove College, Mercy College of Detroit, Purdue University, Sioux Falls College, and the University of Detroit. In 2001 the society had forty-seven active chapters with a total membership of approximately 40,000. The international office is located at Ball State University in Muncie, Indiana.

The society is a nonprofit organization. Elected officers of Lambda Iota Tau are the international executive secretary, the international assistant executive secretary, the treasurer, and the international board of chapter advisers. The international executive secretary conducts the affairs of the society, arranges for and presides over all international meetings, and consults with the international board

in all actions affecting the society as a whole. The treasurer receives all dues and pays all financial obligations of the society. The international board of chapter advisers consists of five chapter advisers from five geographical areas. The board elects its own president, determines and initiates new policies within the constitutional limitations of the society, ratifies the appointments of the secretaries and treasurer, nominates candidates for all elective offices, corresponds with the chapters in their geographical areas, and determines the international dues.

Members are students majoring or minoring in literature, including literature written in foreign languages, who are in the upper 35 percent of their class in cumulative grade point average, have attained at least a full B average in at least twelve semester credit hours or eighteen term hours of literature and all prerequisites thereto, are enrolled in at least their fifth college semester or seventh college term, and have presented an initiation paper. The initiation paper is presented in such a manner as the local chapter requires, is of a quality certified by the chapter adviser, and is on a literary topic (research or critical) or of a creative nature (short story, essay, poem, drama). Graduate students must have completed one semester term with an A- average.

Members are initiated into local chapters established and maintained only at colleges or universities that grant the baccalaureate or higher degrees and that are accredited by the appropriate regional agency and certain appropriate professional accrediting agencies. The local chapters are approved by the administrations of their institutions. Lambda Iota Tau is a member of the Association of College Honor Societies and meets all of the high standards for member organizations.

Lambda Iota Tau publishes its annual journal *LIT*, which includes noteworthy poems, short stories, essays, and critical analyses written by its members. The best piece in each category of *LIT* is awarded a publication prize. The society also publishes a semiannual *Newsletter*. In addition, several scholarships are awarded to the membership each year.

Chapters are encouraged to hold regular meetings and to sponsor events and activities that will bring the study of literature to the attention of the campus at large. Chapters sponsor such projects as the appearance of outstanding speakers on their campuses, motion pictures based on works of litera-

ture, publications of student creative and critical writing, and library exhibits. They also hold book sales to foster more reading of literature. Some chapters volunteer for local Habitat for Humanity projects and various local literacy projects.

The international office has in the past sponsored lectures by famous individuals such as John Crowe Ransom, Robert Lowell, and Richard Eberhart. The society currently confers honorary memberships on individuals who have made worthy contributions to some area of literature, language, or linguistics, or who have demonstrated proficiency in teaching, scholarship, criticism, or creative writing. The society also bestows an honorary presidency on a literary figure who has achieved distinction in both critical and creative writing. Honorary presidents have included W. H. Auden, Archibald MacLeish, Daniel Hoffman, Robert Penn Warren, Richard Eberhart, Richard Marius, and Robert Pinsky.

BRUCE W. HOZESKI

## PHI BETA KAPPA

Founded at the College of William and Mary in Williamsburg, Virginia, in 1776, Phi Beta Kappa is a college and university honor society established to recognize and promote intellectual scholarship and liberal arts education. Phi Beta Kappa is the oldest Greek-letter organization and national academic honor society. In addition to awarding membership to distinguished undergraduates, the Phi Beta Kappa Society also offers scholarships, awards, funding for visiting scholars, and high-school development programs.

### Goals

For more than 200 years the Phi Beta Kappa Society has engaged its mission of promoting and recognizing excellence in the liberal arts and sciences. Phi Beta Kappa's purpose is to emphasize the importance of the literary and humane tradition by recognizing outstanding scholarship in those fields. At its inception, Phi Beta Kappa was distinguished by such characteristics as an oath of secrecy, a badge, mottoes in Latin and Greek, a code of laws, elaborate initiation rituals, a seal, and a special handshake. The society's distinctive emblem, a golden key, is widely recognized as a symbol of academic achievement. Though the original standards have been modified over time by such changes as omitting the secrecy

clause and through the inclusion of women for membership, the focus on excellence in the liberal arts and scholarly achievement remain central tenets of Phi Beta Kappa's mission.

### Programs and Activities

Programs are offered through the chapters and their community counterparts, the associations, both of which work in conjunction with the national office. The goal of the programs is to honor and champion liberal arts scholarship. Through its various programs and activities, Phi Beta Kappa provides support via scholarships and lectureships, book and essay awards, and funds for visiting scholars. More than one million dollars is raised and distributed each year to support these efforts and the students whom they benefit.

Scholarships are available from the national office, individual chapters, and associations. Individuals must apply for these scholarships and demonstrate merit for receipt of a scholarship. There is an application process, outlined by each respective organization, and committees that evaluate the applicants and confer the awards.

Sponsored by the Phi Beta Kappa Society, the Phi Beta Kappa book awards are granted annually to authors of exceptional scholarly books published in the United States in the fields of the humanities, the social sciences, the natural sciences, and mathematics. There are three book awards that each bestow a prize of \$2,500 to recipients. The awards include the Christian Gauss Award in the field of literary scholarship or criticism; the Phi Beta Kappa Award in Science for contributions to the literature of science; and the Ralph Waldo Emerson Award for scholarship regarding the intellectual and cultural condition of humanity. In addition, the Phi Beta Kappa Poetry Award is presented annually for the best book of poems published in the United States within a given year. It carries a \$10,000 one-time award.

The Visiting Scholar program affords chapters the opportunity to bring renowned scholars to their campuses to participate in lectures and seminars, meet with faculty and students, and address each institution's academic community over a two-day period. The objective of the program is to enhance the intellectual life of campuses by allowing an exchange among visiting scholars, faculty, and students. Twelve or more scholars participate each year.

To foster academic excellence and promote liberal learning at the secondary level, Phi Beta Kappa

has built a partnership with the National Honor Society and the National Junior Honor Society. The partnership was initiated in 1994 and has as its central feature the participation of Phi Beta Kappa in the National Honor Society's annual meeting wherein the society provides the central academic program.

The society also circulates two main publications. *The American Scholar*, which has been in quarterly circulation since 1932, is a scholarly journal that provides articles and essays on various literary, artistic, and scientific subjects. *The Key Reporter* is distributed to all Phi Beta Kappa members and provides organizational information and news.

### The Development of College and University Chapters

When Phi Beta Kappa was initially established, chapters were founded when a chartered Phi Beta Kappa organization on one campus granted a charter to another institution. This process details how the founding chapter at William and Mary awarded chapters to Yale, Harvard, and Dartmouth between 1776 and 1781. Then, in 1881, a national organization was created—the United Chapters of Phi Beta Kappa—to coordinate Phi Beta Kappa programs, activities, and membership. The United Chapters of Phi Beta Kappa evolved into what is known today as the Phi Beta Kappa Society.

The society's governing body, the Council, convenes every three years and brings together national representatives from every chapter and alumni association. This council sets general policies, elects officers and members to the twenty-four-member senate governing board, and decides on applications for new chapters. A Committee on Qualifications—a twelve-member elected body—receives all chapter applications, reviews them, and recommends to the Senate their opinions regarding applicants.

When a campus decides it would like to apply for membership, an informal group of faculty must organize to begin the process of applying for a charter. Since charters are granted to the Phi Beta Kappa members on the faculty rather than to an institution, adequate faculty representation is essential to the vitality and stability of organizing a new Phi Beta Kappa chapter. The appropriate faculty representatives communicate with Phi Beta Kappa headquarters to obtain an application and begin the

documentation process. Because the Council only convenes every three years, timing is also critical. After submission of the application and the appropriate fee, the Committee on Qualifications considers applications and seeks reliable evidence that an applicant institution can meet the Phi Beta Kappa selection criteria.

Phi Beta Kappa sets very high standards not only for the students selected for membership but also for institutions desiring a campus Phi Beta Kappa chapter. Due to the vast differences among colleges and universities, no uniform, abstract standards exist for institutional membership and the awarding of Phi Beta Kappa chapters. Rather, institutions must provide valid evidence and submit to a rigorous assessment process based on individual campus distinctions. It is critical that institutions demonstrate their ability and willingness to uphold the Phi Beta Kappa ideals and standards in cultivating liberal learning. For example, the selection process gives careful consideration to the degree to which institutions possess standards that encourage excellence, a governance structure that fosters academic freedom and vitality, a scholarly faculty, a promising student body, sufficient resources (i.e., libraries and educational facilities), and adequate institutional income.

If institutions meet these standards and are deemed worthy candidates, a site visit is arranged. Phi Beta Kappa representatives conduct the site visits and reconvene to discuss their recommendations. These recommendations are forwarded to the Senate for discussion at the triennial Council meeting. A two-thirds vote by attending chapter and association delegations is required for approval of a new chapter. Upon approval, the charter for a new chapter is promptly granted and formal initiation procedures are arranged. In 2001 there were more than 250 chapters of Phi Beta Kappa in the United States.

#### BIBLIOGRAPHY

- CURRENT, RICHARD N. 1990. *Phi Beta Kappa in American Life: The First Two Hundred Years*. New York: Oxford University Press.
- VOORHEES, OSCAR M. 1945. *The History of Phi Beta Kappa*. New York: Crown.

#### INTERNET RESOURCE

- PHI BETA KAPPA SOCIETY. 2002. <[www.pbk.org](http://www.pbk.org)>.

MEAGHAN E. MUNDY

## PHI DELTA KAPPA INTERNATIONAL

Phi Delta Kappa International is a not-for-profit professional association of women and men in education. The purpose of the organization is to promote quality education—with particular emphasis on publicly supported and universally available education—as essential to the development and maintenance of a democratic way of life. This purpose is achieved through the genuine acceptance, continuing interpretation, and appropriate implementation of the ideals of leadership, service, and research.

### History

Phi Delta Kappa was established in 1910 by representatives of three educational fraternities: Pi Kappa Mu at Indiana University (1906), Phi Delta Kappa of Columbia University (1908), and Nu Rho Beta at the University of Missouri (1909). Chapters were categorized as either *campus chapters* or *field chapters*, a practice that was abolished in 1973. The racial barrier for membership was stricken from the constitution of Phi Delta Kappa in 1938, but it was not until 1974 that the gender barrier was eliminated. The first international chapter was approved in 1955 at the University of Toronto, and in 1999 the constitution of Phi Delta Kappa was changed by chapter referendum to eliminate the use of the term *fraternity* and replace it with *association*.

### Membership

Membership is open to professionals at all levels of education and to individuals in educationally related fields who have a baccalaureate degree and have academic standing sufficient for admission to graduate school. Student teachers are also eligible for membership. Membership is by election through the chapter structure; candidates for membership may be nominated by current members or through self-nomination. Membership is also available without affiliation with a Phi Delta Kappa chapter. Additionally, Phi Delta Kappa provides undergraduate student membership at half the amount of regular dues. Life, senior, and emeritus membership categories are also available.

### Programs

Phi Delta Kappa International offers a variety of programs focused on members, local chapters of the association, the broader education profession, and local communities. Professional development activi-

ties are emphasized by the Center for Professional Development and Services (CPD&S), which offers seminars to school districts. CPD&S also houses the International Curriculum Management Audit Center. The Center for Evaluation, Development, and Research (CEDR) disseminates research information through publications and supports research activities through programs and services. The *Phi Delta Kappan*, the association's journal, is published ten times each year and confronts the most current issues facing K–12 schools and institutions of higher education.

Phi Delta Kappa International underwrites a number of scholarship programs for pre-service and in-service educators, as well as offering support to the Future Educators of America, which promotes teaching as a viable career option for young people. Through the International Travel Scholarship Program, Phi Delta Kappa also makes annual awards to members who wish to participate in educational travel tours sponsored by the association.

The association contributes to the national dialogue in the United States between the education community and U.S. citizens through its sponsorship of the Phi Delta Kappa/Gallup Poll of the Public's Attitudes Toward the Public Schools. The results of the poll are reported each September in the *Phi Delta Kappan*.

### Organization and Governance

As of 2001, there were more than 600 Phi Delta Kappa chapters located in North America and approximately twenty others outside the United States and Canada. Chapters are grouped into areas, each under the direct administration of an elected area coordinator. Coordinators visit chapters, provide leadership training, and disseminate information about the international association. Areas are grouped into nine districts, each under the administration of an elected district representative who also serves on the international board of directors. The legislative council, meeting in odd-numbered years, sets association policy, elects international officers, and adopts the biennial budget. The international board of directors serves as the policymaking agent between meetings of the legislative council and employs the executive director who oversees a staff of approximately sixty persons. Financial support is derived through dues, the sale of publications, services, and grants.

### INTERNET RESOURCE

PHI DELTA KAPPA. 2002. <[www.pdkintl.org](http://www.pdkintl.org)>.

GEORGE KERSEY JR.

## PI KAPPA LAMBDA

Pi Kappa Lambda is a collegiate honor society dedicated "to the furtherance of music in education and education in music." Its goal is to honor outstanding academic and artistic achievement on the part of music majors working at the college or graduate-school level and to encourage students to continue to strive for excellence throughout their careers.

### Program

The primary purpose of Pi Kappa Lambda is to recognize and encourage talented individuals working in the field of music by offering membership to qualified candidates. This honor is conferred by the election to membership itself, along with which the honoree is awarded an insignia of the organization (a symbolic key) and, on paying a nominal membership fee, is entitled to receive a copy of the society newsletter. In addition, the founding (Alpha) chapter at Northwestern University has underwritten several publications, most notably a series of monographs on American music. These monographs and similar studies have been published by Northwestern University Press.

### Organization

Pi Kappa Lambda has enjoyed steady growth since its inception in 1916 and by 2002 enrolled 203 chapters, with 58,000 members, at colleges and universities throughout the United States and in Canada. A board of regents, elected from the official membership, oversees the business of the society during annual meetings. Every other year the society holds a national convention, to which local chapters may send delegates to express their concerns and interests. Every two years the regents commission a new composition.

### Membership

Every year local chapters review the recommendations of their college's or university's school of music and choose from these candidates the students whose work, both artistic and academic, is judged to be outstanding. Students are eligible for consideration only if they meet certain stringent criteria:

They must be at an advanced stage in their studies—junior or senior undergraduates or graduate students. They must have elected music as their major course of study. In addition, they must have the support of their faculty, whose recommendations are carefully considered. Finally, they must meet or exceed certain academic standards. All candidates for membership must maintain a grade point average equivalent to the top 20 percent of the current graduating class, and juniors must be in the top 10 percent of their own class as well.

New members are required to pay a small fee, a portion of which covers the cost of their insignia and subscription to the society newsletter. The remainder of the fee goes to support the work of the national office. The society also earns revenues from its periodic publishing projects.

### History

In 1916 several members of the alumni association of the School of Music at Northwestern University met to discuss ways in which they could help to encourage future students to strive for excellence in both their artistic and their academic lives. Of particular concern was the marriage of music and education, which these founding members felt was too often underappreciated. The group agreed to organize an honor society devoted to these issues. Among this group was Peter Christian Lutkin, whose enthusiasm for the project earned him the distinction of being the very first member of the newly organized honor society. Professor Lutkin contributed more than his enthusiasm, however. When deciding on the name for the new society, the founding group chose Professor Lutkin's initials (in their Greek form), thus, Pi Kappa Lambda.

The society, though still only local, grew quickly, and in 1918 it was officially granted a charter by the state of Illinois. Soon chapters were formed at other universities, and by the early 1970s it had grown to more than 13,000 members at seventy institutions of higher learning. The 1980s and 1990s were a time of dramatic growth, and during this period the society went international, with the first chapters forming in Canada.

The national office remains at Northwestern University where the first chapter was formed. Also at Northwestern are the society's archives, where the very first Pi Kappa Lambda key, issued to Professor Lutkin, is kept.

### INTERNET RESOURCE

ASSOCIATION OF COLLEGE HONOR SOCIETIES. 2002. "Pi Kappa Lambda." <[www.achsnaatl.org/pkl.html](http://www.achsnaatl.org/pkl.html)>.

GEORGE HOWERTON

*Revised by*

NANCY E. GRATTON

### PI SIGMA ALPHA

Pi Sigma Alpha is the national honor society in political science. Its purpose is to encourage, recognize, and reward academic and professional achievement in the study of politics and government. It pursues its objectives through awards, grants, scholarships, subsidies, meetings, and publications.

The honor society operates through a system of local chapters based in political science departments on the campuses of colleges and universities across the United States. Each chapter establishes and administers its own programs and activities to stimulate interest in politics and reward academic excellence. New chapters of the honor society are chartered by the national office. To qualify for a chapter, a political science department must meet a set of strict academic standards established by the rules of the honor society. These standards include official accreditation, autonomy over curriculum and faculty hiring, academic qualifications of faculty, number of majors, and size of the student body.

As a national honor society, Pi Sigma Alpha's primary responsibility is to oversee the annual induction into membership of students who have excelled both in their general academic course work and more specifically in their political science classes. Students are inducted into membership by local chapters based exclusively on academic performance. The national constitution establishes minimum academic standards for admission. These qualifications include a minimum grade point average, minimum number of semester hours completed in political science, and minimum class rank. Individual chapters may raise the eligibility standards, but they may not lower them. The honor society inducts approximately 6,000 new undergraduate and graduate student members each year. Since 1920 the society has inducted more than 160,000 members, and includes among its membership some of the nation's most distinguished and prominent politicians, civil servants, political consultants, journalists, and political scientists.

Pi Sigma Alpha promotes its objectives through a variety of programs. Some programs are directed toward student members and local chapters directly; others are directed more generally toward the broader community of political science scholars. Programs targeted directly at chapters and members include grants to local chapters to support noteworthy and worthwhile campus activities and programs, awards for best undergraduate student papers and theses and best graduate student papers, scholarships for first- and second-year graduate study in political science, awards for best chapters and chapter advisers, a biannual newsletter, and subsidies for student memberships in professional political science associations.

For the political science profession, the national society awards prizes for the best papers written and submitted by political scientists at national and regional political science association conventions; hosts lectures by prominent national politicians, policymakers, and journalists at national, regional, and state political science association conventions; and supports teaching awards for political scientists who distinguish themselves in the classroom.

Pi Sigma Alpha is governed by its biennial national convention. Each chapter may send one faculty delegate and one student to the convention. Representatives at the convention elect the officers and discuss and determine the policies of the society. Each chapter is entitled to one vote at the convention. Between conventions, the affairs of the society are directed by an executive council consisting of the president, president-elect, executive director, newsletter editor, the three most recent past presidents, and twelve council members elected by the membership. Council members serve four-year terms, with half of the council elected every two years.

The national office and the society's programs are funded by a national initiation fee paid by each new member inducted into the society. Individual chapters and their programs are supported by such additional local fees or dues as each chapter may determine.

Pi Sigma Alpha was founded in 1920 at the University of Texas. In 2001 there were more than 560 chapters of Pi Sigma Alpha throughout the United States. Pi Sigma Alpha has been a member of the Association of College Honor Societies since 1949.

#### INTERNET RESOURCE

THE NATIONAL POLITICAL SCIENCE HONOR SOCIETY. 2002. <[www.pisigmaalpha.org](http://www.pisigmaalpha.org)>.

JAMES I. LENGLE

#### RHO CHI

Rho Chi is a collegiate and professional honor society devoted to the promotion of the pharmaceutical sciences. Induction into the society is a mark of recognized excellence in scholarship and professionalism. Goals of the society are to encourage teaching, scholastic achievement, and research and to encourage promising students to pursue graduate-level study in pharmaceutical studies.

#### Program

Like many other national honor societies, Rho Chi's primary mission is to recognize academic and professional excellence through induction into the society. Although membership brings the newcomer into association with others of professional caliber in the field of pharmacy, it is primarily the honor of recognition that membership endows on an initiate. However, the society is strongly committed to its mission of encouraging graduate-level study and to that end it cosponsors, with the American Association for Pharmaceutical Education, an annual first-year graduate fellowship to the most promising candidate embarking on a master's or doctoral program at an accredited institution.

In addition the society circulates an annual publication, *The Report*, which provides a forum for articles of professional, ethical, or educational importance written by its members. Each year the society honors the contributions of a distinguished member of the profession by presenting the Rho Chi Award, and it invites the recipient to deliver an address to the assembled members at a meeting held during the American Pharmaceutical Association's annual conference.

At the local chapter level, the most important event is the induction of new members into the society. The ritual for induction is prescribed by the national committee and is designed to be an occasion of dignified recognition of the inductees' proven excellence. Each initiate receives a copy of *The Rho Chi Society*, the official history of the organization; a copy of the *Constitution and Bylaws* of the society; and a key bearing the official insignia of the group.

At their graduation ceremony, following completion of their degree programs, they are entitled to wear the purple and white insignia of the society over their graduation gowns.

### Membership

Undergraduate candidates for induction into the society must be enrolled in a program of pharmaceutical studies at an institution accredited by the American Council on Pharmaceutical Education (ACPE) and must have completed at least two years of the course work necessary for earning the degree. They must have demonstrated their commitment to scholastic excellence by earning a 3.0 grade point average (on a four-point scale) and ranking in the top twentieth percentile of their class. Finally, they must be certified as eligible by the dean of their degree program and must have no record of disciplinary problems.

Graduate students must meet similar standards of demonstrated excellence, but the grade point average is higher, at 3.5 on a four-point scale. Membership is also open to alumni of undergraduate or graduate programs, after they have entered the profession, and to faculty teaching pharmaceutical studies, if in the course of their professional work they have earned recognition by the society. Honorary memberships are also occasionally conferred.

New members pay an initiation fee that covers the cost of their key and insignia and entitles them to receive a copy of the annual publication. Annual dues are paid to the national board to support the society's activities.

### Organization

Individual chapters must have a minimum of five members under the supervision of a faculty member appointed by the dean of the school of pharmacy at the institution. Local chapters are autonomous in planning activities and in electing their officers. The national organization is governed by an executive council, the members of which are elected for two-year terms. At the annual meeting each chapter is entitled to send one delegate and one alternate to represent the local organization.

### History

The impetus for the formation of a national honor society in the field of pharmaceutical studies began at the University of Michigan, where the School of

Pharmacy had established a local society in 1908. This group, known then as the Aristolochite Society, decided in 1917 to extend its message to other colleges and universities in the country and had succeeded in gaining the interest of pharmaceutical faculties at Oregon Agricultural College, which established a chapter in 1918. Also in 1917, the president of the national professional organization, the American Council of Pharmaceutical Faculties (ACPF, now the American Association of Colleges of Pharmacy) devoted a portion of his annual address to the membership to a call for the establishment of a national honor society, which would promote the council's principles and goals.

The ACPF found that the University of Michigan local organization shared its general philosophy and goals, and ACPE joined forces with them. By 1922 the Michigan organization had succeeded in founding a chapter at the University of Oklahoma and had changed its name to Rho Chi. In that same year it received a charter from the state of Michigan recognizing it as an official honor society.

The Rho Chi society grew slowly during the early years, with only ten chapters by 1932. By 1942, however, it had grown enough to earn recognition by and membership in the Association of College Honor Societies (ACHS), and as of 2002 it had seventy-seven chapters across the nation, serving 73,000 members.

### INTERNET RESOURCE

RHO CHI. 2002. <[www.rhochi.org](http://www.rhochi.org)>.

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*Revised by*

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## SIGMA XI

Sigma Xi, The Scientific Research Society was founded in 1886 at Cornell University in Ithaca, New York, as an honor society for science and engineering. It is an international, nonprofit membership society of more than 70,000 scientists and engineers elected because of their research achievements or potential.

### Goals

Originally established to recognize the scholarly potential and accomplishments of young scientists and

engineers, Sigma Xi also had the objective of bringing together scholars from a number of scientific disciplines so that they might communicate and collaborate. With these guiding principles, the main purpose of the Sigma Xi today is to honor scientific achievement and encourage research in science and technology through awareness, advocacy, and scholarly activities. Sigma Xi strives to promote an appreciation of the roles of science and research in society, and to foster worldwide interactions among science, technology, and society.

### Programs and Activities

Sigma Xi sponsors numerous programs to support ethics and values in research; to improve science and education—and the public's understanding of science; and to promote the health of scientific research worldwide. Key programs include Distinguished Lectureships, the Forum Series of national and international conferences, and Grants-in-Aid of Research. The society also produces numerous publications.

The Distinguished Lectureship program provides an opportunity for society chapters to host visits from outstanding individuals who are at the leading edge of science. The lecturers are brought to campus to communicate their insights and excitement about science and technology to scholars, students, and to the community at large.

The Forum Series was initiated to provide national and international conferences on topics that concern the intersection of science and society. The conference and forum initiative was conceived at the society's centennial celebration in 1986 as part of its New Agenda for Science.

The Grants-in-Aid program awards stipends of \$100 to \$1,000 to support scientific investigation in any field. To be considered for a grant-in-aid, an individual must be an undergraduate or graduate student in a degree program. While membership in Sigma Xi is not a requirement for the program, the majority of the funds are designated for use by individuals whose primary advisers are Sigma Xi members or who are Sigma Xi student members themselves. Individuals are eligible to receive a total of two Grants-in-Aid from Sigma Xi headquarters in their lifetime. No citizenship restrictions apply, and international students and non-U.S. citizens are encouraged to apply. Upon the committee's receipt of an application for aid, notification occurs within twelve weeks of the application deadline.

*American Scientist*, a bimonthly magazine of science and technology, is the publication of Sigma Xi. Containing reviews of current research written by prominent scientists and engineers, it has been produced since 1913 and has received many awards for its exceptional quality.

Additionally, a number of new, smaller programs have also been developed to extend Sigma Xi's mission: The International Chapter Sponsorship Program promotes and assists the formation of new chapters worldwide; the Partnership Programs support joint initiatives sponsored by Sigma Xi and other organizations; and the Science, Math and Engineering Education Program that offers one-time grants of up to \$1,000 to support science education projects. The basic policy is to provide seed money to initiate innovative programs, with special consideration given to those projects that are designed to stimulate young people's interest in science and mathematics.

### The Development of College and University Chapters

Sigma Xi has more than 500 chapters at universities and colleges, government laboratories, and industry research centers worldwide. Having a chapter affords institutions the opportunity to honor individuals involved in science-related activities, supplies a vehicle for providing services (i.e. seminar series, awards, grants), and allows fellowship and interaction with colleagues across science, math, and engineering disciplines.

To receive approval for a chapter charter, Sigma Xi headquarters (in Research Triangle Park, North Carolina) must receive a letter of intent to petition for a charter that includes the signatures of at least eighteen active members in the area. With the letter and appropriate signatures, a description of the sponsoring institution is required, along with supporting recommendations from administrators, a proposed three-year schedule of activities, and member recruitment plans.

The review process is overseen by the Committee on Qualifications and Membership, and, upon their recommendation of approval of an application, the Sigma Xi Board of Directors gives final approval. For chapters to remain in good standing, regular communication with Sigma Xi headquarters is required, minimally providing officer names and an annual report each year. Representation at least once

every three years at the Society's annual meeting is also mandatory. Activity within the chapter evidenced by new membership and programs is also critical to a chapter's good standing.

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#### INTERNET RESOURCE

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MEAGHAN E. MUNDY

### TAU BETA PI

Founded at Lehigh University in 1885 to recognize engineering students of distinguished scholarship and exemplary character, Tau Beta Pi is the only engineering honor society representing the entire engineering profession. The primary goals of Tau Beta Pi are to honor students and engineers who have demonstrated their abilities and shown an appreciation of high standards of character and ethics and to provide opportunities to students and engineers to further their scholarly activities and development in the field of engineering.

#### Programs and Activities

Tau Beta Pi offers a number of programs that assist the organization in carrying out its goals. These activities are implemented at both the local and national levels to generate interest and increase awareness among engineers, to recognize outstanding scholarship, and to emphasize civic responsibility. Key programs offered by Tau Beta Pi include the Engineering Futures program, the Fellowship Program, undergraduate scholarships, and chapter community service projects.

The Engineering Futures program teaches interpersonal skills to engineering students. This is accomplished by utilizing alumni who conduct on-campus training in people skills, team chartering, analytical problem solving, and group process. The Fellowship Program is Tau Beta Pi's single most important project for the advancement of engineering education and the profession. The purpose of the Fellowship Program is to finance a select group of

members chosen for merit and need, providing each of them a year of graduate studies at the college of his or her choice. Unlike many fellowships, a distinguishing feature of the Tau Beta Pi fellowship is that it is free of excessively binding restrictions. Tau Beta Pi fellows are free to do graduate work in any field that will enable them to contribute to the engineering profession. The only specific responsibility fellows must fulfill is to write a summary report at the completion of their fellowship year.

The Tau Beta Pi Association Scholarship Program was established in 1998 for undergraduates in their senior year of full-time engineering study. The amount of the scholarship awards is \$2,000. Other gifts and endowments such as the Dodson Scholarship/Fellowship Fund, the Stabile Scholarship, and the Soderberg Awards, as well as gifts from such companies as Alabama Power Foundation and Merck and Co., also afford financial aid to undergraduate students. At the national level, Tau Beta Pi participates in the Society of Automotive Engineers scholarship program and the National Society of Professional Engineers educational program for first-year engineering students.

Another valuable service the Tau Beta Pi headquarters provides is employment resources for college students and alumni. Various jobs and internships in the engineering field are posted for Tau Beta Pi members through a contracted Internet server. Tau Beta Pi also offers a Recruiting Center at its Knoxville, Tennessee, headquarters, and many companies place recruitment advertisements in *The Bent*, the society's magazine. *The Bent* has been published since 1906 and is available quarterly with more than 94,000 copies circulated per issue. *The Bulletin of Tau Beta Pi*, published three times per year, disseminates news and information on the organization to collegiate chapters.

#### The Development of College and University Chapters

With approximately 429,000 total initiated members in Tau Beta Pi nationally, college chapters exist at more than 220 United States colleges and universities, and active alumnus chapters are available in sixteen regions across the nation. To establish a chapter at an institution of higher education, the recommended requirements are outlined in the Tau Beta Pi bylaws. These standards require that institutions have a specified number of engineering programs accredited by the Accreditation Board for

Engineering and Technology, at least forty engineering graduates per year, and a minimum of three faculty members who are also members of Tau Beta Pi.

To obtain a Tau Beta Pi chapter, an institution must first organize a local engineering honor society with members selected from the top fifth of the senior class or top eighth of the junior class. The chapter is open to all engineering students who fit these distinctions; technology students are ineligible. With the initial membership intact, this organization is expected to govern itself and elect members for two years in the exact ways a formal Tau Beta Pi chapter operates. After this two-year probationary period, a formal petition made to Tau Beta Pi headquarters can be accepted for consideration.

The formal petition and college catalogues are examined by the executive council of Tau Beta Pi, who, upon approval, direct a campus inspection visit. If the recommendations from the inspection group prove favorable, then the petitioners must prepare a formal request and send two representatives—a student and an adviser—to the next Tau Beta Pi National Convention. Based on convention approval, the new chapter would be formally instated and its first members initiated shortly thereafter. To ensure quality and commitment of new chapters, the lengthy process of developing a chapter typically takes about four years. Holding in high regard integrity and excellence in the field of engineering, Tau Beta Pi requires members, chapters, and alumni groups to meet the highest of standards of excellence in their roles as broadly based engineers in society.

#### INTERNET RESOURCE

TAU BETA PI, THE ENGINEERING HONOR SOCIETY. 2002. <[www.tbp.org](http://www.tbp.org)>

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## HONORS PROGRAMS IN HIGHER EDUCATION

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Honors programs are housed in many different types of institutions of higher education. In general, honors education consists of “the total means by which a college or university seeks to meet the educational needs of its ablest and most highly motivated students” (Austin, p. 5). The goals of honors

programs usually include identifying and selecting highly able students; challenging those students academically and allowing them to exercise their potential; and, as the National Collegiate Honors Council website states, serving as a means by which to “raise the level of education . . . for all the students” by acting as an intellectual “laboratory.” Institutional objectives for creating honors programs often include attracting and retaining students and faculty by displaying a “commitment to quality education,” attracting funds, and “enhancing the public image of the institution as a place of superior scholarship” (Austin, p. 7). Not surprisingly, there are many different types of honors programs, often tailored to their specific types of institutions.

While Wesleyan University has had honors at graduation since 1873, and the University of Michigan (1873–1900), the University of Vermont (1888), Princeton (1905), Columbia (1920), and Harvard (1914) had some type of tutorial, exam, or thesis honors, fully developed honors education in America began in 1922 with the implementation of Frank Aydelotte’s program at Swarthmore, which was modeled after the Oxford program of “pass/honors”—a system in which the only grades are pass, fail, or honors. In expectation of a student boom after World War II, Aydelotte felt that America’s future depended on allowing gifted students to break out of the “academic lock step” through challenging courses of study that encouraged them to accept more freedom and responsibility and to develop their intellectual independence and initiative (Aydelotte, p. 15). Aydelotte’s program allowed for greater student independence and specialization by replacing the traditional curriculum of the junior and senior years with unique “free-discussion” seminars with no attendance or hour requirements, culminating in a series of “less frequent, but more comprehensive” written and oral exams (Aydelotte, p. 37).

Subsequent to the success of the Swarthmore program, most universities developed honors programs—following either Swarthmore’s plan of replacing the curriculum in its entirety, or using one of two other models: (1) honors work that replaced a specific number of courses, or (2) honors work as an extra activity beyond ordinary requirements for graduation. In 1928 Joseph W. Cohen, who developed an honors program for the University of Colorado, founded the Interuniversity Committee on Superior Students (ICSS). In 1966 the ICSS became the National Collegiate Honors Council (NCHC),

which in the early twenty-first century has its own scholarly journal, numerous conventions, and publications, and also maintains a list of national and international honors programs, all available through their website.

At the beginning of the twenty-first century, there are almost as many different types of honors programs as there are institutions that create them. Still, as Clifford Adelman found in his 1985 study of postsecondary honors programs, there are “dominant models: the honors community, ‘supply-side’ honors, the ‘exponential major’ and general honors” (Adelman, p. 57). The *honors community* is a program that focuses on developing a “small select group of learners within an institution . . . tending to emphasize organization and support services over curriculum” (Adelman, p. 57). In *supply-side honors*, students are selected at different stages of their college careers and the emphasis lies on the programs—with variety viewed as the key to student demand and achievement. The *exponential major* is an honors version of a traditional major, and is usually open to students after their first year of college. It focuses on a coherent thematic or disciplinary program. The *general honors* model is an “interdisciplinary General Education program, confined to the first two years of college, and with a heavy emphasis on the traditional Liberal Arts” (Adelman, p. 57). In addition to these models, there are programs of independent study and mentor research participation, which involve close relationships with individual faculty members and often culminate in a senior honors thesis or creative project. Regardless of type, honors programs tend to emphasize selectivity and active student participation as customary characteristics, with many programs embracing the goal of producing “a knowledgeable and effective person” (Austin, p. 8).

While honors education has been plagued by accusations of elitism since its inception, this question became even more pressing with the spread of honors programs to community colleges in the early 1980s, particularly since community colleges have often been seen as serving diverse, and usually less-prepared, populations. Recent studies have found, however, that approximately 20 percent of community college students are “high-ability” students who are likely to benefit significantly from honors programs. In light of this, there has been growing recognition that honors programs play an important role in serving the diverse population of community col-

leges, which includes gifted students who are attending community college because of lower tuition, convenience, or for a variety of other reasons.

The goals of community college honors programs are very similar to those of four-year institutions. One role that honors programs serve in community colleges is facilitating students’ transfer to first-rate baccalaureate programs, which helps to bolster the reputation of both community colleges and community college students. This is especially important in education systems such as the City University of New York (CUNY) that link community colleges and senior colleges.

Regardless of their design, most honors programs have at their core the goal of encouraging high levels of excellence in talented and motivated students. To support this goal, the NCHC urges all honors programs to have an articulated mission statement, to employ a director that reports to the chief academic officer of the institution, to occupy suitable quarters, to promote student liaisons with other committees, to offer special academic counseling, and to maintain continuous and critical program review.

*See also:* CAPSTONE COURSES IN HIGHER EDUCATION; COLLEGE SEMINARS FOR FIRST-YEAR STUDENTS; COMMUNITY COLLEGES; CURRICULUM, HIGHER EDUCATION, *subentry on* NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM; GIFTED AND TALENTED, EDUCATION OF.

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## HOPKINS, L. THOMAS (1889–1982)

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Noted Progressive education theorist, consultant, and curriculum leader, L. Thomas Hopkins completed his major writings while a professor and laboratory school director at Teachers College, Columbia University.

Born in Truro, Massachusetts, Hopkins received his bachelor's and master's degrees from Tufts University in 1910 and 1911, respectively. Hopkins claimed that the central ideas of his philosophy of education derived principally from the influence of his mother, careful observation of nature, and interaction with students he taught.

In 1922 he completed the Ed.D. degree at Harvard University under the mentorship of professors Alexander Inglis and Walter Dearborn. Following his work at Harvard, Hopkins accepted an offer to become a tenured faculty member at the University of Colorado at Boulder. Through that post he began an extensive consulting career. One of his first major consultations was with the Denver Curriculum Revision Project, 1923 through 1925; its notoriety launched consultations with many other school districts across the country. His consulting and curriculum ideas are explicated in his *Curriculum Principles and Practices* (1929), which was built heuristically around a wide array of questions to guide curriculum leaders, school administrators, and teachers.

In 1929 Hopkins was invited to join the faculty of Teachers College, Columbia University, as professor of education; he remained there for twenty-five years. At Teachers College he also held the position of director of Lincoln School.

Following his retirement from Teachers College in 1954, Hopkins was a Fulbright scholar in Egypt (1956–1957). He surveyed Italian schools in 1957 and taught at Wheelock College in Boston and at the

University of Maine in the 1960s. In 1960 he chaired the Committee on Schools and Moral Values for the White House Conference on Education. In 1971 he retired for a second time with his wife, Hester Hopkins, to Truro on Cape Cod. There, he continued to write, speak, complete his memoirs, and organize his papers until shortly before his death in 1982. His papers are located at the University of Colorado Library in Boulder, Colorado.

Hopkins's major ideas are outlined in three of his numerous books. In *Integration, Its Meaning and Application* (1937), he argued, contrary to many current interpretations of integrated curriculum, that integration is much more than merely combining subject matter areas around a common theme (i.e., the thematic unit). For Hopkins, integrating the curriculum meant integrating the person; thus, the organizing center for the integrated curriculum was not principally subject matter, but the individual. Drawing analogies from the study of physiology and embryology, Hopkins saw educative growth as moving through three phases: expansion, differentiation, and finally integration. He labeled these phases the normal learning process. In his view of integrated curriculum, subject matter and informal personal knowledge are to be acquired through inquiry that is expressly directed to build the self into a more diverse and integrated human being. An integrated person was, for Hopkins, one whose personal development incorporated the physical, social, mental, emotional, and spiritual aspects of the human organism into a functioning whole.

In *Interaction: The Democratic Process* (1941), Hopkins incorporated a social dynamic to expand the idea of the development of the individual or personal organism. Again, the process of the interacting forces of the normal learning process (expansion, differentiation, and integration) come into play in a social or political realm that argues for a democratic society as well as for the individual. Like John Dewey, Hopkins saw curriculum, writ large, as a dynamic interaction of school and society, experience and nature, and democracy and education. In the *Emerging Self in School and Home* (1954), Hopkins showed that education is not a function of schooling alone. In this book, he developed the image of an organic group, contrasting it with a mere aggregate group, to depict the integration of school, home, and community. Therein he argued that the needs and interests of the individual and those of the community and society are reciprocal. In fact, he argues for

the home as a major site for education to take place, leading to speculation about the need to study other societal venues in which education takes place, which could include homes and families, nonschool organizations, mass media, peer groups, vocations and avocations, and more.

In the early twenty-first century, consistent interpretation of Hopkins's work can be seen in the writings of James A. Beane and in curriculum leadership. Hopkins condemned much that is fashionable in education (memorized knowledge, standardization, external control, extensive testing), calling it the "was curriculum" and characterizing it as useless. In contrast, he advocated the "is curriculum," which "celebrates the experiential . . . deals with the whole pupil who develops through internal control of the learnings that he or she self-selects . . . for personal growth." The is curriculum "is what each pupil can take from the teacher-pupil relationship to help him or her better understand and develop the self, for growth toward the highest possible maturity is the direction of all living organisms" (1970, p. 213).

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; PROGRESSIVE EDUCATION.

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### HORTON, MYLES (1905–1990)

Activist and founder of the Highlander Folk School, Myles Falls Horton was born in a log cabin near Savannah, Tennessee, on July 9, 1905. His parents, Elsie Falls Horton and Perry Horton, had both been school teachers before Horton's birth, but had lost their jobs when the requirements for teachers were increased to include one year of high school, which neither had. After that, his parents supported their family (Horton was firstborn, followed by brothers Delmas and Daniel, and sister Elsie Pearl) by working in factories, as sharecroppers, and taking other jobs when they could find them. In his autobiography, Horton wrote, "We didn't think of ourselves as working-class, or poor, we just thought of ourselves as being conventional people who didn't have any money" (1990a, p. 1).

The Horton family was socially active; his mother shared scarce family resources with and organized classes for less well-off and often illiterate neighbors, and his father was a member of the Worker's Alliance, the union of the Worker's Progress Administration (WPA). "From my mother and father," Horton wrote, "I learned the idea of service and the value of education. They taught me by their actions that you are supposed to serve your fellow men, you're supposed to do something worthwhile with your life, and education is meant to help you do something for others" (1990a, p. 2).

Horton left home at fifteen to attend high school—his hometown had no secondary school—and he supported himself there by working first in a saw mill and then a box factory, where he said he learned about organizing and the strength of collective action. "When I heard people insulted by the factory owners, it hurt me personally," he wrote in his autobiography. "I guess I got as much help from the opposition in firming up my beliefs as I did from

more positive sources” (1990a, p. 8). Later, with co-workers at a crate-building job, he formed a union that held a successful work slowdown for a wage increase.

Horton read widely, and was deeply influenced by the writings of social critics and Marxists. He felt he could learn from many sources, but that in the end he was responsible to himself and his own ideals. “I have to be the final arbiter of my beliefs and my actions,” he said, “and I can’t fall back and justify it by saying, I’m a Marxist, I’m a Christian, I’m a technological expert, I’m an educator” (1990a, p. 45). He worked with a wide range of people who shared a broad vision of a better world, but he remained a stubborn individualist who never joined a party. “I understood the need for organizations, but I was always afraid of what they did to people” (1990a, p. 49).

He attended Cumberland University, the University of Chicago, and the Union Theological Seminary, and sought out teachers who in many cases became lifelong supporters and friends; among these were Reinhold Neibuhr, John Dewey, Jane Addams, and George Counts. As a student in Chicago he heard about the Danish Folk School movement, a populist education experiment that had developed in opposition to the lifelessness of traditional schools and the detachment of academic schooling in Denmark. Danish Folk Schools encouraged students to broaden their experience by analyzing important questions and problems, and then actively participating in practical solutions. Horton resolved to go and see these schools himself.

In Denmark, Horton focused on a specific project: creating a school for life—a place where students and teachers could live together to pose and solve problems; an informal setting where experience could be the main teacher; a site for activists, organizers, and teachers for social justice. In his diary, Horton wrote, “The school will be for young men and women of the mountains and workers from the factories. Negroes would be among the students who will live in close personal contact with teachers. Out of their experiential learning through living, working, and studying together could come an understanding of how to take their place intelligently in the changing world” (1990a, p. 54). He worried that preparation to build his school might take forever, and although he felt inadequate to the task; he decided that the only way he could learn to embody his vision was to simply begin his project.

Horton opened the school, the Southern Mountains School, in 1932. A short time later, he and codirector Don West changed the name to the Highlander Folk School. At Highlander the purpose of education was to make people more powerful, and more capable in their work and their lives. Horton had what he called a “two-eye” approach to teaching: with one eye he tried to look at people as they were, while with the other he looked at what they might become. “My job as a gardener or educator is to know that the potential is there and that it will unfold. People have a potential for growth; it’s inside, it’s in the seed” (1990a, p. 33).

The school was a free space in an oppressive atmosphere—a place where labor organizers, civil rights activists, antipoverty workers, and others assembled to develop solutions. Through the 1930s Highlander was the education arm of the Congress of Industrial Organizations (CIO) in the South. Horton realized that labor would never be emancipated as long as racial segregation—turning workers against each other based on race privilege—remained intact, and he began organizing workshops designed to destroy racist social structures.

For many years Highlander was the only place in the South where white and African-American citizens lived and worked together, something that was illegal in that strictly segregated society. Highlander, Horton once claimed, held the record for sustained civil disobedience, breaking the Tennessee Jim Crow laws every day for over forty years, until the segregation laws were finally repealed.

The list of students at Highlander is a roll call of social activists: Rosa Parks, Eleanor Roosevelt, Pete Seeger, Woody Guthrie, Martin Luther King Jr., Andrew Young, Fanny Lou Hamer. People from the surrounding community used the school as well; all gathered there to give voice to the obstacles to their hopes and dreams, gather the conceptual, human, and material resources needed to continue, and to return home with a plan for forward progress. The school was under constant attack from white supremacists, antilabor groups, and the government.

Myles Horton died on January 19, 1990; his school, now known as the Highlander Research and Education Center, continues to be a catalyst for social change in the early twenty-first century.

*See also:* COMMUNITY-BASED ORGANIZATIONS, AGENCIES, AND GROUPS.

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BILL AYERS  
THERESE QUINN

## HUMAN SUBJECTS, PROTECTION OF

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In 1974, after a long history of harmful research studies conducted on unwilling human subjects (such as the Tuskegee Syphilis Study initiated in the 1930s and a series of studies conducted in the 1960s at the Willowbrook State School, a New York institution for “mentally defective” children), the U.S. Congress established the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. Four years later, this commission issued the *Belmont Report*, which is the cornerstone of the ethical principals guiding federal regulations for the protection of human subjects.

There are three fundamental ethical principles, as outlined in the *Belmont Report*, that guide research involving human subjects: (1) respect for persons, (2) beneficence, and (3) justice. By 1991, seventeen federal departments and agencies had adopted the federal regulations known as the *Common Rule* (Title 45 Code of Federal Regulations Part 46 [43CFR46]).

*Research* is defined as a systematic investigation (including development, testing, and evaluation of programs and methods) designed to discover or

contribute to a body of generalizable knowledge. Not all scientific or scholarly activities qualify as research, nor does all research involve human participants. A *human subject* is a living individual about whom an investigator obtains either (1) data through interaction or intervention with the person, or (2) identifiable private information. Each investigator must decide if their study is to include human participants. If human participants are to be involved, the researcher is ethically obligated to become familiar with and adhere to the regulations governing the rights and safety of the human research participants.

### Vulnerable Populations

Certain groups of human research participants—such as children, prisoners, individuals with questionable capacity to consent, students, or employees of the institution conducting the research—are considered to be either relatively or absolutely incapable of protecting their own interests. Because children have not legally attained an age where they can consent on their own to research or treatment, a parent or legal guardian may provide consent for a child to participate in a study. Above the age of seven, the child must also show willingness to participate by assenting to the study. Although many college students are below the age of twenty-one, they are generally treated as “emancipated adults” for the purpose of consenting to participate in research studies.

### Institutional Review Boards

The National Research Act passed by Congress in 1974 that resulted in the Belmont Report also required the establishment of Institutional Review Boards (IRBs) to review all research involving human subjects funded by the Department of Health and Human Services. The regulations governing IRBs were revised in 1981.

Every institution in the United States receiving federal support for research with human subjects has to have its own IRB or access to an IRB. An IRB protects the rights, safety, and welfare of human research participants by: (1) reviewing research plans to ensure that, in its judgement, the research meets the criteria found in 45CFR46.111; (2) confirming that the research plans do not expose participants to unreasonable risks; (3) conducting continuing review of approved research at intervals commensurate with the degree of risk of the trial—but not less than once a year—to assure that human participant

protections remain in force; and (4) assessing suspected or alleged protocol violations, complaints raised by research participants, or violations of institutional policies.

The IRB has the authority to approve, disapprove, or terminate all research activities that fall within its jurisdiction; require modifications in protocols, including previously approved research; require that information, in addition to that specifically mentioned in 45CFR46.116, be given to participants when the IRB deems that this information would add to the protection of their rights and welfare; and require documentation of informed consent or allow waiver of documentation, in accordance with 45CFR46.117.

IRBs must have at least five members with varied backgrounds who have no vested interest in the conduct or outcomes of the proposed research. At least one member of the IRB must not be affiliated with the institution, and the membership should be as diverse as possible. Most IRBs have many more than five members, and most are divided into subcommittees for the purpose of handling different types of studies, such as biomedical or behavioral studies.

In order to approve a research study, the IRB must assure that risks to participants are reasonable and minimized; that the selection of participants is equitable; that informed consent from each participant is sought and documented; and, when appropriate, that there are adequate provisions to protect the safety and privacy of the participants and the confidentiality of the data. Depending on the level of risk and the type of subject population, review may be done by the full IRB, or it may be expedited. Certain types of studies are exempted from IRB review and approval. Even in these exempt cases (many of which involve educational practices or tests), however, it is not the researcher but the IRB that makes this determination.

### **Informed Consent**

Informed consent, as a legal, regulatory, and ethical concept, has become widely accepted as an integral part of research involving human subjects. A written consent document is a key part of the proposal submitted to an IRB. This is a document written to the proposed subject in a language understandable by the subject. All of the elements required by 45CFR46.116 must be included, plus any other in-

formation necessary for the prospective participant to make an informed decision. The required elements include a statement that the study involves research; an explanation of the purpose of the research, including why the individual was selected and the expected duration of the individual's participation; a description of all procedures to be followed; a description of any foreseeable risks, discomforts, and inconveniences (and what will be done to minimize or deal with them); a description of any anticipated benefits, both to the individual subject and to society; information about who to contact if there are additional questions; a statement that participation in the research is voluntary, that withdrawal may occur at any time, and that there is no penalty for withdrawal or refusal to participate; and, finally, an invitation for the participant to ask any questions about the proposed study before agreeing to participate.

In 2001 the National Cancer Institute of the National Institutes of Health introduced an online training program to educate research teams about human participant protections. This free access program available via the Internet elaborates greatly on all of the information contained in this article.

*See also:* ETHICS, *subentry on* HIGHER EDUCATION; FEDERAL FUNDING FOR ACADEMIC RESEARCH; RESEARCH METHODS.

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KENNETH A. WALLSTON

## HUNTER, MADELINE CHEEK (1916–1994)

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Madeline Cheek Hunter, professor of educational administration and teacher education, was the creator of the Instructional Theory Into Practice (ITIP) teaching model, an inservice/staff development program widely used during the 1970s and 1980s.

Hunter entered the University of California, Los Angeles (UCLA), at the age of sixteen and, over the course of her career, earned four degrees in psychology and education. In the early 1960s Hunter became principal of the University Elementary School, the laboratory school at UCLA, where she worked under John Goodlad. She left the school in 1982 amidst controversy over her methods, but continued at UCLA as a professor in administration and teacher education. She also continued to lecture and write, and by the time of her death at the age of seventy-eight, Hunter had written twelve books and over three hundred articles, and produced seventeen videotape collections.

Hunter's influence on American education came at a time when public schools were criticized widely for falling test scores, increasing dropout rates, and discipline problems. Hunter claimed that her teaching methods would transform classrooms into learning environments, allow the dissemination of more knowledge at a faster rate, and use positive reinforcement and discipline with dignity to greatly reduce disruptive behavior. Her seven-step model and related educational theories, outlined in her extensive writings, lectures, and videotape series, gave teachers strategies for controlling their classrooms and planning their lessons. Administrators used the model as a way to assess the effectiveness of their teachers.

Hunter defined teaching as a series of decisions that take place in three realms: content, learning behaviors of students, and teacher behaviors. Content refers to the specific information, skill, or process that is appropriate for students at a particular time.

Content decisions are based upon students' prior knowledge and how it relates to future instruction; simple understandings must precede more complex understandings. Decisions regarding learning behaviors indicate how a student will learn and show evidence of that learning. Because there is no best way for all students to learn, a variety of learning behaviors is usually more effective than one. Evidence of learning must be perceivable by the teacher to ensure that learning has occurred. The third area of decision-making, teacher behavior, refers to the use of principles of learning—validated by research—that enhance student achievement.

In order to successfully implement Hunter's methods, teachers undergo extensive professional development that conveys the types of decisions they must make. Training includes viewing videotapes that demonstrate effective decision-making in the classroom, and the Teaching Appraisal for Instructional Improvement Instrument (TAIII), administered by a trained observer or coach, which diagnoses and prescribes teacher behaviors to increase the likelihood of student learning.

Hunter's method of direct instruction, generally referred to as the *Madeline Hunter Method*, includes seven elements: objectives; standards; anticipatory set; teaching; guided practice; closure; and independent practice. Behavioral objectives are formulated before the lesson and clearly indicate what the student should be able to do when the lesson is accomplished. Standards of performance inform the student about the forthcoming instruction, what the student is expected to do, what procedures will be followed, and what knowledge or skills will be demonstrated. The anticipatory set is the hook that captures the student's attention. Teaching includes the acts of input, modeling, and checking for understanding. Input involves providing basic information in an organized way and in a variety of formats, including lecture, videos, or pictures. Modeling is used to exemplify critical attributes of the topic of study, and various techniques are used to determine if students understand the material before proceeding. The teacher then assists students through each step of the material with guided practice and gives appropriate feedback. Closure reviews and organizes the critical aspects of the lesson to help students incorporate information into their knowledge base. Independent practice, accomplished at various intervals, helps students retain information after initial instruction.

Although the Hunter Method was widely used during the last quarter of the twentieth century, it has not been without its critics. Based on behavioral psychological theory, some educators concluded that it is mechanistic and simplistic and is only useful—if at all—to teach the acquisition of information or basic skill mastery at the cost of stifling teacher and student creativity and independent thinking. Others deplore the use of the Hunter Method as a lockstep approach to instructional design. The *Hunterization* of teaching has even led some districts to require teachers to utilize the Hunter approach and base their teacher evaluation instruments on it. Hunter herself lamented this misuse of her methods and claimed that there was no such thing as a “Madeline Hunter-type” lesson. A significant body of criticism questions her claims that her method could enable students to learn more at a faster rate and improve student achievement. Several studies, most notably the Napa County, California, study, indicate little, if any, evidence to justify her claims.

Proponents point to Hunter’s clear and systematic approach to mastery teaching. They argue that, rather than being prescriptive, Hunter provides a framework within which teachers can make decisions that are applicable to their own classrooms. Rather than being simplistic or superficial, Hunter’s method is straightforward and uses a common language that classroom teachers can easily understand. Although Hunter’s method may be easy to implement, it may also be complex in its application, depending upon the specific objectives of the teacher.

During the height of her popularity, Hunter’s ITIP Model for mastery teaching was formally adopted in sixteen states and widely used by many others. Hunter is regarded by many as a “teacher’s teacher” for her ability to translate educational and psychological theory into practical, easy-to-understand pedagogy, and her influence on classroom teaching techniques is still evident in the twenty-first century.

*See also:* TEACHER EDUCATION.

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MARILYN HEATH

### HUTCHINS, ROBERT (1899–1977)

A major voice for general education in American higher education, Robert Maynard Hutchins wrote, spoke about, and influenced public policy during his almost fifty years as teacher, educator, and administrator. Known in the educational world for his enthusiasm and dedication to liberal education with an emphasis on the Great Books and great ideas, he was also, during various times in his career, an ardent defender of academic freedom in the university and of democratic freedoms and principles in American society. He was known, too, for his style, wit, and sense of humor as he argued for what were often both iconoclastic and unpopular points of view.

Hutchins, born in Brooklyn, New York, moved at age eight to Oberlin, Ohio, where his father, a minister, taught at Oberlin College, an institution Hutchins attended from 1915 to 1917. He served in the ambulance service during World War I prior to attending and graduating from Yale University (1921) and the Yale Law School (1925). He was named dean of the Yale Law School in 1927 where he presided until 1930, when he became the youngest president ever of a major university, the University of Chicago. Upon leaving the University of Chicago in 1951, he spent four years with the Ford Foundation (1951–1954) and then the remainder of his career with the Ford Foundation-sponsored Fund for the Republic (1954–1977) and the Center for the Study of Democratic Institutions (1959–1973, 1975–1977).

While president of the University of Chicago (1930–1951), Hutchins was an eloquent spokesper-

son for a particular view of higher education. A liberal education was a moral endeavor to discover what was good and how to act on it. He believed that the university should nurture the life of the mind and be a community of scholars rather than an organization without a core, with specialization in the disciplines, and with increased vocationalism framing the curriculum. An expression of his approach was the Hutchins College of the University of Chicago, where young students who had not yet finished high school were admitted to study and acquired a liberal education and where, for example, successful completion of a degree was based on passing comprehensive examinations rather than accumulating course credits. The pedagogical model of choice was small discussion classes and the Socratic method, and the content for discussions included interacting with the Great Books.

Hutchins was a controversial administrator and no area of the university escaped his scrutiny. He continually engaged members of the University of Chicago faculty in attempts to make the university, from his point of view, more just and equitable. In the extracurricular arena, despite the fact that the University of Chicago dominated football in the Western Conference (later to become the Big Ten) and one of its players was the first Heisman trophy winner, Hutchins in 1939 convinced the university that it should drop intercollegiate football. He purportedly claimed, as the reason for dropping it, that it was possible to win 12 letters before learning to write one.

During his presidency at Chicago, Hutchins defended the university and its faculty in academic freedom issues. A staunch defender of free speech in both the academy and in a democratic society, his principled defenses prevailed. When the case of one faculty member accused of teaching communism was to be discussed by the board of trustees, a faculty colleague confronted Hutchins and said: "If the trustees fire [the faculty member], you will receive the resignations of 20 full professors tomorrow morning. Hutchins replied, "Oh, no, I won't. My successor will" (Mayer, p. xii).

During his tenure at the university Hutchins was involved in the publication of the *Great Books of the Western World* and the *Encyclopaedia Britannica*. These two enterprises both enhanced Chicago's reputation and brought additional monetary resources for use in the university. Despite his opposition to the pragmatists in the philosophy depart-

ment, Hutchins was a consummately successful fundraiser who had no difficulty spending money (he always exceeded the yearly university budget).

During World War II Hutchins committed the university to complete support of the war effort. The university was the site, or more precisely and perhaps ironically, a squash court under the football stands in Stagg Field was the site, of the first self-sustaining nuclear chain reaction. This theoretical advance, a part of the Manhattan project, led, of course, to the first atomic bomb and the beginning of the nuclear age. After the war Hutchins tried but failed to get nuclear physicists to not disseminate their knowledge and techniques and to discontinue such work.

Hutchins' strong beliefs in democratic values and his defense of fundamental freedoms continued during his tenure with Fund for the Republic, a Ford Foundation-sponsored organization. He led a number of projects that directly opposed the political machinations of the now infamous Joseph McCarthy, the House Un-American Activities Committee (HUAC) and other groups that perceived communist threats to the United States. Among the most devastating projects of the Fund for the Republic was one that produced a two-volume report of blacklisting in industry with an emphasis on television and the movies. Hutchins, however, did not emerge unscathed from this work and was attacked by the press and popular media for his views.

During its first few years the Fund for the Republic concentrated on projects that produced information and knowledge that could be widely disseminated. The major activity of the fund from the late 1950s until the mid-1970s, however, was support for the Center for the Study of Democratic Institutions. His last attempt to create a community of scholars, the Center in Santa Barbara, California, was a place for resident scholars and invited guests to discuss serious issues. Under Hutchins the Center hosted and supported numerous international conferences and a publishing enterprise that created an international presence for its deliberations.

*See also:* GENERAL EDUCATION IN HIGHER EDUCATION; LIBERAL ARTS COLLEGES; PHILOSOPHY OF EDUCATION; UNIVERSITY OF CHICAGO.

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EDWARD KIFER

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## IEA

See: INTERNATIONAL ASSESSMENTS, *subentry on* INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT.

## IMMIGRANT EDUCATION

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UNITED STATES

Charles L. Glenn

INTERNATIONAL

Charles L. Glenn

### UNITED STATES

The United States is often called a “nation of immigrants”; more accurately the nation always comprised both newcomers and those who worry about the impact of the newcomers on the existing society. The relationship between newcomers and established families has always been in some sense filled with tensions, uncertainties, and even bitter conflicts. It has also been characterized by varied efforts at accommodation and adaptation, often but not always on the part of the newcomers alone.

#### Immigration to the United States

Between 1820 and 1996, 63 million immigrants arrived in the United States. Germans were cumulatively the largest group, with 7.1 million, followed by Mexicans, with 5.5 million (60 percent of the Mexican immigrants over the 176-year period had arrived in the last 15 years). Other groups of immigrants, in order, were from Italy (5.4 million), the United Kingdom (5.2 million), Ireland (4.8 million), Canada (4.4 million, however, many Irish immigrants

came via Canada), and Russia (which used to include much of Poland and the Baltic states—3.8 million).

Immigrants who arrived before the 1840s were for the most part similar to the native population, if not superior in education and ambition; they were rarely considered a problem by the native-born population. With the arrival of large numbers of Irish and German Catholics in the two decades before the Civil War, however, immigrants began to be seen as a threat to American society. The number of immigrants tripled between the 1830s and the 1840s, and the country received as many immigrants in the 1850s as in the two previous decades combined. Between 1845 and 1854 immigration increased the American population by 17.6 percent, a much higher rate than in the latter half of the twentieth century.

After many decades of essentially unrestricted admission, the United States imposed restrictions in 1882 excluding criminals, prostitutes, and the physically and mentally ill. “Nine years later the category of excluded undesirables was extended to take in as well believers in anarchism and in polygamy. These minimal controls reflected no disposition to check the total volume of immigration” (Handlin, p. 287).

Late in the nineteenth century and early in the twentieth century immigrants from southern and eastern Europe, widely considered to come from “inferior stock,” were restricted, though much needed by an expanding economy. In the wave of xenophobia that swept over the United States during World War I, a literacy requirement was imposed in 1917. The phase of qualitative restrictions ended with the National Origins Act of 1924, which placed strict quantitative restrictions on the number of im-

migrants allowed from various nations, explicitly designed to limit immigration from countries that were considered less desirable sources of future citizens.

Puerto Ricans, as United States citizens, enjoyed an unrestricted right to migrate in search of better economic conditions. With the introduction of air service between San Juan and New York City after World War II, the United States experienced what was surely the world's first mass migration by air, with almost 136,250 Puerto Ricans coming to the U.S. mainland in 1947 alone.

The Immigration and Naturalization Act Amendments of 1965 repealed the quotas favoring northwestern Europe (such as those established by the National Origins Act of 1924) but set a limit of 20,000 immigrants per year from each nation of the Eastern Hemisphere and for the first time placed restrictions on immigration from the Western Hemisphere. The Immigration Reform and Control Act of 1986 and subsequent laws have continued to tinker with the terms for the admission of immigrants and refugees.

### Reactions to Immigrants

The American colonists' own adaptation to the new circumstances of their life, especially in the mid-Atlantic colonies, involved a largely unproblematic mixing of people who had had much less contact in their home countries of early modern Europe. By the time of the American Revolution, the French immigrant turned American farmer St. John de Crèvecoeur would write that the nations of Europe had been combined to create: "the American, this new man . . . leaving behind all his ancient prejudices and manners . . . he must therefore entertain new ideas and form new opinions" (pp. 49–50).

The prominent physician and signer of the Declaration of Independence Benjamin Rush published an essay in 1786 that called for the establishment of public schools in Pennsylvania. A remarkable feature of his proposal was its recommendation that children "be taught to read and write the English and German languages," and attendance districts be so arranged that "children of the same religious sect and nation may be educated as much as possible together" (pp. 5, 7).

In fact, until the 1830s most schooling in Pennsylvania (and in the states to its south) was provided by church initiatives, usually on a denominational

and thus ethnic basis. Quaker, Anglican, and Presbyterian schools, schools of German Lutheran and Reformed congregations, and a whole range of other variations provided what schooling was available. State authorities sought to meet their obligation to provide for the schooling of those whose parents could not afford to pay tuition by providing what would now be called *vouchers*, enabling them to go to existing nonpublic schools and academies, including church schools.

In Pennsylvania, what would become a widespread anxiety about the effects on American society of immigration was anticipated (like so much else) by Benjamin Franklin. In 1752 he asked "Why should Pennsylvania, founded by the English, become a colony of Aliens, who will shortly be so numerous as to Germanize us rather than our Anglifying them, and will never adopt our language or customs?" On the eve of the American Revolution, Franklin returned to this theme, noting "the vast unpeopled [sic] Territories of North America," and warning that "Germans are now pouring into it, to take possession of it, and fill it with their Posterity" (pp. 374, 709–710).

Similarly, Thomas Jefferson warned in 1787 that immigrants would "bring with them the principles of the governments they leave, imbibed in their early youth; or, if able to throw them off, it will be in exchange for an unbridled licentiousness . . . These principles, with their language, they will transmit to their children" (p. 211).

It was only in the 1830s, though, that concern about the cultural and religious differences of immigrants began to be a basis for educational policy. In 1836 Calvin Stowe of Ohio warned that "unless we educate our immigrants, they will be our ruin . . . The intellectual and religious training of our foreign population has become essential to our own safety" (p. 993). This was a primary motivation for the extension of the "common school" system of publicly controlled education, and for opposition to public funding for Catholic schools.

When Catholic immigrants (first Germans, then other groups) began to organize their own schools, as did some Protestant and Jewish immigrants, it was perceived by many as an expression of refusal to accept the requirements of life in American society. Their children "will be shut up," warned a prominent Protestant minister in 1853, "in schools that do not teach them what, as Americans, they most of all

need to know . . . They will be instructed mainly into the foreign prejudices and superstitions of their fathers." If, instead, the children of immigrants could be gathered into the common public school, "we may be gradually melted into one homogeneous people" (Bushnell, pp. 209–303).

In fact, religious schools do not seem to have retarded what came to be called *Americanization*; to the contrary, they have provided a safe setting for millions of immigrant children to learn American ways without turning their backs on their families. In a study of Mexican-American children in San Antonio, Philip Lampe found that those who attended Catholic schools "were more likely to have non-Hispanic friends, were more willing to date and marry outside their own ethnic group, were more willing to identify with the WASP value system, showed significantly less prejudice against other ethnic groups, and were more willing to perform their civic duties" than their public school counterparts (Walch, p. 202).

As anxiety about Catholicism began to fade, other cultural differences came to be the primary concern. The immigrants arriving from southern and eastern Europe in the late nineteenth and early twentieth centuries seemed to many commentators to be of an inferior stock. As John R. Commons, a leading social scientist of the Progressive era wrote in 1907, "If in America our boasted freedom from the evils of social classes fails to be vindicated in the future, the reasons will be found in the immigration of races and classes incompetent to share in our democratic opportunities." After all, he pointed out, "race differences are established in the very blood and physical constitution. They are most difficult to eradicate, and they yield only to the slow processes of the centuries. Races may change their religions, their forms of government, their modes of industry, and their languages, but underneath all these changes they may continue the physical, mental, and moral capacities and incapacities which determine the real character of their religion, government, industry, and literature" (pp. 12, 7).

More optimistic observers insisted upon the capacity of the public school to transform the children of immigrants into "real Americans," and it was this impulse which led to several decades of emphasis upon Americanization through schools and other agencies of popular education like settlement houses and civic associations. Ellwood Cubberley, the enormously influential Stanford University professor, ar-

gued in 1909 that the highest mission of public education was "to assimilate and amalgamate those people as part of our American race, and to implant in their children, so far as can be done, the Anglo-Saxon conception of righteousness, law and order, and popular government, and to awaken in them a reverence for our democratic institutions and for those things in our national life which we as a people hold to be of abiding worth" (Cremin, p. 68).

Although the "intelligence tests" conducted by the U.S. Army during World War I seemed to confirm the intellectual inferiority of Slavic, Jewish, and southern European immigrants, the findings reflected a generational phenomenon. Although immigrants in the early decades of the twentieth century had low levels of education compared to their native-born contemporaries, there was a "massive educational jump among the new Europeans in the cohort born between 1925 and 1935 in the concentration in professional jobs . . . The analogous change for native whites of native parentage was much smaller" (Sollors, pp. 206, 329).

### **Immigrants and Language**

The desire to preserve German language and culture had been one of the motivations behind the organization of Catholic and Lutheran parochial schools in the nineteenth century, and Polish, Bohemian, and other immigrant groups made efforts in the same direction. Public schools in some cities responded to this competition by offering classes designed to maintain and develop the languages that pupils spoke at home. In 1877 the superintendent of schools in San Francisco argued that public schools should begin offering French and German. Public schools in Chicago began offering German in confidence that "the number of private schools now to be found in every nook and cranny of the city will decrease, and the children of all nationalities will be assembled in the public schools, and thereby be radically Americanized" (Peterson, pp. 54–55). By the late 1880s, eight states had statutes authorizing bilingual instruction in public schools.

Such measures on the part of public authorities should not be construed as reflecting acceptance of bilingualism as a long-term educational goal; the mounting concern about how immigrants seemed to be building separate communities led by 1911 seventeen states to require that English be the sole language of instruction at the elementary level in public schools. The anti-German sentiment of World War

I led twenty-one states to add such a requirement for private schools as well—a requirement that the U.S. Supreme Court struck down in *Meyer v. State of Nebraska* in 1923.

The supposed failure of immigrants and their children to learn English is the basis for much concern about immigration and about bilingual education in the early twenty-first century. In fact, there is no reason to believe that current immigrants, any more than those in the past, will seek or be able to persuade their children to remain linguistically separate. Two leading supporters of bilingual education concede that “the United States is, at the societal level, staunchly monolingual. Legislating monolingualism as a requirement for citizenship could hardly have been more successful in creating a monolingual society than have been the unofficial economic and social forces at work.” Among immigrant minority groups, “only the old folks, the very young, and the recent arrivals, in general, speak these other languages; the school children and young adults have often switched to ‘dominance’ in English” (Snow and Hakuta, p. 385). The continuing use of Spanish in California has not slowed the rate of shift to English as the primary language for individuals of Hispanic descent; while “in most areas of the United States approximately 70 percent of the native born currently are adopting English as their usual language,” the rate is 85 percent in California (Veltman, p. 66).

It is sometimes suggested that the heavy concentrations of Hispanics constitutes an exception to the usual pattern of language shift, but this seems to reflect mostly the language use of newcomers. A 1973 study by Alejandro Portes and Ruben G. Rumbaut in Los Angeles found that, among third-generation Mexican-American women, 4 percent spoke only Spanish at home, and 84 percent only English. The transition to English among men was even more rapid.

Because of this pattern of language loss, some argue that the public schools have an obligation to help maintain minority languages and cultures. It would be more accurate to say that, while this policy option certainly could be justified on educational grounds, it is not a legal requirement. In no case have the courts found a legal right to public support in maintaining a group’s identity or language as a remedy of past discrimination.

Even if language maintenance were to be accepted as an educational goal, there is little reason to be-

lieve that even full-time bilingual classes would have the effect of maintaining the active use of minority languages, unless these languages were strongly supported outside the school.

Immigrant parents are especially likely to question language-maintenance efforts in schools if they believe there is any chance this will limit their children’s acquisition of the majority language that they themselves cannot teach their children well. Mexican-American parents surveyed by the Educational Testing Service in 1987 supported bilingual education and said it was important that their children speak Spanish well, but rejected instruction in Spanish nearly four to one if it would take away from learning English. In a 1998 survey, the foundation Public Agenda posed the question: “With students who are new immigrants, which is more important for the public schools to do? Teach them English as quickly as possible, even if this means they fall behind in other subjects, or teach them other subjects in their native language, even if this means it takes them longer to learn English?” Foreign-born parents favored “English as quickly as possible” by 75 percent to 21 percent, while Hispanic parents supported that option by 66 percent to 30 percent.

### **Educating the Children of Immigrants**

No special arrangements were made for immigrant pupils through most of the nineteenth century, apart from being in a public school classroom, with what was then a strong emphasis upon basic skills and upon patriotism and civic morality. In some cases, indeed, they were not allowed to attend school with native children. Children of Chinese immigrants were segregated by law in a number of states. The California legislature enacted a requirement during its 1859–1860 session that “Negroes, Mongolians, and Indians, shall not be admitted into the public schools.” The legislature, however, did allow local school boards to establish separate schools for such children; this segregation was reaffirmed in the school code adopted ten years later.

Such discrimination was not confined to California. The U.S. Supreme Court ruled in *Gong Lum v. Rice* (1927) that school officials in Mississippi could exclude a Chinese-American child from the local “white” school. Martha Lum had “the right to attend and enjoy the privileges of a common school education in a colored school” or her father could send her to a private school at his own expense.

Although persons of Mexican descent were considered “white” under state laws requiring school segregation of blacks, they were often segregated by local practices. Local practices included drawing school attendance lines to correspond with residential segregation—and the segregation already existing within schools—and assigning all Mexican-American children automatically to the lowest instructional track, according to Guadalupe Salinas’s 1971 study. As a result of such practices, “in 1931, 85 per cent of California schools surveyed by the state government reported segregating Mexican students either in separate classrooms or in separate schools . . . . By 1930, 90 per cent of the schools in Texas were racially segregated” (Donato, Menchaca, and Valencia, p. 35).

Separation was not always permanent, or motivated by distaste for the immigrant. Special reception classes to teach essential language skills in an otherwise unmodified school program were considered an especially progressive measure in the period of heaviest immigration to the United States in the early twentieth century. So-called steamer classes were provided in many cities for children newly arrived “off the boat” from Europe. In Massachusetts alone, twenty-six cities and towns reported providing such classes in 1914. The Boston school superintendent asserted that “there is general agreement in the practice of progressive communities in grouping older immigrant children in special classes for intensive work in English, in order that they may acquire the common tongue as a tool for work through which they can be advanced rapidly to classes of children of their own age” (Thompson, p. 118).

Special language support did not become a right until the Supreme Court’s 1974 decision in *Lau v. Nichols*. This decision stated that San Francisco was violating the Civil Rights Act of 1964 by failing to provide programs that met the needs of several thousand pupils of Chinese ancestry who did not speak English. The implication of the decision was that no violation would have been found if all of the pupils in question had participated in supplemental English instruction (ESL), as did about a thousand others. The court left the method of meeting this obligation to the discretion of school districts. “Teaching English to the students of Chinese ancestry who do not speak the [English] language is one choice. Giving instructions to this group in Chinese is another. There may be others.” The court took care to point out that it would not be appropriate to sepa-

rate minority children more than was required by their educational needs, citing an earlier federal government regulation specifying that any ability grouping or tracking system employed by the school system to deal with the special language skill needs of national origin, minority children must be designed to meet such language skill needs as soon as possible and must not operate as an educational dead-end or permanent track.

In retrospect, however, it seems almost inevitable that such a targeted program would develop a momentum of its own and that those educators who made it their specialty would discover an ever-increasing need for what only they could provide, and ever new reasons not to integrate language minority children into the mainstream. The “Lau remedies” issued in draft form subsequently by the federal government, influenced by bilingual education advocates, leaned heavily toward requiring use of the home language for instruction in a separate program, so-called transitional bilingual education. School administrators had every reason to believe that they were not only permitted but required to educate language minority pupils separately, at least for whatever period of time was required to bring them up to speed in English. The argument, by some linguists and minority language advocates, that the best way to learn English was through a number of years (five to seven years is the figure most commonly used) of a bilingual program provided a strong rationale for extending this period of separation.

Much conflicting research exists on the issue of whether children should first be instructed through their home language if that is not the language of their continuing education. Fortunately, a very complete review of more than thirty years of studies was carried out on behalf of the National Research Council. “It is clear,” the experts note,

that many children first learn to read in a second language without serious negative consequences. These include children in early-immersion, two-way, and English as a second language (ESL)-based programs in North America, as well as those in formerly colonial countries that have maintained the official language [of the colonizer] as the medium of instruction, immigrant children in Israel, children whose parents opt for elite international schools, and many others . . . . The high literacy achievement of Spanish-speaking children in English-

medium Success for All schools . . . that feature carefully-designed direct literacy instruction suggests that even children from low-literacy homes can learn to read in a second language if the risk associated with poor instruction is eliminated. (August and Hakuta, p. 60)

Later in the report, indeed, Diane August and Kenji Hukuta conclude candidly that “we do not yet know whether there will be long-term advantages or disadvantages to initial literacy instruction in the primary language versus English, given a very high-quality program of known effectiveness in both cases” (p. 177). This would seem to argue for allowing the individual school to adopt whatever method produces satisfactory results.

Bilingual education was developed initially not as a remedial program but as an enrichment of the education of middle-class children, responding to demands of a relatively high-status refugee group that included many teachers, the Cubans who fled to Miami from the Castro regime in the early 1960s. According to James Crawford, this group, expecting to return to Cuba, was strongly motivated to maintain Spanish. The Dade County school system launched the first experiment in bilingual education at the Coral Way School. This was an unabashed Spanish-maintenance program for Cuban children and at the same time a Spanish immersion program for Anglo children. The goal was fluency in both languages for both groups.

Transitional bilingual education (TBE) programs have a different goal: they provide support in the home language while the pupil becomes proficient in English. TBE has been provided by hundreds of local school systems as a result of the requirements of state laws (the first was enacted in Massachusetts in 1971) or as a means of complying with the requirements of the 1974 *Lau v. Nichols* case. While federal law leaves it up to local education officials to determine how to overcome language barriers, a strong encouragement has been given to bilingual programs by federal funding that supports “educational programs using bilingual education practices, techniques and methods.”

Pupils are assigned to TBE programs on the basis of an assessment that they are unable to perform ordinary classwork in English and speak another language at home. Pupils stay in these separate classes typically for three years, though many remain

longer and advocates argue that five to seven years would be preferable. “Late-exit” bilingual programs, with an explicit intention of maintaining and developing the home language while English is learned, are less common.

A 1980 survey found that local school districts in thirty-eight of the fifty states provided TBE for Spanish-speaking youngsters, in twenty states they did so for Vietnamese children, in twelve for Korean youngsters, in ten for French-speaking children, and in nine for speakers of Greek. Half the states had laws that mandated or permitted bilingual instruction as needed—or were in the process of enacting such legislation—and the other half did not seem to have significant enrollments of affected students. The 1980s were probably the high-water mark of this approach to educating the children of immigrants.

California adopted a mandate of bilingual and “bicultural” education in 1976, requiring school districts with more than fifty pupils of limited proficiency in English to develop and implement district master plans. This law was not reenacted in 1987, but most large school systems continued to implement bilingual programs until the referendum (Proposition 227) organized by Ron Unz. In June 1998 California voters decisively mandated that the children of immigrants be given one year of “structured immersion” in English before mainstreaming into regular classes, unless a sufficient number of parents petitioned for a bilingual class.

Voters in Arizona followed the California example and, as of 2001, similar efforts are under way in Colorado and Massachusetts. Even liberal newspapers like the *New York Times* have begun to criticize bilingual programs, which face new demands for accountability and results. The alternative offered is no longer “sink-or-swim,” but carefully designed programs that focus (like those in other countries with large numbers of immigrants) on developing an initial proficiency in English so that the pupil can as soon as possible be placed with classmates for whom that is the first language and with whom he will communicate naturally and so become more and more proficient.

It should be noted that proficiency in a language other than that of the school is by no means of itself a barrier to success in school, and may indeed be associated (whether as cause or effect) with academic achievement, provided that the pupil is also proficient in the school language. A study conducted by

the Educational Testing Service in conjunction with the National Assessment of Educational Progress concluded that “whether or not one comes from a home where a second language [that is, other than English] is frequently spoken is not the critical issue, but rather the central question is whether or not one is competent in English” (Baratz-Snowden et al., p. iii).

In the early twenty-first century American education seems to be entering a period in which a variety of approaches to the education of immigrant children will be employed, based upon local judgments about what will work best and what parents want; a new emphasis on accountability for results will prevent schools from sliding back into the old complacency about whether immigrant students learn or not.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; BILINGUAL EDUCATION; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION LANGUAGE MINORITY STUDENTS; RACE, ETHNICITY, AND CULTURE; SECONDARY EDUCATION.

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CHARLES L. GLENN

## INTERNATIONAL

The social and cultural effects of immigration have been in the forefront of policy debate a number of times in U.S. history (and in that of Canada and of Australia) but it is a largely unfamiliar and thus all the more difficult question in Europe. As the late Willem Fase noted, "Western Europe quickly moves in the direction of immigration countries such as the United States, Canada and Australia" but there is "crossnational variation in social and educational provisions for ethnic minority groups" (p. 7). The focus here will be upon the members of the European Union and Canada, Australia, and New Zealand.

Ethnicity and its consequences are among the most difficult and potentially destabilizing political issues in most of the Western democracies, as well as in the former Soviet Union and Yugoslavia and the developing nations. In recent years, commentators in Germany, France, Australia, and elsewhere have ranked immigration as the leading "hot button" topic in political discourse. The education of the children of immigrants is a challenge that professionals in the United States have faced for many years, but it is a relatively recent concern in Europe.

Certain countries, such as Australia, Canada, the United States, and South Africa, have long welcomed immigrants, though often with restrictions based upon origin, race, or skills. Migrant workers have been moving, and often settling, within Europe for centuries. Since World War II, Western Europe has absorbed millions of "guest workers," immigrants from former colonies who became permanent

residents and brought their families; and more recently, millions of migrants from Eastern Europe. Even countries like Italy, Spain, Portugal, and Greece that were long exporters of their citizens to other countries now find themselves seeking to integrate hundreds of thousands of immigrants from North Africa, Eastern Europe, and elsewhere. Most European cities now have areas inhabited mostly by immigrant families.

Exceptional groups aside, the educational outcomes of immigrant children are generally inferior to those of native children. This has led to high rates of grade-retention and to frequent failure of students to obtain qualifications for technical or university education. Immigrant children are also often concentrated in schools that, in some cases, enroll no native pupils at all. Policy responses have included "reception classes" for pupils who are not proficient in the language of the school, supplemental programs to support home language and culture, and the designation of special zones or schools that receive additional funding to permit a more favorable pupil-teacher ratio and other supports. In a few cases that have not been widely copied, authorities have provided bilingual education or made efforts to desegregate schools.

### Reception Classes

Typically, children of immigrant parents who are older than primary school age when they arrive are placed in reception classes for a year, where they are given an intensive program in the language of the school as well as orientation to life in the host society. In France, for example, it is assumed that young immigrant children should be treated like and integrated with French children of the same age; should learn numbers, colors, and reading in French; and should receive supplemental help only as individually needed, just as a child from a French-speaking home would. Special reception programs are regarded as an essential transitional measure only for pupils who start French schools at ages when their classmates would already be well advanced in their studies.

Some classes have a teacher who speaks the language of most of the children, as well as a native teacher. The role of the former is to assist with explanations and not to instruct in academic subjects through the home language; the goal is to prepare pupils as quickly as possible for participation in a regular class.

### Supplemental Home Language and Culture Programs

In the countries under consideration some arrangement has been made to enable immigrant children to continue to develop their home language and to gain some knowledge of the culture of the country from which their parents came. Some of these programs are funded by the governments of the sending countries or by ethnic organizations, but many are supported by the educational system of the host society. Typically, pupils attend these classes on a voluntary basis for several hours per week, so arranged as not to conflict with regular academic instruction.

Supplemental language programs should not be confused with "bilingual education" (BE) as it is practiced in the United States. The intent is not, as in BE, to develop initial literacy in the home language or to teach the academic subjects through that language, but rather to enable immigrant children to retain some link with the homeland and the culture of their families.

### Extra Resources for Immigrant Pupils

A number of efforts have been made to increase the effectiveness of the schooling provided to children from immigrant families by devoting additional resources to their schools. France has a system of "priority educational zones" (ZEPs) that receive additional support and attention.

### Bilingual Education

Although instruction provided in two languages is common in some areas with linguistically mixed native populations, such as Catalonia in Spain, Friesland in the Netherlands, Schleswig-Holstein in Germany, and Wales, bilingual education has seldom been provided for the children of immigrants. The exceptions include some programs for Finnish immigrants in Sweden and experimental classes in other countries. The results have not been sufficiently positive to encourage widescale adoption of this approach.

### School Desegregation

Only a few scattered attempts have been made in Western Europe to ensure that ethnic minority children are not concentrated in certain schools. It has frequently been pointed out that the growing tendency toward segregation of the children of immigrants has a negative effect upon their opportunities

to learn the language of the school and reduces the motivation of foreign pupils and their parents to take seriously schooling in which no native pupils participate.

One German community that made a determined and comprehensive effort to promote ethnic integration is Krefeld in North Rhine/Westphalia. While the "Krefeld Model" was most notable for its stress upon pedagogical integration, it also included an element of deliberate assignment of pupils to create the preconditions for successful integration. Similar efforts have been made in Gouda and Amsterdam in the Netherlands, and in a number of cities of Flanders in Belgium.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; BILINGUAL EDUCATION; LANGUAGE MINORITY STUDENTS; WESTERN EUROPE.

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CHARLES L. GLENN

## IMMUNIZATION AND CHILDREN'S PHYSICAL HEALTH

With the exception of safe water, no other public health intervention has had a greater impact in reducing deaths related to infectious disease than vaccinations. Smallpox was eradicated in 1977; wild-type poliomyelitis was eliminated from the Western hemisphere in 1991. Among children under five, measles and invasive *Haemophilus influenzae* type b (Hib) have both been reduced to record low numbers. Deaths associated with smallpox, diphtheria, pertussis, tetanus, paralytic poliomyelitis, measles, mumps, rubella, congenital rubella syndrome, and Hib decreased an average of nearly 100 percent during the twentieth century.

Though the United States is reaching record low levels of vaccine-preventable disease, continued immunization is important. Pathogenic viruses and bacteria still circulate in the United States, and with continuing globalization, the threat of disease spread increases. Immunization protects the general population from disease; individuals who are immunized have inherent protection from disease while those who are not immunized are protected by the limited likelihood that they will be exposed to another unimmunized and infected individual. Furthermore, immunization protects a population from disease;

vaccinated individuals acquire immunologic protection from pathogens for themselves. As a consequence, immunized individuals are protected secondary to a decreased incidence of disease. This phenomenon of *herd immunity*, however, will not be achieved unless 80 percent to 95 percent of the population is immunized.

### Childhood Immunizations

A detailed childhood immunization schedule is released yearly by the National Immunization Program (NIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). This schedule informs parents and health care providers which vaccines children need to receive and when they should receive them. An updated schedule can be found at the website of the Centers for Disease Control and Prevention.

State governments are responsible for passing and enforcing school immunization laws. Currently all fifty states have immunization requirements for children entering school. The vaccinations required may be different for different states. Additionally, states may also differ in the number and types of philosophical or religious exemptions they allow for children entering school. Vaccination decreases the risk of infection and outbreaks in schools by reducing the number of unprotected people who may be infected that are capable of transmitting the disease within their schools and communities.

Immunizations are available either free of charge or for a reduced cost at local health departments for children whose parents cannot afford to take their children to private physicians for immunization. Furthermore, on August 10, 1993, the Omnibus Budget Reconciliation Act (OBRA) created the Vaccines for Children Program (VFC) program as Section 1928 of the Social Security Act in order to increase access to immunizations. The program began on October 1, 1994; it provides vaccinations at no cost to VFC-eligible children seeing either public or private providers.

### Vaccine-Preventable Diseases

The following eleven vaccine-preventable diseases are addressed through standard vaccination programs. A number of these diseases are covered by mandatory school immunization laws.

*Diphtheria* is a respiratory disease caused by a virus that is spread by coughing and sneezing. Symp-

toms include sore throat and low-grade fever. Left untreated, diphtheria can lead to airway obstruction, coma, and death. Vaccines that contain the diphtheria toxoid include the DTP, DtaP, DT, and Td vaccines.

*Tetanus* (lockjaw) is a disease of the nervous system that is caused by bacteria that enters the body through a break in the skin. Early symptoms include lockjaw, stiffness in the neck and abdomen, and difficulty in swallowing. Later onset symptoms include fever, elevated blood pressure, and severe muscle spasms. Death occurs in one third of all cases, especially among the elderly. Tetanus toxoid is also contained in the DTP, DT, DtaP, and Td vaccines.

*Pertussis* (whooping cough) is a highly contagious bacterial respiratory disease spread through coughing and sneezing. Symptoms include severe fits of coughing that may interfere with eating, drinking, and breathing. Pertussis may cause pneumonia, encephalitis, and infant death. The pertussis vaccine is contained within the DTP and DtaP vaccines.

*Haemophilus influenzae* type b is a bacterial infection that predominantly affects infants. It is spread by coughing and sneezing. Symptoms include skin and throat infections, meningitis, pneumonia, sepsis, and arthritis and may be severe for children under the age of one. Risk of disease is reduced after the age of five. A Hib vaccine can prevent the disease.

*Hepatitis A* is caused by the Hepatitis A virus and is spread most commonly through the fecal-oral route when the stool of an infected person is put into another person's mouth. It can also be transmitted by ingesting food or water that contain the virus. The disease affects the liver. Symptoms are unlikely, but if present they may include yellow skin or eyes, fatigue, stomach ache, loss of appetite, and nausea. This disease is prevented using the Hepatitis A vaccine.

*Hepatitis B* is caused by the Hepatitis B virus and is spread through sexual contact or through contact with the blood of an infected person. As with the initial clinical presentation of Hepatitis A, infection with Hepatitis B may follow an indolent course and manifest no symptoms. The likelihood of developing Hepatitis B increases with age. If present, symptoms are similar to Hepatitis A. The Hepatitis B vaccine prevents the disease.

*Mumps* is caused by a virus and is spread through coughing and sneezing. It is a disease that affects the lymph nodes. Symptoms include fever,

headache, muscle ache and swelling of the lymph nodes close to the jaw. Infection with the mumps virus may also lead to meningitis, inflammation of the testicles or ovaries, inflammation of the pancreas and permanent deafness.

*Measles* is a highly contagious respiratory disease caused by a virus that is transmitted through coughing or sneezing. Symptoms include rash; high fever; cough; runny nose; and red, watery eyes lasting about a week. The measles may cause diarrhea, ear infections, pneumonia, encephalitis, seizures, and death. The measles vaccine is contained within the MMR, MR and measles vaccines.

*Rubella* (German measles) is a viral respiratory disease spread through coughing and sneezing. Symptoms may include a mild rash and fever for two to three days in children and young adults. Complications are severe for pregnant women, whose children frequently have congenital birth defects. The rubella vaccine is contained within the MMR, MR, and rubella vaccines.

*Polio* is a viral disease of the lymphatic and nervous systems. Transmission occurs through contact with an infected person. Symptoms include fever, sore throat, nausea, headaches, stomach aches, and stiffness in the neck, back and legs. OPV and IPV are the vaccines in current use.

*Varicella* (chickenpox) is a highly contagious disease caused by bacteria and is spread by coughing or sneezing. Symptoms are a skin rash of blister-like lesions on the face, scalp, or trunk. The varicella vaccine prevents this disease.

### Immunization Safety

Before vaccines are approved by the Food and Drug Administration, they undergo rigorous scientific testing to ensure that they are safe and effective. However, differences in each individual's response to an antigenic vaccine challenge account for the rare occurrences ranging from vaccine failure to anaphylaxis. The National Childhood Vaccine Injury Act (NCVIA) of 1986 created the National Vaccine Program Office within the Department of Health and Human Services. It requires that all providers who administer vaccines provide a Vaccine Information Statement that explains the disease and the risks and benefits of vaccination to the vaccine recipient, parent, or legal guardian. The NCVIA also created the Vaccine Adverse Event Reporting System, a mandatory reporting system for health care provid-

ers. The National Vaccine Injury Compensation Program was also created under the NCVIA as a no-fault system for compensating people injured by vaccination.

*See also:* HEALTH EDUCATION; HEALTH SERVICES, *subentry on* SCHOOL.

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ANGELA HUANG

## IMPACT AID, PUBLIC LAWS 815 AND 874

Public Laws 81-815 and 81-874 were approved by the U.S. Congress in 1950 to assist local school districts with the construction and cost of public educational activities impacted by federal defense efforts. The so-called impact laws were an extension of a 1941 federal emergency measure, the Lanham Act. The precedence of the Lanham Act, the rising educational burden placed on local school districts near military bases, and the advent of the Korean War (1950–1953) contributed to the subsequent passage of the impact laws. A House Committee on Education and Labor studied the strain on local districts and concluded that unless federal assistance were provided, "more than 1.8 million children in these federally impacted areas would not receive normal school services" (National Association of Federally Impacted Schools, p. 9).

To ameliorate the loss of local taxes from personnel residing on federal lands, the authorizing

committees of both the House and the Senate passed legislation (H.R. 7940 and S. 2317) to provide federal aid for the construction and maintenance of new schools in defense areas. On July 13, 1950, Public Law 81-874 was initially authorized for four years. Public Law 81-815 was passed on August 22, 1950 for an initial two-year authorization. The passage of the impact laws in 1950 and subsequent reauthorization during the 1950s represented a significant exception to the contentious federal school politics of the 1940s and early 1950s. Numerous federal aid-to-education bills had failed because of racial and religious dissent. Until the passage of the Elementary and Secondary Education Act in 1965, impact laws were the only form of federal general aid for K–12 education. Furthermore, school districts receiving impact aid funds were generally free from federal governmental interference. For example, until the 1964 Civil Rights Bill enabled the U.S. Office of Education to withhold federal money from districts maintaining racial segregation, impact aid schools were not pressured to desegregate.

Children attending schools in impacted areas or federally connected children were (1) children who lived on federal property and whose parents worked on federal property; (2) children who either lived on federal property or whose parents worked on federal property; and (3) children whose parents came into the district as a result of federal contracts with private firms. A minimum of 3 percent or 400 federally connected children had to be in average daily attendance in a given district to qualify for impact aid.

The Elementary and Secondary Education Act (ESEA) of 1965 and subsequent amendments altered the original criteria for impact laws to assist not only areas affected by military personnel but also those with high poverty rates and other hardships such as rapid growth. Under Title I, Public Law 81-874 created a new three-year program of basic federal grants to the states. Funds would be allotted to districts where at least 100 school-age children, or 3 percent of the total number of school-age children were from families with low annual incomes. Under Title VI of the 1966 ESEA amendments the stipulation that three percent of children in a district must be federally connected to receive impact aid was altered to substitute a minimum of 400 children even if three percent were not federally connected. Public Law 81-815 also was broadened under the 1966 ESEA amendments to allow districts with rapid enrollment to qualify for aid.

Native American children living on federally owned lands also were eligible for funds under Public Law 81-874 and Public Law 81-815. However, it was not until passage of Title IV of the 1972 Amendments, the Indian Education Act, that Native Americans were explicitly included. In that year Public Law 81-874 was amended to financially assist local educational agencies for the education of Indian children.

Impact Aid funds flow primarily through basic support payments on behalf of federally connected children. Additional payments are made for federally connected children with disabilities, for heavily impacted districts, for federal property removed from local tax rolls after 1938, and for construction and renovation of school facilities. The bulk of the appropriation goes directly to student compensation. For fiscal year 1999, the Department of Education found that close to 97 percent of the \$864 million allocation was for federally connected children, whereas little more than 3 percent was targeted for school districts that lost significant local assessed value due to the acquisition of property by the federal government since 1938.

### Program Analysis

Researchers from RAND's National Defense Research Institute analyzed the Impact Aid Program, with an emphasis on its effect on the children of military personnel. Their findings are documented in a 2001 publication by Richard Buddin, Brian P. Gill, and Ron Zimmer. The authors drew the following conclusions.

- The complex Impact Aid formula results in large payment disparities for the same type of students.
- Differences in how school districts are defined makes the link between them and reimbursements inherently flawed.
- Educational opportunities of military and civilian children appear roughly comparable.
- Concern over the extra cost of military children may be misplaced.
- Military children have a much higher migration rate than do civilian children.

### Future Directions

The U.S. Department of Education continually proposes changes for funding via appropriations lan-

guage and annual budget requests to best serve the needs of all federally connected children, and to improve the targeting of districts experiencing the greatest impact from federal activities. To improve the timely processing of Impact Aid payments, the department is increasing its use of technology and endeavoring to establish improved review procedures. According to the department's biennial report for the fiscal year 1995–1996, however, the program objectives have remained substantially the same: to support local school districts impacted by children who reside on military bases, Indian lands, federal properties, or in federally subsidized housing; or to a lesser extent, for children who have parents in the uniformed services or who are employed on eligible federal properties, but do not also reside there.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; FEDERAL SCHOOLS AND COLLEGES.

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## INCLUSION

*See:* SPECIAL EDUCATION.

## INDEPENDENT SCHOOLS

*See:* PRIVATE SCHOOLING.

### INDEPENDENT STUDY

Independent study programs are found at nearly every level of education in the United States, from elementary school through graduate school. Although the concept of independent study was not new, a spectacular increase in interest in the subject occurred in elementary and secondary schools in the 1960s. In the early twenty-first century, many courses delivered within a traditional format are expected to have some component of independent study and to build independent learning skills. The major elements of independent study are the following:

- Individualized teaching and learning takes place through the student's activity.
- A tutorial relationship exists.
- Learning is made convenient for the student.
- The learner takes responsibility for progress.

Independent study programs are sometimes criticized because they release students from group-learning situations. Students themselves, while they may select or volunteer for independent study experiences, are frequently unprepared because they lack experience with any other way to learn except in a classroom. However, some research has shown that computer-based learning is as effective as traditional instruction. Students were able to organize their own learning effectively, were generally positive about using this form of instruction, and scored similarly on examinations.

#### Purposes and Goals of Independent Study

Successful independent study programs provide preparation for students and guidance along the way:

- Students are taught knowledge and skills that cannot easily be communicated in classrooms.
- As evaluated by exams, independent students learn at least as well as students in classes.
- Independent study provides useful practice in the process of learning.

- Independent study is viable when an educational institution is inaccessible to the learner.
- Independent study meets the convenience needs of many learners.
- Independent study develops self-motivation, concentration, and discipline.
- The learner is taught to identify a problem, gather data, and take responsibility for conclusions.
- The learner does all the work and cannot slide by on the anonymity of group activity.

#### Independent Study and Extensiveness in Grades K–12

The amount of time that students devote to independent study could be much greater than is the case in most schools. Although often identified as a tool for meeting the needs of gifted students, independent study should be available for all. Each year, teachers demand more group attention on the part of students, leaving less time for independent study even though the students' capacity for independent study grows. Of course, students differ in their degree of self-direction, creativity, and performance, but all can profit from a greater amount of independence. In the past independent study has too often been viewed as being synonymous with learning by doing or with special term projects. Independent study needs to be viewed as an integral part of the total process of learning in all fields. Each curricular area needs sequenced materials that enable students to learn independently effectively. The materials first should describe the required outcomes in terms that each student can understand. Concepts and skills should be defined in behavioral terms. For example, if students are asked to research an issue through independent study, the exact parameters of their project, depth and breadth, the types and numbers of sources, the form conclusions should take, and the formats that may be used to present the results should be clearly spelled out, so that each student will know precisely what the school expects. Each segment in the learning sequence should provide a variety of learning activities that may be used to arrive at specified outcomes. Pretests and self-tests that enable monitoring of learning and suggestions of some ways to study in greater depth should be included. Motivation is enhanced by self-selection of learning strategies that work well for individual students and by the immediate reinforcement of self-

testing. Provocative questions or activities to stimulate the learner's creativity such as those described by Phil Schlemmer (1999) for students in grade six and above can be used in concert with a traditional curriculum. Students no longer fail; they simply make less progress in the learning sequence. Each student's special projects should be recorded as part of an educational portfolio (now required by some states for graduation).

The University of Missouri-Columbia High School (MU High School), part of the University of Missouri Center for Distance and Independent Study, has an accredited diploma program for students of varying ages interested in alternatives to traditional high school. These include students who are home schooled, rural students wishing for additional college preparation, gifted students who need coursework above their current grade level, and students who need to make up courses. More than 150 different courses can be applied toward credit to a high school transcript. John Marlowe (2000) recommends that educators offering independent study to high school students analyze individual needs, match needs to options, use a paper trail to manage each program, enlist teacher support, guarantee academic rigor, and include some component that allows for students to socialize. Programs to teach independent and strategic learning skills to this age student also exist. In summary, students at the high school level use independent study to do the following:

- Earn university credit before they begin college.
- Earn extra credits to finish high school early.
- Supplement schedules with courses not offered at their schools.
- Enrich their high school experiences.
- Make up credits to graduate on time.
- Earn a high school diploma.

Similar programs also exist at the elementary and middle school level. The University of Missouri's Distance and Independent Study Center also offers a program for elementary and middle school students in grades three through eight that covers curriculum in language arts, mathematics, science, and social studies. All the courses were written by licensed teachers and are equivalent to a semester of work. Coursework can be completed through the mail, online, or by fax.

### Trends, Issues, and Controversies

The movement toward independent study at the elementary and middle school level has been fueled by an increase in the number of students who are home schooled. Although developed primarily for this consumer group, such courses are being offered to schools as supplements to the regular curriculum and as a way to meet the needs of diverse learners. Schools may opt for these programs for use in enrichment programs, especially for students in accelerated programs or those identified as gifted, for remediation, for use with students with identified learning problems, or in place of summer school programs. Programs to teach independent and strategic learning skills also exist for grades K–12.

There are several reasons for this trend. First, independent study programs have been successful in meeting the needs of students who lack other educational opportunities. Second, increasing pressure on adults to continue learning to upgrade skills for their current job or to prepare themselves for new careers has created a concomitant expectation that students will learn how to do this in grades K–12. Third, educational technology has gained increasing acceptance as an ally of the teacher and student in accomplishing tasks that would be more difficult and expensive in conventional formats. Fourth, improved understanding of the nature of the individual process of learning has yielded greater emphasis on teaching the student to learn and solve problems independently and with less emphasis on information transfer.

At the beginning of the twenty-first century, the infusion of technology (particularly the Internet and video-conferencing) has made independent learning and distance education a focus for all schools. Carefully conducted research and a rigorous evaluation of the effectiveness of independent study programs, especially those that rely heavily on technology over a long period of time, are needed. Such evaluation should analyze not only differences in achievement, as measured by existing standardized tests, but also changes in student attitudes and the quality of their experience. The changes that independent study and distance education bring in the learning and teaching environment must also be a focus of study.

*See also:* ALTERNATIVE SCHOOLING; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; GIFTED AND TALENTED EDUCATION; HOME SCHOOLING; SECONDARY

EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## INDIVIDUAL DIFFERENCES

### ABILITIES AND APTITUDES

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## ABILITIES AND APTITUDES

Abilities are cognitive or mental characteristics that affect one's potential to learn or to perform. Aptitudes are sometimes treated as interchangeable with abilities, particularly when they focus on prediction of performance in other settings or on other occasions. Cognitive abilities have been conceived very broadly (e.g., intelligence) and also in terms of specialized abilities such as verbal, spatial, memory, reasoning, problem solving, and psychomotor ability. Some authors have defined aptitudes more broadly than abilities, to include any number of individual-differences factors— affective, cognitive, and personality characteristics—that influence one's readiness or likelihood of learning or performing successfully.

During the twentieth century, there have been significant changes in conceptions of ability, moving from atheoretical models that have their basis in measurement and psychophysics to ones that are based largely on cognitive theories of human performance. Social issues continue to influence conceptions of ability and practices of ability testing. The scientific measurement of abilities has been viewed as either enabling or stifling social progress, and such controversy continues in the twenty-first century.

### History

Ability testing in education began in 1905 in Paris when Alfred Binet along with his assistant Théodore Simon developed the Binet-Simon scale to solve the practical problem of reliably differentiating between educable, educable with special help, and uneducable children. Prior to the development of the scale, such classifications were made subjectively and inconsistently; thus the scale was considered a signifi-

cant practical achievement. The scale consisted of thirty tests, such as “naming objects in pictures,” “defining common words by function,” and “retaining a memory of a picture.” In historical treatments, Binet and Simon’s approach is sometimes referred to as a task-sampling approach, in that the tests are essentially samples of typical educational events.

The task-sampling approach may be contrasted with another tradition in ability testing, a basic elements approach. This tradition began with Francis Galton’s development of a battery of basic sensory-motor, reaction time, and memory tests. Galton believed that a general mental ability with biological underpinnings underlay performance on these tests, but to his disappointment, he found no relationship with educational or occupational levels. Charles Spearman developed a statistical method known as factor analysis, which demonstrated that Galton’s hypothesis of a general ability was supported after all. Later, researchers such as Louis Thurstone and J.P. Guilford refined Spearman’s notion, by adding various kinds of tests to the more basic batteries, and identifying “group factors” such as spatial and verbal ability in addition to general ability (Spearman’s “g”) to account for patterns of performance.

Developing conceptions of ability and aptitude have proceeded in tandem with practical applications, particularly in military, educational, and employment settings. In the military, the development of the “Army Alpha and Beta” intelligence tests during World War I, which helped efficiently sort 1.7 million World War I conscripts into job classifications (training, frontline, officer, and so forth) has been cited by Frederick McGuire as one of psychology’s most influential contributions to American society. The Army Alpha, used essentially as a measure of general cognitive ability, consisted of eight subtests (oral directions, arithmetic problems, practical judgment, antonyms, disarranged sentences, number series, analogies, and information), most of which are still being used in test batteries today. During World War II and through the 1950s the number of abilities measured was expanded to include such constructs as verbal and quantitative ability, technical knowledge, and psychomotor abilities, the latter being particularly important for pilot and navigator selection. In the early twenty-first century the U.S. military services use a multidimensional test battery, the Armed Services Vocational Aptitude Battery (ASVAB), for both selecting applicants and

assigning them to training and occupational specialties.

Following the success of the Army Alpha, there was general optimism about the role ability assessment could play in “social engineering,” such as providing opportunities for higher education to students based on merit rather than on birthright. An example was the Scholastic Aptitude Test (now known as the SAT) during the period between World War I and World War II. The SAT was designed, in the words of the American educator James Bryant Conant, to “reorder the ‘haves and have-nots’ in every generation to give flux to our social order.” The composition of the SAT has fluctuated minimally over the years, consistently yielding “verbal” and “mathematical” scores, relying on tasks that are arguably work samples of academic tasks (e.g., reading comprehension) to those that are more abstract from such tasks (e.g., verbal analogies).

A third major application of abilities and aptitudes is in employment testing. The General Aptitude Test Battery (GATB) was developed around the time of World War II, by a commission of industrial psychologists and measurement experts for the U.S. Department of Labor. The test measures general ability, verbal aptitude, numerical aptitude, psychomotor ability (motor coordination, finger dexterity, and manual dexterity), and general perceptual ability (spatial aptitude, form perception, and clerical perception). The GATB was designed to predict job performance. More than seven hundred validity studies have demonstrated that it does so, and consequently the test is widely used as an employment screen. A meta-analysis of these studies conducted by John Hunter and Ronda Hunter has shown that general cognitive ability is the primary determinant of job success, but that psychomotor ability is important for relatively low complexity jobs.

### Modern Views

The major aptitude batteries—the ASVAB, GATB, and SAT, in the military, industrial, and educational sectors, respectively—were developed in the post-World War I period, and although still in use in the early twenty-first century, have not fundamentally changed over the years in what they measure or how they measure it. But advances in the knowledge of how people think, learn, and solve problems, since the 1970s, has triggered a reevaluation of what abilities are and how they ought to be measured.

**Information processing.** The information-processing view likens the individual to an information-processing system, suggesting that the parameters governing the performance of an information-processing system, such as speed and memory capacity, might be the abilities that govern human learning and performance. Since the 1960s, numerous studies have examined the relationship between mental speed and learning and performance. The conclusion has been that increased sophistication in the procedures for measurement are responsible for a slightly more favorable view than Galton had of the importance of mental speed in everyday life. Still, the work has primarily been of theoretical interest, and there have been few suggestions that mental speed is an important ability to begin routinely including it in large-scale aptitude batteries. In fact, to the contrary, the military services are in the process of removing their “speed” composite from the ASVAB because it has proven not to be a valid predictor of training success or job performance. Similarly, ETS routinely considers speed to be an irrelevant factor for most of its measures.

There has been considerable support, though, for the notion that another aspect of information processing, working-memory capacity, is central to human performance. Several studies have shown that working-memory capacity (as measured by tasks such as mental arithmetic) is indistinguishable from Spearman’s “g” and therefore is the primary ability governing learning and performance. Ian Deary has suggested that Spearman’s “g” is simply being relabeled to have a more contemporary-sounding title. But information-processing explanations of abilities have several advantages. One is that they allow for the construction of ability measures based not simply on previous measures, but on the understanding of how people learn, think, and solve problems. A second is that an information-processing scheme has potential use in task analysis. For example, as Susan Embretson has demonstrated, the requirements of a task can be characterized in information-processing terms, enabling the a priori prediction of item difficulty. A third advantage is that information-processing based concepts connect with wider areas of inquiry such as cognitive and brain sciences, and therefore allow for the uniting of what Lee Cronbach referred to as the two disciplines of scientific psychology, the correlational and the experimental.

**Knowledge and expertise.** A second perspective based on new conceptions in cognitive science might be called the knowledge and expertise view. In this view, characteristics such as working-memory capacity and information-processing speed are not viewed as fixed characteristics of an individual, but as dependent upon knowledge and skill that is developed over long periods of time. So, for example, expert chess players have the ability to recall actual chess positions with impressive accuracy and to a much greater extent than novice players. However, when chess pieces are arranged in random fashion, the two groups have equal recall. Similarly, many studies have demonstrated that processing speed is a direct function of repeated practice. These studies have demonstrated that efficient information processes are, in large part, the residue of well-organized knowledge structures that are developed over years of active engagement and practice within a domain. Further, well-developed knowledge structures in a domain make one a much more effective learner of other concepts in that domain, since there is an established knowledge organization within which to embed and connect new information.

This emphasis on domain specific expertise has profound implications for considering ability testing and ability development. The implication of the expertise approach is to assess and then facilitate the development of knowledge structures and processing skills that will support performance and learning within a domain, without significant attention paid to broad, domain-independent skills. Clearly, the debate over how much of ability is specific to or independent of particular domains continues, and has profound implications for the selection, education, and training of individuals.

**Hierarchical model.** A third new development might be called the hierarchical model of ability differences. This work continues the factor analytic tradition began by Spearman, and further refined by Thurstone and Guilford. The key idea behind the hierarchical model is that what had been thought to be rival hypotheses concerning the number and organization of human abilities can be now seen as compatible. Even into the 1980s one had to take a position on whether the evidence was more favorable towards the Spearman view of one general ability (along with number test-specific abilities); with Thurstone’s view of eight to eleven primary mental abilities; or Guilford’s 120 or 160 ability models. The hierarchical model, as developed by Jan-Eric Gustaf-

sson and John Carroll, shows the fruitfulness of considering abilities as varying in their generality from fairly specific abilities (e.g., memory span, associative memory, and free recall memory), to broader ones (e.g., general memory and learning), to the most broad (general intelligence). In fact, this example is taken from Carroll's "Three-stratum structure of cognitive abilities," which posits sixty-seven or so "Stratum I" abilities, eight "Stratum II" abilities, and one "Stratum III" ability. Gustafsson's scheme is similar in spirit, but he did not consider nearly as many datasets as Carroll did, and so consequently his proposal may be seen as a subset of Carroll's.

**Multiple intelligences.** A final new development might be called the "multiple intelligences" view. There are actually two quite distinct notions that might be considered in this category, the "triarchic theory" of Robert Sternberg and the "multiple intelligences" theory of Howard Gardner. Sternberg's idea is that the field, the testing industry, and the application sectors themselves (education, industry, and the military) are preoccupied with one notion of abilities, which he playfully refers to as the "g-centric view." He also calls this analytic intelligence, and suggests that while important, success in school and in life is perhaps equally if not more importantly determined by other intelligences, namely creativity and practical intelligence. Although this work has not yet resulted in any widescale applications, preliminary work, particularly in the area of practical intelligence appears promising.

Gardner has proposed a different scheme, called "multiple intelligence theory," which identifies eight abilities—linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, intrapersonal, and naturalist intelligences. This scheme is quite popular in educational circles, perhaps attributable to its elevation of abilities other than the usual linguistic and logical-mathematical abilities, encouraging the recognition of some students for talents normally overlooked. However, the scheme is often dismissed in scientific circles because by eschewing measurement, it fails to allow for its validity to be tested. As Nathan Brody has pointed out, multiple-intelligence theory is at odds with the rest of the field in its rejection of a general cognitive ability, and with its choice of the particular eight abilities—neither empirical nor theoretical justifications for these features of the theory have been produced.

## Controversies

Discussions and investigations of aptitudes, abilities, and individual differences have been fraught with controversy throughout their history. Certainly one of the most contentious issues is that of the heritability of abilities. Comparisons of monozygotic and dizygotic twins, twins reared apart versus together, adoption studies, and various other behavioral genetics studies, suggest that abilities are somewhat heritable, although the issue of by what amount remains unsettled. There is ample evidence for notably high consistency in test scores over time. A study reported by Ian Deary showed that Scottish eleven-year-olds performed remarkably similarly on an identical test of mental ability administered sixty-six years later, when they were seventy-seven years old.

Some of the reason for the intense interest in heritability seems to be inappropriately due to a misconception that to the degree that abilities are inherited, there is not much one can do to improve one's abilities. Heritability, however, is not synonymous with immutability, as can be proven with a simple thought experiment. Height is highly heritable, but has steadily increased over the twentieth century due to improvements in environmental factors such as nutrition. Similarly, as documented by James Flynn, intelligence scores have been shown to have risen quite dramatically in the second half of the twentieth century in numerous parts of the world. Early childhood intervention programs, such as Head Start, have met with mixed success, but others, such as the Carolina Abecedarian project, have shown strong and persistent gains in cognitive skills, academic test scores, and language use in follow-up studies through the age of fifteen.

Another area of some controversy in the abilities and aptitudes literature concerns the role of other factors such as metacognition, attitudes, motivation, and concepts such as emotional intelligence, in performance in school and the workplace. Concepts such as test anxiety have for a long time been cited as a threat to the validity of an estimate of a student's ability. Claude Steele has suggested that additional attitudinal factors, "disidentification" and "stereotype threat," may impair the performance of minority students in certain contexts. Motivation has long been considered an important factor in governing learning and performance success and related concepts such as goal setting, self-efficacy, and optimism are being investigated for their role in learning. Emotional intelligence refers to a wide variety of fac-

tors that may mediate the relationship between abilities and performance, or may serve as abilities and aptitudes in their own right.

A third controversy centers on the extent to which ability can even be considered as an individual phenomenon. In the situated cognition view, abilities can only be considered as they are manifest and develop within social situations. The interaction of the person with the social environment is what defines ability—it is not a construct that can be defined independent of such interaction. Much of the support for this work comes from examining very sophisticated cognitive strategies that develop without the benefit of any formal academic training or ability to demonstrate the strategies in traditional academic ways.

### Further Directions

The predominant use of individual differences in abilities and aptitudes in education has been in assigning students to special remedial programs, selecting them for admission into schools (e.g., colleges), or identifying them for receiving awards such as scholarships or fellowships. Although this use will undoubtedly continue, it is likely that an increasing emphasis will be put on new uses, opening the door to additional opportunities, in the form of diagnosis, tailored educational programs, and self-assessments to facilitate more efficacious career choices. It is likely that the noncognitive ability and aptitude variables, including interests, personality, motivation, and the like, will prove particularly important for the new uses role.

Another trend in ability and aptitude testing in education is an increased emphasis on the assessment of achievements rather than the more basic abilities. Some of this is due to what some have characterized as the pernicious effects of test coaching, and is certainly consistent with cognitive conceptions of expertise. The idea is that as long as there are high-stakes ability tests, there will be a coaching industry designed to help students improve their chances of succeeding on those tests. To the extent that the tests directly reflect the achievements that are supposed to be learned in school, coaching then becomes a positive force, a productive adjunct to the school curriculum, reinforcing lessons learned in school. Another reason for this trend is that test users and the public in general have increasingly demanded tests that look more like the learning or performance activities that the tests are designed to

predict. There seems to be less patience with arguments based exclusively on predictive validity statistics. One sees this in military and industry testing as well as educational testing.

A third trend in abilities and aptitude assessment is what is sometimes called “embedded assessment” or the insertion of abilities tests within the context of instruction itself. This trend fits with the general trend toward the increased use of achievement testing, but for the specific purpose of tailoring instruction to a particular individual, based on that individual’s changing knowledge and understanding of a particular topic area. Richard Snow and Valerie Shute have suggested both “macroadaptive” and “microadaptive” responding on the part of a computerized (“intelligent”) tutoring system. Microadaptive instruction refers to the specific reactions a tutor makes in response to its continually updated understanding of what a student knows and is learning; macroadaptive instruction refers to more global approaches to delivering coaching and feedback the tutor makes based on more general assessments of a student’s abilities.

Finally, a possible future trend is increasing attention paid to what might be called “mediators” for their role in affecting abilities and aptitudes. These include factors such as nutrition, psychopharmacology, fatigue, and circadian rhythms. Nutritional explanations have begun to appear more frequently in discussions of changes in abilities, and the role of nutrition, vitamins, and glucose has been investigated but as of yet, little is known. Similarly, there have been some investigations of “smart drugs,” such as caffeine, ginseng, and ginko biloba, as well as other psychopharmacological agents, particularly cholinergic enhancers. Finally, much has been learned over the past decade about the role of circadian rhythms in affecting hormonal production and concomitant behavioral effects such as fatigue and alertness over the course of the day. There has been some work suggesting that “morningness” and “eveningness” may be characteristic dispositions that mediate both cognitive abilities and personality factors.

*See also:* ASSESSMENT; INTELLIGENCE; TESTING.

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## AFFECTIVE AND CONATIVE PROCESSES

People react emotionally to their own and others’ performances, often in characteristic ways. Getting

a grade of “B” in a course can produce devastation in an anxious student who expected an “A.” Psychologists believe that the student’s temperament interacts with expectations for the course grade to produce a negative emotional response.

Characteristic emotional reactions and certain qualities of temperament are examples of psychological processes that are affective. Affective processes include all feelings and responses, positive or negative, related to emotion-laden behavior, knowledge, or beliefs. Affect can alter perceptions of situations as well as outcomes of cognitive effort; it can also fuel, block, or terminate cognition and behavior.

Affective processes intertwine with aspects of motivation and volition. In educational situations, students’ motivational beliefs and judgments of their own capabilities influence their intentions and plans. Thus students who see themselves as “not good at math” will prefer other subjects and struggle in math class. Conation, an ancient psychological concept whose dictionary definition refers to purposive striving, covers the range of motivational and volitional processes that human beings display. Motivational processes underlie the decision to pursue a goal; they are the wishes and desires that lead to intentions, in turn dictated by interest and experience. Volitional processes come into play after goals and intentions are formed; these processes reflect steps to implement goals, and ways of managing resources. Modern psychology has come to see motivation and volition as category labels for distinct conative processes.

In 1980 Ernest Hilgard wrote that the main agenda for modern scientific psychology ought to be to understand the processes underlying three central human functions—cognition (perception, memory, and the processing of information), affection, and conation. Indeed, since the beginning of the twentieth century, psychology in education has been peppered with programs of research on the qualities and characteristics of people that fit into one of these three functional categories. Intelligence, for example, is cognitive, impulsivity is affective, and self-concept is conative. Within conation, some well-studied processes influence commitments and are therefore considered motivational. One example is self-efficacy, a kind of personal capability belief. Other research examines processes that people use to protect commitments already formed—for example, self-monitoring and self-rewards. When these

processes occur once a commitment is made, they are volitional.

As early as the mid-twentieth century, theories began to identify the range of variables within and between categories that could be measured validly and reliably in persons. But despite much progress up to and past Hilgard's writing in 1980, more effort is needed to explain how the triad of human functions works together at the process level. Moreover, this research agenda is virtually unknown to those outside psychology, and laypeople are frequently unaware of how psychologists use these terms.

For some purposes, affective and conative processes have proven to be so interconnected that it makes little sense even to psychologists to separate them. One group of researchers, the Stanford Aptitude Seminar, invented the hybrid term, *affcon*, to reflect this viewpoint. Given the complicated sociocultural context in which schooling takes place today, it is hard to dismiss the importance for educators, parents, and counselors of understanding how changes in affect can influence conation and vice versa: Both play central roles in the willingness to work and quality of effort invested by students in academics.

Three examples serve to illustrate how the interplay between academic-intellectual processes and affcon processes affects objectives of educational practitioners, decision makers, and students. The examples reflect current issues as well as persistent problems.

### **Cognitive Engagement**

A school classroom is a social context offering many opportunities for students to be distracted from their work. At the same time, the organization of a classroom demands behavioral self-control. This paradoxical combination of opportunities and demands suggests the need for creative curricular experiences that engage students fully in classroom work, making them want to succeed. The concept of cognitive engagement is a prominent goal of classroom teaching, at virtually all levels of education.

Part of what new paradigms for instruction are about is providing teachers with a repertoire of strategies for promoting cognitive engagement. Modern education reform emphasizes success as its own reward, but encourages teachers to use other incentives to move students along. Activities and experiences grounded in students' own interests,

and assignments that require meaningful discussion of topics and material, help to promote cognitive engagement. Also supported by empirical research are inquiry teaching methods that make thinking explicit, and uncover hidden assumptions in content ranging from narratives to persuasive arguments. Research on teaching conducted between 1970 and the early twenty-first century makes it clear that students tune out in tired models of conventional teaching, where students listen and teachers talk.

Knowledge about which reforms and strategies work in different situations has been informed by evaluations of educational programs. Frequently, these demonstrate the insufficiency of seeking direct impact on learning outcomes such as achievement scores. Rather, achievement improves as a result of tapping into the affcon responses of students as they engage in and with schoolwork.

### **Student Responsibility**

A student who takes responsibility for learning is self-regulated and self-motivated, intentionally directing energy toward learning tasks. Self-starters have long reaped academic rewards. Research conducted between 1980 and the early twenty-first century has uncovered the attitudes, skills, and behavior that characterize self-regulated learners, and emphasized the important role played by self-regulation skills in schooling outcomes. Researchers have also designed programs to help weaker students acquire self-regulation knowledge and skills. Counselors and teachers can use such programs to teach students responsibility. Likewise, parents can model self-regulation and strategies for doing homework.

Self-regulation and personal responsibility involve affcon processes. Careful self-management is necessary when follow-through is in jeopardy; for example, when a student experiences boredom or perceives that a task will be difficult to perform. The effortful processes that mark volition come forward then, with the sense to "buckle down." Not all academic situations demand volitional control, however. In some activities in the curriculum, learning can seem to occur with no effort, almost automatically. When a person is in the affective state that Mihalyi Csikszentmihalyi called "flow," there is no need to drain volitional reserves.

Astute teachers and parents will listen and watch closely for evidence of emotional stress in school children, and encourage the highly motivated to

enjoy their time between work and play. Negative physiological as well as emotional changes can result from too much pressure on children in school. Although the ability to monitor and control emotions increases developmentally, some variation remains even among adults.

### Adaptive Teaching

An increasingly diverse population of students leads teachers to differentiate curriculum and instruction. Some common differentiation strategies have proven ineffective from an academic standpoint; for example, teaching to the bottom third of the class. There are also well-documented negative social consequences to other differentiation strategies, most notably the common practices of tracking and retention in grades. To accommodate individual differences in students, a teacher must do only good.

Some types of cooperative work groups, formed to reflect the heterogeneity of students within classes, produce positive affect outcomes: Students give and receive help from peers; they learn how to organize and manage due dates; the whole group incurs rewards when individuals contribute best efforts. But even effective grouping arrangements work best in short bursts of time; motivation and affect are buoyed by flexibility. In forming cooperative groups teachers should take into account students' affect and self-regulatory styles as well as their status characteristics and levels of achievement. The importance of considering the affect profile of students has historically been left out of adaptive teaching discussions and decisions.

Another important point to make about adaptive teaching is that good teachers have always addressed students according to attitudinal and work styles. For any given task, what a student presents in the way of interest and attitude, as well as prior knowledge, often dictates a particular explanation, example, or suggestion for improvement. Different explanations, examples, and suggestions will reach students with other interests or markedly opposite styles of behavior. Moreover, teaching adaptively means shifting with the student's own development. Hence, the teacher's dictum of "If you can't reach them one way, then try another" comes into play. Adaptive teaching not only requires a teacher to circumvent observed student weaknesses, but also to capitalize on strengths. When a student is removed from conventional instruction for compensatory purposes, there ought to be simultaneous efforts to

develop an aptitude for conventional instruction directly. It is, after all, to the regular classroom that many special program students eventually will return.

Despite the growing body of research on affective and conative processes in education, many programs remain disjointed, even when constructs overlap considerably. There are important theoretical issues still contested, including the need for distinctions between concepts as interrelated as motivation and volition, and the precise nature of the connections in Hilgard's trilogy of mental functions. Some highly regarded theorists, such as Richard Snow and Julius Kuhl, offer sophisticated and situated (context-dependent) models, models that suggest the need for new language as well as new methods of practical assessment and clinical treatment. As the twenty-first century continues, work will advance in these directions, ultimately producing entirely different ways of thinking about affect and conation in education.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; INSTRUCTIONAL STRATEGIES.

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LYN CORNO

## ETHNICITY

As the student population in the United States continues to become more ethnically diverse, the central challenge facing education is how to provide schooling experiences that maximize the participation and academic success of all students. The representation of ethnic minority students rose from 22 percent in 1972 to 38 percent in 2000, and is expected to increase dramatically through the year 2020, when more than two-thirds of the total public-school stu-

dent population will be African American, Asian American, Hispanic, or Native American. Meanwhile, comparison studies continue to show a consistent gap in school achievement for various ethnic school populations.

Derived from the Greek term *ethnos*, meaning *people*, ethnicity refers to a sense of membership in and identification with a distinct group in which members perceive themselves, and are perceived by outside observers, to be bound together by a common origin, history, and culture. Cultural features that define an ethnic group include shared expectations for behavior, such as family roles, health practices, and work and recreational activities; shared values, such as religion, politics, and concepts of achievement, beauty, time and space; and shared symbols, such as language, art, music, and modes of dress. Although broad ethnic categories such as African American, Asian American, Hispanic, Native American, and white are used conventionally in the United States, there are, in fact, important national, linguistic, religious, tribal, regional, and generational differences within each of these broad categories.

### Empirical Approaches: Cross-Cultural and Cultural Process

In the social sciences, two main approaches, distinct in their assumptions, foci, and methodologies, are used to investigate the role of ethnicity and culture in education: a *cross-cultural* approach and a *cultural-process* approach. In a cross-cultural approach, ethnicity and culture are viewed as separate from human behaviors. Cross-cultural researchers focus on the influence that ethnicity and culture have on human behavior. Alternatively, the cultural-process approach treats ethnicity and culture as interdependent with social processes; in other words, ethnicity and culture influence human interactions, and, at the same time, are constructed within those interactions.

Cross-cultural researchers tend to view ethnicity as relatively stable and fixed, while cultural-process researchers tend to view ethnicity as more dynamic with its content and boundaries continually under revision and redefinition. Cross-cultural researchers usually employ quantitative methodologies, such as survey questionnaires and experiments, with a focus on the attributes of individuals. Cultural-process researchers almost exclusively utilize qualitative methodologies, such as observations and interviews, with a focus on actions and interactions in context. For

example, in studying parent involvement, a researcher using a cross-cultural approach might conduct a survey on a large sample of families from different ethnic groups to assess group differences in the amount of time parents spend on a variety of activities related to their child's schooling. A researcher using a cultural-process approach might interview parents from several ethnic groups on what it means to be involved with their child's school, while also engaging in an observational study of the interactions between students and parents, in order to detail the processes through which the parents engage with their children in their schoolwork. Ultimately, the combination of both a cross-cultural approach and a cultural-process approach is beneficial for a more in-depth understanding of the role of ethnicity and culture in education.

### The Achievement Gap

The results of numerous cross-cultural studies indicate that many ethnic minority students are not faring well in U.S. schools. Ethnic group differences are found in school grades, standardized achievement tests, course enrollment, grade retention rates, high school graduation, and level of educational attainment. The achievement gap appears in the early school years, increases during the elementary school years, and persists through the secondary school years. While achievement gaps narrowed between 1971 and 1999, the average scores of African-American and Hispanic students have remained significantly below those of non-Hispanic white students.

Rates of grade retention tend to be higher for African-American and Hispanic students (particularly males), when compared to other groups. High school dropout rates tend to be highest for Hispanic students, followed by African-American students. African-American males tend to be disproportionately represented in special education classes. With the exception of Asian Americans, ethnic minority students are not adequately represented within programs for gifted and talented education (GATE).

In general, Asian-American students fare well academically, displaying high levels of performance on standard achievement indicators. With respect to the educational attainment level of students, high school graduation rates since 1971 have greatly increased overall for ethnic minority youth, however the rates in 2000 were lower for Hispanic and African-American students than for Asian-American

and white students. Asian-American students, in general, show higher college graduation rates, as well as higher graduate degree attainment, than white students. It may be noted that for some of the cross-cultural studies, comparisons were not made across all of the major ethnic groups due to the relatively small sample sizes of Native American students and, in some cases, Asian-American students.

A number of issues require consideration in light of these general findings of ethnic group differences in school achievement. First, many studies do not account for socioeconomic differences, such as family income, parental employment and education, when examining ethnic groups. Given that the average socioeconomic status (SES) differs substantially among ethnic groups, the failure to disentangle ethnicity and SES can lead to erroneous interpretations. SES is a significant predictor of academic success, and ethnic minority families are disproportionately represented in the lower SES bracket. Moreover, schools with the highest proportion of low-income students are more likely to have fewer qualified teachers, have substantially fewer resources (computers, enrichment materials), and be located in a neighborhood with fewer informal educational resources (such as museums and libraries). Economic pressures at home, compounded by poor neighborhoods and poor schools, makes the separation of socioeconomic factors from ethnic cultural factors even more difficult. Thus, it is imperative for future studies to examine comparability as well as account for the disparities among ethnic groups with respect to SES levels.

Many educators and policymakers often perceive technology as a promising tool for leveling inequities in educational achievement. However, studies show that children who come from lower-income families (which are disproportionately ethnic minority families) have fewer computers in the home. The provision of updated educational technology within schools is uneven at best, and this, combined with unequal access within the home, limits such computer-based activities as homework completion, research, word processing of reports, and presentations.

Second, while many comparative studies typically focus on the major ethnic groups as broad groups, it is important to acknowledge that individual differences within each ethnic group are substantial. Such categorization may give the illusion of overall cultural similarity and obscure substantial

national, tribal, or other subgroup differences. For example, the broad category of Asian Americans is comprised of diverse national backgrounds, including Cambodian, Chinese, Filipino, Korean, Japanese, Vietnamese, Thai, Khmer, and Asian Indian. Additionally, much variation within an ethnic group is likely to exist with respect to variables such as gender, social class, generation/immigrant status, and level of assimilation.

Studies that examine differences within an ethnic group are useful for a variety of reasons. First, within-group studies may serve to weaken the uniform, and often stereotyped, views associated with particular ethnic groups. Second, studies of within-group differences in which the subgroups differ on various demographic variables would be helpful in understanding the role that variables such as generation/immigration status, level of assimilation, language, and socioeconomic status may play. Third, within-group studies may provide a further understanding of the cultural processes underlying achievement-related outcomes.

### **Theoretical Models Explaining the Achievement Gap**

Researchers have attempted to explain the consistent achievement gap among ethnic groups from a number of different perspectives. The explanations offered may be grouped into three theoretical models. The first, a *cultural deprivation*, or *deficit*, model, explains the poor performance of ethnic minority students as the result of an impoverished and restricted home life. The underlying theory is that “culturally deprived” or “socially disadvantaged” students do not achieve because they lack a cognitively stimulating environment. Research may identify, for example, a lack of parental support, a low value placed on education, a language-poor environment, or even low intellectual capacity. The use of whites as the norm against which other ethnic minority groups are compared may perpetuate a deficit model in which ethnic minority groups are perceived as second-rate to the majority group.

The second theoretical model, the *cultural difference* model, points to differences in values, expectations, languages, and communication patterns between teachers and students—or between schools and families—as a source of difficulty for ethnic minority students. The underlying theory is that the social organization, learning formats and expectations, communication patterns, and sociolinguistic envi-

ronment of schools are incongruent with the cultural patterns of different ethnic groups, and therefore limit the opportunities for student success. For some researchers in this area, the important differences exist at the level of interpersonal communication, where teachers and students are unable to fully understand each other. Important communicative differences may be identified at many levels, including formal language (e.g., English versus Spanish), conventions for interacting (e.g. distance between speakers, acceptable physical contact, and turn-taking rules), preferences for rhetorical style (e.g., the use of emotion in persuasion), and storytelling patterns.

A number of studies have also suggested that differences between social worlds, such as home and school, can be difficult for ethnic minority students to negotiate. For example, where U. S. public schooling tends to encourage independence, with competition and rewards for individual achievement, some ethnic groups may tend to encourage interdependence among members, with rewards for collaborative effort. Socialization practices also vary across ethnic groups, so that, for example, the parenting styles acceptable within one ethnic group may vary significantly from the parenting styles valued by schools and educators. Likewise, expectations for the role of parents in education may differ across ethnic groups, so that while some teachers expect active parent involvement at school, parents’ conceptions of involvement may be altogether different. Additionally, some parenting practices may focus on social and observational learning and apprenticeship examples, and thus favor visual rather than auditory information processing. Insofar as early learning experiences may vary systematically by ethnic group, ethnicity can have important consequences for learning in (and out) of school.

Some researchers argue that the cultural difference model presumes ethnic differences to be inherently problematic when, in fact, it is the perception of differences and how people act on such perceived differences that is an important source of difficulty for minority students. These researchers typically utilize a cultural-process approach and focus on social interactions. Barriers to school success are identified by examining how students, teachers, and parents understand patterns of language use and socialization. In any case, the cultural difference model has made important contributions to understanding the relationship between ethnicity and school

achievement by pointing out that children from different ethnic groups may vary in culturally patterned ways, some of which are relevant for educators.

A third theoretical model, which can be termed *sociosystemic*, moves outside the classroom in an effort to identify the social, economic, and political forces that contribute to the achievement gap. Researchers have come to recognize how differences in perceived economic opportunity affect the level of school engagement for ethnic minority students. For example, when students' families, peers, and community members hold beliefs that economic and social opportunities are limited, regardless of school achievement, students are far less likely to engage in meaningful ways with formal educational activities. Such beliefs may lead to a youth's active resistance to school or a "disidentification" with schooling overall (i.e., when students are apathetic or disaffected toward schooling). Some studies have identified patterns of differences within ethnic minority groups, where school achievement varies according to the conditions of one's minority status. Specifically, members of *voluntary* minority groups, including those who immigrated for improved economic opportunity, often do better in school than members of *involuntary* minority groups, such as those who were colonized or whose residency was forced (e.g., through slavery). Research utilizing a sociosystemic model has also identified schools as the places where societal pressure to assimilate is most keenly perceived—and often resisted. Many researchers and practitioners, for example, have noted that student peer groups link school achievement to the acceptance or rejection of various identities.

Each of the theoretical models on the achievement gap—cultural deficit, cultural difference, and sociosystemic—corresponds with specific policies (federal, state, regional, district, school), curricula, and teaching practices seeking to narrow the gap. Within the cultural deficit model, educators are encouraged to intervene as early as possible in children's development. Many federal and state programs, such as Head Start, focus on the compensation of deficits. From the cultural difference model, schools and teachers are encouraged to make better use of the knowledge and practices of diverse cultures and to form home-school connections. The various forms of multicultural education also derive from a basic cultural difference model, as do some bilingual education programs. Also included in this model are recent efforts to develop theories and

practices of *culturally-relevant pedagogy*, an approach to teaching that modifies both curriculum and communication to reflect the diverse cultural practices of students. The cultural difference model appears to decrease the pressure on children to conform to mainstream culture standards, yet increase the pressure on teachers and schools to transform their practices to better reflect the diversity that is present around them.

For those with a sociosystemic perspective, repairing the achievement gap demands a commitment to an ongoing examination of the social and political systems, along with direct action to counter systemic bias. Few formal policies or programs with this model exist, although *critical theory* and *critical pedagogy* are actively promoted within this perspective. Critical theory seeks to make systemic injustice visible and critical pedagogy encourages teachers and students to understand and contend with stereotyping, racism, sexism, and other forms of prejudice.

Because of the tremendous variation within any ethnic group, it would be inappropriate to make generalizations about the needs and abilities of any individual student based solely on his or her membership in a given ethnic group. That said, there is no doubt that variation does exist along several lines, and educators should be aware of this. Perhaps most important of all, members of the teaching and learning community should be reflective of their own perceptions and actions with respect to all learners. It must be recognized that just as schools themselves vary, so do the students within them. Schools are the spaces where a great deal of a youth's development occurs, and on multiple levels, including academic achievement, identity, and social competence. In the end, ethnicity and culture must become part of the face of education in order to reflect and better serve our youth as they encounter an increasingly diverse world.

*See also:* LITERACY AND CULTURE; MULTICULTURAL EDUCATION; POVERTY AND EDUCATION; RACE, ETHNICITY, AND CULTURE.

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## GENDER EQUITY AND SCHOOLING

The 1992 publication of the landmark report *How Schools Shortchange Girls*, by the American Association of University Women (AAUW) Educational Foundation, brought gender equity to the forefront of educational reform. Since then, the focus of discussions about quality education for all students has shifted from *equality* to *equity*. In the context of gender, equitable education appropriately addresses the needs of both girls and boys rather than assuming that those needs are identical. Thus, equity in education provides equal opportunities for reaching a shared standard of excellence. Simply defined, gender equity in education is the absence of gender differences in educational outcomes.

Researchers struggling to identify the origins of gender differences have examined a range of theories, including biological, psychoanalytic, social learning, and cognitive developmental approaches to gender differences. While there has been ongoing debate about the role of biology as a source of cognitive differences, educators agree that changes in educational outcomes must focus on the psychosocial aspects of behavior. Regardless of the specific causes of gender gaps, schools have a mission to ensure that all students can fully participate in and experience educational success. While acknowledging that individual differences within each gender are substantial, this analysis will focus on girls and boys as aggregate groups in an examination of similarities and differences in schooling experiences and outcomes. These differences will be reviewed in relation to mathematics, science, humanities, technology, and extracur-

ricular activities, including differences in both attitudes and outcomes. Except where noted, the information presented here is based on data from public schools in the United States, for kindergarten through twelfth grade. Statistical findings reported are based primarily upon results from a number of large-scaled studies and reports, such as those of the American Association of University Women, the U.S. Department of Education, and the National Center for Education Statistics.

### Gender Equity Pertains to Boys and Girls

Because much of the literature regarding gender in education has focused on areas where girls are underserved, some have argued that gender equity appeared to pertain to girls only. Near the turn of the new millennium, however, a few authors brought attention to the education gender gap for boys, showing that the national phenomenon of male underachievement has been nearly invisible in the gender-equity literature. Gender equity is not “for girls only,” and improvement for one gender should not imply a disadvantage for the other.

### Early Behavioral Outcomes

Girls and boys appear to have similar types and amounts of opportunities to help them prepare for elementary school. For example, equal numbers of girls and boys are enrolled in center-based preschool programs and receive equivalent amounts of literacy activities at home. Preschool girls perform higher on tests of small motor skills than boys, and they show fewer signs of developmental difficulties in areas such as physical activity, attention, and speech. Boys in the early grades are more likely to be identified as learning disabled, to be tracked into remedial and special education classes, to be diagnosed with attention-deficit disorder, to be involved with crimes and violence on school property, to repeat a grade, and to be suspended from school. Subsequently, boys are more likely to drop out of school altogether. Girls, on average, receive higher grades than boys in all subjects beginning in the early grades—a trend that continues throughout middle and secondary school.

### Classroom Environment

Aspects of the classroom environment have been found to foster and/or reinforce gender biases. Often unintentionally, many teachers exhibit gender biases when interacting with students. For example, teachers generally give more attention to boys than to

girls. Ironically, this is partly caused by the fact that girls tend to be better behaved in the classroom and more attentive to assigned tasks. Teachers’ attention is often consumed by boisterous or aggressive behaviors more typical of boys. Teachers also tend to give less feedback (positive or negative) to female students. Without such feedback, girls may be deprived of valuable opportunities to evaluate their own behaviors and ideas and to learn to cope with constructive criticism. Boys, on the other hand, when reinforced for their boisterous behaviors, may fail to learn self-control, listening skills, and respect for others.

Classroom materials may also serve to reinforce gender biases in the schools. Although editors of textbooks and other instructional materials have made greater efforts to include women since 1992, female characters continue to play a smaller role than male characters in classroom materials. Moreover, when female characters are represented, they are often shown in stereotypical roles that reinforce gender biases.

### Attitudes

Among the core academic subjects, some are considered typically “male,” and others “female.” In spite of increased female enrollment in mathematics and science courses, ideas persist that these subjects are for boys, while the humanities and social sciences are for girls. Students often act on these stereotypes in class activities by self-selecting into groups and roles according to gender norms. In science classes, for example, boys often dominate laboratory equipment, controlling hands-on experiments while girls observe and take notes. Similarly, when boys and girls work together on computers, boys tend to sit where they can more easily view the monitor and take control of the mouse. Also, computer usage is typically dominated by boys during after-school activities.

Differences remain in boys’ and girls’ attitudes toward academic subjects. On average, girls report liking mathematics and science less than boys, and having less confidence in their ability to succeed at these subjects. Girls also rate themselves lower in computer abilities than boys, and are far more likely to suffer from *math anxiety* or *tech anxiety*. They tend to perceive these subjects as being less useful in their lives, which may diminish their achievement motivation in these areas. Hence, fewer girls plan to choose careers in mathematics, science, or technology. Additionally, whereas boys tend to believe their

success in academics is the result of ability, girls tend to attribute academic successes and failures to luck and other external factors. This attribution of success to factors other than effort may lead some girls to feel “helpless,” particularly in subjects they perceive as male domains.

### **Mathematics and Science**

Encouragingly, the gender gap in mathematics and science course enrollment is closing. At least as many girls as boys are now enrolling in algebra, geometry, precalculus, calculus, trigonometry, and statistics/probability courses. Moreover, girls receive higher grades than boys, on average, in math classes (as in all academic subjects). Nevertheless, girls consistently lag behind boys in scores on standardized mathematics assessments, including the mathematics sections of the Preliminary SAT (PSAT), the SAT, the National Assessment of Educational Progress (NAEP), and mathematics Advanced Placement (AP) exams. Such “high-stakes” exams are critical factors in determining college admission and scholarship awards, and lower scores can therefore limit career opportunities.

Gender differences found in science are similar to those in mathematics. In high school, girls are more likely than boys to take biology and chemistry, while about equal numbers of girls and boys enroll in engineering and geology. Physics, however, continues to be a male-dominated subject. Girls also take fewer AP science exams than boys, and they receive proportionately fewer top grades.

### **Humanities**

Humanities, an area in which female students typically excel, receives little attention in the research about gender in education. With the shrinking of gender gaps in math and science, however, the humanities are quickly becoming an area in which the most substantial gender differences can be found. More girls than boys enroll in English, sociology, psychology, foreign languages, and fine arts. Particularly notable because of its role in standardized testing is the subject of English. Girls consistently outnumber boys in English classes, and significantly outperform them in most reading and writing assessments, with the notable exception of the AP English exam.

### **Technology**

Many educators, administrators, and policymakers advocate technology as a tool for empowering other-

wise disadvantaged groups, thus leveling inequities in educational achievement. Nevertheless, a number of disturbing gender inequities have already been observed in educational technology use. For example, female enrollment in computer science courses lags significantly behind that of males. Moreover, only a small percentage of the students taking the AP exam in computer science (17% in 1995 and 1996) is female. Many more men than women are computer educators, and women remain greatly underrepresented in computer technology careers. Such disparities are of particular concern because technology skills are increasingly crucial for high-skill, well-paying jobs.

Several hypotheses have been suggested to explain the gender gaps in technology. Social and parental expectations, along with teacher biases, are commonly suggested reasons. Differential access to computers is also thought to play a significant role in creating gender disparities. It is often reported that parents are more likely to buy computers for boys than girls. Moreover, even when given equal access, boys use computers at home more frequently than girls. Additionally, computer software may appeal more to boys than to girls. Computer-related toys and games, designed mostly by males, are marketed primarily to boys and are typically found in the “boys’ aisles” in toy stores. Games, which play a significant role in computer use, are dominated by images of competition, sports, and violence, which typically appeal more to males. These games, along with other technology-based materials, may help to perpetuate gender stereotypes.

### **Extracurricular School Activities**

Girls and boys tend to participate in different types of extracurricular activities, representing traditional areas of gender dominance. Females, for example, are more likely than males to participate in performing arts, belong to academic clubs, work on the school newspaper or yearbook, or participate in the student council or government. Females are also more active than males in community service. Males, on the other hand, are more likely than females to play on athletic teams. While girls’ rates of participation in team sports have increased since 1972, equity has not been achieved.

The differences in boys’ and girls’ choices of extracurricular activities may have important consequences. For example, sports participation has been linked to higher academic achievement as well as

greater leadership capacity, better overall health, higher self-esteem, and more positive attitudes toward school. On the other hand, participation in non-sports-based extracurricular activities has also been found to build self-esteem, leadership, and social skills; to improve general health; and is associated with higher mathematics and reading test scores.

### Individual Differences

It is important to acknowledge that the gender differences described above are based on average group scores. Girls (and boys) are not a uniform group and their needs are certainly not singular. In fact, large differences exist within each gender across different racial, ethnic, and socioeconomic groups. For example, African-American girls, despite the existence of both racial and gender discrimination, have a higher self-esteem, healthier body image, and greater social assertiveness than their white female counterparts. These girls also perform better on many academic indicators than their black male counterparts. Similarly, Latino girls score higher than Latino boys in mathematics by the eighth grade, and in science by the twelfth grade—contradicting patterns for girls on the whole. However, Latino females also have the highest dropout rate of all groups of girls, with one in five leaving school by the age of seventeen.

Race, ethnicity, and socioeconomic status (SES) appear to play a larger role than gender in determining enrollment in remedial and special education classes; and participation rates are lower in all extracurricular activities for low-SES students. Furthermore, students in ethnically diverse and low socioeconomic schools have less access to technology. Finally, regional differences may also contribute to gaps in educational outcomes. Girls in rural southern regions of the country consistently perform below girls from rural and nonrural areas in other regions. Greater understanding of gender, racial, ethnic, regional, and socioeconomic class differences and needs can only improve U.S. schooling. Building on all students' cultures, interests, and ways of knowing can make schooling experiences meaningful to their lives and useful for addressing social problems. At its core, educational equity seeks to enrich classrooms, expand choices, and widen opportunities for reaching a shared standard of excellence for all students.

*See also:* DEVELOPMENTAL THEORY, *subentry on* COGNITIVE AND INFORMATION PROCESSING; GEN-

DER ISSUES, INTERNATIONAL; MORAL DEVELOPMENT; MOTIVATION, *subentry on* INSTRUCTION; SINGLE-SEX INSTITUTIONS; TITLE IX.

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## INDIVIDUALIZED INSTRUCTION

The improvement of instruction has been a goal of educators as far back as the teachings of the Greek philosopher Socrates. Although there are a wide variety of approaches, in most cases instruction can be characterized by the following tasks: setting objectives, teaching content based on these objectives, and evaluating performance. This formula is indeed the most common; however, there have been many advocates of alternative approaches. Among the alternative approaches there is a focus on a more individualized approach to instruction, where the traits of the individual learner are given more consideration. Each approach to individualizing instruction is different, but they all seek to manipulate the three following fundamental variables:

- **Pace:** the amount of time given to a student to learn the content
- **Method:** the way that the instruction is structured and managed
- **Content:** the material to be learned

### **Pace**

There are two basic extremes when the pace of instruction is considered. The first is when someone other than student, usually a teacher or instructor, controls the amount of time spent learning the material. In this case specific due dates are defined before instruction begins. This is currently the predominant model in most educational systems. The opposite extreme would be if the learner had exclusive control over the pace of instruction, without a time limit. Between these two extremes are situations where control of the pace of instruction is shared or negotiated, not necessarily equally, by the teacher and learner.

### **Method**

As theories of learning and instruction develop and mature, more and more consideration is given to the way in which learning occurs. In an attempt to account for the way that students learn, instructors may apply a combination of theories and principles in preparing instruction. This can influence whether instruction is designed for one homogenous group, or is flexible, in anticipation of individual differences among learners. In the majority of cases, instruction is designed for the average learner, and is customized ad-hoc by the teacher or instructor as needed once instruction begins. This type of instruction, although it does give some consideration to individual differences among learners during instruction, does not fall into the typically accepted definition of individualized instruction. For instruction to be considered individualized, the instruction is usually designed to account for specific learner characteristics. This could include alternative instructional methods for students with different backgrounds and learning styles.

To help clarify this point, the instructional method used can be considered in terms of extremes. In the first extreme, one instructional method is used for everyone. Terms like *inclusion* and *mainstreaming* have been used to describe this first case. In the second extreme, a specific instructional method is used for each individual. Between these extremes lie situations where students are arranged into groups according to their characteristics. These groups can vary in size, and the instructional method is tailored to each group.

### **Content**

Perhaps the least frequently modified component is the actual learning content. However, it is possible to vary the content taught to different learners or groups of learners. Both "tracking" and "enrichment" are examples of customizing instructional content. A renewed movement toward learner-centered principles in education has given this component more consideration in the 1990s. It has become possible to find examples of instructional settings in which students define their own content, and pursue learning based on their own interests. In most cases, however, this opportunity is limited to high-achieving students. In terms of extremes, content can be uniform for everyone, or unique to each individual. Between these extremes lie cases where the content can be varied, but only within a prede-

finer range. The range of activities available to the learner is an indicator of how individualized the content is in an instructional setting.

### Examples of Individualized Instruction

There are many examples of instructional approaches that have modified some or all of these three components. In all of these examples, the goal was to improve the instructional experience for the individual learner. Some of the most historically notable approaches are discussed below. Within each example both the benefits and criticisms of each approach are discussed.

**Personalized System of Instruction.** Introduced in 1964 by Fred Keller, the Personalized System of Instruction, or the Keller Plan, is perhaps one of the first comprehensive systems of individualized instruction. Keller based his system on ten accepted educational principles (McGaw, p. 4):

1. Active responding
2. Positive conditions and consequences
3. Specification of objectives
4. Organization of material
5. Mastery before advancement
6. Evaluation/objectives congruence
7. Frequent evaluation
8. Immediate feedback
9. Self-pacing
10. Personalization

None of these ten principles should be considered unique, as they all can be easily found in other more traditional educational settings. Rather, it is the components of the Keller plan—based on these ten principles—that makes the Keller Plan somewhat different: self-pacing; unit mastery; student tutors; optional motivational lectures; and learning from written material. It is the first component, self-pacing, that is the most obvious attempt at individualizing the instruction. From the second component, unit mastery, it can be seen that the content does not vary, as the unit content is fixed. To illustrate the static nature of the content, Mike Naumes describes the basic design of a course using Keller's personalized system of instruction:

breaking the material of the course into several units. . . . dividing the material into units one to two weeks long. . . . [and] as each unit of material is covered, specific

learning objectives are given to the students. These state exactly what a student must know to pass a unit quiz. (p. 2)

The last three components indicate that the method of instruction does vary slightly from individual to individual. Although all students learn from written material and student tutors, the motivational lectures are optional. Making these lectures optional does constitute some flexibility in terms of instructional method, albeit extremely limited. Fundamentally, it is the self-pacing that more or less stands alone as the individualized component of this instructional system.

Proponents of the Keller Plan cite many benefits, including better retention and increased motivation for further learning. At the same time, there are others with criticisms of the Keller Plan such as the following: limited instructional methods, high dropout rates, and decreased human interaction. The debate over the effectiveness of Keller's Personalized System of Instruction, with its advantages and disadvantages, raises fundamental questions about the nature of self-contained, self-paced learning. There are indeed opportunities for designing instruction that lend themselves to the Personalized System of Instruction approach. This would apply especially to cases where enrollment is high, course material is standardized and stable, and faculty resources are scarce. On the other hand, when there is not a shortage of faculty, or the class size is not large, the course would be better taught with more conventional methods, yet still based on sound educational principles. Where the line is drawn on the continuum between these two extremes is a matter of opinion, and should be based on the context in which the instruction is to take place. It would be inappropriate to claim that one of the extremes is completely right, and the other wrong, given the vast number of studies and evaluations that support either side.

**Audio-Tutorial.** Audio-Tutorial is a method of individualized instruction developed by Samuel N. Postlethwait in 1961 at Purdue University. His goal was to find an improved method of teaching botany to a larger number of college students and to effectively assist the students who possessed only limited backgrounds in the subject. The development of an Audio-Tutorial program requires a significant amount of planning and time by the instructor. Although there is some room for modification for each specific program, the general principles remain the same. Students have access to a taped presentation

of a specifically designed program that directs their activities one at a time. The basic principles of Audio-Tutorial are “(1) repetition; (2) concentration; (3) association; (4) unit steps; (5) use of the communication vehicle appropriate to the objective; (6) use of multiplicity of approaches; and (7) use of an integrated experience approach” (Couch, p. 6).

The major benefits of Audio-Tutorial are that “students can adopt the study pace to their ability to assimilate the information. Exposure to difficult subjects is repeated as often as necessary for any particular student” (Postlethwait, Novak, and Murray, p. 5). In addition to taking more time if they wish, students can also accelerate the pace of their learning. Other benefits are that students feel more responsible for their learning, and more students can be accommodated in less laboratory space and with less staff.

Some of the major criticisms that are common to Audio-Tutorial courses were illustrated by Robert K. Snortland upon evaluating a course in graphics design. The primary criticism concerns the claim of responsibility. It seems that some students respond to the responsibility placed upon them, while others do not. There was a problem with the initial dropout rate, which seemed to be explained by the lack of willingness of some students to take on the amount of responsibility that was required in order to complete the course. Snortland advised that “since many freshmen students are not ready for additional self-discipline required of them in the A-T format, the choice of either a structured approach or an individualized approach should always remain open” (p. 8). Many other criticisms of Audio-Tutorial courses are concerned with teacher control. The instructor dictates all of the material including the learning and feedback procedures. The criticism is that this is a severe form of teacher control over the student.

Like the Keller Plan, Audio-Tutorial allows the individual student to determine his or her own pace, and the content is fixed. Unlike the Keller Plan, however, there are more instructional delivery methods available when designing the course. Yet the locus of control remains with the instructor in the Audio-Tutorial as well.

**Computer-Assisted Instruction (CAI).** Most proponents of individualized instruction saw the computer as a way to further improve the design and delivery of individualized instruction—now in an electronic environment. With the advent of the

computer came the potential to deliver individualized instruction in a more powerful way. This potential was anticipated long before the proliferation of the home computer. John E. Coulson wrote in 1970: “A modern computer has characteristics that closely parallel those needed in any educational system that wishes to provide highly individualized instruction” (p. 4). He also noted the specific benefits that the computer could offer (p. 5):

1. “It has a very large memory capacity that can be used to store instructional content material or . . . to generate such material.”
2. “The computer can perform complex analyses of student responses.”
3. “The computer can make decisions based on the assessments of student performance, matching resources to individual student needs.”

Although there were many anticipated benefits to using the computer to deliver instruction, in practice, CAI has been heavily criticized for its hidden side-effects. These are nicely articulated by Henry F. Olds:

Learning is in control of some unknown source that determines almost all aspects of the interactive process. To learn one must suspend all normal forms of interaction and engage only in those called for by the program. Learning is an isolated activity to be carried on primarily in a one-to-one interaction with the computer. Normal inter-human dialogue is to be suspended while learning with the computer. Learning involves understanding (psyching out) how the program expects one to behave and adapting one’s behavior accordingly. One must suspend idiosyncratic behavior. Learning (even in highly sophisticated, branching programs) is a linear, step-by-step process. In learning from the computer, one must suspend creative insights, intuitions, cognitive leaps, and other nonlinear mental phenomena. (p. 9)

Olds even offered some solutions to these problems, indicating that “time on-line needs to be mixed with plenty of opportunities for human interaction” and that computer should allow people to “jump around within the program structure” (p. 9).

CAI became the forerunner in individualized instruction during the 1980s and early 1990s, as the

home computer became more powerful and less expensive. The changes that the computer environment helped to make were predominantly a change in the delivery mechanism of individualized instruction, rather than a fundamental change in purpose or method. In a sense, the computer, especially the home computer, offered a convenience that other delivery mechanisms lacked. This convenience was accelerated with the proliferation of the Internet in late 1990s. Starting as an extension of computer-based instruction, online education became increasingly popular and eventually began to supplant CAI as the predominant form of individualized instruction.

**Distance education.** A surge in the number of non-traditional students attending college in the 1990s, combined with the technological potential of the Internet, has caused a renewed effort to deliver instruction in a nontraditional fashion. Accessibility and convenience—not research—are the primary driving forces in this movement toward instruction in the form of online education. When reviewing more than 200 articles on online instruction over the 1990s, James DiPerna and Robert Volpe found that only one article directly addressed the impact of the technology on learning. Partnerships between businesses and institutions of higher learning have arisen to address the increased need for continuing education.

Whether it is more effective or less effective than traditional education seems less a concern. In many cases, the audience addressed is nontraditional, and they have limited access to traditional education. Additionally, many students who could otherwise attend brick-and-mortar institutions are choosing online education for the convenience. In other words, what was established initially due to necessity has now expanded as students choose this route because of its convenience. The rate of expansion of online education has accelerated to a point where the general feeling among institutions of higher learning is of willing participation. In terms of pace, method, and content, there is a large variety of competing approaches to distance education, and no dominant model has emerged. Like previous iterations of individualized instruction, it is usually the pace of instruction that most often varies. The content is still fixed in most cases, as is the method (predominantly via the Internet).

## Final Issues

Individualized instruction comes in many forms, all of which seek to improve instruction in some way. As can be seen in the examples above, alternative instructional approaches most often vary the pace and method of instruction, but not the content itself. The content is usually consistent with traditional instruction, although it may be segmented differently.

Other benefits are also significant, but not as consistent among approaches. Each approach has its own set of prescriptions, and each has been heavily criticized—yet that is to be expected. Even now, individualized instruction in its various forms is still a relatively recent innovation, and will remain under scrutiny until several criticisms are accounted for.

Perhaps the most profound criticism comes in the article “Individualization: The Hidden Agenda,” by Ronald T. Hyman. He was concerned with the latent functions of individualization generally. In the push for individualization, the most common approach is to divide the subject matter up into segments and teach it at a self-taught level, but Hyman warns that “Segmented Junk Is Still Junk” (p. 414). There is no concern for what really is the problem, and that is the subject matter itself. He claims that individualized instruction typically does not alter the subject matter based on the needs of the student. Without doing this, there is a compromise of individualized instruction.

In summary, individualized instruction has the potential to improve instruction by varying the pace of instruction, the instructional method, and the content. Most approaches allow for self-pacing, yet variation in method and content is rare, and when it does occur, is usually very limited. As of the early twenty-first century, there are no indications that this trend will change in the immediate future, although as the research base in this area increases, major improvements are certain to come.

*See also:* INSTRUCTIONAL STRATEGIES; TECHNOLOGY IN EDUCATION, *subentry on* CURRENT TRENDS.

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## INDIVIDUAL WITH DISABILITIES EDUCATION ACT (IDEA)

See: PEOPLE WITH DISABILITIES, FEDERAL PROGRAMS TO ASSIST.

## INDUSTRIAL ARTS EDUCATION

See: TECHNOLOGY EDUCATION.

## INFANT SCHOOLS IN ENGLAND

Infant schools in England provide publicly funded education for children age five to seven and repre-

sent the first level of compulsory education in England. Infant schools and junior schools are often housed together in primary schools. Together, they furnish education to children until they reach eleven years of age. As of 1998 there were 18,230 primary schools in England providing full-time education for almost 4 million children. Twelve percent of these schools were infant schools, providing children with two years of education only. All infant schools educate children age five to seven, but the traditional infant school approach to education has influenced educational programs for younger and older children.

Children enter infant schools shortly after their fifth birthday, and it is here that they learn to manipulate numbers, read, and write. Traditional infant schools offer an informal education using child-centered techniques. They encourage hands-on manipulation, group and individual learning, and learning through play. Infant schools have been characterized as progressive, child-centered, open and exploratory; they educate children in a way that recognizes their development from a holistic perspective.

Classes are typically vertically grouped to accommodate children age five through seven. Class size may be as large as forty children. Infant schools use an open classroom approach where children move freely from indoor to outdoor environments. The teachers' role is one of facilitation; he or she (usually she) works individually with students or with small groups of students and provides students the opportunity to choose from a range of options appropriate to their developmental level. Infant schools utilize an integrated day, where children pursue various interests or themes without rigid time periods.

Infant schools have a rich conceptual heritage. Their approach draws on the ideas of Friedrich Froebel, who emphasized the importance of play and object in learning; Maria Montessori, who emphasized self-correcting play and an individualized pace in learning; John Dewey, who characterized the community of the school and emphasized integration among subject areas; and Jean Piaget, who supported a developmentally-sensitive approach to learning and advocated hands-on exploration of materials.

Most infant schools encourage children's choice. For example, children typically choose where

to sit and whether they would like to work individually or with peers. Infant schools permit freedom of movement and conversation, encouraging children's natural curiosity and exploratory tendencies.

Infant school teachers are trained to understand the interrelation between social, emotional, and intellectual development, and accommodate children's individual variability within these developmental domains. Infant school teachers are expected to acknowledge the immaturity, innocence, and lack of self-control of young children, employing oblique, indirect strategies toward discipline. Teachers are expected to demonstrate pleasantness, affection, and level-headedness toward misbehaving children. For example, when a child misbehaves, it is more typical for a teacher to chide, "Someone's being silly" rather than scold, "Don't do that!"

### A History of Infant Schools

Robert Owen established the first infant school in 1816 in Scotland. His goal was to shield children from the effects of poverty. This school was designed to provide children with a pleasant school environment where they could think about practical problems and experience little punishment. Teachers encouraged children to help each other, dance, sing, and play outside.

In nineteenth-century England, many mothers worked outside of the home. Forty-five percent of children under the age of five were enrolled in school. Consistent with Owen's objectives, infant schools aimed to protect children and promote a better society. In 1870 the official age for school entrance was set at five, but infant schools accepted poor children of two to seven years, space permitting. During this period, the government imposed standards for children to attain so that children would be prepared to enter school (first standard) at age six. When these standards were relaxed at the end of the nineteenth century, infant schools began a new period of development that strengthened their child-centered ideology.

An early step in this direction was an 1893 government circular encouraging educators to consider all facets of children's development in creating educational programs. By the 1920s and 1930s the infant schools adopted a child-centered approach. The *Report of the Hadow Committee* in 1933, written by the Consultative Committee of the Board of Education on the Primary School, stated explicitly that primary

schools should provide discovery learning and child-centered practice.

The Education Act of 1944 required that primary education be available to all children age five through eleven. The act was vague on what this entailed, mandating "[education] suitable to the requirements of junior pupils." Because this definition was imprecise, curriculum decisions were ceded to the schools. Infant schools offered a wide variety of curricula, structures, and functions. This same act created a selective system of secondary education. As a result, one of the implicit goals for primary education was to begin the process of streaming or tracking, a goal that was discredited gradually over subsequent decades.

In 1967 the Central Advisory Council for Education issued "Children and Their Primary Schools," known as the Plowden Report. This report was based on observations in infant schools. It described the state of primary education in Britain, and endorsed those schools subscribing to "informal, child-centered education." As a result of this report, teachers were given increased freedom to teach children as they saw fit, with less emphasis on strict schedules and specific curricula.

The Plowden Report also assessed the effectiveness of the child-centered infant schools. It asserted that children in traditional, formal classes performed slightly better on conventional tests than children in child-centered, open classrooms. These differences were greatest for arithmetic, smallest for reading, and disappeared in later school years. Some proponents of the child-centered infant schools dismissed these findings on the basis that traditional, formal schools spend time teaching children how to take conventional tests. Despite these results, the Plowden Report advocated the child-centered approach.

The Education Reform Act of 1988 produced a radical restructuring of British education. This included infant schools. England was experiencing uncertainty about its status in the world, and these new laws represented an attempt by the government to control the content and the balance of the curriculum. The Education Reform Act of 1988 required that children be offered "a balanced and broadly based curriculum which promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society; and prepares such pupils for the opportunities, responsibilities, and experiences of adult life."

The Education Reform Act ushered in a new national curriculum and a matching set of assessment procedures. Primary schools, including infant schools, were required to teach a core curriculum of mathematics, English, science, history, geography, technology, music, art, and physical education, requiring approximately 70 percent of the instructional time. Specific provisions were created for children with special educational needs.

The act also mandated testing. Children's achievement was to be measured based on a combination of teachers' assessment and Standardized Assessment Tasks (SAT). The SATs were integrated into the normal classroom routines; children were to experience them as normal classroom tasks that they might do individually or with other children, but would reflect their academic progress. Children had to attain specific English, mathematics, and science competencies by age seven.

The Education Reform Act supported parents' rights to choose their children's schools and encouraged competition among schools. By imposing free market models on educators, the government hoped to provide more cost-effective and efficient schools.

Several studies have examined the implications of the Education Reform Act on educational practice and effectiveness. The PACE (Primary Assessment Curriculum and Experience) study found less use of an integrated day, more use of whole class teaching, and a new emphasis on assessment compared to the traditional infant school model. According to the PRINDEP (Primary Needs Independent Evaluation Project) study, teachers found the national curriculum burdensome, but reported few changes in their balance between individual, group, and whole class pedagogy. Teachers in the PRINDEP study reported increased professionalism in the climate at their school following the act. Finally, the new ORACLE (Observational Research and Classroom Learning Evaluation) study compared basic skills in 1976 with basic skills in 1996, cross-sectionally, and showed declines in mathematics, language, and reading skills between these time periods.

### **Influences of the Infant Schools on Education in Other Countries**

France, Switzerland, Belgium, the Netherlands, and other European countries adopted infant schools in the early to mid-1800s. Their goal was to buffer children from poverty-related stressors. Infant schools

on the Continent were similar to those in England, providing children with a child-centered educational environment.

Infant schools of England were again influential throughout Europe during the 1960s and 1970s. Existing programs adopted aspects of the English child-centered approach. For example, the Netherlands fully subsidized infant schools and included them as part of their public school system in 1965. In the 1970s the German Federal Republic's Council on Education opened *Eingangsstufe*, a transitional class in primary schools for five-year-old children that resembled infant schools in England.

Several infant schools were established in the United States in the 1820s in response to Owen's writings, but these disappeared within ten years. The infant school movement had a larger influence on preschool and primary education in the United States during the 1960s and 1970s. At this time, U.S. preschool programs were viewed as "preparatory programs for rigid kindergarten classrooms" (Featherstone 1967, p. 19). To U.S. observers, the infant schools in England offered a demonstration that a child-centered, informal education for young children could exist within in the public schools. As Lillian Weber wrote in 1971, "By observing somewhat analogous situations in the industrial cities of England, I sought relevant answers to the problems of present preschool expansion in the United States and to the needs of children in our deteriorated areas of our cities" (p. 7).

Thus, as Head Start and Follow-Through programs developed, they incorporated practices from the English infant schools. British heads and teachers ran workshops on "informal education." They trained American teachers to recognize individual and uneven patterns of development, reorganize classrooms to enable teachers to interact with small groups and individuals, and establish opportunities for children to manipulate and discover materials independently. There was a proliferation of books designed specifically for early childhood teachers wanting to provide an informal education to their students. These books were rooted in the infant school philosophy, and explained the role of the school, teachers, and families; appropriate curricula; approaches to discipline; the physical organization of schools; and the construction of materials, such as easels and aquariums, to promote children's curiosity.

Also during the 1970s, infant schools influenced practice in U.S. elementary schools. Open schools, which grew from infant school principles, emphasized the holistic development of the child and children's interests as the basis for school learning. Schools implementing this approach offered decentralized learning, freedom of movement from one space to another, unstructured periods of study, and individualized and group-oriented student activities. This approach faced implementation problems in the U.S., which included improper training of teachers and unsupportive administrators and families.

### Summary

Infant schools offer a child-centered, informal approach to education that has been recognized as being sensitive to the development of young children. Educational reforms late in the twentieth century have demanded higher levels of competency from young children and have affected the direction and practices of infant schools in England. English infant schools have had a lasting impact on educational policy and practice in many countries.

*See also:* EARLY CHILDHOOD EDUCATION, *subentries on* OVERVIEW, PREPARATION OF TEACHERS; EARLY CHILDHOOD EDUCATION IN AN INTERNATIONAL CONTEXT.

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SARA E. RIMM-KAUFMAN

## INSTITUTE OF INTERNATIONAL EDUCATION

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The Institute of International Education (IIE) is a world leader in the international exchange of people and ideas. Its mission is to foster international understanding by opening minds to the world. It does this by assisting college and university students to study abroad; advising institutions of higher education on ways to internationalize their student body, faculty, and curriculum; fostering sustainable development through training programs in energy, the environment, enterprise management, and leadership development; and partnering with corporations, foundations, and governments in developing people's ability to think and work on a global basis.

### Program

Sponsors of IIE's more than 250 programs include government departments and agencies in industrialized and developing countries, the World Bank, major philanthropic foundations, public corporations, and individuals. Nearly 4,000 men and women from the United States and 14,000 people from 175 countries study, conduct research, receive practical training, or provide technical assistance through these programs each year. IIE has administered the Fulbright Program on behalf of the U.S. Department of State since its inception in 1946, and, since 1948, has also conducted the annual *Open Doors* census on international student mobility to and from the United States.

IIE's programs are managed by professional staff with expertise in fields such as higher education

and scholarship administration, energy and the environment, business and public administration, human rights, economic development, and the arts. The institute's program staff serve in four departments:

- **Exchange Programs and Regional Services.** This department manages the U.S. and Foreign Fulbright Student Programs and the International Visitor Program, both funded by the U.S. Department of State, as well as other privately funded academic and professional exchange programs. With 140 staff in New York, Washington D.C., Chicago, Denver, Houston, and San Francisco, this department conducts extensive outreach to local communities throughout the United States.
- **Center for Global Development (CGD).** The CGD administers capacity-building programs serving participants from developing countries. CGD professional exchange programs have allowed participants to gain industry expertise and learn leadership and technical skills in national energy and environmental program implementation, health care, and civil society development. With a staff of more than 100 people in sixteen countries, CGD is IIE's primary mechanism for initiating multisector development assistance contracts worldwide.
- **Educational and Corporate Services.** This department administers scholarship programs and leadership development and skills training programs for midcareer professionals. Educational Services staff also conduct policy and statistical research on international academic mobility and provide educational advising and testing services in the institute's international offices. The department has 100 staff members in nine offices around the world.
- **Council for the International Exchange of Scholars (CIES).** CIES was founded in 1947 to administer the Fulbright Scholar Program and has grown to house other international scholarly exchange initiatives. In 1997 CIES became a department of IIE, based in Washington D.C. More than 1,600 U.S. academics and international scholars are served by CIES programs annually. The day-to-day work of the department is carried out by more than forty-five program officers and staff.

## Organizational Structure

IIE has a staff of more than 475 professionals and relies on the services of more than 6,000 volunteers who serve on regional advisory boards, scholarship screening and selection panels, and program committees. In addition to its headquarters in New York City, IIE has offices in Chicago, Denver, Houston, San Francisco, and Washington, D.C. International offices are located in Bangladesh, Brazil, China, Egypt, Hong Kong, Hungary, India, Indonesia, Kazakhstan, Mexico, Philippines, Russia, South Africa, Thailand, Ukraine, and Vietnam.

Staff members in U.S. offices administer IIE-related programs, mobilize community support for international exchange, provide information and counseling to individuals and institutions, and maintain contact with grantees and the institutions they attend.

Personnel in the international offices assist students and scholars wishing to study or conduct research in the United States; administer U.S. admissions tests for international applicants; report on educational systems, institutions, and developments; cooperate with other private and government agencies abroad to facilitate international exchange; and provide technical assistance and training in selected development fields. The institute is governed by an international board of trustees composed of corporate executives, diplomats, college and university presidents, and artistic and civic leaders.

IIE disburses more than \$150 million annually on programs and services. Most funds provide direct support to sponsored students and professionals. These funds also materially assist the universities and research and training institutions at which IIE grantees study and work.

## History and Development

Until the twentieth century there were no programs for study abroad in American higher education. The U.S. Bureau of Education began collecting data on foreign students in 1904, and published a guidebook in 1915. The YMCA formed a Committee on Friendly Relations Among Foreign Students in 1911, and three bilateral exchange programs came into existence during this time: the Rhodes Trust, the American-Scandinavian Foundation, and the China Foundation for the Promotion of Education and Culture. IIE was established in 1919 as the first independent, nonprofit organization dedicated to pro-

moting all aspects of educational exchange on a global basis. The founders were Elihu Root, the Nobel Prize-winning secretary of state; Nicholas Murray Butler, then president of Columbia University and subsequently a recipient of the Nobel Peace Prize; and Dr. Stephen Duggan, a professor at the City College of New York. These men were deeply committed internationalists in an age when this was not popular. They believed that academic travel abroad would promote mutual understanding and closer cultural relations between Americans and leaders of other countries. Dr. Duggan became the first director, and the institute's first programs were supported by grants from the Carnegie Endowment for International Peace.

The institute lobbied for the creation of non-immigrant student visas in 1921 and designed a new application to assist American consular officials to process visa requests. Its first student exchange was negotiated in 1922 with five American and five Czechoslovakian students. In 1925 the institute created a junior year abroad program for American undergraduates. In 1933 it established the Emergency Committee in Aid of Displaced German Scholars, under the institute's then assistant director, Edward R. Murrow. Its activities saved more than 300 European scholars from the Holocaust. In 1941, the U.S. State Department called upon IIE to administer the country's first nationally sponsored educational exchange scholarships with Latin America under the Buenos Aires Cultural Convention Program. Additional work for the U.S. government necessitated the institute's opening an office in Washington, D.C., in 1943. In 1948, the State Department appointed the institute to screen, place, and supervise student exchange under the Fulbright program.

As African nations emerged from colonial rule in the 1950s, IIE created new U.S. scholarship opportunities for African students. In 1952 the Educational Associates program was established by the institute, providing services for U.S. colleges and universities. In the late 1970s IIE designed and implemented the U.S. government's Hubert H. Humphrey Fellowship program for midcareer professionals from developing nations, as well as creating the South African Education Program to help prepare black South Africans for leadership in a post-apartheid future. The institute also assumed responsibility for a portion of the U.S. government's International Visitor Program and began to run the ITT Corporation's International Fellowship Pro-

gram, which for seventeen years was an exemplary model of corporate involvement in international educational exchange. In the 1980's, the institute began managing short-term, hands-on professional development projects and internships for sponsors such as USAID, expanding its service for scientific and technical development, and establishing a division to undertake energy training programs. IIE has created innovative programs in journalism and human rights, and opened new offices in Jakarta, Zimbabwe, Sri Lanka, and Cairo.

Taking advantage of improving relations with Communist governments, IIE developed the U.S.-USSR Student Exchange Program in cooperation with the Soviet State Committee for Public Education and extended its educational advising services in the People's Republic of China.

In the 1990s IIE initiated programs for leaders, managers, professors, and students in formerly Communist countries to enable them to learn about market economics and democratic institutions. It also developed collaborative programs with Japan and Southeast Asian nations to deepen mutual understanding and address issues of common concern. In response to the Balkan conflicts and the Asian currency crisis, IIE designed and implemented Balkan-Help and Asia-Help emergency assistance funds to enable students from these regions to stay in the United States to complete their degrees.

In 2000 the Ford Foundation turned to the institute to help administer the single largest program in the foundation's history—The International Fellowships Program. This program recruits candidates that lack systematic access to higher education from social groups and communities around the world. These individuals are provided with full scholarships for graduate education in the hope that they will become leaders in their respective fields, furthering social justice and economic development in their own countries.

The institute also helped to develop, and now administers, the Benjamin A. Gilman International Scholarship Program on behalf of the State Department. This program provides awards for undergraduate study abroad for U.S. students who are receiving federal need-based financial aid under Pell Grants, Federal Work-Study, Stafford Loans, Perkins Loans, and Supplemental Educational Opportunity Grants.

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## **INSTITUTIONAL ADVANCEMENT IN HIGHER EDUCATION**

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With the rapid increase in the costs associated with higher education, there has been an ever-increasing pressure placed upon colleges and universities to raise funds for institutional support. Fund-raising drives in excess of \$1 billion are commonplace among top tier institutions in the early twenty-first century. The responsibility for identifying individuals capable of making gifts to the institution falls under the umbrella of institutional advancement.

Offices of institutional advancement are typically responsible for all of the institution's relationships with individuals external to the institution. This discussion of institutional advancement in higher education includes two sections. First, it presents a brief history of institutional advancement. In the second section, the four functional areas of institutional advancement are discussed (public relations, publications, alumni relations, and development).

**Historical Background**

The philanthropic support of educational institutions is not a new concept. Some of the earliest examples of educational philanthropy include Greek philanthropist Cimon's support of the Academy of Socrates and Plato and Alexander the Great's assistance in opening Aristotle's Lyceum through his financial support.

The history of educational philanthropy in the United States can be traced back to medieval universities in twelfth-century Europe. In these institutions, founders were forced to approach potential donors for money and resources for college operations. Wealthy individuals established endowments to support the universities of Paris, Oxford, and Cambridge. The idea of the chief faculty member raising funds for the institution was transferred to the early colonial American colleges.

The first president of Harvard College, Henry Dunster, counted generating resources as part of his duties. While the first solicitation for Harvard College in 1641 is cited as the beginning of fund-raising in this country, Kathleen Kelly commented in 1998 that the extent of the solicitation efforts tends to be overstated and presents a misleading portrayal of early educational institutions as heavily dependent on financial donations. Others also dismiss the notion that fund-raising began in the 1600s given that most early colleges were supported by government funds and taxes. Systematic fund-raising traces its roots to the twentieth century; early efforts were limited and involved only a few wealthy benefactors.

In 1821 Williams College established the first alumni association and in 1823 Brown University established the first alumni fund. Not until 1897 did the first public university, the University of Michigan, establish an alumni association. This difference in organizational behavior between public and private institutions is repeated throughout fund-raising history, although only minor differences exist today.

One of the first great institutional fundraisers was William Lawrence, an Episcopal bishop, who raised more than \$2 million for Harvard in 1904–1905 as president of the alumni association and who led a drive at Wellesley College that brought in nearly \$2 million. From 1905 to 1915 Charles Sumner Ward and Lyman L. Pierce conducted the first “capital campaign” for the YMCA that raised about \$60 million in capital funds.

However, in 1936 fewer than fifty percent of colleges and universities had alumni funds in place and. According to Kelly “apart from a few exceptions related to annual giving. . . the first full-time staff fundraisers did not appear on the scene until the late 1940’s” (p. 149). Private, rather than public institutions employed the first fundraisers, “with only 25 percent of all institutions reporting a centralized development function as recently as 1970” (Brittingham and Pezzulo, p. 82). The majority of those were private institutions. In 1912, twenty-three men who were responsible for organizing former students of their universities founded the Association of Alumni Secretaries (AAS). While some of those involved had responsibilities for raising funds, the majority were engaged in the organization of alumni to support their universities in ways other than financial. By 1938 only one fifth of those surveyed by the American Alumni Council (the new name adopted by the AAS) were engaged in fund-raising activities.

In the spring of 1958 the American Public Relations Association (ACPRA) and the American Alumni Council (AAC) met at the Greenbrier Hotel in White Springs, Virginia. The purpose of the meeting was to discuss the need for administrative coordination of the functions of public relations, alumni relations, and fund-raising. In 1974 the AAC and ACPRA merged to form the Council for the Advancement and Support of Education (CASE). This organization brought together the organizational functions of public relations, publications, fund-raising, and alumni relations under the umbrella of institutional advancement.

### Areas of Institutional Advancement

**Public relations.** The first functional area within institutional advancement is public relations. Through this department, an institution crafts messages for its various publics. Frequently the director of public relations serves as the institution’s chief spokesperson. The public relations arm of institutional advancement also cultivates and manages the university’s re-

lationships with members of the media, which may consist of being available to members of the media when they have questions about the institution or its activities or contacting the media to get placement of stories. Many public relations offices facilitate media relationships by maintaining a list of faculty members who are experts on specific subject areas and having them available for media interviews when comments are needed for news stories.

In some public relations offices, there is an individual or a team that is responsible for planning special events for the institution. These may include commencement events or other large-scale special occasions that will increase the public visibility of the institution.

**Publications.** The second functional area within institutional advancement is publications. Publications offices are responsible for all print materials used by the institution. Within publications offices are graphic designers, proofreaders, and photographers.

Typically, an institution’s publications office is responsible for the design and production of the alumni magazine. This is frequently the largest and most visible of the publications produced by an institution. Depending upon the size of a college or university, individual colleges, schools, or departments may have their own magazines or newsletters. The design and maintenance of the college or university web pages also falls to members of the publications staff.

Publications departments are also responsible for the consistency of an institution’s print image and the proper use of university symbols. This is frequently accomplished by requiring internal production of all print pieces or by subjecting anything that has been designed outside of the publications office to scrutiny by a member of the publications staff. This review, coupled with the office having the ability to stop the printing of a publication that does not conform to university standards, allows for a tight maintenance of the institution’s graphic identity.

**Alumni relations.** The alumni relations office is primarily responsible for maintaining ties between graduates of a higher education institution and their alma maters. This is typically accomplished through events held for alumni either at the university or college or by scheduling programs away from campus. For example, a college or university alumni office may be responsible for organizing homecoming festivities for alumni at the institution.

The activities of the alumni office are frequently directed by an alumni board. At some colleges and universities, the board has hiring and firing authority over the director of alumni relations. The board helps to direct the activities of the association and to shape the programming for alumni. Two different types of alumni associations exist in higher education. The first is a dues-based organization that requires graduates to join the association by paying yearly dues (or perhaps by making a certain level of gift to the annual fund). The other type is an alumni association to which all alumni become members automatically without any required contribution or dues payment.

The office of alumni relations is also responsible for maintaining a chapter or club system for the institution. These clubs or chapters are separate organizations located in cities in which there are large concentrations of alumni. Frequently these organizations have their own officers and may have responsibility for their own finances.

Alumni offices also design programs targeted to specific alumni affinity groups, for example, a program designed for graduates of an institution who were members of a fraternity or sorority. These programs help maintain the bond created by the extracurricular activities alumni participated in while they were students on campus.

**Development.** The development office frequently contains the largest number of positions within an institutional advancement division. The office's organization may be centralized, decentralized, or a hybrid of these two. Organization is often dependent upon the size of the institution. In a centralized environment, all individuals responsible for fund-raising are housed in one physical location and report either directly or indirectly to the same person. This type of organization is better suited to smaller colleges and universities. In a decentralized environment, development officers are spread out among the various academic units of the institution. The fund-raisers in these schools and colleges report to the deans of their respective areas. This organization is often found in larger institutions. The hybrid model mixes the centralized and decentralized, with development officers physically located in a college or school, yet reporting to both a dean and a chief development officer.

Within a development office, there are a number of distinct areas of operation, each of which are discussed in detail.

**Annual fund.** The primary responsibility of the annual fund of a college or university is to ask graduates of the institution for small gifts that are given yearly. Annual fund gifts can range from one dollar to ten thousand dollars or more. These gifts are solicited primarily through the mail or by telephone. Occasionally, high-end annual fund gifts are solicited in person. Annual fund gifts can be either restricted (to be used only for a specific purpose) or unrestricted (to be used however the institution deems appropriate).

The annual fund is one of the most important components of a mature development program. Not only does it provide annual operating dollars for the institution's budget, it also helps to identify individuals who are interested in making gifts to the institution and who may want to make larger gifts in the future.

The annual fund office may also help to organize a senior class gift program through which graduating seniors make a pledge (either for a single year or over a number of years) to donate for a specific project identified by the graduating class. Many annual funds are also responsible for a parents fund, through which parents of current and former students are asked for gifts.

Annual fund offices are also the coordinators of matching gift solicitations. Some companies have standing agreements with their employees that the company will match any gifts made to a charitable organization. Annual fund officers craft specific solicitations to their graduates who are employees of those companies, asking them for gifts and reminding them that their donation comes with additional funds for the institution.

**Major gifts.** Major gifts are larger than annual gifts. They frequently are composed of a pledge, on which payments are spread over a number of years. Because of the large amounts of money involved in major gift solicitations, individuals who have long-standing relationships with the potential donors usually solicit them.

Major gift prospects are identified in many ways. They may be annual fund donors who have a history of providing support to the institution. Other individuals are identified because they have a level of wealth that would allow them to make a major gift to the institution and they have an interest in an area which the institution is seeking support.

Once major gift prospects have been identified, they are assigned either to a development officer or

to an individual who is engaged in major gifts fundraising. At most institutions the president has a list of individuals with whom close relationships must be developed or already exist. Other individuals who are involved in the major gift process include deans, some department chairs, and select faculty members and administrators.

These individuals bring their prospects closer to the institution by involving them in programs, inviting them to serve on advisory committees or on boards of trustees. Throughout this process, the prospect's interests emerge. Once the development officer has an idea of what sort of gift the prospect might make, a team is assembled of individuals who are closest to the prospect and who are best suited to ask the prospect to consider the donation. The actual solicitation is usually done face-to-face. Actually getting a definitive "yes" to a major gift solicitation may take a considerable amount of negotiation. The prospective donor may want to change how the gift would be used, the amount of the gift, or other specifics related to the request.

**Capital campaigns.** Capital campaigns are intensive efforts to raise a significant amount of money for an institution over a limited period of time in order to increase the institution's capital assets, either physical (through the erection of buildings, etc.) or financial (by increasing the institution's endowment). Many institutions also conduct comprehensive campaigns that raise operating funds in addition to capital funds.

Campaigns generally progress in four phases: the planning phase, the silent phase, the public phase, and the accounting phase. In the planning phase, the institution determines what dollar amount could realistically be raised over the period of the campaign. Additionally, the organization ascertains what volunteers will be recruited to help with the campaign, how many staff members will be needed to meet the goal, and how many individuals will be identified as campaign prospects. Colleges and universities may employ outside counsel to assist with this phase of the campaign.

In the silent phase, individuals who have been cultivated are solicited for campaign gifts. The institution's prospects who have been cultivated the most and have the capacity to make the largest gifts are usually solicited first. While active requests are being made during this phase, only individuals who are very close to the institution would be aware that a

campaign is in progress. Most institutions attempt to raise between one-half to two-thirds of the dollar total in this phase of the campaign. Doing so reduces the risk that the institution will not make the campaign goal in the next phase.

In the public phase of a campaign, the institution lets all of its constituencies know that a campaign is in progress, what the dollar goal for the campaign is, the total amount of money raised to date, and the date selected for the end of the campaign. This is usually done in conjunction with a special event for those who have been involved in the campaign and those who will be asked to be major contributors. Additionally, press conferences may be held for the media and if building projects are involved, official groundbreaking ceremonies may be conducted. During the public phase, individuals who have been cultivated through the silent phase are solicited. Finally, in the closing months of the campaign, a large-scale mailing is frequently conducted so that individuals who cannot contribute at a major gift level have the opportunity to participate and feel included.

The final phase of a campaign is the accounting phase. During this phase staff members who were brought on board specifically for the campaign may be let go, the institution tries to collect unfulfilled pledges, and the plans are made for either restarting the campaign cycle or returning to noncampaign operations.

**Planned giving.** Planned giving is the term given to any gift which involves a transfer of assets other than cash. These gifts are planned because they frequently have tax consequences or involve other structuring. The most familiar of all planned gifts is the bequest, where an individual leaves either a portion or all of their estates to a higher education institution after their death. Also quite common is the transfer of stock or real estate to the institution. However, many other vehicles exist for potential donors to make planned gifts, including those that create a lifetime income for the donor or a beneficiary.

Planned giving officers are often attorneys familiar with tax and estate law. While other development officers may have the ability to discuss planned giving options with prospects, many institutions have planned giving officers on staff to deal with the details of a structured gift.

**Prospect research.** Within the development department, identification of individuals who have the

ability to make major gifts to the institution falls to the prospect research department. Once these prospects have been identified, prospect research, through the use of print and electronic resources, develops dossiers on each individual. These profiles include information on the prospect's family background, interests, previous giving history for the institution and other institutions, a rating indicating for how much the prospect should be solicited, and a cultivation and solicitation strategy based upon the office's research.

**Advancement records.** The advancement records area is responsible for all gifts and pledges that come into the university. Specifically, advancement records documents donations and pledges electronically for each donor in the university's alumni and donor record system. Address information is kept on each alumnus or alumna, parent, and friend of the institution. Additionally, information that is frequently attached to each address record can include previous gifts and pledges, interests, names of family members, year of graduation and degree type (if a graduate), and other biographical information.

Donor records also generates receipts for those making gifts and may also generate acknowledgment letters letting donors know that their gifts were received and that the college or university appreciates the gift.

Advancement records also sees that daily receipts are deposited into the university accounts and that restricted gifts are posted to the correct funds. At the end of each month this office also generates income statements breaking down gift totals in many categories, and may provide year-to-date totals along with comparisons to previous years.

**Corporate and foundation relations.** Depending upon the size of the development operation, there may be a department of corporate and foundation relations or an individual who has the same responsibility. Because of the intense writing required for submitting a foundation proposal, individuals in corporate and foundation relations spend much of their time writing grant proposals. In smaller offices, the responsibility for developing relationships with foundations and corporations falls to individual development officers.

**Stewardship.** Once an individual, foundation, or corporation makes a gift to an institution, the responsibility of maintaining the relationship falls to the stewardship office (in addition to those involved

in the solicitation). Being good stewards of a gift includes providing donors with annual reports detailing how their gifts were used and which individuals benefited from the generosity. Additionally, the stewardship office maintains the record of the things to which pledges are designated and to whom the end of the year reports should be sent. The institution also has a responsibility to the donor that it will be a good steward of the donated funds and that they will be used according to the donor's wishes. Finally, the process of thanking a donor is critical to the development process because individuals who have made gifts in the past are the best prospects for the future.

**See also:** BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; PRESIDENCY, COLLEGE AND UNIVERSITY; STRATEGIC AND LONG-RANGE PLANNING IN HIGHER EDUCATION.

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TIMOTHY C. CABONI

## INSTITUTIONAL RESEARCH IN HIGHER EDUCATION

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Institutional research is research activity carried out in colleges and universities to collect and analyze data concerning students, faculty, staff, and other educational facilities. The primary purpose of institutional research is to promote institutional effectiveness. It does this by providing information for institutional planning, policy formation, and decision-making within the college or university.

Largely as a result of the significant role institutional research plays in keeping track of the performance of the institution, higher educational institutions have created a special office, called the Office of Institutional Research. This office usually is placed in the higher hierarchy of the administrative units of the institution.

The size of the Office of Institutional Research depends upon the educational programs and services of the institution. The Office of Institutional Research for a larger higher educational institution usually reports to the provost. In a smaller institution, the Office of Institutional Research reports to the vice-president for academic affairs. No matter

the size or the organizational structure, all institutional research offices exist to provide information for institutional planning, policy formation and implementation, and decision-making.

### Tasks Performed

The primary role of the Office of Institutional Research in the institutional setup is to collect, analyze, and interpret institutional data on students, faculty, educational programs, and administrative and support services so as to provide accurate information to support planning and decision making activities within the educational institution.

It is the responsibility of the Office of Institutional Research to compile data on course enrollments every semester or quarter. The course enrollment data shows the distribution and major of students enrolled in each department and course. With this knowledge, the institution is in a better position to discontinue a program that is not attracting students. It also allows the administration to allocate more funds to programs that are attractive to students. This helps the institution to utilize its resources for efficient organization and management.

The Office of Institutional Research gathers and maintains data on student retention in terms of gender, race, age, geographic location, and test scores, and shares this information with the student admission office. Student retention is the ability of an educational institution to recruit and retain a student until the student graduates from that institution. A higher retention rate is a reflection of the effectiveness of the programs the institution offers students. Any higher educational institution with a higher retention rate takes delight in displaying this information in a brochure to showcase the effectiveness of their educational programs to prospective students and the general public. Therefore, at the end of every term, the Office of Institutional Research looks into the student population and provides the admissions office data that it needs for its recruitment and retention efforts.

Apart from recruitment and retention records, the Office of Institutional Research keeps track of degrees granted by every department of the institution. In particular, it identifies students who graduate with certificate, associate, bachelor, master, or doctoral degrees. This information is often compiled in terms of discipline or area of study, gender, race, age, or number of years the student studied to com-

plete the program. Information on graduation records is essential because it reflects the number of students who are able to successfully complete their studies in the institution. It also makes the administration aware of educational programs or fields of study that are or are not attracting and maintaining students through graduation.

Of primary importance to the work of the Office of Institutional Research is enrollment management. Often the Office of Institutional Research collaborates with the Student Affairs Office to engage in enrollment and retention management activities to find out how best to retain students in their programs. As a result of such collaborative activities, many colleges and universities have established special programs such as scholarships or grants to attract students who are under-represented in their institutions.

The Office of Institutional Research maintains a plethora of data relating to the financial status of the institution. It shares this information with the Finance Office, which in turn uses this data to conveniently determine and allocate funds for such institutional programs as faculty development, instructional materials, research, work-study students, and faculty and staff salary.

The Office of Institutional Research at the end of every term or year also examines and evaluates the performance of its program faculty. It examines such variables as faculty publications, research, and general contributions to the academic community. Through student evaluations of faculty at the end of every semester or quarter, the Office of Institutional Research is able to document the performance of its program faculty. Students evaluate faculty on such items as grading procedures, knowledge of content, pace of instruction, and respect for student views in the learning process. Assessment of program faculty is done essentially for the purposes of faculty development, retention, recruitment, and promotion.

Institutional research offices produce what is called a "fact book" about the institution. The fact book presents, at a glance, general information and data concerning academic programs, students, degrees conferred, faculty and staff, finances, institutional facilities such as library holdings, and research activities by the institution. The fact book serves as a window to the institution. It provides a summary of the achievements, programs, progress, and facilities of the institution. The Office of Institutional Re-

search takes great pains to prepare it because it gives the public a taste of what awaits students who decide to enroll in that institution.

By the nature of its work, the Office of Institutional Research provides vital data for internal and external surveys and reports. It compiles data for institutional self-study and accreditation by external agencies. Institutional self-study is an attempt that every institution makes to evaluate the effectiveness of its programs and activities. It reveals strengths and weaknesses in the institution. It is done with the aim of making sure the institution is working to accomplish its educational mission. Accreditation is also of significant importance to all colleges and universities because it is an indication that the academic programs of the institution conform to federal or state established standards. Accreditation acts as a benchmark for institutional effectiveness and gives the institution a higher academic ranking.

Institutional research offices also serve as contact points for reports and surveys requested from governmental and nongovernmental agencies such as the United States Department of Education. These agencies may require this data to compile reports on issues such as affirmative action and college guidebooks.

The smooth functioning of educational institutions, like any other organization, depends upon the ability of the institution to identify problems and find appropriate solutions for them. Without this ability, no organization can function effectively. The Office of Institutional Research conducts research into specific problems facing the institution. The research may be focused on such areas as student attrition or retention rate, faculty turnover, or student diversity. It shares the research findings with other departments in the institution. Many of the research activities may be carried out annually or otherwise as needed. The Office of Institutional Research carries out such research with the sole purpose of finding solutions to challenges the institution might encounter in the future. At other times, the research may be conducted with the aim of finding a solution to an existing problem or adding a new program to the curriculum of the institution.

Facilities in educational institutions have the potential effect of attracting students to that institution. Therefore, the Office of Institutional Research compiles data on educational facilities in the institution for organizational purposes. The data on facili-

ties indicates the number of classrooms, teaching laboratories, meeting or conference rooms, offices, libraries, media and technology, space utilization, housing, and vehicles. In addition to compiling the data, the Office of Institutional Research presents an annual report on facility utilization in the institution.

As in all organizations, educational institutions need common guidelines and procedures for implementing policies. The Office of Institutional Research defines common data sets used by the college or university to establish policies for administrative procedures. It is the responsibility of this office to define a part-time student or a part-time faculty member, as well as the concepts of doctoral degree, bachelor's degree, master's degree, a commuter, credit hour, contact hour, credit, or grade point average. The common data set is essential to the smooth administration of the institution because it helps the institution to develop rules, regulations, and policies to guide staff, student, and faculty conduct in the service of the institution.

*See also:* COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; PRESIDENCY, COLLEGE AND UNIVERSITY.

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KWABENA DEI OFORI-ATTAH

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## INSTRUCTIONAL DESIGN

### OVERVIEW

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Charles M. Reigeluth

### ANCHORED INSTRUCTION

Nancy J. Vye

### CASE-BASED REASONING

Janet L. Kolodner

### DIRECT INSTRUCTION

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### LEARNING THROUGH DESIGN

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### PROBLEM-BASED LEARNING

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## OVERVIEW

Instructional-design theory provides guidance on how to help people learn (or develop) in different situations and under different conditions. This guidance includes what to teach and how to teach it. To do this, instructional-design theory must take into account both methods and situations. Just as a carpenter uses different tools for different situations, so do instructional design theories offer instructional designers and teachers different tools for facilitating learning in different situations.

### Elements of Instructional-Design Theory

Elements of instructional-design theory include instructional outcomes, conditions, methods, and values. Instructional values are an individual's or group's philosophy or beliefs about instruction. Instructional design theories ought to inform possible users (teachers and instructional designers) of the values about learning and instruction with which the theory was constructed, for they are the values that users and students must hold in order for the theory to work well.

Instructional outcomes include both results that are intentional and those that are incidental. Outcomes include the instruction's effectiveness, efficiency, and appeal. Instructional outcomes should not be confused with learning outcomes. Instructional outcomes focus on the degree of success in attaining the desired learning outcomes (the effectiveness of instruction) but also include the efficiency and appeal of the instruction.

Instructional conditions are factors beyond the influence of the instructional designer that impact upon the effects of the methods of instruction. Conditions may include the nature of what is being learned (the content), the learner, the learning environment, and the instructional development constraints (e.g., time and money). Instructional-design theory, in attempting to provide guidance for people to help others learn, ought to state explicitly the conditions under which different methods should and should not be used.

Instructional methods are the “how to” for facilitating human learning. They are the elements of guidelines that inform designers and teachers what to do to help students learn. They can be very general, such as “provide opportunities for practice,” or they can be broken down into much more detailed specifications, such as (for learning concept classifi-

cation) presenting previously unencountered examples and nonexamples of the concept in random order and asking the learner to identify those that are examples of the concept.

Instructional methods are situational rather than universal. This means that there are values, desired instructional outcomes, and instructional conditions (collectively referred to as instructional situations) in any context that influence whether or not a given instructional method should be used. Hence, instructional-design theory should specify the values, outcomes, and conditions for which each method should be used. Also, instructional methods are probabilistic rather than deterministic. That is, their use can only increase the probability that the desired outcomes will be attained.

### Differences

Instructional design theories differ most importantly by the methods they offer. But the methods differ because of differences in the outcomes, values, and conditions for which they are intended.

For example, regarding instructional outcomes, some theories may focus more on effectiveness of the instruction, while others may focus more on appeal or efficiency. Also, regarding learning outcomes, different instructional theories can promote very different kinds of learning: from memorization to deep understandings or higher-order thinking and self-regulatory skills; from cognitive goals to such affective goals as emotional and social development.

Instructional values may differ, and they lead one to select different goals and different methods to attain those goals. Traditional instruction systems design (ISD), “a systematic approach to the planning and development of a means to meet instructional needs and goals” (Briggs, p. xxi), specifies that goals should be selected based on an assessment of learners' needs. However, in 1999 Charles Reigeluth proposed that users also consider teachers' and learners' values about goals. Furthermore, designers have tried to rely on experimental research to determine which methods are best for any given situation. Reigeluth countered that users also consider teachers' and learners' values about methods. If a teacher does not value learner-centered methods, then forcing the teacher to use them is not likely to ensure success.

Instructional conditions may also differ across instructional design theories. First, the nature of

what is to be learned (the content) may differ. For example, some theories, such as those of David Perkins and Chris Unger, focus on deep understandings, which are taught differently than skills. Second, the nature of the learner may differ, including prior knowledge, skills, understandings, motivation to learn, and learning strategies. Third, the nature of the learning environment may differ. And finally, different instructional design theories may be intended for different constraints on instructional development (time and money). In essence, different instructional theories use different methods to attain different outcomes under different conditions and based on different values.

### Major Trends

Two major trends in the field of instructional-design theory are apparent: the increasing predominance of an information-age paradigm of theories and the broadening of the kinds of learning and human development addressed by instructional theorists.

**Information-age paradigm.** Scholars, such as Bernie Trilling and Paul Hood, are increasingly drawing attention to the need for an attainment-based, “learning-focused paradigm” of instruction to meet learners’ new educational needs in the information age, compared to the time-based, “sorting-focused paradigm” of the industrial age. Reigeluth (1999) distinguishes between the industrial and information ages with certain “key markers” (see Table 1).

In the early twenty-first century there is a growing recognition that the current system of education is beginning to fail society, not in its ability to attain traditional goals, but in its ability to provide what is increasingly needed in the emerging information society. There has begun a societal transition in which the complexity of human activity systems is growing dramatically, and learning has become the “indispensable investment” according to the National Commission on Excellence in Education 1983 report, *A Nation at Risk*. This has important implications for both what should be taught and how it should be taught.

### Broadening the scope of instructional theory.

Much of the work that has been done in relation to and with instructional-design theory has been focused on teaching and learning procedural tasks, which are performed by following sets of defined mental or physical steps that were predominant in the industrial age. However, educational and corpo-

rate settings increasingly require people to solve problems in ill-structured and complex domains—problems for which there is not a clear solution or just one way of doing things. These “heuristic” tasks entail the use of causal models and “rules of thumb,” along with other kinds of typically tacit knowledge that require different methods of instruction. This heuristic knowledge because of its nature often takes years for experts to develop through trial and error, if at all. Therefore, it would be valuable for schools and corporations to be able to teach it well.

Several new methods and tools are designed to assist learners with real-world problem solving, including just-in-time instruction and electronic performance support systems (EPSSs). However, they do not provide the appropriate amount or types of support for learning this usually tacit heuristic knowledge. Only toward the close of the twentieth century have instructional design theorists seriously attempted to address this complex type of learning. Promising work has been done in the area of problem-based learning by such theorists as John D. Bransford and colleagues, David Jonassen, Laurie Nelson, and Roger Schank.

Other current areas of promising instructional-design theory include collaborative learning, self-regulated learning, and such affective areas as emotional development and social development.

Peter Senge highlighted the importance of the “learning organization,” which he defined as “an organization that is continually expanding its capacity to create its future” (p.14) through the use of five disciplines: systems thinking, personal mastery, mental models, building shared vision, and team learning. A challenge for instructional design theorists is to develop comprehensive theories that foster such organizational learning.

The preceding offers only a sampling of areas in which instructional-design theory is currently being developed. Due to the nature of human learning, there exist many more domains of instructional guidance that require greater study.

### Controversial Issues

Three controversial or problematic issues are discussed below: (1) Should instructional design theories be “theoretically pure” or eclectic? (2) Are traditional research methods appropriate for advancing instructional design theories, or is a different paradigm of research needed? (3) Should

instructional-design theories be strictly “local” in scope, or should they generalize across settings?

**Eclecticism versus purism.** Some scholars, such as Anne K. Bednar and colleagues, argue that an instructional-design theory should be “theoretically pure” in that it should follow a set of assumptions from a single theoretical perspective, such as constructivism or behaviorism. Others, such as Peggy Ertmer and Timothy Newby, believe that such is true for descriptive theories, but that design theories, with their goal orientation, should draw on all useful methods for accomplishing the stated goals. For example, a behaviorist perspective would offer the method of drill and practice to help learners remember important information, whereas a cognitive perspective would offer the use of mnemonics to relate the new information to meaningful information. Perhaps there are some situations where good mnemonics cannot be developed, in which case drill and practice would be suggested by a design theory. Is it unwise for a teacher to draw on both kinds of methods because they hail from different theoretical perspectives? This issue is particularly important because it greatly influences the nature of an instructional theory.

**Traditional versus new research methods.** Many scholars advocate experimental and/or descriptive case studies or other kinds of descriptive research to advance our knowledge about design theories. Other theorists, such as James Greeno and colleagues, advocate new forms of research, such as “design experiments” and “formative research” (Reigeluth and Frick). “Design experiments” is the term Greeno, Allan Collins, and Lauren Resnick have come to use to refer to educators collaborating to analyze and design changes in institutional practice. “Formative research” is a form of research developed by Charles Reigeluth and Theodore Frick that is meant to help improve instructional-design theory. In an analysis of this issue, Glenn Snelbecker argued in 1974 that descriptive theories in the field are evaluated by how truthfully they describe why learning occurs, whereas instructional theories are evaluated by how useful their methods are for attaining their stated goals. Given this very different orientation toward usefulness rather than truthfulness, Reigeluth (1999) has proposed that the major concern in research on design theory should be “preferability” (whether or not a given method is more useful than the alternatives), rather than “validity” (whether or not the description is truthful). He has also suggested that the

**TABLE 1**

**Key markers of the industrial and information ages that affect education**

Industrial age	Information age
Standardization	Customization
Bureaucratic organization	Team-based organization
Centralized organization	Autonomy with accountability
Adversarial relationships	Cooperative relationships
Autocratic decision-making	Shared decision-making
Compliance	Initiative
Conformity	Diversity
One-way communications	Networking
Compartmentalization	Holism
Parts-oriented	Process-oriented
Planned obsolescence	Total quality
CEO or boss as “king”	Customer as “king”

SOURCE: Reigeluth, Charles M. 1999. “What Is Instructional-Design Theory and How Is It Changing?” In *Instructional-Design Theories and Models, Vol. II: A New Paradigm of Instructional Theory*, ed. Charles M. Reigeluth. Mahwah, NJ: Erlbaum. Page 17. Reprinted with permission.

focus for research on a design theory should be to improve it rather than to prove it, because most of our methods of instruction are not nearly as successful as we need them to be. There is also clearly a role for descriptive research on instructional design theories, however. It is occasionally helpful to compare one method with another for a given situation, and descriptions of what a highly effective teacher or computer program does can be helpful for improving an instructional theory.

Although most researchers recognize that different research methods are useful for different purposes, perhaps there has not been enough emphasis on research to improve the preferability of instructional-design theories.

**Generalizable versus local knowledge.** Some scholars argue that instructional design theories should be “local” in scope because every situation is unique and methods that work well in one situation may not work well in another. Others believe that the purpose of an instructional-design theory is to generalize across situations—that if it loses this quality, it has little usefulness. Given that the standard for a design theory is usefulness rather than truthfulness, the issue may boil down to whether a highly local theory is more useful than a highly generalizable theory, or even whether a design theory that is intermediate between local and general may be the most useful.

There is another consideration that may enlighten this issue. Design theories are made up of not only methods, but also situations (values, desired outcomes, and conditions) that serve as a basis for deciding when to use each method. If a design theory offers different methods for different situations, the theory is at once both local and generalizable. It recognizes the unique needs of each situation but also offers methods for a wide range of situations. In this manner perhaps the profession can transcend “either-or” thinking and be both local and global.

### Further Directions

Instructional-design theory bridges the gap between descriptive theory and practice and offers powerful guidance for practitioners. It has the potential to spur tremendous improvements in practice, but it currently constitutes a minor percentage of scholarly efforts devoted to education. Partnering of researchers and practitioners to develop and improve more powerful instructional-design theories can provide valuable insights and improvements for more useful design theory to facilitate human learning and development.

*See also:* COOPERATIVE AND COLLABORATIVE LEARNING; INSTRUCTIONAL DESIGN, *subentries on* ANCHORED INSTRUCTION, DIRECT INSTRUCTION, LEARNING THROUGH DESIGN, PROBLEM-BASED LEARNING.

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DANIEL F. OSWALD  
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## ANCHORED INSTRUCTION

*Anchored instruction* (AI) is an example of an approach to curriculum and instruction that provides opportunities for students to learn important content while attempting to understand and solve authentic problems that arise within particular disciplines. Other related approaches are case-based learning, which is used in law and business education, and problem-based learning, sometimes used in medical education. Another way of organizing instruction around problem solving is through project-based learning.

### The Problem of Inert Knowledge

In 1929 the English philosopher Alfred Whitehead identified a major problem in schools, namely the problem of *inert knowledge*. Inert knowledge is knowledge that can be recalled when people are explicitly prompted to remember it, but is not spontaneously used to solve problems even though it is relevant. A major goal of AI is to create learning environments that overcome the inert knowledge problem.

Research suggests that the degree to which knowledge remains inert is strongly affected by the way the information was learned initially. One factor contributing to the problem of inert knowledge is that traditional instruction too often consists of learning isolated facts and procedures. As a consequence, students do not learn when or how to use what they have learned. The knowledge is not organized in memory with information on the conditions under which to apply it. In AI students are provided with opportunities to solve realistic problems—called anchors—that help them learn when and how to apply knowledge.

### The Role of Prior Knowledge in Learning

Research indicates that learning is affected by the knowledge that people bring to the learning situation. Sometimes people’s prior knowledge of a situation enables them to understand with little effort the meaning and significance of new information. More typically, especially in the case of young learners, prior knowledge of the situation is limited and the learner is unable to make sense of new information and has difficulty discriminating important from less important aspects of the information. When learners lack sufficient prior knowledge, information is treated as facts to be memorized. Anchored instruction was developed to compensate for learners’ lack of experience and knowledge. Anchors consist of multimedia (e.g., video or audio with pictures) scenarios that are designed to improve learners’ understanding of the problems to be solved.

### Experience Being an Expert

Another major goal of AI is to help people learn the kinds of problems that experts in various areas encounter and to experience how experts identify, represent, and solve problems. The problems that experts encounter are more complex and open ended than the problems that students are asked to solve in school. Experts also assume greater autonomy than students in solving problems, including learning new skills and knowledge on an as-needed basis to solve problems. Anchors are designed to afford these kinds of experiences.

### An Example of AI: *The Adventures of Jasper Woodbury*

Some of the original work on AI was conducted in the domain of middle school mathematics by the Cognition and Technology Group at Vanderbilt. These efforts culminated in a series called *The Adventures of Jasper Woodbury*. *Jasper* consists of twelve anchors (on videodisc or CD-ROM) that are designed for students in grades five and up. To promote transfer of learning, multiple related anchors are available to provide extra practice on core concepts and problem schemas. Three anchors relate to each of the following topics: statistics and business planning, trip planning, geometry, and algebra. Each anchor contains a short (about fifteen minutes) story on video, which ends in a complex challenge. The adventures are like good detective novels, where all the data necessary to solve the adventure (plus additional solution-irrelevant data) are embedded in the story.

In *The Big Splash*, one of the anchors related to statistics and business planning, the main character is a junior high school student named Chris. Chris's school is having a Fun Fair to raise money to buy a new camera for the school TV station. Chris wants to set up a dunking booth at the fair. Students would buy tickets for the opportunity to try to dunk their teachers in a pool of water. Chris needs to develop a business plan to get his dunking booth project approved by the school and to obtain a loan from the school principal. The plan must include an estimate of revenue and expenses for the dunking booth and must meet constraints set by the principal with respect to the maximum amount of the loan and the requisite profit. The video story shows Chris collecting information for his business plan.

**Design principles.** *Jasper* anchors were designed according to a set of principles. Each is video based. Research indicates that video helps students, especially poor readers, comprehend problems better. Video is also motivating to students. Anchor problems are presented in story form, instead of expository form. Stories are used because they are easy to remember.

Anchors are not simply traditional word problems on video—they are more representative of problems that an expert might solve. They are complex; more than one solution is possible and many steps (and hours) are required to solve them. Traditional story problems explicitly present the problem to be solved (there is usually only a single problem) and the relevant data. Anchors use a generative format. Each story ends with a challenge and students must generate the problems to be solved. For example, in *The Big Splash* many different business plans can be generated, based on the information presented. There are several options for filling the dunking booth with water and each option differs in terms of cost, risk, and the amount of time required. The challenge also involves some important statistical concepts. Chris conducts a survey to collect information on whether students at his school would be interested in dunking a teacher and how much they would pay to do so. Data from the survey can be used to extrapolate an estimate of revenue for the whole school.

All of the data needed to solve each challenge is contained in the story; students revisit the videos on an as-needed basis to look for and record data. Some of the *Jasper* anchors also contain ideas for how to solve parts of the challenge. These are called embed-

ded teaching scenes. The embedded teaching scenes provide students with models for how to approach particular problems that may not be familiar to them.

### Perspective on Pedagogy

Anchored instruction is consistent with a class of instructional theories known as constructivist theories. Constructivism rejects the idea that students learn by passively “soaking up” knowledge that is transmitted to them by teachers or others. Instead they assume students learn more if the teacher engages them in activities, such as defining problems, clarifying misunderstandings, generating solutions, and so forth, instead of lecturing or “telling” students how to solve problems.

Because of their complexity, anchors are effective for use in cooperative learning groups. Depending on the skill level of the class, teachers may structure the small-group work in different ways. If the class is quite skilled, the teacher may simply ask students to solve the challenge posed at the end of the video. For other classes, the teacher may ask groups to work and report on some part of the challenge or may focus the task even more by asking groups to brainstorm and report on ideas for how to solve a part of the challenge. An important aspect of AI pedagogy relates to how teachers mediate group problem solving. Because a goal of AI is for students to be as intellectually autonomous as possible in solving the anchors, it is important for teachers to interact with student in ways that do not usurp this autonomy.

### Research on Anchored Instruction

One of the largest studies on AI involved a field implementation of four anchors from *The Adventures of Jasper Woodbury*. These anchors were used over the course of a school year by teachers in seventeen classes in seven states in the southeastern United States. In the majority of the classes, the *Jasper* instruction took the place of the students' regular mathematics instruction. Ten comparison classes that were matched on key demographic variables, including socioeconomic status, location, gender, minority representation, and mathematical achievement, were included in research. All students were administered a series of tests at the beginning and end of the school year. One test examined students' word-problem-solving skills. In spite of the fact that *Jasper* students had not received additional practice

on written word problems, they performed significantly better than comparison students at the end of the school year. In this way, *Jasper* students were able to transfer the skills they had acquired in the context of solving *Jasper* problems to written word problems.

Students were also administered a series of tests designed to assess their abilities to define and formulate problems. They were given complex story problems in written form and were asked to identify goals that would need to be addressed to solve these problems. They were also shown mathematical formulations and were asked to identify the goal that each formula would satisfy. These aspects of problem solving are unique to the *Jasper* anchors and are not part of traditional problem-solving instruction. As expected, *Jasper* students performed better than comparison students on the posttest.

Finally, self-report measures of students' attitudes were collected. *Jasper* students showed more positive change relative to comparison students in five areas: they showed a reduction in mathematics anxiety, an increase in their beliefs about their ability to perform successfully in mathematics, greater interest in mathematics, greater interest in solving complex problems, and they thought mathematics was more useful in solving problems from everyday life.

The goal of anchored instruction is to help students learn information such that it can be remembered later on and flexibly applied to solve problems. Relevant research suggests that pedagogical approaches such as anchored instruction can enhance students' complex problem solving skills and positive attitudes towards learning.

*See also:* INSTRUCTIONAL DESIGN, *subentries on* CASE-BASED REASONING, LEARNING THROUGH DESIGN, PROBLEM-BASED LEARNING.

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NANCY J. VYE

## CASE-BASED REASONING

Case-based reasoning (CBR) is a kind of analogical reasoning that focuses on reasoning based on previous experience. A previous experience can play several roles, such as:

- suggesting a solution to a new problem or a way of interpreting a situation,
- warning of a problem that will arise, or
- allowing the potential effects of a proposed solution to be predicted.

These are the types of inference necessary for addressing the kinds of ill-defined or complex problems that occur every day in the workplace, at school, and at home. One might, for example, create a new recipe by adapting one made previously. To understand why someone's boss reacted a certain way, one might remember a situation when his own boss reacted similarly. People might persuade themselves that a strategic plan will work based on the similarities between their company's situation and that of another company that is progressing in a similar way.

### Cognitive Foundations

Case-based reasoning views analogical reasoning as the centerpiece of the ability to function as human beings. It posits that the most natural and powerful learning strategies are the automatic ones that situate learning in real-world experience. Previous experience and knowledge are naturally brought to bear in interpreting new situations, trying to explain when things are not as expected (based on the predictions made by previous experiences and knowledge), drawing conclusions based on explanations and on similarities between situations, and anticipating when some new thing just learned might be applicable. To do these things automatically there must be some internal processes and representations that allow a new experience to call up similar ones from memory.

Key to such reasoning is a memory that can access the right experiences (cases) at the times they

are needed (the indexing problem). Case-based reasoning identifies two sets of procedures that allow such recognition to happen. First, at insertion (encoding) time, while engaging in an experience, a reasoner interprets the situation and identifies at least some of the lessons it can teach and when those lessons might most productively be applied. The case is labeled according to its applicability conditions, that is, the circumstances in which it ought to be retrieved. The most discriminating labels on a case will be derived by a reasoner who has taken the time and effort, and who has the background knowledge, to carefully analyze a case's potential applicability. Second, at retrieval time, while engaging in a new situation, a reasoner uses his or her current goals and understanding of the new situation as a probe into memory, looking for cases that are usefully similar to the new one. The extent to which a reasoner is willing or able to interpret the new situation determines the quality of the probe into memory. An uninterpreted situation is likely to yield poorer access to the contents of memory than is one that is more embellished. The more creative a reasoner is at interpreting a situation, the more likely he or she is to find relevant knowledge and experience to use in reasoning about it.

Learning, in the CBR paradigm, means extending one's knowledge by interpreting new experiences and incorporating them into memory, by reinterpreting and reindexing old experiences to make them more usable and accessible, and by abstracting out generalizations over a set of experiences. Interpreting an experience means creating an explanation that connects one's goals and actions with resulting outcomes. Such learning depends heavily on the reasoner's ability to create such explanations, suggesting that the ability and need to explain are key to promoting learning.

Case-based reasoning thus gives failure a central role in promoting learning because failure promotes a need to explain. When the reasoner's expectations fail, he or she is alerted that his or her knowledge or reasoning is deficient. When such failures happen in the context of attempting to achieve a personally meaningful goal, the reasoner wants to explain so that he or she can be more successful. Crucial to recognizing and interpreting failure is useful feedback from the world. A reasoner who is connected to the world will be able to evaluate his or her solutions with respect to what results from them, allowing in-

dexing that discriminates usability of old cases and allowing good judgments later about reuse.

Because one's first explanations might not be complete or accurate, iterative refinement is central to CBR. Explanations (and thus, knowledge) are revised and refined over time. People explain and index any experience the best they can at the time, and later on, when a similar situation comes up, remember and try to apply what was learned from the past experience. The ability to accurately explain develops over time through noticing similarities and differences across diverse situations, suggesting that a variety of experiences with a concept or skill—personal ones and vicarious ones—are necessary to learn it to its full complexity.

### Implications for Promoting Learning

Case-based reasoning suggests five important facilitators for learning effectively from experience:

1. having the kinds of experiences that afford learning what needs to be learned;
2. interpreting those experiences so as to recognize what can be learned from them, to draw connections between their parts so as to transform them into useful cases, and to extract lessons that might be applied elsewhere;
3. anticipating the usefulness of those extracted lessons so as to be able to develop indexes for these cases that will allow their applicability to be recognized in the future;
4. applying what one is learning and experiencing failure of one's conceptions to work as expected, explaining those failures, and trying again (iteration); and
5. learning to use cases effectively to reason.

Case-based reasoning suggests that the easiest kinds of experiences to learn from are those that afford concrete, authentic, and timely feedback, so that learners have the opportunity to confront their conceptions and identify what they still need to learn. It also suggests that learners be given the opportunity to iteratively move toward increasingly better development of the skills and concepts they are learning so as to experience them in a range of situations and under a variety of conditions, and that, with each iteration, they have a chance to explain things that did not go exactly as expected and identify what else they need to learn. According to CBR,

the iterative cycle of applying what is known, interpreting feedback, explaining results, and revising memory explains how expertise is developed and how an expert uses personal experiences and those of others to reason and learn.

### Designing Instruction

Case-based reasoning makes two kinds of suggestions about designing instruction. First it suggests ways of orchestrating and sequencing classroom activities, including the roles teachers and peers can play in that orchestration and ways of integrating hands-on activities, software tools, and reflection. Second it suggests several kinds of software tools for scaffolding and enhancing reasoning and for promoting productive kinds of reflection.

**Design of learning environments.** Case-based reasoning suggests a style of education in which students learn by engaging in problem solving and other activities that motivate the need to learn and that give students a chance to apply what is being learned in ways that afford real feedback. In such an environment students might engage in solving a series of real-world problems (e.g., managing erosion, planning for a tunnel, designing locker organizers) requiring identification of issues that need resolution and knowledge that needs to be learned to address those issues; exploration or investigation or experimentation to learn the needed knowledge; application of that knowledge to solve the problem; and generation and assessment of a solution. Thinking about the problem they are trying to solve should help learners identify what they need to learn; they should have opportunities to learn those things; and they should get to apply what they are learning over and over again, with help along the way aimed at allowing them to successfully solve the problem and successfully learn the targeted knowledge and skills. Two approaches to the design of full learning environments have come from CBR. Roger C. Schank's group at Northwestern University's Institute for the Learning Sciences proposed the notion of a goal-based scenario as a fully automated learning environment. Janet L. Kolodner's group at Georgia Institute of Technology proposes the notion of their trademarked Learning by Design, a way of orchestrating a classroom for combined learning of content and important skills.

**Goal-based scenarios (GBS).** A goal-based scenario is a learning environment that places students in a situation where they have to achieve some inter-

esting goal that requires them to learn targeted knowledge and skills. In *Advise the President*, for example, students play the role of advisers to the president in dealing with a hostage situation in a foreign land, in the process learning about several hostage-taking events, which have happened in history, and also learning some foreign policy. In *Sickle-Cell Counselor* students advise couples about their risk of having children with sickle-cell anemia, in the process learning about genetics in the context of sickle-cell disease. Using *Broadcast News* students put together a news story, in the process learning both history and writing skills. Students learn about history or genetics or writing because they need to learn those things to successfully achieve the challenge set for them. The trick is to design challenges that both engage the students and focus them on whatever content and skills they should be learning.

The student engaged in a goal-based scenario is provided with a case library of videos of experts telling their stories, strategies, and perspectives, which might help them with their task. When they reach an impasse in achieving their goal, they ask a question of the case library, and an appropriate video is retrieved and shown. Sometimes a story will suggest a topic they should learn more about or a skill they need to learn; other times it will tell how that expert dealt with some difficult issue the student is addressing. Based on suggestions made by the case library students move forward with their task—choosing a policy to recommend to the president, choosing a blood test, making recommendations to couples about whether or not they should have children, or deciding how to refer to a leader. The software takes on an additional role to clearly inform students when they have failed at their task. The case library can be consulted again, this time to help with explaining and recovering from a failure.

***Learning by Design.*** Learning by Design is a project-based inquiry approach to middle school science, which uses design challenges as compelling contexts for learning science concepts and skills. Design challenges provide opportunities for engaging in and learning complex cognitive, social, practical, and communication skills. For example students design miniature vehicles and their propulsion systems to learn about forces, motion, and Newton's laws; and ways of managing the erosion near a basketball court to learn about erosion and accretion, erosion management, and the relationship between people and the environment.

Learning by Design's curriculum units are centered on the design and construction of working devices or models that illustrate physical phenomena. Learning by Design's focus on design challenges comes from CBR's suggestion that learning requires impasses and expectation failures. Designing, building, and testing working devices provides the kinds of failure experiences and feedback that promote good learning as well as opportunities for trying again to achieve the challenge based on what's been newly learned.

Case-based learning purports that learning from experience requires reflecting on one's experiences in ways that will allow learners to derive well-articulated cases from their experiences and insert them well into their own memories. Learning by Design includes integration of classroom "rituals" that promote such reflection. "Poster sessions" provide a venue for reporting on and discussing investigative results and procedures. "Pin-up sessions" give small groups the opportunity to share their plans with the whole class and hear other students' ideas. "Gallery walks" provide a venue for presenting one's designs in progress to the rest of the class and explaining why one's device behaves the way it does. Each provides opportunities for students to publicly present the way they engaged in important science skills, to see how others have engaged in those skills, and to discuss the ins and outs of the skills being practiced. Preparing for presentations requires doing the kinds of reflection on their activities that CBR suggests will lead to lasting learning.

Successfully engaging in design and investigative activities and in reflecting on those activities in ways that lead to productive learning requires help, and in Learning by Design, that help is distributed among the teacher, peers, cases, software, and paper-and-pencil tools. Cases that are read as part of the investigation or during design planning help students identify what they need to learn more about and give them ideas for their designs. Paper-and-pencil design diary pages help them keep track of decisions they make and data they collect while designing and testing so that they will be able to remember and reconstruct their experiences. SMILE's (Supportive Multi-User Interactive Learning Environment) Design Discussions help students plan investigative activities, summarize investigative experiences, justify design decisions, and explain design experiences, and its Lessons Learned helps them reflect back on a full design experience (several

weeks long) and articulate what they've learned. The tools act as resources to help students create cases for others to use, help students keep track of what they have been doing, and help students reflect on their experiences and turn them into cases in their own memories. Learning by Design's classroom rituals get students and teachers involved in sharing and discussing experiences, providing advice, and abstracting across the experiences of different groups in a class.

**Design of instructional tools.** Case-based reasoning suggests three types of software tools for promoting learning: (1) case libraries as a resource; (2) supports for reflection; and (3) realistic simulation and modeling environments.

**Case libraries as a resource.** The most common place where CBR has influenced learning tools is in the creation of case libraries. A case library offers the opportunity for students to learn from others' experiences. Case libraries as a resource can offer a variety of different kinds of information of value to learners:

- Advice in the form of stories
- Vicarious experience using a concept or skill
- The lay of the domain and guidance on what to focus on
- Strategies and procedures
- How to use cases

Archie-2, for example, provides cases for architecture students to use while designing. Its cases describe public buildings, focusing on libraries and courthouses. As students work on designing buildings they consult Archie periodically for advice. Another program, STABLE, is designed to help students learn the skills involved in doing object-oriented design and programming. It uses a web-based (hypermedia) collection of cases made from previous students' work. Many goal-based scenarios include case libraries at their cores.

The context in which case libraries are used is critical to their effectiveness. For cases to be a useful resource to students, the students must be engaged in an activity where their impasses might be answered by cases in the case library. If students are facing challenges that arise naturally in problem solving (e.g., "How do I model a situation like this?" or "What's a good starting point for this kind of problem?"), then a case library of relevant situations and problems can help them address those impasses.

Building case libraries can be as valuable educationally as using case libraries, sometimes even more valuable. One of the findings in using Archie-2 was that the graduate students who were *building* the case library seemed to be learning as much or more than the students who were *using* the case library in their design work. The activity of building a case library is frequently motivating for students because it is creating a public artifact whose purpose is to help future students. Cognitively the need to explain to others in a way that will allow them to understand requires reflecting on a situation, sorting out its complexities, making connections between its parts, and organizing what one has to say into coherent and memorable chunks.

**Support for reflection.** Case-based reasoning purports that the most productive reflection for deep and lasting learning includes connecting one's goals, plans, actions, and their outcomes to tell the fully interpreted story of an experience, and then extracting the lessons learned and making predictions about the circumstances when those lessons might be applicable in the future. Several software tools have been designed to help learners engage in such reflection, each asking learners to be authors of cases describing their experiences. Jennifer Turns's Reflective Learner helps undergraduate engineering students write "learning essays" about their design experiences. Its prompting asks students to (a) identify and describe a problem that they had encountered when undertaking the current phase of their design project; (b) describe their solution to the problem; (c) say what they had learned from the experience; and (d) anticipate the kinds of situations where a similar solution might be useful. Amnon Shabo's Javacap and its successor, Kolodner's and Kris Nagel's Storyboard Author, provide structuring and prompts to help middle school students summarize their project-based science experiences, extract from them what they have learned, and write them up as stories for publication in a permanently accessible case library for use by other students. The networked computer creates motivation for the students' reflection; students enhance their own learning as they write summaries, which can act as guides and supports to future students. Nagel and Kolodner's Design Discussions, mentioned earlier, provides prompting to help students write up the results of experiments they've done, ideas about achieving project challenges or solving problems they are

working on, or what happened when they constructed and tested a design idea.

**Realistic modeling and simulation.** Case-based reasoning's model of learning puts emphasis on experiencing failure as a motivation for deep learning. Case-based reasoning thus suggests that learners should have opportunities to try out their conceptions, failing softly when their predictions fail, and getting timely and interpretable feedback that they can use to identify and explain their misconceptions. Thus, the ability to try out and see the results of one's conceptions is fundamental to any learning environment based on CBR's model. Sometimes one can construct artifacts and try them out. For example, in Learning by Design, students design, construct, and test miniature vehicles to learn about combining forces. But often processes have time scales, size, cost, or safety constraints that make authentic feedback impractical. In those situations, CBR suggests making available to students realistic modeling and simulation environments.

### Evidence of Learning

There has not been a great deal of evaluation and assessment of case-based tools and learning environments, but indicators are positive. Teachers and trainers who use CBR-informed materials come back energized. Teachers feel that they are able to reach more of their students with this methodology. Both students at the top and those at the bottom seem to be drawn in more by these activities than they are in a normal aim-toward-the-middle classroom. Concepts and skills are being learned, teachers think, in ways that will encourage students to remember and reuse them. Students surprise the teachers with ideas they come up with and the connections they are able to draw.

Evaluation and assessment in Learning by Design classrooms shows that indeed students are learning, often better than students in a traditional classroom. Results indicate that students who participate in Learning by Design learn the science content as well as or better than students in more traditional science classes. More important, results show that Learning by Design students learn targeted science skills and communication, collaboration, project, and learning practices such that they can apply them in novel situations. Indeed, Learning by Design students in typical-achievement classes perform these skills and practices as well as or better than honors students who have not been exposed to Learning by

Design, while Learning by Design honors students perform the targeted skills and practices almost like experts.

*See also:* INSTRUCTIONAL DESIGN, *subentries on* ANCHORED INSTRUCTION, LEARNING THROUGH DESIGN, PROBLEM-BASED LEARNING.

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JANET L. KOLODNER

## DIRECT INSTRUCTION

*Instruction* is an illusive term that is often used indiscriminately to describe any presentation of information. In this discussion instruction is limited to those situations that, in addition to providing relevant in-

formation, include the following characteristics: (1) a particular educational goal has been specified; (2) the information has been organized to facilitate the acquisition of the desired knowledge or skill; (3) appropriate practice with feedback has been provided; and (4) guidance is available to assist learners to acquire the desired knowledge or skill.

*Learning* is also a term that is often equated with instruction. Learning occurs in all situations, whether or not there was a deliberate attempt to promote acquisition of a particular goal. Instruction is limited to those situations where there is a deliberate attempt to promote learning of specified knowledge or skill.

*Direct instruction* is a subset of instructional situations in which there is some instructor or instructional agent that is not only providing information but also monitoring the instructional activities of the student and providing guidance and feedback as appropriate. Ruth Clark describes four instructional architectures: receptive, directive, guided discovery, and exploratory. *Receptive instruction* is typified by a lecture where information is provided, but there is no attempt to ensure learning by providing practice or guidance. *Directive instruction*, often called tutorial instruction, involves presenting segments of information followed by appropriate practice with feedback and guidance. This is the type of instruction that is the subject of this entry. *Guided discovery* provides students with problems to solve and engages them in microworlds or simulations of the real world where they can explore a variety of approaches. The amount of guidance provided varies widely in this type of instruction. Highly guided situations are very similar to direct instruction, whereas those with little or no guidance depend more on student discovery of the knowledge or skill being promoted. *Exploratory architectures* are typically unstructured. Learners are provided some problem to solve and given a rich library of resource material. Students must structure their own learning as they investigate various resources and attempt to solve the problem.

### Types of Instructional Models

There are a wide variety of instructional models and theories available to guide the design of directive instructional products. Charles M. Reigeluth includes summaries of more than twenty such models. Robert Tennyson et al. and Sanne Dijkstra et al. include summaries of a number of international models of instruction. David Jonassen includes a number of ar-

ticles summarizing research related to direct instruction. Perhaps the most widely used model for direct instruction is the 1985 work of Robert Gagné, elaborated and extended by David Merrill in 1994. A newer model of some importance is the 4C/ID model of J. J. G. van Merriënboer.

The author has examined the above and other sources to identify instructional principles prescribed by this body of theory and research to which all of these authors would agree. These instructional design models represent a wide range of philosophical orientation and each emphasizes different aspects of the instructional situation. Some of these models apply more directly to architectures other than direct instruction but have implications for direct instruction nevertheless.

Many of these instructional models suggest that the most effective learning situations are those that are problem-based and involve students in four distinct phases of learning: (1) activation of prior experience; (2) demonstration of skills; (3) application of skills; and (4) integration of these skills into real-world activities.

### Principles for Direct Instruction

The various instructional theorists and researchers all seem to agree on the following underlying principles for direct instruction:

1. Learning is promoted when learners are engaged in solving real-world problems.
  - a. Learning is promoted when learners are shown the task that they will be able to do or the problem they will be able to solve as a result of completing a module or course.
  - b. Learning is promoted when learners are engaged at the problem or task level, not just the operation or action level.
  - c. Learning is promoted when learners solve a progression of problems that are explicitly compared to one another.
2. Learning is promoted when relevant previous experience is activated.
  - a. Learning is promoted when learners are directed to recall, relate, describe, or apply knowledge or skill from relevant past experience that can be used as a foundation for the new knowledge or skill.
  - b. Learning is promoted when learners are provided relevant experience that can be used as a foundation for the new knowledge or skill.

- c. Learning is promoted when learners are provided or encouraged to recall a structure than can be used to organize the new knowledge.
3. Learning is promoted when the instruction demonstrates what is to be learned rather than merely telling information about what is to be learned.
    - a. Learning is promoted when the demonstration is consistent with the learning goal: examples and nonexamples for concepts, demonstrations for procedures, visualizations for processes, and modeling for behavior.
    - b. Learning is promoted when learners are provided appropriate learner guidance including some of the following: learners are directed to relevant information, multiple representations are used for the demonstrations, and multiple demonstrations are explicitly compared.
    - c. Learning is promoted when media plays a relevant instructional role.
  4. Learning is promoted when learners are required to apply their new knowledge or skill to solve problems.
    - a. Learning is promoted when the application (practice) and the posttest are consistent with the stated or implied objectives: *information-about practice* is to recall or recognize information; *parts-of practice* is to locate, name, and/or describe each part; *kinds-of practice* is to identify new examples of each kind; *how-to practice* is to do the procedure; and *what-happens practice* is to predict a consequence of a process given conditions, or find faulted conditions given an unexpected consequence.
    - b. Learning is promoted when learners are guided in their problem solving by appropriate feedback and coaching, including error detection and correction, and when this coaching is gradually withdrawn.
    - c. Learning is promoted when learners are required to solve a sequence of varied problems.
  5. Learning is promoted when learners are encouraged to integrate (transfer) the new knowledge or skill into their everyday life.
    - a. Learning is promoted when learners are given an opportunity to publicly demonstrate their new knowledge or skill.
    - b. Learning is promoted when learners can reflect on, discuss, and defend their new knowledge or skill.
    - c. Learning is promoted when learners can create, invent, and explore new and personal ways to use their new knowledge or skills.

*See also:* INSTRUCTIONAL DESIGN, *subentry on* OVERVIEW.

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M. DAVID MERRILL

## LEARNING COMMUNITIES

At the end of the twentieth century in America there has developed a *learning-communities* approach to education. In a learning community the goal is to advance the collective knowledge and, in that way, to support the growth of individual knowledge. The defining quality of a learning community is the presence of a culture of learning in which everyone is involved in a collective effort of understanding.

There are four characteristics that such a culture must have: (1) diversity of expertise among its members, who are valued for their contributions and given support to develop; (2) a shared objective of continually advancing the collective knowledge and skills; (3) an emphasis on learning how to learn; and (4) mechanisms for sharing what is learned. It is not necessary that each member assimilate everything that the community knows, but each should know who within the community has relevant expertise to address any problem. This marks a departure from the traditional view of schooling, with its emphasis on individual knowledge and performance and the expectation that students will acquire the same body of knowledge at the same time. Classrooms organized as learning communities differ from most classrooms along a number of dimensions.

### Learning Activities

Because the goals focus on fostering a culture of learning, the activities of learning communities must provide a means for (1) both individual development and collaborative construction of knowledge, (2) sharing knowledge and skills among members of the community, and (3) making learning processes visible and articulated. The learning activities described in a learning-communities approach and those found in most classrooms may share some similarities. For instance, methods such as cooperative learning can be used to support a learning community's goals, but they can equally well support

more traditional learning aimed at inculcating particular knowledge among students.

### Teacher Roles and Power Relationships

In a learning-communities approach the teacher takes on roles of organizing and facilitating student-directed activities, whereas in most classrooms the teacher tends to direct the activities. The power relationships shift as students become responsible for their own learning and the learning of others. Students also develop ways to assess their own progress and work with others to assess the community's progress. In contrast, in most classrooms the teacher is the authority, determining what is studied and assessing the quality of students' work.

### Identity

As members of a learning community take on different roles and pursue individual interests toward common goals, students develop individual expertise and identities. In contrast, in most classrooms students work on the same things and are all expected to reach a base level of understanding. Students tend to form their identity through being measured or by measuring themselves against this base level. In a learning-communities approach there is also the notion of a community identity. By working toward common goals and developing a collective awareness of the expertise available among the members of the community, a sense of "who we are" develops.

### Resources

Both a learning-communities approach and many traditional classrooms use resources outside of the classroom, including disciplinary experts, telementors, the Internet, and so forth. However, in learning communities both the content learned and the processes of learning from the outside resources are shared more among members of the community and become part of the collective understanding. A further distinction between learning communities and most classrooms is that in learning communities, both the members themselves and the collective knowledge and skills of the communities are viewed as important resources.

### Discourse

In the learning-communities approach, the language for describing ideas and practices in the community emerges through interaction with different knowledge sources and through co-construction and ne-

gotiation among the members of the community. Also, learning communities develop a common language for more than just content knowledge and skills. The community develops ways to articulate learning processes, plans, goals, assumptions, and so forth. In contrast, in most classrooms the teacher and texts tend to promulgate the formal language to be learned.

### Knowledge

In learning communities the development of both diverse individual expertise and collective knowledge is emphasized. In order for students to develop expertise, they must develop an in-depth understanding about the topics that they investigate. There is also a circular growth of knowledge, wherein discussion within the community about what individuals have learned leads individuals to seek further knowledge, which they then share with the community. In most classrooms the goals tend toward covering all the topics in the curriculum (breadth over depth) and teaching everyone the same thing.

### Products

In a learning-communities approach, members work together to produce artifacts or performances that can be used by the community to further their understanding. There is sustained inquiry and development of products over months. In contrast, most classrooms tend toward individual or small group assignments with little sharing or collective products. Usually work is produced in short periods of time.

A key idea in the learning-communities approach is to advance the collective knowledge of the community, and in that way to help individual students learn. This is directly opposed to the approaches found in most schools, where learning is viewed as an individual pursuit and the goal is to transmit the textbook's and teacher's knowledge to students. The culture of schools often discourages sharing of knowledge by inhibiting students talking, working on problems or projects together, and sharing or discussing their ideas. Testing and grading are administered individually. When taking tests, students are prevented from relying on other resources, such as students, books, or computers. The whole approach is aimed at ensuring that students have all the knowledge in their heads that is included in the curriculum. Thus the learning-community approach is a radical departure from the theory of

learning and knowledge underlying traditional schooling.

*See also:* COMPUTER-SUPPORTED COLLABORATIVE LEARNING; COOPERATIVE AND COLLABORATIVE LEARNING; PEER RELATIONS AND LEARNING.

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KATERINE BIELACZYK

### LEARNING THROUGH DESIGN

Design principles, perspectives, and processes in K–12 classroom practice became a topic of educational research during the final decade of the twentieth century. Research was preceded by design-based practices in the classrooms of many K–12 teachers, who engaged students in a variety of design projects and activities, such as proposing environmental strategies, creating plans for future communities, building bridges, designing machines, creating art and theater, and planning for community events. Classroom design projects thrived among teachers, who appreciated their value, but received little notice from researchers of learning. Design activities were the legacy of John Dewey and other progressive influences on schools and teachers, with roots in "experiential education," "learning by doing," and "project work." This entry is concerned exclusively with the nascent research field exploring the cognitive, metacognitive, and social contributions of design-based approaches to learning.

## Research Background and Interests

The research community's interest in design-based approaches to curriculum overlap with several movements in education during the last two decades of the twentieth century. During the 1980s an education policy atmosphere developed that called for connecting what was taught and learned in school with the emerging demands of the work world. At the same time, cognitive and social research on learning evolved in new directions. Finally, research and development efforts with educational technologies emerged, bringing new concerns, tools, and methods to classroom research. In each of these arenas there was interest in problem solving, multidisciplinary approaches to content learning, social aspects of the learning process, applications of school content to the real world, and development of new tools. Because design embodies these qualities, it became a focus of research.

**Policy.** At the policy level, standards documents supported the importance of design-based learning experiences. The national science content standards included a strand titled "Science and Technology Standards," which called for students to engage actively in design work, from stating problems to designing solutions and evaluating them. The standards "emphasize abilities associated with the process of design and the fundamental understandings about the enterprise of science and its various linkages with technology" (National Research Council, p. 106). The *Standards for Technological Literacy* included design activities, stating that design is "as fundamental to technology as inquiry is to science and reading is to language arts" (International Technology Education Association, p. 90). Although not pointing directly to design, other standards documents from the National Council of Teachers of Mathematics supported problem solving, modeling, and connecting schoolwork to real applications. The trend to include design was international as well. In a 1996 multinational examination of science, mathematics, and technology curricula in thirteen countries, Paul Black and J. Myron Atkin identified movement toward design-oriented curricula that coincided with the desire of educators to have relevant, applied contexts as well as contexts for students to develop their practical knowledge and understandings. Although the policy call was clear, there was little account of existing school practices and no evidence of their effectiveness.

**Design-based curricula.** The most comprehensive examination of design-based learning in the United States, a 1997 report by Meredith Davis and colleagues under the umbrella of the National Endowment for the Arts, attempted to find and study design-based curricula to show what teachers and students do in design and the promise it holds for educational reform. The study used an "exploratory, hypothesis-generating approach" because design practices in classrooms were not widespread. Scores of design approaches were discovered and examined. The study's contribution was in providing descriptions of design practice in classrooms and identifying effective models and outcomes for using design. The study emphasized the ways design opens learning opportunities across curriculum subjects for teachers and learners and connects them to the world and a future beyond school.

## Designing for Results

Changes took place in what was of interest to study as well as in the ways social and cognitive researchers approached and conducted research. Concerns about the learning goals of schools and their connections to students' futures as citizens and workers interested cognitive and social-learning researchers. Prior research results indicated that, under the right conditions, children were capable of complicated understandings and skills, and more researchers became interested in identifying and understanding learning in practice. This brought researchers out of laboratories and into the rough and tumble of classroom life. Researchers began to connect with teachers and reformers, expanding the goals, methods, and reach of their research. New models of research became established, such as the "design experiment" and "interactive research and design," both less aimed at researching design-based learning and more focused on researchers designing, implementing, studying, and tweaking classroom activities until they achieved sought-after results. Some researchers partnered with teachers to conduct classroom-based cognitive research and to develop tools and curriculum based on research findings that specifically incorporated design.

**Middle-School Mathematics through Application Project (MMAP).** Research and development of educational technologies became an additional and significant intersection point. Technology and design have a symbiotic relationship. Once technology tools for problem solving were in the hands of teach-

ers and students, design-based activities became a possibility for widespread use. The Middle-School Mathematics through Application Project (MMAP) developed and researched an approach to middle school mathematics that integrated technology as a tool for mathematics learning in the context of design-based projects. Students were introduced to mathematics as they needed it, to solve pre-specified and constrained design problems, such as building a research station in Antarctica or recommending environmental population-control policies. Design contexts were treated as resources for mathematical interaction and explanation, and they led to increasing student engagement with mathematics topics. Design contexts made real-world connections of mathematics obvious to students and gave them situational resources for developing mathematical concepts. Design contexts provided opportunities for problem definition, problem solving, and performance-based assessments.

**Jasper Project.** The Jasper Project incorporated design-based approaches to upper-elementary mathematics learning with technology. The Jasper series focused on mathematical problem finding and solving, reasoning, communications, and making connections to other content areas for elementary students. The Jasper Project encouraged collaborative activity on extended problems over time, while offering deep understanding of mathematical concepts. Both MMAP and the Jasper Project emphasized the emergent aspects of problem solving and the utilization of various mathematical concepts and skills along the way to solving real-world problems. They both emphasized the roles technologies could play in supporting complex, design-based work in the mathematics curriculum and the supports needed for teacher professional development and assessment.

Yasmin Kafai and Mitchell Resnick bring together research from both school and informal technology, using settings to demonstrate how design activities with games, textile patterns, and robots empower children and connect them to important mathematics and science ideas. They examined subject-matter learning and provided compelling cases for how design processes provide meaningful and productive learning settings.

**Learning by Design.** Research independent of technology has concentrated on connections between design contexts and content learning, especially in mathematics and science. The Learning by Design

project employed design approaches in science learning. The researchers based their work on prior results to create environments for learning science concepts and their applicability through a curriculum focused on “design and build challenges.” They studied how, in the context of design work, students gained a conceptual understanding of complex systems and practices and created and field tested pedagogical rituals and processes for making design projects effective.

**Modeling.** With a concentration in both mathematics and science, work by Richard Lehrer and Leona Schauble investigated students’ understanding of modeling, which is central to design work. They studied four schools where teachers were moving away from emphasizing facts and procedures to approaches focusing on constructing, evaluating, and reviewing models. They chronicled the development of models across the K–5 years and outlined key features in teacher professional development. In other analyses, they examined the development of mathematical inscription devices for representing and communicating about data in experiments and designs.

**Geometry.** Several studies of geometry understanding explored design contexts. In a 1998 study on understanding space, Lehrer, Cathy Jacobson, and colleagues examined how the geometric ideas of transformation and symmetry were developed through a quilt-design activity. They found that quilt design provided students with opportunities to explore ideas of symmetry and transformation and that informal knowledge of drawing and aesthetics played a mutual role in mathematical argumentation and notation. James Middleton and Robert Corbett examined the contexts of engineering and architecture to see if realistic situations helped students develop notions of physical structure that they could in turn connect to their understanding of geometry. Students made toothpick models of geometric solids, tested their strengths, then created suspension bridges and tested their stability. Results were mixed, with conceptions of geometric contributions to stability present but applied naively in designs.

### Features of Design-Based Learning under Study by Researchers

A closer look at the features of design ideas and practices reveals what has made them appealing to teachers and researchers and indicates areas for future research. As a collaborative process, design requires

discussion and clarification of goals, problems, sub-problems, and actions. Researchers of learning have interests in problem exploration, the development of organizational skills and logic, and the ways they connect to, or enhance, learning of content and concepts.

Once problems and solution constraints are understood, design-based brainstorming encourages participation because it requires students to offer ideas and suggestions for solving problems in the context of a low-pressure forum. This engages students as stakeholders at the start of a complex set of activities. Brainstorming reinforces equity principles by providing for cultural knowledge to be relevant, brought to the table, and consequential for engagement and participation.

Success and inclusion are encouraged because multiple solutions to design problems are sought and appreciated. Variation is an expected outcome of the design experience. Variation in response to problems requires that students keep track of their decisions and provide rationales for them.

The features mentioned, including problem definition, brainstorming, open access to varied solution paths, and collaborative work, provide support for specific discourse processes in the classroom. Discussion, making and testing conjectures, rationales, argumentation, and explanation are necessary. Students must talk about possibilities, resources, and constraints. The more students discuss the problems they are trying to solve, the more they suggest and assess the viability of specific solutions while trafficking in the vocabulary and discourse practices of the discipline, then the more they are learning.

Design work and its tools require students to interact with multiple media and representations of information and data, and these are an increasing focus of research. Students may have to create constraint lists, flowcharts, data tables, graphs, and drawings as they use numbers and number sense, measurement, and both natural language and symbolic formulas while working from problem definition to solution. Researchers recognize the ability and ease with which technologies and media can put multiple representations of problems and processes on the student's desktop.

Research on design-based approaches creates opportunities for studying performance-based assessment practices. Iterative review processes are part of design work, leaving teachers and students

with more opportunities for performance-based and peer-based assessment. Elaborating and agreeing on goals, evaluating processes, giving and receiving feedback, and prioritizing and making revisions are practices in design and worthwhile assessment practices as well.

In design, students' work with extended real-world problems connects them to practical professions, such as art, architecture, and engineering. Links are created between the real world and models, between simulations and solution processes, giving students access to practical knowledge and general processes of problem solving.

Finally, design-based learning has examined teacher practices. Evidence from MMAP suggests that the design process has the effect of decentering instruction from the teacher, and provides students with more explanation opportunities, more agency, and a more balanced position of power in relation to their work progress.

Barriers to widespread design-based approaches are also evident. Design-based learning is considered difficult to adopt and implement and remains only a specialized classroom practice. Design-based projects and activities are disruptively different from traditional approaches and perspectives. They impact on "business as usual" in the classroom in terms of management, planning, pedagogy, and content focus, disrupting classroom routines and requiring new kinds of work and attention. They are complex and take extended periods of time, making it necessary to reorganize classroom activity structures.

Design projects place new demands on teachers and students. Teachers need professional development to learn how to structure and manage design-based activities and many of the design-focused research projects also depend on teacher learning and preparation. Design work supports new levels of participation from students as well. Students often make strong connections to their design projects, taking extra time and often working at home. This is a positive effect, with implications for supporting partnerships between school, home, and community, but one that needs to be negotiated.

With collaborative work, emergent, complex problems, and real-world distractions, design projects are difficult to grade. Researchers are working to find ways to articulate standards, assessments, and complex learning environments, such as design projects.

## Summary

Design-based approaches to learning have a long-standing place in the K–12 classroom, yet research attention to the role and effects of design-based learning experiences is in its infancy. Recent movements in educational reform, changes in the conduct of social and cognitive research on learning, and the growth of research and development in educational technologies have contributed to design-based learning becoming a topic of interest and inquiry. Current research reports findings from work in the social and cognitive sciences on problem solving, discourse and learning, teaching and learning processes, culture and learning processes, and classroom assessment.

*See also:* INSTRUCTIONAL DESIGN, *subentries on* ANCHORED INSTRUCTION, CASE-BASED REASONING, PROBLEM-BASED LEARNING.

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SHELLEY GOLDMAN

## PEDAGOGICAL AGENTS AND TUTORS

The creation of pedagogical agents is a fairly new enterprise that has emerged from previous work done in autonomous agents, intelligent tutoring systems, and educational theory. *Pedagogical agents* are autonomous agents that occupy computer learning environments and facilitate learning by interacting with students or other agents. Although intelligent tutoring systems have been around since the 1970s, pedagogical agents did not appear until the late 1980s. Pedagogical agents have been designed to produce a range of behaviors that include the ability to reason about multiple agents in simulated environments; act as a peer, colearner, or competitor; generate multiple, pedagogically appropriate strategies; and assist instructors and students in virtual worlds.

### Animated Pedagogical Agents

A new breed of pedagogical agents has begun to appear in learning environments and on websites: *animated* pedagogical agents. The advent of animated pedagogical agents is the result of recent advancements in multimedia interfaces, text-to-speech software, and agent-generation technologies. Some of the more high-profile systems are described below.

- ALI is an automated laboratory instructor that monitors and guides undergraduates as they solve problems while interacting with chemistry simulations.
- ADELE (Agent for Distance Learning—Light Edition) helps students work through problem-solving exercises for courses that are delivered over the Internet. ADELE-based courses have been developed for continuing medical education and geriatric dentistry.
- AutoTutor simulates the dialogue moves of human tutors while participating in conversations with students. AutoTutor is currently designed to help college students learn about topics in computer literacy and conceptual physics.
- Cosmo exploits deictic behaviors to offer problem-solving advice to students learning about network routing mechanisms in the Internet Advisor learning environment.

- Herman the Bug inhabits the Design-A-Plant learning environment and helps children learn about botanical anatomy and physiology.
- PPP Persona provides online help instructions while helping users navigate through web-based materials.
- STEVE (Soar Training Expert for Virtual Environments) interacts with learners in an immersive virtual environment and has been used in naval training tasks such as operating engines on U.S. Navy surface ships.
- Vincent helps workers in shoemaking factories learn about production-line control time.

These agents exhibit lifelike behaviors and have the potential to bolster student-learning outcomes by exploiting both the auditory and visual channels of the learner. In general, animated pedagogical agents are lifelike personas, which execute behaviors that involve emotive responses, interactive communication, and effective pedagogy.

**Emotive responses.** Clark Elliott, Jeff Rickel, and James Lester argue in their 1999 article that animated agents displaying appropriate emotions provide a number of educational benefits to learners. First, agents that appear to care about students' progress may convince students to care about their own progress. Second, agents that are sensitive to learners' emotions (e.g., boredom or frustration) can provide feedback that prevents students from losing interest. Third, agents that convey enthusiasm for the subject matter are more likely to evoke the same enthusiasm in learners. Finally, agents that have rich and interesting personalities make learning more enjoyable for the learner.

Agents can display appropriate emotions through facial expressions, gestures, locomotion, and intonation variations. For example, Cosmo uses a recorded human voice and full-body emotive behaviors to express a wide range of pedagogically appropriate emotions. When a student experiences success in the Internet Advisor learning environment, Cosmo may applaud, point to relevant information on the screen, and provide positive feedback (e.g., "You chose the fastest subnet. Also, it has low traffic. Fabulous!"). Another system, AutoTutor, synchronizes facial expressions and intonation variations to provide feedback that reflects the quality of students' natural language contributions. If a student provides a good answer to a question, AutoTutor may respond simultaneously with an enthusiastic

“Okay!” a fast head nod, and a smile. However, if the student’s answer is only partially correct, AutoTutor may respond with a less enthusiastic “Okay,” a slower head nod, and no smile.

**Interactive communication.** Most educational websites and software packages are designed to be mere information delivery devices that occasionally employ unsophisticated reward systems as metrics of student understanding. Pedagogical agents, however, facilitate interaction in learning environments and force students to be active participants in the learning process. Agents and learners can collaboratively perform tasks, solve problems, and construct explanations. STEVE, the agent that teaches procedural knowledge involved in operating engines on navy ships, demonstrates for learners how to perform tasks and solve problems. A learner may choose to intervene and finish the demonstration. When this happens, STEVE monitors the learner’s actions and a mixed-initiative demonstration occurs. Specifically, learners can take the initiative by asking questions or performing actions, or STEVE can mediate the interaction by providing hints, asking questions, giving feedback, or demonstrating a task. Learning sessions with ADELE are interactive in that ADELE interrupts students when “she” detects student errors and suggests alternative actions to be performed instead (e.g., “Before ordering a chest X ray, it would be helpful to listen to the condition of the lungs.”). Students who reach impasses during problem solving may receive hints and ask “why” questions while interacting with ADELE and STEVE. In other systems, such as AutoTutor, the agent and student have a conversation with each other. Throughout the conversation, AutoTutor simulates human-tutor-dialogue moves (e.g., hints, prompts, assertions, and corrections), which allow the agent and student to jointly construct answers and explanations to deep-reasoning problems.

**Effective pedagogy.** In order to be considered value-added entities of learning environments, pedagogical agents must be effective teachers and, therefore, adaptive and dynamic in their teaching strategies. They must be able to adjust their teaching to fit a particular problem state or learning scenario, and they must be capable of adjusting their pedagogy to accommodate students’ knowledge and ability levels. Pedagogical agents should be able to ask and answer questions, provide hints and explanations, monitor students’ understanding, provide appropriate feedback, and keep track of what has been covered in the

learning session. All of the pedagogical agents mentioned above are, to some extent, capable of each of these functions. Of course the litmus test for any pedagogical agent is whether it produces positive student-learning outcomes.

### Learning Outcomes

It has been well documented that users prefer learning environments with animated agents over those that do not have agents. Specifically, participants assigned to learning conditions with animated agents (even ones that are not particularly expressive) perceive their learning experiences to be considerably more positive than participants assigned to learning conditions that do not include animated agents. This recurring finding is known as the *persona effect*. The persona effect is somewhat enigmatic in that it generally is not related to student outcome or performance measures. That is, most researchers who report evidence of the persona effect also report no differences between agent and no-agent conditions for retention and learning measures.

Several recent empirical studies, however, indicate that pedagogical agents do promote learning on both retention and transfer tasks. Robert Atkinson reported that students who received explanations from an animated agent about how to solve proportion word problems outperformed other learning conditions on both near and far transfer problems. In a study conducted by Roxana Moreno et al., college students and seventh graders attempted to learn about how to design plants that could survive in a number of different environments. One group of students interacted with a pedagogical agent, Herman the Bug, while another group of students received identical graphics and textual explanations but no pedagogical agent. The results indicated that students in the pedagogical agent condition outperformed students in the no-agent condition on transfer tests but not on retention tests. In another study, Natalie Person et al. (2001) reported that the effect size for AutoTutor was .6 compared to the other learning conditions; human tutoring studies typically report effect sizes around .5 compared to other learning controls. Given the results of these learning-outcome studies and the fact that learners perceive their interactions with agents quite favorably, the future for pedagogical agents looks quite promising.

*See also:* COOPERATIVE AND COLLABORATIVE LEARNING; PEER RELATIONS AND LEARNING; TECHNOLOGY IN EDUCATION, *subentry on* TRENDS.

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## PROBLEM-BASED LEARNING

Problem-based learning (PBL) is one of a class of instructional methods that situates learning in complex contexts. In PBL, students learn through guided experience in solving complex, open-ended problems, such as medical diagnosis or designing a playground. Developed by Howard Barrows for use in medical schools, it has expanded to other settings such as teacher education and K–12 instruction.

Problem-based learning was designed with five goals: to help students (1) construct flexible knowledge; (2) develop effective problem-solving skills; (3) develop self-directed learning skills; (4) become effective collaborators; and (5) become motivated to learn.

With its emphasis on learning through problem solving and on making key aspects of expertise visible, PBL exemplifies the cognitive apprenticeship model. In this model, knowledge is constructed by learners working on real-world problems. One key

characteristic that distinguishes PBL from other cognitive apprenticeship approaches is its potential for covering an entire integrated curriculum through a well-chosen set of problems. Concepts and thinking skills are used in a variety of problems. This redundancy affords learners the opportunity to construct a deep understanding by revisiting concepts from many perspectives and by experiencing a variety of situations in which skills are applied.

### The Problem-Based Learning Tutorial Process

A PBL tutorial session begins by presenting a group, typically 5 to 7 students, with a small amount of information about a complex problem. From the outset, students question the facilitator to obtain additional problem information; they may also gather facts by doing experiments or other research. At several points, students pause to reflect on the data they have collected so far and generate questions about that data and ideas about solutions. Students identify concepts they need to learn more about to solve the problem (i.e., learning issues). After considering the case with their existing knowledge, students divide up and independently research the learning issues they identified. They then regroup to share what they learned, and reconsider their ideas. When completing the task, they reflect on the problem to consider the lessons learned, as well as how they performed as self-directed learners and collaborative problem solvers.

While working, students use white boards to help guide their problem solving. The white board is divided into four columns to help them record where they have been and where they are going. The columns help remind the learners of the problem-solving process. The white board serves as a focus for group deliberations. Figure 1 shows an example of white board entries made by engineering students working on a chemical release problem. The *Facts* column holds information that the students obtained from the problem statement. The *Ideas* column serves to keep track of their evolving hypotheses about solutions, such as reducing the storage of hazardous chemicals. The students place their questions for further study into the *Learning Issues* column. They use the *Action Plan* column to keep track of plans for resolving the problem or obtaining additional information.

### The Role of the Problem

Cognitive research and experience with PBL suggest that to foster learning, good problems have several

**FIGURE 1**

<b>The problem-based learning tutorial process</b>			
Examples of white-board entries used by engineering students solving a chemical release problem.			
<b>Facts</b>	<b>Ideas</b>	<b>Learning Issues</b>	<b>Action Plan</b>
Hazardous chemical	Minimize onsite storage	What are the safety standards for cyanide storage?	Call EPA to find out standards
Near population center	Provide safety training Improve early warning systems	What technology is available to safely store hazardous chemicals?	

SOURCE: Courtesy of author.

characteristics. Problems need to be complex and open ended; they must be realistic and connect with the students' experiences. Good problems require multidisciplinary solutions and provide feedback that allows students to evaluate the effectiveness of their knowledge, reasoning, and learning strategies. Problems should promote conjecture and discussion and should motivate the students' need to go out and learn. As students generate and defend their ideas, they publicly articulate their current understanding, thus enhancing knowledge construction and setting the stage for future learning.

Each problem requires a final product or performance that allows the students to demonstrate their understanding. For example, PBL has been used to help middle school students learn life science by designing artificial lungs. They conducted experiments and used a variety of other resources to learn about breathing. Their final products were models of their designs.

### The Role of the Facilitator

The term *facilitator* refers to someone trained to facilitate student learning through PBL. In PBL facilitators are expert learners, able to model good learning and thinking strategies, rather than being content experts. The facilitator is responsible for moving students through the various stages of PBL and for monitoring the group process—ensuring that all students are involved and encouraging them to externalize their own thinking and to comment on each other's thinking. The facilitator plays an important role in modeling the thinking skills needed

when self-assessing reasoning and understanding. For example, the facilitator encourages students to explain and justify their thinking as they propose solutions to problems. Their questions help model the use of hypothetical-deductive reasoning as they encourage students to tie inquiry to their hypotheses. Facilitators progressively fade their scaffolding as students become more experienced with PBL, until their questioning role is largely adopted by the students. However, they continue to actively monitor the group, making moment-to-moment decisions about how to facilitate the PBL process.

### **Collaborative Learning in Problem-Based Learning**

Collaborative problem-solving groups are a key feature of PBL. Its small group structure helps distribute the work among the members of the group, taking advantage of individual strengths by allowing the whole group to tackle problems that would normally be too difficult for any student alone. Students often become experts in particular topics. Small group discussions and debate enhance higher-order thinking and promote shared knowledge construction.

### **Reflection in Problem-Based Learning**

Reflection on the relation between doing and learning is needed to help the learners understand that the tasks they are doing are in the service of the questions they have asked and that these questions arise from the learning goals they have set. Thus, each task is not an end in itself but a means to achieve a self-defined learning goal.

One potential danger of PBL is that knowledge may become bound to the problem in which it is learned. Learners need to understand what principles are at play in a given task and further understand how those principles might apply to new problems. To avoid this difficulty, learners must use concepts and thinking skills in multiple problems and to reflect on their learning. Reflection is important in helping students (1) relate their new knowledge to prior understanding; (2) mindfully abstract knowledge; and (3) understand how the strategies might be applied in new situations. Problem-based learning incorporates reflection throughout the tutorial process and when completing a problem. As students make inferences that tie the general concepts and skills to the specifics of the problem that they are working on, they construct more coherent

understanding. The facilitator-guided reflection helps students prepare to take what Gavriel Salomon and David Perkins, in their 1989 study, call the “high road” to transfer as they consider how their new knowledge might be useful in the future and the effectiveness of their learning and problem-solving strategies.

### **Empirical Support for Problem-Based Learning**

Research results are converging to show that some of these goals have been successfully met. Students in problem-based curricula are more likely to use their knowledge during problem solving and to transfer higher-order thinking skills to new situations. Cindy Hmelo has studied PBL in medical students and found that when asked to provide an explanation for a patient problem, the students in problem-based curricula were more accurate in their diagnoses, more likely to apply scientific concepts, and constructed better quality explanations than students in traditional curricula. This study provides evidence that PBL students transfer their knowledge and strategies to new problems. Shelagh Gallagher and William Stepien have studied the effects of PBL on gifted high school students. In one study, they examined the effect of a PBL intervention on content knowledge in social studies and found that students in PBL learned as much content as students in traditional instruction. In another study Gallagher, Stepien, and Hilary Rosenthal, comparing students taking a PBL science and society elective with students taking other classes, found that PBL students became better at problem-finding than comparison students. Most studies of PBL have been conducted either in medical schools or in other highly selected populations such as gifted high school students, but Hmelo, Douglas Holton, and Janet Kolodner conducted a 2000 preliminary study with middle school students learning life science. The students in the PBL intervention learned more than a comparison class, but because the students were not actually able to get feedback by implementing their solution, they did not achieve as deep an understanding as the investigators had expected.

### **Conclusion**

Problem-based learning was designed to help students become flexible thinkers. Although the research on PBL is promising, the effects of PBL need to be examined more widely. The challenge ahead lies in understanding how the potential of PBL can

be harnessed in diverse settings. Understanding the nature of the tutorial process, including the role of the problem and facilitator, collaboration among peers, and the importance of student reflection is necessary to successfully implement PBL and to prepare students to think in the world beyond school.

*See also:* INSTRUCTIONAL DESIGN, *subentries on* ANCHORED INSTRUCTION, CASE-BASED LEARNING, LEARNING THROUGH DESIGN.

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CINDY E. HMELO-SILVER

## INSTRUCTIONAL DESIGN AND COMPUTER-ASSISTED INSTRUCTION

*See:* TECHNOLOGY IN EDUCATION, *subentry on* CURRENT TRENDS.

## INSTRUCTIONAL OBJECTIVES

Most people would agree that the goal of education is learning. Most would also agree that education is likely to be more effective if educators are clear about what it is that they want the learners to learn. Finally, most would agree that if teachers have a clear idea about what learners are expected to learn, they can more easily and more accurately determine how well students have learned.

Enter instructional objectives. Because instructional objectives specify exactly what is supposed to be learned, they are helpful to the teacher as well as the learner throughout the learning process and are invaluable in the evaluation process.

Instructional objectives (also known as *behavioral objectives* or *learning objectives*) are basically statements which clearly describe an anticipated learning outcome. When objectives were first coming into their own in education, they almost always began with the phrase: "Upon completion of this lesson, the student should be able to . . ." This phrase focused on the outcome of learning rather than on the learning process. In fact, one of the criteria for a well-written objective is that it describe the outcome of learning, that is, what the learners can do after learning has occurred that they might not have been able to do before the teaching and learning process began.

### Characteristics of a Well-Written Objective

A well-written objective should meet the following criteria: (1) describe a learning outcome, (2) be student oriented, (3) be observable (or describe an observable product).

A well-written objective should describe a learning outcome (e.g., to correctly spell the spelling words on page seventeen). It should not describe a learning activity (e.g., to practice the words on page seventeen by writing each one ten times). Learning activities are important in planning and guiding instruction but they are not to be confused with instructional objectives.

A student-oriented objective focuses on the learner, not on the teacher. It describes what the learner will be expected to be able to do. It should not describe a teacher activity (e.g., to go over the words on page seventeen with the students, explaining their meaning and telling them how the words are pronounced). It may be helpful to both the

teacher and the student to know what the teacher is going to do but teacher activities are also not to be confused with instructional objectives.

If an instructional objective is not observable (or does not describe an observable product), it leads to unclear expectations and it will be difficult to determine whether or not it had been reached. The key to writing observable objectives is to use verbs that are observable and lead to a well defined product of the action implied by that verb. Verbs such as "to know," "to understand," "to enjoy," "to appreciate," "to realize," and "to value" are vague and not observable. Verbs such as "to identify," "to list," "to select," "to compute," "to predict," and "to analyze" are explicit and describe observable actions or actions that lead to observable products.

There are many skills that cannot be directly observed. The thinking processes of a student as she tries to solve a math problem cannot be easily observed. However, one can look at the answers she comes up with and determine if they are correct. It is also possible to look at the steps a student takes to arrive at an answer if they are written down (thus displaying his thinking process). There are many end products that also can be observed (e.g., an oil painting, a prose paragraph, a 3-dimensional map, or an outline.)

### Characteristics of a Useful Objective

To be useful for instruction, an objective must not only be well written but it also must meet the following criteria: (1) be sequentially appropriate; (2) be attainable within a reasonable amount of time; (3) be developmentally appropriate.

For an objective to be sequentially appropriate it must occur in an appropriate place in the instructional sequence. All prerequisite objectives must already have been attained. Nothing thwarts the learning process more than having learners trying to accomplish an objective before they have learned the necessary prerequisites. This is why continuous assessment of student progress is so important.

A useful objective is attainable within a reasonable time. If an instructional objective takes students an inordinately long time to accomplish, it is either sequentially inappropriate or it is too broad, relying on the accomplishment of several outcomes or skills rather than a single outcome or skill. An objective should set expectations for a single learning outcome and not a cluster of them.

Developmentally appropriate objectives set expectations for students that are well within their level of intellectual, social, language, or moral development. Teachers, parents, and others who are working with preschool or elementary school children should be especially aware of the developmental stages of the children they are working with. No author or researcher has more clearly defined the stages of intellectual development than Jean Piaget. Familiarity with his work as well as with the work of other child development specialists (e.g., Lev Vygotsky's language development, Lawrence Kohlberg's moral development and Erik Erikson's social development) should produce better instructional objectives.

### Kinds of Instructional Objectives

Instructional objectives are often classified according to the kind or level of learning that is required in order to reach them. There are numerous taxonomies of instructional objectives; the most common taxonomy was developed by Benjamin Bloom and his colleagues. The first level of the taxonomy divides objectives into three categories: cognitive, affective, and psychomotor. Simply put, cognitive objectives focus on the mind; affective objectives focus on emotions or affect; and psychomotor objectives focus on the body.

Cognitive objectives call for outcomes of mental activity such as memorizing, reading, problem solving, analyzing, synthesizing, and drawing conclusions. Bloom and others further categorize cognitive objectives into various levels from the simplest cognitive tasks to the most complex cognitive task. These categories can be helpful when trying to order objectives so they are sequentially appropriate. This helps to insure that prerequisite outcomes are accomplished first.

Affective objectives focus on emotions. Whenever a person seeks to learn to react in an appropriate way emotionally, there is some thinking going on. What distinguishes affective objectives from cognitive objectives is the fact that the goal of affective objectives is some kind of affective behavior or the product of an affect (e.g., an attitude). The goal of cognitive objectives, on the other hand, is some kind of cognitive response or the product of a cognitive response (e.g., a problem solved).

Psychomotor objectives focus on the body and the goal of these objectives is the control or manipulation of the muscular skeletal system or some part

of it (e.g., dancing, writing, tumbling, passing a ball, and drawing). All skills requiring fine or gross motor coordination fall into the psychomotor category. To learn a motor skill requires some cognition. However, the ultimate goal is not the cognitive aspects of the skill such as memorizing the steps to take. The ultimate goal is the control of muscles or muscle groups.

### The Role of Objectives in Teaching and Testing

Objectives can be helpful in instructional planning, during the teaching/learning process, and when assessing student progress. Instructional objectives are often either ignored (by both teachers and students) or are, at best, occasionally referred to. However, it can be argued that instructional objectives should guide the teaching and learning process from beginning to end.

Most lesson plan forms include a place for the objectives of the lesson to be recorded. However, to write an objective down and then to plan the lesson around the topic of the lesson rather than around the learning outcomes to be reached is missing the point. There is good evidence in the human learning literature that different kinds of outcomes are learned differently. Robert Gagné was one of the first researchers to articulate this; it follows from his research that instructional planning must take into account the kind of learning the students will be engaged in as they seek to reach an objective. Effective teachers learn to categorize their instructional objectives and then develop the teaching and learning activities that will help students do the kind of thinking required for that kind of learning.

It's time to evaluate. How does an educator know what to measure? Look at the objectives. How does a teacher know what kind of information gathering tools to use (test, rubric, portfolio)? Study the objectives. Any test item, any rating scale or checklist, any technique devised to collect information about student progress must seek to measure the instructional objectives as directly and as simply as possible. Instructional objectives are an extremely valuable teaching tool that guide both teachers and students through the teaching and learning process.

*See also:* ASSESSMENT, *subentry on* PERFORMANCE ASSESSMENT; INSTRUCTIONAL DESIGN, *subentry on* OVERVIEW; STANDARDS FOR STUDENT LEARNING.

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## **INSTRUCTIONAL STRATEGIES**

Since the inception of formal, classroom-based instruction, a fundamental aspect of teaching has been

the way teachers arrange the classroom environment so students can interact and learn. The instructional strategies teachers use help shape learning environments and represent professional conceptions of learning and of the learner. Some strategies consider students empty vessels to be filled under the firm direction of the teacher; other strategies regard them as active participants learning through inquiry and problem solving—still others tell children they are social organisms learning through dialogue and interaction with others.

### **History**

The instructional strategies used in the early twenty-first century began in antiquity. In ancient Greece, Socrates illustrated a questioning strategy intended to facilitate the learner's independent discovery of important truths. An instructional strategy similar to direct instruction was reported by Samuel Griswold Goodrich's account of teaching in a rural Connecticut school during the early eighteenth century.

The children were called up one by one to Aunt Delight, who sat on a low chair and required each, as a preliminary, "to make his manners," which consisted of a small, student nod. She then placed the spelling book before the pupils and with a penknife pointed, one by one, to the letters of the alphabet saying, "What's that?" (Edward and Richey, p. 172).

As education extended beyond society's elite, educators became interested in instructional strategies that would accommodate large numbers of students in efficient ways. One example, the Lancaster Method, popular in the early nineteenth century, consisted of gathering as many as a hundred students in one large room, sorting them into groups of similar abilities, and having monitors (teacher aides) guide pupil recitations from scripted lesson plans. Nineteenth-century instructional strategies were teacher centered, intended mainly to transmit basic information clearly. In the early part of the twentieth century, however, this emphasis started to shift. John Dewey and his disciples of Progressive education left a legacy of student-centered instructional methods aimed at helping students acquire higher-level thinking and problem-solving skills. Of particular importance was the project method that provided the intellectual heritage for such contemporary methods as cooperative learning, problem-

based instruction and other approaches emphasizing active student learning and group interaction.

The early work of the Progressives, fueled later by new theories and research about learning by such eminent theorists as European psychologists Lev Vygotsky and Jean Piaget and Americans Jerome Bruner and Albert Bandura extended thinking in the profession about instructional strategies in the post-*Sputnik* reforms of the 1950s and 1960s. Cognitive psychology and constructivist perspectives produced instructional strategies such as discovery learning and inquiry teaching that were at the center of the curriculum reforms of that era, and the cooperative learning and problem-based strategies popular today became more widely known and used.

In the late 1960s Bruce Joyce began describing the various approaches to teaching that had been developed over the years. He developed a classification system to analyze each approach according to its theoretical basis, the learner outcomes it was designed to accomplish, and the teacher and student behaviors required to make the approach work. Joyce used the term *model* rather than *teaching strategy* to refer to a particular approach to instruction. In his initial work (Joyce and Weil, 1972) more than twenty models were identified. Joyce's conceptualization of the field was a significant contribution and has influenced greatly how educators have thought about instructional strategies worldwide.

### Nature and Categories of Instructional Strategies

In the early twenty-first century there are many instructional strategies. Similarly, there are tactics used by teachers to support particular strategies. The following provides a framework for thinking about instructional strategies, and then provides descriptions of seven strategies used frequently by teachers.

**Instructional organizers, strategies, and tactics.** A number of educators over the years, such as Barrie Bennett and Carol Rolheiser, have developed conceptual frameworks for thinking about instructional strategies. The frameworks most often include instructional organizers, instructional strategies, and tactics. Instructional organizers are at one end of a complexity continuum, and provide the "big ideas" that allow us to think about instructional practices. Examples of instructional organizers would be Howard Gardner's multiple intelligences or Benjamin Bloom's taxonomy for organizing instructional objectives. On the other end of the continuum are what

are often labeled *instructional tactics*. These are specific, and for the most part, simple actions taken by teachers within the confines of particular teaching strategies. Asking questions, checking for student understanding, providing examples or visual representations, or examining both sides of an argument are examples of instructional tactics. Many tactics have grown out of the practices of experienced teachers. In the middle of the continuum are instructional strategies that involve a series of steps, are supported by theory and research, and have been designed to produce certain types of student learning. Examples of instructional strategies would include direct instruction, cooperative learning, and the others described later in this article.

Finally, some teaching strategies are tightly tied to the content of particular lessons. *Pedagogical content knowledge* is a term coined by Lee Shulman in 1987 to describe the relationship between content and strategy and to illustrate how what is being taught influences the way it is taught. For example, an English teacher teaching a Shakespearean tragedy would use different strategies than the biology teacher who is trying to help students understand photosynthesis. Similarly, a fourth-grade teacher would use different methods to teach reading, fractions, or the concept of scarcity.

**Learning environments and instructional strategies.** Classrooms are places where teachers and students interact within a highly interdependent environment. At particular times, some types of learning environments have been deemed more appropriate than others. For example, prior to the mid-twentieth century in the United States, environments that kept students quiet and in their seats were the preferred environment compared to later times when more open and active environments were in vogue. Both formal and informal learning emanates from the particular environments that teachers create, and these are highly influenced by the strategies being used. For instance, lecturing creates a tightly structured learning environment where students are expected to listen, observe, and take notes. On the other hand, if the teacher divides students into cooperative learning groups, an environment is created where students are actively engaged and in charge of their own interactions.

**Instructional strategies and learner outcomes.** Learning is defined as a process where experience (instruction) causes a change in an individual's knowledge or behavior; different learning theories

propound different perspectives about what is important and how learning occurs. Behavioral learning theories generally view the outcome of learning as change in behavior and emphasize the effects of the external environment. Cognitive and constructivist learning theories, on the other hand, view learning as change in cognition and focus mainly on internal mental activity. Instructional strategies used by teachers stem from particular learning theories and in turn produce certain kinds of outcomes. For most of the twentieth century, arguments persisted about which learning theories and which instructional strategies were the most accurate and most effective in affecting student learning. Debates among educators and the general public have surrounded lecture versus discussion; direct instruction versus discovery learning; and phonics versus whole language. These debates led nowhere mainly because the selection of effective instructional strategies can not always be precisely pinpointed, and mainly depends on what the teacher is trying to accomplish.

Contemporary conceptions of instructional strategies acknowledge that the goals of schooling are complex and multifaceted, and that teachers need many approaches to meet varied learner outcomes for diverse populations of students. A single method is no longer adequate. Effective teachers select varied instructional strategies that accomplish varied learner outcomes that are both behavioral and cognitive. To illustrate this point consider strategies teachers might use to teach the Bill of Rights to a group of eighth-grade students. The teacher might begin with a lecture describing each of the ten articles and the reasons they were included as the first ten amendments to the Constitution. Students might then be asked to match each amendment with its purpose. Use of the lecture and direct instruction methods facilitates the transmission of fairly large amounts of information to students in an efficient manner and helps them retain it in memory. However, it does not encourage students to think very deeply or critically about the Bill of Rights, or consider its significance to contemporary life. Nor would listening to a teacher promote the development of social discourse skills. Instead, the teacher might use more interactive strategies such as concept teaching and cooperative learning. If, however, teachers use more interactive methods, they have less time to explain the Bill of Rights. Particular strategies, then, have been designed to achieve particular learner outcomes, but no single strategy can

address them all. Appropriate use of particular strategies depends upon the type of learning outcomes the teacher wants to achieve.

### Taxonomies for Categorizing Instructional Methods

Several taxonomies have been developed that categorize instructional strategies based on the strategy's theoretical underpinnings and on the type of learner outcomes that result from using the strategy. Joyce's taxonomy divided instructional models into four major families: information processing, behavioral, personal, and social. Behavioral strategies are designed to help students acquire basic information and skills. Information processing strategies help the learner process and use information and data. Social strategies help develop a sense of community and facilitate the learning of social skills. Personal methods emphasize the development of personal growth and awareness.

Others have made distinctions among strategies based on achieving learning outcomes most closely associated with behavioral theory as compared to those outcomes that stem from information processing, cognitive, and constructivist theories of learning. Still others have found the student-centered and teacher-centered categorization scheme useful for thinking about the relationship between student learning and instructional strategies. The seven strategies are categorized according to the degree of student versus teacher centeredness and the theoretical basis for the strategy (see Table 1).

### Frequently Used Instructional Strategies

The rationale and theoretical background for each strategy is described in the table, along with the learner outcomes the strategy is intended to produce and the syntax and learning environment required to make the strategy effective. Syntax refers to the steps or phases through which a lesson progresses. Learning environment refers to the classroom context and required teacher and student behaviors. Each strategy described has been subjected to substantial research and evaluation and has been deemed highly effective. Positive effects, however, are sizeable only if the strategy is implemented faithfully.

**Direct instruction.** Direct instruction is a method for imparting basic knowledge or developing skills in a goal-directed, teacher-controlled environment. The teacher identifies clearly defined learning out-

comes, transmits new information or demonstrates a skill, and provides guided practice. Direct instruction is designed to maximize academic learning time through a highly structured environment in which students are “on task” and experience high degrees of success.

Direct instruction has its roots in behaviorism. Behavioral theorists emphasize breaking behaviors and skills into component tasks and mastering each subcomponent. They emphasize the importance of modeling desired behavior and using feedback and reinforcement to guide students toward desired goals. The clearest empirical support for direct instruction came from the teacher effectiveness research of the 1970s and 1980s. By studying the relationship between teaching behaviors and student achievement in classrooms, researchers concluded that direct instruction produced greater time-on-task and higher student achievement, particularly for the acquisition of basic information and skills.

Direct instruction can be used effectively to promote acquisition of knowledge that is well structured and that can be taught in a step-by-step fashion, such as parts of speech, the multiplication tables, or the capitals of the fifty states. It is also effective in teaching how to perform simple and complex skills such as how to subtract, read a map, or swing a golf club. Although direct instruction is widely used, it is not appropriate for teaching concepts and generalizations, higher-level thinking, inquiry, problem solving, group processes, or independent learning.

In general, a direct instruction lesson proceeds through five phases. Teachers begin the lesson with an orientation phase. The teacher clarifies the goals of the lesson, explains why the lesson is important, ties the lesson to previous lessons and students’ prior knowledge, and motivates students. This establishes the students’ mental set and prepares them for the lesson. This initial phase is followed by phase 2, presentation or demonstration. The teacher demonstrates the skill or presents new information. If a skill is being taught, each step must be identified and demonstrated accurately. If new information is being taught, the information must be well organized and logically presented. Effective teachers give multiple examples, provide accurate demonstrations, restate the information often, and use visual models or illustrations.

The third phase is guided practice. The teacher structures the initial practice by walking the students

**TABLE 1**

<b>Categorizing instructional methods</b>		
<b>Learning theory</b>	<b>Mainly teacher-directed</b>	<b>Mainly student-centered</b>
<b>Behavioral/social learning theories</b>	Direct instruction	Simulation
<b>Information processing</b>	Lecture with advance organizers	Concept teaching
<b>Cognitive/constructivist theories</b>	Discussion	Cooperative learning Problem-based instruction

SOURCE: Courtesy of author.

through, step-by-step, and giving feedback on correct and incorrect responses. When students understand, the teacher moves to guided practice in which students work independently while the teacher monitors student work and gives individual feedback. Guided practice is most effective in short increments repeated over time. At the end of guided practice, phase 4 checks for understanding and provides feedback, informally or formally, verbally or in writing. The most common tactic in this phase of the lesson is teacher questioning, but assessing independent work, giving a quiz, or observing a live or taped performance may also be appropriate. Feedback must be given as soon as possible after practice and be specific and focused on behavior.

The final phase of a direct instruction lesson is extended practice. Extended practice reinforces the knowledge or skill. It can be accomplished through seatwork or homework, but should only be given when students are at or near mastery and timely feedback can be given. Extended practice over time increases retention, transfer, and automaticity.

The learning environment in a direct instruction lesson is highly structured by the teacher. Students are expected to be careful listeners and keen observers.

**Simulation.** Simulation involves students playing roles in simulated situations in order to learn skills and concepts transferable to “real life.” Students make decisions and learn from successes and failures. Simulations enable the learning of complex concepts or mastery of dangerous tasks in more simple and safe environments. Simulations include hands-on games such as Monopoly (real estate), social-political-economic role-playing or problem

solving (model United Nations or feeding a family of four on \$100 a week), software games (“Where in the World Is Carmen Sandiego?” for geography) and experiments (chemical changes), and simulators (driving a car or landing a plane). Although some simulations are done individually (such as driving), others occur in groups.

Simulation is grounded in a branch of behavioral psychology called cybernetics, which holds the perspective that learning occurs in an environment in which the learner receives immediate feedback, experiences the consequences of behavior, and continually self-corrects until mastery occurs. When learning to land a plane in a flight simulator, for example, the “pilot” receives feedback on the speed, height, and angle of descent, and corrects (or under- or over-corrects) until the plane “lands” or “crashes.” With continued practice, corrective behaviors become automatic until the “pilot” lands the plane safely each time.

Simulations are effective for teaching complex skills or concepts. Simulations can be used to practice skills such as driving, to teach concepts such as how political, social, and economic systems work, or to discern scientific principles through simulated experiments. Additional outcomes include problem solving, decision making, cause-effect relationships, cooperation or competition, and independent learning. Simulations are not effective for teaching large amounts of fact-based information.

Simulation has four phases. The teacher begins the lesson by explaining the purposes of the simulation and providing an overview of how it will proceed. This is followed by phase 2, where students are trained in the rules, procedures and goals of the simulation and provided time for abbreviated practice.

During phase 3, the simulation itself, the teacher serves as a coach, giving feedback, clarifying misconceptions, and maintaining the rules. The teacher does not tell students what to do or provide direct assistance. The debriefing aspect of the simulation, phase 4, allows time to describe and analyze experiences, make comparisons to real world situations, and relate the experience to the subject they are studying. The teacher’s role is critical at this final phase in helping students make sense of the simulated experience and tie it to course content.

The teacher structures and facilitates the learning environment fairly tightly; however, students are active in determining their own experiences during

the simulation. Students work individually or cooperatively in a nonthreatening atmosphere in which feedback comes from the simulation or from peers. The teacher helps students apply their learning to real world situations.

**Presentation using advance organizers.** Presentation (or lecture) is among the most commonly used strategies for knowledge acquisition and retention. But presentation is more than teachers talking. An effective presentation requires a highly structured environment in which the teacher is an active presenter and students are active listeners and thinkers. Teachers use advance organizers—powerful concepts to which subordinate ideas and facts can be linked—to provide structure and then involve students in processing the new information.

The presentation strategy is grounded in information processing theory, which describes how learning occurs and how the mind organizes knowledge. The brain utilizes short-term memory for complex thought processes and long-term memory for information storage. Stored information is organized according to hierarchically ordered concepts and categories called cognitive structures. New information must be processed actively in short-term memory and tied to students’ existing cognitive structures in long-term memory. Just as the mind has cognitive structures, every discipline has an organizational structure. Presentations should be organized around key ideas and structures and these structures should be made explicit to students.

Presentation enables teachers to organize and convey large amounts of information efficiently. It is an appropriate strategy for instructing students about the key ideas in a subject, for acquisition and retention of factual information linked to these ideas, and for comparing similarities and differences among ideas. Presentation is less appropriate for higher-level thinking, problem solving, and inquiry, although it may be used prior to such activities to ensure that students have the necessary foundational information.

There are four phases in a presentation lesson. The teacher begins the presentation by explaining the goals, sequence, and expectations of the lesson, and by helping students retrieve appropriate prior knowledge. In phase 2 the advance organizer is presented. Advance organizers are “scaffolds” that help learners link new information to what they already know. Advance organizers may be expository, com-

parative (relationships), or sequential (steps), and work best when accompanied by graphic or visual representations.

Phase 3 is the presentation itself. As new learning material is presented, the teacher pays particular attention to order and clarity, and provides concrete examples and illustrations that help students make required connections to what they already know.

In the final phase of a presentation, the teacher checks for student understanding and helps them integrate what they have learned. The teacher asks questions to encourage precise and critical thinking. Effective questions might involve asking for summaries, definitions, examples, comparisons, descriptions, analysis, or connections to the advance organizer. It is in this final phase that students integrate the new knowledge into their prior knowledge, build more complex cognitive structures, and develop understanding of complex relationships.

The teacher carefully structures the learning environment during a presentation so students can hear and see the presentation, uses procedures to ensure a smooth and effective pace, and addresses off-task behaviors immediately.

**Concept teaching.** Concept teaching helps students learn concepts and develop higher level thinking skills. Concepts (such as round and integer in mathematics, scarcity and freedom in social studies, energy and motion in science, and comedy and tragedy in literature) serve as the foundation for knowledge, increase complex conceptual understanding, and facilitate social communication. There are several different approaches to concept teaching. The approach described here is called concept attainment and is an inductive process in which students construct, refine, and apply concepts through teacher-directed activities using examples and nonexamples and in which students learn to classify, recognize members of a class, identify critical and noncritical attributes, and define and label particular concepts.

Cognitive theorists such as Jean Piaget and Jerome Bruner and information processing psychologists such as Robert Gagne emphasized that thinking is organized around conceptual structures. Children begin learning concepts very early through interaction with concrete objects. Conceptual structures continue to develop with increasing complexity and abstraction throughout life. Concept formation requires students to build categories (an island is land

surrounded by water; a noun is a name for a person, place or thing). Concept attainment requires students to figure out the attributes of a category (e.g., a triangle has three sides and three angles; an adjective describes a noun). Young children can categorize using one rule or attribute (a bird has feathers), but students gradually develop the ability to use multiple rules or attributes (birds have feathers, lay eggs, have feet, and are warm-blooded) and to distinguish noncritical attributes (some birds fly, but not all birds). Examples and nonexamples are used to help students construct new concepts (a diary is a primary source, but a novel is not).

The primary purpose of concept teaching is to learn new concepts. It is also effective for teaching higher-level thinking, including inductive reasoning, hypothesis formation, logical reasoning, concept building strategies, and taking multiple perspectives (Is a slave's concept of slavery different from a master's concept?). Although not designed to convey large amounts of information, students must process information as they formulate new concepts.

Concept teaching has four phases. In phase 1 the teacher explains the purposes of the lesson, describes why concepts are important, and gets students ready to learn. The second phase consists of presentation of examples and nonexamples of the concept. The teacher gives examples and nonexamples, and the students strive to discover the concept and its attributes through inductive reasoning.

After the concept has been discovered, the teacher gives more examples and nonexamples, then asks students to provide examples and nonexamples. The purpose of this tactic is to test student understanding of the concept and its attributes. A concept lesson concludes with the teacher asking students to analyze their thinking patterns, strategies, and decisions in order to develop more effective thinking skills and to help students integrate the new concepts into existing knowledge.

The learning environment for concept teaching has a moderate degree of structure in that the teacher controls the first three phases of the lesson rather tightly. The fourth phase is more open and student interaction is encouraged. As students gain more experience with concept learning, they can assume increasing responsibility for how the lesson proceeds.

**Discussion.** Discussion is central to all aspects of teaching. Classroom discussion may serve as a strategy in itself or as part of another strategy. Teachers

and students talking about academic content and students displaying their ideas and thinking processes to the teacher and to each other characterize discussions. Effective discussions go beyond question-and-answer recitations. The more involved students are in the discussion, the more effective the learning.

Theoretical support for classroom discussions stems from the study of language and patterns of discourse and from constructivist psychologists, such as Lev Vygotsky, who believed that most learning occurs through language-based social interactions.

Discussion is an appropriate strategy for improving student thinking; promoting engagement in academic content; and learning communication and thinking skills in a social environment. Discussion is particularly appropriate for topics that are subjective or controversial and that involve several points of view, such as the causes of World War I or funding of stem-cell research.

Classroom discussion proceeds through five phases. The teacher introduces the discussion by providing a clear purpose for the discussion and engaging students so they will become involved. This is followed by phase 2 where the teacher sets the ground rules, then poses a question, raises an issue, or presents a puzzling situation.

Phase 3 is the discussion itself. The teacher asks questions, uses wait-time, responds to students' ideas, and enforces the ground rules. The teacher keeps the discussion focused and encourages all students to participate. Using visual cues and posting a written record of main ideas keeps the discussion focused. Skillful, well-planned questioning is critical, and each discussion should include a mixture of factual and thought-provoking questions. Pairing students or putting them in small groups can increase their participation during a discussion.

The teacher provides closure in phase 4 by (1) summarizing; (2) asking students to summarize the content and meaning of the discussion; and (3) tying it back to the initial question or problem. Finally, the teacher debriefs the process of the discussion by having students examine their thinking processes and reflect on their participation.

The teacher focuses and moderates the discussion, but broad and active student participation characterizes the learning environment. The atmosphere is one of open communication in which students feel free to express their ideas and ask

questions. Teaching students to have high regard for other's ideas and to use interpersonal communication skills improves cognitive and social learning.

**Cooperative learning.** In cooperative learning students work together in small groups on a common learning task, coordinate their efforts to complete the task, and depend on each other for the outcome. Cooperative learning groups are characterized by student teams (of 2–6) working to master academic goals. Teams are normally comprised of learners of mixed ability, ethnicity, and gender. Rewards systems (grades) are designed for the group as well as individuals.

Cooperative learning is rooted in two theoretical traditions. First, it is based on the progressivism of John Dewey, particularly his idea that the school should mirror the values of the society and that classrooms should be laboratories for learning democratic values and behaviors. Students are prepared for civic and social responsibilities by participating in democratic classrooms and small problem-solving groups. Cooperative learning also has roots in constructivist theory and the perspective that cognitive change takes place as students actively work on problems and discover their own solutions. Particularly important is Lev Vygotsky's theories that students learn through language-based interactions with more capable peers and adults.

Cooperative learning has three distinct goals: academic achievement, acceptance of diversity through interdependent work, and development of cooperative social skills.

There are numerous approaches to cooperative learning and each proceeds in slightly different ways. However, in general, a cooperative learning lesson has six phases. The teacher begins the lesson by presenting the goals of the lesson, motivating students, and connecting the forthcoming lesson to previous learning. Procedures, timelines, roles and rewards are described. Required group processes or social skills may also be taught at the beginning of a cooperative learning lesson.

In phase 2 the teacher facilitates the acquisition of the academic content that is the focus of the lesson. This may be done verbally, graphically, or with text. The teacher during phase 3 explains how the teams are formed and helps students make transitions into their groups. Phase 4 is teamwork. Students work together on cooperative tasks and the teacher assists students and groups, while reminding them of their interdependence.

The final phases of a cooperative learning lesson consists of phase 5 (assessment) and phase 6 (recognition). The teacher tests student knowledge or groups present their work. Individual students and groups are assessed on cooperation as well as academic achievement. The effort of individuals and groups are recognized through displays, newsletters, presentations, or other public forums.

The learning environment for cooperative learning differs markedly from the traditional individualistic classroom environment. Students assume active roles and take responsibility for their own learning. The social atmosphere is collaborative and respectful of differences. Students learn group processes and problem-solving skills and become increasingly independent in using them. Students construct their own learning through active engagement with materials, problems, and other students. The teacher forms the teams, structures the group work, provides materials, and determines the reward structure, but the students direct their own work and learning.

**Problem-based instruction.** In problem-based instruction students are presented with authentic, meaningful problems as a basis for inquiry and investigation. Sometimes called project-based instruction, inquiry learning, or authentic investigation, this strategy is designed to promote problem solving and higher-level thinking skills. All problem-based instruction strategies include more or less the following features: a driving question or problem, interdisciplinary focus, authentic investigation, production of artifacts or exhibits, and collaboration. This strategy is designed to involve students in the kinds of real-world thinking activities they will encounter outside of school from childhood through adulthood. Sample problems include the following:

- Why did the settlers at Jamestown die?
- How can we recycle in the school cafeteria?
- What causes clouds to form different shapes?
- How much peanut butter does our school need for a year and how much would it cost?
- Why did some civilizations thrive while others died out?
- What will happen if the world population doubles in five years?

Like cooperative learning, problem-based instruction has its roots in the progressivism of John Dewey and the constructivism of Jean Piaget, Lev

Vygotsky, and Jerome Bruner. Dewey argued that learning should be relevant and engaging through the involvement of students in group projects of their own interest. Piaget theorized that learning occurs through active investigations of the environment in which students construct personally meaningful knowledge. Vygotsky stressed the importance of social, language-based learning. Bruner emphasized the importance of learners working with their own ideas and finding meaning through active involvement and personal discovery.

The primary goal of problem-based instruction is learning content through inquiry that can be applied in authentic situations. Students learn to think and behave like adult workers, scholars, and problem solvers and to regulate their own learning. They learn collaboration skills and research and inquiry strategies, and gain an understanding of knowledge as complex, multifaceted, and uncertain.

Problem-based instruction involves five phases similar to those in cooperative learning. A lesson may extend over several days or even weeks. Phase 1 is orientation to the problem. The teacher presents the problem or driving question, provides the parameters for student inquiry, and motivates students to engage in problem-solving activities. In phase 2 the teacher assists students in forming study groups and assists the groups in defining, planning, and organizing tasks and timelines, and by clarifying roles and responsibilities.

During the students' investigation, phase 3, the teacher encourages, questions, and assists students in data/information gathering, hypothesis formulation and testing, and the generation of explanations and solutions. Guiding and coaching is emphasized, not directing and telling.

Problem-based lessons are brought to conclusion through student presentation of products and exhibits, phase 4, and through reflection, phase 5. The teacher assists students in planning, preparing, and presenting products that share their work with others. These might include reports, videos, multimedia presentations, murals, plays, reenactments, models, diaries, or computer programs. After presentations, the teacher helps students reconstruct and analyze their thinking processes and integrate their learning.

Problem-based instruction is the most student centered of the strategies presented. Students work actively and independently on problems that interest

them. This requires an environment that is open and safe for asking questions, forming hypotheses, and sharing ideas. The teacher's role is to pose problems, ask questions, facilitate investigation and dialogue, and provide support for learning.

*See also:* CURRICULUM, SCHOOL; DEVELOPMENTAL THEORY, *subentry on* VYGOTSKYAN THEORY; DEWEY, JOHN; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; PIAGET, JEAN; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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## INTELLECTUAL PROPERTY RIGHTS

Intellectual property law, once thought of as an arcane and unpopular area of law, came to the forefront of legal disciplines in the 1990s, in large part due to the increased use of computers and the commercialization of the World Wide Web. Because of the widespread use of technology and computers to conduct research and teach, intellectual property law greatly impacts the educational enterprise in the early twenty-first century. The use of computer networks and the Web to create classrooms in cyberspace, communicate with students and faculty, write and publish scholarly material, and conduct research is considered the norm for many educational institutions. And each of these activities involves the use of copyrighted information. As a consequence educators and administrators need to have a basic understanding of copyright in order to avoid misusing copyrighted material.

### Copyright Framework and Exclusive Rights

Intellectual property in the United States is a property right created by the law in intangible property. Specifically, *copyright* is a subset of *intellectual prop-*

erty, which protects creative works such as literature and art. Other types of intellectual property are patents, which protect inventions and processes, and trademarks, which protect names and logos.

Copyrights and patent rights originate from the Patent and Copyright Clause of the United States Constitution, which states “The Congress shall have power to . . . promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries” (Art. 1, sec. 8, clause 8). The policy behind the copyright framework, embodied in this clause, is that economic incentive, in the form of monopoly rights in an author’s work, is needed to generate new creative works in society and thus promote “the progress of science and useful arts.”

The monopoly rights that authors possess are outlined in section 106 of the Copyright Act of 1976 (the Act). These rights include the right to make copies, create derivative works, and distribute, display, and perform works publicly. The copyright owner is entitled to exercise and authorize these rights, and prevent others from exercising these rights. Unless a use is exempted or considered fair, users must seek the permission of copyright owner and/or pay license fees to use a copyrighted work.

The digital environment implicates the exclusive rights of authors quite easily. For example, every time a person saves a work to a disk, the right to make copies is invoked. Scanning, digitizing, uploading, downloading, and file transfer all involve the right to make copies. A work is publicly displayed each time someone posts copyrighted information on a bulletin board, website, or online class. When a display or performance is done through a digital network transmission, temporary RAM copies are made in computers through which the material passes.

### Copyright Protection and the Public Domain

In order to qualify for copyright protection, a work must meet the statutory requirements set out in section 102(s) of the Act. The work must be an original work of authorship fixed in a tangible medium of expression. Copyright protection exists from the moment of fixation in a tangible medium. The protection is automatic and notice is not required; however, registration carries certain benefits and is required to bring a lawsuit. Section 102 of the Copy-

right Act of 1976 includes eight categories of subject matter that fall under copyright protection: literary works; musical works; dramatic works; pantomimes and choreographic works; pictorial, graphic, and sculptural works; motion pictures and audiovisual works; sound recordings; and architectural works. Examples of copyrighted expression also include computer programming, animations, video footage, java applets, web pages, and photographs.

An important aspect of the copyright framework is that facts, ideas, and government works are not protected. Those items are generally considered within the public domain and freely available for use without permission or payment of license fees. The logic behind this is clear. If facts and ideas in particular were considered copyrighted information, then the process of innovation, research, and scholarship would be considerably slowed due to the increased time and monetary costs of getting permission and paying fees. Moreover, the possibility of great constraint of academic freedom would be quite high under those circumstances because those who exercised control over controversial facts or ideas might be hesitant to grant access to those materials. Facts, ideas, government information, and items with expired terms of copyright are also within the public domain. To determine whether a copyright term has expired, one should consult Chapter 3 of the Copyright Act. Another helpful resource is a chart developed by Laura N. Gasaway of the University of North Carolina School of Law that helps determine when works pass into the public domain. The chart can be found online at <[www.unc.edu/~unclng/public-d.htm](http://www.unc.edu/~unclng/public-d.htm)>.

### Copyright Ownership

The exclusive rights in copyright are initially given to the owner of the copyrighted work. Although the author may transfer the copyright to someone else, any analysis of copyright ownership should begin with the principle that the author is the owner. Section 201 of the Act provides four types or categories for ownership: (1) author; (2) joint ownership; (3) collective works; and (4) works made for hire.

The primary exception to the *author is owner* approach is the *work-for-hire* category. When a work is made for hire, the employer, not an employee, is considered the owner/author of a work. Section 101 of the Act outlines two ways a work is made for hire: (1) the employee creates the work within the scope of his or her employment; or (2) the work meets the

statutory criteria of being an independently contracted work made for hire.

The work-for-hire doctrine has always played a role in academic production. Many institutions have asserted ownership over research and other scholarly works by claiming the work is made for hire. However, an exception to this rule was developed in the common law for things such as syllabi, lectures, textbooks, and articles that professors write. There is no such explicit exception in the Copyright Act of 1976.

The factors to be considered in determining whether or not a person is an employee were outlined in the Supreme Court's decision in *Community for Creative Non-Violence (CCNV) v. Reid* (1989). The CCNV factors applied by the U.S. Court of Appeals for the Second Circuit in *Aymes v. Bonelli* include: the right of the hiring party to control the manner and means of creation; employee benefits provided by the hiring party; whether the hiring party has the right to assign more projects to the hired party; tax treatment of the hired party; and skill required to complete the project.

If a creator is not an employee, but is hired to create something, and both parties sign a written contract before the work begins that states the work is a work made for hire, and if the work fits into one of the statutory categories, it will be considered a work made for hire and the hiring party will own the work. The statutory categories are: contribution to a collective work; part of a movie or other audiovisual work; a translation; a supplementary work; a compilation; an instructional text; a test; answer material for a test; an atlas.

The controversy over the availability of the academic exception under the 1976 act has been exacerbated by the onset of digital distance education. Many educators claim that distance-education courses delivered online are nothing less than lecture notes, and that these items have historically been the property of faculty. Institutions counter that online courses are not developed in isolation, but that various persons help to develop them, and the institution therefore has an ownership interest in such courses. Because of the lack of clarity in this area, it is very important that colleges and universities develop copyright policies. University copyright policies can affect the application of copyright law by designating certain activities as being outside the scope of employment and/or incorporating the traditional academic exception.

## Copyright Limitations and Exemptions

Although copyright owners have exclusive rights in their creations, these exclusive rights are limited by certain statutory exemptions and defenses. The most used and notable of these for the education community are: fair use, library copying, first sale, and the educational *performance and display* exemptions. The primary limitation in copyright on the exclusive rights of copyright owners is *fair use*. The fair use privilege allows for the reasonable use of a copyrighted work without permission or payment of license fees if the use is fair pursuant to statutory factors. Section 107 of the Act includes four factors that must be weighed to determine whether or not a use is fair: (1) the purpose and character of the use; (2) nature of the copyrighted work; (3) the amount and substantiality of the portion used; and (4) the effect of the use on the potential market for, or value of, the copyrighted work. All four factors are weighed or balanced, and no one factor ensures a finding of fair use. Fair use is critical to the teaching and research that takes place in educational institutions. If fair use did not exist, then the research process would be greatly frustrated, since many small and relatively inconsequential research uses copyrighted material that could be considered unlawful reproductions such as photocopying a page from a journal in order to write a research paper.

Exemptions that are directly applicable to the classroom and to distance education are located in Section 110 of the Copyright Act. The classroom exemption, 110(1), allows for the performance and display rights to be used in the course of "face to face" teaching at a nonprofit educational institution. The use must be within a "classroom or similar place devoted to instruction." The right to public display may occur whenever a picture, graphic, text, or chart is shown directly or by means of a projecting mechanism. A performance may occur when a work is recited or acted, or when an audiovisual work, such as a videotape, is played. Thus, in the course of teaching students in the classroom one can read text out loud, sing a song, or play a movie.

The types of activities permitted in the course of face-to-face instruction under the act, as of May 2002, may not be permitted in an online class, pursuant to the distance education exemption. The distance education exemption, 110(2), allows for the performance only of nondramatic literary or musical works or the display of a work if: (1) the use is part of "systematic instructional activities" of a nonprofit

educational institution or governmental body; (2) the use is “directly related and of material assistance to the teaching content of the transmission;” and (3) the transmission must be “primarily” for “reception in classrooms or similar places normally devoted to instruction,” or for persons whose disabilities or other special circumstances prevent their coming to classrooms.

The distance education provision was created in the 1970s and does not address the issues involved in transmitting content in the online classroom. This exemption does not provide for the use of audiovisual works such as educational videos, theatrical films, and film clips. The U.S. Copyright Office documented some of the limitations in 110(2) in a report given in 1999. The copyright owner and user communities have attempted to negotiate an amendment to Copyright Act, known as the Technology Education and Copyright Harmonization Act (TEACH Act). As of May 2002, the TEACH Act had yet to be adopted by Congress.

### **Infringement and Liability**

Use of a copyrighted work without permission, unless it is covered under an exemption, infringes on the exclusive rights of the author outlined in Section 106 of the Copyright Act. Infringement can be direct, vicarious, or contributory. Direct infringement occurs when someone violates any of the exclusive rights of the copyright owner. Vicarious infringement occurs when one has the right to control the infringement of another or profits from infringement. This type of liability is based on the relationship with the direct infringer. Contributory infringement occurs when a person has knowledge of infringing activity and/or induces, causes, or contributes to infringing conduct. Educational institutions and faculty may be liable under all three types of liability.

### **Digital Millennium Copyright Act**

Educational institutions that are heavily networked with high student and faculty use of computers need to become well versed in the liability limits in the Digital Millennium Copyright Act (DMCA), a 1998 amendment to the Copyright Act. Specifically, the DMCA limits liability for Internet Service Providers (ISPs) and provides safe harbors from liability for conduit activities, system caching, hyperlinks, directories, and location tools and stored material on an ISP system. There are specific requirements that

must be met in order to get statutory protection, however. Service providers qualifying for these limits in subsections (a)–(d) are shielded from damage awards. Section 512(j) limits the availability of injunctive relief.

The DMCA has a specific provision for nonattribution of infringing conduct by graduate students and faculty of nonprofit educational institutions. This provision, 512(e), applies to the conduct of graduate students and faculty involved in teaching and research if: (1) the activities do not involve online access to instructional materials that are required or recommended for a course taught at the institution within the preceding three-year period; (2) within that same three-year period, the institution received two or fewer DMCA notifications that a particular faculty member or graduate student engaged in infringement and no actionable misrepresentations were made in connection with such notifications; and (3) the institution provides information on copyright compliance.

### **Anti-Circumvention**

The DMCA also adds sections 1201–1205 to the Copyright Act, implementing the World Intellectual Property Organization treaty provisions prohibiting the circumvention of technological copyright protection measures and protecting the integrity of copyright management information. Section 1201 defines circumvention of technological measures and prohibits circumvention of technological measures that restrict access to a copyrighted work and trafficking in the means to circumvent protective measures restricting access to a copyrighted work. A technological measure that controls access is defined as one in which the authorized access to a copyrighted work requires either application of information (such as a password) or a process or treatment—with the authority of the copyright owner. Circumvention occurs whenever such technological measures are avoided, bypassed, deactivated, or impaired without the authority of the copyright owner.

Section 1201(d) exempts nonprofit libraries, archives, or educational institutions that circumvent technological measures controlling access to a protected work that is not reasonably available in another form. Such conduct must be for the sole purpose of making a good faith determination of whether to acquire that work. This exemption does not apply to acts that fall under section 1201(a)(2) or 1201(b)(1), which prohibit trafficking in a product or service

that is intended to circumvent technological copyright protection measures.

There is also a narrowly limited reverse-engineering exception, found in section 1201(f), for circumvention of technological measures controlling access to a computer program. The exception exists for the sole purpose of identifying and analyzing those elements of a copyrighted work necessary to achieve interoperability with other independently created programs. *Interoperability* is defined as the ability of computer programs to exchange and share information. This section does not exempt acts of reverse engineering, but merely the circumvention of measures controlling access.

### Computer Software

The issue of reverse engineering as copyright infringement was litigated before the Court of Appeals for the Ninth Circuit in *Sega Enterprises Ltd. v. Accolade* (1992). The court observed that “intermediate copying of computer object code may infringe the exclusive rights granted to the copyright owner in section 106 of the Copyright Act regardless of whether the end product of the copying also infringes those rights.” The court held, however, that disassembly of copyrighted object code was a fair use, since it was a necessary step in the examination of unprotected ideas and functional concepts. The court recognized that there is no “settled standard” for identifying protected expression and unprotected ideas involved in determining copyright infringement of computer software.

*See also:* FACULTY AS ENTREPRENEURS; FACULTY CONSULTING; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; UNIVERSITY-INDUSTRIAL RESEARCH COLLABORATION.

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KIMBERLY M. BONNER

## INTELLIGENCE

### EMOTIONAL INTELLIGENCE

Peter Salovey  
 Paulo N. Lopes

### MEASUREMENT

David Lubinski  
 April Bleske-Rechek

## MULTIPLE INTELLIGENCES

Jie-Qi Chen

## MYTHS, MYSTERIES, AND REALITIES

James W. Pellegrino

## TRIARCHIC THEORY OF INTELLIGENCE

Robert J. Sternberg

## EMOTIONAL INTELLIGENCE

The term *emotional intelligence* was introduced in a 1990 article by Peter Salovey and John D. Mayer. They described emotional intelligence as a set of skills that involve the ability to monitor one's own and others' feelings and emotions, to discriminate among them, and to use this information to guide one's thinking and action. Salovey and Mayer introduced the term as a challenge to intelligence theorists to contemplate an expanded role for the emotional system in conceptual schemes of human abilities, and to investigators of emotion who had historically considered the arousal of affect as disorganizing of cognitive activity. In the spirit of Charles Darwin, who, in his 1872 book *The Expression of the Emotions in Man and Animals*, viewed the emotional system as necessary for survival and as providing an important signaling system within and across species, Salovey and Mayer emphasized the functionality of feelings and described a set of competencies that might underlie the adaptive use of affectively charged information.

### Associated Concepts and Formal Definition

The idea of an emotional intelligence was anticipated, at least implicitly, by various theorists who argued that traditional notions of analytic intelligence are too narrow. Emotional intelligence adds an affective dimension to Robert Sternberg's 1985 work on practical intelligence, is consistent with theorizing by Nancy Cantor and John Kihlstrom (1987) about social intelligence, and is directly related to research on children's emotional competencies by Carolyn Saarni (1999) and others. Emotional intelligence is most similar to one of the multiple intelligences characterized by Howard Gardner in *Frames of Mind* (1983). Gardner delineated *intrapersonal intelligence* as awareness of one's feelings and the capacity to effect discriminations among these feelings, label them, enmesh them in symbolic codes, and draw upon them as a means of understanding and guiding one's behavior.

Mayer and Salovey described emotional intelligence more specifically in 1997 by outlining the

competencies it encompasses. They organized these competencies along four branches: (1) the ability to perceive, appraise, and express emotion accurately; (2) the ability to access and generate feelings when they facilitate cognition; (3) the ability to understand affect-laden information and make use of emotional knowledge; and (4) the ability to regulate emotions to promote growth and well-being.

Individuals can be more or less skilled at attending to, appraising, and expressing their own emotional states. These emotional states can be harnessed adaptively and directed toward a range of cognitive tasks, including problem solving, creativity, and decision-making. Emotional intelligence also includes essential knowledge about the emotional system. The most fundamental competencies at this level concern the ability to label emotions with words and to recognize the relationships among exemplars of the affective lexicon. Finally, emotional intelligence includes the ability to regulate feelings in oneself and in other people. Individuals who are unable to manage their emotions are more likely to experience negative affect and remain in poor spirits.

### Measures and Findings

There are two types of measures of emotional intelligence: self-report questionnaires and ability tests. Self-report measures essentially ask individuals whether or not they have various competencies and experiences consistent with being emotionally intelligent. Ability tests require individuals to demonstrate these competencies, and they rely on tasks and exercises rather than on self-assessment. Self-report and ability measures may yield different findings, because asking people about their intelligence is not the same as having them take an intelligence test.

Self-report measures include relatively short scales, such as Niccola Schutte and colleagues' (1998) scale, intended to assess Salovey and Mayer's original model of emotional intelligence, and the Trait Meta-Mood Scale (TMMS), designed to assess people's beliefs about their propensity to attend with clarity to their own mood states and to engage in mood repair. More comprehensive self-report inventories, such as the Bar-On Emotional Quotient Inventory (EQ-i) encompass a larger number of subscales that tap into personality and other traits related to emotional experience and self-reported, noncognitive competencies.

The advantage of self-report measures is that they provide a global self-evaluation of emotional

competence. They draw upon a rich base of self-knowledge and reflect people's experiences across different settings and situations. However, these measures have important limitations: they measure perceived, rather than actual, abilities; and they are susceptible to mood and social desirability biases, as well as deliberate or involuntary self-enhancement. Moreover, self-report measures overlap substantially with personality, and it is unclear whether they contribute to the understanding of social and emotional functioning over and above what personality traits might explain.

To overcome such problems, Mayer, David Caruso, and Salovey (1999) developed an ability test of emotional intelligence. Their first test, called the Multidimensional Emotional Intelligence Scale (MEIS), paved the way for a more reliable, better normed, and more professionally produced test, the Mayer, Salovey, and Caruso Emotional Intelligence Test (MSCEIT). This test asks people to process emotional information and use it to solve various problems, and to rate the effectiveness of different strategies for dealing with emotionally arousing situations. It consists of eight tasks, including decoding facial expressions and visual displays of emotion, understanding blends of emotions and emotional dynamics, integrating emotional information with other thinking processes, and managing emotions for purposes of self-regulation and social interaction. The test can be scored using either expert or consensus norms, and Mayer and his colleagues demonstrated in 2001 that these scoring methods yield similar results.

Ability tests of emotional intelligence avoid the self-enhancement and other biases that plague self-report measures, and they are very different from personality inventories. These are substantial advantages. However, these tests also have limitations. To assess emotional regulation, the MSCEIT evaluates people's knowledge of appropriate strategies for handling various situations, rather than their actual skill in implementing these strategies. It is not known to what extent the abilities assessed by ability tests generalize across situations and social or cultural contexts. While they are intended to assess skills, relying on consensus scoring can make it difficult to distinguish enacted skills from adjustment or conformity, especially because emotionally intelligent behavior necessarily reflects attunement to social norms and expectations.

Evidence suggests that emotional intelligence, assessed through ability tests, represents a coherent and interrelated set of abilities, distinct from (but meaningfully related to) traditional measures of intelligence, and developing with age. Initial studies also suggest that ability measures of emotional intelligence are associated with a range of positive outcomes, including lower peer ratings of aggressiveness and higher teacher ratings of prosocial behavior among school children; less tobacco and alcohol consumption among teenagers; higher self-reported empathy, life satisfaction, and relationship quality among college students; and higher manager ratings of effectiveness among leaders of an insurance company's customer claims teams. Emotional intelligence also seems to explain the perceived quality of social relationships over and above what personality traits and traditional measures of intelligence might explain.

Stronger evidence that emotional skills are associated with social adaptation comes from studies with children, using very different measures. In a large number of studies, children's abilities to read emotions in faces, understand emotional vocabulary, and regulate their emotions have been associated with their social competence and adaptation, as rated by peers, parents, and teachers.

### **Emotional Intelligence in the Schools**

During the 1980s and 1990s, the idea that the social problems of young people (e.g., dropping out of school, illicit drug use, teenage pregnancy) can be addressed through school-based prevention programs became popular among educational reformers. Earlier programs focused primarily on social problem-solving skills or conflict resolution strategies. After the 1995 publication of a best-selling trade book on the topic of emotional intelligence by science writer Daniel Goleman, the concept of emotional intelligence gained enormous popular appeal, and school-based programs of social and emotional learning multiplied. These programs usually deal with emotions explicitly, and they can help children to build a feelings vocabulary, recognize facial expressions of emotion, control impulsive behavior, and regulate feelings such as sorrow and anger.

There is evidence that programs of social and emotional learning that are well designed and well implemented can promote children's social and emotional adjustment. Programs such as Promoting Alternative Thinking Strategies (PATHS), the Seattle

Social Development Project, and Resolving Conflict Creatively have been evaluated through studies that track children's development over time. Benefits from these programs may include gains in children's social and emotional bonding to school, lowered dropout rates, a reduced incidence of aggressive or risky behaviors, and improvements in cognitive and emotional functioning. However, social and emotional learning programs usually address a very broad range of competencies, and it is not known to what extent the benefits observed in these studies can be attributed specifically to the training of emotional skills. Moreover, the success of these interventions depends on many factors, including the quality and motivation of the teachers, as well as their capacity to promote informal learning and generalization of skills.

Researchers associated with the Collaborative to Advance Social and Emotional Learning (CASEL) and others have drafted useful guidelines to help educators choose, adapt, and implement effective social and emotional learning programs. Important questions remain to be addressed, however. In dealing with others, people draw upon a very wide range of social and emotional skills, and it may be difficult to address all these competencies through formal or explicit instruction. It is not clear exactly what skills to emphasize, what are the best ways of teaching these skills, and to what extent they generalize across settings and situations.

Emotional skills may contribute to academic achievement in various ways. The ability to perceive and understand emotions may facilitate writing and artistic expression, as well as the interpretation of literature and works of art. Emotional regulation may help children to handle the anxiety of taking tests, or the frustrations associated with any pursuit requiring an investment of time and effort. It may also facilitate control of attention, sustained intellectual engagement, intrinsic motivation, and enjoyment of challenging academic activities.

*See also:* INTELLIGENCE, *subentry on* MYTHS, MYSTERIES, AND REALITIES.

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## MEASUREMENT

Introductory treatments of the measurement of intelligence often begin with a discussion of three pioneers in the field: the French psychologist Alfred Binet (1857–1911), the English psychologist Charles Spearman (1863–1945), and the American psychologist Lewis Terman (1877–1956). Binet initiated the applied mental measurement movement when, in 1905, he introduced the first test of general mental ability. Spearman offered support for a psychologically cohesive dimension of general intellectual ability when, in 1904, he showed that a dominant dimension (called *g*) appears to run through heterogeneous collections of intellectual tasks. And Terman championed the application of intelligence testing in schools and in the military. Subsequently, Terman also illustrated how tracking intellectually talented youth longitudinally (i.e., via long-term studies) affords fundamental insights about human development in general.

### Binet: The Testing of Mental Ability

Binet was not the first to attempt to measure mental ability. Operating under the maxim of the fourth century B.C.E. Greek philosopher Aristotle, that the mind is informed to the extent that one's sensory systems bring in clear and reliable information, the English scientist Francis Galton (1822–1911) and others had aimed to measure intellect through fundamental psychophysical procedures that indexed the strength of various sensory systems. In contrast, Binet examined complex behaviors, such as comprehension and reasoning, directly. In doing so, his methods could not compare to psychophysical assessments in terms of *reliability*. But Binet more than made up for this in the *validity* of his assessment procedure in predicting school performance. Binet's insight was to use an external criterion to validate his measuring tool. Thus, he pioneered the empirically keyed or external validation approach to scale construction. His external criterion was chronological age, and test items were grouped such that the typical member of each age group was able to achieve 50

percent correct answers on questions of varying complexity. With Binet's procedure, individual differences in scale scores, or mental age (MA), manifested wide variation around students of similar chronological age (CA). These components were synthesized by William Stern to create a ratio of mental development: MA/CA. This was later multiplied by 100 to form what became known as the intelligence quotient ("IQ"), namely  $IQ = MA/CA \times 100$ .

### Spearman: The Discovery of *g*

While Binet was creating the first valid test of general intellectual functioning, Spearman was conducting basic research that offered tangible support for the idea that a psychologically cohesive dimension of general intelligence (*g*) underlies performance on any set of items demanding mental effort. In a groundbreaking publication from 1904 called "General Intelligence: Objectively Determined and Measured," Spearman showed that *g* appears to run through all heterogeneous collections of intellectual tasks and test items. Ostensibly, items aggregated to form such groupings were seen as a hodgepodge. Yet when such items are all positively correlated and they are summed, the signal received by each is successively amplified and the noise carried by each is successively attenuated. And the total score paints a clear picture of the attribute under analysis.

Spearman and William Brown formalized this property of aggregation in 1910. The Spearman-Brown Prophecy formula estimates the proportion of common or reliable variance running through a composite:  $r_{tt} = kr_{xx} \div 1 + (k - 1)r_{xx}$  (where:  $r_{tt}$  = common or reliable variance,  $r_{xx}$  = average item intercorrelation, and  $k$  = number of items). This formula reveals how a collection of items with uniformly light (weak) positive intercorrelations (say, averaging  $r_{xx} = .15$ ) can create a composite dominated by common variance. If fifty  $r_{xx} = .15$  items were available, for example, their aggregation would generate an individual differences measure having 90 percent common variance (and 10 percent random error). Stated another way, aggregation amplifies signal and lessens noise. As Bert Green stated in his 1978 article "In Defense of Measurement," "given enough sow's ears you can indeed make a silk purse" (p. 666). A large number of weak positive correlations between test items is, in fact, the ideal when measuring broad psychological attributes.

## Terman: The Application of IQ

Binet's approach to assessing mental ability was impressive because, unlike psychophysical assessments of sensory systems, his test forecasted teacher ratings and school performance. And Spearman's work identified the dominant dimension responsible for the validity of these forecasts. Subsequently, Terman cultivated the new enterprise of applied psychological testing. For example, he played a key role in America's military effort when he combined forces with the American psychologist Robert Yerkes (1876–1956) to facilitate personnel selection during World War I. The U.S. armed forces needed an efficient means to screen recruits, many of whom were illiterate. One of Terman's students, Arthur Otis, had devised a nonverbal test of general intelligence, and his work was heavily drawn on to build one of the two group intelligence tests used for the initial screening and the appropriate placement of recruits: the Army Alpha (for literates) and Beta (for illiterates). The role that mental measurements played in World War I and, subsequently, in World War II constitutes one of applied psychology's great success stories. Even today, an act of the U.S. Congress mandates a certain minimum score on tests of general mental ability, because training efficiency is compromised prohibitively at IQs less than or equal to 80 (the bottom 10% of those tested).

Following World War I, Terman was one of the first to draw a generalization between the utility of military intellectual assessments and problems in America's schools. In the early 1920s, Terman developed one of the most famous longitudinal studies in all of psychology, exclusively devoted to the intellectually gifted (the top 1%). Terman, a former teacher himself, was aware of the ability range found in homogeneous groupings based on chronological age and became an advocate of homogeneous grouping based on mental age. Drawing on solid empirical findings from his study of 1,528 intellectually precocious youth (a study that continued after his death in 1956 and into the twenty-first century), he proposed that, at the extremes (say, two standard deviations beyond either side of IQ's normative mean), the likelihood of encountering special student needs increases exponentially. Terman noted that structuring educational settings around chronological age often results in classes of students with markedly different rates of learning (because of markedly different mental ages). Optimal rates of curriculum presentation and complexity vary in gradation

throughout the range of individual differences in general intelligence. With IQ centered on 100 and a standard deviation of 16, IQs extending from the bottom 1 percent to the top 1 percent in ability cover an IQ range of approximately 63 to 137. But because IQs are known to go beyond 200, this span covers less than half of the possible range. Leta Stetter Hollingworth's classic 1942 study, *Children above 180 IQ*, provided empirical support for the unique educational needs of this special population. These needs have been empirically supported in every decade since.

## The Modern Hierarchical Structure of Mental Abilities

Modern versions of intelligence tests index essentially the same construct that was uncovered at the turn of the twentieth century in Spearman's 1904 work, "General Intelligence: Objectively Determined and Measured"—albeit with much more efficiency and precision. For example, *g* is a statistical distillate that represents approximately half of what is common among the thirteen subtests comprising the Wechsler Adult Intelligence Scale. As noted by intelligence researcher Ian J. Deary in "Intelligence: A Very Short Introduction," the attribute *g* represents the research finding that "there is something shared by all the tests in terms of people's tendencies to do well, modestly, or poorly on all of them" (p. 10). In 2001 Deary's team published the longest temporal stability assessment of general intelligence to date (covering a span of sixty-six years, from age eleven to age seventy-seven); they observed a correlation of .62, which rose to over .70 when statistical artifacts were controlled.

John B. Carroll and other modern psychometricians have come to a consensus that mental abilities follow a hierarchical structure, with *g* at the top of the hierarchy and other broad groups of mental abilities offering psychological import beyond *g*. Specifically, mathematical, spatial-mechanical, and verbal reasoning abilities all have demonstrated incremental (value-added) validity beyond *g* in forecasting educational and vocational criteria. Although mathematical, spatial, and verbal reasoning abilities do not have the breadth or depth of external correlates that *g* does, the incremental validity they offer makes them especially important for educational and vocational planning.

## Psychological and Social Correlates of *g*

Psychologists at poles of the applied educational-industrial spectrum, such as Richard Snow and John Campbell, respectively, have underscored the real-world significance of general intelligence by incorporating it in lawlike empirical generalizations, as in the following two passages:

Given new evidence and reconsideration of old evidence, [*g*] can indeed be interpreted as “ability to learn” as long as it is clear that these terms refer to complex processes and skills and that a somewhat different mix of these constituents may be required in different learning tasks and settings. The old view that mental tests and learning tasks measure distinctly different abilities should be discarded. (Snow, p. 22)

General mental ability is a substantively significant determinant of individual differences in job performance for any job that includes information-processing tasks. If the measure of performance reflects the information processing components of the job and any of several well-developed standardized measures used to assess general mental ability, then the relationship will be found unless the sample restricts the variances in performance or mental ability to near zero. The exact size of the relationship will be a function of the range of talent in the sample and the degree to which the job requires information processing and verbal cognitive skills. (Campbell, p. 56)

Modern research on general intelligence has sharpened validity generalizations aimed at forecasting educational outcomes, occupational training, and work performance. But empiricism also has escalated in domains at the periphery of general intelligence’s network of external relationships, such as aggression, delinquency and crime, and income and poverty. For some benchmarks, general intellectual ability covaries .70–.80 with academic achievement measures, .40–.70 with military training assignments, .20–.60 with work performance (higher correlations reflect greater job complexity), .30–.40 with income, and around .20 with law-abidingness.

An excellent compilation of positive and negative correlates of *g* can be found in a 1987 work by Christopher Brand that documents a variety of weak correlations between general intelligence and diverse

phenomena. For example, *g* is positively correlated with altruism, sense of humor, practical knowledge, responsiveness to psychotherapy, social skills, and supermarket shopping ability, and negatively correlated with impulsivity, accident-proneness, delinquency, smoking, racial prejudice, and obesity. This diverse family of correlates is especially thought-provoking because it reveals how individual differences in general intelligence “pull” with them cascades of direct and indirect effects.

Charles Murray’s 1998 longitudinal analysis of educational and income differences between siblings is also illuminating. Murray studied biologically related siblings who shared the same home of rearing and socioeconomic class yet differed on average by 12 IQ points. He found that the differences in IQ predicted differences in educational achievement and income over the course of 15 years. His findings corroborate those of other studies that use a similar control for family environment, while not confounding socioeconomic status with biological relatedness.

Experts’ definitions of general intelligence appear to fit with *g*’s nexus of empirical relationships. Most measurement experts agree that measures of general intelligence assess individual differences pertaining to “abstract thinking or reasoning,” “the capacity to acquire knowledge,” and “problem-solving ability.” Naturally, individual differences in these attributes carry over to human behavior in facets of life outside of academic and vocational arenas. Abstract reasoning, problem solving, and rate of learning touch many aspects of life in general, especially in the computer-driven, information-dense society of the United States in the early twenty-first century.

## Biological Correlates of *g*

General intelligence may be studied at different levels of analysis, and, as documented by Arthur Jensen in “The *g* Factor,” modern measures of *g* have been linked to a variety of biological phenomena. By pooling studies of a variety of kinship correlates of *g* (e.g., identical and fraternal twins reared together and apart, and a variety of adoption designs), the heritability of general intelligence in industrialized nations has been estimated to be between 60 and 80 percent. These estimates reflect genetic factors responsible for individual differences between people, not overall level of *g*. In addition, research teams in molecular genetics, led by Robert Plomin, are working to uncover DNA markers associated with *g*.

Using magnetic resonance imaging technology, total brain volume covaries in the high .30s with *g* after removing the variance associated with body size. Glucose metabolism is related to problem-solving behavior, and the highly gifted appear to engage in more efficient problem-solving behavior that is less energy expensive. Also, highly intellectually gifted individuals show enhanced right hemispheric functioning, and electroencephalographic (EEG) phenomena have been linked to individual differences in *g*. Finally, some investigators have suggested that dendritic arborization (the amount of branching of dendrites in neurons) is correlated with *g*.

### A Continuing Field of Debate

The above empiricism is widely accepted among experts in the measurement/individual differences field. Yet, it has been common for empiricism pertaining to general intelligence (and interpretative extrapolations emanating from it) to stimulate contentious debate. Indeed, psychologists can be found on all sides of the complex set of issues engendered by assessing individual differences in general intelligence. But this is not new, and it is likely to continue. Because psychological assessments are frequently used for allocating educational and vocational opportunities, and because different demographic groups differ in test score *and* criterion performance, social concerns have followed the practice of intellectual assessment since its beginning in the early 1900s. In the context of these social concerns, alternative conceptualizations of intelligence, such as Howard Gardner's theory of multiple intelligences, Daniel Goleman's theory of emotional intelligence, and Robert Sternberg's triarchic theory of intelligence have generally been positively received by the public. Yet, measures of these alternative formulations of intelligence have not demonstrated incremental validity beyond what is already gained by conventional measures of intelligence. That is, they have not yet demonstrated incremental validity beyond conventional psychometric tests in the prediction of important life outcomes such as educational achievement, occupational level, and job performance. This is not to say that there is no room for improvement in the prediction process. Innovative measures of mental abilities, however, need to be evaluated against existing measures before one can claim that they capture something new.

*See also:* ASSESSMENT TOOLS, *subentry on* PSYCHOMETRIC AND STATISTICAL; BINET, ALFRED; INTELLI-

GENCE, *subentry on* MYTHS, MYSTERIES, AND REALITIES; TERMAN, LEWIS.

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## MULTIPLE INTELLIGENCES

The theory of multiple intelligences (MI) was developed by Howard Gardner, a professor of cognition and education at Harvard University. Introduced in his 1983 book, *Frames of Mind*, and refined in subsequent writings, the theory contends that human intelligence is not a single complex entity or a unified set of processes (the dominant view in the field of psychology). Instead, Gardner posits that there are several relatively autonomous intelligences, and that an individual's intellectual profile reflects a unique configuration of these intelligences.

### Definition of Intelligence

In his 1999 formulation of MI theory, *Intelligence Reframed*, Gardner defines intelligence as “a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture.” By considering intelligence a potential, Gardner asserts its emergent and responsive nature, thereby differentiating his theory from traditional ones in which human intelligence is fixed and innate. Whether a potential will be activated is dependent in large part on the values of the culture in which an individual grows up and the opportunities available in that culture, although Gardner also acknowledges the role of personal decisions made by individuals, their families, and others. These activating forces result in the development and expression of a range of abilities (or intelligences) from culture to culture and also from individual to individual.

Gardner's definition of intelligence is unique as well in that it considers the creation of products such as sculptures and computers to be as important an expression of intelligence as abstract problem solving. Traditional theories do not recognize created artifacts as a manifestation of intelligence, and therefore are limited in how they conceptualize and measure it.

**Criteria for intelligences.** Gardner does not believe that the precise number of intelligences is known, nor does he believe that they can be identified

through statistical analyses of cognitive test results. He began by considering the range of adult end-states that are valued in diverse cultures around the world. To uncover the abilities that support these end-states, he examined a wide variety of empirical sources from different disciplines that had never been used together for the purpose of defining human intelligence. His examination yielded eight criteria for defining an intelligence:

- Two criteria derived from biology: (1) an intelligence should be isolable in cases of brain damage, and (2) there should be evidence for its plausibility and autonomy in evolutionary history.
- Two criteria derived from developmental psychology: (3) an intelligence has to have a distinct developmental history along with a definable set of expert end-state performances, and (4) it must exist within special populations such as idiot savants and prodigies.
- Two criteria derived from traditional psychology: (5) an intelligence needs to be supported by the results of skill training for its relatively independent operation, and (6) also by the results of psychometric studies for its low correlation to other intelligences.
- Two criteria derived from logical analysis: (7) an intelligence must have its own identifiable core operation or set of operations, and (8) it must be susceptible to encoding in a symbol system—such as language, numbers, graphics, or musical notations.

To be defined as an intelligence, an ability has to meet most, though not all, of the eight criteria.

**Identified intelligences.** As of 2001, Gardner has identified eight intelligences:

1. Linguistic intelligence, exemplified by writers and poets, describes the ability to perceive and generate spoken or written language.
2. Logical-mathematical intelligence, exemplified by mathematicians and computer programmers, involves the ability to appreciate and utilize numerical, abstract, and logical reasoning to solve problems.
3. Musical intelligence, exemplified by musicians and composers, entails the ability to create, communicate, and understand meanings made out of sound.
4. Spatial intelligence, exemplified by graphic

designers and architects, refers to the ability to perceive, modify, transform, and create visual or spatial images.

5. Bodily-kinesthetic intelligence, exemplified by dancers and athletes, deals with the ability to use all or part of one's body to solve problems or to fashion products.
6. Naturalistic intelligence, exemplified by archaeologists and botanists, concerns the ability to distinguish, classify, and use features of the environment.
7. Interpersonal intelligence, exemplified by leaders and teachers, describes the ability to recognize, appreciate, and contend with the feelings, beliefs, and intentions of other people.
8. Intrapersonal intelligence, apparent when individuals pursue a particular interest, choose a field of study or work, or portray their life through different media, involves the ability to understand oneself—including emotions, desires, strengths, and vulnerabilities—and to use such information effectively in regulating one's own life.

Gardner does not claim this roster of intelligences to be exhaustive; MI theory is based wholly on empirical evidence, and the roster can therefore be revised with new empirical findings. In the MI framework, all intelligences are equally valid and important, and though significantly independent of one another, they do not operate in isolation. Human activity normally reflects the integrated functioning of several intelligences. An effective teacher, for example, relies on linguistic and interpersonal intelligences, and possesses knowledge of particular subject areas as well.

### Relationship to Other Theories

MI theory bears similarities to several other contemporary theories of intelligence, yet it remains distinct. Although it shares a pluralistic view of intelligence with Robert Sternberg's triarchic theory, MI theory organizes intelligences in terms of content areas, and no single cognitive function, such as perception or memory, cuts across all domains. The triarchic theory, in contrast, posits three intelligences differentiated by functional processes, and each intelligence operates consistently across domains.

Daniel Goleman's theory of emotional intelligence resonates with MI theory in that both ac-

knowledge the social and affective aspects of intelligence. Whereas Goleman views intelligence from a moral and ethical perspective, however, Gardner regards all intelligences as value-free: He does not judge individuals as inferior or superior based on their configuration of intelligences, nor does he judge cultures as inferior or superior because they value one intelligence over another.

MI theory has been criticized on two grounds. First, some critics contend that psychometric research finds correlations, not autonomy, among abilities. Gardner has argued that these correlations are largely due to the use of psychometric instruments designed to measure only a given set of abilities. Second, critics have suggested that human intelligence is different from other human capabilities, such as musical talent. Gardner believes that such a narrow use of the word *intelligence* reflects a Western intellectual mind-set that does not recognize the diversity of roles that contribute to society.

### Implications for Educational Practice

The primary intent for developing MI theory was to chart the evolution and topography of the human mind, not to prescribe educational practice. Nonetheless, MI theory has been discussed widely in the educational field and has been particularly influential in elementary education, where it has provided a useful framework for improving school-based practice in the areas of curricula, instruction, and assessment.

**Curricula and instruction.** From an MI perspective, curricula, particularly for young children, should encompass a broad range of subject areas that include (but go beyond) reading, writing, and arithmetic, because all intelligences are equally valuable. The visual arts, for example, are a serious domain in and of themselves, and not just as a means to improve reading scores. According to MI theory, the talented artist is just as intelligent as the excellent reader, and each has an important place in society. In *The Disciplined Mind*, Gardner cautions that an authentic MI-based approach goes beyond conveying factual knowledge about various domains: He stresses the importance of promoting in-depth exploration and real understanding of key concepts essential to a domain.

Because each child's biopsychological potential is different, providing a broad range of subject areas at a young age also increases the likelihood of discov-

ering interests and abilities that can be nurtured and appreciated. Educators who work with at-risk children have been particularly drawn to this application of MI theory, because it offers an approach to intervention that focuses on strengths instead of deficits. By the same token, it extends the concept of the gifted child beyond those who excel in linguistic and logical pursuits to include children who achieve in a wide range of domains.

MI theory can be applied to the development of instructional techniques as well. A teacher can provide multiple entry points to the study of a particular topic by using different media, for example, and then encouraging students to express their understanding of the topic through diverse representational methods, such as pictures, writings, three-dimensional models, or dramatizations. Such instructional approaches make it possible for students to find at least one way of learning that is attuned to their predispositions, and they therefore increase motivation and engagement in the learning process. They also increase the likelihood that every student will attain at least some understanding of the topic at hand.

**Assessment.** When applied to student assessment, MI theory results in the exploration of a much wider range of abilities than is typical in the classroom, in a search for genuine problem-solving or product-fashioning skills. An MI-based assessment requires “intelligence-fair” instruments that assess each intellectual capacity through media appropriate to the domain, rather than through traditional linguistic or logical methods. Gardner also argues that for assessment to be meaningful to students and instructive for teachers, students should work on problems and projects that engage them and hold their interest; they should be informed of the purpose of the task—and the assessment criteria as well; and they should be encouraged to work individually, in pairs, or in a group. Thus, the unit of analysis extends beyond the individual to include both the material and social context.

MI-based assessments are not as easy to design and implement as standard pencil-and-paper tests, but they have the potential to elicit a student’s full repertoire of skills and yield information that will be useful for subsequent teaching and learning. As part of Project Spectrum, Gardner and colleagues developed a set of assessment activities and observational guidelines covering eight domains, including many often ignored by traditional assessment instruments,

such as mechanical construction and social understanding. Project Spectrum’s work also included linking children’s assessments to curricular development and bridging their identified strengths to other areas of learning.

### **Evidence of the Value of the Theory**

MI theory has been incorporated into the educational process in schools around the world. There is much anecdotal evidence that educators, parents, and students value the theory, but, as of 2001, little systematic research on the topic has been completed. The main study was conducted by Mindy Kornhaber and colleagues at Harvard University’s Project Zero in the late 1990s. They studied forty-one elementary schools in the United States that had been applying MI theory to school-based practice for at least three years. Among the schools that reported improvement in standardized-test scores, student discipline, parent participation, or performance of students with learning differences, the majority linked the improvement to MI-based interventions. Kornhaber’s study also illuminates the conditions under which MI theory is adopted by schools and integrated into the educational process.

The difficulty of research on MI theory in education is correlating changes specifically to the theory, since schools are complex institutions that make it difficult to isolate cause-and-effect relationships. Indeed, since MI theory is meaningful in the context of education only when combined with pedagogical approaches such as project-based learning or arts-integrated learning, it is not possible to study the precise contribution of the theory itself to educational change, only the effect of interventions that are based on it or incorporate it.

*See also:* ASSESSMENT, *subentries on* CLASSROOM ASSESSMENT, PERFORMANCE ASSESSMENT, PORTFOLIO ASSESSMENT.

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## MYTHS, MYSTERIES, AND REALITIES

Intelligence and intelligence tests are often at the heart of controversy. Some arguments concern the ethical and moral implications of, for example, selective breeding of bright children. Other arguments deal with the statistical basis of various conclusions such as whether tests are biased, or how much of intelligence is genetically determined. What one hears less often is discussion of the construct of intelligence itself: What is intelligence? How does it grow? How and why do people differ intellectually? Questions like these, along with many others, which are central to any discussion of intelligence and intelligence testing, are less often raised, much less answered.

### Historical Roots of Intelligence Tests

Intelligence testing began as a more or less scientific pursuit into the nature of differences in human intellect. However, it soon acquired practical significance as a tool for predicting school achievement and selecting individuals for various educational programs. Sir Francis Galton’s work in the late 1800s formed the background for much of the research and theory pursued during the twentieth century on the assessment of individual differences in intelligence.

Galton believed that all intelligent behavior was related to innate sensory ability but his attempts to

empirically validate that assumption were largely unsuccessful. In France, Alfred Binet and Victor Henri (1896) criticized the approach advocated by Galton in England and James McKeen Cattell in the United States and argued that appropriate intelligence testing must include assessment of more complex mental processes, such as memory, attention, imagery, and comprehension. In 1904, Binet and Théodore Simon were commissioned by the French Minister of Public Instruction to develop a procedure to select children unable to benefit from regular public school instruction for placement in special educational programs. In 1905 Binet and Simon published an objective, standardized intelligence test based on the concepts developed earlier by Binet and Henri. The 1905 test consisted of thirty subtests of mental ability, including tests of digit span, object and body part identification, sentence memory, and so forth. Many of these subtests, with minor modifications, are included in the Stanford-Binet intelligence test of the early twenty-first century.

In 1908 and again in 1911, Binet and Simon published revised versions of their intelligence test. The revised tests distinguished intellectual abilities according to age norms, thus introducing the concept of *mental age*. The subtests were organized according to the age level at which they could be successfully performed by most children of normal intelligence. As a result, children could be characterized and compared in terms of their intellectual or mental age. The Binet and Simon intelligence test was widely adopted in Europe and in the United States. Lewis Terman of Stanford University developed the more extensive Stanford-Binet test in 1916. This test has been used extensively in several updated versions throughout the United States.

A major change in intelligence testing involved the development of intelligence tests that could be simultaneously administered to large groups. Group tests similar to the original Binet and Simon intelligence test were developed in Britain and the United States. During World War I, group-administered intelligence tests (the Army Alpha and Army Beta tests) were used in the United States to assess the abilities of recruits who could then be selected for various duties based on their performance. In England, from the 1940s to the 1960s, intelligence tests were administered to all children near the age of eleven years to select students for different classes of vocational training.

An enormous number of “mental” tests are available in the early twenty-first century and are typically divided into those involving group versus individual administration. Whereas IQ (the intelligence quotient) was originally reported as the ratio of an individual’s mental age to chronological age multiplied by 100 ( $100 \times \text{MA/CA}$ ), IQ has long been based upon normative score distributions for particular age groups. All individual and group tests currently yield such deviation IQs where 100 typically represents the 50th percentile and 68 percent of all scores fall between 85 and 115.

### Factor Theories of Intelligence

What is intelligence and what do these tests actually assess? Very early in the psychological study of intelligence, Charles Spearman (1904) sought to empirically determine the similarities and differences between various mental tests and school performance measures. He found that many seemingly diverse mental tests were strongly correlated with each other. This led him to postulate a general factor of intelligence, *g*, that all mental tests measure in common while simultaneously varying in how much the general factor contributes to a given test’s performance. On the basis of correlational studies, Spearman argued that intelligence is composed of a general factor that is found in all intellectual functioning plus specific factors associated with the performance of specific tasks. Spearman’s theoretical orientation and methods of analysis served as the foundation of all subsequent factor analytic theories of intelligence. Spearman (1927) later developed a more complex factor theory introducing more general “group factors” made up of related specific factors. However, he adhered to his main tenet that a common ability underlies all intellectual behavior. For lack of a better definition, he referred to this as a mental energy or force.

The concept that intelligence is characterized by a general underlying ability plus certain task- or domain-specific abilities constitutes the basis of several major theories of intelligence, including those offered by Cyril L. Burt (1949), Philip E. Vernon (1961), and Arthur Jensen (1998). Quite distinct from theories of intelligence that emphasize *g* are those that emphasize specific abilities that can be combined to form more general abilities. Lloyd L. Thurstone (1924, 1938) developed factor analytic techniques that first separate out specific or primary factors. Thurstone argued that these primary factors

represent discrete intellectual abilities, and he developed distinct tests to measure them. Among the most important of Thurstone’s primary mental abilities are verbal comprehension, word fluency, numerical ability, spatial relations, memory, reasoning, and perceptual speed.

Raymond Cattell (1963, 1971) attempted a rapprochement of the theories of Spearman and Thurstone. In an attempt to produce a *g* factor, he combined Thurstone’s primary factors to form secondary or higher-order factors. Cattell found two major types of higher order factors and three minor ones. The major factors were labeled *gf* and *gc*, for fluid and crystallized general intelligence. Cattell argued that the fluid intelligence factor represents an individual’s basic biological capacity. Crystallized intelligence represents the types of abilities required for most school activities. Cattell labeled the minor general factors *gv*, *gr*, and *gs* for visual abilities, memory retrieval, and performance speed, respectively. Cattell’s initial theory has been substantially extended by individuals such as John L. Horn (1979, 1985).

The most recent psychometric research supports a hierarchical model of intellect generally in accord with the outlines of the Cattell-Horn theory. At the top of the hierarchy is *g* and under *g* are broad group factors such as *gf* and *gc*. Below these broad group factors are more specific or narrow ability factors. The majority of intelligence tests focus on providing overall estimates of *g* (or *gf* and *gc*) since this maximizes the prediction of performance differences among people in other intellectual tasks and situations, including performance in school.

### Alternative Theoretical Perspectives

The hierarchical model of human intelligence that has evolved from the psychometric or measurement approach is not the only influential perspective on human intellect. A second view of intelligence, that provided by developmental psychology, stems from the theory of intellectual development proposed by the Swiss psychologist Jean Piaget. This tradition is a rich source of information on the growth and development of intellect. A third view on intelligence, the information-processing or cognitive perspective, is an outgrowth of work in cognitive psychology since the 1970s. It provides elaborate descriptions and theories of the specific mental activities and representations that comprise intellectual functioning. The three perspectives are similar with regard to the

general skills and activities that each associates with “being or becoming intelligent.” For all three, reasoning and problem-solving skills are the principal components of intelligence. A second area of overlap among the three involves adaptability as an aspect of intelligence.

The differences and separate contributions of the three perspectives to an understanding of human intellect also stand out. The emphasis on individual differences within the psychometric tradition is certainly relevant to any complete understanding of intelligence. A theory of intelligence should take into account similarities and differences among individuals in their cognitive skills and performance capabilities. However, a theory of human intellect based solely on patterns of differences among individuals cannot capture all of intellectual functioning unless there is little that is general and similar in intellectual performance.

In contrast, the developmental tradition emphasizes similarities in intellectual growth and the importance of organism–environment interactions. By considering the nature of changes that occur in cognition and the mechanisms and conditions responsible, one can better understand human intellectual growth and its relationship to the environment. This requires, however, that one focus not just on commonalities in the general course of cognitive growth, but consider how individuals differ in the specifics of their intellectual growth. Such a developmental-differential emphasis seems necessary for a theory to have adequate breadth and to move the study of intelligence away from a static, normative view, where intelligence changes little over development, to a more dynamic view that encompasses developmental change in absolute levels of cognitive power.

Finally, the cognitive perspective helps to define the scope of a theory of intelligence by further emphasizing the dynamics of cognition, through its concentration on precise theories of the knowledge and processes that allow individuals to perform intellectual tasks. Psychometric and developmental theories typically give little heed to these processes, yet they are necessary for a theory of intelligence to make precise, testable predictions about intellectual performance.

No theory developed within any of the three perspectives addresses all of the important elements and issues mentioned above. This includes the more recent and rather broad theories such as Howard

Gardner’s multiple intelligences theory (1983, 1999) and Robert J. Sternberg’s triarchic theory (1985). Both theories represent an interesting blending of psychometric, developmental, and cognitive perspectives.

### Uses and Abuses of Tests

Above it was noted that testing was developed in response to pragmatic concerns regarding educational selection and placement. The use of intelligence tests for educational selection and placement proliferated during the decades from the 1930s through 1960s as group tests for children became readily available. Since the early 1980s, however, general intelligence testing has declined in public educational institutions. One reason for diminished use of such tests is a trend away from homogeneous grouping of students and attendant educational tracking. A second reason is that achievement rather than aptitude testing has become increasingly popular. Not surprisingly, such tests tend to be better predictors of subsequent achievement than aptitude or intelligence tests. Even so, it is an established fact that measures of general intelligence obtained in childhood yield a moderate 0.50 correlation with school grades. They also correlate about 0.55 with the number of years of education that individuals complete.

Intelligence and aptitude tests continue to be used with great frequency in military, personnel-selection, and clinical settings. There are also two major uses of intelligence tests within educational settings. One of these is for the assessment of mental retardation and learning disabilities, a use of tests reminiscent of the original reason for development of the Binet and Simon scales in the early 1900s. The second major use is at the postsecondary level. College entrance is frequently based upon performance on measures such as the SAT, first adopted in the United States by the College Entrance Examination Board in 1937. Performance on the SAT, together with high school grades, is the basis for admission to many American colleges and universities. The ostensible basis for using SAT scores is that they moderately predict freshman grade point average—precisely what they were originally designed to do. However, considerable debate has arisen about the legitimacy and value of continued use of SAT scores for college admission decisions.

Throughout the history of the testing movement, dating back to the early 1900s and extending to the early twenty-first century, there has been con-

trovercy concerning the (mis)use of test results. One of the earliest such debates was between Lewis Terman, who helped develop the revised Stanford-Binet and other tests, and the journalist Walter Lippman. A frequent issue in debates about the uses and abuses of intelligence tests in society is that of bias. It is often argued that most standardized intelligence tests have differential validity for various racial, ethnic, and socioeconomic groups. Since the tests emphasize verbal skills and knowledge that are part of Western schooling, they are presumed to be unfair tests of the cognitive abilities of other groups. As a response to such arguments, attempts have been made to develop culture-fair or culture-free tests. The issue of bias in mental testing is beyond this brief review and Arthur R. Jensen (1980; 1981) can be consulted for highly detailed treatments of this topic. Evidence in the 1990s suggests that no simple form of bias in either the content or form of intelligence tests accounts for the mean score differences typically observed between racial and ethnic groups.

### Factors Affecting Test Scores

Much of the research on intelligence has focused on specific factors affecting test scores. This includes research focused on environmental versus genetic contributions to IQ scores, related issues such as race differences in IQ, and overall population trends in IQ.

One of the most extensively studied and hotly debated topics in the study of intelligence is the contribution of heredity and environment to individual differences in test scores. Given a trait such as measured intelligence on which individuals vary, it is inevitable for people to ask what fraction is associated with differences in their genotypes (the so-called heritability of the trait) as well as what fraction is associated with differences in environmental experience. There is a long history of sentiment and speculation with regard to this issue. It has also proven difficult to answer this question in a scientifically credible way, in large measure due to the conceptual and statistical complexity of separating out the respective contributions of heredity and environment. Adding to the complexity is the need to obtain test score data from people who have varying kinship and genetic relationships, including identical and fraternal twins, siblings, and adoptive children with their biological and adoptive parents. Nonetheless, evidence has slowly been gathered that heritability is sizeable and that it varies across popu-

lations. For IQ, heritability is markedly lower for children, about 0.45, than for adults where it is about 0.75. This means that with age, differences in test scores increasingly reflect differences in the genotype and in individual life experience rather than differences in the families within which they were raised. The factors underlying this shift as well as the mechanism by which genes contribute to individual differences in IQ scores are largely unknown. The same can be said for understanding environmental contributions to those differences. A common misconception is that traits like IQ with high heritability mean that the results are immutable, that the environment has little or no impact, or that learning is not involved. This is wrong since heritable traits like vocabulary size are known to depend on learning and environmental factors.

Perhaps no topic is more controversial than that of race differences in IQ, especially since it is so often tied up with debates about genetics and environmental influences. It is an established fact that there are significant differences between racial and ethnic groups in their average scores on standardized tests of intelligence. In the United States, the typical difference between Caucasians and African Americans is 15 points or one standard deviation. A difference of this magnitude has been observed for quite a long period of time with little evidence that the difference has declined despite significant evidence that across the world IQ scores have risen substantially over the last fifty years. The latter phenomenon is known as the "Flynn Effect," and it, like so many other phenomena associated with test scores, begs for an adequate explanation.

There is a tendency to interpret racial and ethnic differences in mean IQ scores as being determined by genetic factors since, as noted above, IQ scores in general have a fairly high level of heritability and the level of heritability seems to be about the same in different racial and ethnic groups. There is, however, no logical basis on which to attribute the mean difference between racial groups to either genetic or environmental factors. As one group of researchers stated, "In short, no adequate explanation of the differential between the IQ means of Blacks and Whites is presently available" (Neisser et al., p. 97).

### Age and Intelligence

Although most intelligence tests are targeted for school-age populations, there are instruments developed for younger age groups. Such tests emphasize

the assessment of perceptual and motor abilities. Unfortunately, measures of infant and pre-school intelligence tend to correlate poorly with intelligence tests administered during the school years. However, there appears to be a high degree of stability in the IQ scores obtained in the early primary grades and IQ scores obtained at the high school level and beyond. Often this is misinterpreted as indicating that an individual's intelligence does not change as a function of schooling or other environmental factors. What such results actually indicate is that an individual's score relative to his or her age group remains fairly constant. In an absolute sense, an individual of age 16 can solve considerably more difficult items and problems than an individual of age 8. Comparing IQ scores obtained at different ages is akin to comparing apples and oranges since the composition of tests changes markedly over age levels.

Research has also studied changes in IQ following early adulthood. A frequent conclusion from research examining age groups ranging from 21 to 60 and beyond is that there is an age-related general decline in intellectual functioning. However, there are serious problems with many such studies since they involve cross-sectional rather than longitudinal contrasts. In those cases where longitudinal data are available, it is less obvious that intelligence declines with age. John L. Horn and Cattell (1967) presented data indicating a possible differential decline in crystallized and fluid intelligence measures. Crystallized intelligence measures focus on verbal skills and knowledge whereas fluid intelligence measures focus on reasoning and problem solving with visual and geometric stimuli. The latter also often place an emphasis on performance speed. Fluid intelligence measures tend to show substantial declines as a function of age, whereas crystallized intelligence measures often show little or no decline until after age 65. Research in the 1990s based on combinations of longitudinal and cross-sectional samples supports the conclusion that there are age-related declines in intelligence, which seem to vary with the type of skill measured, and that the declines are often substantial in the period from age 65 to 80.

### Future Outlook

After more than 100 years of theory and research on the nature and measurement of intelligence there is much that researchers know but even more that they don't understand. Still lacking is any agreed upon

definition of intelligence and many of the empirical findings regarding intelligence test scores remain a puzzle. In their summary paper "Intelligence: Knowns and Unknowns," Ulric Neisser and colleagues (1996) stated:

In a field where so many issues are unresolved and so many questions unanswered, the confident tone that has characterized most of the debate on these topics is clearly out of place. The study of intelligence does not need politicized assertions and recriminations; it needs self restraint, reflection, and a great deal more research. The questions that remain are socially as well as scientifically important. There is no reason to think them unanswerable, but finding the answers will require a shared and sustained effort as well as the commitment of substantial scientific resources. (p. 97)

**See also:** GIFTED AND TALENTED, EDUCATION OF; INDIVIDUAL DIFFERENCES, *subentry on* ABILITIES AND APTITUDES.

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## TRIARCHIC THEORY OF INTELLIGENCE

The triarchic theory of intelligence is based on a broader definition of intelligence than is typically used. In this theory, intelligence is defined in terms of the ability to achieve success in life based on one's personal standards—and within one's sociocultural context. The ability to achieve success depends on the ability to capitalize on one's strengths and to correct or compensate for one's weaknesses. Success is attained through a balance of analytical, creative, and practical abilities—a balance that is achieved in order to adapt to, shape, and select environments.

### Information-Processing Components Underlying Intelligence

According to Robert Sternberg's proposed theory of human intelligence, a common set of universal mental processes underlies all aspects of intelligence. Although the particular solutions to problems that are considered "intelligent" in one culture may be different from those considered intelligent in another, the mental processes needed to reach these solutions are the same.

*Metacomponents*, or executive processes, enable a person to plan what to do, monitor things as they are being done, and evaluate things after they are done. *Performance components* execute the instructions of the metacomponents. *Knowledge-acquisition components* are used to learn how to solve problems or simply to acquire knowledge in the first place. For example, a student may plan to write a paper (metacomponents), write the paper (performance components), and learn new things while writing (knowledge-acquisition components).

### Three Aspects of Intelligence

According to the triarchic theory, intelligence has three aspects: analytical, creative, and practical.

**Analytical intelligence.** Analytical intelligence is involved when the components of intelligence are applied to analyze, evaluate, judge, or compare and contrast. It typically is involved in dealing with relatively familiar kinds of problems where the judgments to be made are of a fairly abstract nature.

In one study, an attempt was made to identify the information-processing components used to solve analogies such as: A is to B as C is to: D1, D2, D3, D4 (e.g., lawyer is to client as doctor is to [a] nurse, [b] medicine, [c] patient, [d] MD). There is an *encoding* component, which is used to figure out what each word (e.g., *lawyer*) means, while the *inference* component is used to figure out the relation between *lawyer* and *client*.

Research on the components of human intelligence has shown that although children generally become faster in information processing with age, not all components are executed more rapidly with age. The encoding component first shows a decrease in processing time with age, and then an increase. Apparently, older children realize that their best strategy is to spend more time in encoding the terms of a problem so that they later will be able to spend less time in making sense of these encodings. Similarly, better reasoners tend to spend relatively more time than do poorer reasoners in global, up-front metacomponential planning when they solve difficult reasoning problems. Poorer reasoners, on the other hand, tend to spend relatively more time in detailed planning as they proceed through a problem. Presumably, the better reasoners recognize that it is better to invest more time up front so as to be able to process a problem more efficiently later on.

**Creative intelligence.** In work with creative-intelligence problems, Robert Sternberg and Todd Lubart asked sixty-three people to create various kinds of products in the realms of writing, art, advertising, and science. For example, in writing, they would be asked to write very short stories, for which the investigators would give them a choice of titles, such as “Beyond the Edge” or “The Octopus’s Sneakers.” In art, the participants were asked to produce art compositions with titles such as “The Beginning of Time” or “Earth from an Insect’s Point of View.” Participants created two products in each domain.

Sternberg and Lubart found that creativity is relatively, although not wholly, domain-specific. In other words, people are frequently creative in some domains, but not in others. They also found that correlations with conventional ability tests were modest to moderate, demonstrating that tests of creative intelligence measure skills that are largely different from those measured by conventional intelligence tests.

**Practical intelligence.** Practical intelligence involves individuals applying their abilities to the kinds of problems that confront them in daily life, such as on the job or in the home. Much of the work of Sternberg and his colleagues on practical intelligence has centered on the concept of tacit knowledge. They have defined this construct as what one needs to know, which is often not even verbalized, in order to work effectively in an environment one has not been explicitly taught to work in—and that is often not even verbalized.

Sternberg and colleagues have measured tacit knowledge using work-related problems one might encounter in a variety of jobs. In a typical tacit-knowledge problem, people are asked to read a story about a problem someone faces, and to then rate, for each statement in a set of statements, how adequate a solution the statement represents. For example, in a measure of tacit knowledge of sales, one of the problems deals with sales of photocopy machines. A relatively inexpensive machine is not moving out of the showroom and has become overstocked. The examinee is asked to rate the quality of various solutions for moving the particular model out of the showroom.

Sternberg and his colleagues have found that practical intelligence, as embodied in tacit knowledge, increases with experience, but that it is how one profits, or learns, from experience, rather than experience *per se*, that results in increases in scores. Some people can work at a job for years and acquire relatively little tacit knowledge. Most importantly, although tests of tacit knowledge typically show no correlation with IQ tests, they predict job performance about as well as, and sometimes better than, IQ tests.

In a study in Usenge, Kenya, Sternberg and colleagues were interested in school-age children’s ability to adapt to their indigenous environment. They devised a test of practical intelligence for adaptation to the environment that measured children’s infor-

mal tacit knowledge of natural herbal medicines that the villagers used to fight various types of infections. The researchers found generally negative correlations between the test of practical intelligence and tests of academic intelligence and school achievement. In other words, people in this context often emphasize practical knowledge at the expense of academic skills in their children's development.

In another study, analytical, creative, and practical tests were used to predict mental and physical health among Russian adults. Mental health was measured by widely used paper-and-pencil tests of depression and anxiety, while physical health was measured by self-report. The best predictor of mental and physical health was the practical-intelligence measure, with analytical intelligence being the second-best measure and creative intelligence being the third.

### **Factor-Analytic Studies**

Factor-analytic studies seek to identify the mental structures underlying intelligence. Four separate factor-analytic studies have supported the internal validity of the triarchic theory of intelligence. These studies analyzed aspects of individual differences in test performance in order to uncover the basic mental structures underlying test performance. In one study of 326 high school students from throughout the United States, Sternberg and his colleagues used the so-called Sternberg Triarchic Abilities Test (STAT) to investigate the validity of the triarchic theory. The test comprises twelve subtests measuring analytical, creative, and practical abilities. For each type of ability, there are three multiple-choice tests and one essay test. The multiple-choice tests involve verbal, quantitative, and figural content. Factor analysis on the data was supportive of the triarchic theory of human intelligence, as it was measured relatively separate and independent analytical, creative, and practical factors. The triarchic theory also was consistent with data obtained from 3,252 students in the United States, Finland, and Spain. The study revealed separate analytical, creative, and practical factors of intelligence.

### **Instructional Studies**

In another set of studies, researchers explored the question of whether conventional education in school systematically discriminates against children with creative and practical strengths. Motivating this work was the belief that the systems in most schools

strongly tend to favor children with strengths in memory and analytical abilities.

The Sternberg Triarchic Abilities Test was administered to 326 high-school students around the United States and in some other countries who were identified by their schools as gifted (by whatever standard the school used). Students were selected for a summer program in college-level psychology if they fell into one of five ability groupings: high analytical, high creative, high practical, high balanced (high in all three abilities), or low balanced (low in all three abilities). These students were then randomly divided into four instructional groups, emphasizing memory, analytical, creative, or practical instruction. For example, in the memory condition, they might be asked to describe the main tenets of a major theory of depression. In the analytical condition, they might be asked to compare and contrast two theories of depression. In the creative condition, they might be asked to formulate their own theory of depression. In the practical condition, they might be asked how they could use what they had learned about depression to help a friend who was depressed.

Students who were placed in instructional conditions that better matched their pattern of abilities outperformed students who were mismatched. In other words, when students are taught in a way that fits how they think, they do better in school. Children with creative and practical abilities, who are almost never taught or assessed in a way that matches their pattern of abilities, may be at a disadvantage in course after course, year after year.

A follow-up study examined learning of social studies and science by 225 third-graders in Raleigh, North Carolina, and 142 eighth-graders in Baltimore, Maryland, and Fresno, California. In this study, students were assigned to one of three instructional conditions. In the first condition, they were taught the course they would have learned had there been no intervention, which placed an emphasis on memory. In the second condition, students were taught in a way that emphasized critical (analytical) thinking, and in the third condition they were taught in a way that emphasized analytical, creative, and practical thinking. All students' performance was assessed for memory learning (through multiple-choice assessments) as well as for analytical, creative, and practical learning (through performance assessments).

Students in the triarchic-intelligence (analytical, creative, practical) condition outperformed the other students in terms of the performance assessments. Interestingly, children in the triarchic instructional condition outperformed the other children on the multiple-choice memory tests. In other words, to the extent that one's goal is just to maximize children's memory for information, teaching triarchically is still superior. This is because it enables children to capitalize on their strengths and to correct or to compensate for their weaknesses, allowing them to encode material in a variety of interesting ways.

In another study, involving 871 middle-school students and 432 high school students, researchers taught reading either triarchically or through the regular curriculum. At the middle-school level, reading was taught explicitly. At the high school level, reading was infused into instruction in mathematics, physical sciences, social sciences, English, history, foreign languages, and the arts. In all settings, students who were taught triarchically substantially outperformed students who were taught in standard ways.

### Conclusion

The triarchic theory of intelligence provides a useful way of understanding human intelligence. It seems to capture important aspects of intelligence not captured by more conventional theories. It also differs from the theories of Howard Gardner, which emphasize eight independent multiple intelligences (such as linguistic and musical intelligence), and from the theory of emotional intelligence. The triarchic theory emphasizes processes of intelligence, rather than domains of intelligence, as in Gardner's theory. It also views emotions as distinct from intelligence. Eventually, a theory may be proposed that integrates the best elements of all existing theories.

*See also:* CREATIVITY; INTELLIGENCE, *subentry on* MYTHS, MYSTERIES, AND REALITIES.

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## INTERDISCIPLINARY COURSES AND MAJORS IN HIGHER EDUCATION

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Interdisciplinary studies, broadly defined, is the process of answering a question, solving a problem, or addressing a problem that is so broad or complex that it cannot be addressed through a single discipline or field. In higher education in the United States, interdisciplinary studies are conducted through individual courses, including independent studies; in specific programs of study such as major or minor concentrations; as part of a student's general education requirements; through practica, internships, and other educational experiences that focus on the application of theory and knowledge to the workplace and society; and occasionally through honors programs. In a few cases entire colleges or universities are organized in interdisciplinary units that replace discipline- or field-based departments or divisions.

The goal of most interdisciplinary courses and programs is to integrate the contributions of different academic disciplines or fields of study so that topics, problems, and phenomena under study are better understood. (*Disciplines* have traditionally been defined as specializations within the arts and sciences; the term *fields* is often used to distinguish disciplines from professional fields, such as business, education, law, and medicine, which draw their content and methods from a number of different disciplines.) However, some scholars such as Jean Francois Lyotard contest the usefulness of academic disciplines as ways of organizing and generating knowledge, and thus challenge the idea that disciplines are the basis for interdisciplinarity. These scholars consider interdisciplinarity to be a critique of the disciplines; in their view, the goal of interdisciplinarity is to subvert, rather than to utilize, the disciplines as they are currently organized.

### Rationale for Interdisciplinary Courses and Programs

Arguments favoring interdisciplinary teaching emphasize the need to bring multiple disciplinary perspectives to bear on real-world issues. Proponents of interdisciplinarity argue that the disciplines arbitrarily fragment the world and allow their adherents to select only those dimensions of a problem that their discipline can adequately address, thus leaving important dimensions of the problem unaddressed.

The views offered by the disciplines are therefore considered partial; they provide a single lens or perspective from which to study and understand complex phenomena or issues. Advocates of interdisciplinarity argue that disciplinary approaches to education are therefore reductionist; they divide knowledge rather than generate comprehensive explanations of the world. Although many if not most proponents of interdisciplinarity believe that disciplines are necessary for the advancement of knowledge, they view overspecialization, in the form of increasing disciplinary isolationism, as impeding communication and understanding among disciplinary experts, their students, and the larger public that might be consumers or beneficiaries of their work.

Those who encourage interdisciplinary education seek holistic understandings of the social and natural worlds. Real-world problems, they argue, are not separated into disciplinary components; rather, they are complex, hard to define, challenging to solve, and often have more than one right answer. Such problems require that individuals know what kinds of information are needed and where to find that information. By requiring students to work on such problems, the argument proceeds, interdisciplinary education develops a number of intellectual skills. These include skills in problem solving, critical thinking, evaluation, synthesis, and integration. In addition, interdisciplinary courses are believed to develop the ability to see and employ multiple perspectives; to encourage tolerance and respect for the perspectives of others; to expand students' horizons or perspectives; to increase their willingness and capacity to question assumptions about the world and about themselves; to promote the ability to think in creative and innovative ways; and to create sensitivity to disciplinary and other biases. As a result, advocates argue, interdisciplinary study is excellent preparation for the role of citizen and worker in a pluralistic, technological, and democratic society.

Proponents such as James R. Davis, William H. Newell, and William J. Green also claim that interdisciplinary curricula are more engaging, capturing students' intellectual interests and encouraging them to make connections among the disparate realms of information provided by discrete disciplines. Even scholars, this argument continues, need to know about developments in other disciplines so that they may adapt or incorporate these into their own work as appropriate. Interdisciplinary training has there-

fore been recommended by Joseph Klockmans as a way to build bridges to overcome disciplinary isolation. Others argue that interdisciplinary courses can improve faculty morale by revitalizing instructors' interest in teaching introductory or survey courses that are not closely related to their areas of specialization. Similarly, supporters contend that interdisciplinary courses promote faculty development, offering instructors the opportunity to explore new areas of interest and collaborate with colleagues and thereby expand their repertoire of knowledge and skills.

Arguments, such as Thomas C. Benson's, opposing undergraduate interdisciplinary courses and programs typically focus on perceived detriments to student learning. Interdisciplinary study, opponents argue, cannot be effective unless students are first adequately schooled in at least one of the disciplines contributing to an interdisciplinary course or program. Without this foundation, students cannot marshal arguments, methods, or insights from the disciplines in an interdisciplinary course. Critics also assert that substantial commitment to interdisciplinary study as an undergraduate student, as is required in a minor or major program, may impede a student's development of disciplinary competencies. A third argument—that interdisciplinary courses are shallow and lacking in intellectual rigor—builds on the previous arguments. This criticism maintains that because students do not have the foundational knowledge of the involved disciplines that allows them to participate in demanding intellectual discussions in interdisciplinary courses, instructors emphasize what is entertaining and most accessible to the majority of students. Opponents also argue that interdisciplinary courses are costly because they often rely on team-teaching, independent studies, and low faculty-student ratios.

### **Interdisciplinary Study in U.S. Higher Education**

The first interdisciplinary courses in U.S. colleges and universities were part of the general education, or core, requirements of the undergraduate curriculum. (General education is that component of the undergraduate curriculum intended to provide students with the knowledge, skills, and values required for life as a contributing member of society.) Although general education has a long history in higher education, interdisciplinary general education courses in the United States did not appear until the twentieth century when World War I prompted

U.S. colleges and universities to institute general education courses designed to strengthen Americans' sense of cultural and national identity and responsible citizenship. These comprehensive survey courses, which relied on a number of disciplines for their subject matter, attempted to sustain the content and values of Western civilization. The courses required instructors who could effectively synthesize knowledge and make it accessible to undergraduates and therefore highlighted the need for interdisciplinary approaches to education. Despite concerns about disciplinary fragmentation and academic overspecialization, only a few institutions offered more than a handful of interdisciplinary survey courses; the Experimental College at the University of Wisconsin, which lasted only from 1928 to 1932, is perhaps the most famous example of an institution committed to an extensive interdisciplinary general education.

During the 1930s and 1940s, war again influenced interdisciplinary curricula as institutions developed area studies programs designed to provide knowledge about foreign cultures and peoples involved in World War II. Although international education was spurred by private foundation support before the war, these efforts diversified during and after World War II as programs focused on more and more geographic areas. By 1988, there were more than 600 area studies programs on American campuses.

The social and cultural transformations of the 1960s and 1970s inspired additional interdisciplinary educational efforts. As the civil rights, women's liberation, and Vietnam War protests created demands for more personally and socially relevant, student-centered curricula, institutions responded by offering interdisciplinary courses and programs in a variety of areas. While a few institutions developed interdisciplinary organizational models, most institutions developed interdisciplinary courses and programs that supplemented the usual disciplinary offerings. By the 1970s, interdisciplinary minor and major programs in Black, Chicano, Environmental, Urban, and Women's Studies appeared on campuses across the United States. In the year 2000 Barrie Thorne reported there were more than 700 women's studies programs in U.S. institutions. According to a report published by the National Center for Education Statistics in 2001, in 1998 more than 6,200 associate and baccalaureate degrees were conferred in area, ethnic, and cultural studies. In addition more

than 35,000 students earned associate's or baccalaureate degrees in multi/interdisciplinary studies.

During the 1980s concerns about general education heightened and curricular reform in this area was often motivated by a desire to create more meaningful and less fragmented educational experiences for college students. General education distribution requirements, typically filled by allowing students to choose from a variety of introductory courses in selected disciplines, were replaced by a core of interdisciplinary courses common to all students in an institution. Proponents believed the goals of general education would be better served if students engaged in a common conversation regarding cultural and societal issues rather than haphazardly choosing courses from approved lists with little concern for their connection to one another. Interdisciplinary general education requirements often include multicultural studies, environmental studies, Western Civilization, and the Great Books. In the final decades of the twentieth century, the number and type of interdisciplinary curricula greatly increased as programs in cultural studies, interdisciplinary science fields (e.g., neuroscience, molecular biology, and environmental sciences), human ecology, information technology, public policy, and legal and labor studies gained prominence in U.S. colleges and universities.

### **Interdisciplinary Courses**

A distinction is often made between multidisciplinary and interdisciplinary courses, although the difference is more likely one of degree. In multidisciplinary courses, instructors present disciplinary perspectives, often one at a time, without special attention to integrating those perspectives or examining their assumptions. In contrast, instructors in interdisciplinary courses not only examine the underlying assumptions of the disciplines that contribute to the course, but also assist students in integrating the separate disciplinary contributions that have been brought to bear on a topic into an inclusive understanding.

Typically an interdisciplinary course is organized around a topic, broadly defined as an issue, theme, problem, region, era, institution, person, or idea. Different disciplinary (and potentially other) perspectives on the topic are incorporated into readings and assignments. Interdisciplinary courses take a variety of formats and espouse a number of purposes. First-year seminar courses can provide a com-

prehensive orientation to a field or fields of study, often by probing a single issue, problem, or question. Advanced seminars usually have an integrative purpose, serving as culminating or capstone courses in which students refine analytical and critical methodologies. Fieldwork, internship, service learning, and travel-study courses may also employ interdisciplinary approaches to assist students in connecting life experiences with classroom learning.

Individual instructors often plan and teach interdisciplinary courses, but teams of two or more faculty members from different disciplines or fields of study are also common. Collaboration among faculty teaching interdisciplinary courses can involve course planning, content integration, teaching, and assessment. All members of the faculty team may be involved in planning a course or a single individual can take primary responsibility for this role. Responsibility for instruction can also vary. In some team-taught courses, all members are present in the classroom for each session; they may all contribute to each class session or team members may take responsibility for specific components of the course. In other team-based courses, a core of faculty supplement their lectures and discussions by inviting guest lecturers to provide instruction in a specific area of interest. In a dispersed team model, large classes of students meet together for one class session per week in which all members of the faculty team are present. Subsequent weekly meetings take place in smaller sections taught by a single faculty member. No matter what delivery model is used, team members must make decisions about how student work will be assessed. Faculty may share this task, with each team member reading and commenting on all student work, or they may divide the task among them.

Coordinated studies and learning community models are a variation on the team-taught course. In these models, members of a faculty team coordinate two or more courses that focus on a prearranged theme or topic rather than teaching about that theme or topic in the context of a single course. Each coordinated course is designed to contribute to a wide-ranging understanding of the subject under study; in addition to coordinating content across these courses, instructors may also coordinate course activities and assignments to enhance the learning experience. The multiple-course format is intended to achieve the goal of depth of learning; a few institutions seek to further enhance depth by ex-

tending coordinated courses over an academic year rather than confining them to a single semester.

Instructors who teach interdisciplinary courses alone rather than in a team must present disciplinary information and perspectives that are not part of their area of specialization in order to teach an interdisciplinary topic. Most proponents of interdisciplinary courses and programs argue that faculty must have a broad background in the disciplines that are engaged in a particular interdisciplinary course before they can teach it without assistance from other disciplinary experts; faculty teaching an interdisciplinary course must be able to present their own, as well as different, disciplinary perspectives accurately and in depth. Until instructors develop the requisite base of knowledge and skills, proponents of this view believe that “solo” efforts should be discouraged. Faculty development in the form of seminars in which faculty teach one another their disciplines can provide the kind of faculty development needed to support interdisciplinary courses, but can be costly in terms of human and financial resources.

Many interdisciplinary courses are never taught in teams; individual faculty design and teach all the perspectives needed in the course. Faculty trained in interdisciplinary programs may have the necessary background for teaching such courses. Others develop expertise once asked to teach an interdisciplinary course. Interdisciplinary programs sometimes offer incentives to persuade and reward faculty who serve the program. These incentives can take the form of salary stipends, teaching or research assistants, travel money, or funding for the purchase of books or other materials. These incentives provide helpful resources for course preparation and also recognize the time and effort dedicated to the preparation and teaching of an interdisciplinary course.

Team-taught courses are frequently used for general education course sequences and in interdisciplinary programs in which the variety of disciplinary perspectives engaged are disparate, each requiring in depth knowledge of a specific set of methods or concepts, such as in environmental sciences, biochemistry, or urban planning. Individually taught interdisciplinary courses are particularly common in the humanities, women’s studies, cultural studies, and ethnic studies, and often include a critique of disciplinary knowledge.

## **Interdisciplinary Programs**

Interdisciplinary major and minor programs take a number of organizational forms, but three forms are prominent: (1) established programs with permanent staffs and program budgets; (2) interdepartmental committees, programs, or colleges with defined curricula but no faculty members appointed solely to the unit; and (3) individually designed majors or other programs that permit students to design, with faculty guidance, customized degree programs to meet their educational needs.

Typically, established programs have a full- or part-time director who provides administrative leadership and who also teaches in the program. Individual faculty in established programs may hold joint appointments with the interdisciplinary program and with one or more departments related to their area of expertise. They may also be appointed for a fixed term to serve an interdisciplinary program (for a portion or all of their time). The number of faculty associated with such programs can vary, but this mode provides stability to the interdisciplinary program because it guarantees at least a portion of a faculty member’s time will be dedicated to program responsibilities at a given time.

In interdepartmental committees, programs, or colleges, the program director is either full- or part-time and is responsible for arranging courses to be taught by faculty from different departments. These faculty are not permanent members of the program but are rather borrowed temporarily from their home departments. Such budgetary arrangements leave interdisciplinary programs vulnerable in times of resource and financial stress. Advocates of interdisciplinarity note however that the closer the interdisciplinary program is tied to the mission of the institution, the less likely it is to suffer financially during difficult periods in an institution’s history.

## **Interdisciplinary Colleges and Universities**

Most institutions that adopt an interdisciplinary approach value team teaching, student and faculty involvement in curriculum development and in governance, and active participation by the students both in the classroom and in external research or work internships. Academic departments based on disciplinary affiliations are either nonexistent or more fluid than in other institutions. “Great Books” colleges, characteristically small institutions such as St. John’s College of Maryland and of Santa Fe, are

often labeled interdisciplinary because they explore the foundational ideas and questions that distinguish a civilization. The few Great Books colleges in the U.S. organize their curricula around reading and discussion of what they believe to be a set of classic texts of Western civilization. Proponents of this approach believe that students are best prepared for life when they interact and wrestle with the greatest minds of our civilization, and they opt for a nondisciplinary structure because “neither the world nor knowledge of it is arbitrarily divided up as universities are” (Hutchins, p. 59).

Other interdisciplinary institutions organize curricula around specific societal or environmental issues, and encourage individualized programs of study developed collaboratively by students and faculty. In 1965 the Wisconsin legislature chartered the University of Wisconsin-Green Bay to devise a future-oriented innovative curriculum. Influenced by the ecology movement of the time, Green Bay offered an interdisciplinary curriculum focused on the relationships between humans and their environment. The university organized its colleges around environmental themes rather than academic disciplines and divided its curriculum into nine problem-centered concentrations. Over time, however, Green Bay added disciplinary majors and interdisciplinary minors to its original structure. A smaller institution, the College of the Atlantic, established in Bar Harbor, Maine, in 1969 maintained its commitment to one primary issue. It offers individually tailored bachelor’s and master’s degrees in human ecology, a field that emphasizes the interrelationships between humans and their social and physical environments.

Other institutions, such as Evergreen State College in Olympia, Washington, offer a more extensive interdisciplinary curriculum. In 1967 Evergreen opened as a nontraditional liberal arts college. Its coordinated studies program allows students to participate in full-time interdisciplinary study through a combination of team-taught programs and student-designed areas of concentration. Hampshire College in Massachusetts also offers students the opportunity to create individualized programs of study built upon a core multidisciplinary curriculum. The number of colleges and universities offering exclusively interdisciplinary curricula is relatively small; the majority of higher education institutions in the United States either prescribe or offer interdisciplinary tracks within their general education offerings.

*See also:* ACADEMIC DISCIPLINES; CAPSTONE COURSES IN HIGHER EDUCATION; CURRICULUM, HIGHER EDUCATION; GENERAL EDUCATION IN HIGHER EDUCATION.

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## INTEREST GROUPS

See: EDUCATIONAL INTEREST GROUPS.

## INTERGOVERNMENTAL RELATIONS IN EDUCATION

Relationships between branches and levels of government are important in the administration and delivery of educational services in all countries. National ministries of education may wish to control all phases of education, but they inevitably must delegate significant aspects of the operation and delivery of educational services to lower levels of government. The more decentralized the governance system, and the more branches and levels of government there are, the more complex intergovernmental relationships may be. But, even in nations with highly centralized approaches to governance, the re-

lationship between the central ministry of education and schools and colleges is important. Any government's policies are only as effective as their design and implementation permit, and effective implementation is heavily influenced by the character of the relationship that exists between branches and levels of government.

### Governance Structures

Most nations have a unitary government, which means that the central government holds sovereign power over all lower levels of government. The lower levels of government are subordinate to the national government, which can overrule or even abolish them. By contrast, some nations have adopted federal governance systems, in which power is shared between the national government and state or regional units, which cannot be abolished. These federations with constitutions developed in nations, such as Australia, Canada, Germany, and the United States, where regional differences are important and where former colonies or semiautonomous states banded together out of common interest. In federal systems, education usually is the legal responsibility of the state governments rather than the national government. Still, even in federal systems, national interests in such matters as equality of opportunity and educational adequacy and excellence inevitably cause the national governments to play a role in education.

Whether control over a nation's government is democratic or autocratic, and whether a unitary or federal system is used, there can be significant variation in the degree to which the government is centralized or decentralized. By definition, one expects decentralization in federal systems, but this is not always the case. For example, until the mid-1980s Australia's states ran highly centralized statewide education systems in which all but the simplest decisions were made in the state ministries of education in the capitol cities. For the most part, Germany's states continue to run highly centralized education systems.

Beginning in the 1980s, a reform movement advocating decentralization and much greater decision-making at the school level (school-based management or "self-managing schools") began to spread across the world, especially the English-speaking world. School-based management sought to restructure the decision-making chain of command by shifting authority from highly centralized bureaucracies to the school site level. New Zealand

adopted this approach completely, and some Australian states have moved in this direction. Britain presents a complex and interesting example of these trends. It has reduced the power of the local education authorities (roughly equivalent to American and Canadian school districts) and given schools much more decision-making authority, but the entire system operates under a powerful central government in London. In the United States, more than one-third of all school districts have implemented some version of school-based management, and at least five states—Colorado, Florida, Kentucky, North Carolina, and Texas—have legislated participatory decision-making at each school.

The high degree of decentralization in the structure of educational governance in the United States is unusual. The kind of local control that exists in the United States, through the delegation by states of substantial decision-making power to elected school boards of lay citizens in some 15,000 local school districts, is rare. Most nations have far more centralized arrangements. In European nations, such as France and Germany, civil servants operating within highly bureaucratized agencies or ministries of education tightly control the education system. In these settings, local citizens have little or no voice in decision-making for schools, and a highly professionalized (or at least bureaucratized) cadre of educators hold sway.

The stark contrast between, on the one hand, highly centralized and bureaucratized systems of governance and, on the other hand, decentralized systems that allow for local and lay participation in educational policy-making raises the question of how best to structure the governance of education. Here, it is common to see a tension between competing values. Efficiency, it can be argued, is best served by a centralized system that can better ensure consistent standards throughout a nation than a decentralized system. On the other hand, centralized systems are prone to develop bureaucratic rigidities that can ultimately impede efficiency, not to mention liberty and democracy. Debates about the proper governance of public services, in fact, often seem to revolve around the tension between the competing values of democracy and efficiency. Unfortunately, by themselves neither centralized nor decentralized approaches to government can guarantee either democracy or efficiency.

### **Standards, Accountability, and Capacity-Building**

Many nations require students to pass national examinations in order to advance in school or exit from the school system. These high-stakes exams and the accompanying national curriculum provide a common standard for all students and schools and help establish a coherent educational system. In the United States, however, a debate continues over curriculum standards, testing, and accountability measures and over which level of government (local, state, or federal) should be responsible for these measures. The long tradition of local control over education impedes state and national efforts to impose standards and accountability systems. Further, high-stakes examinations conflict with American beliefs in freedom, individualism, and multiple opportunities for success. Inevitably, national goals, individual and minority rights, and regional differences conflict and contribute to tensions in intergovernmental relations.

Most U.S. states have established academic and curricular standards with testing and other accountability requirements, and many have experienced increasingly tense intergovernmental relations. The highly publicized takeover of the academically and fiscally distressed School District of Philadelphia by the Commonwealth of Pennsylvania in December 2001 illustrates how volatile intergovernmental conflicts can become when serious consequences are attached to school accountability measures. When higher levels of government intervene in or take over failing schools or school districts, the assumption is that the higher levels have the capacity to correct the problems. But, owing to underinvestment, state education departments sometimes lack the capacity to provide the technical assistance and professional development necessary to reinvigorate failing schools. Many schools lack the organizational capacity to respond effectively to the demands of higher academic standards, so staff professional development and capacity-building efforts are key activities in which higher levels of government need to assist them.

### **The Financing of Schools and Intergovernmental Relations**

The costs of professional development efforts, not to mention the basic costs of operating and maintaining schools, lead to the important question of intergovernmental arrangements for the finance of education, including the relative share of the costs different levels of government should contribute.

Ideally, there are provisions, such as in Australia, to ensure that the same amount of government tax money is provided to finance a child's education regardless of where the child lives. But arrangements can be far less logical and equitable than that. The tradition of local control of education in the United States has produced a situation in which the funding of schools is heavily influenced by the wealth of individual communities. Even though American states try to equalize funding through contributions of state funds to augment local property tax revenue, many states still allow large disparities to exist between the levels of spending in local school districts that vary in wealth. Since the 1960s, this inequitable pattern has been challenged in numerous court cases, and reformers have succeeded in reducing the disparities in some states.

The funding of schools is likely to become even more complicated as governmental agencies are now having to determine who is responsible and at what level for the costs of educating students who no longer attend local schools but instead receive their education through "cyber schools" over the Internet. Cyber schools and other technological advances pose new challenges to intergovernmental relations and raise new politically charged questions. Policy-makers must determine, for example, if cyber schools—in which students primarily stay home and access materials online with little direct contact with teachers—should be counted and financed as public education. Further, cyber schools raise new questions about school funding for which there have been no clear answers. Who should pay? What amount should come from local funds and what from state or national? Beyond fiscal questions, cyber schools also raise accountability and regulatory issues.

### **Intergovernmental Relations and School-Linked Social-Services Coordination**

Children worldwide face a multitude of modern problems that include increased incidents of substance abuse, inadequate and unaffordable housing, racism, sexism, child abuse and family violence, sexual promiscuity and teen pregnancy, poverty, hunger, and limited or poor health care. These problems place children at risk and put schools at the epicenter of interconnected social problems. Yet the services needed to respond to these problems are typically fragmented across a variety of uncoordinated government agencies. Consequently, many Westernized

nations are increasingly adopting policies to have schools and external agencies collaborate to help meet students' nonacademic needs and provide more comprehensive support services for at-risk students and their families.

School-linked social-services efforts illustrate the complicated nature of intergovernmental relations in education. Although each school, social-service agency, or branch of the government seeks to assist those in need, jurisdictional and organizational problems can limit their ability to work together to find sustainable solutions that help those most at risk. Coordinated, school-linked services create new expectations and complexities and introduce new actors, thereby increasing organizational demands, ambiguities, and, potentially, loss of control. A fundamental challenge in intergovernmental collaborative efforts is to overcome the barriers created by the effects of competing institutional interests that emphasize protecting jobs, budgets, programs, facilities, and the agency's "turf" and clientele.

Organizational and professional differences among various government and nonprofit agencies, including schools, create barriers that include a lack of a common outlook and professional language, communication problems, licensure issues, and confidentiality issues. Also problematic are issues such as space and facilities management; funding issues and resource mingling; differing salary and personnel policies; new roles and relationships between educators and other agency personnel; leadership issues; deficits and differences in professional preparation programs and training; information sharing and retrieval; and control and legal issues. Research indicates that these are significant barriers that can impede intergovernmental/interagency collaboration.

*See also:* GOVERNMENT AND EDUCATION, THE CHANGING ROLE OF; SCHOOL-LINKED SERVICES; STATES AND EDUCATION; STATE DEPARTMENTS OF EDUCATION.

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## INTERNATIONAL ASPECTS OF EDUCATION COMMERCE

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The use of government financial resources to support public basic-education provision is well estab-

lished and widely accepted across the globe. However, since 1990 there has been a noticeable shift in the traditional ways that provision of higher education and, to a lesser extent, secondary education is regulated. In different contexts there are new financing strategies being implemented in the public sector, with a view toward generating additional revenues from public assets, mobilizing additional resources from students and their families, encouraging donations from third-party contributions, and involving the private sector in the provision of essential services to educational institutions. Future demand for private provision of education services, especially at the higher levels of education, is predicted to grow even more in the first decade of the twenty-first century.

All governments are concerned about investment in human capital, and, despite significant improvements in education coverage in developing countries, there is still a large unmet demand for both access and quality education at all levels.

The private sector's role as a potential partner with the public sector in both the provision and financing of education is widely recognized in the early twenty-first century. There is substantial evidence to show that the private sector can: (1) ease the pressure on governments' financial constraints; (2) encourage and demonstrate efficiency, effectiveness and innovation; (3) promote social mobility and contribute to the growth of an emerging middle class; (4) expand educational diversity; and (5) increase access and quality across all education levels and societal groups.

### Private Higher Education

In higher and continuing education, private-sector provision has become a practical way for economies to scale up their investment in human capital, especially in developing countries. More than 2.3 billion people, or 53 percent of the total population of the developing world, live in the poorest countries—those that have annual per capita incomes of less than \$885. These countries have a small proportion (12 million students) of the global tertiary education market (90 million). Innovative action has been necessary in these lower-income countries to provide an acceptable standard of tertiary education in order to provide the education needed to generate economic growth. In these settings, low-income countries are providing positive legal frameworks where private, specialized two- or three-year tertiary education in-

stitutions (such as technical institutes or community colleges) can provide training for technicians and applied specialists.

Studies done between 1998 and 2000 show that the size of the private higher-education sector varied significantly across developing countries. Levels of private-sector ownership included:

- 100 percent of professional training market in Cote d'Ivoire
- 44 percent of skills training market in The Gambia
- 75 percent of tertiary colleges in India
- 1,274 private institutions, with 4 million students, in China
- 37 tertiary institutions in Ghana
- 60 percent of tertiary institutions in Brazil

A common characteristic of private higher-education provision is that tuition fees are the main source of revenue. Private institutions also serve both the rich and poor, which often includes *second chance* students who cannot gain admission to public universities. These institutions also exist in different forms, including franchises, school groups, sole proprietorships, for-profit companies, nonprofit institutions, and religious organizations. Some higher-education institutions may also offer a limited range of professional and practically oriented courses (e.g., accounting, management, English information technology), often using part-time staff (including trained professionals, practitioners, or professors from public institutions).

Student loan schemes are also emerging in places where positive regulatory conditions are in place for banks to provide for an individual student's access to credit. This is particularly the case at postsecondary levels, where private financial institutions can use students' increased expected earnings from their education as future collateral to provide individual credit.

### Private Schools

Evidence shows that, in many cases, private schools can introduce and encourage better effectiveness in terms of education outcomes. A 2000 study by Arjun Bedi and Ashish Garg on the effectiveness of private versus public schooling in Indonesia showed a positive correlation between increased labor market earnings (as a proxy for more effective education) and private school attendance. Results from the Do-

minican Republic, the Philippines, Tanzania, and Thailand show evidence of better education results, at lower costs, for private schools—through better management practices, more efficient use of inputs, and the introduction of innovative cost-saving techniques. Likewise, two studies in India concluded that private initiatives provide better education at lower costs. The Fé y Alegria School network in Latin America is also known to provide more effective schooling than its public-sector counterparts; its per student costs are only 60 percent of those in the public sector; yet many of the schools achieve similar or better learning outcomes.

### For-Profit and Nonprofit Institutions

Many countries regulate that private schools only be operated on a not-for-profit basis, while others are more liberal and allow for both nonprofit and for-profit institutions to operate and compete freely in the same markets. There has been an emergence of more for-profit institutions across the globe. Typically, but not always, they will serve urban-based middle- to upper-class families, and the tuition fees they charge can vary considerably. These schools are normally registered by public authorities, are subject to socially based regulatory requirements, and in some cases they receive public subsidies. Such is the case in many eastern European countries and South Africa, where subsidies are paid on a sliding scale based on the levels of tuition fees charged to students.

The main difference between the two categories of private schools is that nonprofit entities are not traditionally obliged to pay any taxes on surpluses they may generate, whereas for-profit entities are required to pay taxes on the profits they earn.

In countries where all private schools are required by regulation to be nonprofit entities, it is typical for investors to establish for-profit entities that can *parent*, or own, a school's physical assets and deliver essential services, usually on preferred commercial terms. While the education institution preserves its status by complying with the not-for-profit regulations, the parent entity can operate on a for-profit basis, selectively deriving income from the school's operations on favorable terms. Using these for-profit vehicles, proprietors are generally able to find more flexible mechanisms to minimize the tax impact on their earnings, and at the same time provide satisfactory social and financial returns to investors.

### **Public-Private Partnerships**

Partnerships between the public sector and the private sector have provided a basis for positive collaboration between governments and private-sector interests. In some developed countries where effective decentralization has taken place (e.g., Chile, New Zealand), greater autonomy at the institution level has had a positive impact on institution efficiency and accountability. Depending on the degree of outsourcing in each case, traditional services such as teacher payroll, school transport, financial services, and professional development have been successfully outsourced to the private sector. In cases where sensitivity to privatization exists, governments are actively seeking ways to outsource the design, building, and management of selected facilities, while retaining the ownership and control of all academic operations.

### **Supply of Textbooks and Ancillary Services**

Traditional private-sector supply of textbooks, curriculum, and other learning materials to both public and private schools has been in place for many years. Food service, catering, cleaning, and building and general maintenance services are also typically provided by the private sector.

### **Public Schools Managed by Private Companies**

Private-sector management of publicly owned schools (e.g., in Chile and the United States) under contract to the state has begun to earn public acceptance. Although it is still too early to know whether delivery of curriculum and learning outcomes improve in these situations, professional staff and many of their school communities are known to be supportive of these initiatives, with communities having greater inputs into school operations and development. In 2001, the Edison Schools network in the United States consisted of 136 schools in 53 cities, covering 22 states and serving approximately 75,000 students. This meant that Edison Schools were servicing approximately one out of every 700 K–12 students.

### **Private Tutoring Services**

Across the globe, private tutoring services have developed into a burgeoning industry. They thrive on supplementing the curriculum delivered in public institutions, are often highly skills-based in nature, and are sometimes staffed by teachers or subject specialists as a second job. In Asia alone there is more

than U.S. \$20 billion spent annually on English lessons.

### **Accreditation, Quality Reviews, and Inspections**

Independent accreditation services for colleges and universities are the norm in the United States. There is also a growing interest in many countries for quality reviews of schools and tertiary institutions to be carried out by the private sector. Many U.S. agencies, for example, are providing accreditation and quality-assurance services internationally. In Oman, a private British group undertakes operational and quality reviews of public schools.

### **Education on Internet Portals**

The private sector also plays an important role in education, improving access to new technologies through the development of resources and services that the public sector would find difficult to sustain. Private-sector interests will continue to dominate the development of information and communications technology (ICT) resources for the education sector throughout the world. Core curriculum materials and programs developed for use with ICT have, in a few cases, remained the preserve of public education. It is in the future interest of ICT development in education in both developed and developing countries that public- and private-sector education interests work in close partnership with private-sector ICT companies for the benefit of future education development. The private sector has the capability of making the significant investments required to keep pace with the continuous technological changes that are happening in the ICT sectors across the globe.

Education sites on the Internet can take on different forms of ownership. Private-sector sites and resources are common in the United States, India, Canada and elsewhere. In New Zealand, the development and management of the public education Internet portal was outsourced to the private sector. But in each case, consultation with the public sector regarding the linking of resources to the local curriculum was important.

Relevant use of the Internet will help democratize education, giving all students, even those in poor communities, access to global libraries and teachers around the world. A majority of the ICT resources developed to support electronic learning, or to add value to the delivery of curriculum into the classroom, have been developed by the private sector.

Education authorities in both developed and developing countries do not have the capability of making the significant investments required to keep pace with the continuous technological changes that are happening in the ICT sectors.

*See also:* COMMERCE OF EDUCATION; INTERNATIONAL EDUCATION; INTERNATIONAL STUDENTS, *subentry on* THE GLOBAL COMMERCE OF HIGHER EDUCATION.

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RONALD F. PERKINSON

## INTERNATIONAL ASSESSMENTS

### OVERVIEW

Larry Suter

### INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT

Ton Luijten

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Albert E. Beaton

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Judith Torney-Purta

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## OVERVIEW

International comparisons of student achievement involve assessing the knowledge of elementary and secondary school students in subjects such as mathematics, science, reading, civics, and technology. The comparisons use test items that have been standardized and agreed upon by participating countries. These complex studies have been carried out since 1959 to explicitly compare student performance among countries for students at a common age. To participate in such a comparative study, a country must demonstrate that it has had prior experience in conducting empirical studies of education.

Comparing student achievement between countries has several goals. To policymakers, country-to-country comparisons of student performance help indicate whether their educational system is performing as well as it could. To a researcher of education issues, the studies provide a basis for hypothesizing whether some policies and practices in education are necessary or sufficient for high student performance (such as requiring all teachers to obtain college degrees in the subject area they teach). To teachers and school administrators, international studies provide examples of behavior that may be a source of new forms of practice and self-evaluation.

### Types of Study Results

The results of a large international study in 1995 showed that eighth-grade teachers in the United

States are often not involved in decisions about the content areas of their teaching, as teachers are in other nations. U.S. teachers work longer hours than those in most other countries, they do not have as much time during the day to prepare for classes, and their daily classroom teaching is disrupted more often by things such as announcements, band practice, and scheduling changes. Moreover, the organization of curriculum used by elementary and middle schools in the United States appears not to be focused on topics that will propel students toward a more advanced understanding of mathematics. Comparisons with other countries show that U.S. students are just as interested in science and mathematics as other students, they study as long, and they watch just as much television.

### Organizational History

Education researchers and policymakers from twelve countries first established a plan for making large-scale cross-national comparisons between countries on student performance in 1958 at the UNESCO Institute for Education in Hamburg, Germany. The first successful large-scale quantitative international study in mathematics was conducted in 1965 by the International Association for the Evaluation of Educational Achievement (IEA) and included Australia, Belgium, England, Finland, France, Germany, Israel, Japan, Netherlands, Scotland, Sweden, and the United States. Since then, studies in fourteen or more countries have been conducted periodically in several subject areas of elementary and secondary education.

Between 1965 and 2001 the IEA sponsored studies of mathematics in 1965, 1982, 1995, and 1999; science in 1970, 1986, 1995, and 1999; reading in 1970, 1991, and 2001; civics in 1970 and 1998; and technology in 1990 and 1999. The Educational Testing Service conducted an International Assessment for Education Progress in science and mathematics in 1990. The Adult Literacy and Lifeskills survey is a large-scale comparative survey designed to identify and measure prose literacy, numeracy, and analytical reasoning in the adult population (those between sixteen and sixty-five years of age). This survey was conducted in 1994 and 2001.

Studies such as these require the development of a set of test items, which are translated into the languages of the participating countries. The translated items are checked for proper translation and they are pretested in each country to determine

whether they have misunderstandings or errors that would make the items unsuitable for use in the final study (about three times as many items are written as are finally used). The participating countries collectively agree upon a framework to define critical aspects of the topic area. For example, an elementary mathematics test would include items in numbers, geometry, algebra, functions, analysis, and measurement, and would also have items that represented different aspects of student performance, such as knowing the topic, using procedures, solving problems, reasoning, and communicating. However, no single assessment could cover comprehensively an entire topic for all countries.

The tests are administered to a sample of students in 100 to 200 schools, which are selected to represent all students in the country. An international referee monitors the school selection process to insure that all countries follow correct sampling procedures. The test items are scored according to internationally agreed-upon procedures and are analyzed at an international center to insure cross-national comparability. Countries that do not meet high standards of participation are not included in the comparisons.

### Problems of Comparability

Some educators believe that learning is too elusive and culturally specific to be measured in a statistical survey. They believe that the outcomes of education are too diverse, indirect, and unpredictable to be measured in a single instrument. Others believe that comparisons are “odious” because practices that work in one culture may not be appropriate in another culture due to differences in social context and history.

The first IEA study planners were not confident that cross-national comparisons would be valid. They were concerned that the curriculum of different countries would stress different aspects of mathematics, science, or reading, and that any test of student performance might not reflect what students had been taught. To recognize national differences in teaching, the first studies measured the degree to which topics that were emphasized in the school system were actually covered. Curriculum differences were categorized as *intended*, *implemented*, or *attained* curriculum in order to separate the policies of the school district from classroom presentations and actual student performance. The amount of coverage of a topic became an important explanato-

ry variable for between-school and between-country differences in achievement. The analysis showed that students in every country cover the same topics, but that they were often covered in a different order, and with a different emphasis, thus showing that international comparisons of student achievement do reflect the same content areas as other countries and thus they do make sense.

Education practices in the countries studied have been found to have more similarities than differences. The differences can be studied, however, and give important insights into which practices can be improved. International studies have helped policymakers understand that student performance is strongly determined by how schools articulate the content areas they are responsible for.

For example, a study conducted in 1965 showed significant differences in how countries approached the teaching of mathematics. Subsequent studies showed which topics of mathematics each country considered important, at what age they were introduced, and how the topics were sequenced. These studies led educators to pay closer attention to the underlying curriculum and the training of teachers in the United States. They also led to the earliest efforts by the mathematics education professionals to develop a single set of standards for mathematics teaching.

Studies of writing have had difficulty in achieving standards that permit comparison across countries. After several attempts to develop a standard set of principles for grading the writing of students across countries, the IEA gave up its efforts to evaluate writing across cultures. However, a study of reading achievement was successfully conducted in elementary and middle school grades in 1970, and studies are being conducted by the IEA and the Organisation for Economic Co-operation and Development (OECD). International studies have shown that U.S. elementary school students have a high performance level in reading compared with the rest of the participating countries, but only moderate performance at grade nine. These results indicate that U.S. students begin school with sufficient ability to read and interpret texts.

### Forms of Inquiry

Comparative studies of student achievement require carefully designed statistical surveys for the statistical measurement aspect of the comparison. The popula-

tions must be defined in a common way for each country, even though definitions of a grade might differ from country to country. For example, one way to insure comparability is to select a careful sample of all students who attend whatever grade is common for fourteen-year-old students. These surveys involve students taking a test for about an hour and filling in a background questionnaire of their attitudes toward school. Teachers are asked to complete questionnaires about the curriculum topics they cover and their own professional training.

Since the 1990s studies have sometimes involved the use of videotape technology to collect information on teaching practices and student activities. For example, large national samples of mathematics classrooms were videotaped in 1995 in Japan, Germany, and the United States, and classrooms for other subjects were videotaped, in additional countries, in 2000. Videotape methods permit a more careful description of teaching practices than classroom surveys, and they provide a check on the validity of teachers' self-reporting of their practices. Detailed case studies of educational practices in several countries have also provided information about the social context in which students are taught.

### International Assessments in the Twentieth Century

The first international studies were carried out by university research centers unaffiliated with government agencies. The results of those studies were published in academic journals, technical volumes, and academic books. During the 1980s these studies influenced policies in American education. Beginning in 1989 government agencies decided that they should have a larger role in organizing and supporting the studies and improving their quality. The National Center for Education Statistics (NCES), an agency of the U.S. Department of Education, and the National Science Foundation provided the leadership and funding support for creating international assessments. The U.S. National Academy of Sciences established an oversight committee called the Board on International Comparative Studies in Education to monitor the progress of these studies.

By 1995 international comparative studies had become an accepted continuing aspect of describing the status of the educational outcomes and were being carried out regularly by the NCES. Many countries originally participated in these studies in order to conduct an analysis of a single subject area

in a single year. They have since shifted toward a more strategic plan to develop consistently measured trends in educational achievement with international benchmarks.

### International Assessments in the Twenty-First Century

The complexity of conducting standardized comparisons of student achievement in many countries will always challenge researchers, yet they have become institutionalized in many countries. The OECD, which is based in Paris, has gained support from at least twenty-five governments for a continuing series of international comparisons of reading, mathematics, and science. These comparisons began in 2000. Also in 2000 UNESCO established the International Institute of Statistics to further institutionalize a process for improving the use of comparative statistics for policymaking.

Studies on the use of technology in schools are being developed to provide new information on forms of instructional technology that are becoming widespread in schools. Schools all over the world have introduced the use of computers and other forms of technology to classroom instruction, and studies seek to determine how educational practices are being altered by these systems.

*See also:* ASSESSMENT, *subentry on* NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS; STANDARDS FOR STUDENT LEARNING; TESTING, *subentry on* INTERNATIONAL STANDARDS OF TEST DEVELOPMENT.

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## INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT

The International Association for Educational Assessment (IAEA) was conceived as an international association of measurement agencies in 1974 at a meeting at Educational Testing Service (ETS) in Princeton, New Jersey. Later that same year a preparing committee, representing various geographic regions, met at CITO, the Institute for Educational Measurement in the Netherlands, to formulate the plans for the association.

In 1976 the United Nations Educational, Scientific and Cultural Organization (UNESCO) admitted IAEA to C (information sharing) status as a nongovernmental organization (NGO). In 1981 UNESCO admitted IAEA to B (consultative) status.

### Purpose and Objectives

The broad purpose of IAEA is to assist educational agencies in the development and appropriate application of educational assessment techniques to improve the quality of education. IAEA's main objectives are to:

- improve communication among organizations interested in educational assessment through the sharing of professional expertise, conferences, and publications, while providing a framework that includes cooperative research, training, and projects involving educational assessment;
- make expertise in assessment techniques readily available for the solution of problems in the field of educational evaluation;
- cooperate with other organizations and agencies having complementary interests;
- engage in other activities leading to the improvement of assessment techniques and their appropriate use by educational agencies throughout the world.

### Membership

IAEA has mainly three groups of membership: primary organizations, affiliate organizations, and individuals. Primary organization members are not-for-profit organizations, often associated in one way or another with ministries of education, which have educational assessment as their primary function. Affiliate organizations are those that make a major use of educational assessment techniques, or financial

agencies that devote a large part of their budgets to work involving educational assessment. Individual members are those with a professional interest in assessment who may not be associated with an organization that has educational assessment as a primary concern. An executive committee whose officers and members are elected by the primary organization members governs IAEA. A subscription to the journal *Assessment in Education: Principles, Policy and Practice* is included with membership.

### Activities and Projects

IAEA organizes annual conferences on assessment themes of international significance. Rotated on a geographic basis, a primary organization member in a region assumes responsibility for organizing the conference. IAEA has focused on topics such as standard setting, school-based assessment, public examinations, and admission to higher education.

In cooperation with UNESCO, IAEA organizes roundtables on the impact of assessment on education. The roundtables bring experts from designated geographic areas together to share information about topics of mutual interest, such as "The Impact of Evaluation and Assessment on Educational Policy," "The Impact of Examination Systems on Curriculum Development," and "International Comparisons of Student Achievements." Since its inception IAEA has conducted through its members a number of projects for UNESCO and the World Bank.

The executive Secretaryship of IAEA is located at CITO, The Netherlands.

*See also:* INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION, *subentry on* UNITED NATIONS AND INTERNATIONAL AGENCIES.

TON LUIJTEN

## INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT

The International Association for the Evaluation of Educational Achievement (IEA), founded in the late 1950s, conducts international comparative studies in which educational achievement is assessed in relation to student background, teacher, classroom, and school variables. At the time of the IEA's founding, there was a growing awareness among international

agencies of the role of formal education in social and economical development while indicators for educational “productivity” were lacking. A group of researchers, among them Torsten Husén and his colleagues, decided in the early 1960s to undertake a first study of mathematics achievement in twelve countries to explore the feasibility of international comparative achievement studies. This first study marked the birth of the IEA.

After starting as a group of researchers, the IEA soon became a cooperative of research institutes with a primarily academic research focus. Since the early 1980s the IEA has begun to focus more specifically on the interests of policymakers, and an increasing number of member countries are represented by their ministry of education and no longer by a leading research institute. The current membership of the IEA comprises almost sixty countries from all regions of the world, and these are represented in a policymaking body, the IEA General Assembly, that is supported by the Secretariat in Amsterdam. Each IEA study is managed by three bodies: the International Coordinating Centre (ICC), which is responsible for the conduct of the research at the international level; the International Steering Committee (ISC), which monitors the quality of the research and is responsible for the general policy directions; and the International Study Committee, which consists of the National Research Coordinators (who are responsible for the study at the national level), the ISC, and the ICC.

Over the years the IEA has conducted many survey studies of basic school subjects. Most of the studies were curriculum driven and measure educational outcomes (the attained curriculum) on the basis of an analysis of the “official” curricula (the intended curricula) of the participating countries. All these studies evaluate school and classroom process variables (the implemented curriculum), as well as teacher and student background variables. Examples are the studies of mathematics and science, reading literacy, civics education, and English and French as foreign languages. The IEA also conducts studies that are not curriculum based, such as the Pre-Primary Project and the Computers in Education study. In a typical IEA study, data are collected in the third and/or fourth grade, the seventh and/or eighth grade, and the final year of secondary schooling, although some studies do not include all three populations. IEA’s best-known study is the Third International Mathematics and Science Study (TIMSS),

conducted between 1992 and 1999 for all three populations, in which more than forty countries participated. This study was designed to assess achievement in mathematics and science in the context of national curricula, instructional practices, and the social (and learning) environment of students.

To allow countries a longitudinal international comparative perspective, the IEA in the late 1990s initiated a basic cycle of studies in which the association studies, in alternating years, mathematics and sciences (through TIMSS—now called Trends in Mathematics and Science Study) and reading literacy (through the Progress in International Reading Literacy Study). Additionally, the IEA conducts other studies such as the Civic Education Study, which was completed in 2002, and the Second Information Technology in Education Study, which started in the fall of 1997.

### **Purposes and Functions of IEA Studies**

IEA’s mission is to enhance the quality of education. Its studies have two main purposes: (1) to provide policymakers and educational practitioners with information about the quality of their education in relation to relevant reference countries; and (2) to assist in understanding the reasons for observed differences among educational systems.

Given these purposes, the IEA strives for two kinds of comparisons in its studies. The first one consists of straight international comparisons of effects of education in terms of scores (or subscores) on international tests. The second relates to how well a country’s official curriculum is implemented in the schools and achieved by students.

As a result, IEA studies have a variety of functions for educational policymakers, practitioners, and researchers:

- describing the national results in an international context
- analyzing the information about the status of the achievement of pupils against the results of one or more other countries or against the results in the country of interest in an earlier study (“benchmarking”)
- analyzing data to contribute to recommendations for changes when and where needed (“monitoring”)
- analyzing data with the purpose of understanding the reasons for observed performances either in a national context or within an international comparative perspective

- promoting a general “enlightenment”—that is, there is not a direct link to decisions but rather a gradual diffusion of ideas into the sphere of organizational decision-making

Many national and international reports on IEA studies illustrate the usefulness of IEA studies for educational policy and practice. For example, in Australia, Hungary, Ireland, Japan, New Zealand, and the United States, specific curriculum changes have been attributed to IEA findings.

### Considerations in Planning IEA Studies

IEA studies are very complex endeavors and are conducted with attention to quality at every step of the way. The first question to be answered in planning an IEA study is “what questions do we want to address through this study.” The leading research questions become very compelling because there are a variety of competing perspectives in realizing a study. In order to obtain valid and useful data and indicators, high-level scientific and technical standards have to be met for each component of the study, such as the development of a conceptual framework; determining target populations; curriculum analysis; instrument development (including pilot testing, translation, etc.); sampling; data collection, cleaning and file building; quality control in participating countries of each component; data analysis; and report writing.

Many countries participate in IEA studies (e.g., in TIMSS more than forty countries), and according to its mission the IEA aims to create opportunities for each country to conduct its own cross-national analysis in order to enhance the understanding of the functioning of its educational system at all levels. The varying interests of participating countries contribute to the dilemma between desirability and feasibility (many stakeholders want an array of data, while there are practical limitations in collecting data in schools), and in these types of studies compromises have to be found among the interests of all participating countries. The IEA aims for a design and for instruments that are as equally fair as possible to all participating countries, while also allowing for national options. For example, in the 1999 TIMSS study in South Africa, where the majority of pupils receive instruction in a language other than the home language, a language proficiency test was included to allow for investigating relationships between language and achievement.

A final point that requires careful attention is the organizational and logistical complexities of the IEA studies. For instance, the 1995 TIMSS study involved the following: achievement testing in mathematics and science in forty-five countries; five grade levels (third, fourth, seventh, eighth, and final year of secondary school); more than half a million students; testing in more than thirty languages; more than 15,000 participating schools; nearly 1,000 open-ended questions, generating millions of student responses and performance assessments; questionnaires from students, teachers, and school principals containing about 1,500 questions; and many thousands of individuals to administer the tests and process the data.

### Conclusions

IEA studies do not lead to easy answers to complex educational problems, but they contribute to the body of knowledge of how educational systems work and of optimal conditions for teaching and learning. An example can be found in a 1992 report by T. Neville Postlethwaite and Kenneth N. Ross, who determined on the basis of cross-national analysis of the IEA Progress in International Reading Literacy Study that a large number of variables (including school, teacher, teaching, and student variables) influenced reading achievement. Their analyses illustrate how IEA studies can contribute to informed decision-making by policymakers and create an awareness of the rich variety of educational settings and approaches around the world. On the other hand, the types of studies conducted by the IEA have some limitations and also receive criticism. Technical criticisms have largely been addressed in the recent studies, and critiques have become increasingly political.

Finally, reflecting on nearly half a century of IEA activities, a number of developments have occurred and benefits have emerged. IEA studies have moved beyond simply international comparative assessment scores and contextual information. They have contributed to the national and international education community in various ways. They have provided possibilities of addressing regional issues as part of an international comparative study, linking national assessments to international assessments, and for developing countries, in particular, the opportunity to collect baseline data on education. Important benefits of the international comparative IEA studies have been the development of education research ca-

capacities in many countries, culminating in the development of a network of researchers and specialists who can be drawn from by both governments and other agencies both nationally and internationally.

*See also:* INTERNATIONAL ASSESSMENTS, *subentries on* IEA AND OECD STUDIES OF READING LITERACY, IEA STUDY OF TECHNOLOGY IN THE CLASSROOM, IEA THIRD INTERNATIONAL MATHEMATICS AND SCIENCE STUDY, POLITICAL DEMOCRACY AND THE IEA STUDY OF CIVIC EDUCATION.

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TJEERD PLOMP

#### IEA AND OECD STUDIES OF READING LITERACY

Globalization, increased worker mobility, and competition between knowledge-based economies have led to a growth in demand for studies to measure and compare the achievement outcomes of education systems. Given its importance in students' educational development and in everyday life, it is not surprising that reading has featured in a number of these studies. Reflecting a concern with functional aspects of learning, the assessment of reading was expanded from one that mainly focused on decoding and comprehension skills to one that addressed the ability to understand and use written language forms required by society and valued by the individual.

The International Association for the Evaluation of Educational Achievement (IEA), a nongovernmental organization, pioneered international assessment studies in the early 1960s. The number

of education systems (mostly in the industrialized world) participating in its reading studies increased from fifteen in 1970–1971 to thirty-two in 1991–1992 and to thirty-six in 2001. In the studies assessment instruments were developed by international panels, translated into national languages, and administered to representative samples of nine- or ten-year-old students and thirteen- or fourteen-year-old students in participating countries. A variety of correlates of reading proficiency, including students' opportunity to learn and resources for reading, were identified.

The Organisation for Economic Co-operation and Development (OECD), responding to concern among member governments about the preparedness of young people to enter society and the world of work, has supported the development of the Programme for International Student Assessment (PISA), which is designed to monitor the achievements of fifteen-year-old students in reading literacy (as well as in mathematics and science). Thirty-two countries participated in the first survey in 2000. The ability to comprehend forms of prose organized as continuous and noncontinuous text, such as lists and forms, and to retrieve and evaluate information were assessed.

In the 1990s a number of countries (eventually twenty) joined with Statistics Canada in studies, later involving OECD, to assess the ability of adults (sixteen to sixty-five years old) to understand and employ written information in daily activities at home, at work, and in the community. Reading tasks were based on text from newspapers and brochures, maps, timetables, and charts; basic arithmetic tasks were also included. Proficiency was found to be negatively related to age and, in eighteen countries, respondents' level of education was its strongest predictor.

Although international studies were initially planned to improve understanding of the educational process and to provide information relevant to policymaking and educational planning, the media have generally interpreted their findings in a competitive context, focusing on countries' relative performances, without considering the social, economic, and educational conditions that affect student learning.

*See also:* INTERNATIONAL ASSESSMENTS, *subentry on* INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT.

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VINCENT GREANEY  
THOMAS KELLAGHAN

## IEA STUDY OF TECHNOLOGY IN THE CLASSROOM

Prior to 1980 few teachers utilized information technology (IT) in the classroom. But the global diffusion of personal computers in the 1980s generated considerable interest in educational circles around the world, leading the International Association for the Evaluation of Educational Achievement (IEA) to initiate the first international comparative study of IT or computers in education. This study was named the Computers in Education Study and sometimes called CompEd.

### IEA Computers in Education Study

Twenty-two countries participated in the first stage of the Computers in Education Study and in 1989 conducted school surveys, as documented by Pelgrum and Plomp. Surveys were conducted in elementary, lower secondary, and upper secondary schools, and within each school sample, questionnaires were completed by the principal, computer coordinator, and several teachers. In 1992 the second stage of the study repeated the surveys of the first stage and added a student assessment, according to Willem Pelgrum and colleagues and Robert E. Anderson.

An assessment was designed to measure the ability of students to generally understand and use information technology. The performance of students in this assessment depended largely on the extent to which school curricula in each country provided opportunity to learn such skills. A number of countries already had instituted an informatics curriculum at the middle- or upper-secondary levels. Perhaps the most important finding of the study was that teachers in general lacked opportuni-

**TABLE 1**

<b>The three modules of SITES</b>				
<b>Module</b>	<b>Time Frame</b>	<b>Number of Countries</b>	<b>Issue</b>	<b>Data</b>
School Survey (Module 1)	1997–1999	26	What are the main trends?	Surveys of principals and of technology coordinators.
Case Studies (Module 2)	1999–2003	30	What innovative teaching uses technology and what forms does it take?	In-depth case studies of innovative teaching in schools.
Assessment (Module 3)	2001–2005	Not yet known	What are teachers and students able to do with ICT to improve their learning?	Surveys of schools, teachers, and students. Student test and performance assessment.

SOURCE: Courtesy of author.

ties for the type of training that would enable them to integrate technology into their instruction.

The terminology for information technology has changed since the 1980s. Whereas information technology was called computers or IT during that decade, by the late 1990s educators in most countries referred to it as ICT to stand for the phrase *information and communication technology*. However, in some countries, most notably the United States, educators refer to information technology simply by the word *technology*.

### Second IEA Study

The rapid diffusion of the Internet and multimedia technology during the mid-1990s generated an interest in a new study that among other things could investigate the changes in the curricula and classrooms since IEA's earlier study. The Second International Technology in Education Study (SITES) was initiated in 1996 by the IEA and school surveys were conducted in 1998. The SITES study consists of three modules as summarized in Table 1.

Although the study was approved by the IEA in 1996, the survey data of module 1 were collected in 1998. The module 2 case study visits to the school sites were conducted during 2000 and 2001, and the reports will be released in 2002 and 2003. Module 3 was launched in 2001, but the data for the surveys and student assessments will be collected during 2004, with the results released in 2005 and 2006. Each of the three modules will be described briefly in turn.

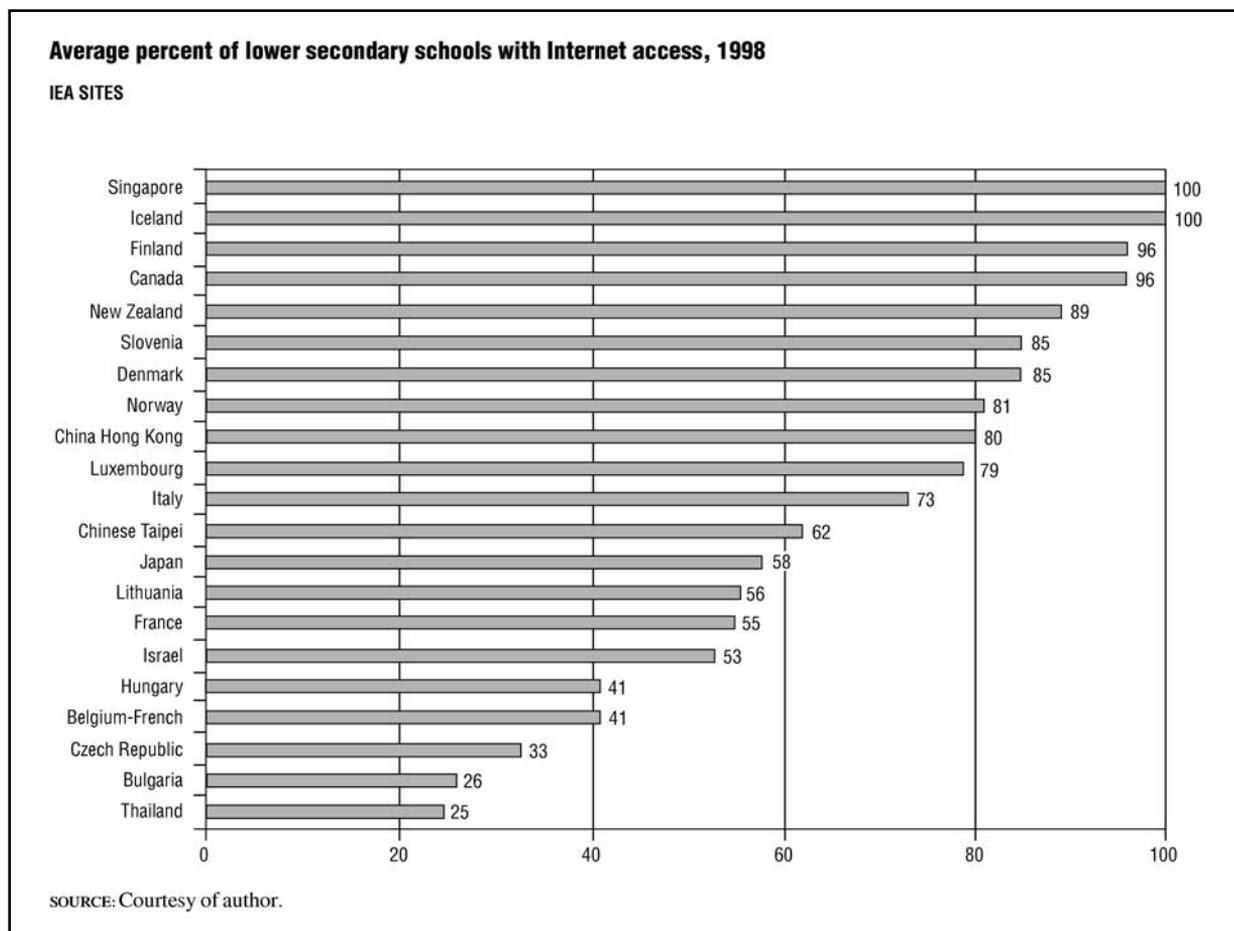
**School Survey Module.** In 1998 data were collected using a questionnaire survey of principals and one

of technology coordinators or their equivalents. Twenty-six countries participated by conducting these surveys in one or more of these three school levels: primary, lower secondary, and upper secondary. As reported by Pelgrum and Anderson, this module produced findings on the following phenomena:

- the extent to which ICT is used (and by whom) in education systems across the globe
- the extent to which education systems have adopted, implemented, and realized the results from objectives that are considered important for education in a knowledge society
- teaching practices that principals consider to be innovative, important, effective, and satisfying
- existing differences in ICT-related practices both within and between education systems and what lessons can be learned from this.

The findings on school Internet access were representative of the heterogeneous pattern of cross-national adoption of new ICT practices. Figure 1 shows that while 100 percent of the schools in Singapore and Iceland had access, some countries had only about a fourth of their schools connected. Most of the other countries had connected more than 50 percent of their schools. What is so remarkable about this pattern is that even in populations that do not speak English—the dominant language of the Internet—most of their countries' schools had been connected and many of the students were using the Internet in school. This rapid connection of schools to the Internet occurred within only about five years or less.

FIGURE 1



**Case Studies Module.** Nearly thirty countries conducted in-depth case studies during the last half of 2000 and the first half of 2001. The focus of this qualitative research is innovative pedagogical practices that use technology (IPPUT). The main purposes are to understand what sustains these practices and what outcomes they produce. To accomplish this investigation, each case study describes and analyzes classroom-based processes and their contexts. These case studies are intended to provide policy analysts and teachers with examples of “model” classroom practices and offer policymakers findings regarding the contextual factors that are critical to successful implementation and sustainability of these exemplary teaching practices using ICT.

The twenty-eight countries participating in this module of SITES were Australia, Canada, Chile, China Hong Kong, Chinese Taipei, Czech Republic, Denmark, England, Finland, France, Germany, Israel, Italy, Japan, Korea, Latvia, Lithuania, the Nether-

lands, Norway, Philippines, Portugal, Russian Federation, Singapore, Slovakia, South Africa, Spain (Catalonia), Thailand, and the United States. As each country will conduct four to twelve case studies, the total number of cases for analysis is expected to be more than 150.

One noteworthy preliminary finding was that the students used the Internet as part of nearly every innovative practice selected. Another preliminary finding of perhaps greater importance is that the students involved in these innovative pedagogical practices often engaged in activities that could be considered “knowledge management” in that they frequently constructed knowledge products. Typically such activities were called projects and included the tasks of searching, organizing, and evaluating knowledge. For instance, Germany’s first case study found that students “turned into providers of knowledge.” Portugal’s pilot case reported that the teachers wanted their students to be “constructors

rather than receptors of mathematical knowledge.” In Norway and the USA the case studies found students working collaboratively with ICT tools to complete projects yielding diverse types of knowledge.

**Assessment Module.** This module builds upon these findings from the leading-edge classrooms of the case studies. Specifically, the school survey, teacher survey, and student assessment will include indicators to determine the difference between the innovative and the typical learning contexts. The study will measure the ICT-supported knowledge management competencies of students, including their abilities to retrieve, organize, critically evaluate, communicate, and produce knowledge. In addition, the study will determine the readiness of schools and teachers to provide a learning environment where students can develop these abilities. In addition, this module will follow up the school survey module by having a school survey administered to principals and ICT-coordinators to measure trends of technology availability and use in schools.

All countries participating in the assessment module will study fourteen-year old students; the target population will be the grade with the most students of age fourteen. An optional population will be the grade with the most ten-year-old students. Each country will be expected to attain a sample of a minimum of 200 randomly selected schools per population. In at least 100 of these participating schools, one intact class will be sampled from all classes in the target grade. In addition to surveying the teacher of the sampled class, three additional teachers will be sampled and surveyed from those teaching the target grade.

Guiding the development of the student assessment is a framework that considers different types of knowledge management and types of tools. The categories of knowledge and tools are shown in Table 2 with the cells that illustrate sample performance tasks.

In the student assessment there will be a paper-and-pencil assessment administered to all students in the sample, and an optional Internet-based performance assessment given to four students in each class, provided that they are Internet-“literate.” Students in the sampled class will be administered a survey questionnaire and a short paper-and-pencil assessment during a single class period. The assessment will include a short Internet screening test.

Students will not be eligible for participation in the performance assessment unless they pass the screening test. If at least half of the students pass the Internet screening test, then the school will be eligible for participation in the performance assessment.

Despite highly diverse national educational systems around the world, almost every country has established policies regarding ICT in education. SITES in its first two modules found many different approaches across countries to the ICT challenge in education. Yet there are common threads such as widespread and rapidly growing access to the Internet. There is every reason to believe that this trend, as well as the large digital divide across countries, will continue in the early twenty-first century. It is anticipated that the assessment module with its focus on knowledge management will capture significant trends in information technology and the changing role of knowledge in society.

*See also:* INTERNATIONAL ASSESSMENTS, *subentry on* INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT.

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TABLE 2

<b>Knowledge management competencies by ICT tool types with illustrative performance assessment tasks in cells</b>			
<b>ICT Knowledge Management Competency</b>	<b>Tools to find, organize (e.g., browser, database)</b>	<b>Tools to analyze, model (e.g., spreadsheet)</b>	<b>Tools to present, communicate, write (e.g., multimedia presentation)</b>
Knowledge construction	Project with choice of tools and data	Project with choice of tools and data	Project with choice of tools and data
Critical thinking: analyze, interpret data, evaluate evidence	Drill down to highly granular information	Scenario simulation	
Projects and complex problem solving		Using a model to make decisions	
Complete collaborative projects			
Effective presentations and discourse			Develop persuasive web-based presentation
Find, assemble, restructure knowledge	Web search and analysis		
Understand principles including secondary effects			

SOURCE: Courtesy of author.

PLOMP, TJEERD; ANDERSON, ROBERT E; and KONTOGIANNOPOULOU-POLYDORIDES, GEORGIA. 1996. *Cross National Policies and Practices on Computers in Education*. Dordrecht, Netherlands: Kluwer.

RONALD E. ANDERSON

## IEA THIRD INTERNATIONAL MATHEMATICS AND SCIENCE STUDY

The Third International Mathematics and Science Study (TIMSS) is the largest and most ambitious educational assessment ever done under the auspices of the International Association for the Evaluation of Educational Achievement (IEA). The TIMSS data collection in 1995 involved testing more than a half-million students in more than forty educational systems (usually countries) around the world. Students were assessed at five different grade levels, and students, as well as their teachers and principals, were given questionnaires about their backgrounds, attitudes, and practices. The TIMSS data collection in 1999 focused on eighth-grade students in thirty-eight countries.

The TIMSS study resulted in many provocative findings, which are published in the TIMSS international reports. The results showed that the averages of students of participating Asian nations (Hong Kong, Japan, Korea, and Singapore) were higher

than those of students of other nations in mathematics at both the elementary and middle school levels. Japan and Korea also did very well in science at these levels, although Australia, Austria, and the United States also performed highly at the elementary level, and the Czech Republic performed well at the middle school level.

Testing was also done at the end of secondary school, where a sample of the total population of students was assessed in mathematical and scientific literacy. In addition, samples of students taking advanced mathematics or physics courses were tested on those subjects. The Asian countries were not among the twenty countries that participated in this assessment. The average scores of the Netherlands, Sweden, Iceland, Norway, and Switzerland were highest in mathematical and scientific literacy; the average achievement in advanced mathematics was highest in France and Russia; and the average physics test scores were highest in Norway, Sweden, and Russia.

The TIMSS results have been widely reported in the press and in numerous public reports. All TIMSS reports, including those cited above, are available on the Internet. TIMSS's website also contains technical reports that contain the details of the TIMSS methodology, and the raw TIMSS data are available at this site for those who would like to use the data to investigate different educational questions or research methodologies.

The study was administered by the International Study Center at Boston College and by the International Coordinating Centre at the University of British Columbia. TIMSS has been funded by the participating countries along with major contributions by the Government of Canada, the National Science Foundation (U.S.), and National Center for Education Statistics (U.S.).

### The Aim of TIMSS

The TIMSS was established to improve the teaching and learning of mathematics and science in school systems around the world through a comparison of the curricula and practices of different countries, and to relate this information to the performance of their students. The research questions included not only what students in the participating countries had learned, but also how the curricula varied in different countries and what facilities and opportunities were made available for students to learn what was in their curricula. The relationships of students' performance to their curricula, educational opportunities, and backgrounds were also to be investigated.

### IEA Studies of Mathematics and Science

The IEA has been involved in comparing the educational systems of various countries for many years. Four previous IEA studies of mathematics or science led up to TIMSS:

- First International Mathematics Study (FIMS), 1959–1960.
- First International Science Study (FISS), 1970.
- Second International Mathematics Study (SIMS), 1980–1982.
- Second International Science Study (SISS), 1982–1986.

TIMSS, which included both mathematics and science, was conducted in the Northern Hemisphere in 1995 and in the Southern Hemisphere in both 1994 and 1995. A second round of TIMSS, involving only eighth-grade students, was conducted in 1999. A third assessment is planned for 2003.

### TIMSS Design

The design of TIMSS grew out of discussions in the late 1980s by many researchers who were involved in SIMS, and these discussions led to the Study of Mathematics and Science Opportunity (SMSO), which explored the curricula and teaching practices of a few countries around the world and initiated the

development of the tests and questionnaires for TIMSS. The final design and its instrumentation were developed and approved by the participating countries in conjunction with mathematics and science education specialists and specialists in educational assessment.

### Populations and Sampling

TIMSS defined three populations of students for assessment:

- Population 1—all students enrolled in the two adjacent grades that contain the largest proportion of students nine years old at the time of testing. In most participating countries, grades three and four fit this definition.
- Population 2—all students enrolled in the two adjacent grades that contain the largest proportion of students thirteen years old at the time of testing. In most participating countries, grades seven and eight fit this definition.
- Population 3—all students in their final year of secondary education, including students in vocational education programs. In most countries, this was grade twelve. Population 3 included two subpopulations: students taking advanced courses in mathematics and students taking advanced courses in physics.

In Populations 1 and 2, an early decision was made to sample intact mathematics classrooms so that information about teachers and students could be matched and studied. The students who were not enrolled in any mathematics class were treated as a separate classroom, and thus they could be selected for the sample. In Population 3, students were not sampled by classroom, but were classified according to their mathematics and science courses, and then individually sampled for assessment. All participating countries were required to assess Population 2, but assessments of Populations 1 or 3 were optional.

### TIMSS Tests and Questionnaires

The TIMSS tests were constructed using mathematics and science frameworks that were agreed upon by the participating countries and subject-matter specialists. TIMSS included multiple-choice, short answer, extended response, and performance items. Countries were not required to administer the performance items.

In order to widen the curriculum coverage of TIMSS, a form of matrix sampling was used in which

students in a population received different test items, except for a few items that were common to all booklets. In Populations 1 and 2, there were eight different booklets of items administered along with student questionnaires. Teachers and school questionnaires were also administered. In Population 3, nine test booklets were administered, with the particular booklet to be used dependant on the courses in which a student was enrolled. The teacher questionnaires were omitted because intact classrooms were not sampled. The booklets in Populations 1 and 2 required about an hour of student time, whereas the booklets for Population 3 required about ninety minutes.

### Administration and Quality Monitoring

TIMSS was administered by personnel from the participating countries, and the TIMSS administrators were given extensive training to assure the high quality and comparability of the TIMSS data. International quality-control monitors were hired and trained to visit the national research centers and to review their procedures. The translations were also checked centrally to detect and avoid differences in the presentation of assessment questions.

### Analysis and Reporting

The basic TIMSS database was constructed in the participating countries and then given extensive statistical scrutiny at the IEA Data Processing Center in Germany. Any unusual occurrences in the database were noted and adjudicated with the participating countries. The data were then sent to Statistics Canada for a review of the sampling and construction of sampling weights. The data also went to the Australian Council for Educational Research for scale development. The scaling was done using a variation of the Rasch model. The scaled database then went to the International Study Center at Boston College for analysis and reporting.

TIMSS was a very complex study that required the cooperation of the many countries and contracting organizations involved. Cooperation was critical to assure that the tests were appropriate for all countries and that the administration of TIMSS was uniform. The coordination required many meetings in which strategy and tactics were discussed and decided. Many training sessions were required to assure that all phases of the TIMSS were carried out successfully. The flow of data from the participating countries to Germany, then Canada, Australia, and

finally to the United States required careful monitoring. Finally, the final reports were designed and approved by the participating countries before the data were available. The details of the procedures are given in the TIMSS technical reports.

*See also:* INTERNATIONAL ASSESSMENTS, *subentry on* INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT.

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ALBERT E. BEATON

## POLITICAL DEMOCRACY AND THE IEA STUDY OF CIVIC EDUCATION

In examining the contributions of education to political democracy researchers have considered shared decision-making, use of extracurricular activities to promote civic awareness, and policies designed to enhance educational equity. School curricula (especially in history, civics and government, and the social sciences/social studies) and the atmosphere of classroom discussion are also dimensions of education that contribute to students' acquisition of an understanding of and willingness to participate in political democracy. Citing empirical findings from a massive international study of civic education, evidence about these dimensions of education will be examined. The special focus is on how classroom practices contribute to what fourteen-year-old students know and believe about democratic processes and institutions.

## The 1999 IEA Civic Education Study

The International Association for the Evaluation of Educational Achievement (IEA), headquartered in Amsterdam, is a consortium of research institutes and agencies in more than fifty countries. Since the late 1950s IEA has carried out nearly twenty large, cross-national studies of educational achievement in various curriculum areas. The 1999 Civic Education Study, the first IEA study in this subject area since 1971, was ambitious both in concept and in scope. About 90,000 fourteen-year-old students from twenty-eight countries as well as approximately 10,000 teachers and thousands of school principals participated in the study.

The countries participating in the test and survey of fourteen-year-olds in 1999 included Australia, Belgium (French-speaking), Bulgaria, Chile, Colombia, Cyprus, the Czech Republic, Denmark, England, Estonia, Finland, Germany, Greece, Hong Kong (SAR), Hungary, Italy, Latvia, Lithuania, Norway, Poland, Portugal, Romania, the Russian Federation, the Slovak Republic, Slovenia, Sweden, Switzerland, and the United States. Fifteen of these countries and Israel surveyed an older population of students, primarily in 2000.

## Design of the IEA Civic Education Study

Through an international consensus process involving representatives from the participating countries and reflecting observations from structured national case studies conducted during the first phase of this study, three domains were identified as important topics in civic education across democracies: Democracy, Institutions, and Citizenship; National Identity and International Relations; and Social Cohesion and Diversity. Test and survey items were then written to assess students' knowledge and skills as well as attitudes in these three domains. Specifically, students were tested on their knowledge of democratic processes and institutions and their skills at interpreting political communication (e.g., interpreting the message of a political cartoon and an election leaflet). In addition, students were surveyed on their concepts of democracy and citizenship, their attitudes toward their countries and political institutions, the political rights of women and immigrants, and their expected civic participation. Background information was also collected from the students, including the activities in which they participated both in and out of school, the books avail-

able to them at home, and their perceptions of classroom climate.

The test and survey were administered to fourteen-year-olds by national research teams in accordance with IEA technical policies and guidelines. Teachers and school principals were also surveyed. The data provide a rich and complex picture of the civic development of young adolescents and the views of their teachers.

### The Importance of Classroom Climate

The extent to which students experience their classrooms as places to discuss issues and express their opinions as well as hear the opinions of their peers has been identified as a vital element of civic education. Because of its importance, a scale was developed to measure students' perceptions of the classroom climate for open discussion in the 1999 IEA Civic Education Study. Students were asked how frequently (never, rarely, sometimes, or often) they were encouraged to make up their own minds about issues, how often they felt free to disagree with their teachers about political and social issues during class, and the extent to which teachers respected student opinions and encouraged their expression during class. Students were also asked how often teachers presented several sides of an issue and whether the students felt free to express opinions even when the issues might be controversial.

The students' responses to these statements proved to be a significant predictor of both student knowledge and attitudes. For example, single level path analyses show that a democratic classroom climate where discussion takes place and teachers encourage multiple points of view was an important predictor of students' knowledge of democratic processes and institutions and skills in interpreting political communication. The only factors more closely related to knowledge were the home literacy resources available to the students and their plans for future education. Classroom climate was also positively associated with students' plans to vote as adults—an essential element of democracy. Furthermore, positive classroom climate was related to students' trust in government institutions, their confidence in school participation, and positive attitudes toward immigrants and women. In short, findings from students tested in 1999 in the IEA Civic Education Study show that when schools model democratic values by providing an open climate for discussing issues, they enhance their effec-

tiveness in promoting students' civic knowledge and engagement.

Although open classroom climate seems to enhance democratic learning and engagement, this classroom approach is not the norm in many countries. Across the twenty-eight countries in the IEA Study, about one-third of the students reported that they were often encouraged to voice their opinions in the classroom, but an almost equal proportion said that this rarely or never occurred (especially when the issues were potentially controversial). Teacher responses confirmed the students' perceptions. They reported that teacher-centered methods of instruction, such as the use of textbooks, recitation, and worksheets were dominant in civic-related classrooms in most of the countries, although there were also opportunities for classroom discussion of issues.

### Conclusion

Classrooms where students feel free to express their views on issues, and where multiple perspectives can be heard, seem to foster both knowledge about democratic principles and processes as well as positive attitudes toward civic engagement and the rights of others. Yet, these classroom practices are not the norm in some democratic countries. An emphasis on the transmission of factual knowledge through textbooks and worksheets seems to be dominant in many (though certainly not all) classrooms. Research closely tied to the design of professional development programs could help to illuminate the ways in which classrooms might better reflect democratic practices and thereby enhance civic learning and engagement.

*See also:* INTERNATIONAL ASSESSMENTS, *subentry on* INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT; SOCIAL CAPITAL AND EDUCATION; SOCIAL COHESION AND EDUCATION.

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## INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT

See: INTERNATIONAL ASSESSMENTS, *subentry*  
on INTERNATIONAL ASSOCIATION FOR  
EDUCATIONAL ASSESSMENT.

## INTERNATIONAL BACCALAUREATE DIPLOMA

The international baccalaureate (IB) diploma program is a curriculum whose time has come. Growing out of a perceived need in the 1960s, the IB diploma—as it is commonly known—has gone from strength to strength in creating a role for itself as a major player on the world education stage.

## The Establishment of the IB Diploma

The IB diploma was first developed in international schools and, in particular, the International School of Geneva. Reportedly the oldest international school in existence, this bilingual (French/English) school was founded in 1924 primarily as a means of providing education for the offspring of employees of the League of Nations. As the number of international schools grew over the following thirty-year period, in response to increasing ease of international travel and global mobility of professional parents, this school remained at the forefront of educational development. In 1951 it took the lead in founding the International Schools Association (ISA), which was set up "to help the growing number of international schools all over the world with their common problems" (Peterson, p. 15). As Peterson describes, one of the most pressing of these problems was that of providing adequate university preparation for their older students, destined as they were to seek university places in many different countries of the world. In 1962 a group of teachers from the International School of Geneva, with a small amount of funding from the United Nations Educational, Scientific, and Cultural Organization (UNESCO), organized a conference of social studies teachers from international schools to investigate the possibility of developing an international social studies program. With sponsorship from the Twentieth-Century Fund and the Ford Foundation, and central involvement of Atlantic College in Wales, the United Nations International School in New York, and Oxford University's department of educational studies in England, the program was launched. Developments led to the setting of a first full examination paper in 1971 and generation of a program that would, on the one hand, provide "an education that would facilitate the admission of students into the universities of their choice in different countries, without having to engage in the lengthy and uncertain process of obtaining equivalence agreements"; and, on the other, have as a major purpose "promoting international understanding and world peace" (Fox, p. 65).

## The Early Twenty-First Century

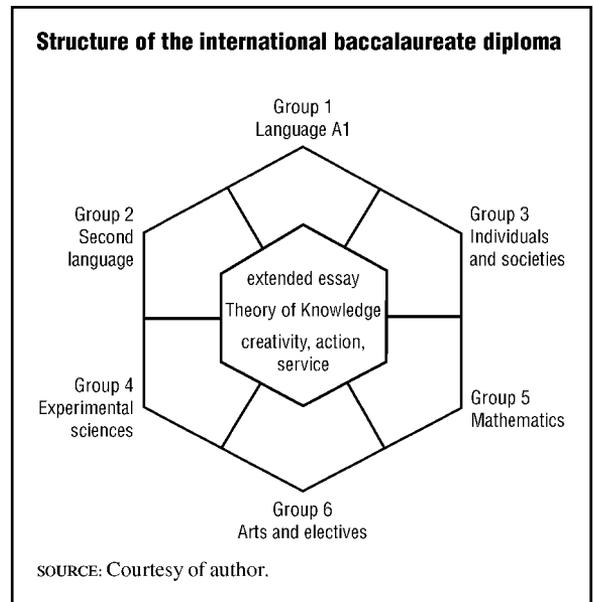
The IB diploma of the early twenty-first century is based on essentially the same structure as was developed originally, which is represented by Figure 1. Students are required to engage in study of six subjects, with at least one selected from each of groups one to five, and a sixth choice, which may be from

any of the six groups. Either three or four subjects must be studied at higher level and the others at standard level, while students must also complete a course in the theory of knowledge, write an extended essay of some four thousand words, and engage in the creativity, action, service (CAS) program. The IB diploma program can be shown to have four main characteristics, as follows:

- **Breadth:** By requiring the study of a range of disciplines to pre-university level, the diploma avoids the narrowness of programs such as the English “Advanced” (“A”) Level, where students commonly study no more than three or four subjects at the ages of 16 to 18, often in very restricted areas of the curriculum.
- **Depth:** The availability of two levels of study, taken alongside the possibility of studying a second subject from groups one to five and of writing an extended essay in a chosen area of interest, “allows for a specialist element within the context of overall breadth” (Hayden and Wong, p. 351).
- **Coherence:** Two elements at the center of the hexagon model serve to support the notion of the IB diploma as a coherent program, as opposed to simply a collection of subjects. The theory of knowledge program “has often been seen as the ‘cement’ or ‘glue’ that binds together the different curricular areas of the IB Diploma hexagon” and has “been viewed as the sort of meta-learning that can give meaning to knowledge acquired in the subjects which students must study” (Mackenzie, p. 46), while the CAS program promotes the affective as well as cognitive dimensions of the student experience.
- **Internationalism:** The mission statement of the International Baccalaureate Organization (IBO) includes reference to strong emphasis being placed upon “the ideals of international understanding and responsible citizenship” (IBO web site), and subject programs are designed to encourage students to consider issues from a number of perspectives as they become “global citizens” (Hill dissertation).

Schools may opt to offer the program in one or more of three working languages (English, French, and Spanish) in which all curriculum materials are produced and examinations are set. All subjects are graded on a scale from one (low) to seven (high), with a further total of three points potentially avail-

**FIGURE 1**



able for the theory of knowledge and extended essay, leading to a maximum possible score of forty-five points. A minimum score of twenty-four points with achievement of a number of other conditions (including satisfactory completion of the nonassessed CAS program) leads to the award of the diploma. As an alternative to the diploma, students may elect to register for one or more individual certificates, which are also awarded if conditions for the award of the diploma are not met.

The IBO head office is in Geneva, the Curriculum and Assessment Centre is in Cardiff Wales, and its Research Unit is based at the University of Bath in England. It also has regional offices in New York, Geneva, Buenos Aires, and Singapore. The curriculum is developed by examiners and teachers worldwide, and some 3,400 examiners and assessors for the program are similarly located in many different countries. The number of schools offering the IB diploma program has grown steadily: as of May 2001 some 960 schools in more than one hundred countries were authorized to offer the diploma program, through which some 40,000 students were assessed in 2001.

According to former students, the advantages of studying the IB diploma program include “its breadth-depth balance, its academic rigour and its suitability as a preparation for university-level study . . . (and its) contribution to world peace and understanding” (Hayden and Wong, p. 352). The IB

diploma is accepted by universities worldwide, including those in Europe, North America (where advanced placement may be offered for diploma holders), and all other continents.

### Issues for the Future

In a relatively short period of time, the IB diploma program has come to satisfy varying needs of different constituencies. Clearly it continues to provide an appropriate curriculum for those international schools worldwide that seek to promote an “international education” that is not associated with a particular national system. Additionally, in more recent years the program has been adopted by a number of schools in national education systems, which are attracted to it for a variety of reasons. Some of those in England and Wales, for instance, undoubtedly favor its breadth compared with the narrowness of the national (“A” level) system. The many American high schools that offer the program are attracted to the combination of an international perspective with the rigor and high academic standards that the IB diploma represents. In some cases it serves as a basis on which to promote programs for particularly able students and in others as a means of assisting state or public schools in their efforts to help students to meet state or provincial standards. Schools in still other systems are undoubtedly influenced by what might be termed *credentialism* where local elites respond to a “stiffening of the local positional competition on the one hand and a globalization of that competition on the other. As more people gain local educational qualifications, those who can afford to do so seek a new competitive edge by taking qualifications that they hope will give them a local advantage” (Lowe, pp. 24–25). A major challenge, then, to the IB diploma in the twenty-first century is the continued development of its attraction to national as well as international schools as it moves from being “a programme for international schools” to being “an international programme for schools” (Hagoort, p. 11).

A further and related challenge is that of determining the appropriate linguistic base for a program that is now so widely used internationally. Forty-five different languages are available as languages A1 (the student’s “best language”), each including a study of world literature, and in principle an A1 examination can be set in any language with a sufficient body of written literature. The Eurocentric nature of the IBO’s English, French, and Spanish working lan-

guages, however, is an issue currently being addressed in terms of how many—and which—working languages a program should offer before it can claim to be truly “international.” Although new subjects have been added to the program since its inception, an interesting development is the current trialing of a small number of transdisciplinary subjects, which cross existing subject boundaries. A further important development in recent years has been the extension of the IB organization’s provision to younger students by the development of the IB middle-years program (designed for ages eleven to sixteen, added in 1994 with 184 schools authorized to offer the program in May 2001) and the IB primary-years program (designed for ages three to twelve, added in 1997 and offered by fifty-nine authorized schools in May 2001). As a program now catering, therefore, to the entire pre-university age range, which is increasingly being offered within national systems as well as by international schools, the international baccalaureate seems likely to have interesting and challenging times ahead.

*See also:* ALTERNATIVE SCHOOLING; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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## INTERNATIONAL CURRICULUM

See: CURRICULUM, INTERNATIONAL.

# INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION

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BILATERAL AGENCIES  
Andrew J. Finch

#### REGIONAL INSTITUTIONS

Andrew J. Finch  
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#### UNITED NATIONS AND INTERNATIONAL AGENCIES

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## BILATERAL AGENCIES

An official bilateral development or aid agency is responsible to a single government. It is usually a ministry or part of a government ministry dedicated to advancing foreign policy goals while contributing to the economic and social development of recipient countries. This discussion will review the history, legacy, importance, and current role of some of the more important bilateral agencies with regard to education.

### U.S. Agency for International Development (USAID)

As an agency within the U.S. State Department, the United States Agency for International Development's mandate includes assisting countries with disaster recovery, poverty reduction, and the expansion of democratic reforms. USAID education and training support activities fall within this mandate and cover six major areas: basic education, learning technologies, higher education, workforce development, participant training, and telecommunications reform and applications.

USAID's current efforts in basic education include activities such as the Demographic and Health Surveys Education Data for Decision-Making (DHS EdData), which builds on population-based demographic surveys and provides data for planning and evaluation of education policies worldwide; the Global Education Database (GED), a computer-based database of international statistics; and Basic Education and Policy Support (BEPS). Learning technologies consist of activities such as Global Information Network in Education (GINIE). Higher education includes activities such as the Higher Education Partnerships and Development and Advanced Training for Leadership and Skills (ATLAS). Workforce development entails activities such as Global Workforce in Transition. Participant training includes activities such as Global Training for Development and the Training Resources and Information Network (TraiNet). Telecommunications reform and applications entail activities such as the Telecommunications Leadership Program.

USAID was created by executive order in 1961 when U.S. President John F. Kennedy signed the Foreign Assistance Act. It was the first U.S. foreign assistance organization whose primary emphasis was on long-range economic and social development assistance efforts. The agency faced early criticisms fueled by opposition to the Vietnam War, concern that aid was too focused on short-term military considerations, and concern that aid, particularly development aid, was a giveaway program producing few foreign policy results for the United States. Thus in 1972 and 1973 the Senate rejected the foreign-assistance bill authorizing funds. In 1973 the House Committee on Foreign Affairs restructured aid to focus on “functional categories,” including “education and human resources development.” Since then, USAID has faced concerns about its administration and structure, and there have been multiple efforts to officially restructure the administration and control of the agency. In 1998 the Foreign Affairs Reform and Restructuring Act placed the agency under the direct authority and foreign policy guidance of the secretary of state. In 2001 the George W. Bush administration reorganized USAID into three spheres of influence: global health, economic growth and agriculture, and conflict prevention and developmental relief. The second sphere captures most education funding.

USAID has continually tried to define its education policy. Policy papers from the mid-1980s established the priorities for USAID funding of “basic education and technical training.” First, a 1982 statement proclaimed that “assisting countries to establish more efficient systems of education” was an essential component of an “effective development strategy.” These efforts would include raising the levels of basic education and relating technical-training systems more effectively to productive employment. A 1984 paper stated the policy of improving primary education enrollment, program efficiency, and diversification of training. In the 1990s a USAID–higher education community consultation was designed (1) to enhance the U.S. foreign assistance program by incorporating the experience and knowledge of higher education institutions to develop better USAID policies, country and sector strategies, and activity designs and implementation; (2) to collaborate constructively in the delivery of development and humanitarian assistance when interests are compatible; and (3) to increase the transparency of USAID’s decision and

polycymaking processes relevant to higher education institutions. In 1997 the agency released a strategic plan listing seven goals to support USAID’s mission, the third of which was “to build human capacity through education and training.” Still, the \$7.7 billion total 2002 fiscal-year budget request allocated a mere 3 percent to education and training.

### **Canadian International Development Agency (CIDA)**

The Canadian International Development Agency assists in issues from health, education, and agriculture to peace building, governance, human rights, land mines, and information technology. CIDA works with a variety of partners, both inside and outside of Canada, and it supports projects in more than 150 countries. Partners include nongovernmental organizations (NGOs), the private sector, and academic institutions—in Canada and in recipient countries—as well as a number of international organizations and institutions. Some projects are run bilaterally, while others are carried out through multilateral organizations. According to CIDA, its primary objective regarding development assistance is “to support sustainable development in developing countries in order to reduce poverty and contribute to a more secure, equitable, and prosperous world.” In funding education projects, CIDA has chosen to define education as “the acquisition of knowledge, skills, and training through formal, non-formal, and informal systems and activities” (Isaac, p. 2).

CIDA has its official origins as Canada’s External Aid Office, created in 1960 to reduce poverty and promote growth. The office’s primary functions were to administer assistance programs funded by the Department of External Affairs, coordinate operations with other agencies, consult with international agencies and Canadian NGOs, and coordinate Canadian efforts to obtain aid for countries affected by disasters. Edward T. Jackson et al., in a 1996 report, note that most bilateral organizations, such as CIDA, spent the 1950s and 1960s focusing on initiatives to increase national production through industrial growth and paid little attention to income distribution within countries. However, as the spirit of such organizations started to change in the late 1960s, Canada complied with international guidelines and replaced “Office” with “Agency” and “Aid” with “International Development,” becoming the Canadian International Development Agency in

1968. Education became more of a focus in the 1970s, as growth was promoted through equity by targeting interventions at the poor and meeting “basic human needs.” The 1980s were characterized by structural adjustment policies, forcing developing nations to reduce deficits, privatize and deregulate industry, and promote exports. With the 1990s came an emphasis on “accountability and value-for-money spending.” In 1990 Canada co-chaired the United Nations World Summit for Children, and it set a ten-year agenda for improving the well-being of children. Goals included attaining a basic education for all children and achieving at least an 80 percent completion rate of primary education for all boys and girls. However, rising public debt and nationwide unemployment forced Canada to cut social programs in the 1990s and also led the country to emphasize development programs that best served Canadian trade and competitiveness objectives. During this time CIDA faced some criticism for having “no comprehensive, official policy on basic human needs,” having out-of-date “sub-priority” policies on areas such as education, having an “underdeveloped” management information system, a tendency to “underestimate, undervalue, or ignore altogether the record of engagement in basic human-need by the nongovernmental sector,” and a need to boost accountability assessments (Jackson et al., section 5.25).

In 2001 CIDA released *Social Development Priorities: A Framework for Action*, in which budgetary allocations for social development programs, including education, increased from 19 percent to 38 percent. The plan called for quadrupling funding for basic education to \$164 million annually. The additional financial commitment provides support for activities that promote the development and reform of the basic education sector in selected countries, strengthen the integration of locally driven education efforts, and improve the quality of basic education. The two stated goals were to increase gender equality and to achieve universal primary education by 2015. The plan called for improving programming, investing in girls’ education, strengthening action against HIV/AIDS, integrating efforts of local communities and NGOs, and strengthening global political commitment.

### **Swedish International Development Cooperation Agency (SIDA)**

The Swedish International Development Cooperation Agency handles Sweden’s bilateral international

development cooperation and much of its relationship with central and eastern Europe. SIDA attempts to raise the standard of living among poorer populations throughout the world while also addressing geographical concerns, such as security and the environment, through cooperation with countries in central and eastern Europe. Although SIDA contributes financial resources and skill development, it holds partner countries responsible for their own general development and improvement.

SIDA supports development through nine operational areas, including social development that encompasses education. According to the 1997 annual report, SIDA gives priority to programs that have a direct effect on classrooms, particularly textbooks and teacher training. While SIDA’s main task is to promote the development of international partners, it also promotes Swedish interests in a variety of ways. First, solving global problems holds direct appeal for both Sweden and its partners. In education, this has included funding primary education in rural areas and building education centers in villages. Second, development cooperation (such as research, business, and volunteerism) helps strengthen relations of value to Swedish society. SIDA has supported the privatization of textbook production in Tanzania and worked with many Swedish university departments to enable Swedish students to perform minor field studies during their senior years. Finally, by contracting with domestic companies and using Swedish goods, SIDA contributes to both the short- and long-term growth of the country. About 300 Swedish NGOs receive support, and 60 percent of SIDA’s budget goes ultimately to Swedish companies and foundations in the form of consultancy assignments, higher levels of employment, construction contracts, and sales orders. One-third of SIDA’s cooperation is channeled through various multilateral organizations (such as the United Nations agencies and the World Bank).

For many years Swedish aid focused on nations that had advanced the most toward a planned economy. In the first part of the 1990s, total Swedish aid declined, thus affecting development program aid. In 1999 Howard White’s *Dollars, Dialogue, and Development: An Evaluation of Swedish Programme Aid* noted SIDA had an excessive bureaucratic burden, which acted as a constraint to SIDA’s operations. Also, SIDA supported anti-inflationary policies, which some felt might be “detrimental for long-run growth by undermining investment in human capi-

tal” programs, such as education and training. Questions also arose about how well Swedish program aid (which comprised about 12% of total aid in the 1990s) supported policy change in recipient countries.

At the turn of the century, SIDA began to reduce the number of projects by 25 percent in order to maintain quality and efficiency. SIDA also determined that certain countries had developed sufficiently to warrant replacing development grant aid with other types of cooperation. Indeed, the 1997 annual report mentioned phasing out “one-sided giving” in favor of development that “creates mutual benefits and from which all parties gain.” According to SIDA, at the center of all development cooperation is developing knowledge and skills, but major efforts in education will not succeed unless other important functions in society, such as public administration, trade, and industry work properly.

### **The Department for International Development (DFID)**

The Department for International Development is the British government entity responsible for promoting development and reducing poverty. DFID has six divisions (Africa, Asia, eastern Europe, western hemisphere, International, and Resources) and seven advisory groups or departments, of which education is one. The majority of DFID’s assistance goes to the poorest countries in Asia and sub-Saharan Africa.

The current department was created in 1997, with policy outlined in the *White Paper on International Development*. DFID replaced Britain’s Ministry of Overseas Development, which was created in 1964. The transformation was in response to increasing globalization of the world economy and a “review of aspirations.” According to the *White Paper*, the 1970s and 1980s had produced inadequate economic policies that benefited only a small portion of the population, and those years produced external factors, such as high oil prices, which particularly affected developing countries.

Thus the new DFID established the goals of contributing to the elimination of poverty in poorer countries through bilateral and multilateral development programs, as well as intergovernmental cooperation. One of the three initial objectives was to improve education, health, and opportunities for poor people. In particular this meant promoting ef-

fective universal primary education, literacy, access to information, and life skills. It created targets based on the United Nations conventions and resolutions, which aimed for universal primary education in all countries by 2015 and the elimination of gender disparity in primary and secondary education by 2005. DFID’s stated priority was “to achieve the full participation of all children and adults in quality education at all levels.”

DFID focuses its education support on access, quality, retention, and equity. Initial strategies included strengthening and extending partnerships by involving local communities in managing schools, reconstructing school systems in poor countries, and promoting research to improve understanding of how education can contribute to the elimination of poverty. Early spending reviews suggested DFID needed to become more selective and focused on poverty reduction in its assistance.

### **French Agency for Development (AFD)**

The French Agency for Development is a public, industrial, and commercial institution and a component of France’s official development assistance. The AFD financially supports public and private job-creating projects in developing countries. Some projects are financed completely by the AFD, while others are cofinanced with partner-funding agencies. In addition, the AFD deploys and administers structural adjustment aid allocated by the French government.

The AFD functions as a group of domestic and foreign entities, including two domestic subsidiaries and fourteen banking, financial, and real estate subsidiaries operating in the overseas departments and territories. Although the AFD itself manages state treasury loans, grants, and other government funding, it has two domestic subsidiaries: the Society of Promotion and Participation for Economic Cooperation (Proparco) and the Center for Finance, Business, and Banking Studies (CEFEB).

Proparco was established in 1977 as a limited company owned by the AFD, and originally it was concerned mainly with risk capital. The AFD converted Proparco to a financial company in 1990, and it currently works entirely with private-sector funding.

CEFEB focuses purely on education and training. Founded in 1963, it is based in Marseilles, France. CEFEB provides continuing education and

training for personnel from France and developing countries with current or future careers in senior posts in economic or financial public services, financial development institutions, and public or private enterprises. CEFEB's principal activities are: (1) an annual diploma course for approximately seventy trainees; (2) specialized short-duration seminars in France; and (3) training missions abroad. In addition, in cooperation with the University of Aix-Marseilles or Hautes Etudes Commerciales (HEC), CEFEB runs two master's-level courses for senior executives—one for human resources managers and the other for managers of operational or functional units. Finally, CEFEB is also involved in running in-service training for AFD staff and courses for the Ministry of Foreign Affairs.

The AFD operates in more than eighty countries and has a network of forty-three local offices and agencies around the world. In 1941 General Charles de Gaulle created the Caisse Centrale de la France Libre in London. In 1992 the Caisse Française de Développement was established by decree to succeed the Caisse Centrale de la France Libre, and six years later the name was changed to the Agence Française de Développement, or the French Development Agency. Under a French law established in the 1980s, the AFD is classed as a "specialized financial institution," which is a credit institution with a permanent public-service mission. The AFD's commitments, the terms of those commitments, and the company accounts are submitted for approval to its supervisory board. As a public institution the AFD is subject to control by the French Court of Auditors and, as a specialized financial institution, by the French Banking Commission.

The AFD plays a role in both bilateral and multilateral programs. Bilateral aid is directed mainly toward countries with strong historical and political ties. Countries in Africa and French-speaking countries worldwide have traditionally been given special attention by the AFD and its predecessors. About 75 percent of AFD aid is handled on a bilateral basis. The other 25 percent is handled at a multilateral level, within international and European organizations. As a whole, the AFD has designed its development cooperation to be compatible with other members of the Organisation for Economic Cooperation and Development (OECD) and to have a European context through investments in central and eastern Europe.

The AFD's program activity can be divided into fourteen sectors, of which the educational infrastructure is one. After becoming the AFD in 1998, almost 60 percent of project aid went to sub-Saharan Africa. However, the government directed the agency to expand, and more aid started to move into the Mediterranean region and Lebanon. Still, only about 1 percent of all project aid went to education-specific projects. Conversely, about 50 percent of all project aid at the beginning of the new millennium went to support rural development and urban infrastructure.

### **Japan International Cooperation Agency (JICA)**

The Japan International Cooperation Agency was created in 1974 to handle Japan's bilateral Official Development Assistance (ODA). As Japan's governmental aid agency, JICA has a stated goal of "helping people to help themselves." Japan handles official development assistance through a program devised in 1954 as a part of the Colombo Plan to assist Asian countries. That program has three components: (1) bilateral grants; (2) bilateral loans; and (3) multilateral assistance. JICA is responsible for most of the first component, bilateral grants, which are composed of grant aid and "technical cooperation." The agency also conducts surveys and helps execute a capital-grant assistance program on the part of Japan's Ministry of Foreign Affairs. In addition, JICA has helped create a long-term training program to allow foreign students to obtain academic degrees in Japan as well as a grant-aid program to support foreign students.

One of JICA's education contributions is through this capital-grant assistance program. These projects may hold public value but are not highly profitable, as grant aid involves financial assistance without obligation of repayment and is focused upon basic human needs. There are three types of grant aid: general, aid for fisheries, and aid for increased food production. Education projects are funded through general grant aid, and projects include construction of education-related facilities such as school buildings, expansion of broadcast education services, and training and retraining of educators. Aid is also provided for specific local needs.

In addition, JICA provides for training through technical cooperation activities. In essence, technical cooperation refers to the fostering of human and socioeconomic development through the exchange of technology and knowledge. JICA engages in techni-

cal cooperation with developing countries in six basic ways: (1) by providing training in Japan; (2) dispatching Japanese experts to provide training abroad; (3) supplying equipment; (4) providing technical assistance in the development of projects; (5) conducting economic development studies; and (6) dispatching Japanese volunteers to work in developing countries. Training, expert dispatch projects, and volunteer dispatch each have educational elements. Training courses include both group and individual courses, and many group courses have been implemented in the field of education (such as "The Practice of Science Education"). The volunteer dispatch program sends Japan Overseas Cooperation Volunteers (JOCV) to primary and secondary educational institutions. The expert dispatch sends experts to education-related agencies and vocational-training programs in Japan and overseas. Finally, project cooperation is directed at universities through such programs as agriculture, engineering, and medicine.

The Japanese government's interest in assisting developing countries grew after receiving aid from the World Bank in the 1950s for its own reconstruction. In 1954 Japan established Official Development Assistance (ODA), and according to JICA, Japan's development assistance has expanded annually since that time. Initially, Japan focused on funding Asian countries, but toward the end of the twentieth century began expanding aid to eastern and central Europe. By 1992 it was the major donor in twenty-five countries. With the creation of JICA in 1974, Japan's ODA started taking a more country- and issue-specific approach. As the cold war came to a close, certain development issues, such as education, the environment, and population began to receive more global attention, and this was reflected in JICA projects. Beginning with the 1990 World Conference on Education for All in Jomtien, Thailand, Japan adopted the international goals of extending primary education and eliminating gender inequality in education. Consequently, a much larger portion of JICA's contributions have gone to primary schools whereas until 1990 higher education had received greater emphasis.

### **Norwegian Agency for Development Cooperation (NORAD)**

The Norwegian Agency for Development Cooperation aims to assist developing countries in improving political, economic, and social conditions.

Headquartered in Oslo, Norway, NORAD is a Norwegian directorate under Norway's Ministry of Foreign Affairs. NORAD is responsible for bilateral and long-term aid, while the Ministry of Foreign Affairs handles the administration of multilateral projects. The education sector became a higher priority in the late 1980s and 1990s, with funding nearly tripling during that time. Asia receives the most Norwegian educational support.

NORAD focuses on six major areas of development: social development; economic development; peace, democracy, and human rights; environment and natural resource management; humanitarian assistance in the event of conflict or natural disasters; and gender equality. NORAD gives priority to education funding, and most of these six major areas have educational objectives. For example, by providing assistance for multilingual education and cultural diversity, NORAD attempts to support human rights and democracy.

In addition, NORAD invests in knowledge and human resource development in order to assist in the health and education sectors. A variety of programs support the development of knowledge management, research-based planning, support for international involvement in centers of knowledge, institutional development at universities and colleges in partner countries, the development of financial plans for research and higher education, and cooperation in research and education.

Although Norway has been involved in international development activities since the late 1940s, NORAD was created in 1968. Norway's first bilateral education project began in 1952, as a component of the India Fund's "Kerala Project." The project was designed to promote economic and social development of the people of India and had a number of programs, including "fishery colleges." In the 1960s programs extended to other countries in Asia and Africa, and in 1968 NORAD took over aid activities and obtained a broader range of objectives. In essence, NORAD became the sole agency responsible for coordinating and preparing Norway's official development aid. Before 1990 most of NORAD's education aid went to tertiary education. In 1991 a Norwegian white paper endorsed the goals of "education for all," established at the 1990 Jomtien World Declaration of Education for All conference. Since that time, NORAD's orientation to development has evolved from a project approach to more sectorwide programs, such as the Basic Primary Ed-

ucation Project in Nepal, and the Basic Education Sub-Sector Investment Program in Zambia.

Norway conducts annual evaluations, available to the public, of its foreign aid program. Suggestions for NORAD's education programs have included improving donor coordination and ensuring that recipient countries play a stronger role in coordinating aid, improving information management, conducting specific evaluations of education programs, and funding educational research in beneficiary countries.

### **Netherlands Organization for International Cooperation in Higher Education (Nuffic)**

The Netherlands Organization for International Cooperation in Higher Education was created in the 1950s to promote an accurate image of Dutch higher education around the world. Its mission states four major areas of interest: development cooperation, internationalization of higher education, credential evaluation, and positioning Dutch higher education worldwide. Within these four areas, human resource and institutional development receives the most funding, followed by international academic relations, communication, and finally, international credential evaluation.

Higher education in the Netherlands has three branches: (1) the universities of professional education; (2) the remaining universities; and (3) international education institutes. Nuffic's board consists of members appointed by organizations representing each of these branches. Nuffic also has three secretariats: the National Commission for UNESCO, the Netherlands Development Assistance Research Council, and the Steering Committee of the Netherlands Israel Development Research Program. In addition to these three autonomous secretariats, Nuffic began conducting language courses for both foreigners and Dutch people in 1966. Participants in this program include students, foreign employees and their partners, embassy staff, au pairs, and classroom groups.

One of Nuffic's initial programs in the 1950s was international credential evaluation. Essentially, Nuffic offers advice regarding the relative value of foreign higher education diplomas in the Netherlands and vice versa. Nuffic publishes a manual, *Evaluation of Foreign Credentials in the Netherlands*, to help clients in this regard. An Internet resource describing procedures of higher education qualifica-

tions earned within the European Union (EU) and the European Economic Area Countries (EEA) is also maintained. As internationalization grew throughout the world in the mid-1980s, Nuffic assumed a role of encouraging cooperation between Dutch institutions and other industrialized countries. The goal was to improve Dutch higher education and broaden its dimensions. The primary method of promoting internationalization was the exchange of Dutch students and staff, and these efforts were supported by grants and scholarships.

Nuffic's primary source of difficulty has been the confrontation between different academic and cultural traditions, which has resulted in delays and irritation among participants. Nuffic has published various books in an effort to help program participants deal with issues arising from these differences.

Development cooperation represents one of Nuffic's main activities. At the end of the 1990s Nuffic reduced its concentration to a smaller number of countries to install a sectorwide approach, which emphasizes human resource development. This change represents a philosophical shift within the agency in which education is regarded as integral to all areas of development, and thus development cooperation receives the greatest amount of Nuffic's expenditures. Nuffic administers and finances education programs, initiates communication, and helps develop policy in beneficiary countries. Programs are categorized as human resource development, such as fellowships and scholarships, or institutional development, such as the Joint Financing Program for Cooperation in Higher Education (MHO) and Cooperation between the Netherlands and South Africa (CENESA).

In 1999 Nuffic adopted a more succinctly worded mission regarding knowledge export, by stating the goal "to position Dutch higher education on emerging markets." That same year, Nuffic set up the Project Office for Positioning Higher Education, to coordinate and support efforts of Dutch higher education institutions with the goal of recruiting institutional partners and foreign students. Three nations were targeted: Taiwan, China, and Indonesia. In 1998 Nuffic established the Network for the Export of Higher Education, in which nearly forty higher education institutions join to exchange information and coordinate activities.

### **The German Organization for Technical Cooperation (Deutsche Gesellschaft für Technische Zusammenarbeit) (GTZ)**

The German Organization for Technical Cooperation is owned by the Federal Republic of Germany, and it operates as a service enterprise for international development cooperation. Established in 1975 as a private-sector enterprise with a development-policy mandate, the GTZ supports international development, reform, and technical cooperation on behalf of the Federal German Ministry for Economic Cooperation (BMZ) and other German ministries, partner-country governments, and international organizations. Education represents one of the GTZ's sector-related themes, and it has four major components: educational aids, basic education, vocational training, and universities/scientific and technical institutions.

The first educational area, education aids, operates by the name of the Crystal project. Crystal provides teachers' aids such as textbooks and materials, specialist literature, and consulting. Consulting services are provided for vocational training, work-oriented training, and development cooperation (such as the application of new media and education aids). Services and materials are free to developing countries, and many of them are described in a Crystal catalog.

In the second area of basic education, the GTZ serves in an advisory role. The GTZ advises developing government partners on ways to improve their basic education systems. The suggestions focus upon quality, efficiency, and relevance through the design of programming methods and system structures. The GTZ's educational philosophy supports a decentralized approach utilizing parents and communities. Three major basic education activities include: (1) developing and introducing appropriate curricular elements and relevant learning and teaching materials; (2) institution building; and (3) systems consulting.

Vocational training encompasses the GTZ's third education area. These services are aimed at policymakers, industry, research and planning institutions, state and private training institutions, and in-company training facilities. The GTZ serves a consulting and planning role for the general vocational field as well as individual institutes of further and advanced training and vocational agencies. Specific services include concept design, planning, and

evaluation, along with the establishment and commissioning of agencies and staff.

Finally, the GTZ provides consulting for universities and scientific and technical institutions. The goals of this higher education theme are to improve the performance capacity of education and research systems, to boost training performance and research capacity, and to encourage an exchange of ideas and experience at the academic level through international linkages. The GTZ provides services such as developing education and research systems, developing institutions, consulting on program conduct and efficiency, and the promotion of cooperation in training and research.

When the GTZ was developed, most services were conducted out of the head office. Though the head office is still the major interface between the government and project implementation abroad, in an effort to cut costs, the organization began to emphasize decentralization and regionalization in the late 1980s and early 1990s. This shifted responsibility to the field offices in more than sixty partner countries. The GTZ has also focused most heavily on advisory services. The late 1980s figured prominently in the GTZ's development because of German reunification. This required Eastern bloc nations, including the former East Germany, to make the transition to a market economy. Since the changes in Germany both drove and were affected by globalization, the GTZ decided to expand its cooperation with other organizations. In addition, the GTZ took on a larger role in the promotion of democracy worldwide.

### **Summary**

Overall, bilateral agencies have been expanding their education and training goals since the early 1990s. The opening of eastern Europe, the fall of state socialism, and the 1990 Jomtien World Conference on Education for All were among the main factors shaping education policy regarding the geography and the goals of bilateral aid. Still, in the late 1990s, actual overall aid budgets had begun to decline, especially across the member countries of the OECD. Indeed, though policies have had lofty objectives, the reality often has not been as positive. According to Therien and Lloyd, bilateral aid agencies have faced issues such as dwindling resources, the loss of donors and a rationale for aid because of the end of the cold war and the dismantling of the Soviet Union, greater support of domestic aid instead of foreign development assistance, and an overall decrease in

public support. As interests of donors have taken precedence over the interests of recipients, development aid has suffered. Other issues facing bilateral agencies include problems working through recipient governments, the inconsistency between economic and social development objectives (which span countries), and inconsistent foreign policy goals (with regard to specific countries). Some examples of these issues include French aid to francophone Africa, U.S. aid to Egypt and Israel, and Nordic aid to its program countries. Furthermore, globalization and development assistance received much scrutiny at the beginning of the new millennium, as groups questioned whether or not programs were actually reducing poverty.

*See also:* INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION, *subentry on* UNITED NATIONS AND INTERNATIONAL AGENCIES; NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS.

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#### REGIONAL INSTITUTIONS

Official regional development agencies are those whose mandate confines them to serve regional ob-

jectives. Some are part of regional governments, such as the European Union (EU), while others are managed by groups of individual national governments with common interests, like the Organisation for Economic Co-operation and Development (OECD). This entry will review the history, legacy, importance, and role of some of the more important regional institutions with regard to education.

### **Organisation for Economic Co-operation and Development (OECD)**

**Purpose.** Originally founded as the Organisation for European Economic Co-operation (OEEC), OECD was formed to administer American and Canadian aid for the reconstruction of Europe under the Marshall Plan after World War II. In 1961 the organization was renamed the Organisation for Economic Co-operation and Development to promote economic growth and global trade. Since then, its mandate has been to build strong economies in member countries, improve efficiency, hone market systems, expand free trade, and contribute to development in industrialized and developing countries. It also groups the thirty member countries in an organization that provides a setting in which governments develop economic and social policy. Increasingly nongovernmental organizations and civil society are included in policy and thematic discussions. OECD is well known for its publications and statistics, which cover economic and social issues including education, the environment, social policy, and science and technology.

**Structure.** OECD's internal governance consists of each member country having a permanent representative, usually of ambassadorial rank, who sits on the council, the governance body. The council, meeting in sessions of ministers or permanent representatives, makes all major decisions on budgetary issues and the work programs of each committee.

**Projects and activities.** OECD does not generate operational development projects, but rather focuses on information-generating projects, such as collecting statistical indicators across OECD countries and writing publications. For example, OECD's Directorate of Education, Employment, Labor, and Social Affairs (DEELSA) undertakes work in the following five areas: (1) education and skills; (2) employment; (3) health; (4) international migration; and (5) social issues.

DEELSA undertakes research and policy work in education as well as other areas. The emphasis with-

in education is on lifelong learning, from early childhood to adulthood, which is considered important for social integration and a tool in the battle against social exclusion, from both society and the labor market. However, the work of DEELSA spans the range from early childhood development to higher education, including adult learning and literacy, education indicators, education policies, finance of lifelong learning, higher education management, human and social capital, information and communication technology (ICT) and the quality of learning, inclusion and equity, knowledge and learning, a program for international student assessment, schooling for tomorrow, and the transition from initial education to working life. The directorate produces host meetings and conferences to discuss these issues and provides online documents, newsletters, and publications pertaining to each area. In addition, the directorate works in close cooperation with the thirty member countries and draws on the expertise of the secretariat and external consultants, who provide advice and guidance through their national delegations and ministerial meetings. The resulting work is intended to meet the needs of member countries and their citizens.

Within DEELSA is the Centre for Educational Research and Innovation (CERI), which carries out studies and promotes an international dialogue about education across OECD countries. It is a source of information and publications on the topic of education. It strives to establish links between research, policy innovation, and practice, to enhance knowledge about educational trends internationally, and to actively engage educational researchers, practitioners, and government officials in cross-national discussions.

**Statistical improvements.** One of the first efforts to improve education statistics was the creation, in 1990, of the Indicators of National Education Systems (INES) with support in part from the U.S. Department of Education. OECD embraces the importance of statistics as a means of achieving

informed policymaking. The INES program responds to the need to standardize the collection of statistics on a given aspect of education. For example, in the area of students with disabilities or learning or behavior problems, each member country uses a different definition for a particular term. The INES program works to establish

uniformity in the definition and collection of indicators.

More recently, the World Education Indicator (WEI) project, a joint endeavor of OECD and the United Nations Educational, Scientific and Cultural Organization (UNESCO), has become an important initiative to expand the indicators system beyond OECD countries. Begun in 1997 as a pilot project for a small group of countries invited by OECD and UNESCO, the primary aim of the project is to develop a small but critical mass of policy-oriented education indicators, which measure the current state of education in an internationally valid, timely, and efficient manner. The project received funding from the World Bank for organization and administration, but participating countries provided their own resources for assembling and reporting data.

During the first year, the eleven countries that initially agreed to participate identified common education issues of concern, agreed upon an indicator set and the definitions and classifications to be used in the data collection, and assembled and provided the data. OECD processed the data and results, which were subsequently presented in the annual publication *Education at a Glance*. During the second year of the project, OECD and UNESCO agreed to add a number of countries that had expressed an interest in joining the pilot group, bringing the number of participating countries to sixteen. Indicators prepared from the data submissions over the two-year period served as the basis for a separate WEI report released in 2000. In 2001 the project produced *Teachers for Tomorrow's Schools: Analysis of the World Education Indicators*, a second volume that analyzes education indicators developed through the WEI project.

In addition to the basic data collection to derive the indicators, a number of special-interest groups assembled to research areas requiring data development and make recommendations based on their research of additions to the indicator set. World Bank funding permits pilot projects in six selected countries to develop national education indicators systems that both respond to national policy information needs and are compatible with education indicators used at the international level. The result of these pilot projects is a number of national education indicator publications that are disseminated to policymakers within national ministries and development agencies.

## European Union (EU)

**Purpose.** The European Union, formed by the Maastricht Treaty of 1993, expanded European integration through the establishment of a common foreign and security policy and standards of justice, and improved police protection. A twenty-member European Commission represents the policymaking arm and executive body for the fifteen countries that comprise the EU. The Council of the European Union (not to be confused with the Council of Europe, which is a separate regional institution) is comprised of one representative of ministerial level from each member country, and it represents the legislative body of the EU. Along with the European Parliament, the council makes legislative and budgetary decisions for the EU.

In the formation of the EU, education was suggested to remain a national enterprise. Article 149 of *The Treaty Establishing the European Community* notes, "The Community shall contribute to the development of quality education by encouraging cooperation between Member States and, if necessary, by supporting and supplementing their action, while fully respecting the responsibility of the Member States for the content of teaching and the organization of education systems and their cultural and linguistic diversity." However, although education itself is thus not an official function of the EU mandate, EU literature still claims education and vocational training were "two cornerstones of the Commission's commitment to securing investment in people" ("Education—Training—Youth"). In fact, education programs were inaugurated to improve the prospects of European integration in culture, science, technology, and labor markets.

The EU's education policy has six basic components: (1) education; (2) vocational training; (3) recognition of diplomas and comparability of vocational qualifications; (4) training and mobility; (5) youth; and (6) international cooperation. The education component contains programs dealing with quality, access, and the teaching of languages. There have been four main programs—Tempus, Socrates, Erasmus, and Lingua—and European integration was the rationale for each.

**Erasmus program.** Erasmus (1987), Lingua (1989), and Tempus (1990) were each established before the official creation of the EU in 1993, as projects of the European Community, a precursor to the EU. The Erasmus program was adopted in June 1987 and

amended in December 1989, and its focus was the mobility of university students within the European Community. The steps included establishing a European university network among the member states, the creation of grants to assist with travel and the cost-of-living differential, recognition and mobility of diplomas and periods of study, and the financing of promotional activities to create awareness of work throughout the European Community. In 1994, its final year as an independent program, Erasmus received European Currency Unit (ECU) 96.7 million.

**Lingua program.** Lingua went into effect in January 1990 and lasted independently for five years. It was an attempt to bolster foreign-language competence within the EU. Specifically, it focused upon Danish, Dutch, English, French, German, Greek, Irish, Italian, Luxembourgish, Portuguese, and Spanish. The program operated at various levels: citizens, teachers, university students, and organizations. The focus was on promotion, increasing learning opportunities, and innovative training. Lingua's budget was set at about 200 million euros. In its five years, Lingua provided services for 120,000 youth through educational projects, 30,000 students through interuniversity cooperation, and 30,000 teachers through training grants. In addition, projects promoting languages in economics and business were established. In 1995 Lingua activities were integrated into other EU programs.

**Tempus program.** Tempus was first established in May 1990, with a second phase adopted in April 1993, and a third phase adopted in April 1999. The third phase was scheduled to last from 2000 through 2006. Tempus was designed to help develop higher education systems for the "eligible countries" operating as partners with EU member states, and funding was established at ECU 95 to 100 million per year. Eligible countries include a number of republics in central and eastern Europe and central Asia. Its stated objectives were to develop new teaching programs, purchase equipment, encourage mobility of university professors, create periods of study in member states, and promote the learning of European Community languages. The overall goal of each of these objectives was to assist in the transfer to a market economy. The second and third phases added more countries to the list of eligible nations and further refined its features. The third phase aimed to adapt higher education to the socioeconomic and cultural needs of the new democracies. By phase three, the focus had become the reform

of higher education structures, linking training to industry, and strengthening citizenship and democracy.

**Socrates program.** While Tempus was continually updated as its own program, both Lingua and Erasmus were melded into the Socrates program, the only one of the four to be established first as an EU program. Socrates was inaugurated in March 1995 and moved into a second six-year phase in January 2000. Socrates had a much more general aim to actually create an open European educational area through access, mobility, and language knowledge. It incorporated higher education (Erasmus), school education (Comenius), and adult education initiatives (Grundtvig), as well as language learning (Lingua), distance learning and technology education (Minerva), and information exchanges (Arion and Eurydice). Socrates also extended beyond the member states into some central and eastern European countries and former Soviet republics. Phase two had a budget of 1.85 million euros.

**Program evaluation.** Criticism and difficulties of the four programs included the divergence among the legacies of the various nations, especially the newly independent states; coordination and communication between nations; and monitoring and evaluation of projects. However, there have also been some indirect side effects, including the improvement of quality, coverage, and content of local and national systems.

**The remaining components.** Vocational training involves access to training, analyzing qualification requirements, quality of training, and promotion of apprenticeship. The EU has run a variety of programs and organizations to handle vocational training. These have included Comett and Eurotecnet to promote technology and human resource training, IRIS (Inter-Regional Information Society) to promote equality of opportunity, Petra to boost the status of vocational education and encourage transnational cooperation, Force to encourage investment in vocational education, and Leonard da Vinci to promote lifelong learning and EU cooperation.

Recognition of diplomas and qualifications and training and mobility both attempt to facilitate unity with the EU. This has involved creating mechanisms for the recognition of diplomas and the establishment of comparable training. It has also meant the removal of barriers to mobility, such as recognition

of training abroad and the continuation of health insurance.

Youth programs have included volunteer service, social inclusion, and youth exchange programs, such as “Youth for Europe.” Finally, international cooperation programs have involved the United States and Canada.

The EU has its origins in the European Federalists Union, designed in 1946. The following year, the Marshall Plan was signed, and a variety of unionist movements began, culminating in the International Coordination of Movements for the Unification of Europe Committee in December 1947. Some of those involved in the movement wanted a federation, and others wanted simply cooperation. In 1950 French Foreign Minister Robert Schuman proposed a union of countries to pool coal and steel resources. Six nations (Belgium, France, Germany, Italy, Luxembourg, and the Netherlands) ultimately subscribed to the Schuman Plan, forming the European Coal and Steel Community (ECSC) in 1951. These six nations ratified the Treaty of Rome in 1953, thus officially starting the path toward a European union forty years later. This community developed from a tax, customs, and quantity regulator into a full-fledged political institution, dealing with trade, human rights, labor, economics, agriculture, and energy. In 1967 the ECSC merged with the European Economic Community and Euratom to form the European Communities (EC). In November 1976 a council was held in The Hague, and a statement was published regarding the possible construction of a “European Union.” In 1983 the Ministers of Education held their first joint meeting with the Ministers of Employment and Social Affairs. A ruling on non-discriminatory enrollment fees was handed down in 1985. Following the fall of the Berlin Wall and the subsequent opening of eastern Europe, a council held in Maastricht, the Netherlands, drafted a Treaty on the European Union in 1991, which was ratified in 1993 with twelve member nations. Just before ratification, the commission published a green paper on creating a “European dimension of education.” In 1995 Austria, Sweden, and Finland joined the EU, bringing the number to fifteen, with a number of eastern European newly independent states awaiting ratification. A council in Brussels in 2001 outlined a ten-year strategic education and training plan with three main objectives: (1) increase quality and effectiveness of education in the EU; (2) facilitate access; and (3) open up education and training systems “to

a wider world” through research, mobility, and exchanges.

### **The Council of Europe (COE)**

The Council of Europe is distinct from—and larger than—the European Union. As of 2001 the COE comprised forty-three member states, including all fifteen of the European Union states. Established in 1949 and headquartered in Strasbourg, France, the COE is a regional organization that essentially makes recommendations (through conventions, studies, and activities) to member states. The COE holds no legislative authority over its members, and this allows it to consider a large breadth of issues. The COE has developed programs involving human rights, economics, health, culture, sport, the environment, education, and many others, not including defense. It also tries to ensure that citizens of one nation, who are residents of another, will receive the same social benefits as the nationals. The requirements for membership in the COE are less stringent than the EU, as nations basically must accept “the principle of the rule of law” and guarantee “human rights and fundamental freedoms to everyone under its jurisdiction” (Council of Europe website 2001).

The COE was born from the 1948 Congress of Europe. While some nations favored a European union or federation, others felt more comfortable with basic intergovernmental cooperation. These nations (along with five of the six eventual charter members of the ECSC) formed the COE in 1949. One of the earliest COE conventions included education. In 1950 the ten original member states signed the European Cultural Convention, which established a framework for education, as well as youth, culture, and sport.

With so many nations involved in discussions, the breadth of issues considered by the COE has also stretched the specific area of education. The COE has considered educational projects in primary, secondary, higher, and adult education; research and promoting links and exchanges; recognition of educational qualifications throughout Europe; publishing handbooks for policymakers and educators; and cooperating with European institutions and non-governmental organizations. In addition, with the opening of central and eastern Europe, educational programs to assist the new democracies took hold in the 1990s. The COE has been active in promoting democratic citizenship and, toward the end of the 1990s, social cohesion.

Regarding higher education, the COE established the Higher Education and Research Committee for the exchanges of views and experience among member-state universities. Other higher education activities have included mobility, recognition of qualifications, lifelong learning, citizenship, cultural heritage, access, research, and social sciences. In 1971 the COE established the European Documentation and Information System for Education (EUDISED), which pools education research from throughout Europe and is available via the Internet. EUDISED is a joint project with the EU's European Commission. In addition, the Legislative Reform Program (LRP) helps new member states reform their higher education laws.

The variety of cultures and languages represented by the COE presents challenges for any cooperative effort, thus language learning and social science have been the focus of many programs, such as the Council for Cultural Cooperation's Modern Language Project and the European Center for Modern Languages. The COE's cultural work has also involved democracy, human rights, minorities, history teaching, and "Europe at School," an annual Europe-wide competition for school children.

### **Organization for Security and Cooperation in Europe (OSCE)**

The Organization for Security and Cooperation in Europe is the largest regional security organization in the world with fifty-five participating states from Europe, Central Asia, and North America. It is active in early warning, conflict prevention, crisis management, and postconflict rehabilitation.

The OSCE approach to security is comprehensive and cooperative. It deals with a wide range of security-related issues, including arms control, preventive diplomacy, confidence- and security-building measures, human rights, democratization, election monitoring, and economic and environmental security. It is cooperative in the sense that all OSCE participating states have equal status, and decisions are based on consensus.

The OSCE headquarters are located in Vienna, Austria. The organization also has offices and institutions located in Geneva, Switzerland; The Hague, Netherlands; Prague, Czech Republic; and Warsaw, Poland. The organization employs about 4,000 staff in more than twenty missions and field activities located in southeastern Europe, the Caucasus, eastern

Europe, and Central Asia. They work "on the ground" to facilitate political processes, prevent or settle conflicts, and promote civil society and the rule of law.

The organization's attention to education is twofold; it comprises (1) internal and external training efforts, and (2) an emphasis on voter and civic education.

Given the considerable increase in the number and size of OSCE field activities in the 1990s, the OSCE's training efforts must be able to adapt to the changing environment. The OSCE participating states regard training as a tool for enhancing the ability of the organization's institutions and missions to carry out their mandate. This is the underlying principle behind the *OSCE Strategy on Capacity-Building and Training* adopted by the OSCE Permanent Council in March 1999. Participating states have acknowledged the need for training in two main spheres: first, training as a component of human resources management within the organization; second, training as an instrument to achieve the goals of the OSCE in conflict prevention, crisis management, and postconflict rehabilitation.

Within the areas of voter and civic education, training is emphasized. The OSCE deems it necessary for election observers to be able to assess the extent and effectiveness of voter and civic education. Sufficient voter and civic education is necessary to ensure that participants in the electoral process are fully informed of their rights and responsibilities as voters. These efforts can also generate knowledge and interest about the election process and build a climate for open debate. Voter education is focused on the particular election and should inform voters of when, how, and where to vote. It is therefore essential that this information be provided in a timely manner, allowing voters sufficient time to make use of the information. Civic education is a long-term process of educating citizens in the fundamentals of democratic society and civic responsibility. It may focus on the choices available to the voter and the significance of these choices within the respective political system.

Although political parties and civic organizations may contribute to voter and civic education efforts, it is ultimately the responsibility of the government and the election authorities to ensure that voters receive objective and impartial information, which should be provided to all eligible voters,

including traditionally disenfranchised segments of the population, such as minorities.

### **Southeast Asian Ministers of Education Organization (SEAMEO)**

The Southeast Asian Ministers of Education Organization promotes cooperation in education, science, and culture in Southeast Asia. The SEAMEO was established in 1965 in Bangkok, Thailand, and it has a mission to establish networks and partnerships, to provide a forum for policymakers and experts, and to develop regional “Centers of Excellence” for human resource development. Some specific education project areas include education technology, language, higher education, science and mathematics, vocational and technical education, distance learning, history, and education management.

The SEAMEO has ten member countries from Southeast Asia, six associate member countries from Australia, North America, and Europe, and one donor country, Japan. Each member and associate member assigns a representative to the SEAMEO Council. There are eleven centers that focus upon various sectors.

Each of the centers involves education to some degree. The Center for the Impact on Tropical Biology builds capabilities and provides grants and training. It also is developing a postgraduate degree program in information technology in natural resource management. The Center for the Impact on Educational Innovation and Technology provides training in educational leadership, curriculum and policy development, technology, literacy, nonformal education, and community development. The Center for the Impact on Education in Science and Mathematics provides research and teacher training in science and mathematics instruction. The Center for the Impact on Language Education provides teacher training in language instruction through pedagogy, testing, and textbooks. The Center for the Impact on Higher Education Development promotes recognition of qualification in Southeast Asia and conducts networking and policy development in higher education. The Center for the Impact in Indochina runs a regional training center in Ho Chi Minh City, Vietnam, which provides English training and planning for vocational and technical school directors. The Center for the Impact on Open Learning/Distance Education provides computer resources and training to promote distance learning. The Center for the Impact on Graduate Study and

Research in Agriculture provides graduate study, training, and research, and it adopted an elementary school through the Community Outreach Program. The Center for the Impact on Archaeology and Fine Arts develops theories of standard practices and scholarship on regional culture, arts, archaeology, and heritage. The Center for the Impact of Tropical Medicine and Public Health was established for training and research, and it grew into a forum on policies and sector needs. Finally, the Center for the Impact on Vocational and Technical Education conducts training programs and provides an education database.

SEAMEO emerged from a 1965 meeting between education ministers from Thailand, Singapore, Malaysia, Laos, and the Republic of South Vietnam (now Vietnam). Advisers from UNESCO and the United States were also involved. Indonesia and the Philippines joined in 1968, followed by Cambodia in 1971, Brunei Darussalam in 1984, and Myanmar in 1998. Its first thirty-five years saw numerous challenges within the region in the form of various social and political transitions, some of them violent, and an extreme economic downturn in the 1990s. Also, SEAMEO has faced cultural diversity that has created both tension and programs.

### **Inter-American Development Bank (IDB)**

The Inter-American Development Bank, the oldest and largest regional multilateral development institution, was established in December 1959 to help accelerate economic and social development in Latin America and the Caribbean. The bank’s operations cover the entire spectrum of economic and social development. In the past, IDB lending emphasized the productive sectors of agriculture and industry, the physical infrastructure sectors of energy and transportation, and the social sectors of environmental and public health, education, and urban development. Current lending priorities include poverty reduction and social equity, modernization and integration, and the environment.

IDB provides financing for projects in the education sector for the purpose of promoting greater integration of educational activities within the national development strategy of the member countries. The loans and technical cooperation from the bank for education have the following objectives:

- Training of human resources for development to contribute to the formation of technical and

scientific skills that enable people to efficiently carry out the occupational tasks of promotion and management needed for the economic and social development of the country.

- Equality of educational opportunities to facilitate national efforts for introducing conditions of fairness in access to education opportunities for the entire population.
- Efficiency of investments in education to stimulate and support national efforts for rational planning of education systems and the essential reforms in content, teaching methods, organization and administration of programs, and institutions and systems, to achieve more positive results within the financial possibilities of the country.

IDB gives preference for financing development projects in the following educational areas:

1. Higher education programs at the professional, postgraduate, and scientific and technological research level and the training of specialized technicians in short-duration courses. The bank will support the role of higher education in the training of management teams needed in the development process and will stimulate the strengthening, at the national and regional levels, of institutions with high academic standards capable of showing the way in critical development areas.
2. Programs on technical education and professional training to turn out skilled workers and middle-level technicians in occupations needed for productive activities and to assure their participation in the social and cultural benefits of their communities, including reform and adaptation of middle-level education programs, which provide training in technical occupations without sacrificing the opportunity of acquiring basic education.
3. Education programs to provide a minimum of social and work skills to young persons and adults who did not have access to formal education, thus equipping them to find employment in rural development programs or rehabilitation of urban areas.
4. Programs to introduce substantive reforms in curriculum, teaching methods, structure, organization, and functioning of basic,

formal, and nonformal education at the primary and secondary level. These programs can include education research, training and retraining of teachers and auxiliary technical staff, nontraditional forms of education, and the design, production, and evaluation of institutional materials, equipment, and communication systems of proven effectiveness. The basic objective of these programs is to improve the quality and efficiency of education activities and to expand the levels of participation without considerable increase in cost.

5. Programs to improve efficiency and fairness in the application of funds intended for financing education and promoting the creation of additional sources of financing by improving student loan systems, social security, business support, scholarships for priority professional fields, and such other systems as appropriate.

#### **Asian Development Bank (ADB)**

The Asian Development Bank, a regional multilateral development institution established in 1966, provides loans and investments for developing countries; technical assistance for development projects, programs, and services; facilitation of public and private capital investment for development; and assistance in policy coordination and planning. The ADB has fifty-nine member countries, with Japan and the United States as the largest shareholders (combining for almost one-third of the shares). The ADB has a stated primary goal of reducing poverty in Asia and the Pacific, and its headquarters are in Manila, Philippines.

One of the ADB's objectives is supporting human development, and education is one of the major means to this end. Noting that education is a basic human right recognized in the 1948 Universal Declaration of Human Rights, the ADB states, "Education helps lay the foundation for the three pillars of poverty reduction: human development, equitable economic growth, and good governance" (Asian Development Bank 2001). However, it was not until 1988 that the ADB formally stated in a policy paper that basic education was a human right. According to its own historical accounts, the ADB invested \$4.6 billion in education between 1970 and 2000, with about two-thirds of that investment occurring in the 1990s. During its initial years, the ADB followed a

“manpower planning” and economic growth philosophy and funded facilities and equipment for vocational and technical education. In 1988 the ADB published its first education sector policy paper, which called for investment in primary and secondary education to foster human and social development. In 1990 the ADB adopted the goals set down by the World Conference on Education for All, held in Jomtien, Thailand, which called for universal education and gender equity. With these goals came an emphasis on basic education, teacher training, and curriculum planning. The ADB also moved deeper into policy, research, and capacity-building activities. However, education represented only about 6 percent of the ADB’s total investments during the 1990s.

The ADB’s 2001 education policy paper called for the ADB to support programs in literacy and nonformal education, early childhood development, basic education, secondary education, higher education, and skills training. It also called for reducing poverty, enhancing the status of women, and facilitating economic growth.

Critique of the ADB has included a narrow focus on “schooling as opposed to education in the broader sense” (Asian Development Bank 2001), uneven distribution of support (three countries accounted for two-thirds of the total education lending between 1970 and 2000), an early focus on traditional project technical assistance, education as a relatively small proportion of the ADB’s overall investment portfolio, sector reform not always guided by clear policy goals and strategies, and overall education investment not reaching its impact potential because of weak sector analysis.

### **The Economic Commission for Africa (ECA)**

The Economic Commission for Africa is a United Nations regional institution designed to foster economic and social development and promote regional integration and cooperation in Africa. Established in 1958, the ECA has its headquarters in Addis Ababa, Ethiopia, and it reports directly to the United Nations Economic and Social Council. The fifty-three African countries comprise the ECA’s member states, and it serves four main modal functions: (1) advocacy and policy analysis; (2) convening stakeholders and building consensus; (3) technical cooperation and capacity building; and (4) enhancing the United Nation’s role in Africa. In approaching edu-

cational and other policy issues, the ECA essentially reports on social situations and influences policy.

Because of Africa’s size, political situations, and economic extremes, education in the continent provides a variety of challenges. A 1995 conference of ministers’ report (United Nations Economic Commission for Africa 2001) outlined many of the educational issues the ECA has faced and documented during its existence. According to the report, “the crisis in African education” intensified in the 1980s and 1990s, because of rapid population growth and cuts in public spending. Many African countries during this period offered little funding for primary education, and primary school enrollments declined while total enrollment increased. Together with these issues were declining standards, overcrowding, lack of teaching materials, and declining teacher morale. Inadequate facilities and “deteriorating” educational quality also plagued secondary education during the period. Girls were not served at the same level as boys, and fewer girls stayed in school through tertiary education. Higher education as a whole faced low salaries, political issues, lack of materials, student and professor unrest, and university closures. Finally, the number of adult illiterates rose considerably during the last two decades of the twentieth century.

The ECA has served a number of roles in handling educational issues and other sector situations. It helped create the African Development Bank in 1964, and it has assisted in the establishment of a number of other regional organizations and technical institutions. The ECA also helps member nations communicate and cooperate in efforts to tackle issues. Through analyses and reports, the ECA tries to suggest and implement strategical approaches to problem areas, and it also helps evaluate the progress of implemented programs.

As economic development strategies moved away from primarily physical or structural developments and recognized the importance of education and human capital in capacity building, many of the ECA member states adopted international conventions on educational development. A 2001 ECA strategy noted eight “sub-programs,” including facilitating economic and social policy analysis, promoting trade and mobilizing finance for development, enhancing food strategy and sustainable development, strengthening development management, harnessing information for development, promoting regional cooperation and integration,

promoting the advancement of women, and supporting subregional activities for development.

### The African Development Bank (AfDB)

The African Development Bank, a regional multilateral development bank, was established in 1964 and began operations in 1966. The AfDB has seventy-seven shareholder states, including each of the fifty-three African countries and twenty-four nations in Asia, Europe, North America, and South America. As a development bank, the AfDB provides: (1) loans and investments for developing countries; (2) technical assistance for development projects, programs, and services; (3) facilitation of public and private capital investment for development; and (4) assistance in policy coordination and planning. Education is one of the AfDB's major sectors of support, and financing includes specific projects, loans, private-sector support, and cofinancing with bilateral and multilateral institutions.

The AfDB did not support an education project during its first nine years of operation. The first education project occurred in Mali in 1975. From 1975 through 1998, education lending represented 6.7 percent of the total lending to all sectors. During that period, over 80 percent of the AfDB's lending in education went to hardware, such as equipment and furniture. In addition to funding hardware, the AfDB has funded training for teachers, administrators, and planners, and construction and rehabilitation. The AfDB has also supported both regional and national projects.

Three publications/conferences had major effects on AfDB educational policy. First, the AfDB published an *Education Sector Policy Paper* in 1986. Before that time, education accounted for just under 60 percent of the AfDB's social-sector lending. After the policy paper, education accounted for an average of 70 percent of all social-sector spending (from 1985 to 1998). A second milestone was the 1990 Jomtien World Conference on Education for All, which called for gender equality and universal basic education. Prior to 1990 nearly half of all funding went to secondary, general, vocational, and technical education or teacher-training projects. After the Jomtien conference (1991–1998), however, 52.8 percent of the total lending went to basic education.

As Africa's education issues evolved in the last years of the 1990s, the AfDB tried to address challenges, such as globalization, the growth of informa-

tion technology, the increased role of the private sector, deepening poverty, high unemployment, low human-capital production, extreme population growth, HIV/AIDS and malaria, armed conflicts and population displacement, and unequal access to education. Recognizing that education could both affect and was affected by these issues, the AfDB released a new *Education Sector Policy Paper* in 1999. This paper listed three priority areas: (1) quality education for all; (2) provision of middle- and high-level skills; and (3) organization and management of the education sector. The paper also listed five strategies of improvement: (1) access; (2) equity; (3) quality of instruction and output; (4) management and planning; and (5) financing mechanisms. It also suggested the AfDB's approach would shift from a project-orientation to a sectorwide approach focused on joint financing with governments and institutional partners. Among the areas of interest that had grown since 1986 were girls' education, technology and distance learning, environmental education, population and AIDS education, and peace education.

Some of the areas in need of improvement within education-sector funding, according to the policy paper, included the need to balance qualitative and quantitative approaches, coordinating projects at the community level, participation of beneficiaries and stakeholders, maintenance and sustainability of building and equipment, supervision of projects, and monitoring of evaluations. In addition, Njoki Njoroge Njehũ, the director of 50 Years Is Enough: U.S. Network for Global Economic Justice, a coalition "dedicated to the profound transformation of the World Bank and the International Monetary Fund" ("Hearing on U.S. Policy," 2001), noted that the conditions in Africa had not improved substantially during the first thirty-five years of bank lending and that the AfDB, "as it recovers from its management crisis of the 1990s, is losing relevance to most of the people of the continent" by lending to "very few sub-Saharan countries."

*See also:* INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION, *subentry on* UNITED NATIONS AND INTERNATIONAL AGENCIES; INTERNATIONAL EDUCATION STATISTICS; NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS.

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**UNITED NATIONS AND INTERNATIONAL AGENCIES**

Official multilateral development agencies are those that are responsible to and governed by representatives of worldwide organizations. The United Nations (UN), a multilateral organization with a variety of institutional mandates, has many organizations under its umbrella. Other organizations have a single mandate but are similarly broad in scope. A distinction should be made between the multilateral development banks—such as the World Bank—whose projects take the form of loans, and the other multilateral development agencies—such as United Nations Educational, Scientific and Cultural Organization (UNESCO)—whose projects take the form of nonreimbursable grants. This entry will describe the history, legacy, importance, and role of international agencies with regard to education.

**The World Bank (or the International Bank for Reconstruction and Development)**

The World Bank is an international bank established in 1944 to help member nations reconstruct and develop by guaranteeing loans. The organization has members (both donors and borrowers) who own shares in the bank, although each member nation does not have a vote. Rather, the governance structure is representative in nature, such that one representative may vote on issues for a cluster of nations. It provides loans and technical assistance in many sectors—including education—to reduce poverty and advance sustainable economic growth. There are several types of loans: project loans, macro-policy loans, and sector-policy loans. For each project bank staff work carefully with country counterparts to establish a project covenant or loan

agreement, which stipulates the government's commitments, to reform, for example. As part of the loan agreement, when the bank and the country meet to negotiate the loan contract, the bank can establish conditionalities or parameters that commit the country to accomplishing certain changes. Should these benchmarks not be reached, then the bank, according to the terms set out in the contract, can take action.

**Educational mission.** Education is a cornerstone in the bank's overall mission to help countries fight poverty. The World Bank's mission in education is to assist clients to improve access to relevant learning opportunities, use education resources wisely and fairly, and build stronger institutional capacity. More specifically, the bank works with national ministries of education to identify and implement the countries' strategic steps in order to provide access for all to quality education. The institution works in partnership with the client (or government) as well as other stakeholders, including bilateral-aid agencies, nongovernmental organizations (NGOs), and other members of civil society.

The long-term goal in education is to ensure that everyone completes a basic education of adequate quality, acquires foundation skills (literacy, numeracy, reasoning, and social skills such as teamwork) and has further opportunities to learn advanced skills throughout life, in a range of postbasic education settings.

At the beginning of the twenty-first century the bank draws upon four decades of experience in education with approximately 600 projects in 115 countries totaling \$26 billion. Although the focus of early projects was on building school infrastructure, increasingly the focus is on improving access to schooling, student attendance, and the quality of education once students are there. Concern for the adequacy of the education has led to greater emphasis on teaching quality and learning achievement. In addition, the concern about a greater demand on limited resources has precipitated a concern about efficiency, including the need for building the institutional capacity required to implement and sustain improvements.

The World Bank made its first loan for education in 1963, and the bank is now the largest single source of external financing for education in developing countries. Since 1980 the total volume of lending for education has tripled, and its share in overall

bank lending has doubled. The primary and secondary levels of education are increasingly important; in the fiscal years from 1990 to 1994 these levels represented half of all World Bank lending for education. Early bank lending for education concentrated on Africa, East Asia, and the Middle East, but at the beginning of the twenty-first century lending is significant in all regions. Girls' education is at the forefront, and increasing attention is being given to the educational needs of ethnic minorities and indigenous people. World Bank funds are used less for buildings and more for other educational inputs. The narrow project focus of the past is increasingly giving way to a broad sectoral approach.

The World Bank is strongly committed to continued support for education. However, even though bank funding now accounts for about a quarter of all aid to education, this funding still represents only about 0.5 percent of developing countries' total spending on the sector. Therefore, the World Bank sees its key contribution as advice or technical assistance, designed to help governments develop education policies suitable for the circumstances of their countries. Bank financing will generally be designed to leverage spending and policy change by national authorities. According to World Bank documents, future operations are expected to adopt a more explicit sectorwide policy focus to support changes in educational financing and management. Because of the need to consult key stakeholders, this strategy may increase both the resources and the time needed to prepare projects. In increasingly decentralized contexts, the stakeholders will include not only central governments but also other levels of government, as well as communities, parents, teachers, and employers. Donor cooperation is expected to extend to broad policy advice, as well as investment coordination.

**Programs.** World Bank programs encourage governments to make education and education reform a higher priority, particularly as economic reform becomes a permanent process. Projects will take more account of outcomes and their relation to inputs, making explicit use of cost-benefit analysis, participatory methods, learning assessments, and improved monitoring and evaluation. The share of basic education in total World Bank lending for education is expected to continue to increase, especially in the poorest countries, which receive International Development Association (IDA) funds. The bank emphasizes a sectoral approach that recognizes the

importance of each level of the education system, the interdependencies among levels, and the need to focus bank assistance in areas where the bank can be most useful in the particular circumstances of each country.

At the outset of the twenty-first century, World Bank-supported projects have paid greater attention to equity. This is especially the case in education for girls, for disadvantaged ethnic minorities, and for the poor—and consequently for early childhood education. Projects will support household involvement in school governance and in school choice through an increased emphasis on the regulatory framework for education, on quality-enhancing mechanisms such as outcome monitoring and inspection, on recurrent cost financing, and on demand-side financing mechanisms such as targeted scholarships for the poor, stipends for girls, and student loan schemes for higher education. They will encourage flexible management of instructional resources, complemented by national assessment and examination systems to provide incentives. In all these areas, bank-supported projects are expected to focus more intently on institutional development, including strengthening educational administration and appropriate financial mechanisms, and the bank's staff will pay increased attention to implementation.

**Criticism.** Criticisms of the World Bank emanate from across the political spectrum, from NGOs as well as committees of the U.S. Congress (e.g., the Meltzer Commission), and are strikingly similar in nature. Critics from the conservative right, such as the Meltzer Commission, argue that institutions such as the World Bank should stop the business of lending and instead serve as development agencies. Critics from the left contend that the bank does not alleviate poverty, but rather condemns citizens of poor nations to chronic debt. Both ends of the political spectrum have registered criticism of the need for reform, restructuring, and revisiting the mission of the bank, an increase in transparency and access to information, and the creation of an independent audit and evaluation unit. Another area of criticism revolves about the issue of conditionalities. The criticisms leveraged by NGOs include mention of the unreasonable restrictions and demands placed on countries by the multilateral development banks, including the World Bank.

### **The United Nations Children's Fund (UNICEF)**

The United Nations Children's Fund is an affiliated agency of the United Nations. It was originally established in 1946 as the United Nations International Children's Emergency Fund. UNICEF is concerned with assisting children and adolescents throughout the world, particularly in devastated areas and developing countries. Unlike most United Nations agencies, UNICEF is financed through voluntary contributions from governments and individuals, rather than by regular assessments. National UNICEF committees collaborate with UNICEF in various projects. UNICEF was awarded the Nobel Peace Prize in 1965.

UNICEF was created at the end of World War II to relieve the suffering of children in war-torn Europe. It continues to respond rapidly in crises, helping recreate a sense of stability and normalcy, reopening schools and establishing safe spaces for children when armed conflict, war, flood, and other disruptions occur.

The mandate of UNICEF confines its activities and operations to projects intended to benefit children and youth. Unrestricted donations to its budget permit UNICEF to provide assistance on a grant basis and to operate wherever it deems most necessary, independent of political or governmental influence. As part of its mission, UNICEF is committed to the notion that the survival, protection, and development of children are universal imperatives, integral to human progress.

UNICEF currently works in more than 160 countries, areas, and territories on solutions to the problems plaguing poor children and their families and on ways to realize their rights. Its activities vary according to the local challenges presented. They include encouraging the care and stimulation that offer the best possible start in life, helping prevent childhood illness and death, making pregnancy and childbirth safe, and combating discrimination and cooperating with communities to ensure that girls as well as boys attend school. UNICEF works on behalf of children's well-being in other ways. It supports National Immunization Days in the global effort to eradicate polio. It encourages young people to prepare for and participate in issues affecting them. It helps youth resist the onslaught of HIV/AIDS. UNICEF is out in the field at the local level and at the fore, bringing ideas, resources, strategies, and support to bear when and where they are needed most.

UNICEF strives through its country programs to promote the equal rights of girls and women and to support their full participation in the political, social, and economic development of their communities.

### **United Nations Educational, Scientific and Cultural Organization (UNESCO)**

United Nations Educational, Scientific and Cultural Organization is the agency charged with instituting and administering programs for cooperative, coordinated action in education, science, and the arts. The agency promotes education for all, cultural development, protection of the world's natural and cultural heritage, press freedom, and communication. The internal governance structure grants each member nation one representative in the decision-making body of UNESCO and one vote.

Within UNESCO is an International Bureau of Education (IBE) that is responsible for holding conferences on both broad and specific topics within education. This includes international, regional, and country-specific work, including research, technical assistance projects, the provision of data banks and publications to be used by professionals in international organizations, NGOs, ministries of education, and others.

The IBE Documentation and Information Unit has two main tasks: (1) the Internet site with its data banks, and (2) the Documentation Center. The unit manages the IBE's website in general and, to increase the relevance of its services to decision-making processes in member states and to the needs of educational practice, has developed several data banks, which are accessible and regularly updated on the website: (1) INNODATA—innovative projects in the fields of educational content, methods, and teacher education; (2) world data on education; (3) educational profiles—descriptions of national education systems; (4) national reports—full texts of reports presented to the International Conference on Education in 1996; and (5) country dossiers—a compilation of various sources on education. The data banks provide wider access to materials gathered and analyzed at the IBE. These materials are available for local consultation in the Documentation Center. UNESCO is heavily involved in numerous education-related endeavors, which include associated schools, the production of basic learning materials, drug-abuse prevention programs, early childhood and family development programs, pro-

motion of Education for All, educational facilities, e-learning, emergency assistance, girls and women in Africa, higher education, HIV/AIDS work, the literacy decade project, poverty eradication, primary education, science and technology, special needs education, street and working children, sustainable future, and technical and vocational education.

In addition, it provides more than half a dozen networks for communication among practitioners, policymakers, and people interested in education-related topics. UNESCO also works to build partnerships among key stakeholders in the education policy process, including intergovernmental organizations (IGOs), NGOs and other UN agencies.

A learning materials project, the Basic Learning Materials Initiative (BLM) is based on the premise that successful materials-development strategies must include mechanisms for generating a wide range of printed materials needed by a reading society. The development of a viable local publishing industry in each country is a necessary element of such strategies. The creation of a well-functioning system for the production and distribution of basic learning materials may be a first step toward creating a literate society and a market for books and other printed materials. This project seeks to address the scarcity of books, magazines, newspapers, and even posters in the developing world and to provide learning materials for the classroom environment, which is often the only place where children encounter words in written form. Textbooks provide the main resource for teachers, enabling them to animate the curricula and give life to the subjects taught in the classroom. The importance of books to the quality of education and rates of educational achievement has been well documented. But the goal of Education for All also involves the development of literate societies in the developing world and cannot be attained solely by providing quality learning materials to schools. If people are to stay literate, they must have access to a wide variety of written materials and continue the habit of reading in their adult lives.

Like any large organization, UNESCO has not been immune to controversy. In the 1980s it suffered accusations of mismanagement, which precipitated the withdrawal of three nations: the United States, the United Kingdom, and Singapore. Although the latter two have returned, UNESCO closed its Washington, DC, office definitively in 2001.

### **International Labor Organization (ILO)**

The ILO formulates policies and programs to improve working conditions and employment opportunities and defines international labor standards as guidelines for governments. It settles labor disputes and establishes guidelines for acceptable labor practices. In the field of education, the ILO is involved in issues regarding teaching personnel, including initial preparation, further education and recruitment of teachers, the conditions of employment and work, and the extent of teacher's participation in decision-making processes of public and private educational authorities that affect teaching and learning. The internal governance structure grants each member nation one representative in the decision-making body of ILO and one vote. The philosophical basis of all ILO operations is the equal tripartite partnership of labor, business, and government, with representatives of all three on most internal commissions.

The ILO established the InFocus Program on Strengthening Social Dialogue to strengthen and promote the practice of social dialogue in ILO-member states as a means of sharing information among labor administrations, trade unions, and employers' associations, as well as developing consensus on policy approaches and practical measures to ensure equitable social and economic development. Social dialogue is understood to include all types of negotiations, consultations, or exchange of information between or among the tripartite and bipartite partners on issues of common interest relating to economic and social policy. As such, it plays a pivotal role in identifying the important labor and social issues of the ILO's constituents and in realizing fundamental principles and rights at work promoted by the ILO.

### **World Health Organization (WHO)**

The World Health Organization is the international directing and coordinating authority for information on international health work, which strives to bring the highest quality health to all people. Health is defined in the WHO constitutions as a state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity. In support of its main goal, the WHO works to promote technical cooperation; assist governments at their behest to strengthen health services, to provide appropriate technical assistance and, in emergencies, necessary aid; to stimulate and advance work on the

prevention and control of epidemic, endemic, and other diseases; and to promote, in cooperation with other specialized agencies, the improvement of nutrition, housing, sanitation, recreation, economic or working conditions, and other aspects of environmental hygiene. The internal governance structure grants each member nation one representative in the decision-making body of WHO and one vote.

As part of an educational mission of sorts, the WHO works to promote and coordinate biomedical and health services research. It also promotes improved standards of teaching and training in health, medical, and related professions.

The WHO conducts numerous health-education programs for the benefit of health care professionals and health care beneficiaries. Such health-education programs include, for example, teaching medical students about diarrheal diseases, programs to prevent and reduce the use of tobacco, and health education in food safety. The role of education at the WHO is to aptly disseminate information about ways to prevent and cure disease.

The WHO serves as a conduit to numerous sources of health and medical information as well as health initiatives. The WHO Global School Health Initiative, for example, seeks to mobilize and strengthen health and education activities at the local, national, regional, and global levels. The initiative is designed to improve the health of students, school personnel, families, and other members of the community through schools. Another example is that of the WHO Healthy Cities Project in which attention is given to the principle that health can be improved by modifying living conditions, that is, the physical, environmental, social, and economic factors that affect or determine people's health. The home, the school, the village, the workplace, or the city are all places or settings where people live and work. Health status is often determined more by the conditions in these settings than by the provision of health care facilities.

The WHO has extended collaboration with a number of organizations. One such example is WHO's collaboration with the Industry Council for Development (ICD) and the International Life Sciences Institute (ILSI), both NGOs in official relations with WHO. Some of their joint activities include (1) the Second Asian Conference on Food Safety; (2) Hazard Analysis Critical Control Point training in several countries; (3) training of nutri-

tionists in food safety in Indonesia; and (4) development of a food safety program in Indonesia.

### **Food and Agriculture Organization of the United Nations (FAO)**

The Food and Agriculture Organization of the United Nations is an intergovernmental, multilateral organization created to boost standards of living through improving nutrition, agricultural productivity, and the conditions of rural populations. This is accomplished through development strategies and projects undertaken in cooperation with both national governments and other organizations. The FAO is the largest of the many specialized organizations in the UN system. The FAO's 180 member states and one member organization, the European Community, form the FAO Conference, which meets every two years to determine policy and approve a budget. Each member nation has one representative at the conference. The conference also elects a council of 49 member nations, which form the executive organ of the organization. The council meets at least three times between each conference session, and each of the 49 member nations has one vote. Council representatives are selected for three-year terms.

Founded in 1945, the FAO moved its headquarters from Washington, DC, to Rome, Italy, in 1951. The FAO has eight departments: Administration and Finance, Agriculture, Economic and Social, Fisheries, Forestry, General Affairs and Information, Sustainable Development, and Technical Cooperation. Education programming falls primarily under the control of the Sustainable Development department.

The Sustainable Development (SD) department has four main components: communication for development, education, extension, and research and technology. According to the FAO, it gives priority to basic education through promoting and supporting initiatives aimed at improving children's health and capacity to learn, using technology and distance education, educating rural girls and women, and promoting lifelong education and skills for life in a rural environment. However, the SD expands beyond basic education to improve the quality of all levels of education by supporting curriculum development and teacher training. The FAO tries to respond to the needs of farmers and rural communities by assisting agricultural universities to better serve farmers and to interact with basic and second-

ary educators. In addition, the SD encourages debate on future trends in education and training in agriculture, rural development, and food security; researches practices and case studies; supports partnerships for education for rural development; and provides technical assistance for the training of policymakers and managers.

Youth programming includes a Youth Network for Food and Security and various exchange programs. The goal is to provide education and training to prepare future farmers and community planners.

The SD agriculture extension service does much of its work through universities and extension-research-education linkages. This involves fostering interaction between academic staff and students, with members of local farming communities, and supporting collaborative problem solving.

The FAO further assists in human-resource capacity building through efforts to improve literacy, health and nutrition, and economic well-being. The FAO Nutrition Education and Training Group works with governments to provide training about nutrition and dietary habits. The Policy Assistance Division assists with capacity building through policymaker training.

A 1997 FAO report available on the FAO Internet site in the SD area titled "Agricultural Education and Training: Issues and Opportunities" outlines some of the changes that have affected agricultural education. These include advances in communications technology, decreasing proportions of economically active populations dependent upon agriculture and an increasing marginalization of agriculture and rural life, population increases, scientific progress, changing market demands and employment opportunities, and the increasing recognition of the roles of women in the sector.

### **The United Nations High Commissioner for Refugees (UNHCR)**

The United Nations High Commissioner for Refugees helps resettle people who have left their home countries due to a fear of persecution and who either do not want to or cannot return to their homelands. The UNHCR has two basic goals. First, it aims to protect refugees, and second, it tries to help refugees normalize their lives again. According to the UNHCR women, children, and the elderly comprise 80 percent of the typical refugee population, and the organization attempts to meet their basic needs. For children, this includes education projects.

The UNHCR views education services as meeting psychological needs; restoring structure to children, families, and communities; and helping prevent conflict by providing alternatives to joining armed groups. The UNHCR funds governments and NGOs to construct, rebuild, and operate schools for children and adolescents. Many of these projects are small-scale, quick-impact projects of building and repairs. Although most of the UNHCR's activities are focused on primary and secondary schools, it also provides for literacy classes and vocational training for adults.

The UNHCR tries to use familiar languages and the curriculum from refugees' home countries. In some instances, refugee status might be long-term, and in those cases the UNHCR combines curriculum from countries of origin and the host countries. In cases where a host country forbids education of refugee youth, the UNHCR negotiates on behalf of the refugees.

Beyond direct assistance to refugees and their teachers, the UNHCR also provides information and curriculum materials for teachers worldwide. These resources are provided with the goal of expanding awareness of historical issues and current refugee situations. These efforts can be preventive and build assistance possibilities.

The UNHCR was established with a three-year mandate in 1950 to help resettle refugees left homeless in Europe following World War II. The UN has extended the mandate every five years. It began as a small agency and gradually expanded to offices in 120 countries. It has faced resistance from some countries either unwilling to provide assistance to fleeing civilians or willing to help only temporarily.

*See also:* INTERNATIONAL EDUCATIONAL AGREEMENTS; NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS.

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## INTERNATIONAL EDUCATION

In the late 1970s a course on international education at the University of Chicago included a series of readings that seemed to fall into the following types of materials. First, there were references to some of the nineteenth-century travelers—Horace Mann, Mathew Arnold, Joseph Kay—who brought back impressions of education in foreign lands for domestic consideration. Second, there were references to some who tried to systematize the results of these kinds of impressions—Michael Sadler, Isaac Kandel, George Bereday. Third, there were references to great minds drawn from philosophy or from the social sciences generally that were of interest to comparative education as well as to many other lines of inquiry—Plato, Leo Tolstoy, Max Weber, Émile

Durkheim, Clifford Geertz, Edward Shils, Stuart Eisenstadt, and David Apter. Either they had thought about education, or they were contributors to compelling theories in which education played a role—in modernization, tradition, center and periphery, economic development, civic culture, and stratification. Fourth, there were references to those who had begun to measure and estimate what it was about education that seemed to make a difference in society—Philip Foster, Torsten Husén, Alex Inkeles, Yuri Bronfenbrenner, Edward Denison, and John McClelland. The purpose of these figures was to study education as though it were like any other social function—religion, law, or medicine, for instance. They were curious about whether education's role and function were similar around the world and why. And last, there were individuals who helped “plan” education's effects—Fredrick Harbison and Charles Myers, Neville Postlethwaite, Benjamin Bloom, Charles Havighurst, James Coleman, C. Arnold Anderson, and Mary Jean Bowman.

Readings by and about these figures constituted “the literature” in the late 1970s. The field, however, was greater. Attending meetings of the Comparative and International Education Society were representatives of various foundations and public agencies who took a keen interest in the field and the society itself. The conferences included scholars from anthropology, political science, public administration, comparative literature, sociology, and regional area studies—Africa, Asia, Latin America, and the Middle East—linked by a common interest in education.

By the early twenty-first century, the major interdisciplinary programs at Stanford University and at the University of Chicago had closed, and the level of international development assistance to education in developing countries continued to decline. Was there less interest in the field than twenty-five years previous? Is international education at risk in the early twenty-first century? Where is international education headed?

### **International Education: More but Different**

There is more written in the early twenty-first century concerning international education than was written in the 1970s. One reference system of public policy issues shows 34 entries on international education in the 1970s and 155 ten years later, a nearly fivefold increase. Another reference system, which includes formal articles and publicly presented papers, shows a substantial level of production of 478

entries in the 1970s, compared to 2,125 ten years later.

Both systems exclude the many and varied internal reports from public agencies, such as the World Bank, the Inter-American Development Bank, the Asian Development Bank, the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the United Nations Children's Fund. There were, for example, 33 World Bank education sector reports produced annually during the 1970s and almost four times that level (123) ten years later, going from 1 in 1972 and 1975, to 10 in 1977, to 12 in 1978, to 17 in 1981 and 1985, to a high of 24 in 1992. The current average is about 20 per year.

The U.S. federal government changed too. Out of more than 3,000 research projects sponsored by the federal government on adolescence and youth in 1974, only one had anything to do with international education. Moreover, the agency sponsoring this particular study (the National Institute of Education) made some effort to underplay its existence for fear of being scrutinized by a congressional committee as being frivolous.

For education, the rise in oil prices in 1974 became a “second *Sputnik*.” Rightly or wrongly it was widely believed that the United States was “behind” in some fundamental way, motivating local demands for more information. These came, for instance, from the offices of state governors in Tennessee, South Carolina, Kentucky, and Washington. Questions about international information began coming from the National School Boards Association, the National Governors Association, the National Educational Association, the American Federation of Teachers, the Council of Chief State School Officers, and the National Association of Manufacturers. This demand for answers to “what's wrong?” led to the 1983 publication of *A Nation at Risk*, a report by the National Commission on Excellence in Education that led to a significant increase in the demand for more international information on education and more reliable information.

The year after the publication of *A Nation at Risk*, there was an acrimonious meeting of the board of directors of the Center for Educational Research and Innovation (CERI). The U.S. delegate pushed for the Organisation for Economic Co-operation and Development (OECD) to be engaged in a project collecting and analyzing statistical education “in-

puts” and “outcomes”—quantifiable information on curricular standards, costs and sources of finance, learning achievements on common subject matter, employment trends, and the like. The reaction among the staff of CERI was one of shock and suspicion. Many thought that generalizations about education were confined to individual cultures, and hence that it was unprofessional to try and quantify education processes or results. They believed that the process of quantification would oversimplify and misrepresent a nation’s educational system. Perhaps more importantly, some suspected that the demand for such information would shift as soon as the political party of the U.S. president changed.

A common European mistake has been to rely primarily on traditional central ministries of education for information. Europeans traveled to the United States to do primary source research on education only sparingly, and they often assumed that the structure and policies were settled in a manner closely resembling their own experience.

The point is that this common European mistake has become less common. Since the 1970s there has been a growth in demand and in sophistication concerning international educational information on both sides of the Atlantic. From the European side, they have learned that the demand for better and more reliable data was not coming exclusively from a single president or a single political party. It was coming, in fact, from educational consumers and grassroots interests, from parts of the society and the educational system over which Washington had no control, and to which political leaders in any democracy had no choice except to respond.

By the early twenty-first century, the OECD’s publication on education indicators was being published in French and English and constituted the most widely circulated publication in OECD history. New projects have been launched on academic achievement, adult literacy, and the use of technology in education. Supported by the World Bank and UNESCO, the World Education Indicators project has expanded to include seventeen non-OECD countries, including China, Brazil, and India, allowing the OECD indicators to claim that they are now representative of the majority of the world’s education systems.

There have been four Nobel prizes dealing with human capital issues (awarded to Edward Dennison, Jan Tinbergen, T. W. Schultz, and Gary Becker).

There has been a flurry of reports on the status of education issued by international agencies in the early 1980s onward. There have been two meetings of heads of state on international educational issues: the Education for All meeting held in Jomtien, Thailand, in March 1990; and the World Summit for Children, which took place in New York City in September 1990. There are three new educational boards of the U.S. National Academy of Sciences and major new research initiatives from the General Accounting Office, the Office of Technology Assessment, various congressional committees, and the Carnegie, Spencer, Ball, and Soros Foundations. There is an ongoing cooperative effort among the donors to assist African education. This is, of course, in addition to the many new efforts in Europe and Asia. The Japanese initiated an important fund to assist human resources in developing countries. The ministers of education from fourteen nations in Asia and North America have decided to pool resources on projects having to do with curriculum requirements and teacher certification. These resources are not classified as foreign aid; instead, they come out of ministry of education budgets. This is also characteristic of the Dutch CROSS (Coordination Dutch-Russian Cooperation in Education) Program, which is designed to assist Russian education. It is justified on grounds that Dutch educational officials have something significant and unique to offer the Russians in the fields of educational management, educational publishing, and assessments of learning achievement and educational examinations and standardized testing, and that the Dutch can themselves learn equally from the cooperative effort. The British Council is also assisting Russian educators with studies and analytic resources. The British Know How Fund is assisting eastern Europeans with studies of the “textbook sector”; the Swedish and the American academies of sciences are assisting higher education and research capacity in the former Soviet Union, as is the European Union. Perhaps unique, though, is an effort led by the chancellor of the State University of New York to provide high-quality advice in comparative education to the minister of higher education in Russia.

These efforts, and the many publications rapidly emerging from them, are not isolated. From a low point of the National Institute of Education’s fear that their one comparative education project would be seen as a waste of resources in 1974 has emerged

a new industry of international education initiatives and projects.

### **Quality of International Education Information**

The international education questions coming from public authorities reveal new sophistication. No longer is thinking confined to “Why Johnny cannot read as well as Ivan.” No longer are the interests of public officials confined to that of an Olympic finish. This increasing sophistication is not uniform, but the kinds of questions being asked in the early twenty-first century cover a much wider spectrum of comparative educational endeavors. The staff of congressional committees ask increasingly about teaching and organizational techniques, types of salary incentives, and the methods of teaching children racial and ethnic tolerance. Questions concern the arts, the system of finance and management, morals, culture, language, and ethnicity. It is now (almost) normal for U.S. political figures to appreciate that political leaders and educators from other countries are not necessarily interested in the exact same questions and problems that interest Americans. Only infrequently does one find the “marble syndrome” of educational politics (if they are not interested in my game and my rules, I go home); rather, there is an appreciation that educational research and the gathering of educational statistics is a natural and normal part of diplomacy. For example, the United States remained in an (expensive, publicly financed) international study of computer literacy even though it was felt there was not very much to learn from other countries. The reason it remained was because it was felt that other countries wanted to learn from the United States. Similarly, the United States lowered its expectations of international research on educational standards with the Asia-Pacific Economic Conference in lieu of the Asian nations’ need to learn about moral education and the teaching of national consensus building. It has become understood that the Japanese may wish to learn about diversified curriculum from the United States, that Russians wish to learn about the teaching of democracy with a heterogeneous school population, and that all societies want to know more about techniques of local management and local finance—all of which are areas in which the United States is not “behind.”

Is it possible that Americans are showing signs of international tolerance and understanding in the field of education? Is it possible that Americans are coming out of their long-held tradition of localism

and educational isolationism? It may be too early to make firm conclusions. But the diversity and sophistication in the kinds of questions being asked by public authorities has increased so dramatically that at times one has the sense that nearly every social science issue on the comparative education reading list the early 1970s seems to be coming of age and into maturity—civic culture and governance, the complexity of human capital theory, stratification and cultural integration, the need for tradition as well as economic development. In every sense, the new century may be a “golden age” for international education.

### **Why Interest in International Education Is Growing**

Some changes come about suddenly and have an immediate worldwide impact. In 1999 Thomas L. Friedman suggested that this is the case with respect to the Internet. Other changes are glacial in the speed by which they are recognized, yet in terms of impact are no less profound. Such is the case with respect to education issues and their shift from local to international relevance.

Significant shifts have affected the governance of education and, hence, the character of international education. These include: the globalization of social and economic forces; the shift to mass education, including mass higher education; the spread of democracy to new areas of the world; the mismatch between education objectives and fiscal capability; the demands placed on the systems to attract high-level talent in terms of international students and faculty; the urgent demands of technology; the new efforts to systematically provide sources of cross-national statistical information; the pressures to create a level playing field in terms of international trade in education services; and the new demands for education to influence social cohesion.

In the 1970s and 1980s governments often determined economic investments, and foreign aid frequently was the dominant source of development capital for middle- and low-income countries. By the early twenty-first century, transfers of private capital far outstripped public investments. A future computer manufacturing plant might be located in Nashville, Tennessee, Northern Ireland, or southern Italy; a textile plant in Bangalore, India, or Sonora, Mexico; a farm for winter fruit in Florida or Chile. What determines the choice of where to invest? Investment capital flows to one or another location on

the basis of many factors—taxation policy, freedom to repatriate profit, labor productivity, labor cost, and social stability. The latter three are heavily influenced by education and by the success of local education systems. Hence, the demands for economic growth and prosperity help determine that pressures on education systems to perform are similar.

In the 1960s the central education representatives were often the sole representatives. Education in the early twenty-first century is frequently a decentralized activity with many new decision makers. Local authorities increasingly drive budgets and policy priorities. This is particularly evident in Brazil, Mexico, India, Russia, Nigeria, and other federal systems; but it is also evident in France, Indonesia, and Malaysia, which had been traditionally centralized. Local states and communities increasingly evaluate their own program innovations, initiate their own research projects, and review their own policies. Local or administrative initiative is often a leading force in centralized education systems as well. Local business and community groups, industries, and nongovernmental organizations increasingly influence policymakers as well as educational authorities. In higher education and private education, where policy decisions are increasingly the responsibility of individual institutions, these institutions are involved in international relations on their own. Educational software companies, publishers, and corporate training firms are ever more active and are demanding new and current information on the size of the educational markets in many countries. Taken together these new categories of participants have deeply affected the vision and the expressed interests of the traditional education authorities.

### **The Influence of Democracy on Educational Governance**

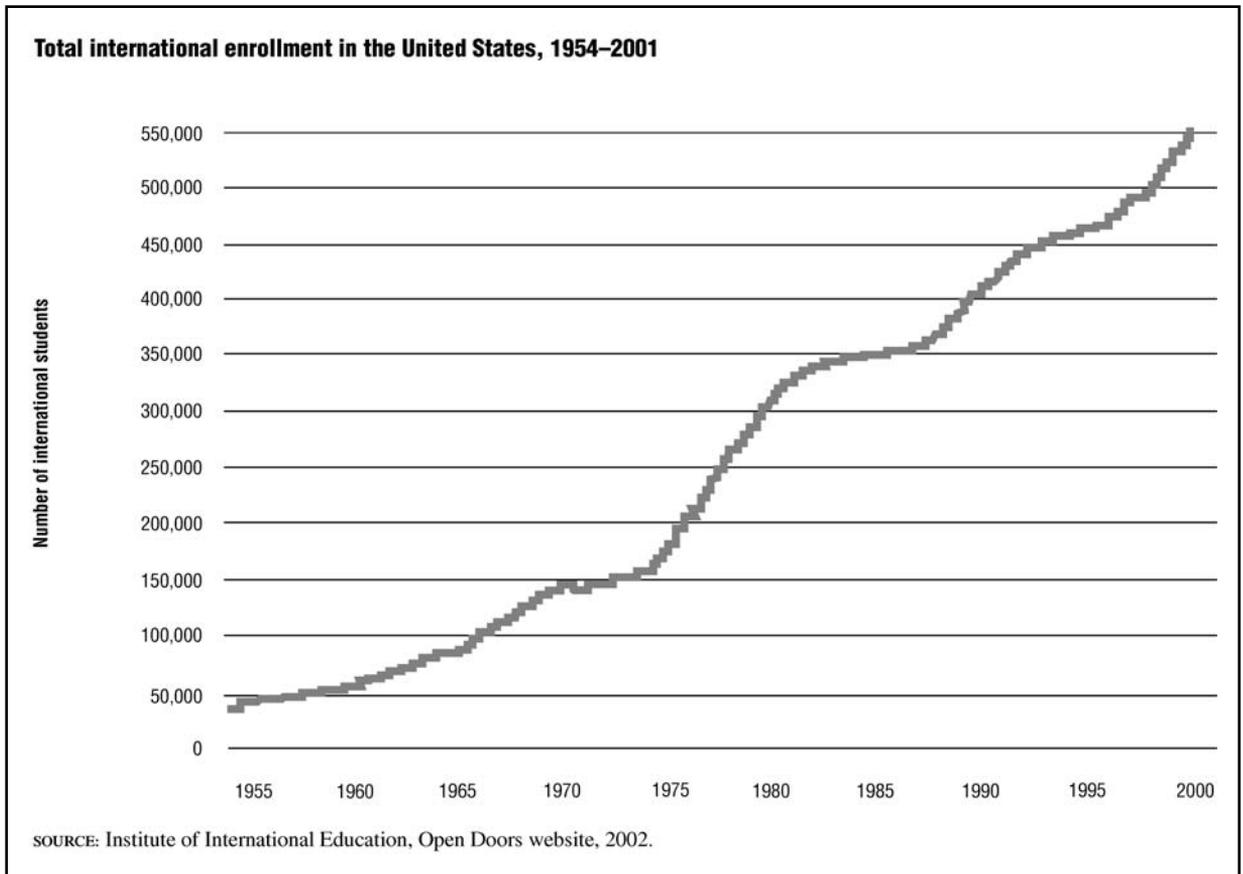
Under autocratic governments, there was little need to explain education policy to the public. Educational policy consisted of edicts of intent and orders for administrative action that may or may not have been carried out effectively. Mechanisms for public debate did not exist. The performance of educational institutions was not open to public scrutiny. Data and other information on program effectiveness were not required. The curriculum was imposed; the goals of civics and history were decided unilaterally. If problems occurred, public officials were not held accountable.

New democracies have emerged in South Africa, Europe and Central Asia, Latin America and the Caribbean, and East Asia. With democracy, the requirements of educational management shift. The effectiveness of educational institutions is open to public scrutiny for the first time, and education policy is the subject of heated public debate. To be effective, policy requires public awareness and consensus prior to any announcements. Institutions have come to be in the position of competing for new resources, new faculty, and new curricula to keep abreast of quickly changing public demands.

Educational systems in the new democracies are faced with problems even more serious than that of efficient management. In many countries, curricular authority has been localized to the region or the local school. In some instances, such as in Bosnia, this has led to serious disagreements over the role of the school itself. Such disagreements have included the content of history and civics, the use of pedagogy counterproductive to interethnic harmony, and the existence of barriers to the equality of educational opportunity for particular ethnic and social groups. In many instances, schools and school systems have been engaged in performing functions exactly the opposite of their traditional intent. Instead of resolving differences across social groups, schools have been used to exacerbate those differences.

### **The Influence of Financial Austerity on Educational Governance**

School systems differ from one country to another, but all share certain characteristics. All school systems share the universal struggle to balance the rapidly changing demands for improvement with the equally problematic realities of fiscal constraints, a permanent and unsolvable dilemma. The demand for mass access, higher levels of equity (for the socially excluded), and higher quality (for everyone) inevitably exceeds financial capacity. These universal demands make all schools and all school systems conscious consumers of educational policy innovations. The key difference in the early twenty-first century, compared to two decades previous, is the growing recognition that relevant innovations may emerge from anywhere; they are not necessarily local or even domestic. This new era in international education is led by the burgeoning realization from active consumers—teachers, school and university managers, and system administrators—that their success may well depend on having the most com-

**FIGURE 1**

pellling innovations, and that they are quite capable of making their decisions on whether geographical origin is a critical factor or not.

As a result, new policies have become common in widely disparate localities—including such policies as focusing on the quality and relevance of teaching materials that are procured from an open and competitive market; developing a professional force in which more effective teachers receive higher compensations; conducting research that allows for transparent comparisons that are available to the public; and securing financing from multiple sources to maximize local investment without abrogating equity. Educational managers around the world have become focused on common problems such as school-based management, teacher incentives, multicultural education, civic responsibilities, tracking, curriculum depth, individualized instruction, fair testing and assessment, special learning problems, and communications with the public.

Higher education has become mass education—it is no longer only for the elite. In the 1960s, in no

country in western Europe was more than 9 percent of the age cohort enrolled in higher education; by the early twenty-first century, however, no country in the region enrolled fewer than about 35 percent of the age cohort. This shift has been associated with common, if not identical, fiscal and administrative pressures. These in turn have generated demand for creative policy reforms. Demand exists for innovations in institutional efficiency in terms of student–faculty ratios, judicious use of new technologies, efficiency in generating contractual outsourcing of traditional functions, department-based budgeting, marketing of university copyrights, and attention to the problems of international trade in education commerce.

In terms of size, the U.S. education system accounts for less than 5 percent of world enrollment. Together, industrialized countries account for about 17 percent. The remaining 83 percent of the world’s enrollments are located in the middle-income and developing countries, with 57 percent enrolled in East and South Asia. Each of these “nonindustrial-

TABLE 1

<b>Source of funds for international students in the United States</b>				
<b>Primary Source of Funds</b>	<b>All foreign students (percent)</b>	<b>Under-graduate (percent)</b>	<b>Graduate (percent)</b>	<b>Other (percent)</b>
Personal and family	66.9	80.7	46.9	65.2
U.S. college or university	19.8	8.4	39.9	6.1
Home government/university	4.0	3.6	4.5	3.9
Private U.S. sponsor	2.5	2.8	2.3	1.0
Foreign private sponsor	2.4	2.7	2.1	2.1
Current employment	2.4	0.4	1.4	18.9
Other sources	1.9	0.6	1.4	1.3
U.S. government	0.6	0.4	0.9	0.8
International organization	0.4	0.3	0.5	0.8
Total number of students	547,867	254,429	238,497	54,941

SOURCE: Institute of International Education, Open Doors website, 2002.

ized” countries is changing rapidly. As economies grow, more is spent on students. Unit expenditures across the world doubled between 1980 and 1994, but different regions showed different rates of growth. Expenditures doubled in the United States, but they increased by 135 percent in Europe and 200 percent in East Asia. In terms of challenges and dilemmas, the world’s education systems share more than ever before.

These common challenges imply several things. First, the demand for innovative policies in education is growing rapidly, and their source is no longer confined to one country’s experience. This is particularly important for the United States, which has a high demand for policy innovation, yet a small portion of the world’s education experience from which to draw lessons. To attain excellence today the education profession must keep abreast of relevant innovations and educational experience from wherever they derive.

But these trends imply something else as well. With the common decentralization of decision-making, the client for educational research and policy innovation is not limited to central or public authorities. There are many different demands for good ideas and information, and therefore many different clients to decide what is relevant. Local school officials in Minnesota, for example, have opted to join international studies of academic achievement so they might compare their educational performance with Sweden and Singapore. The American Federation of Teachers has studied the degree to which American high-stakes tests compare with those in Europe and Asia. These examples illustrate

that traditional notions of what is relevant to local school systems are constantly being retested with new information but are also in the hands of an increasingly diverse set of local educational clients and decision makers.

### **The Influence of International Students on Education Policy**

In 1960 there were only 50,000 international students in the United States. The number of international students in the United States rose steadily thereafter, reaching a record high of 549,000 in 2001 (see Figure 1). Final year expenditures on tuition and fees by international students in the United States reached \$11 billion in 2001. Of those expenditures, approximately 66 percent were derived from personal and family sources. At the undergraduate level (i.e., for 254,000 students), family support accounted for 81 percent (see Table 1). While American higher education may be expensive by world standards, a large number of families outside the United States can afford it. Because of its potential, international education is now classified as a traded service by the U.S. Department of Commerce and has become the nation’s fifth-largest service export.

More than one-half of the foreign students in the United States come from Asia, with students from China and India together accounting for more than 25 percent alone (see Table 2). Most are in the United States to study for utilitarian purposes. The proportion of international students studying humanities is only 2.9 percent; fine arts, 6.2 percent; and social sciences, 7.7 percent. Almost one-half of the foreign students are “crowded” into three fields:

TABLE 2

**International students in the United States by leading country of origin**

Place of Origin	1999–2001	2000–2001	Percent Change	Scholar Total
World Total	74,571	79,651	6.8	
China	13,229	14,772	11.7	18.5
Japan	5,460	5,905	8.2	7.4
Republic of Korea	5,015	5,830	16.3	7.3
India	4,929	5,456	10.7	6.8
Germany	5,016	5,221	4.1	6.6
Canada	3,578	3,735	4.4	4.7
United Kingdom	2,916	3,352	15.0	4.2
Russia	3,195	3,253	1.8	4.1
France	3,076	3,154	2.5	4.0
Italy	2,108	2,226	5.6	2.8
Spain	1,729	1,706	-1.3	2.1
Brazil	1,273	1,315	3.3	1.7
Australia	1,090	1,212	11.2	1.5
Israel	1,108	1,205	8.8	1.5
Taiwan	1,200	1,196	-0.3	1.5
Netherlands	978	1,037	6.0	1.3
Turkey	898	918	2.2	1.2
Mexico	959	898	-6.4	1.1
Poland	805	862	7.1	1.1
Switzerland	774	767	-0.9	1.0

SOURCE: Institute of International Education, Open Doors website, 2002.

19.4 percent are in business and management, 15.2 percent in engineering, and 12.4 percent in mathematics and computer sciences. Human resources are becoming more popular, with health at 4.1 percent and education at 2.6 percent of the total (see Table 3). Just as demand is growing for students to study in the United States, demand by American students to study abroad, even temporarily, is growing. From 1985 to 1999, the number of American students studying abroad increased from 45,000 to 140,000 (see Figure 2). These figures reflect high demand. But is the demand for higher education institutions in the United States as high as it is for higher education institutions outside the United States? In other words, in terms of attracting international students, does U.S. higher education continue to be competitive with higher education elsewhere?

In fact the trade in higher education outside the United States is growing faster. Since 1990 the share of international students studying within the United States dropped from 40 percent to less than 30 percent. And as a proportion of the overall student population, in 2001 the international student population in the United States (3.9%) was not that much greater than it was in 1954 (1.4%). As a percentage of the overall student population, in fact, the United States

ranked twelfth among OECD countries in 1998. The international student proportion in Switzerland that year was 16 percent; in Australia, more than 12 percent; in Britain, about 11 percent; in Germany, about 8 percent; and in France, about 7 percent (see Figure 3).

These figures suggest that international education has become openly competitive and that the United States does not have as large an advantage as it once did. The figures would also suggest that given their proportion of the overall student population, the “impact” of international students in the United States is modest by comparison to the situation that some of its trading partners face.

### Cross-National Sources of Statistical Information

In spite of the inevitable political emphasis on the Olympic nature of cross-national studies, countries are beginning to participate because the lessons derived have proven to be insightful and to stimulate new questions and ideas for improvement. Many have learned that the lessons in one country are not identical to the lessons elsewhere. For example, with respect to the Third International Mathematics and Science Study (TIMSS), Americans drew conclusions about the curriculum being “a mile wide and an inch deep” (Schmidt, p. 3), but Colombians drew conclusions about the range of age within each grade level; Latvians drew conclusions about differences between Latvian and minority students. All countries seemed to draw conclusions about the manner in which subject matter is sequenced. Moreover, it is common to sponsor reanalyses of the datasets, which often result in new insights. For instance, Americans must now ponder why their disadvantaged perform worse than the disadvantaged in other participating countries and why school resources are more inequitably distributed than in other countries.

International standards have been greatly enhanced by the procedures and the results of cross-national studies. Achievement studies around the world have learned from the three different elements used in TIMSS: what one expects to be learned, what has been taught, and what has been learned. The new studies have tried to include case examples and videotape episodes, as well as both cross-sectional and time-series surveys. This experience has helped mitigate the long-standing unproductive battles between quantitative and qualitative evidence; all evidence

TABLE 3

International students in the United States by field of study				
Field of Study	1999–2000 Foreign Students	2000–2001 Foreign Students	Percent of Total	Percent Change
Total	514,723	547,867	100.0	6.4
Business and management	103,215	106,043	19.4	2.7
Engineering	76,748	83,186	15.2	8.4
Mathematics and computer sciences	57,266	67,825	12.4	18.4
Other (general studies, communication, law)	53,195	57,235	10.4	7.6
Social sciences	41,662	42,367	7.7	1.7
Physical and life sciences	37,420	38,396	7.0	2.6
Undeclared	32,799	35,779	6.5	9.1
Fine and applied arts	32,479	34,220	6.2	5.4
Intensive English language	21,015	23,011	4.2	9.5
Health professions	21,625	22,430	4.1	3.7
Humanities	16,686	16,123	2.9	-3.4
Education	12,885	14,053	2.6	9.1
Agriculture	7,729	7,200	1.3	-6.8

SOURCE: Institute of International Education, Open Doors website, 2002.

has its strengths and weaknesses, and the principles governing the use of data have become largely understood to be universal. International standards of data collection, reporting, quality control, sampling, the impartiality of questionnaire design, first proposed by the authorities within the United States, have been established and widely accepted, and this has led to questioning and then strengthening of the international institutions that support education data collection and dissemination.

### Future Issues

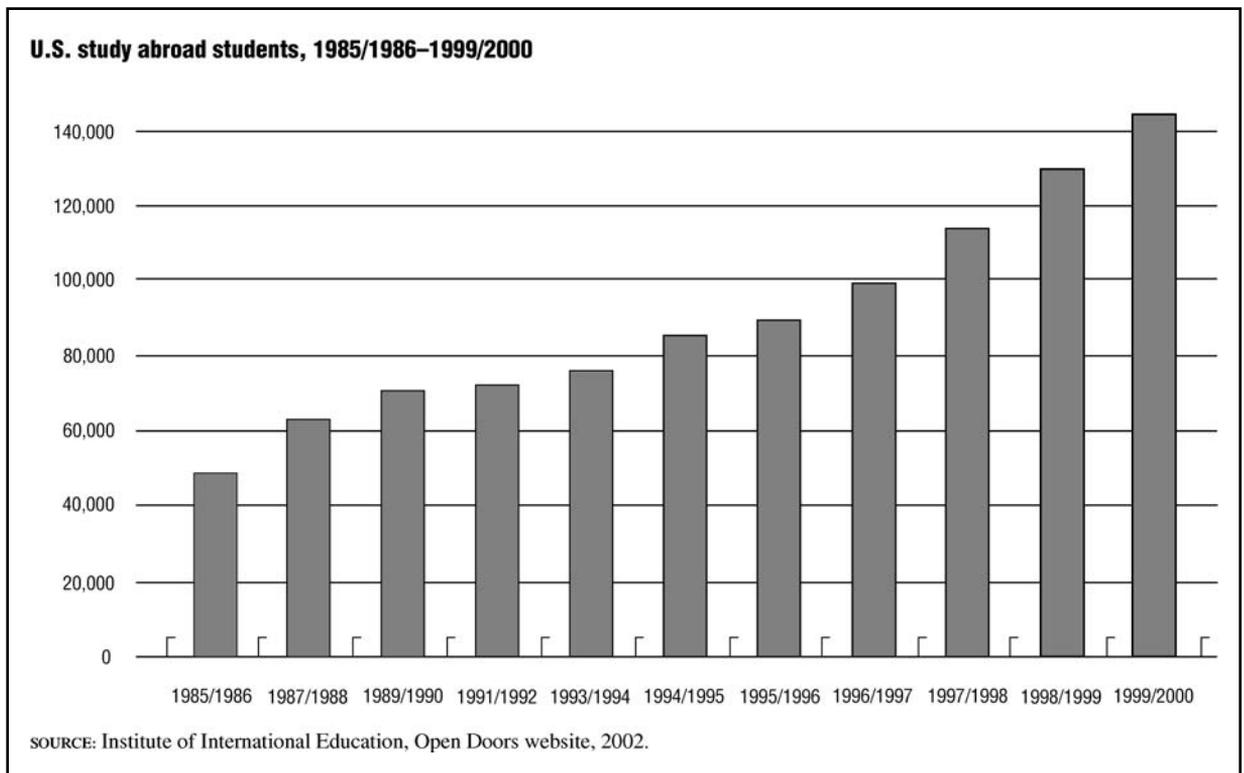
The institutional structure underpinning international education data collection remains fragile. There is no consensus about how financial support for international data collection should be obtained in a fashion that is fair to all countries. Now considered a trade good, education is the source of debate surrounding the World Trade Organization. Are there indeed barriers to the trade in education, or is education a “cultural good” falling within the purview of each nation independently? It is clear that as a separate field of study, international education has shifted. No longer is it viable as an esoteric field of study. Instead, international experience is becoming a normal part of all fields of study—curriculum, administration, human development, and pedagogy. But graduate schools of education, particularly in the United States, are not well-equipped to respond to this new set of demands and will have to undergo a significant, and perhaps painful, adjustment to catch up with the field itself.

*See also:* DECENTRALIZATION AND EDUCATION; GLOBALIZATION OF EDUCATION; INTERNATIONAL ASSESSMENTS; INTERNATIONAL EDUCATION STATISTICS; INTERNATIONAL ISSUES OF SOCIAL MOBILITY OF UNDERPRIVILEGED GROUPS; INTERNATIONAL STUDENTS; POPULATION AND EDUCATION.

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FIGURE 2



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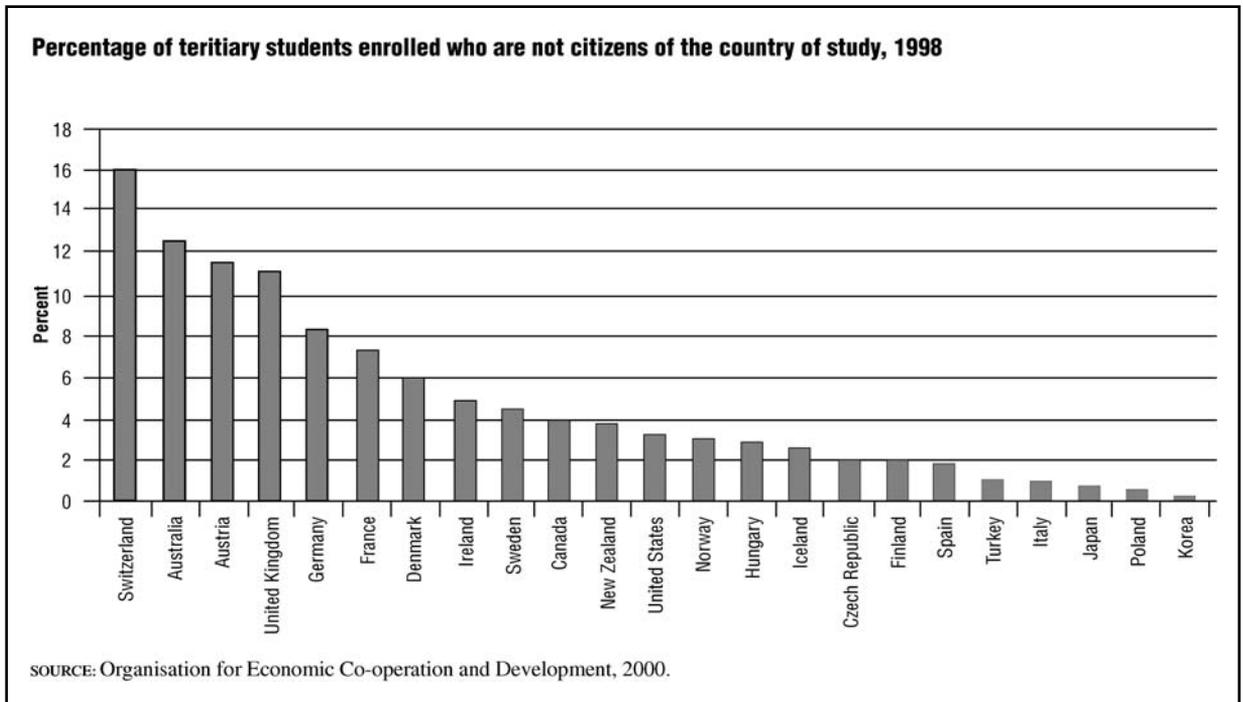
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FIGURE 3



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STEPHEN P. HEYNEMAN

## INTERNATIONAL EDUCATION AGREEMENTS

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The term *international agreement* refers to an international treaty, declaration, or recommendation adopted by the governments of many different countries in order to set out certain principles or courses of action in a selected field, or set of fields, of mutual interest. Countries sign international agreements on many things, such as travel and health regulations, telecommunications, air and ship navigation, and labor practices. The earliest such agreements in the field of education were adopted in the period between the first and second world wars, and many more have been adopted since then. Most

have their origins in the work of international organizations. In some cases they form part of broader agreements that also cover other fields, as in the case of the Universal Declaration of Human Rights (1948). Broadly speaking, their purposes and scope reflect the context of international relations prevailing at the time they were drawn up.

An analysis of these agreements could take any one of several alternative approaches. A historical approach is used here in order to draw attention to both the accumulation of these agreements over time and the possibility that countries have found it easier to adopt new agreements than to implement old ones. The focus is on agreements that are basically worldwide in scope, and not just confined to countries in a particular geographical region. The full texts of all the agreements specifically mentioned here can be consulted at the websites of the United Nations and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

### International Agreements in General

International agreements can be classified according to the level or degree of commitment that countries formally accord each agreement's implementation. The most demanding level is that of an *international treaty*, sometimes referred to as an *international convention* or *covenant*. Treaties typically require a formal signature by representatives of the countries concerned, and they are considered, under international law, to be legally binding on the countries (states) that ratify (accede to) them. The countries that are party to an international treaty normally need to ensure that the terms or provisions of the treaty are reflected in their national legislation.

Certain international treaties have as their purpose the setting up of an intergovernmental organization. An example is the treaty signed in San Francisco in 1945 that set up the United Nations. Another example is the treaty drawn up and adopted by a group of countries in London in 1945 that established UNESCO. Countries that accede to the United Nations and UNESCO treaties undertake to pay dues (assessed financial contributions) to these organizations, and to abide by these organizations' constitutions.

International treaties are normally drawn up and adopted by international conferences of states (so-called diplomatic conferences). They usually come into effect when an agreed number of states in

each case has formally ratified them, which can sometimes be several years after the treaty was originally adopted, depending on how rapidly individual states are able to incorporate the treaty in their national legislation. In the case of education, most international treaties since 1945 have been drawn up and adopted by diplomatic conferences convened either by the United Nations or by UNESCO. No international treaty concerning education was adopted before 1945.

International treaties usually include a provision for states to report to a *treaty body* on measures taken to ensure their implementation. In the case of treaties adopted under the auspices of the United Nations, for example, the latter has established committees, such as the Human Rights Committee and the Committee on Economic, Social and Cultural Rights, to serve as treaty bodies.

Diplomatic conferences are also convened from time to time for the purpose of drawing up and adopting less demanding forms of agreement, such as an international *declaration* or *recommendation*. Broadly speaking, declarations tend to focus on principles that should guide action, while recommendations tend to focus on courses of action, although this distinction is not always clearly apparent. The states concerned formally undertake to make their best efforts to abide by the provisions of the declaration or recommendation in question, without necessarily agreeing to adopt specific legislative measures as might be required by a treaty. The declarations, recommendations, and treaties adopted by international conferences of states are generally referred to in diplomatic parlance as international *normative instruments*.

Other types of agreement include resolutions adopted by the member states of international organizations, as well as international declarations and recommendations of an essentially nonformal character that representatives of countries have expressed their support for without formally committing their respective states to abide by. The latter are typically drawn up and adopted by consensus at nondiplomatic conferences that have a mixed composition of participants, often including representatives of international organizations and nongovernmental organizations as well as of governments. Probably the best-known example in the field of education is the World Declaration on Education for All, adopted by the World Conference on Education for All, held in Jomtien, Thailand, in 1990. Such

conferences have also tended to adopt a plan or program of action for implementation of the declaration or recommendation specifying how the various parties concerned will work towards the agreed goals or objectives. In some cases, agreement has also been reached on the establishment of a mechanism to monitor implementation.

### The Years between the Wars, 1918–1939

With two or three exceptions, the international education agreements adopted during the period between the two world wars were generally of a nonformal character. The exceptions were in the form of resolutions adopted by the General Assembly of the League of Nations, the forerunner of the United Nations set up by the peace conference that followed World War I. The majority were in the form of recommendations adopted by successive international conferences organized by the International Bureau of Education (IBE), a hybrid nongovernmental/intergovernmental body established in Geneva in 1926.

The idea of governments adopting agreements concerning education emerged from the broader movement of opinion among the leaders of the major industrial countries after World War I in favor of new approaches to the challenge of fostering international understanding and peace. The League of Nations was conceived in this spirit as a permanent mechanism of consultation between states, essentially for the purpose of overcoming misunderstandings and disagreements before they could develop into armed conflict. A key concept of the League was that such consultation should not be just a matter of diplomatic contacts between ministries of foreign affairs, but should also include contacts between the national administrations responsible for matters that were often the basic sources of misunderstanding and disagreement between countries, such as commerce and trade, communications, travel, employment, and health. Various subsidiary organs of the League were established in order to facilitate cooperation between countries in certain of these fields.

Education was not specifically mentioned in the treaty setting up the League, although at the peace conference that drew up the treaty, some countries had favored its inclusion. Others felt that education was mainly an internal matter. Nevertheless, at its first session in 1920 the League's General Assembly adopted a resolution calling for the League's (execu-

tive) Council to examine a closely related question, that of “international intellectual co-operation,” which the resolution’s sponsors (Belgium and France) considered to be highly relevant to the task of developing a spirit of understanding, cooperation, and peace among nations. In the following year the League established an International Commission on Intellectual Co-operation, composed of eminent personalities in the sciences and humanities from different countries and charged with advising the council on measures that governments could take with a view to stimulating international cooperation among scientists, artists, philosophers, writers, and other groups of intellectuals, in furtherance of the League’s overall objectives.

This opened a door for the League of Nations to enter somewhat indirectly into educational matters. Thus, one of the early actions taken by the League’s General Assembly was its adoption in 1923 of a resolution calling upon countries to encourage the teaching of the goals of the League and the ideals of international cooperation to young people. However, in the absence of a formal mandate in education, the scope for further initiatives by the League in this field was limited. In the years remaining up until the outbreak of World War II, the only other instance of such an agreement being reached by the League’s General Assembly was the adoption of a resolution in 1935 calling upon countries to encourage the teaching of history for peaceful purposes.

In the meantime, however, the French government (with the League’s blessing, though not its financial support) had set up a body, the International Institute of Intellectual Co-operation, for the purpose of carrying out operational activities in areas of concern to the commission. These indirectly had an educational dimension, if only because international intellectual cooperation partly concerned international cooperation between educational institutions, such as universities, that in most countries were the main centers of intellectual life. The institute became active in promoting exchanges between researchers in different countries, in both the sciences and humanities, and in promoting international cooperation between universities, particularly with regard to teacher and student exchanges and the mutual recognition of degrees and diplomas. Much of this work was to be taken up after World War II by UNESCO.

The absence of a mandate for the League of Nations to get involved in educational matters did not

preclude the League’s members from showing an interest in another framework of cooperation in this field, which came to be provided by the IBE. The IBE was established in Geneva in 1926 as an offshoot of the University of Geneva’s School of Education (Institut Jean-Jacques Rousseau), one of the main centers in Europe of the New Education movement, a body of educational thinking closely associated with the ideas of John Dewey and the Progressive education movement in the United States. Originally conceived as an international nongovernmental clearing-house of educational research and documentation, the IBE revised its statutes in 1929 so as to permit governments to become members, and it was soon discovered that there was widespread latent support for the creation of some kind of forum in which national educational policymakers could exchange views and experiences concerning educational developments in their respective countries.

From 1934, therefore, the IBE undertook to organize an annual conference, the International Conference on Public Education, open to any country that wished to participate. More than thirty countries sent delegations to the first conference, and the attendance increased at subsequent conferences. Delegations were invited to present reports on recent educational developments in their countries, and to participate in a general debate on educational themes selected by the IBE for examination by the conference. The themes (usually three) were selected with a view to addressing current policy issues of concern to conference participants. At the first Conference, for example, the themes were Compulsory Education and the Raising of the School Leaving Age; Admission to Secondary Schools; and Economies in the Field of Public Education. Later conferences examined themes such as The Professional Training of Elementary School Teachers (1935); School Inspection (1937); and The Organization of Preschool Education (1939). In order to give a structure to the debates, the IBE also prepared ahead of the conference a draft recommendation on each theme setting out policies that the conference could consider as likely to help advance the development of education. At the end of its proceedings, the conference would adopt by consensus a final version of each recommendation, taking into account any amendments suggested during the debate.

The spirit that drove the conferences was basically that of the New (or Progressive) Education thinking associated with the IBE: expansion of edu-

cational opportunities and the promotion of more child-centered pedagogies. The recommendations were nonformal and purely advisory, and it was accepted that countries would adapt them to their individual circumstances. Their usefulness for participants (generally ministries of education) probably lay in the broad stamp of international approval that they accorded to policies that most countries were inclined to pursue anyway. Significantly, the majority of the recommendations concerned the organizational and administrative aspects of education rather than its contents, which would have been more difficult to handle politically.

### **Agreements since the End of World War II**

The success of the IBE's conferences was probably a factor in the interest among a number of countries, even before the war was over, in the possibility of future international cooperation on educational matters. Towards the end of the war, at the initiative of the British government, a standing Conference of Allied Ministers of Education was formed in London to discuss the tasks of educational reconstruction and cooperation that countries would need to undertake after the war. This body soon coalesced around proposals for establishing an intergovernmental educational and cultural organization, with scientific cooperation being added later. In the meantime, the United States had initiated a process of international negotiations and discussions with a view to setting up the United Nations Organization, the purposes of which were envisaged in Article I of the organization's charter to include, besides the maintenance of "international peace and security" and the development of "friendly relations among nations," the achievement of "international cooperation in solving international problems of an economic, social or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion." The San Francisco treaty containing the charter came into force in October 1945. The London treaty containing the constitution of UNESCO came into force in November 1946.

Under Article I of its constitution, UNESCO was basically conceived by its founders as complementary to the United Nations:

The purpose of the Organization is to contribute to peace and security by promoting collaboration among the nations through

education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations.

In accordance with their founding instruments, the United Nations and UNESCO have been responsible for initiating most of the international agreements concerning education that have been adopted since the end of World War II. However, in one important respect their founding instruments were incomplete, because the U.N. Charter in particular (to which the UNESCO Constitution refers) does not actually spell out anywhere what the "human rights and fundamental freedoms" are that the United Nations is mandated "to achieve international cooperation . . . in promoting and encouraging respect for." This task was considered at the time to be too complex for the San Francisco conference to handle, and was therefore deferred until a later date. It was taken up by the United Nations itself shortly after the organization came into being, and was to result in the proclamation of the Universal Declaration of Human Rights by the U.N. General Assembly in December 1948.

In adopting the declaration, the opening words of which affirm that "recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world," countries have accepted a set of principles, covering a vast range of human endeavor, that the organizations of the United Nations system are required under their statutes to encourage member states to put into practice. The principles directly relating to education are set out in the declaration's Article 26:

(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit. (2) Education shall be directed towards the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations,

racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace. (3) Parents have a prior right to choose the kind of education that shall be given to their children.

Virtually all international agreements concerning education adopted since 1948 have owed at least part of their contents to this article, whether or not the agreement has been specifically focused on human rights or on related questions of international concern such as peace and development.

The agreements fall into two groups: those that deal with education along with several other fields, and those that essentially are confined to education. The former correspond broadly to the agreements adopted under the auspices of the United Nations, and the latter to those adopted under the auspices of UNESCO. A comprehensive listing of the various agreements follows, with brief comments on selected aspects of their contents. Particular attention is given to the treaties, since they represent the strongest degree of commitment by countries.

**United Nations agreements.** The agreements adopted under the United Nations' auspices are considered first, beginning with the treaties. The three main treaties that contain provisions concerning education are the International Covenant on Economic, Social and Cultural Rights (1966), the Convention on the Elimination of All Forms of Discrimination against Women (1979), and the Convention on the Rights of the Child (1989). Another treaty, the Convention on the Elimination of All Forms of Racial Discrimination (1965), requires the states parties (nations that have ratified a covenant or convention) to eliminate "racial discrimination in all its forms" in regard to "the right to education and training," among several other rights, but does not elaborate further on the matter.

The International Covenant on Economic, Social and Cultural Rights (1966) has a much broader scope than the other treaties. It emerged directly from the process of drawing up the Universal Declaration of Human Rights, following a decision of the United Nations Economic and Social Council that the principles enunciated in the declaration should be transformed into treaty provisions establishing legal obligations on the part of each ratifying state. The prevailing view was that two separate treaties or covenants were needed, one dealing with civil and political rights, and the other with economic, social,

and cultural rights, the rationale being that civil and political rights could, in principle, be secured immediately, whereas economic, social, and cultural rights could be achieved only progressively, according to each state's available resources. The preparation of the International Covenant of Civil and Political Rights and the International Covenant of Economic, Social and Cultural Rights was very laborious, given the legal issues involved for each member state, and took nearly eighteen years. The covenants were adopted in their final form by the General Assembly in December 1966. Another decade was to pass before they came into force. They have substantially influenced all subsequent international treaties relating to human rights.

The Covenant of Civil and Political Rights mentions education in paragraph 4 of its Article 18, which declares that "The States Parties to the present Covenant undertake to have respect for the liberty of parents and moral education of their children in conformity with their own convictions." Article 13 of the Covenant on Economic, Social, and Cultural Rights basically restates paragraph 4 of Article 18 of the Covenant on Civil and Political Rights. However, there are certain differences. Thus, it provides for "the progressive introduction of free education" in secondary and higher education, and requires the states parties to the covenant "to have respect for the liberty" of parents and guardians "to choose for their children schools, other than those established by the public authorities, that conform to such minimum educational standards as may be laid down or approved by the State." It also requires the states parties to recognize that "the development of a system of schools at all levels shall be actively pursued, an adequate fellowship system shall be established, and the material conditions of teaching staff shall be continuously improved." Under Article 14, the states parties that have not already instituted a system of free and compulsory primary education undertake to do so "within a reasonable number of years." As of February 8, 2002, the covenant had been ratified by 145 states.

The other two treaties mentioned above were intended to focus on particular categories of persons deemed to be especially in need of support and protection. The Convention on the Elimination of All Forms of Discrimination against Women (1979) deals with education in its Article 10. The provisions of this article are based in part on the Covenant on Economic, Social and Cultural Rights, as well as an

earlier UNESCO convention (the 1960 Convention against Discrimination in Education), but they enumerate in detail specific conditions that the states parties shall apply in order to “ensure” to women “equal rights with men,” such as “the same conditions for career and vocational guidance, for access to studies and for the achievement of diplomas in educational establishments of all categories, . . . access to the same curricula, the same examinations, teaching staff with qualifications of the same standard and school premises and equipment of the same quality, . . . the elimination of any stereotyped concept of the roles of men and women at all levels and in all forms of education,” as well as several other conditions of a similar nature. As of February 8, 2002, this convention had been ratified by 168 states.

The Convention on the Rights of the Child (1989) deals with education in Articles 28 and 29. Article 28 is largely a development of Article 13 of the International Covenant on Economic, Social and Cultural Rights, while focusing specifically on the child (essentially defined as a person below eighteen years of age). However, it differs from the covenant by certain omissions and additions. A significant omission is any mention of the “progressive introduction of free education” in respect to higher education. The convention states simply that higher education shall be made “accessible to all on the basis of capacity by every appropriate means.” A significant addition is the requirement that states parties take action with a view to achieving the right of the child to education “on the basis of equal opportunity,” a notion that first appeared in an international instrument in UNESCO’s constitution. Another addition is the requirement that “States Parties shall take all appropriate measures to ensure that school discipline is administered in a manner consistent with the child’s human dignity and in conformity with the present Convention.” Yet another addition is the requirement that “States Parties shall promote and encourage international cooperation in matters relating to education, in particular with a view to contributing to the elimination of ignorance and illiteracy throughout the world and facilitating access to scientific and technical knowledge and modern teaching methods. In this regard, particular account shall be taken of the needs of developing countries.” Article 29 deals mainly with the purposes of education. It basically reiterates the provisions of the covenant, but adds that “States Parties

agree that the education of the child shall be directed to . . . the development of respect for the child’s parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own,” as well as “the development of respect for the natural environment.” As of February 8, 2002, this convention had been ratified by 191 states—all the member states of the United Nations except for Somalia and the United States of America.

The main declarations adopted by the United Nations containing provisions concerning education are the Declaration of the Rights of the Child (1959); the Declaration on the Promotion among Youth of the Ideals of Peace, Mutual Respect and Understanding between Peoples (1965); the Declaration on the Elimination of Discrimination against Women (1967); the Declaration on Social Progress and Development (1969); the Declaration on the Rights of Mentally Retarded Persons (1971); the Declaration on the Rights of Disabled Persons (1975); the Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities (1992); the Declaration and Programme of Action on a Culture of Peace (1999); and the Millennium Declaration (2000). In addition, certain other declarations containing provisions concerning education have been adopted by international conferences of states convened by the United Nations, notably the Proclamation of Teheran adopted by the International Conference on Human Rights (1968); the Rio Declaration on the Environment and Development (1992); the Vienna Declaration and Programme of Action of the World Conference on Human Rights (1993); the Declaration and Programme of Action of the World Summit for Social Development (1995); and the Beijing Declaration and Platform of Action of the Fourth World Conference on Women (1995).

As their titles indicate, the various declarations fall into two broad categories: those focusing on human rights as such and/or the rights of a particular class of persons (e.g., children, women, mentally retarded and disabled persons, persons belonging to various kinds of minorities) deemed to be especially in need of protection and support; and those focusing on particular aspects of the international context (e.g., peace, development, and the environment). Certain of the declarations in the first category were followed up later by treaties (e.g., Rights of the

Child, Elimination of Discrimination against Women). The declarations in the second category have been less amenable to follow-up by treaties, in part because they deal with matters that have been much more open to ideological and political disagreement among countries. Particularly during the cold war, declarations and resolutions of the United Nations concerning peace were open to controversy over the relative priority, if any, to be accorded to peace versus human rights. The declarations relating to the environment and social development, however, have been relatively free of controversy.

The United Nations General Assembly has also from time to time adopted resolutions proclaiming an *International Day, Year, or Decade* relating to education, the purpose being to focus world opinion on a particular aspect of education considered to be deserving of attention and support. Examples include International Literacy Day (September 8), World Teachers Day (October 5), International Literacy Year (1990), and United Nations Decade for Human Rights Education (1995–2004).

**UNESCO agreements.** Turning to the international agreements adopted under UNESCO's auspices, it may first be noted that UNESCO undertook to convene the International Conferences on Public Education jointly with the IBE from 1947 onwards, thus assuming a share of the responsibility for the recommendations adopted by these conferences. The IBE was formally incorporated into UNESCO in 1969, after which the conferences were convened biennially (as International Conferences on Education) up until 1997, and irregularly since then. The International Institute of Intellectual Co-operation, which had been partly involved with education before the war, closed down at the end of 1946.

UNESCO has adopted three international and several regional treaties directly concerning education. The international treaties are the Convention against Discrimination in Education (1960); the Protocol Instituting a Conciliation and Good Offices Commission to Be Responsible for Seeking the Settlement of Any Disputes which may Arise between States Parties to the Convention against Discrimination in Education (1962); and the Convention on Technical and Vocational Education (1989). The regional treaties are agreements relating to the recognition of studies, diplomas, and degrees in higher education.

Two early treaties indirectly relating to education may be noted: the so-called Beirut and Florence

Agreements adopted by UNESCO's General Conference at its third and fifth sessions held, respectively, in those two cities. Their titles indicate their nature: the Agreement for Facilitating the International Circulation of Visual and Auditory Materials of an Educational, Scientific and Cultural Character (1948); and the Agreement on the Importation of Educational, Scientific and Cultural Materials (1950). Although both are designed to promote international cooperation in education, science and culture, they are essentially concerned with reducing tariff, tax, currency, and trade obstacles to the international circulation of the materials indicated in their titles, and thus are, in effect, tariff and trade instruments falling within the scope of the World Trade Organization. With the expansion of electronic commerce in education (cross-border distance education), the two instruments are likely to become better known to national educational policymakers in the future.

The Convention against Discrimination in Education (1960) was the first international treaty to be adopted concerning education as such, except for the London treaty that established UNESCO. It was basically designed to transform the principle of non-discrimination contained in Article 2 of the Universal Declaration of Human Rights into legal obligations pertaining specifically to education, while also taking into account the provisions of the declaration's Article 26 concerning the right to education, as well as the principle of "equality of educational opportunity" affirmed in UNESCO's constitution. The convention influenced the provisions relating to discrimination in education that subsequently came to be included in all international treaties concerned wholly or partly with education, from the Convention on the Elimination of All Forms of Racial Discrimination (1965) down to the Convention on the Rights of the Child (1989). It was also the first international treaty to contain provisions dealing with parental choice and the rights of minorities in education, and in this regard its provisions remain the most comprehensive of any international treaty. As of February 8, 2002, this Convention had been ratified by eighty-four states. The protocol associated with the convention provides for the setting up of a mechanism for dealing with any charges that might be leveled by one country against another accusing it of bad faith in ratifying the convention but not attempting to implement it. As of February 8, 2002, the protocol had been ratified by thirty states.

The Convention on Technical and Vocational Education (1989) is the only international convention ever adopted concerning a specific level or sub-field of education. It was partly inspired by the provision in Article 26 of the Universal Declaration of Human Rights affirming that “technical and professional education shall be made generally available,” and partly by an earlier initiative of the International Labour Organization, which in 1975 had adopted a Convention and Recommendation on Vocational Guidance and Vocational Training. At that time, UNESCO had already adopted (in 1974) its Revised Recommendation concerning Technical and Vocational Education, but not yet a convention. Many of the provisions of UNESCO’s convention are in the nature of prescriptions or recommendations, rather than actions that the states parties specifically agree to undertake. As of February 8, 2002, this convention had been ratified by twelve states.

Aside from the treaties, and unlike the United Nations, UNESCO has historically tended to adopt recommendations rather than declarations. The main recommendations concerning education adopted by UNESCO’s General Conference are the Recommendation concerning the International Standardization of Educational Statistics (1958); the Recommendation against Discrimination in Education (1960; adopted at the same time as the Convention mentioned above); the Recommendation concerning Technical and Vocational Education (1962); the Recommendation concerning the Status of Teachers (1966); the Recommendation concerning Education for International Understanding, Cooperation and Peace and Education relating to Human Rights and Fundamental Freedoms (1974); the Revised Recommendation concerning Technical and Vocational Education (1974); the Recommendation on the Development of Adult Education (1976); the Revised Recommendation concerning the International Standardization of Educational Statistics (1978); the Recommendation on the Recognition of Studies and Qualifications in Higher Education (1993); and the Recommendation concerning the Status of Higher Education Teaching Personnel (1997). The purpose of these recommendations, as of those adopted by the International Conferences on (Public) Education, has essentially been to encourage countries to adopt wise policies and good practices in the relevant fields. Their adoption by UNESCO’s General Conference has been intended to give them more weight and validity than

the recommendations of the International Conferences on (Public) Education, since the former body is a conference of states, while the latter are basically just conferences of ministers of education. As indicated in the titles of some of the recommendations, it has been understood that the recommended policies and practices might need to be reconsidered later in the light of experience and changes in national and international circumstances.

From time to time UNESCO’s General Conference has also adopted resolutions that amount in effect to revised recommendations, though without being formally declared as such. In 1997, for example, it endorsed a new International Standard Classification of Education (ISCED-97) intended to replace an earlier version that had been endorsed by the Revised Recommendation concerning the International Standardization of Educational Statistics (1978).

UNESCO did not issue any recommendations concerning education during the 1980s. This was a period of controversy for the organization, marked by the withdrawal of the United States from the organization at the end of 1984 and the United Kingdom and Singapore at the end of 1985, in protest against what U.S. Secretary of State George Schultz, in his letter of withdrawal, said were “trends in the policy, ideological emphasis, budget and manpower of UNESCO [that] were detracting from the organization’s effectiveness [and were leading the organization] away from the original principles of its constitution.” A definitive study of the merit of these charges has never been made, although in regard to education it may be noted that after the end of the cold war UNESCO became more active in seeking to collaborate with other international organizations for the purposes of advancing its program in areas such as education for development and education for human rights. Two significant international agreements that were to result from this were the World Declaration on Education for All (1990) and the World Plan of Action on Education for Human Rights and Democracy (1993), adopted by the International Congress on Education for Human Rights and Democracy, held in Montreal. The Salamanca Statement (Declaration) on Special Needs Education (1994), adopted by the World Conference on Special Needs Education (jointly convened by UNESCO and the Spanish government in Salamanca, Spain, in June 1994) may also be noted, as well as a follow-up declaration (the Dakar Declaration on Education for

All) to the Jomtien Declaration mentioned above, adopted by the World Education Forum, an international conference convened by UNESCO jointly with its Jomtien partners in Dakar, Senegal, in April 2000.

### Implementation and Impact

A comprehensive study of the implementation and impact of the various international education agreements indicated above has never been undertaken. Since there are so many of these agreements, all of them overlapping to some extent, and all of them having varying degrees of support from the countries of the world, such a study would in any case be an extremely complex undertaking. Although UNESCO, under its constitutional mandate, could undertake such a study, it has largely confined its monitoring activity to the agreements adopted directly under its auspices. Monitoring of the various agreements adopted by the United Nations has been undertaken by the several treaty bodies established by the United Nations for that purpose. Their activities can be consulted at the website of the United Nations High Commissioner for Human Rights.

There are limits to the effectiveness of the existing monitoring mechanisms. The main ones are the dependence of these mechanisms on government-supplied information and the different degrees of readiness and capability of governments to supply information. Indeed, with the growing number of international agreements in education and other fields, there are signs of a *reporting overload* on governments. Thus, questionnaire surveys addressed by the monitoring bodies to the states parties to some of these agreements rarely elicit responses from more than half the countries concerned. Neither the United Nations nor UNESCO can do much about this, since the agreements are, in the last resort, purely voluntary, and both organizations are bound by their constitutions not "to intervene in matters which are essentially within the domestic jurisdiction of any state." It is only in countries with highly developed legal systems, as in western Europe, that ordinary citizens can effectively challenge their governments on questions relating to the implementation of international agreements, whether in education or other fields.

What, then, do they all add up to? Have the agreements had any effect on the worldwide development of education? Probably. The development that has occurred over the years since the Universal

Declaration of Human Rights was proclaimed has certainly been dramatic. In the late 1940s, only a minority of the world's young people had access to any kind of formal education, and little more than half the world's adults could read and write a simple passage about their everyday lives. In the early twenty-first century the great majority of the world's young people go to school, with nearly half of them enrolled in formal education beyond the elementary and fundamental stages, while around four out of five of the world's adults (though a larger percentage of men than of women) are estimated to have acquired at least some simple literacy skills. Doubtless much of this development would have occurred without any international agreements concerning education, but it is reasonable to suggest that the steady accumulation of such agreements, constituting, in effect, a broadly coherent body of international opinion committed to the expansion and equalization of educational opportunities, would have reinforced any secular trends (for example, rising income levels) tending to favor such development. The more that such agreements keep coming, each one affirming one or another aspect of the right to education, then the more difficult it becomes morally for countries to disregard this right.

Nevertheless, it is apparent that there is considerable variation among individual agreements in the degree of commitment that countries accord to their implementation, even among the treaties. Compare, for example, the Convention on Technical and Vocational Education (1990), with only twelve ratifications to date, and the Convention on the Rights of the Child, adopted in the same year, with 191 ratifications. It is also apparent that some agreements basically restate long-standing, but not fully implemented, earlier commitments. For example, both the Dakar Declaration on Education for All (2000) and the United Nations' Millennium Declaration (2000) expect universal primary education to be achieved in all countries by the year 2015, although the World Declaration on Education for All (1990) had earlier targeted the year 2000. The danger here is of a progressive devaluation of all education agreements if new ones are too readily adopted ahead of significant progress in implementing earlier ones.

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## INTERNATIONAL EDUCATION STATISTICS

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### OVERVIEW

Eugene Owen

Laura Hersh Salganik

### THE USE OF INDICATORS TO EVALUATE THE CONDITION OF EDUCATION SYSTEMS

Thomas M. Smith

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### OVERVIEW

Comparisons between the education system in the United States and the systems of other countries have become an established element of the public discussion about education policy and practice in the United States. Publications aimed at the education profession often include articles describing approaches in other countries that are relevant to education in the United States, such as a discussion of tuition tax credits in Canada in *Education Week* and a special section in the *Phi Delta Kappan* about early childhood education in Europe.

Why is this information useful? Simply put, countries outside the United States provide something akin to a natural social laboratory in which one can observe education policy, practices, and outcomes under a variety of different conditions and environments. Knowing whether education in one country is the same or different from education in other countries provides a useful perspective for better understanding a country's system, and is also a useful source of ideas. Comparisons of learning outcomes provide a measure of the effectiveness not possible with any other approach. Given the prominent role of statistics and indicators for policymaking in the United States, it is not surprising that statistics have become an important source of information for these comparisons. At the beginning of the twenty-first century rich sources of statistics are available that can be used to compare education in the United States with education in other countries. But this is a relatively new development.

## The Demand for International Education Statistics

As is the case for many aspects of history of education in the United States since the mid-1980s, the publication of *A Nation at Risk* in 1983 was a key event for setting the stage for change—in this case for strengthening international education statistics. A steady decline in national test scores during the 1960s and 1970s, coupled with the perception that foreign industrial and consumer products were superior, had led many Americans to question the performance of U.S. schools. An international perspective was central to the argument of *A Nation at Risk*, chief among the many reports prepared to document the problem. Citing the superiority of new manufactured goods from Japan, South Korea, and Germany, as well as the level of worker skill that these foreign products represented, the report proclaimed: “If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war” (p. 5). When presenting its list of indicators of the risk facing the country, the poor performance of U.S. students in international studies of achievement was the first item.

A second major event that increased the importance of international comparisons was the adoption of the National Education Goals in 1990. One of the six goals adopted by President George H. W. Bush and the nation’s governors was that “by the year 2000, United States students will be first in the world in mathematics and science.” Shortly after this announcement, the National Education Goals Panel was created and charged with producing a series of publications aimed at reporting national and state progress toward achieving the goals. This amplified the need to develop performance measures for the U.S. educational system in an international context, particularly in mathematics and science.

During this period, genuine concern about the future of the U.S. economy and the importance of looking outside of the United States for solving problems was a common theme of policy discussions in a variety of arenas. For example, the National Governors Association report *Time for Results* (1986) named global economic competition and poor performance of U.S. students (compared to those of other countries) as reasons why governors should take a more active role in education. *America’s Choice: High Skills or Low Wages* (1990), pub-

lished by the National Center on Education and the Economy, presented international comparisons of investment in employment and training policies and called for higher U.S. expenditures in this area.

But in spite of the prominence of international comparisons, it was widely recognized that the data were very weak. The reason that *A Nation at Risk* used studies that were a decade old was that they were the only ones available. Similarly, it was agreed that statistics comparing expenditures for education—which were relevant to perennial questions about costs—were not usable because of their low quality.

## Comparability

Why does the international dimension present a particular challenge for statistics of education? The central idea is the notion of comparability. For basic statistics about education at the national level in the United States, there is general agreement about what constitutes the things being measured or counted (e.g., schools, teachers, students, school subjects). Although the decentralization of governance and diversity of approaches and programs require that care be taken when making comparisons among states or local districts, the issue is compounded many times when dealing with making comparisons among countries.

There are many instances in the arena of international education statistics in which differences among countries in fundamental aspects of the system can put statistics in jeopardy of being inaccurate and misleading. In the United States, for example, public schools are financed by public funds and private schools by private funds (at least the vast majority of the funding), whereas many countries in Europe finance privately governed schools with public funds. Thus, counting funding of public schools as a measure of a nation’s financial support of education would be misleading. In many countries, it is common for staff considered to be teachers to also function in a position equivalent to a principal in small elementary schools. From the U.S. perspective, counting such staff members as teachers would lead to an overcount of staff resources devoted to teaching, an undercount of resources for administration, and misleading student–teacher ratios. Similarly, achievement tests that do not take differences in curricula and practices associated with testing and test-taking into account may inaccurately represent school learning.

In cases where there are common definitions and concepts, it is of equal importance to collect and process the data in a manner that captures the information desired. This often requires that countries recalculate national statistics based on these common definitions. Issues are even more complex when surveys are involved. For example, countries must agree on common practices for selecting comparable samples, setting acceptable response rates, and calculating response rates and margins of error. Another methodological issue is translation, which requires a high level of understanding of the concepts involved. Translation can even affect the difficulty of test items, a factor requiring attention in the development of international assessments.

During the 1980s, the generally weak comparability of the international education statistics prepared by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the Organisation for Economic Co-operation and Development (OECD) was well known, and the published works received limited circulation and attention. The comparability of comparative studies of achievement was also routinely questioned. But with the demand created by the introduction of an international aspect to the education policy questions of the day, the need for improvement was clear.

### Country Collaboration

The United States was not alone in its interest in improved statistics for comparing education systems. Similar circumstances—particularly pressure on public services to demonstrate their productivity and efficiency and a new awareness of economic competitiveness in a global market—led to a growing interest in education statistics in other OECD countries. The OECD responded to this demand by initiating the Indicators of Education Statistics (INES) program after two preparatory meetings, one hosted by the U.S. Department of Education in 1987, and the other by the French Ministry of Education in 1988.

To improve the quality of international statistics, it was necessary to have the participation of individuals with deep knowledge of their national education systems, access to national data systems, and the motivation and commitment to collaborate on an ongoing basis with those from other countries. The INES project put these elements together. The Netherlands, Scotland, the United States, and Sweden contributed substantial resources to lead work-

ing groups on topics such as enrollment in education, finance, learning outcomes, labor force outcomes, school functioning, and attitudes about education. Australia, Austria, and France also made important financial contributions. Meeting at regular intervals, individual delegates, sponsored by their countries, worked through comparability issues and served as contact points in their countries for the preparation and submission of data prepared specifically to meet the international standards. The result was much-improved comparability and a quality-control process that was supported by peer review and the personal commitment of participants in the working groups. In addition, the participants gained expertise that enhanced their countries' resources for interpreting the statistics in a national context.

The OECD had extensive involvement in coordinating the process, collecting the data, and preparing and publishing a series of volumes of indicators under the title *Education at a Glance: OECD Indicators*. The first *Education at a Glance* (1992) was about 150 pages long, with parallel text in French and English, and several of the indicators were designated as provisional because of general questions about their validity or applicability. With succeeding years, new indicators have been added, as well as extensive background information relevant for interpreting the indicators. The 1995 and 1996 editions have annotated charts prepared by each country describing the organization of their education systems, including types and levels of schools and ages of students in each. The 2001 edition is almost 400 pages long, includes data from many non-OECD countries, and is available in English, French, and German. Selected editions of *Education at a Glance* have been translated into Czech, Italian, Japanese, Korean, and Spanish.

The establishment of the Program for International Student Assessment (PISA) highlights the importance of country collaboration in the development of international education statistics. To those working in the INES project, it quickly became clear that there was a lack of coherent data for indicators of student achievement. There was no extant database and no structure designed for governments to collaborate on an ongoing basis for regular data collections. Factors that needed to be overcome included major comparability issues ranging from conceptualization of outcomes to general survey practices; some countries' reluctance to publish indicators of achievement in a limited number of school

subjects; and the large cost associated with producing the indicators. After several years of ongoing discussions, a consensus was reached to set up a project in which for the first time, countries shared the central cost of developing and implementing the assessment (countries typically are responsible for the cost of local data collection). The effort is governed by a board composed of representatives of participating countries and managed by the OECD secretariat. It includes assessments at three-year intervals of reading, mathematics, and science literacy, and of selected cross-curricular competencies such as attitudes and approaches related to learning.

Among the many other accomplishments associated with the country collaboration through the INES project, two that stand out are improvements in the comparability of expenditure data and of the categories for different levels of education (e.g., primary, secondary, tertiary). In the case of the levels of education, UNESCO's International Standard Classification of Education (ISCED), developed during the 1970s, was revised to reflect various changes—for example, growth in continuing education and training outside of education institutions and programs that straddle the boundaries between upper secondary and postsecondary education, and a manual was developed to facilitate consistent interpretation of the new system.

Studies conducted by the International Association for the Evaluation of Educational Achievement (IEA) also involve collaboration among governments and researchers. Three studies that have contributed to the data available for international education statistics are the Third International Mathematics and Science Study (TIMSS), the Second Information Technology in Education Study (SITES), and the Civic Education Study (CivEd). The Civic Education Study, working in an area in which different countries have different notions about many of the concepts involved (such as democracy and participation of individuals in democracy), relied heavily on international teams throughout the entire project for identifying common core ideas, developing assessment items, and interpreting results.

### What Has Been Learned?

Because of the range and depth of international education statistics, it is impossible to provide more than a very brief summary in this limited space. What follows are a few illustrative highlights taken

from publications of the OECD, the IEA, and the U.S. National Center for Education Statistics (NCES). NCES publications include explanatory notes and background information useful for interpreting the material from a U.S. perspective. Readers are encouraged to consult the publications directly to find additional statistics relevant to their particular interests.

**Context of education.** It is widely recognized that there is a large association between poverty and school achievement. Among a large number of countries participating in one study, the United States had by far the largest percentage of youth who were poor.

**Participation in education.** Into the 1990s, there was a general impression that the young people remained enrolled in school longer in the United States than in other countries. However, statistics show that the percentage of those fifteen to nineteen years old and those twenty to twenty-nine years old enrolled in education in the United States is quite close to the average percentage among OECD countries.

**Expenditures.** The United States spends a similar percentage of its gross domestic product (GDP) on education as other countries. On a per pupil basis, its expenditures are among the highest for elementary and secondary education. In higher education, the U.S. also spends considerably more per student than any other OECD country.

**Teachers and teaching.** Teachers in the United States have the highest number of teaching hours, although teachers in a few other countries put in almost as many hours. The student–teacher ratio in the United States is similar to the average of OECD countries in elementary, secondary, and postsecondary education, with the exception of vocational postsecondary education, where there are fewer students per teacher in the United States than in most other countries.

**Learning outcomes for school-age youth.** On studies of mathematics and science achievement, U.S. students typically score lower in relation to other countries as they progress through the grades. Performance of fifteen year olds in the United States was similar to the average for countries participating in PISA in reading, mathematics, and science literacy tasks designed to reflect real-life situations (in contrast to school curriculum). Many countries have variation in achievement in the same range as that

of the United States, although some have less variation. Some countries with relatively little variation have high achievement, indicating that it is not necessary to “sacrifice” the bottom to have a high average score. Among countries participating in the IEA Civic Education Study, the United States is among the highest in knowledge of civic content among fourteen year olds, as well as the highest in civic skills, such as interpreting information.

**States and nations.** Because states have primary responsibility for education in the United States and are similar in size to many countries, comparisons between the states and other nations are of special interest to policymakers. Some U.S. states and school districts compare favorably in math and science with the highest-scoring countries, while others have scores in the same range as the lowest-performing ones. This pattern is repeated in other indicators that include both states and nations.

**Adult literacy.** Variation in adult literacy is strongly associated with income variation—countries that have a wider income distribution also have a higher percentage of adults in both high- and low-literacy groups, with the United States having the highest variation in both income and literacy.

### Conclusion

Increased demand in the mid-1980s for data to support solid comparisons among the education systems of different countries fueled major advances in the quality and quantity of international education statistics. These advances would not have been possible without an organizational structure that incorporated collaborative working relationships among statisticians and education professionals from different countries. This model was essential throughout the many phases of the work, including agreeing on common definitions of the concepts to be represented by statistics, developing methodologies for surveys and translation, and generating commitment and adherence to high standards and quality control. It will continue to be important to assure comparability as work proceeds to improve and broaden statistics in areas such as learning outcomes for students and adults, expenditures for education, teachers and teaching, and the relationship between education and the labor market.

*See also:* INTERNATIONAL ASSESSMENTS; NATIONAL CENTER FOR EDUCATION STATISTICS.

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## THE USE OF INDICATORS TO EVALUATE THE CONDITION OF EDUCATION SYSTEMS

The use of widely published *statistical indicators* (also referred to as *social indicators* outside the purely economic realm) of the condition of national education systems has in the early twenty-first century become a standard part of the policymaking process throughout the world. Uniquely different from the usual policy-related statistical analysis, statistical indicators are derived measures, often combining multiple data sources and several statistics, that are uniformly developed across nations, repeated regularly over time, and have come to be accepted as summarizing the condition of an underlying complex process. Perhaps the best known among all statistical indicators is the gross national product, which is derived from a statistical formula that summarizes all of the business activity of a nation's economy into one meaningful number. In the closing decades of the twentieth century, international statistical indicators of educational processes made considerable advances in quantity, quality, and acceptance among policymakers.

These cross-national indicators often have significant impact on both the public and the education establishment. In the United States, for example, the *New York Times* gives high visibility to reports based on indicators of where American students rank in the latest international math or science tests, or those revealing how educational expenditures per student, teacher salaries, or high school dropout rates compare across countries. National education ministries or departments frequently use press releases to put their own spin on statistical indicator reports such as the annual *Education at a Glance* (EAG), published by the Organisation for Economic Co-operation and Development (OECD). The use of indicators for comparisons and strategic mobilization has become a regular part of educational politics. Dutch teachers, for example, used these indicators to lobby for increases in their salaries after the 1996 EAG indicators of teacher salaries showed that they were not paid as well as their Belgian and German neighbors. Similarly, in the United States, comparisons of a statistical indicator of dropout rates across nations were used to highlight comparatively low high school completion rates in 2000. In an extreme, but illustrative, case, one nation's incumbent political party requested that the publication of the EAG be delayed until after parliamentary

election because of the potentially damaging news about how its education system compared to other OECD nations.

These examples of the widespread impact of international education statistical indicators are all the more interesting when one considers that an earlier attempt to set up a system of international statistical indicators of education during the 1970s failed. While attempts to create a national, and then an international, system of social indicators (known as the *social indicators movement*) faltered, early attempts by the OECD to develop statistical indicators on education systems fell apart as idealism about the utility of a technical-functionalist approach to education planning receded.

### History of Social Indicators

The social indicators movement, born in the early 1960s, attempted to establish a "system of social accounts," that would allow for cost-benefit analyses of the social components of expenditures already indexed in the National Income and Product Accounts. Many academics and policy makers were concerned about the social costs of economic growth, and social indicators were seen as a means to monitor the social impacts of economic expenditures. *Social indicators* are defined as time series that are used to monitor the social system, which help to identify change and to guide efforts to adjust the course of social change. Examples of social indicators include unemployment rates, crime rates, estimates of life expectancy, health status indices such as the average number of "health days" in the past month, rates of voting in elections, measures of subjective well-being, and education measures such as school enrollment rates and achievement test scores.

Enthusiasm for social indicators led to the establishment of the Social Science Research Council (SSRC) Center for Coordination of Research on Social Indicators in 1972 (funded by the National Science Foundation) and the initiation of several continuing sample surveys, including the General Social Survey (GSS) and the National Crime Survey (NCS). As reporting mechanisms, the Census Bureau published three comprehensive social indicators data and chart books in 1974, 1978, and 1980. The academic community launched the international journal *Social Indicators Research* in 1974. Many other nations and international agencies also produced indicator volumes of their own during this period. In the 1980s, however, federal funding cuts

led to the discontinuation of numerous comprehensive national and international social indicators activities, including closing the SSRC Center. Some have argued that a shift away from data-based decision making towards policy based on conservative ideology during the Reagan administration, coupled with a large budget deficit, helped to pull the financial plug on the social indicators movement. While field-specific indicators continue to be published by government agencies in areas such as education, labor, health, crime, housing, science, and agriculture, the systematic public reporting envisioned in the 1960s has largely not been sustained, although comprehensive surveys of the condition of youth have arisen in both the public and private spheres, such as those by the Annie E. Casey Foundation (2001) and the Forum on Child and Family Statistics (2001).

Some of the main data collections that grew out of the social indicators movement, including the GSS and NCS, continue, as do a range of longitudinal and cross-sectional surveys in other social areas. On the academic side, a literature involving social indicators has continued to grow, mostly focused on quality-of-life issues. While education is seen as a component of quality of life, it tends to be used in a fairly rudimentary fashion. For example, out of 331 articles published in *Social Indicators Research* between 1994 and 2000, only twenty-six addressed education with any depth. And although the widely cited Human Development Index compiled by the United Nations Development Programme has education and literacy components, these are limited to basic measures of school enrollments and, arguably, non-comparable country-level estimates of literacy rates, which are often based on census questions about whether someone can read or write. As a sub-field of social indicators, however, the collection and reporting of education statistics has expanded rapidly since the early 1980s in the United States, the early 1990s in OECD countries, and, more recently, in developing countries.

### **State of International Education Statistical Indicators Today**

Among the current array of statistical indicators of education within and across nations are some that go far beyond the basic structural characteristics and resource inputs, such as student-teacher enrollment ratios and expenditures per student, found in statistical almanacs. More data-intensive and statistically

complex indicators of participation in education, financial investments, decision-making procedures, public attitudes towards education, differences in curriculum and textbooks, retention and dropout rates in tertiary (higher) education, and student achievement in math, science, reading, and civics have become standard parts of indicators reports. For example, the OECD summarizes total education enrollment through an indicator on the average years of schooling that a 5-year-old child can expect under current conditions, which is calculated by summing the net enrollment rates for each single year of age and dividing by one hundred. Unlike the gross enrollment ratios (calculated as total enrollment in a particular level of education, regardless of age, divided by the size of the population in the “official” age group corresponding to that level) that have traditionally been reported in UNESCO statistical yearbooks, the *schooling expectancy* measures reported by the OECD aggregate across levels of education and increase comparability by weighting enrollment by the size of the population that is actually eligible to enroll.

Examples of other indicators that attempt to summarize complex issues into concise numerical indices include measures of individual and societal rates of return of investments in different levels of education, measures of factors contributing to differences in relative statutory teachers’ salary costs per student, and *effort indexes* for education funding, which adjust measures of public and private expenditures per student by per capita wealth. Furthermore, the OECD is working to develop assessment and reporting mechanisms to compare students’ problem-solving skills, their ability to work in groups, and their technology skills. There are few components of the world education enterprise that statisticians, psychometricians, and survey methodologists are not trying to measure and put into summary indicator forms for public consumption.

High-quality indicators require data that are accurate and routinely available. Behind the creation of so many high-quality indicators of national education systems is the routine collection of a wide array of education data in most industrialized countries. In addition to the costs of gathering data and information for national purposes, a large amount of human and financial investment is made to ensure that the data meet standards of comparability across countries. Country-level experts, whether from statistical or policy branches of governments,

frequently convene to discuss the kinds of data that should be collected, to reach consensus on the most methodologically sound means of collecting the data, and to construct indicators.

### Growth and Institutionalization of International Data Collections

Numerous international organizations collect and report education data, with the range of data types expanding and the complexity of collection and analysis increasing. Hence, the total cost of these collections has increased dramatically since 1990. Government financial support, and in some cases control, has been a significant component of this growth in both the sophistication of data and the scope of collections. Briefly described here are some of the basic institutional components involved in the creation of a set of international organizations or organizational structures that provide the institutional infrastructure for creating and sustaining international education statistical indicators.

**IEA.** Collaboration on international assessments began as early as the late 1950s when a group composed primarily of academics formed the International Association for the Evaluation of Educational Achievement (IEA). In 1965, twelve countries undertook the First International Mathematics Study. Since that time, the IEA has conducted fourteen different assessments covering the topics of mathematics, science, reading, civics, and technology. Findings from IEA's Second International Mathematics Study were the primary justification for the finding in the early 1980s that the United States was a "nation at risk." In the 1990s, government ministries of education became increasingly important for both funding and priority setting in these studies.

The results of the Third International Mathematics and Science Study (TIMSS) were widely reported in the United States and served as fuel for the latest educational reform efforts. As governments became increasingly involved in setting the IEA agenda, some key aspects of the research orientation of earlier surveys were no longer funded (e.g., the pre-test/post-test design in the Second International Science Study), while other innovative activities were added. For example, the TIMSS video study conducted in Germany, Japan, and the United States applied some of the most cutting-edge research technology to international assessments. As part of the 1999 repeat of TIMSS (TIMSS-R), additional coun-

tries have agreed to have their teachers videotaped and science classrooms have been added to the mix.

Over time, the IEA assessments have become more methodologically complex, with TIMSS employing the latest testing technology (e.g., item response theory [IRT], multiple imputation). As the technology behind the testing has become more complex, cross-national comparisons of achievement have become widely accepted, and arguments that education is culturally determined or that the tests are invalid, and thus that achievement results cannot be compared across countries, have for the most part disappeared.

**OECD.** While the IEA has been the key innovator in the area of education assessment, the OECD has led the development of a cross-nationally comparable system of education indicators. After a failed attempt to initiate an ambitious system of data collection and reporting in the early 1970s, the OECD, with strong support from the United States, undertook the development of a new system of cross-nationally comparable statistical indicators in the late 1980s. The ministers of education of OECD countries agreed at a meeting in Paris in November 1990 that accurate information and data are required for sound decision-making, informed debate on policy, and accountability measures. Ministers also agreed that data currently available lacked comparability and relevance to education policy.

Although led by the OECD, the core of the International Indicators of Education Systems (INES) projects was the organization of four country-led developmental networks: Network A on Educational Outcomes, Network B on Student Destinations, Network C on School Features and Processes, and Network D on Expectations and Attitudes towards Education—led by the United States, Sweden, the Netherlands, and the United Kingdom, respectively. The OECD secretariat chairs a technical group on enrollments, graduates, personnel, and finances. These networks—involving up to 200 statisticians, policymakers, and, in some cases, academics—designed indicators, negotiated the definitions for data collections, and supplied data for annual reporting. This model of shared ownership in the development of *Education at a Glance* (which was at first published biennially and later became an annual publication) contributed to its success. Participants in the networks and the technical group invested the time needed to supply high-quality data because they had a stake in the publication's success.

INES was initially a reporting scheme where administrative databases within countries were mined and aggregated, and it has evolved into an initiative that mounts its own cross-national surveys, including school surveys, public attitudes surveys, adult literacy surveys, and surveys of student achievement. The largest and most expensive project to date is the OECD Programme for International Student Assessment (PISA). PISA is an assessment of reading literacy, mathematical literacy, and scientific literacy, jointly developed by participating countries and administered to samples of fifteen-year-old students in their schools. In 2000 PISA was administered in thirty-two countries, to between 4,500 and 10,000 students per country. Expected outcomes include a basic profile of knowledge and skills among students at the end of compulsory schooling, contextual indicators relating results to student and school characteristics, and trend indicators showing how results change over time. With the results of PISA, the OECD will be able to report, for the first time, achievement and context indicators specifically designed for that purpose (rather than using IEA data) for country rankings and comparisons.

**UNESCO.** The United Nations Educational, Scientific and Cultural Organization (UNESCO) has been the main source of cross-national data on education since its inception near the end of the Second World War. UNESCO's first questionnaire-based survey of education was conducted in 1950 and covered fifty-seven of its member states. In the 1970s UNESCO organized the creation of the International Standard Classification of Education (ISCED), a major step forward towards improving the comparability of education data. Although as many as 175 countries regularly report information on their education systems to UNESCO, much of the data reported is widely considered unreliable. Throughout the 1990s the primary analytical report on education published by UNESCO, the *World Education Report*, based many of its analyses and conclusions on education data collected by agencies other than UNESCO.

Between 1984 and 1996 personnel and budgetary support for statistics at UNESCO declined, and UNESCO's ability to assist member countries in the development of their statistical infrastructure or in the reporting of data was severely limited. In the late 1990s, however, the World Bank and other international organizations, as well as influential member countries such as the Netherlands and the United

Kingdom, increased pressure and financial contributions in order to improve the quality of the education data UNESCO collects.

Collaboration between UNESCO and OECD began on the World Bank-financed World Education Indicators (WEI) project, which capitalized on OECD's experience, legitimacy, and status to expand the OECD *Indicators Methodology* to the developing world. Although this project includes only eighteen nations (nearly fifty if OECD member nations are included), it has helped to raise the credibility of indicator reporting in at least some countries in the developing world. Even though this project has in many ways "cherry-picked" countries having reasonably advanced national education data systems, the collaborative spirit imported from OECD's INES project has been quite effective.

A major step for the newly constituted UNESCO Institute for Statistics will be to take this project to a larger scale. Significantly expanding WEI will be quite a challenge, however, as the financial and personnel costs needed to increase both the quality of national data collection and reporting, as well as processing and indicator production on an international level, are likely to exceed the budget and staff capacity of the institute in the short term. The visible success of the WEI project, however, shows that the interest in high-quality, comparable, education indicators expands far beyond the developed countries of the OECD.

### **Integration of National Resources and Expertise into the Process**

Many of the international organizations dedicated to education data collection were in operation well before the renaissance of the statistical indicator in the education sector, but these groups lacked the political power and expertise found in a number of key national governments to make them what they have recently become. A central part of the story of international data and statistical indicators has been the thorough integration of national governments into the process. As technocratic operations of governance, with its heavy reliance on data to measure problems and evaluate policies, became standard in the second half of the twentieth century, wealthier national governments invested in statistical systems and analysis capabilities. As was the case for the IEA and its massive TIMSS project, several key nations lent crucial expertise and legitimization to the process, factors that were clearly missing in earlier at-

tempts. Although this “partnership” has not always been a conflict-free one, it has taken international agencies to new technical and resource levels.

The integration of national experts, often from ministries of education or national statistical offices, into international indicator development teams has improved both the quality of the data collected and the national legitimacy of the data reported. A number of decentralized states, including Canada, Spain, and the United States, have used the international indicators produced by OECD as benchmarks for state/provincial indicators reports. As more national governments build significant local control of education into national systems, this use of international indicators at local levels will become more widespread. In the case of Canada, the internationally sanctioned framework provides legitimacy to a specific list of indicators that might not otherwise have gained a sufficient level of agreement among the provinces involved.

The initial release of results from the PISA project will take this one step further, in that the OECD will provide participating countries reports focused on their national results, in a way similar to how the National Assessment of Educational Progress (NAEP) produces reports for each of the fifty U.S. states. This reporting scheme will allow participating countries to “release” their national data at the same time as the international data release. The same could easily happen with releases of subnational indicators in conjunction with international releases. This form of simultaneous release is seen as an effective way to create policy debate at a number of levels within the American system, as illustrated by the U.S. National Center for Education Statistics’ ability to generate public interest in its release of achievement indicators from TIMSS and TIMSS-R. International education indicators provide constituencies within national education systems another vantage point to effect change and reform.

### Conclusions

There have been four main trends behind the massive collection of data and the construction of cross-national statistical indicators in the education sector over the past several decades. These trends are: (1) greater coordination and networks of organizations dedicated to international data collection; (2) integration of national governments’ statistical expertise and resources into international statistical efforts that lead to statistical indicators; (3) political use of

cross-national comparisons across a number of public sectors; and (4) near universal acceptance of the validity of statistical indicators to capture central education processes.

Although examples presented here of each factor focus more on elementary and secondary schooling, the same could be said for indicators of tertiary education. The only difference is that the development of a wide range of international statistical indicators for higher education (i.e., indicators of higher education systems instead of research and development products of higher education) lags behind what has happened for elementary and secondary education. However, there are a number of signs that the higher education section will incorporate similar indicators of instruction, performance, and related processes in the near future. It is clear that international statistical indicators of education will continue to become more sophisticated and have a wider impact on policy debates about improving education for some time to come.

*See also:* INTERNATIONAL ASSESSMENTS; INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION.

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## INTERNATIONAL GAP IN TECHNOLOGY, THE

At the dawn of the twenty-first century, there was a major gap between industrialized and developing countries in terms of their access to information and communications technology (ICT). This gap has come to be known as the *digital divide* and is illustrative of the vast differences in development among nations resulting from the process of globalization. While most industrialized countries were linked into the global information economy through high speed information networks and computers, the majority of people in the developing world had very little or no access to basic information and communications networks—let alone the new technology of the Internet. Indeed, more than half the people on the planet, mostly in the developing world, had yet to make a telephone call.

There are many ways of measuring the digital divide. One measure is the extent to which people in the industrialized and developing countries have access to the Internet. Table 1 provides a rough estimate of the approximately 500 million worldwide Internet users by region at the beginning of the current century. It shows that the industrialized countries represented some 65 percent of all Internet users.

Another measure is the location of Internet content providers. Here the dominance of the developed world is still more accentuated: the United States shows a ratio of 25.2 Internet domains per thousand population and parts of Europe 15 per thousand, compared to Brazil’s 0.5, China’s 0.2, and India’s 0.1.

The digital divide is far more than a gap in access to ICT, however. It is a major impediment to the social and economic development of poor nations. In the twenty-first century, knowledge and information and a highly skilled labor force are increasingly important determinants of growth in the global economy. Or as Manuel Castells has observed, “Information technology, and the ability to use it and adapt it, is the critical factor in generating and accessing wealth, power, and knowledge in our time” (1998, p. 92). ICT has already revolutionized economic life and business in the industrialized countries and is transforming these societies in equally profound ways. ICT is a key weapon in the war against world poverty. When used properly, it offers huge potential to empower people in developing countries to overcome development obstacles, to

address the most important social problems they face, and to strengthen communities, democratic institutions, a free press, and local economies.

According to some, the development of information and communications technology is increasing the gap between the rich and the poor, the knowledgeable and the knowledge deprived, the information rich and the information poor. Instead of closing the divide, the introduction of more ICT exacerbates social and economic divides—not only between rich and poor countries, but also among various socioeconomic groups within countries. Others argue that ICT closes the divide by integrating countries in the global economy and providing them access to global knowledge and information for development. Nonetheless, there are stark differences in access across the world according to gender, geography (i.e., urban versus rural), income, education, age, occupation, and even ethnicity and race. The groups with the greatest access to new information and communications technology are generally well-educated, high income urban males. Poor, illiterate females in rural areas are least likely to have access to ICT.

### The Digital Divide in Education

The global dimensions of the digital divide are most prominent in education. At the beginning of the twenty-first century many industrialized countries had begun to gear up their education systems for the knowledge economy by making major investments in computers for classrooms, in networking their schools, and in training teachers to use technology in their teaching. Thus, in the United States the ratio of students to instructional computers reached five to one and 98 percent of schools were connected to the Internet. In the United Kingdom, the ratio of students to computers was twelve to one in primary school and seven to one in secondary school while access to the Internet was virtually universal, as it was in the European Union as a whole. Canada showed similar patterns, as did Australia and New Zealand. In addition, many students either owned their own computers or had access to the Internet outside of school hours. Getting online had also become the buzz of the higher education sector in industrialized countries; most universities had or were acquiring access to both fiber optic and wireless high speed digital networks.

In contrast, most of the developing countries, with few exceptions, were more concerned with very

**TABLE 1**

<b>Worldwide Internet users by region, 2001</b>		
<b>Region</b>	<b>Number of users</b>	<b>Percentage</b>
Africa	4 million	1
Asia/Pacific	144 million	28
Canada and United States	181 million	35
Europe	155 million	30
Latin America	25 million	5
Middle East	5 million	1
<b>World Total</b>	<b>514 million</b>	<b>100%</b>

SOURCE: Adapted from Nua Internet Surveys. August 2001.

difficult educational issues—low primary and secondary school enrollments, inadequately trained teachers, little or no access to textbooks, and ineffective school management—rather than with improving ICT. The exceptions were a small number of countries in Asia, Latin America, and other parts of the developing world that began introducing computers in classrooms, networking schools, and developing digital content to address the educational requirements of the global knowledge economy.

Among Asian countries, Singapore, Malaysia, Korea, China, and Thailand were making important investments in ICT in higher education and at the primary and secondary levels. Thailand developed the first nationwide, free-access network for education in Southeast Asia, SchoolNet@1509. This program also made Thai content available on the Internet. China's Ministry of Education planned to provide online education services to five million higher education students by 2005. In Latin America, Brazil, Mexico, and Chile were making significant ICT investments. Brazil built high speed data networks for university research and installed large numbers of computers in primary and secondary schools nationwide. Chile had linked 5,000 primary and secondary schools and produced educational software under its Enlaces program. In other parts of the world, Turkey launched a major initiative to install computers in more than 5000 classrooms, and the South African SchoolNet (SchoolNetSA) began providing Internet services to local schools and developed online educational content.

### Education and Technology in the Balance

Does access to computers and the Internet give the education systems of industrialized countries an advantage over those in developing countries? Or has

technology balanced rich and poor countries, because poor countries now have access to high quality information, data, and research via the Internet they never would have had without technology? The answers to these questions depend in large measure upon how one assesses the impact and cost-effectiveness of ICT on the education systems in the industrialized countries. At the start of the twenty-first century, the educational impact of computers and the Internet was not widely in evidence in many schools, although it is clear that ICT was being widely adopted and used at all levels of education. Moreover, a new “Net Generation” of learners weaned on the Internet was stimulating new approaches to teaching and learning online, initially within the traditional classroom, but increasingly outside that venue, without regard to physical location or time of day.

While there has been good progress in providing access to ICT in schools and universities in industrialized countries, the expected benefits to education, as noted, have been difficult to measure: (1) increasing productive teaching and learning; (2) transforming teaching and learning from traditional textbook lessons to more learner-friendly, student-centered approaches that employ powerful interactive tools and methods; and (3) equipping students with higher order thinking and problem-solving skills that prepare them for life in an information-based society and workplace.

Some researchers, such as James Kulick, have recorded positive outcomes from the use of computers for teaching and learning basic skills and for information and knowledge management. Others, such as Larry Cuban, believe that computers have been oversold and underused; they argue that most educational institutions remain essentially as they were decades ago, despite the availability of technology, and are not reaping enough benefits from technology to justify the investments. Further, others question the cost-effectiveness of computers relative to other inputs for improving the quality of education in the classroom: smaller class sizes, self-paced learning, peer teaching, small group learning, innovative curricula, and in-class tutors.

The experience of the industrialized countries would suggest that access to the Internet and the wealth of knowledge and information it provides does not automatically lead to measurable improvements in the quality of teaching and learning in schools. Rather, such improvements are the result of

parallel efforts to enhance the teaching and learning process by training teachers, reducing class size, making textbooks available, and establishing standards of learning. Nonetheless, it is obvious that school systems everywhere, and especially in the developing countries, need to find ways of providing more students with regular and frequent access to information and communications technology and to enable students to acquire the knowledge and skills needed to support a knowledge economy.

### **Bridging the Digital Divide in Education**

The developing countries face massive challenges in bridging the digital divide in education. What are these challenges? And is progress possible? In order to bridge the digital divide in education, developing countries will first need to overcome the key constraints to the development of ICT in general. Too often programs fail to address the problems in a comprehensive and sustainable way. To reduce the technology gap developing countries need to discover ways to expand information infrastructure, increase access by improving markets, and reduce the cost of service, especially for Internet access. A reduction in Internet costs—both telecommunications company charges and Internet service provider charges—in developing countries is necessary for a broadening of the information society there, and for more widespread and cost-effective use of new technologies to improve education.

Even with the best of intentions, however, achieving these goals will not be easy for developing countries. They lack both the funding and the technical expertise to overcome infrastructure and human resource constraints. Many international financial organizations, aid agencies, and private foundations are committed to helping developing countries bridge the digital divide and are being mobilized into action by the United Nations, the World Economic Forum, and other bodies.

Additionally, many feel that advances in technology will help bridge the digital divide between industrial and developing countries. Overall, diffusion of Internet access is expected to be rapid in the first decade of the twenty-first century. Indeed, access to information over the Internet is already being greatly facilitated for consumers in developing countries by the existence of new data caches and innovative networking of servers around the world. The development of wireless telecommunications is also expected to facilitate access to the Internet in remote

rural areas where telephone service has been unavailable. And, above all, computers are likely to become both pervasive and affordable, not just on the desk top and as handheld appliances, but embedded in intelligent objects everywhere.

While access to computers and telecommunications networks is necessary to bridge the digital divide, access alone is not sufficient to ensure that education systems in developing countries benefit from the Internet revolution. The governments of these countries also need to: (1) train teachers and trainers to exploit the potential of learning technologies; (2) offer free or inexpensive Internet access to schools; (3) foster capacity to develop content and instructional resources in their own language; (4) build networks and well-maintained facilities for both accessing knowledge and providing affordable lifelong learning and skill upgrading; and (5) preserve the freedom of teachers and students to explore the myriad educational resources on the web without filtering and censorship such as that which exists in China, Saudi Arabia, Iran, and other countries.

Both industrialized and developing countries must also seek to address the digital divide between rich and poor. The United States has made significant progress in bridging the gap, although there are still considerable inequities, especially in instructional practice—that is, in how effectively modern learning technologies are being used with different groups of students. In the developing countries, public policies to promote competition (which lowers prices and improves quality) and to make new technologies more accessible will ultimately influence availability and adoption of technology and access. However, special community-based programs by governments and nongovernmental organizations involving marginalized or rural communities, women, and minorities are also essential for bridging the digital divide.

*See also:* INTERNATIONAL ASSESSMENTS, *subentry on* IEA STUDY OF TECHNOLOGY IN THE CLASSROOM; TECHNOLOGY EDUCATION; TECHNOLOGY IN EDUCATION.

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## INTERNATIONAL ISSUES OF SOCIAL MOBILITY OF UNDERPRIVILEGED GROUPS

Children of lower socioeconomic status (SES) groups tend to perform worse in school than upper SES groups, and they tend to stay in school for a shorter time. In addition, these children tend to be underrepresented in higher education. These patterns exist regardless of region of world, sociopolitical system, and level of economic development of a country. This article examines the universality of these observations. It also discusses exceptions to these general tendencies and promising interventions that enable children of lower socioeconomic groups to overcome barriers to progress in school.

### Education, Equality, and Equity

The theme of education and social mobility of underprivileged groups is integrally related to issues of social equality and equity. Equality, according to Martin Bronfenbrenner, refers to the numerical distribution of a good or service (such as income, land, or years of schooling), whereas equity refers to judgments concerning the fairness or justice of that distribution. The sociological study of equality of educational opportunity and outcomes usually focuses on the relationship between stratification—the hierarchical ordering of people on such dimensions as wealth, power, and prestige—and the amount and type of schooling available to different social groups. According to Ann Parker Parelius and Robert James Parelius, it is widely assumed that “‘equality of opportunity’ exists when each person regardless of such ascribed characteristics as family background, religion, ethnicity, race, or gender, has the same chance of acquiring a favorable socioeconomic position” (p. 264).

It should be noted that equal educational opportunity does not necessarily imply that people will end up equal but simply that an individual’s socioeconomic position will be the result of a “fair and open contest—one in which the winners are those who work hardest and demonstrate the most ability” (Parelius and Parelius, p. 264). In the debate over inequality, one critical question concerns the degree to which advantage is passed on from one generation to another. For example, if the social-class standing of a family is high in terms of income, occupational status, and educational attainment, will the family’s offspring have greater access to the highest levels of

a school system? And what is the effect of family socioeconomic position on the relationship between level of schooling attained and subsequent income and occupational status? Christopher J. Hurn noted in 1993 that if a society’s education system is truly meritocratic (that is, based on ability and not on ascriptive factors such as social class, gender, and ethnicity), then (1) the correlation between individuals’ educational attainment (how far one goes in school) and future occupational status should increase over time; (2) the correlation between students’ educational attainment and their parents’ socioeconomic status should decrease over time; and (3) the correlation between parents’ SES and their offspring’s SES should also decrease.

Evidence strongly supports the proposition that, around the world, education increasingly is becoming the strongest determinant of occupational status and the type of life chances individuals experience. Evidence does not, however, support the thesis that the relationship between family background and how far one goes in school and what one learns is decreasing over time. Indeed, the relationship between family SES and school success or failure appears to be increasing since the 1980s as the result, in part, of public policies that tend to decentralize and privatize education. While primary education has expanded to near universal coverage of the relevant age group, access to the levels of education that are most important for social mobility and entry into the most modern and competitive sectors of the increasingly globalized economies remain elusive for all but elites. Consequently, the relationship between parents’ SES and their children’s SES has shown little evidence of changing over time.

### Significant Educational Interventions

Moreover, comparative longitudinal studies of factors influencing what is learned in school and level of educational attainment suggest that as societies industrialize and modernize, social class increasingly plays a significant role in determining educational outcomes. This finding does not discount the importance of school-based factors in determining how well students, especially those living in conditions of poverty, fare in school. Well-designed interventions aimed at improving the quality of instruction can make a difference. These include quality preschool and early childhood programs with supplementary nutrition and health care services; more adequate school infrastructure so that poor, rural, and indige-

nous children have the same amenities (school desks and chairs, electricity, running water, and toilets) enjoyed by their more advantaged peers in urban and private schools; a flexible academic calendar responsive to the socioeconomic context of schools in different regions of a country; sufficient supplies of textbooks and culturally sensitive as well as socially relevant curricular materials in the appropriate languages; teaching guides matched to transformed curricula; student-centered, more active pedagogies that involve collaborative work as well as personalized attention to each child; significantly improved pre-service and in-service teacher education and professional development programs and opportunities; incentive pay for teachers working under difficult conditions and, generally, more adequate remuneration and social recognition of the importance of teaching; and, importantly, greater participation of teachers, parents, and communities in the design of education programs to meet their self-defined needs.

For female students, who are often the most discriminated against with regard to access to schooling and the types of curricula that lead to high-status jobs, a complementary set of interventions would include placement of schools closer to their homes, female teachers and administrators as role models, opportunities to be taught separately where appropriate, academically challenging curricula, waiver of tuition and book fees, and, in some cases, monetary incentives to families to compensate for lost income or opportunity costs borne by them. In some cases, agencies working to promote greater school participation rates by females have employed a variety of outreach activities and media, including extension agents and sociodramas performed in communities, to counter notions that religious doctrine or cultural traditions prohibit the education of daughters.

Intangible factors such as school culture (the values propounded by school personnel and student peer groups) also are significant. Bradley Levinson's ten-year study of a Mexican junior high school, for example, documents how the egalitarian ideology of the 1910 Revolution enters the discourse and practices of school personnel and is appropriated by students. The belief that *Todos Somos Iguales* ("We Are All Equal") strongly shapes interactions between students and, contrary to much U.S. and European social and cultural reproduction theory, overrides the forces that would stratify students by social class, ethnicity, and gender. Elizabeth Cohen and asso-

ciates' research on "equitable classrooms" underscores the importance of multidimensional and complex instruction that demand high levels of performance of all students and encourages the use and evaluation of multiple abilities. In such classrooms, "the interaction among students is 'equal-status,' that is all students are active and influential participants and their opinions matter to their fellow students" (Cohen, p. 276). Similarly, *effective schools* research indicates that an overall ethos of high expectations and a climate of respect have a positive impact on the achievement of lower SES students.

### **Problematic Reforms: National Standards and High-Stakes Examinations**

Along with greater respect accorded to students and the knowledge and values they bring to school, teacher expectations and general curricular standards are important factors in raising student performance. The worldwide trend to establish national standards in core academic subjects and hold schools and individual teachers and students accountable for them through systematic testing may contribute to higher test scores for disadvantaged groups. These efforts, however, are fraught with serious problems and may, instead, lead to greater failure for the intended beneficiaries of these reforms. While standards may be uniformly applied to all students, the resources to accomplish heightened expectations usually are not equally available. The standards themselves may be questioned as to whose knowledge and values are represented; the language in which tests are administered is a particularly significant issue in multilingual, pluralist societies. Generally, there is widespread criticism that the tests constrain the professional autonomy of teachers to determine what is in the best interest of students, often involve a *dumbing down* and narrowing of what is taught, and tend to be a one-size-fits-all strategy for educational improvement.

### **Cultural and Social Capital**

As indicated above, educators concerned with educational interventions that are culturally sensitive and contextually appropriate take into account the so-called cultural and social capital of their students, families, and communities. The term *cultural capital* refers to the knowledge, linguistic skills and speech codes, and modes of behavior that students bring to school, whereas *social capital* refers to the networks of support and resources that families and their chil-

dren can draw upon to interact successfully with various public agencies such as schools. The failure of students from lower socioeconomic groups and ethnic minorities to succeed in school often resides in the mismatch between the expectations of state curricula and school personnel and what students actually know and value. Education systems must build upon this individual and local knowledge while expanding it so that students, with a heightened sense of their own identity and efficacy, also can participate in the larger society in ways beneficial to themselves and others.

The significance of social capital and how to mobilize it has received substantial attention since the late 1980s. Ways to strengthen the social capital of lower SES families include enabling closer and more systematic involvement of teachers with parents (rather than only when problems arise), arranging for parent-teacher conferences to take place at convenient locations and times, making information about the workings of the education system and individual schools available in the home language, and focusing on the strengths of the children and what they can do. In the absence of other social-service agencies in rural areas and depressed urban neighborhoods, schools necessarily must offer a number of educational and social services, such as extended day care, recreational facilities and sports programs, health programs (including inoculations and birth-control information), and literacy and adult education classes.

### Neoliberal Economic and Education Policies

Unfortunately, as noted by such authors as Robert Arnove, Joel Samoff, Fernando Reimers, and Maria Bucur, the full panoply of interventions and reforms is rarely implemented. Reform efforts usually are piecemeal, haphazardly implemented, and inadequately funded. Furthermore, current neoliberal policy initiatives that are being uniformly initiated around the world are likely to widen the gap between academic achievement (what students learn in school) and the educational attainment of the rich and the poor. The term *neoliberal* derives from the neoclassical economic theories expounded by the major international donor agencies, such as the World Bank and the International Monetary Fund, as well as by national governments that pursue economic and social policies that give priority to the workings of market forces. The theories are based on writings of the classical economists Adam Smith

(1723–1790) and David Ricardo (1772–1823), who believed the role of the state consisted in establishing the conditions by which the free play of the marketplace, the laws of supply and demand, and free trade based on competitive advantage would inevitably redound to the benefit of all. Government policies based on these notions have led to a drastic reduction in the state role in social spending, deregulation of the economy, and liberalization of import policies. The educational counterparts of these policies have included moves to decentralize and privatize public school systems.

Initiatives to decentralize national education systems most commonly involve transfer of a number of previously centralized functions (such as hiring of teachers) to local levels of government along with greater responsibility for the financing of education. At the same time, in many countries, a core national curriculum is established, and, increasingly, national standards, systematic testing, and various accountability measures are introduced. In countries with dramatic differences in wealth by regions, these policies tend to exacerbate the availability and quality of schooling. Comparisons of test scores between more-advantaged urban areas and depressed rural areas, and between elite private schools and poor urban schools, reveal a growing gap between children of upper and lower socioeconomic strata. Moreover, cost-recovery measures are usually introduced, which means that previously free services are no longer provided. Parents, for example, must pay for textbooks, school uniforms, special classes, and equipment (usually related to computers and the learning of a foreign language). These fees, in countries where a majority of the population is living in poverty, may drive children out of the school system. Frequently, parents must choose between paying school fees and buying food, clothing, and medicines. Sometimes, the principal incentive for sending children to school is the milk or a hot meal that will be provided. Various measures facilitating the creation and subsidization of private education further widen the gap between the rich and the poor, as well-to-do families are encouraged to send their children to private schools, thereby eroding the base of support for public schooling.

### Higher Education and Stratification

At the higher education level, postsecondary education has become so integrally linked to individual economic well-being that it is now deemed one of

the “essential components of cultural and socioeconomic development of individuals, communities and nations” (United Nations Development Programme, p. 2). As such, the higher education degree credential, over time, has become the principal entry point into the most modernized sectors of the economy and middle- or upper-class status. Nevertheless, as countries around the globe contend with issues of increased demand for, and access to, higher education institutions, financially sustaining those institutions has become a dilemma for all societies. As a result, while the costs of higher education in many countries traditionally involve no or minimal tuition fees, policy reforms increasingly shift the costs of higher education to students and their families. Ironically, at the very moment when historically marginalized groups have begun to gain access to higher education, the neoliberal move to decentralize and privatize education has become most prominent. Such reform initiatives have frequently led to student as well as faculty seizures of higher education facilities, public protests, and occasionally violent demonstrations.

One reason for this opposition to reform is that despite the diverse histories of, and demands, cultures, and clients for, higher education throughout the world, dissimilar nations are increasingly connected by their policy decisions without sufficient local adaptation. For higher education, the 1990s was a period of financial crisis around the world. These financial pressures have led to surprisingly similar reforms for higher education. Oftentimes, policy solutions of industrialized nations (e.g., the United States, the United Kingdom, and Australia) become the prevailing model used by other nations facing the same fiscal pressures. The most widespread financial reform mechanism involves increasing tuition and fees at the same time that financial-aid systems of grants and student loans are introduced. Student loan programs exist in more than fifty countries. Because student loan programs are costly to administer, they often compete with grants for governmental program support. As loan programs are introduced, grant programs are frequently reduced.

The conflict between student loans, which must be repaid by the student, and outright grants, which do not need to be repaid, is contested by policy analysts. Some researchers support charging students and their families for an increasing share of the cost of higher education because keeping tuition prices

low through governmental support mainly benefits high-income students. Other analysts assert that the high cost of tuition discourages minority and low-income students from even considering college attendance. Most researchers agree that the enrollment of high-income students in tertiary education does not change because of price. Shifting the costs of higher education to students and their families has also served to stratify educational opportunities by institution type such that the students from high- and middle-income backgrounds increasingly seek degrees from more prestigious universities, while low-income students increasingly enroll in the less prestigious institutions and vocational institutions.

More than adequate financial support is important for low-income and nontraditional students to succeed in higher education. Equally crucial for student success are a welcoming environment; a variety of support services; adaptation of academic calendars, curricula, and pedagogy to the characteristics of students; and flexible class schedules and modalities for delivering instruction. Taking into account the cultural and social capital of students from diverse backgrounds as well as their financial resources constitutes a major move toward more inclusive and equitable higher education systems.

### **The Need for Poverty Reduction: International Data**

While the association between levels of educational attainment and lifetime earning streams is substantial and becoming stronger, economic policies can alleviate the dramatic wage differences between those who have a higher education and those who do not. Stephen Nickell and Brian Bell note that comparative data (from Germany, the Netherlands, Switzerland, and the United Kingdom) point out that wage policies and efforts made to provide high-level skills to those not receiving a higher education can lead to more equitable systems of income distribution.

Ultimately, public policies related to poverty alleviation are critical to overcoming the gap between the rich and poor within and between countries. Lyle V. Jones draws attention to the strong correlation between poverty levels, school expulsions and suspensions, and achievement scores in the United States, Germany, and Japan to underscore the point “that within every one of the nations that participated, poverty is related to achievement. . . . Based on these findings, there can be little basis for surprise

when we discover that the U.S. [with more than double the level of children living in poverty] may lag behind Japan, Germany, and some other countries in average school achievement in mathematics” (p. 8).

Unfortunately, current national development and economic policies based on the application of market forces to the provision of social services, and especially education, have led to an expansion and deepening of poverty not only within countries but also between countries and large regions of the world. While certain countries have successfully integrated into the global economy, many countries have not. Among those excluded from the so-called benefits of international market forces and policies of privatization and decentralization are large sectors of Africa, Latin America, Russia and eastern Europe, and Asia. The poorer the country, the greater is the probability that a higher percentage of children will never even enter or complete primary education. For example, in 1990 Marlaine E. Lockheed and Adriaan M. Verspoor found that in thirteen countries with low gross national product the median dropout rate was 41 percent compared with 14 percent for seven upper-middle-income countries. More recent research, summarized in 2000 by the International Institute of Educational Planning as a ten-year follow-up to the 1990 Jomtien, Thailand, international conference on “Education for All,” found that “the lower the national income, the greater the inequalities in education within a country,” with “the differences between rich and poor, between center and periphery, between men and women, generally greater . . . the poorer the country” (Hernes, p. 2). While enrollment figures are important indicators of access to schooling, they do not reveal high dropout and repetition rates, especially among disadvantaged groups. Instead, educational attainment and years of schooling have been identified as the key factors in determining subsequent occupational attainment, income, and SES, particularly in highly industrialized countries. Therefore, Table 1 demonstrates the disparity in educational attainment and years of schooling for different regions of the world by income group. Education systems and teachers most frequently bear the brunt in cost reductions in social spending, resulting in the erosion of previous gains for the poorest and most marginalized sectors of the society and an undermining of public schooling relative to that of the private sector.

## Conclusions

The relationships among family background, educational achievement and attainment, and subsequent life chances are obviously complex. Research that clarifies these relationships must take into account the interaction among contextual (macro-level) as well as local institutional (micro-level) variables. At the level of national comparisons, promising research needs to be conducted along the lines of explaining how certain countries, such as Finland, that excel in international tests of academic achievement, are able to do a good job with all students.

Over time the meaning of equality of educational opportunity has changed significantly. If one thinks of equal educational opportunity in relation to a race or contest, the initial conceptualization was to ensure that all students started the race on fairly comparable terms and, subsequently, that they would attend schools with similar resources and a common curriculum. Students who were disadvantaged would have early intervention programs to bring them up to par. More recent conceptualizations emphasize the outcomes of the education process—that is, the ability of schools to develop to the fullest the potential of students with different backgrounds and talents. In 1972 Torsten Husén referred to this new definition of equal educational opportunity in these terms: “every student should have an equal opportunity to be treated unequally” (p. 26). What this seemingly paradoxical principle means is that every single student should receive an education that is personally appropriate and beneficial. It also implies that more resources are likely to be required for those who are most disadvantaged—just as more costly, intensive care in a hospital is required to remedy a critical health situation. As John Rawls noted, given the years and decades of neglect and often discrimination faced by lower SES groups, ethnic minorities, and females, principles of redistributive justice would require that greater resources be dedicated to achieving maximum benefits for them. Without such idealism, it is unlikely that current trends toward greater inequalities and inequities in the economic, social, and educational spheres will be reversed.

*See also:* GENDER ISSUES, *subentry on* INTERNATIONAL; INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION; POVERTY AND EDUCATION; SOCIAL CAPITAL IN EDUCATION; TESTING, *subentry on* STANDARDIZED TESTS AND EDUCATIONAL POLICY.

TABLE 1

## Highest level of education attained in the percentage of population age twenty-five and over, 1995

	No school (percent)	Primary attainment (percent)	Secondary attainment (percent)	Tertiary attainment (percent)	Average years of schooling in population over 25
World	26.7	32.2	28.0	13.0	6.49
Low and middle income	41.8	33.5	18.3	6.3	4.47
Sub-Saharan Africa	45.6	32.5	19.0	2.6	3.62
East Asia and Pacific	27.1	36.6	26.2	10.1	6.03
South Asia	54.7	26.2	15.2	4.0	3.73
Latin America and Caribbean	19.2	41.8	18.4	10.5	5.38
Middle East and North Africa	43.9	28.7	20.0	7.4	4.46
Transitional economies	1.4	35.9	48.4	14.2	9.72
High income	4.0	28.7	41.4	25.9	9.57

Note: The authors used the International Standard Classification of Education criteria adopted in 1976 as the common criterion for international comparison. This may vary from the criteria used by the United Nations Educational, Scientific and Cultural Organization in its reporting of educational attainment data.

SOURCE: BARRO, Robert J., and Lee, Jong-Wha. 2000. "International Data on Educational Attainment: Updates and Implications." Harvard University, Department of Economics. <<http://post.economics.harvard.edu/faculty/barro/workpapers.html>>.

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## INTERNATIONAL READING ASSOCIATION

The International Reading Association (IRA) is a nonprofit professional organization that seeks to

promote high levels of literacy by improving the quality of reading instruction. The association works to achieve this mission by studying the reading process and teaching techniques, serving as a clearinghouse for the support and dissemination of reading research through conferences and publications, and actively encouraging a lifetime reading habit. The association is concerned with reading at all levels—from the school readiness stage through college and adult learning.

The five organizational goals of the association are: (1) professional development to enhance and improve professional development of reading educators worldwide; (2) advocacy to provide leadership in support of research, policy, and practice that improves reading instruction and supports the best interests of all learners and reading professionals; (3) partnerships to establish and strengthen national and international alliances with a wide range of organizations; (4) research to encourage and support evidence-based policy and practice at all levels of reading and language arts education; and (5) global literacy development to identify, focus, and provide leadership on significant literacy issues.

### History and Development

The International Reading Association was established in 1956 through a merger of two existing groups, the National Association for Remedial Teachers and the International Council for the Improvement of Reading Instruction. The membership has increased from about 5,000 in 1956 to nearly 90,000 in 2002. A headquarters office was first established in Chicago, but was moved to Newark, Delaware, in 1961. IRA's Government Relations and International Development divisions are located in Washington, D.C., and an editorial office for the journal *Lectura y vida* is located in Buenos Aires, Argentina.

### Projects and Programs

The association publishes six peer-reviewed journals. Issued monthly from October to May are *The Reading Teacher*, which reports on research and practice at the elementary level, and the *Journal of Adolescent and Adult Literacy*, which focuses on information relating to middle school, secondary, college, and adult levels. *Reading Research Quarterly* is oriented toward reading theory and research and is published in both print and electronic formats. *Lectura y vida* is a Spanish language journal published

in Argentina four times per year. *Reading Online* is a free Internet-based interactive journal for literacy educators at all levels. *Peremena* is published quarterly in English and Russian for literacy educators in newly emerging democracies in eastern Europe and elsewhere. The organization's bimonthly newspaper, *Reading Today*, provides coverage of the reading profession and activities of the association. The association's active publishing program, which includes a list of more than 200 print and nonprint publications, produces an average of twenty new books and other resources each year, and supports a full-service online bookstore.

An annual convention is held each spring in either the United States or Canada. This five-day program of scholarly and social events attracts some 18,000 dedicated professionals from throughout the world. The association also sponsors a biennial world congress to promote global cooperation and the dissemination of information. In addition to these regularly scheduled conventions, many regional conferences, seminars, and meetings are held.

The association has embarked on a series of comprehensive projects to expand global literacy in both industrialized nations and developing countries. The Reading and Writing for Critical Thinking (RWCT) Project has grown from nine to twenty-four participating countries since its inception in 1997. This project links educators from North America, Europe, and Australia with those from emerging democracies in central and eastern Europe and the former Soviet Union. The Language to Literacy Project in Africa will help to advance literacy in several African nations through professional networking, community development, and increased access to technology.

Through research, the International Reading Association provides a cornerstone for professional development and influence. This includes the creation and dissemination of position papers, collaboration with a wide range of organizations throughout the world, and the active support of research through grants, awards, and the prestigious annual Reading Research Conference. The association also speaks for its members before many government bodies, which has led to increased funding for reading programs, expanded professional development opportunities for members, and the development of new legislation.

## Organizational Structure

The International Reading Association serves members at local, state, provincial, national, and international levels through more than 1,250 councils and forty-two national affiliates. The ultimate governing body of the association is the Delegates Assembly, which convenes each year at the annual convention and is made up of representatives from the councils and affiliates. During the year an elected board of directors, made up of three officers and nine directors, controls the activities of the association. An executive director and a staff of 100 people carry out the daily business of the organization.

Membership in the association is open to any individual interested in the field of reading. Membership options allow members to receive a choice of professional publications and discounts on association publications, conferences, and services.

### INTERNET RESOURCE

INTERNATIONAL READING ASSOCIATION 2002.  
<[www.reading.org](http://www.reading.org)>.

ALAN E. FARSTRUP

## INTERNATIONAL SOCIETY FOR PERFORMANCE IMPROVEMENT

Formerly known as the National Society for Programmed Instruction, the International Society for Performance Improvement (ISPI) is dedicated to improving performance in education and industry through a better understanding and use of evolving technology and methodology. It draws on the expertise of individuals from academia, the military, and industry, aiming for a truly multidisciplinary organization representing a broad range of practical and theoretical perspectives.

### Program

The society's members are involved in a wide variety of activities, from research on technological advances and their utility in the educational and work settings to publishing books and journals dealing with technology and performance enhancing initiatives. Its original mission, set forth in its earliest charter, was "to enhance education and training through the collection, development, and diffusion

of information concerned with programmed instruction." In the early twenty-first century the concerns of the organization exceed its original focus on the application of technology to education and extend to using technology to improve performance in the workplace as well.

The society carries out its mission through its annual meetings, conferences, seminars, and workshops. It puts out a number of publications dedicated to performance improvement technology, including the *Performance Improvement Journal*, the *Performance Xpress* (formerly titled *News and Notes*), and the *Performance Improvement Quarterly*, as well as books relating to the subject written by distinguished society members.

In addition to these activities, the ISPI, in conjunction with Boise State University, also operates an online, nonprofit educational and research facility called the Human Performance Technology Institute, which offers courses to members and nonmembers alike. It also sponsors grants ranging from \$2,000 to \$9,000 for research relating to the field of performance technology.

### Organization

The ISPI is governed by a board of directors elected for a year's term by the membership. Serving on the board are the current year's president, vice president, secretary, and treasurer, as well as the president of the previous term and the president-elect for the upcoming term. A board of editors is responsible for the publications arm of the organization. All positions except that of managing editor of the journal are voluntary.

### Membership and Support

Members are drawn from the academic community, the professions, the military, and industry. The society has more than 10,000 members in the United States, Canada, and in forty other countries, making it truly international in scope. The society maintains its independence by being fully self-supporting, earning revenues from annual membership dues, subscriptions to its periodicals, the sale of books, and course fees collected from its seminars, workshops, and the Human Performance Technology Institute.

### History

The 1950s and early 1960s were a time of rapid technological and methodological innovation. As early

as 1954 the potential practical impact of these changes on education was envisioned by noted psychologist B. F. Skinner, who proposed that the practices of scientific inquiry could be profitably applied to what he termed the “art” of teaching. He asserted that educators could use the techniques of the psychology laboratory—techniques designed to elicit desired behaviors—to improve performance in individual students. He called this methodology “programmed instruction.”

At the time of these insights, professional educators were becoming increasingly alarmed at what was seen to be the declining performance of the nation’s schools. It was not long before the concept of programmed instruction began to be adopted, and it spread rapidly throughout the public school system. Soon an interest in the application of programmed instruction extended beyond the field of education.

In 1961 a group of Air Force training officers began a study of the effectiveness of programmed instruction, and they discovered that the use of this approach generated a 33 percent reduction in the time it took for a student to master a subject and a 9 percent improvement in overall achievement. Inspired by their findings, several of the study’s participating officers joined with a group of nonmilitary educators to form the Programmed Learning Society of South Texas in January 1962. Within a month these first seven charter members were joined by twenty-five more, and the group decided to establish a national charter. Remarkably unified in their convictions and principles, the greatest point of contention among these early members appears to have been over the spelling (one *m* or two) of the word *Programmed* in the society’s official name.

Over the next eight months the organization grew rapidly, spreading throughout Texas and spilling over into California when the San Diego chapter was formed there in October 1962. By March 1963 the society had more than 600 members, and by 1968 the organization had achieved true national scope, which prompted the board to move its executive offices to Washington, D.C. During the 1970s the growth of the organization was spurred by further technological advances—driven largely by the rapid evolution of the field of computing—and interest in the society spread to the international community.

In its earliest incarnation, ISPI was primarily concerned with applying principles of programmed

instruction to the classroom through the incorporation of then-new technologies, such as films, slides, and other innovations as well as the development of formal lesson plans and the use of standard methods by which to measure the progress of individual students. Over time this focus has been enlarged to include the introduction of technology in the workplace, as corporate executives began to recognize the need to provide in-house training programs for their employees. Nonetheless, the society’s mission remains consistent with its founding principles: to extend the benefits of instructional technology to the society at large. At the same time, the society is concerned to minimize the problems that arise from the blind adoption of the latest technological fad. To this end it devotes much of its time and energy to training consumers of educational technology in the optimal selection and use of such materials.

#### INTERNET RESOURCE

INTERNATIONAL SOCIETY FOR PERFORMANCE IMPROVEMENT. 2002. <[www.ispi.org](http://www.ispi.org)>.

SUSAN MEYER MARKLE

*Revised by*

NANCY E. GRATTON

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## INTERNATIONAL STUDENTS

U.S. COLLEGES AND UNIVERSITIES

Kathryn Gray Skinner

THE GLOBAL COMMERCE OF HIGHER EDUCATION

Anuradha Shenoy

### U.S. COLLEGES AND UNIVERSITIES

Formerly referred to as *foreign* students, *international students* are students from abroad who are enrolled for courses at American schools, colleges, or universities and admitted under a temporary visa. These students’ primary intent is to obtain an American undergraduate, graduate, or professional degree and return to their home countries.

The number of international students studying at American colleges and universities is rising. More international students pass through America’s doors than those of any other country, making the United States the world’s most sought-after and diverse educational region in the world. More than half a mil-

lion (514,723 in the year 2000) international students, or 3.8 percent of all U.S. higher education students, were enrolled between 1999 and 2000. This 3.8 percent included 2.7 percent of all four-year undergraduates and 12 percent of graduate enrollments. These individuals were admitted expressly for the purpose of study. They did not include recent immigrants, resident aliens, or refugees.

### Characteristics of International Students

In 2000 Asian students (from China, Japan, and India) constituted more than half of international enrollments, and Europeans were the second largest regional group, with 15 percent of U.S. enrollments. More than two-thirds (67%) of all international students in the United States receive their primary source of support from non-U.S. sources. These sources include personal and family funds. U.S. colleges and universities provide approximately 19 percent of funds and home governments/universities provide 4 percent.

More than 20 percent of all international students are enrolled in universities and colleges located in just ten U.S. counties in or around New York City, Los Angeles, Boston, and Washington, D.C. International students currently study in areas where there are centers of finance, information, technology, media services, education, and industry, which are crucial to the emerging global economy.

Business and management are the most popular fields of study among international students, followed by engineering, mathematics, and computer science. These students come to America to study fields that are not well developed in their countries. International undergraduates have in the past outnumbered graduates; however, the pattern changed in the late 1980s, when the graduate and undergraduate proportions were roughly equal. Male foreign students have consistently outnumbered female students; however, the proportion of females is rising steadily. More than 2,500 U.S. institutions host international students and the international presence varies widely from institution to institution.

International students, scholars, and faculty enrich American colleges and universities and, eventually, U.S.-based firms. It is the collective responsibility of lawmakers, university administrators, and state government to ensure that the best of them continue to choose the United States for their education. In addition to providing diversity on American

campuses, these students and their dependents make an economic contribution of \$12.3 billion dollars per year (1999–2000).

### Admissions Process for International Students

Admissions offices at universities, which admit large numbers of international students, are well versed in the recruitment and admission of international students. Colleges, which admit smaller numbers of international students, must develop recruitment and admission procedures and often rely on knowledgeable colleagues at nearby universities to answer admission and immigration questions.

**Testing.** Each U.S. college and university has its own admission standards for admitting international students. Most universities require the Test of English as a Foreign Language (TOEFL), proof of graduation from high school, and either the SAT or ACT Assessment. The question often arises if the SAT and ACT Assessment are appropriate tests to be used for admission of international students into American colleges and universities, as it has been argued they are culturally bound tests (made for American students). Although there is truth to this argument, the SAT and ACT Assessment are the two tests that are most familiar to American universities for admissions decisions. Traditionally, test scores alone are not the sole determinants for university admission. Usually university admissions offices use a composite of international students' high-school course work (its rigor and depth), English-language ability, participation in school and community activities, scores on standardized tests, and commitment to academic purpose in making admissions decisions. International students are often asked to provide a writing sample and are given mathematics and English-language placement tests, once they are admitted, to determine their correct academic placement in classes.

**Foreign transcript evaluation.** International students seeking to transfer to American universities from foreign universities abroad must have their transcripts evaluated by a transcript-evaluation service in order to determine if their course work taken abroad will transfer (for degree credit) to the American semester or quarter system. Large universities often evaluate foreign credentials in-house, while smaller universities require that international students have their credentials evaluated by a professional evaluation service (specializing in the translation and evaluation of foreign academic cre-

dentials) either prior to or during the admissions process.

**Entering the United States.** International students currently apply to American universities via university websites, through overseas advising centers, by written form, and in person while visiting the United States. The most common visa category for international students is F-1 (student visa) followed by the J-1 (exchange visitor). Visas are obtained abroad in the student's home country once he or she has been fully admitted to an American college or university, and a document—either I-20 (for F-1 students) or IAP-66 (for J-1 students)—has been sent to the student.

Foreign student advisers must determine that each international student has sufficient academic preparation to enter the college or university, appropriate English-language ability (or the student will enroll for English as a second language [ESL] classes prior to pursuing academic credit), and sufficient funding to cover the total cost of tuition, room, board, fees, books, insurance, and so forth, while studying in the United States. Foreign student advisers are the front line for American embassies abroad and their roles are vital in that they are responsible for determining which students possess the academic, linguistic, and financial ability to be admitted to study in the United States. Academic institutions in the United States, which have been designated by the Immigration and Naturalization Service (INS) to offer courses of study, are allowed to admit international students for a specific educational or professional objective. Just because a student has the appropriate academic background, sufficient financial resources, and is issued a Form I-20 or a Form IAP-66 does not always mean that he or she will receive a visa to study in the United States.

U.S. consulates abroad determine which students receive visas. If a visa officer determines that a student does not (in his or her estimation) have the appropriate academic background, sufficient English-language fluency, and the financial means of support, or if the officer determines that the student has intent to immigrate (or has otherwise misinterpreted his or her intent) the visa may be denied. The Immigration and Nationality Act of 1952 (INA) allows a nonimmigrant student to enter the United States, who is a bona fide student qualified to pursue a full course of study and who seeks to enter the United States temporarily and solely for the purpose of pursuing a course of study at an established col-

lege, university, seminary, conservatory, academic high school, elementary school, or other academic institution, or in a language-training program.

The school, through the official responsible for admission, accepts the prospective student for enrollment in a “full course of study” that leads to the attainment of a “specific educational or professional objective” (Fosnocht, p. 3). In order to be admitted to an American college or university, the international student's application, transcripts, and all other supporting documents normally necessary to determine scholastic and linguistic eligibility for admission, as well as the student's financial documentation, must be received, reviewed, and evaluated at the school's location in the United States. Newly admitted international applicants should be advised that they are likely to be required to present documentary evidence of financial support at the time they apply for a visa and again to the INS when they arrive in the United States. Close communication during the application and admission process between a prospective international student and the foreign student adviser can prevent most (but not all) unexpected problems and visa denials.

### **Adjustments for International Students**

International students who choose to study in the United States usually are among the brightest and most highly motivated of the student-age population in their home countries. Only students with a high degree of motivation can cope simultaneously with the necessary language learning, travel, and dislocation anxiety necessary to enter American universities. Pierre Casse defines cross-cultural adaptation as the process by which an individual is forced to function effectively, but without alienation, in a setting that does not recognize all or parts of the assumptions and behavioral patterns that the person takes for granted. Culture shock is brought on by the anxiety that results from losing all the familiar signs and symbols of social intercourse.

**The challenges.** International students often arrive in the United States unaware of the immense hurdles in adjustment they must overcome to be successful in the American educational system. These hurdles include English-language acquisition, adaptation to differences in education systems, differences in philosophy/purpose of education, learning styles, and the challenges of other social, religious, and economic values. International students arrive with their own strategies for coping, studying, and social-

izing; however, these strategies often do not fit the dominant culture and must be reworked.

A myriad of adaptive behaviors, including cognitive self-awareness, behavior modification, and experimental learning take place. Studies by Jin Abe, Donn M. Talbot, and Robyn J. Geelhoed indicate that social adjustment and institutional attachment are significantly lower for international students than for their U.S. counterparts. In addition non-cognitive variables, such as self-confidence, availability of a strong support person, realistic self-appraisal, leadership opportunities, and preference for long-range academic goals all impact international students' academic success and persistence. The pressure for international students created by inadequate language skills, inappropriate study skills and habits, and ineffective coping strategies for being a student reveal themselves in many areas of students' lives. Ongoing organized interactions between international and American students are crucial for successful integration into the campus environment. International students experience a constant adaptational process as they attempt to integrate into the American university system.

**Cultural adaptation.** According to Carmel Camilleri, there is much tension and many psychological problems that international students face related to difficulties of cultural adaptation. Five areas that give foreign students the most difficulty are: abandonment of important cultural values, compromises to merge modern privileges while preserving traditional values, viewing one's community in a position of inequality with respect to society, inability to make sense of nonverbal communication, and dual roles related to parental issues.

The acquisition of culture for international students occurs inside and outside the classroom. There are the lessons that are taught formally and the lessons that are learned informally. These lessons enable international students to make meaning of their environment. Certain agreed-on values reside within and become part of the international student's cultural repertoire and are used to cope with the student's academic environment.

The process of international students entering and graduating from American colleges and universities is a dynamic one fraught with many chances to fail. It is the collective responsibility of administrators, professors, staff, and community volunteers to attempt to connect international students to their

American higher education experience. Philip G. Altbach states that the presence of a half million international students and scholars from virtually every country in the world is the most important single element of globalization on American campuses.

### **Services Designed to Assist International Students**

International education is growing in importance and as enrollments of international students in the United States increase, the abilities of teachers and administrators on American campuses must increase to meet these students' unique needs. The international dimension is critical to a well-conceived educational program. The internationalization of the university is one of the most significant challenges facing higher education in the twenty-first century.

**The foreign student adviser.** Typical services for international students at American colleges and universities include visa and immigration services, English as a second language (ESL) classes, orientation programs, and host family programs. Staff in international student services, admissions, and student affairs, and academic advisers and professors all help these international students. The foreign student adviser (in the international office or student services office) has the specialized function of dealing with international students. Skilled counselors, often housed in international offices on large campuses, provide services that include referral, coordination, and a special field of knowledge that deals with international students and their specific problems and needs. Traditionally, foreign student advisers and the staff of international offices help students with academic, immigration/visa, acculturation, language, financial, racial, cultural, religious, and ethnic issues.

The major function of the foreign student adviser is to help international students optimize their American educational experience. From orientation programs at the beginning of an international student's degree program to assistance with résumés as the student prepares to graduate, these advisers are interested in the international student's success. Foreign student advisers are responsible for international students and also to their universities. An odd situation exists in that foreign student advisers do not work for the federal government, yet they represent the federal government as Designated School Official (DSO) and Responsible Officer (RO) for the

U.S. Department of Justice and the State Department in issuing visa paperwork. They are not paid or trained by the U.S. government, relying instead on professional training from organizations, such as NAFSA: Association of International Educators, a nonprofit professional organization, which provides thorough and authoritative sources of information for international educators in the United States.

*See also:* ADJUSTMENT TO COLLEGE; BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; RACE, ETHNICITY, AND CULTURE, *subentry on* RACIAL AND ETHNIC MINORITY STUDENTS IN HIGHER EDUCATION.

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KATHRYN GRAY SKINNER

## THE GLOBAL COMMERCE OF HIGHER EDUCATION

International students contribute billions of dollars to the economy of the United States every year. The U.S. Department of Commerce recognizes education and training as the fifth largest export of the United States and formally classifies it as an industry. During the 1998–1999 academic year, 490,933 international students studied in the United States and they brought almost \$11.7 billion into the economy. During the 1999–2000 academic year, 514,723 international students were studying in the United States and they brought \$12.3 billion into the economy, through expenditures on tuition and living expenses. While the number of international students studying at higher education institutions has steadily increased over the years, policymakers, market analysts and advocates have been concerned because U.S. competitiveness in the international student market has been declining. The U.S. share of internationally mobile students seeking higher education at universities outside their country of birth in 1982 was 40 percent. Statistics compiled by the Organisation for Economic Co-operation and Development (OECD) in the year 1998 show that this percentage has now declined to approximately 32 percent.

Recognizing the contribution of international students to their economies, countries such as the United Kingdom, France, and Australia have introduced vigorous recruitment campaigns to compete for international students. The United States, in its bid to remain competitive in this market, is also formulating a series of measures to regain its market share in this industry.

### Definition and Distribution

For the purposes of this entry, an international student will be defined as a student who (1) is a citizen or permanent resident of a country other than that in which he or she intends to study; (2) has a legal residence outside the country that he or she intends to study in; and (3) is or proposes to be in the host country solely for educational purposes on a temporary student visa. The United States today uses the term *international student* to describe individuals

who fit this description, rather than *foreign student*, as in the past. Other countries still refer to students from other countries as foreign students. In this entry, these terms will be used interchangeably since different sources use either term. Table 1 provides figures for the distribution of foreign students in OECD countries by host country in academic year 1998–1999.

### Global Market for International Higher Education

The global market for international higher education may be explained in terms of an interaction between supply-side factors and demand-side factors. It is important to note that the available literature in this area focuses only on students from developing nations choosing to pursue their higher education in developed countries. The literature does not shed light on reasons that students from developed countries choose to study in either developing countries or in other developed countries.

**Supply-side factors.** Supply-side factors refer to factors that motivate host countries to invite international students to study at their institutions of higher education. Supply-side factors may be classified into economic, political, security, and academic factors. Many of the factors mentioned here are specific to the United States, but may be generalized to other countries as well.

**Economic factors.** First, as mentioned earlier, international students and their dependents bring money into the economy. International students in Australia contributed more than \$1 billion to the Australian economy and foreign students in the United Kingdom contributed approximately \$1.8 billion to the economy of the United Kingdom. Second, international graduate students serve as research assistants in labs and projects at universities in the United States, thereby contributing to technological and scientific advancements. Third, in a country like the United States that has a strong tradition of immigration, foreign-born doctoral recipients, especially those in the science and technology fields, often stay on to enter the labor market as academicians or researchers, thereby making positive contributions to the U.S. economy and national interests. Finally, the presence of international students contributes to the creation of new jobs in the field of international educational exchange.

**Political and security factors.** First, students who study in the United States and then return to

**TABLE 1**

#### Distribution of foreign students in OECD countries by host country, 1998–1999

Country	Percent
United States	32
United Kingdom	16
Germany	13
France	11
Australia	8
Japan	3
Canada, Spain, Austria, and Italy	2 each
Other countries	6

SOURCE: Based on data from the Organisation for Economic Co-operation and Development, 2000.

their home countries are seen to go back with a sense of good will towards the United States. This good will benefits both U.S. political interests and business interests globally. Second, educating international students presents an opportunity to shape the future leaders who will guide the political, social, and economic development of their countries. International students in the United States gain an in-depth exposure to American values such as democracy and take those values home to support democracies and free-market economies in their own countries. Third, educating international students plays an important role in American development assistance programs. Students educated in the United States form a cadre of trained professionals that understand the mission of U.S. development agencies such as the U.S. Agency for International Development (USAID). Development activities, while promoting social and economic progress in nations, also help to create a greater demand for American goods and services. Finally, international students provide Americans with an exposure to different cultures and political philosophies that, in addition to its social value, is seen as vital for U.S. security concerns.

**Academic factors.** First, international students provide cultural diversity to American campuses. Second, since they are often the best and the brightest in their countries, international students often provide a healthy dose of competition to American students, thereby raising the standards at institutions.

**Demand-side factors.** Demand-side factors refer to factors that motivate international students to seek higher education in countries outside their home countries. Economic models of student mobility

have been developed since the mid-1960s by researchers including Everett Lee, Larry Sirowy and Alex Inkeles, Gerald Fry, William Cummings, Vinod B. Agarwal and Donald R. Winkler, and Philip G. Altbach. Most studies analyze demand-side factors that are classified as “push” factors and “pull” factors.

**Push factors.** The term *push factors* refers to factors that push students to seek higher education in countries other than their host or native countries. These can include poor educational facilities in certain subjects, social discrimination, limited openings at the university level, and an array of political and economic factors at home.

**Pull factors.** The term *pull factors* refers to incentives that pull students towards host countries. These factors include availability of scholarships, better facilities, political ties, cultural and linguistic similarities with the host country, and finally the hope that a foreign educational credential will help in obtaining a better job on their return to their home country.

### Attracting International Students

The 1970s and 1980s saw a set of restrictive mechanisms, including tougher entry requirements and sharply higher tuition costs, come into place to restrict the flow of foreign students into the United States, Britain, France, Germany, Australia, and Canada. Reasons for this development included arguments that enrollments of foreign students damaged chances of students at home, that foreign students concentrated themselves in urban centers, and that foreign students often stayed and obtained employment in the host countries, thereby reducing opportunities for noninternational students in certain fields in those countries. However, recognizing the contributions that foreign students make to the economy, the United States and other countries have started making efforts to attract foreign students again.

Since late in the twentieth century, the United States has been in the process of formulating an international education policy to ease visa requirements, ease prohibitive tuition costs, and increase scholarships for international students.

The United Kingdom, the primary competitor of the United States for international students, has declared a formal international education policy designed to attract international students. The government and the British Council developed a program

known as “the U.K. Education Brand” in 1999. The U.K. Education Brand is a research and development program that, according to the British Council, is intended to “re-establish and maintain the United Kingdom’s credentials as a world class provider of education and training.” In addition to aggressive marketing strategies, Prime Minister Tony Blair proposed a four-point program in 1999 to increase their current market share from 16 percent to 25 percent by 2005. The four point program includes (1) a streamlined visa process for qualified applicants; (2) state-of-the art electronic information systems in other countries to provide information to potential students; (3) removal of work restrictions so that international students can work and pay for school; and (4) 1,000 extra scholarships for international students funded by government and private industries.

Australia and other countries created easy-to-read websites that are inviting to students. Australia has established a comprehensive website that deals with all aspects of international education, sponsored by the government.

France, in 1998, announced a new initiative called EduFrance, jointly created by the French ministry of national education, research, and technology; the ministry of foreign affairs; and the ministry for international cooperation. EduFrance was created with a budget of 100 million French francs for four years and a target of attracting 500,000 students overall.

Japan’s government is developing a plan to raise the number of foreign students studying in Japan from approximately 20,000 to 100,000. In 1999 the Japanese ministry of education instituted a simplified testing requirement for foreign students in Japan. Until 1999 students who came to Japan either at their own expense or on private scholarships had to take two tests, the Japanese Language Proficiency Test and the General Examination for Foreign Students. Now they need to take only one. Students interested in studying a liberal arts curriculum take the language proficiency test and students interested in studying science-based subjects take the general examination. Also, the tests are now given in ten overseas locations in Asia and are administered twice a year, compared to the previous system where they were administered only in Japan and only once a year.

Most countries interested in attracting international students are now formulating policies which

ease work restrictions and visa requirements and simplify testing procedures.

### Implications of September 11, 2001

The events of September 11, 2001, when international terrorists (several of whom had been in the United States under student visas) hijacked and crashed four American passenger planes, do not portend well for the United States as an attractive destination for international students. First, national security concerns have demanded that the United States tighten its immigration and admission procedures. Legislative demands for better tracking of international students could increase the oversight of international students in ways that some may find oppressive. Second, foreign students' own concerns for their personal safety might cause students not to choose the United States as a destination for study. Since neither the nature nor the degree of U.S. and international students' responses to the events of September 11, 2001 are clear at this time, it is too early to gauge the short- or long-term impact of potential changes.

*See also:* COMMERCE OF EDUCATION; HIGHER EDUCATION, INTERNATIONAL ISSUES; INTERNATIONAL EDUCATION.

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ANURADHA SHENOY

## INTERNATIONAL TEACHERS ASSOCIATIONS

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A large majority of teachers' unions and associations around the world are represented internationally by one unified organization, Education International (EI). Headquartered in Brussels, Belgium, EI was created by the merger of two major teachers' organizations in 1990. It includes 310 teachers' organizations from 159 countries, with a membership of more than 25 million teachers and other education workers.

The creation of a unified international organization of teachers was the result of several major post-World War II international trends and political developments (e.g., the cold war, the end of European colonization, the expansion of the worldwide movement for civil and human rights, the rise of teacher unionism, the collapse of communism) that brought together two former teachers' internationals and doomed two others.

### Ideologies and the International Labor Movement

Following World War II the international labor movement, of which teachers formed a small part, divided into three major strands, each of which was associated with a competing political ideology. These strands were aligned with democratic, communist, and Christian Democratic ideologies.

At the close of the war, there was a short period during which union federations in Europe, North America, and the Soviet Union joined to form a common international confederation of national union federations, the World Federation of Trade Unions (WFTU), as well as corresponding international trade secretariats (ITSs) for unions in common sectors, such as metal workers, textile workers, and government employees. (ITSs actually predate World War II, but were reorganized after the war as part of the family of international labor confederations.)

From the beginning a small minority of national unions questioned the wisdom of creating an inter-

national union organization that included organizations from the Soviet Union and communist-controlled Eastern European countries, arguing that such unions were not independent from the state and from controlling communist parties. (For example, in the United States, the American Federation of Labor [AFL] refused to join the new international, while the more leftist Congress of Industrial Organizations [CIO] did join.) However, at that time the impulse to create a workers' international overcame any qualms about the validity of unions in communist-controlled countries.

This brief period of labor unity ended in 1949. Between 1945 and 1948, it became increasingly clear to union leaders in democratic countries that so-called unions in Russia and Eastern Europe were actually front organizations that served the foreign policy interests of the Soviet Union, rather than the legitimate interests of workers. The efforts of these communist-controlled unions to block any criticism of the Soviet role in the 1948 coup in Czechoslovakia proved to be a breaking point.

In 1949 democratic union federations in Western Europe and other parts of the world split from the broad labor international to form, with the AFL, the International Confederation of Free Trade Unions (ICFTU). ITSs that had previously included both communist and noncommunist members also split, and new democratic ITSs were organized. The word *free* in the titles of new international labor organizations signaled that they were democratic internationals (e.g., the International Federation of Free Teacher Unions). Socialist and social democratic unions typically led these international labor organizations. The Soviet Union's internationals were composed of labor fronts from Eastern-bloc nations and communist-dominated unions in Western Europe and other parts of the world.

The third political strand in the international labor world was that of the Christian Democrats. The Christian Democratic political movement, founded by the Catholic Church in the first half of the twentieth century in response to the growth of communist and socialist movements, included the organization of fraternal labor movements at the national and international levels. Christian Democratic teachers' organizations were members of the International Federation of Employees in Public Services (INFEDOP; part of the Christian trade unions family) until 1963, when they split off to form the World Confederation of Teachers (WCT).

### The Four Trade Internationals

By the early 1960s there were three international teachers' organizations, each associated with one of these three political strands: the International Federation of Free Teachers' Unions (IFFTU—social democratic), the World Federation of Teachers' Unions (known by its French acronym, FISE—communist), and the World Confederation of Teachers (WCT—Christian Democratic). Then, in 1952, a group of smaller regional and international teachers' organizations that existed before World War II formed a fourth international organization, the World Confederation of Organizations in the Teaching Profession (WCOTP).

The WCOTP differed from the other teacher internationals by its lack of political orientation and, at least originally, any union orientation. It was created at a time when most national teachers' organizations were dominated either by school administrators or by teachers who had little interest in traditional union activity. For example, in the United States, the National Education Association (NEA) was founded as a professional teachers' association and was a founding member of the WCOTP (from 1952 to 1972 the WCOTP office was located in the NEA building in Washington, DC). The American Federation of Teachers was founded as a labor union and was a member of the original AFL, as well as being a founding member of the IFFTU—the social democratic-oriented teachers' international.

The background of member organizations in the IFFTU, the FISE, and the WCT were ideologically related, respectively, to the social democratic, communist, and Christian Democratic political movements. In contrast the WCOTP would accept organizations with any or no political orientation—and with little concern about an organization's independence from government or political parties, as long as it claimed to represent educators.

The ideological identification of the IFFTU did not mean that all its members were affiliated with, or directly connected to, a democratic socialist party. Rather, it indicated that the traditional leadership of the IFFTU unions tended to relate to social democratic movements or with similar parties, such as the Democratic Party in the United States. However, not all European teachers' organizations with social democratic ties affiliated with the IFFTU. For example, most Scandinavian teachers' organizations were

affiliated with the WCOTP until the beginning of the 1990s.

With one notable exception, the internationals did not prohibit members from being simultaneously affiliated with other teacher internationals. Generally, teachers' organizations from developed countries did not hold dual affiliations, for economic reasons, among other factors—it was not practical to pay dues to multiple organizations. Many teachers' organizations from poorer countries, however, held more than one affiliation in order to benefit from financial assistance from different international organizations and free participation in international conferences and congresses—while paying little or nothing in membership fees to any international. Each international teachers organization had a dues structure that adjusted dues to take into consideration the per-capita income of different countries.

While WCOTP and the FISE had no such prohibition, the IFFTU constitution restricted its members from holding dual affiliation with the communist teachers' international, the FISE. WCT members generally did not hold dual affiliations. As a result, the WCOTP included organizations that also belonged to either the FISE or the IFFTU. The IFFTU included members that also belonged to the WCOTP, but not to the FISE. This situation simultaneously contributed to and impeded the IFFTU-WCOTP merger movement in the late 1980s.

### Competition and Convergence

Throughout the cold war era, there was a constant competition, especially between the IFFTU and the WCOTP, for members, prestige, and recognition. Initially, both the IFFTU and the WCOTP were primarily composed of organizations from Europe and North America. Decolonization in Africa and Asia, and the creation of teachers' associations in newly independent nations, resulted in a major expansion of all the four teacher internationals. During the 1960s the membership of the WCOTP expanded rapidly, with the greatest growth coming from Africa, Latin America, and Asia. The membership growth in the IFFTU lagged behind the WCOTP, but began to catch up in the late 1960s and early 1970s. Much of the new membership in the IFFTU came from organizations that were already members of the WCOTP.

It was always difficult to compare the size of the four international teacher organizations with any

degree of accuracy. Membership figures for national affiliates were often unreliable. For example, Indian teachers' unions claimed millions of members, but few of the claimed members paid dues to the national organizations, nor did the national organizations pay more than token dues to the internationals. In general, due to economic hardship, almost no members from developing countries paid more than token dues to international teacher organizations. In addition, the competition between the internationals for members, and therefore to claims of strength on the international stage, made it difficult for an international to pressure members to pay dues for fear of losing those members.

As a result, member organizations from the developed world (Europe, North America, and Japan) were responsible for more than 60 to 70 percent of the core budgets of the WCOTP and the IFFTU. The WCT's and the FISE's core budgets were less transparent. It was assumed that the majority of operating funds for the FISE came from the Soviet government, and that of other communist countries. The WCT received a combination of funding from its major members and from government subsidies in countries with strong Christian Democratic parties.

### The Rise of Teacher Unionism

From the 1960s to the 1980s, the WCOTP was the largest international teacher organization—measured by membership, funding, and prestige—in the international education world. In the earlier years, the IFFTU was smaller and financially weaker than the WCOTP. However, the issue of teacher unionism began to change this balance. Teacher unionization was, by and large, a post-World War II phenomenon. Even teachers' organizations that were founded as unions and belonged to union federations, such as the American Federation of Teachers (AFT), only began engaging significantly in traditional union activities, such as collective bargaining and strikes, in the late 1950s.

The first major teachers' strike in the United States took place in New York City in 1967, when the New York City local of the AFT went on strike for fourteen days. This was the beginning of modern teacher unionism in the United States. Eventually all the major locals in the AFT adopted the demand for union representation and collective bargaining rights. The success of this new strategy for teachers also influenced the National Education Association to change from a management-dominated profes-

sional association to a union led by teacher representatives. In the 1970s and 1980s this transition from professionalism to unionism was duplicated in most of the developed democracies and in many parts of Africa, Asia, and Latin America.

This trend among members of the IFFTU and the WCOTP, and the accompanying emphasis by both internationals on the right of teachers to unionize, increased the coincidence of interests between the two organizations. A second factor that contributed to the harmonization of the two internationals was the development of the European teachers' unions' organization, the ETUC. The ETUC was created in response to the creation of the European Community (EC) and included all European teachers' organizations, regardless of their international affiliations. While European teachers' organizations were divided between those who were members of the IFFTU and the WCOTP or the WCT, the same organizations worked together at the European level.

### Merger

This growing convergence of memberships, interests, and union orientation led to formal merger discussions between the IFFTU and the WCOTP in the late 1980s. After approximately two years of talks, the two organizations reached a merger agreement that was ratified at a joint unity congress held in Stockholm in December 1990. The most significant political requirements of the new organization, Education International, were that its members be independent democratic organizations and not be members of any other international organization of teachers. These two requirements were departures from the practice of the former WCOTP, which had not imposed such qualifications for membership. The impact of these requirements meant that if a national teachers' organization desired membership in the largest, and potentially most influential, teachers' international, it had to give up any affiliation it might have with the two smaller organizations, the FISE and the WCT.

The breakup of the Soviet Union, and the accompanying decline in support of communist movements in other parts of the world in the late 1980s, made this dual membership prohibition somewhat of a moot issue. The FISE closed its Paris offices in the early 1990s and ceased to exist, and the WCT was never as large and influential as either the WCOTP or the IFFTU. In general, the international

Christian Democratic labor movement seems to have withered in terms of numbers and financial support since the 1980s, and the prohibition against EI members holding dual memberships has restricted the membership potential of the WCT. Currently, EI and the WCT are discussing some form of a merger or, short of that, an agreement of cooperation.

### New Century, New Challenges

At the start of the twenty-first century the vast majority of national teachers' unions are represented by Education International. The post-World War II ideological conflicts and divisions have faded away, while many traditional issues, such as recognition of union rights for teachers, remain in several parts of the world. At the same time, organized teachers are facing new challenges to public education, to teacher welfare, and to security, as well as a growing concern over national and international equity issues. The unification of the international teacher's movement has created a vehicle for teachers to address these issues in an international environment. The new focus for EI is to develop the flexibility, financial base, and expertise to effectively defend teachers' interests and promote quality education systems for all countries in the context of the globalization of education issues and policies.

*See also:* AMERICAN FEDERATION OF TEACHERS; NATIONAL EDUCATION ASSOCIATION; TEACHER PREPARATION, INTERNATIONAL PERSPECTIVE.

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DAVID DORN

## INTERNATIONAL TRADE IN EDUCATION PROGRAMS, GOODS, AND SERVICES

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Historically, education has provided the medium for transferring knowledge and skills to a global society. Research by the World Bank has demonstrated that education is "essential for civic order and citizenship

and for sustained economic growth and the reduction of poverty” (1996, p. 1). As the Independent Commission on Population and the Quality of Life states, “education is one of the keys to social development, and virtually every aspect of the quality of life” (p. 170).

As Stanley Katz explains, the commercialization of education took a large leap forward with the development of the personal computer. From the 1950s through the 1970s, computers were expensive and were therefore used mainly for research, instructional, and administrative purposes. But the computer revolution of the 1980s and 1990s saw the development of cheaper computers, better software programs, and the Internet. This resulted in institutions of higher learning expanding their computer capabilities in order to remain competitive. The technology revolution produced many opportunities for the commercialization of education.

Unfortunately, education is facing difficult times in many countries. There are problems with budget shortfalls, increasing enrollment demands, escalating educational costs, and a reduction in foreign aid. Coupled with this has been the protectionism policies practiced by governments to restrict international trade in education.

### General Agreement on Trade and Services

In 1986 a series of trade negotiations was initiated in order to find solutions for these problems. These negotiations, called the Uruguay Round, lasted for seven and a half years with 125 countries, including the United States, as participants. It concluded in 1994 with the formation of the World Trade Organization and the creation of the General Agreement on Trade and Services (GATS).

This pact has been called the most significant agreement ever negotiated by the World Trade Organization. It took effect on January 1, 1995, and is considered to be the first and only collection of multilateral rules governing international trade. Its major goal is to remove or reduce barriers that obstruct international trade. The agreement covers goods, services, and intellectual property. Other major features include procedures for dispute resolution and special treatment guidelines for developing countries. As signatories, governments have made commitments to lower tariffs and other trade barriers, and to open their markets for trade in services to all World Trade Organization members. This is known as *most-favored-nation treatment*.

The trade sectors covered under the agreement include services related to business, communications, construction and related engineering, distribution, environmental, financial, health and social, tourism and travel, recreational, culture and sports, transport, and education. Until the creation of the GATS, such a wide variety of activity had never been recognized in global trade policy.

The trade in services area is important because it is the fastest growing segment of the global economy. According to the World Trade Organization, the trade in services area increased from 17 percent in 1980 to 22 percent in 1995, and service exports expanded by 8.4 percent between 1980 and 1995.

### Trade in Education Services

Education services are defined as primary education services, secondary education services, higher or tertiary education services, adult education services, and other education services. The higher education services sector has been subdivided into advanced/theoretical/professional and practical/occupational categories to allow for more accurate statistical reporting. Other education services are related activities that support the educational process, such as educational testing services and student exchange program services.

The implementation of this arrangement for education services and goods is presently limited to member nations whose governments decided in 1994 to incorporate this section into their agreement. This amounts to forty countries out of the 143 World Trade Organization members. The forty countries that have committed to this section may limit the extent of their use of the concepts of most favored nation and national treatment. They can partially control access to their markets from foreign investors and restrict the movement of persons who cross their territorial borders. In addition, these countries are prohibited from creating new restrictions on foreign service providers without compensating those countries affected by the restrictions. At this time, none of the nations have agreed to open their education markets without restrictions.

The benefits of education services liberalization under the compact are numerous. By opening domestic markets to foreign education service providers, countries create competition with their domestic education service providers, which results in greater efficiency, lower prices, improved service, more con-

sumer choices, reduced inequality, and increased employment. A 1994 study by the World Bank found that employment in the telecommunications industry in Asia and Latin America rose by 20 percent in markets in which competition was permitted, but by only 3 percent in monopolized markets.

Martin Rudner points out that international trade in postsecondary education services is rising. He attributes this to a number of factors, including an increasing number of students studying abroad, more international marketing of academic programs, enhanced educational cooperation between institutions, and the development of foreign institution branch campuses. The United States is the largest exporter of education services in the world followed by France, Germany, the United Kingdom, and the Russian Federation. The United Nations Educational, Scientific and Cultural Organization (UNESCO) estimated that in 1996 the United States exported \$7 billion in higher education services—its fifth largest service-area export.

As these statistics indicate, the major avenue of trade in educational services is through student exchange. In an effort to reduce this student migration, some governments are partnering with foreign educational institutions to establish local branch campuses. Another commercial educational strategy gaining popularity is the “twinning arrangement.” This consists of an educational institution in one country linking up with an educational institution in a foreign county to offer courses leading to a degree from the foreign institution. Sometimes local campus facilities are used in this arrangement. In other instances, the educational programs are “franchised” from the foreign institution so there is little participation at the local level. This approach is particularly popular for distance-education programs.

### **Trade Barriers to Education Services**

The major emphasis of the ongoing trade negotiations for General Agreement on Trade and Services is the reduction of protectionism. Lowering or eliminating barriers to trade will accomplish this goal. But several existing trade barriers continue to provide grist for continuing negotiations. One major hurdle that faces negotiators is governmental use of its immigration laws to restrict not only students from leaving the country to study at foreign institutions and but also the number of foreign teachers employed. These restrictions usually take the form of quotas, nationality requirements, restricted visas,

and limitations on financial aid eligibility. To assist in compliance monitoring, all countries are required to publish and make easily accessible all laws and regulations related to trade. Another barrier to trade involves the local recognition of degrees from foreign institutions. This is an important issue for distance-education service providers because students enrolled in distance-education programs from a foreign country need to have their credentials approved in the country where they intend to work.

Educational credentials from unauthorized institutions cannot be used to acquire governmental certifications or licenses needed to secure employment in the professions. Continued negotiations are needed in this area to develop common standards and quality assurance measurements for professional education. Foreign education service providers often have difficulties acquiring governmental authorization or national operating licenses. For example, governments sometimes permit foreign education service providers to enter their markets but will not recognize them as legitimate degree granting institutions. Future negotiations should include the formulation of acceptable global accreditation standards for institutions and programs in order to eliminate this problem.

### **Trade in Electronic Education Services**

Transformation in communication and information technology is changing the institution of education. Technological breakthroughs of the late 1990s provided a world communications network with global capability. Education providers have the potential to offer their programs throughout the world. In 1997, the Clinton administration published a paper promoting the Internet as a “duty-free zone,” and calling for keeping trade on the Internet free of all tariffs. If governments decide to impose tariffs on electronic transmissions in the future, it would be difficult to enforce because many online transactions are services and require the creation of a mutually acceptable classification system for the content of the transmission. Therefore, negotiations on the tariff treatment of electronic transmissions should be an integral part of any trade barrier reduction effort.

### **Trade in Intellectual Property**

In addition to the GATS, another significant agreement, the Trade Related Aspects of Intellectual Property Rights (TRIPS), was created during the Uruguay Round. It has major implications for edu-

cation service providers since the programs that they sell are copyrighted or contain copyrighted material. This agreement requires governments to guarantee enforcement of their intellectual property rights laws and to assure the World Trade Organization that their penalties for violations are severe enough to effectively deter potential offenders.

### Objections to the Liberalization of Trade Policies in Education

Philip Altbach maintained that higher education regulated by the World Trade Organization would result in a loss of academic autonomy. According to his theory, individual nations would find it difficult to enforce copyright laws, patent and licensing regulations, and trade regulations on academic institutions, programs, and credentials from foreign education service providers. By providing hard-to-regulate educational programs to less developed nations without regard to the local educational culture, educational service providers may inadvertently supplant that country's educational ideas and practices.

*See also:* HIGHER EDUCATION, INTERNATIONAL ISSUES; INTERNATIONAL COOPERATION IN EDUCATION, TRENDS AND PROSPECTS; INTERNATIONAL STUDENTS.

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MICHAEL A. OWENS

## INTERNSHIPS IN HIGHER EDUCATION

Internships, along with cooperative education, field studies, service-learning, and practica, are part of the

field of experiential education. Internships require students to apply classroom learning, theories, and experiences to professional settings. Internships or other forms of practical learning for undergraduate, as well as graduate, students have been part of American higher education since its beginning. The most influential ideas about experiential education are from John Dewey's educational philosophy of Pragmatism, particularly his 1938 book *Experience and Education*.

### Goals

All internships have the general goal of having students apply learning. Academic internships, which are characterized by being linked to the undergraduate curriculum in one or more ways, have more specific learning goals and broader outcomes than just career exploration or learning the basics of professional practice. Nonacademic internships for which students do not receive credit are usually limited to work experience for the student; there are no measurable learning outcomes. Part-time internships offer less time at the work site and thus the learning outcomes are limited. Full-time internships, usually defined as thirty-two hours per week, significantly increase the students' learning and enhance intellectual and skill development. Credit-bearing internships are very distinctive because they share common goals and elements with on-campus study. These include reading, writing, critical thinking, and problem solving. While many goals are specific to each internship program or course, the list below is of intended benefits or goals for students that are most commonly found:

- Engaging the intern in the discipline or major
- Causing interaction with a variety of individuals, systems, and organizations
- Improving self confidence
- Using a variety of learning styles and frequently challenging participants to use new ways of learning and thinking
- Improving skills in research, communication in groups, interpersonal communication, and observation
- Improving critical thinking and problem-solving skills
- Personalizing learning, giving it relevance and meaning
- Putting learning into context to improve understanding and retention of concepts

- Providing networking and mentoring opportunities
- Conditioning the participant to adapt to change
- Frequently challenging attitudes and beliefs, which often change
- Helping a participant grow emotionally and learn from failure and success
- Helping an intern become a more motivated life-long learner

### Structure

While administrative structures vary across successful internship programs, educational and instructional structures are very important. The crucial structural components include participating in an experiential education seminar, writing a learning plan, engaging in reflection, completing reading and writing assignments, undergoing assessment, and creating a learning portfolio. These structures are rooted in Dewey's argument that for experience to be educative it has to be purposefully structured; these structures include the field part of the experience as well as the reflective learning activities that are part of the curriculum.

A credit-bearing internship seminar is a hallmark of a serious internship program. This seminar assists the student in understanding the process of learning and encourages self-directed learning. The academic components of a seminar include assignments such as preparing a thoughtful learning plan; writing reflective journal entries that include analysis of on-site issues and critical incidents; understanding the stages of the internship; completing an analysis of the organization; writing a reflective essay which serves as part of the final learning portfolio; articulating the learning; and giving a final, formal presentation of the learning portfolio or capstone project associated with the internship.

Special attention should be given to the student's learning plan, which is a tool that allows the student to plan personal learning objectives for the internship. It should include content, activities, and methods of evaluation. The learning plan may have different categories of learning, such as knowledge goals, professional goals, technical goals, and cultural goals. The learning plan provides a framework for the student to use throughout the internship and to use when evaluating the learning at the end of the period. The learning plan has been adopted for internships from the practice of adult education by Malcolm Knowles.

Reflection is an essential element of experiential education and therefore of an internship program. Reflection, or critical reflection as it is sometimes called, is the process of deriving meaning from experience through questioning what is experienced or observed. Typical reflection questions are “What is happening? Why? How could this be so? So what?” Reflection can be done in a variety of ways, including classroom discussion, presentations, journal writing, or structured assignments. The point is to provide students an environment and the tools with which to think about what they are doing and what they are learning. Experience without reflection is just experience. However, experiential learning occurs when there is a fusion of theory, practice, and reflection. Reflection allows students to integrate what they are learning and doing at the internship site with what they have learned in the classroom.

Assessment is another important component of an internship program. Someone with academic credentials who can accurately assess student learning should conduct assessment of the student. In addition, the agency sponsor (site supervisor) should be asked to write an evaluation of the student. A learning portfolio often serves as the culmination of the internship and as the major product for assessment.

Internship program goals will determine which structures are used and at what stages of a student’s curriculum. Freshman or sophomore internships may be exploratory in nature and include few project elements. A capstone internship course, like the one required for students in the Human and Organizational Development major at Vanderbilt University, will emphasize cumulative learning. This internship is done in one of the last semesters before graduation and includes a senior project that is assessed for mastery of the content and skills of the major. Other internships are tied to a specific course topic or to mastering the skills of a profession, such as social work. Education majors often do an internship or practicum before they do student teaching at the end of their teacher-training curriculum.

### Process

Like other educational processes, internships have identifiable stages or phases. In their very practical manual, *The Experienced Hand: A Student Manual for Making the Most of an Internship*, Timothy Stanton and Kamil Ali outline ten steps to obtaining an internship, beginning with self-assessment of goals and ending with the first day of starting an intern-

ship. They argue that students who pay attention to each of the ten steps are more likely to obtain a quality and interesting internship. Preparing students thoroughly for an internship is a key element of the process.

Another view of the internship process comes from a developmental theory perspective where predictable stages can be identified and the challenges and tasks of each stage can be addressed. One model by Marijean Suelzle and Lenore Borzak uses the stages of entry, initiation, competence, and completion. Interns have found it helpful to view the semester-long process through this framework so they can be aware of what they should be learning and how they are doing at each stage. Another model developed by H. Frederick Sweitzer and Mary A. King has five stages of an internship: anticipation, disillusionment, confrontation, competence, and culmination. Sweitzer and King’s five stages provide a very useful way for interns to anticipate and understand their journeys to deal with problems that often arise after the excitement of the initial stages has passed. Whichever model one uses, it is important for interns to be aware of their increasing levels of competence and the learning challenges they are mastering.

### Standards

There is no set of “Principles of Good Practice” for internships but there is some general agreement in the field that “The Seven Principles for Good Practice in Undergraduate Education” offered by Arthur Chickering and Zelda Gamson are relevant. Educational research supports the need for structure so that learning takes place and is assessed. Because internships lack a standard definition and have few recognized norms for evaluating and comparing different types of internships that students pursue, Mary Ryan, executive director of the Institute for Experiential Learning, in Washington, DC, compiled a list of standards of excellence that gives a succinct statement of what is known about undergraduate education as applied to internships. These principles, summarized below, illustrate the goals, processes, and structures that are discussed above.

**Enhancing On-Campus Excellence.** The internship program should be integrated with and enhance the college’s mission and curriculum.

**Institutional Excellence and Integrity.** For internships away from campus, the

organization offering the internship program should have an appropriate management structure, staff, and policies to support the provision of a sound and high quality internship program that includes concurrent curricula, support services, and housing.

**Academic Excellence and Rigor.** The internship incorporates a defined project(s) resulting in outcomes and products of benefit to the organization and involving college-level learning on the student's part.

**Individual Attention and Involvement.** The internship program should provide individualized attention and support for the students and should provide for active involvement of students in their education.

**Appropriate Internships.** Internships should be designed to support the student's educational program.

**Appropriate Course Work.** The internship program should provide course work that facilitates the experiential learning process and that supports each student's academic program.

**Diversity.** The program should introduce the student to participants in the larger world of all ages and nationalities and to a variety of opinions, ideas, and philosophies.

**Assessment and Evaluation.** The student's progress and learning should be assessed based on learning outcomes, in other words, students should be able to articulate and apply what they have learned. The assessment process should be ongoing throughout the semester.

*See also:* ACADEMIC MAJOR, THE; EXPERIENTIAL EDUCATION; SERVICE LEARNING, *subentry on* HIGHER EDUCATION.

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DWIGHT E. GILES JR.  
MARY RYAN

## ISLAM

Islam has, from its inception, placed a high premium on education and has enjoyed a long and rich intellectual tradition. Knowledge (*ilm*) occupies a significant position within Islam, as evidenced by the more than 800 references to it in Islam's most revered book, the Koran. The importance of education is repeatedly emphasized in the Koran with frequent injunctions, such as "God will exalt those of you who believe and those who have knowledge to high degrees" (58:11), "O my Lord! Increase me in knowledge" (20:114), and "As God has taught him, so let him write" (2:282). Such verses provide a forceful stimulus for the Islamic community to strive for education and learning.

Islamic education is uniquely different from other types of educational theory and practice largely because of the all-encompassing influence of the Koran. The Koran serves as a comprehensive blueprint for both the individual and society and as the primary source of knowledge. The advent of the Koran in the seventh century was quite revolutionary for the predominantly illiterate Arabian society. Arab society had enjoyed a rich oral tradition, but the Koran was considered the word of God and needed to be organically interacted with by means of reading and reciting its words. Hence, reading and writing for the purpose of accessing the full blessings of the Koran was an aspiration for most Muslims. Thus, education in Islam unequivocally derived its origins from a symbiotic relationship with religious instruction.

### History of Islamic Education

Thus, in this way, Islamic education began. Pious and learned Muslims (*mu' allim* or *mudarris*), dedicated to making the teachings of the Koran more accessible to the Islamic community, taught the faithful in what came to be known as the *kuttāb* (plural, *katātīb*). The *kuttāb* could be located in a variety of venues: mosques, private homes, shops, tents, or even out in the open. Historians are uncertain as to when the *katātīb* were first established, but with the widespread desire of the faithful to study the Koran, *katātīb* could be found in virtually every part of the Islamic empire by the middle of the eighth century. The *kuttāb* served a vital social function as the only vehicle for formal public instruction for primary-age children and continued so until Western models of education were introduced in the modern period. Even at present, it has exhibited remarkable durability and continues to be an important means of religious instruction in many Islamic countries.

The curriculum of the *kuttāb* was primarily directed to young male children, beginning as early as age four, and was centered on Koranic studies and on religious obligations such as ritual ablutions, fasting, and prayer. The focus during the early history of Islam on the education of youth reflected the belief that raising children with correct principles was a holy obligation for parents and society. As Abdul Tibawi wrote in 1972, the mind of the child was believed to be “like a white clean paper, once anything is written on it, right or wrong, it will be difficult to erase it or superimpose new writing upon it” (p. 38).

The approach to teaching children was strict, and the conditions in which young students learned could be quite harsh. Corporal punishment was often used to correct laziness or imprecision. Memorization of the Koran was central to the curriculum of the *kuttāb*, but little or no attempt was made to analyze and discuss the meaning of the text. Once students had memorized the greater part of the Koran, they could advance to higher stages of education, with increased complexity of instruction. Western analysts of the *kuttāb* system usually criticize two areas of its pedagogy: the limited range of subjects taught and the exclusive reliance on memorization. The contemporary *kuttāb* system still emphasizes memorization and recitation as important means of learning. The value placed on memorization during students' early religious training directly influences their approaches to learning when they enter formal education offered by the modern state. A common frustration of modern educators in the Islamic world is that while their students can memorize copious volumes of notes and textbook pages, they often lack competence in critical analysis and independent thinking.

During the golden age of the Islamic empire (usually defined as a period between the tenth and thirteenth centuries), when western Europe was intellectually backward and stagnant, Islamic scholarship flourished with an impressive openness to the rational sciences, art, and even literature. It was during this period that the Islamic world made most of its contributions to the scientific and artistic world. Ironically, Islamic scholars preserved much of the knowledge of the Greeks that had been prohibited by the Christian world. Other outstanding contributions were made in areas of chemistry, botany, physics, mineralogy, mathematics, and astronomy, as many Muslim thinkers regarded scientific truths as tools for accessing religious truth.

Gradually the open and vigorous spirit of enquiry and individual judgment (*ijtihād*) that characterized the golden age gave way to a more insular, unquestioning acceptance (*taqlīd*) of the traditional corpus of authoritative knowledge. By the thirteenth century, according to Aziz Talbani, the ‘*ulama*’ (religious scholars) had become “self-appointed interpreters and guardians of religious knowledge. . . . learning was confined to the transmission of traditions and dogma, and [was] hostile to research and scientific inquiry” (p. 70). The mentality of *taqlīd* reigned supreme in all matters, and religious scholars condemned all other forms of inquiry and

research. Exemplifying the *taqlīd* mentality, Burhān al-Dīn al-Zarnūjī wrote during the thirteenth century, “Stick to ancient things while avoiding new things” and “Beware of becoming engrossed in those disputes which come about after one has cut loose from the ancient authorities” (pp. 28, 58). Much of what was written after the thirteenth century lacked originality, and it consisted mostly of commentaries on existing canonical works without adding any substantive new ideas. The lethal combination of *taqlīd* and foreign invasion beginning in the thirteenth century served to dim Islam’s preeminence in both the artistic and scientific worlds.

Despite its glorious legacy of earlier periods, the Islamic world seemed unable to respond either culturally or educationally to the onslaught of Western advancement by the eighteenth century. One of the most damaging aspects of European colonialism was the deterioration of indigenous cultural norms through secularism. With its veneration of human reason over divine revelation and its insistence on separation of religion and state, secularism is anathema to Islam, in which all aspects of life, spiritual or temporal, are interrelated as a harmonious whole. At the same time, Western institutions of education, with their pronounced secular/religious dichotomy, were infused into Islamic countries in order to produce functionaries to feed the bureaucratic and administrative needs of the state. The early modernizers did not fully realize the extent to which secularized education fundamentally conflicted with Islamic thought and traditional lifestyle. Religious education was to remain a separate and personal responsibility, having no place in public education. If Muslim students desired religious training, they could supplement their existing education with moral instruction in traditional religious schools—the *kuttāb*. As a consequence, the two differing education systems evolved independently with little or no official interface.

### Aims and Objectives of Islamic Education

The Arabic language has three terms for education, representing the various dimensions of the educational process as perceived by Islam. The most widely used word for education in a formal sense is *ta’līm*, from the root *‘alima* (to know, to be aware, to perceive, to learn), which is used to denote knowledge being sought or imparted through instruction and teaching. *Tarbiyah*, from the root *raba* (to increase, to grow, to rear), implies a state of spiritual

and ethical nurturing in accordance with the will of God. *Ta’dīb*, from the root *aduba* (to be cultured, refined, well-mannered), suggests a person’s development of sound social behavior. What is meant by *sound* requires a deeper understanding of the Islamic conception of the human being.

Education in the context of Islam is regarded as a process that involves the complete person, including the rational, spiritual, and social dimensions. As noted by Syed Muhammad al-Naqib al-Attas in 1979, the comprehensive and integrated approach to education in Islam is directed toward the “balanced growth of the total personality . . . through training Man’s spirit, intellect, rational self, feelings and bodily senses . . . such that faith is infused into the whole of his personality” (p. 158). In Islamic educational theory knowledge is gained in order to actualize and perfect all dimensions of the human being. From an Islamic perspective the highest and most useful model of perfection is the prophet Muhammad, and the goal of Islamic education is that people be able to live as he lived. Seyyed Hossein Nasr wrote in 1984 that while education does prepare humankind for happiness in this life, “its ultimate goal is the abode of permanence and all education points to the permanent world of eternity” (p. 7). To ascertain truth by reason alone is restrictive, according to Islam, because spiritual and temporal reality are two sides of the same sphere. Many Muslim educationists argue that favoring reason at the expense of spirituality interferes with balanced growth. Exclusive training of the intellect, for example, is inadequate in developing and refining elements of love, kindness, compassion, and selflessness, which have an altogether spiritual ambiance and can be engaged only by processes of spiritual training.

Education in Islam is twofold: acquiring intellectual knowledge (through the application of reason and logic) and developing spiritual knowledge (derived from divine revelation and spiritual experience). According to the worldview of Islam, provision in education must be made equally for both. Acquiring knowledge in Islam is not intended as an end but as a means to stimulate a more elevated moral and spiritual consciousness, leading to faith and righteous action.

*See also:* MIDDLE EAST AND NORTH AFRICA.

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BRADLEY J. COOK

# J

## JAMES, WILLIAM (1842–1910)

William James was the American philosopher whose work in psychology established that science as an important element in the revision of social and philosophical doctrines at the turn of the nineteenth century. Thereafter it was no longer possible to erect systems in purely deductive fashion. All thought must take account of the deliverances of current natural science, and particularly the branch relating to man's mind. This respect for the organized experience of the laboratory inevitably influenced educational theory and practice, then still known by their proper name of *pedagogy*.

But James was not merely a scientist in psychology and a proponent of scientific rigor in moral philosophy, including education. He was a philosophical genius—the greatest that America has produced—who touched upon every department of life and culture and who ranks as a chief architect of the reconstruction in Western thought that took place in the 1890s. In the company of Nietzsche, Dilthey, Renouvier, Bergson, Mach, Vaihinger, and Samuel Butler, he led the revolt against orthodox scientism, Spencerism, and materialism and contributed to that enlargement of outlook that affected the whole range of feeling and opinion and has since earned the name of Neo-Romanticism. Every academic discipline and every art was involved in the change; and, in each, thinkers of uncommon scope laid the foundation for the new systems of ideas on which the twentieth century still lives.

William James was in a favored position for adding something unique to the movement: He possessed the American experience as his birth-right and was early acclimated to European ways, British

and Continental. He studied in Germany and was fluent in both German and French, and his family circumstances were propitious. He was the eldest son of Henry James Sr., son of the original William James who had emigrated from Ireland to this country and made a fortune. Henry Sr. could devote himself to study and did so. His original ideas on religion and society won no acceptance in his day, but they have been found important by modern scholars, and they certainly influenced the two geniuses who were his sons, William the philosopher and Henry the novelist.

William James's own intellectual career is marked by his father's easy unconventionality, which as will be seen permitted long exploration before "settling down." Every shift in his own development is caught up in, and contributory to, his mature work. James wanted at first to become a painter, but he had the critical sense to see that his talent was insufficient. Next he took up chemistry at Harvard, went on to study physiology in response to his interest in living things, and wound up preparing for a medical degree. He interrupted his course to spend a highly formative year as one of Louis Agassiz's assistants in the Thayer expedition to Brazil. He then went abroad, where he read literature, attended university lectures, and became acquainted with the new psychology, which the Germans had made experimental and exact. He returned to take his Harvard M.D. in 1869 and after further study abroad began to teach anatomy and physiology.

It was not long before his inquiring spirit led him to offer courses in the relations of psychology to physiology, for which he soon established the first psychology laboratory in America. After the publication of his great book, *The Principles of Psychology*,

in 1890, James's work exhibited the flowering of an intellect that had from the beginning been haunted by the enigmas of life and mind: He gave himself exclusively to metaphysics, morals, and religion.

By an oddity of academic arrangements, James was a professor of philosophy four years before he was made a professor of psychology, but nomenclature is irrelevant: His beginnings in the psychology laboratory were very soon followed by his offering of a course in philosophy. In other words, the subjects for him commingled and he was always a philosophical writer and teacher. Those were the great days of the Harvard department of philosophy, and during his thirty-five years of teaching James's direct influence spread over a wide range of students, as disparate as George Santayana and Gertrude Stein.

To the end of the century James, despite his new goals, continued to write and lecture on the subject that had first brought him fame. He pursued his research on the newest topics of abnormal psychology, he read Freud and helped bring him over for a lectureship at Clark University. And what is more to the point of the present entry, between 1892 and 1899, James delivered at a number of places the *Talks to Teachers*, which were an offshoot of the *Psychology* and which constitute his important contribution to educational theory.

In any such theory, the assumptions made about the human mind are fundamental and decisive. If "the mind"—which for this most practical of purposes is the pupil's mind—is imagined as a sensitive plate merely, then teaching can take the simple form of making desired impressions on the plate by attending chiefly to the choice and form of those impressions. The rest is done by setting the child to take these in by rote, by repeating rules, by watching and remembering contrived experiments. In other words, the teacher points the camera and pushes the button for a snapshot or time exposure.

No pedagogy has ever been quite so simple, of course, for the least gifted or attentive teacher is aware that the child must exert *some* effort, be in some way active and not photographically passive, before he can learn the set verses or the multiplication table. So, to start the machinery, a system of rewards and punishments is established, which will by mechanical association strengthen the useful acts of mind or hand and discourage the useless or harmful. In this primitive pedagogy, the pupil's acquirements are deemed a resultant of essentially mechanical

forces, and the teacher serves as the manipulator of a wholly environmentalist scheme.

It is unlikely that any good teacher has ever adhered strictly to that role or thought of himself or herself as operating that sort of invisible keyboard. If it were so, no child would ever have learned much of value from any schooling whatever. But it is also true that educational practice always tends toward the crude mechanics just described. And the reasons are obvious: sheer incompetence in many teachers and weariness in the rest. For the two great limitations on classroom performance under any theory are (1) the scarcity of born teachers; and (2) the strenuousness of able and active teaching (which means that even the best teachers can sustain the effort for only a given number of hours at a time).

The state of affairs which James and other school reformers of the 1890s found and sought to remedy was a result of these several deficiencies. The movement of Western nations toward providing free, public, and compulsory education was, it must be remembered, an innovation of the nineteenth century. The inherent difficulties of this new social and cultural goal were great. It made unprecedented demands—on children, parents, administrative systems, and (most important) on the national resources of teaching talent, which are not expandable at will. Theory, too, was wanting for the supervision and teaching of teachers themselves. The confusion that ensued was therefore to be expected. Only a few points were clear: the older pedagogies were too mechanical in their view of the mind; the number of inadequate teachers was excessive; and the exploitive use of the good ones was a danger to the trying-out of mass education.

It was high time, therefore, that psychology put in its word on the subject it supposedly knew all about—the mind. Unfortunately, the mechanical view of the mind existed in two forms—one, as the view natural to ignorant or indifferent persons and, two, as the view that the prevailing scientific metaphor of the time seemed to justify. The universe, according to the Darwin-Spencer philosophy, was a vast machine, and its elements, living or dead, were also moved by the great push-pull of matter like the parts of a machine. The prophets of science—T. H. Huxley, John Tyndall, John Fiske—held audiences spellbound with illustrations of this principle, which everyone was sure could be demonstrated in the laboratory. The newest science, German born and bred, was psychophysics, a name which alone was enough

to show that the operations of the mind bore the universal character of mechanism. Man was no exception to the law exemplified by the collision of billiard balls or (in more refined form) by the effect of light on a photographic plate.

To be sure, these scientific interpreters of nature would not have subscribed to a simplistic pedagogy if they had ever turned the full force of their minds on the problem of teaching. One of them, Herbert Spencer, did write a fairly sensible tract on education. And the psychophysicists did not entirely blot out the influence of earlier and richer pedagogies, notably that of the German psychologist Johann Herbart, who died in 1841. But on the whole the situation of the schools in the decades of the nineteenth century was critical, and the strictures and exhortations of the reformers tell us very precisely in what ways.

James, with his encyclopedic knowledge of psychology, theoretical and experimental, his mastery of the art of teaching, and his genius for diagnosis in the study of human feeling, was in an ideal position for showing up the false principles, old and new, and propounding the true ones. The root of the matter was to consider the pupil as an active being—not merely a mind to be filled, but complex and growing organism, of which the mind was but one feature. That feature, in turn, was not a receptacle, but an agent with interests, drives, powers, resistances, and peculiarities which together defined a unique person. Nothing can be imagined farther removed from this than a machine built to a pattern and responding passively to external prods and prizes.

Rather, as one marks the difference, the familiar outline appears of the child who presides over the child-centered school of the Progressives—the men and women who came to dominate theory and practice thirty years after James. But it is only the outline of that child, for James was much too wise a philosopher to suppose that doing the opposite of whatever is done will correct present abuses. His *Talks to Teachers* (1899) fill but a small volume, yet they contain an extremely subtle and complex set of precepts—precepts, not commandments. To follow the precepts one must—alas—use intelligence and judgment, not because James is not clear and definite, but because the teaching situation is infinitely variable—like its object, the child.

To begin with, James does not reject the associationist principle that was the mainstay of the earlier

pedagogy. It is a sound principle, but it is not simple or automatic as was once thought. Associations impress the mind not in a one-to-one arrangement, but in groups or constellations, some members of which fight or inhibit each other. Moreover, the structure of the particular mind favors or excludes certain kinds and ranges of associations. It follows that to reach—and teach—any mind, the teacher must multiply the number of cues that will bring to full consciousness in the pupil the points he should retain or remember. The reason for this method, which is in fact less a method than a call to exert the imagination, is that the same reality can be cognized by any number of psychic states. It is accordingly a *field theory of thought* that James substitutes for the linear-mechanical and would have the teacher act upon.

Throughout his chapters, James moves back and forth from the schoolroom to the world, where the habits and powers of great minds and dull ones can be observed and turned into examples. The point of the shuttling is that there is or should be no difference in kind between what the child is asked to imagine, perform, remember, or reason out and what the grown man does or fails to do. This soon becomes an important criterion. Meanwhile the difference is in degree, which means that the teacher must be aware of differences in development—crudely measured by the age of the child, more closely measured by his rate of maturing, most delicately marked by what is called native ability.

Any teacher starts with the pupil as a lively bouncing creature in which the body and its needs predominate. The curiosity of the child is indeed a sign that mind is present also, but James knows that the “native interests of children lie altogether in the sphere of sensation” (1899, p. 92). Hence James recommends that until artificial interests develop, children be taught through objects, things that move, events of dramatic quality, anecdotes in place of propositions. Stressing also the link between instinct (which rules these early interests) and action, James strongly favors letting the child handle the means of instruction, build, take apart, try out, *do*.

In this commonsense view that instruction should begin by exploiting native interests (which turn out to be physical and active), James is a forerunner of the Chicago School, of which John Dewey was the instigator and later the idol. But neither James nor Dewey was an innovator in the desert. The European kindergarten movement, the early,

scattered elements of the Montessori method, and numerous other reforms of school and preschool instruction were in full swing even before James. Indeed, Rabelais and Rousseau had long since made the identical point about the value for education of having the naturally restless child learn by playing, both because playing is congenial and because it is the fundamental form of learning: trial and error.

That point evidently has to be made over and over again in history. But each time history gives it a special coloring. It was natural that in the period immediately after Darwin, which saw the popular triumph of science, the reminder about the child's activism should be seen as the root of the scientific march of mind; for if play is the germ of trial and error, trial and error is the germ of experimentation. It is this plausible linkage that set Dewey and the Progressives to pursue the scientific analogy to an extreme. For them—at least as educators—the mind is forever facing problems and seeking solutions. Teaching school therefore becomes the art of devising situations that will challenge the problem-solving mind and build up in its child-owner a stronger and stronger capacity to size up, ascertain, verify, and solve.

William James never had to confront this hypothesis head on, but it is clear what form his refutation would have taken. In the first place, not every adult is a scientist, and though it is true that adults who are not scientists encounter problems and resolve them, that activity is but one of many forms that cerebration takes. The poet, the painter, the mystic, the housewife, the salesman, the rabble-rouser, each performs his task differently, even if at times they all resort to “situation analysis” and “problem-solving.” We must remember James's assertion that the mind is continuous: it stretches from the kindergarten, where it learns, to the laboratory, where James studies it, just as it stretches from Plato's garden to the London Stock Exchange; which is to say that within the unity of the human mind reigns a great diversity, not reducible to the very special, historically late, and purposely artificial form of scientific reasoning.

According to James, good teaching, therefore, cannot follow a set form; it is not the curing of a weakness, such as the replacement of unreason by reason and superstition by science. Rather, it is the interaction of a practiced or well-filled mind with one on its way to the same state. The contents of any mind at any moment—that which James first called

“the stream of consciousness”—is an ever-flowing rush of objects, feelings, and impulsive tendencies. The art of teaching consists in helping to develop in the child the power to control this stream, to sort out its objects, classify their kinds, observe their relationships, and then multiply their significant associations.

In the abstract, this work may be called *attending*; the power generated is *Attention*. James is particularly valuable on this faculty. He points out that if passive attention is sustained by making subject matter continuously interesting, active attention will not develop. He knows that a good part of any subject for any learner of whatever age is bound to be dull; mastering it is drudgery. Therefore, while he encourages the teacher to arouse the pupil's interest in the dull parts of the work by associating them closely with the more interesting through showing unsuspected facets, by challenging pugnacity to overcome difficulty, by dwelling on the concrete effects of the abstract, and by any other means that ingenuity can supply, he does not lose sight of the goal. All this effort at building up enticing associations is to “lend to the subject . . . an interest sufficient to let loose the effort” of deliberate attention (1899, p. 110).

Not the precept alone but its pattern has significance. Throughout his educational doctrine, James is at pains to counteract what he calls the “softer pedagogy” by qualifying its blind zeal. The softer pedagogy is that which, having seized on a good teaching principle, such as “make the work interesting,” forgets that it is only a device and reduces the end of education to its means: What we can't make interesting we won't teach—or at least not require; there is a good reason for the pupil's not learning it: it's not interesting. On the contrary, says James, education that works for voluntary attention is “the education par excellence” (1890, p. 424).

The Jamesian correctives spring from a sense of the original *complexity* of the human mind. It is not a machine that mysteriously gets more *complicated*. Thus, when James recommends the use of objects, the indulgence of childish touching, building, and trying out, it is not in order to ingrain a habit of fiddling, but in order to develop mental powers that *transcend* the tangible and even the visual. Again, he refuses to give objects primacy over words or to deride the utility of abstraction: “. . . words . . . are the handiest mental elements we have. Not only are they very *rapidly* revivable, but they are revivable as

actual sensations more easily than any other items of our experience” (1890, p. 266). And he goes on to remark that the older men are and the more effective as thinkers, the less they depend on visualization. The implications for educational method, when we consider its evolution since 1890 and are aware that the abandonment of teaching to read has lately been urged on the strength of the visual substitutes at our disposal, deserve our closest attention.

The retreat from the word was already beginning in James’s time and he warned against its dangers. He bore incessant witness to the important connection between words and memory and its role in making knowledge secure. “I should say therefore, that constant exercise in verbal memorizing must still be an indispensable feature in all sound education. Nothing is more deplorable than that inarticulate and helpless sort of mind that is reminded by everything of some quotation, case, or anecdote, which it cannot now exactly recollect” (1899, pp. 131–132). The description seems to fit the student mind that does best at “objective” examinations, where the case or quotation is helpfully supplied. To summon it up unaided requires a more athletic type of mind, developed by training in verbal memory.

It is clear that James’s standard of performance, for both teacher and pupil, was quite simply *the best mind*. He was in that sense a thorough educational democrat, unwilling to classify and mark down intelligences ahead of time, on the basis of their background or their probable future. Everybody had a chance to rival the greatest; education was the means of finding out who could succeed, while helping all equally in the effort. This assumption and the attitude it dictates is the opposite of competing with oneself alone, setting one’s own standards, and pursuing only one’s own “needs”—which boil down to one’s own momentary wants.

All these limiting, hierarchical ideas were in the air when James wrote and lectured, and he put his finger on their unfortunate cause: “Our modern reformers . . . write too exclusively of the earliest years of the pupil. These lend themselves better to explicit treatment; . . . Yet away back in childhood we find the beginnings of purely intellectual curiosity, and the intelligence of abstract terms” (1899, p. 151). The implication here—and experience justifies it—is that the pupils are often brighter than their teachers: “Too many school children ‘see’ . . . ‘through’ the namby-pamby attempts of the softer pedagogy to lubricate things for them.”

The absurdity of believing that geography begins and ends with “the school-yard and neighboring hill” is a case in point. The child soon comes to think of all schooling as contemptible make-believe—and James with prophetic vision denounces the Dick-and-Jane reading books as yet unheard of: “School children can enjoy abstractions, provided they be of the proper order; and it is a poor compliment to their rational appetite to think that anecdotes about little Tommies and little Jennies are the only kind of things their minds can digest” (1899, pp. 151–152).

A principal cause of James’s impatience with spoon-feeding methods, with educational research and statistics (“those unreal experimental tests, those pedantic elementary measurements”), with theoretical advice, including his own (“a perceptive teacher . . . will be of much more value”), is his awareness of the deadly grip of habit (1899, p. 136). “Could the young but realize how soon they will become mere walking bundles of habits, they would give more heed to their conduct while in the plastic state” (1899, p. 77).

If this is true, how much more to blame are the teachers whose “method” in instruction becomes the mold of a habit imposed on the young mind. For James, a right education is precisely the power to sidestep ruts, to link ideas freely over a wide range, to exert voluntary attention, to be rich in suggestion and invention, and to be prompt in receptivity. He repeatedly contrasts the dry, prosaic mind with the witty and imaginative. And since knowledge and experience alike tell him that this balance of freedom and control which he disiderates depends on a well-furnished and strenuously trained mind, he wants teachers capable of arousing passion in their charges—the “whole mind working together.” Native deficiencies in this or that faculty can be overcome or ignored: “In almost any subject your passion for the subject will save you.” And at the same time he shows a warm understanding of the non-academic type. The student who cuts a poor figure in examinations may in the end do better than “the glib and ready reproducer,” just because of deeper passions and of “combining power less commonplace” (1899, pp. 137, 143).

It comes as no surprise, then, that James ends by defining education not in intellectual terms—though his whole impetus is toward intellect—but in terms that unite emotion and action: education is “the organization of acquired habits of conduct and tendencies to behavior. . . . To think is the

moral act:" it "is the secret of will, . . . it is the secret of memory . . . Thus are your pupils to be saved: first, by the stock of ideas with which you furnish them; second, by the amount of voluntary attention that they can exert in holding to the right ones . . . ; and, third, by the several habits of acting definitely on these latter to which they have been successfully trained" (1899, pp. 29, 186–188).

The "saving" is of course from the blind compulsion of determinism reinforced by bad habit. James's pronouncements about education rest upon a mass of physiological and psychological facts and are abundantly illustrated by reference to them. The reflex arc is as much a condition of learning as the stream of thought; the individual type of memory (visual, auditory, muscular) as determinative as the hereditary constitution of the neural synapses. But James is not a materialist, for he can find no evidence that these factors which limit or condition thought also produce it. And at the same time he finds in man's power of fixing the mind upon an idea—the power of thinking—a range of freedom to be exploited.

These considerations and conclusions bring us back to the starting point. If the nascent mind to be taught in the schoolroom is not a machine, if it is continuous and unified in kind, but diversified in quality and degree, if its operations are not exclusively analytic and directed at problem-solving, what sort of mind is it, in a single word? And what sort of educational theory will suit its needs? To answer the second question first, psychology can and ought to give the teacher help, but it is a great mistake to think that "the science of the mind's laws" can serve to define "programmes and schemes and methods of instruction for immediate schoolroom use. Psychology is a science, and teaching is an art; and sciences never generate arts directly out of themselves. An intermediary inventive mind must make the application, by using its originality" (1899, pp. 7–8).

In short, no matter which way we turn, we cannot in education get away from the work of the mind or substitute for it an ingenious abstraction. How then does the mind work? The scientific way, we saw, was but a special form of its activity; what is the inclusive mode, or as we just asked, what sort of mind? It is, so to put it, an artistic mind: it is by a kind of artistry that we perceive reality, which is the mind's most inclusive task. True, sensations hold a controlling position commanding our belief in what is real, but not all sensations are "deemed equally

real. The more practically important ones, the more permanent ones, and the more aesthetically apprehensible ones are selected from the mass, to be believed in most of all; the others are degraded to the position of mere signs and suggestions of these" (1890, p. 305). This description of the mind's seizing upon reality fairly parallels the operations of the artist upon his materials for the creation of another kind of reality: it is the pragmatic method, which only means human impulse seeking convenience and delight, seeking the permanent and the recognizable, the orderly and the satisfying. All education therefore aims at preparing the mind to fulfill its native tendencies and thereby to grasp and enjoy an enlarged order of multifarious reality.

*See also:* EDUCATIONAL PSYCHOLOGY; PHILOSOPHY OF EDUCATION.

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JACQUES BARZUN

## JEANES TEACHERS

African-American supervisors of teachers in the rural south from 1908 to 1968, Jeanes teachers (formally called Jeanes supervising industrial teachers) worked toward improving the communities of schools. They reported to the county school superintendent and the state agent for Negro education.

Jeanes teachers were mostly women and were paid in part from a fund established in 1907 by Anna T. Jeanes, a white Quaker woman who wanted to provide rudimentary education for African Americans who lived in rural areas. Additional funding came from the counties employing Jeanes teachers and the General Education Board (GEB), a private foundation created by John D. Rockefeller in 1902 to support southern education. From 1908 to 1926, Jeanes teachers received an average salary of \$45 per month for six to seven months of employment.

The portion of Jeanes teachers' salaries paid by their respective counties was based on the willingness and ability of county school board leaders to pay. County contributions varied, therefore, but until the mid-1920s were typically considerably lower than those provided by the Jeanes fund. Although some counties contributed to the traveling expenses of Jeanes teachers, others did not.

The economic situation affected county contributions as well as the teachers' workload. During the depression, for instance, the North Carolina State Board of Education made all Jeanes teachers work full time as teachers or principals, and perform their Jeanes tasks before and after school, on Saturdays and during vacations. Their salaries were paid in full by the Jeanes fund or other private donations.

### History

The first Jeanes teacher was Virginia Estelle Randolph of Henrico County, Virginia, who started to

work for the program in 1908. She was born in 1874 to former slaves. In 1890 Randolph passed the county teaching examination at the age of sixteen, beginning a fifty-nine-year teaching career. That Jeanes teachers were expected to be active not just in schools but in the community suited Randolph, who had always been active in her community. Prior to becoming the first Jeanes teacher, she organized a "Willing Workers Club" in Henrico County and a "Patrons Improvement League," composed mainly of women and aimed at improving sanitary and health conditions of homes and schools.

Impressed by Randolph's work, Jackson T. Davis, the superintendent for Negro education in Henrico County, applied for funding from the Jeanes Fund and convinced Randolph to become a Jeanes teacher. Not certain that she wanted to take on additional responsibilities such as supervising teachers in the entire county, Randolph prayed for guidance, then accepted the position. Her concern for the welfare of the entire community became the model for Jeanes teachers. Especially during the first two decades of the program, the trustees promoted Randolph's model by giving broad directions to Jeanes teachers and stressing the need to improve their communities.

By 1910, 129 Jeanes teachers worked in 130 counties in 13 southern states. In 1931 there were 329 teachers, but the figure had dropped to 303 in 1934 because of the states' financial difficulties during the Great Depression. By 1937 the figure had increased again to 426. In 1934 only 17 teachers were men, and 286 teachers were women, 177 of them married or widowed. The dominance of women was no coincidence. Dr. James Hardy Dillard, president of the Anna T. Jeanes Fund from 1908 to 1931, felt that women were better suited for the intensive work that required superb human-relations skills. The fund's administrators also argued that rural women, as opposed to urban, were best suited for the work, and women with a rural background dominated the Jeanes work during the program's first three decades.

### Goals and Duties

Jeanes Fund administrators stressed the need for the teachers to adapt to the specific needs of individual communities as well as to promote higher standards of living. Specific duties included school visits to help and encourage schoolteachers to teach sanitation, sewing, cooking, basket making, chair caning,

and mat making. Jeanes teachers were to meet with men and women in the communities to form Improvement Leagues or Betterment Associations. These organizations were to elevate living conditions and paint or whitewash schoolhouses, homes, and outhouses. The teachers also had to raise money to build better schoolhouses and lengthen school terms. Furthermore, they had to encourage and organize home and school gardens, tomato clubs, and corn clubs.

The first Jeanes teachers were considered industrial teachers but in 1918 at least two were trained nurses who taught good health and hygiene habits and how to care properly for children and sick people. The work of Jeanes teachers was often influenced by their gender. Women were expected to teach the “fundamental industries of the home.” Some women teachers taught sewing or cooking or both to other teachers, students and adults in the community. A few taught washing and ironing. Others were expert dressmakers, milliners, weavers and basket makers. The men, on the other hand, were expected to teach some “sort of bread-winning work.” They mainly taught farming and gardening but also carpentry, bricklaying, blacksmithing, shoemaking and repairing. Other male Jeanes teachers included a painter and paper-handler, a mattress-maker, a cook, and a tailor.

Most Jeanes teachers unofficially served as the county superintendent for African-American schools as white superintendents directed most of their energy toward schools for whites. Jeanes teachers encouraged mainly local African Americans and whites to give money and time to black education. They worked with principals and teachers in implementing curricula changes. They served as liaisons between black schools and white county and state school administrators. They also served as liaisons between black schools and state and local government agencies as well as federal agencies such as the U.S. Department of Agriculture.

To encourage African-American students to attend school, Jeanes teachers simultaneously addressed illiteracy and poverty throughout their communities. Jeanes teachers used Homemakers Clubs and other forms of industrial education to improve the rural food supply, health care, and their schools' finances. They raised funds to build and maintain Rosenwald and county training schools. Jeanes teachers participated in and provided leadership for numerous racial uplift organizations such as

the Federation of Afro-American Club Women, the National Association of Colored Women, the National Council for Negro Women, and church missionary associations. These organizations all provided avenues for community improvement, to support social welfare institutions such as orphanages and homes for wayward girls, and to set up and maintain recreational facilities. Providing clothing to destitute children and access to health care, along with the teachers' efforts to increase the number of schools and improve existing ones, stimulated attendance. The attendance rate increased by 22 percent between 1900 and 1920; by 1950, 69 percent of southern African-American children attended school.

### **The Homemakers Clubs**

The Homemakers Clubs were a major component of the Jeanes teachers' work and of industrial education for blacks in general during the early part of the twentieth century. They were community groups organized as early as 1913 by Jeanes teachers to instruct the locals mainly but not exclusively in the preservation of food. Homemakers Clubs were to encourage vegetable gardens, home sanitation, food preservation and sewing. The Jeanes teacher made personal visits to schools and homes and gave instruction in planting, cultivating, canning, and so forth. They placed special emphasis on the family garden.

### **Rosenwald Schools**

Jeanes teachers also encouraged people in their communities to become involved in building and maintaining schools. They used the contacts and goodwill they developed through Homemakers Clubs, churches and other organizations. Their success encouraged the GEB to increase funding for black schools. It helped efforts to attract funding for black education in the south from philanthropic organizations other than the Jeanes Fund, such as the the Julius Rosenwald Fund. Rosenwald, president of Sears, Roebuck and Company (1910 to 1924) and later chairman of the board (1925 to 1932), established the Rosenwald Fund for improving rural school buildings in the south through public-private partnerships. Jeanes teachers were directly involved in the construction of Rosenwald schools, and it probably challenged their fundraising, public-relations, and organizing skills more than anything else.

Rosenwald contracts stipulated that African-American communities match or exceed the amount

requested from the fund and demanded cooperation between state and county school authorities. The contracts also required that land, equipment and all other property be deeded to the county school. The Rosenwald program stressed industrial education. The first Rosenwald school was built in 1913 in Alabama. In 1936 the fund reported 5,357 schools built in fifteen southern states. North Carolina led the way. The Rosenwald Fund began its funding of schools there in 1915, and between 1915 and 1932 North Carolina built over 800 Rosenwald schools, far more than any other state.

Jeanes teachers worked with local and state officials, professionals such as attorneys and doctors, as well as religious and nonreligious organizations, both black and white, to promote the construction of these schools. They raised funds for equipment, including kitchen equipment. By July 1, 1932, Rosenwald contributions to school construction in the south was \$4.3 million. African Americans had contributed \$4.7 million, and local governments, \$18.8 million. Rosenwald funding increased dramatically during the last four years of the program as it built larger, six-room to seven-room schools.

State agents were important to African-American education, but Jeanes teachers facilitated their success and played the most significant role in the Rosenwald building program. Of the more than 4,000 Rosenwald schools built by the mid-1930s in all fifteen southern states, two-thirds were in counties where Jeanes teachers were employed. Although overlooked by historians, the efforts of Jeanes teachers and other women made the most significant difference in the number and quality of schools for rural African Americans.

### Health Care

In addition to providing buildings to facilitate access to education, Jeanes teachers addressed other student needs. During the first three decades of the twentieth century, hookworm disease, tuberculosis, syphilis, and to some extent malaria and pellagra wreaked havoc on southern communities. Most counties could not afford a nurse, and few health institutions existed for African Americans or the poor. As early as 1917 Jeanes teachers were selected by health departments to help combat tuberculosis. Jeanes teachers invited city nurses to talk to parent-teacher associations and organized medical examinations for students. They held preschool clinics during which nurses or doctors checked students'

tonsils, and visited homes in advance to make sure parents brought their children. Jeanes teachers organized "Clean Tooth" campaigns and National Health Week activities. They fumigated school buildings, following the county health officer's instructions.

### Contribution

Heavy workloads and high expectations from both the community and the Jeanes teachers themselves often meant that most worked long hours, even though they were not paid for much of their overtime. Some teachers visited three to four schools a week, others five to eight. Teachers sometimes spent a week at a particular school, overseeing industrial training projects, assisting teachers with reading, writing, spelling, and arithmetic instruction, visiting homes, and organizing clubs for home and school improvement.

The sheer size of their mandate and the fact that they had to develop most programs from scratch meant that Jeanes teachers could not fulfill all expectations. Jeanes teachers were allowed considerable freedom and flexibility to decide priorities based on their assessment of a community's need and the resources available. It also allowed them to manipulate a Jim Crow system to provide African Americans with some opportunities and most importantly, hope.

*See also:* EDUCATION REFORM; MULTICULTURAL EDUCATION.

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## JEWISH EDUCATION, UNITED STATES

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Throughout history, the Jewish people have been a minority culture and religion. In times of peace, Judaism thrived; in times of hostility, Jews protected themselves from outside forces. In the United States today, Jews face relatively little hostility. Jews are allowed to live wherever they please, they can study and engage in any profession, and they may practice their religion openly. Fighting anti-Semitism is no longer the rallying cry that it once was for the Jewish community. The state of Israel, another center of Jewish cohesiveness, now stands strong in the Middle East and American Jews no longer worry about Israel's permanence as a nation. Furthermore, most Jewish people in the world today are free to leave their countries and move to Israel. Jews cannot rally around the cries to free Soviet Jewry as they did in the late 1980s. Those Ethiopian Jews who dreamt of immigration to Israel are already being resettled. While small pockets of Jews still live in countries that do not allow them to leave, the vast majority of Jews around the world are free.

The multitude of issues that propelled Jewish communities in the United States to come together—and drew individual Jews to work together for the good of the Jewish people worldwide—no longer have the urgency that they once did. Jews in the United States can live without Judaism; many immerse themselves in their secular lives without feeling the loss of the richness of their Jewish heritage. Many Jewish parents are failing to pass their Jewish religion and heritage to their children. In fact, less than half of all children born to at least one Jewish parent (or a parent who was born Jewish) are being raised as Jews, according to Alice Goldstein and Sylvia Fishman's 1993 study. Furthermore, the rate of intermarriage is at an all time high. Almost 50 percent of American Jews married since 1985 did not marry within the Jewish faith. Thus, the overriding concern for American Jewry in the twenty-first century is Jewish continuity—the continued existence of the Jewish people, its culture, traditions, practices and beliefs.

There are three main denominations in the U.S. Jewish community: the Orthodox, who strictly follow the traditions of Jewish life and the basic code of Jewish law; the Conservative, who embrace the central rituals and laws of Judaism but adapt them to modern life; and the Reform, who preserve the

spirit of the law, with the letter of the law as a guidepost for modern decision-making. Across all denominations and movements of Judaism, the response to threats of total assimilation and continuity is education. Jewish education is an important tool as community leaders look to ways to ensure the survival of Judaism for generations to come. Jonathan Sarna maintained in 1998 that “Jewish education serves as the vehicle through which we train successive generations of Jews to negotiate their own way as Jews, in the American arena” (p. 10). This mission is achieved through numerous educational frameworks: day schools, afternoon religious schools, Sunday schools, informal educational programs, university-based programs, and extensive adult education.

### Jewish Day Schools

Day schools are private, independent schools that teach Jewish and secular education subjects, similar to other parochial schools in the United States. The Jewish subject matter typically focuses on Hebrew language, prayers, the Bible, customs, ceremonies and rituals, Jewish history, and the state of Israel. Most day schools are not affiliated with any particular congregation or synagogue, although most are connected to one of the three main denominations of Judaism.

Reform and Conservative Jews have long been ardent supporters of public education. Public schools have typically been seen as a place where children of different backgrounds could mix with—and learn about—each other in a safe environment. Jews have often been at the forefront of efforts to oppose educational options that would lead to segregated schools. Furthermore, many Jews have long felt that Jewish day schools are outdated and not appropriate for Jewish children brought up in the modern world. For instance, in 1870, Rabbi Isaac Mayer Wise, a prominent Reform Jewish leader declared, “Education of the young is the duty of the State and that religious instruction . . . is the duty of religious bodies. Neither ought to interfere with the other” (quoted in Sarna, p. 11).

In contrast, for Orthodox Jews, day schools—including yeshivas—where Torah and other religious subjects are the primary curricula, continue to be the sole avenue for educating children. Most Orthodox day schools belong to an umbrella organization called Torah Umesorah that provides curricula, teacher training, placement services, and special ed-

education supports to the Orthodox educational community. Some Orthodox day schools continue to use Yiddish as the language of instruction, while most day schools rely heavily upon Hebrew.

At the end of the twentieth century, day school enrollment—including that of non-Orthodox day schools—increased dramatically. A census of Jewish Day Schools in the United States conducted by Marvin Schick in 2000 calculated that 185,000 students were enrolled in Jewish day schools across the United States. About two-thirds of these students were in either New York or New Jersey, which strongly correlates to the large percentage of Orthodox Jews who live in these states. In fact, Orthodox schools accounted for 80 percent of the total enrollment in Jewish day schools during the 1998 to 1999 school year.

In all day schools, enrollment is higher in the younger grades. For Orthodox schools, this is true because of increased—and high—birthrates in their communities. In non-Orthodox day schools many parents believe that better opportunities exist in public or other private, non-Jewish schools for their older children when college admissions becomes a key decision factor. Furthermore, many communities do not have non-Orthodox Jewish high school options.

For Reform and Conservative Jews, day schools are seen as a solution to the multitude of Jewish youth growing up without knowledge or commitment to Judaism or a Jewish identity. Seen as a response to the Jewish continuity crisis, new day schools are cropping up across America. Goldstein and Fishman's 1993 research indicates that youth who receive Jewish day school education are less likely to intermarry and are more likely to raise their children as Jews.

### **Synagogue Education**

While attendance at Jewish day schools increased markedly in the ten years prior to the beginning of the twenty-first century, most non-Orthodox Jewish children still receive the majority of their Jewish education in supplemental religious schools run by local synagogues. This mode of education allowed parents to avoid the fears of “ghettoization” of the day schools. Synagogue religious schools have long been given the task of educating Jewish youth in a wide range of subjects, including history, culture, holidays, Hebrew language, prayer, and Torah. Students

in some congregations attend supplementary religious school one day per week, called Sunday school. Other students, especially those affiliated with the Conservative movement, attend approximately six hours per week, one and one-half hours on two days after “regular” school and three hours on Sunday morning. Much of the focus of supplementary school education is on preparing youth for the bar or bat mitzvah at the age of thirteen. Hence, enrollment often declines after bar/bat mitzvah age.

Attendance at synagogue religious school is the central mechanism for children to learn about Judaism. Because of the part-time nature of these educational programs, numerous challenges confront these schools. One is the obvious lack of time and sustained focus available to educators. Children attend with low levels of motivation and commitment after a long day in their secular school. An even bigger challenge is the personnel crisis in Jewish education. These supplementary school classes are often taught by teachers who, although committed Jews, know little about the subjects they teach. A study of Jewish educators in three communities in the United States found that close to 80 percent of the teachers in supplementary schools have neither a degree in Jewish studies nor certification as Jewish educators. In preschools, 10 percent of the teachers are not even Jewish. In one community the figure was as high as 21 percent according to the Council for Initiatives in Jewish Education. Professional development opportunities are relatively scant as well.

However, a new generation of supplemental religious schools is emerging to refocus on both the personnel and continuity crises. Educational efforts are geared toward learners of all ages, including families. Teachers are participating in expanded educational opportunities. Synagogue communities are recognizing that if supplemental education is to be successful it will have to (1) span all age groups and (2) allow students to enter a “Jewish existence that they will recognize to be existentially, intellectually, and spiritually meaningful” (Pekarsyky, p. 39). Successful supplementary schools tend to be housed in synagogues where the educational programs are a high priority for the congregation as a whole, have favored status and commitment from all stakeholders (especially the rabbis and lay leadership), and are linked to the culture and mission of the synagogue.

### Informal Education

One of the most important developments in Jewish education is the huge increase in participation in Jewish summer camps, youth groups, organized youth trips to Israel, and family and adult education. Summer camps are places where Jewish youth can interact with one another in uniquely Jewish environments. Camps allow participants to see the value of living as more than cultural Jews. Campers are able to gain respect and appreciation for engaging in daily Jewish ritual. They experience the power of group observance, and gain their own Jewish identity, independent of that of their parents.

Jewish youth groups are also instrumental in giving Jewish children the education they need to be committed Jews. Like camps, youth groups have many purposes beyond that of education. Social, athletic, and community service activities often attract Jewish youth who may not have attended Jewish day schools, supplemental religious schools, or camps. Thus, participation in Jewish youth groups is an important mechanism to reach out to all types of youth, particularly the unaffiliated. Youth groups are often housed in Jewish community centers and other cross-denominational frameworks.

Summer youth trips to Israel are a large part of the "curriculum" of Jewish education. It was estimated by the Commission of Jewish Education in North America in 1990 that approximately 25,000 American youth annually participate in educational trips to Israel. Some supplementary religious schools mandate participation in a class trip to Israel. Many Jewish federations, a community umbrella organization for all Jewish organizations in a city, provide scholarships to make it possible for youth to go to Israel on educational trips. The educational value of trips to Israel is well documented. Those youth who experience Israel firsthand are more committed ideologically to the state of Israel and to Judaism.

Informal adult education programs provide numerous opportunities for Jewish study. Small groups of adults meet together in informal text study groups, attend retreats, and participate in noncredit courses offered by Jewish community centers, local Hebrew colleges and synagogues. Family education is considered one of the newest models of Jewish education. Young and old alike come together as families to focus on Jewish learning, holiday workshops, and cultural events.

### Conclusion

The end of the twentieth century saw a revival of interest in Jewish education. Day schools increased in popularity across all denominations. Synagogues refocused on providing quality, meaningful education to both children and adults either in a religious school setting or through adult and family education. Informal educational opportunities for youth expanded. Although it is true that, in part, this is due to the traditional Jewish emphasis on education, the increased financial support by Jewish federations and individual philanthropists was aimed at attacking trends of intermarriage, assimilation, and Jewish continuity. Formal and informal Jewish education is the rallying cry.

*See also:* CATHOLIC SCHOOLS; ISLAM; PRIVATE SCHOOLING; PROTESTANT SCHOOL SYSTEMS.

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## JOHNS HOPKINS UNIVERSITY

Johns Hopkins University was founded in 1876 by educational pioneers who abandoned the traditional roles of the American college and forged a new era of modern research universities by focusing on the expansion of knowledge, graduate education, and support of faculty research.

### Early Years

In 1873 Johns Hopkins, a childless bachelor, bequeathed \$7 million to fund a hospital and university in Baltimore, Maryland. At that time this fortune, generated primarily from the Baltimore and Ohio Railroad, was the largest philanthropic gift in the history of the United States. Flush with funds, the new board searched the nation for appropriate models of higher education. Finding none to their liking, they opted for an entirely new model. It was to be a truly national school dedicated to the discovery of knowledge. It owed its inspiration not to America's higher educational system but to modernized Germany. By following the Germanic university example, the board animated a new spirit and structure, which moved higher education in the United States away from a focus on either revealed or applied knowledge to a concentration on the scientific discovery of new knowledge. This made Johns Hopkins the genesis of the modern research university.

### The Gilman Period

Johns Hopkins was intended to be national in scope, so it could serve as a balm for a country divided over the sectional strife of the Civil War. As such, the university's official commemoration took on great significance: 1876 was the nation's centennial year and February 22 was George Washington's birthday. Notwithstanding the care taken in selecting this date, the institution's viability depended directly on the board's choice for the first president. They chose wisely. Daniel Coit Gilman, lured away from the presidency of the University of California, helped create Johns Hopkins University and lead American higher education in new directions. In word and sometimes deed, Gilman held to some traditional goals of the denominational college but, nevertheless, he created the first American campus focused on the faculty and their research. To Gilman, Johns Hopkins existed not for the sake of God, the state, the community, the board, the parents, or even the students, but for knowledge. Therefore, faculty who expanded knowledge were rewarded.

Connected with the new university's focus was its concentration on graduate education and the fusion of advanced scholarship with such professional schools as medicine and engineering. It was the national pacesetter in doctoral programs and was the host for numerous scholarly journals and associations. Having a faculty-oriented perspective, the university did not want its professors bogged down in remedial education, but rather wanted to attract serious, prepared students who could genuinely participate in the discovery of new knowledge. Though the opposite is often mistakenly believed, Johns Hopkins has always provided undergraduate education, although Gilman had to be persuaded to include it and other early presidents attempted to eliminate the program. However, whether undergraduate or graduate, Johns Hopkins concentrates on providing research opportunities for all of its students. And its strong ties with John Hopkins Hospital, a teaching and research hospital, attract students from around the nation interested in biomedical engineering and medicine.

### Modern Times

The legacy of adroit leadership begun by Gilman has continued. Among the many able presidents, Milton S. Eisenhower, brother of Dwight Eisenhower, led Johns Hopkins during the 1950s and 1960s when the university's income tripled, endowment doubled,

ambitious building projects were undertaken, and strong ties with Washington, DC, were developed. Because of his contributions, Eisenhower was one of two men named president emeritus. Steven Muller, who served as president from 1972 until 1990, is the only other one awarded this title—and along with Gilman is one of two to be named president of both the Johns Hopkins hospital and the university.

Though privately endowed, Johns Hopkins University embodies what Clark Kerr called the “federal grant university,” as it often tops the nation in federal research and development expenditures. Johns Hopkins University also illustrates the skewed priorities of federal grants, as the school’s humanities programs cannot hope to attract research funding commensurate with that attracted by medicine, public health, engineering, and physics. Despite this imbalance, the institution remains committed to professional instruction in conjunction with academic disciplines within a true university setting. The Georgian-style Homewood campus provides an academic atmosphere that allows students to participate in extracurricular activities. In intercollegiate athletics, Johns Hopkins is famous for lacrosse and houses the National Lacrosse Hall of Fame and Museum, a fitting location because the Blue Jays have won thirty-seven national championships. At the same time, its medical school and hospital remain in their historic setting in downtown Baltimore’s harbor area. The university’s educational presence in Baltimore is supplemented by its economic role as the city’s single largest employer. Clearly, the Johns Hopkins University continues to fulfill its mission as a national university and as an academic pioneer.

*See also:* GRADUATE SCHOOL TRAINING; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; RESEARCH UNIVERSITIES.

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JASON R. EDWARDS  
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## JOHNSON, MARIETTA PIERCE (1864–1938)

Founder of the School of Organic Education in Fairhope, Alabama, Johnson won international recognition as a child-centered Progressive educator. She was born near St. Paul, Minnesota, and grew up as a twin in a close-knit farming family. After attending public schools in St. Paul and graduating from the state normal school at St. Cloud in 1885, she taught in rural elementary and secondary schools, and served as a training teacher in normal schools. Johnson found success and popularity as a traditional instructor, priding herself on how quickly she could teach first graders to read.

### Organic Education

After a decade and a half of classroom work, she suddenly rejected the very methods she practiced and demonstrated so impressively. In 1901, with all the force of a religious conversion experience, Johnson was convinced that her well-intended but misguided teaching methods violated the “order of development of the nervous system. I realized that my enthusiasm was destructive, and the more efficient I was, the more I injured the pupils!” (Johnson 1974, p. 8). The catalyst for this change was a personal reading program that led Johnson from child psychology books into works by Jean Jacques Rousseau, Friedrich Froebel, and John Dewey. Through these readings as well as her own observation, she came to see that children move through distinct stages as they grow and that parents and teachers should key their educational efforts to the developmental process.

Johnson’s belief in social reform made her unusually receptive to ideas on educational reform. She and her husband John Franklin were socialists, and in 1902 they moved to the small Gulf Coast village of Fairhope, a utopian community dedicated to the single-tax philosophy of Henry George, author of

*Progress and Poverty* (1879). At home among former Midwesterners and northeasterners who seemed determined to set an example for the rest of the world, Johnson added an educational dimension to the Fairhope experiment.

Johnson immediately began searching for ways to educate each student as a complete organism—a “whole child,” as Progressive educators would soon have it—paying balanced attention to body, mind, and spirit. The School of Organic Education she founded in 1907 became known as the most child-centered progressive school in the nation. Dewey explained in *Schools of To-Morrow* (1915) that he was one of many students and experts who had made pilgrimages to this remote corner of the Deep South to see Johnson’s experiment. Dewey pronounced it a “decided success,” and his rave review helped catapult Johnson into national prominence. Soon the School of Organic Education was attracting talented teachers and well-to-do boarding students from throughout the country.

Johnson’s approach to education was genuinely radical. The once eager teacher now steered students away from books until the age of nine. Younger children, she maintained, were not ready for print. They could learn more through direct experience with the environment. Dewey and other visitors to the school were impressed with the time spent teaching and learning outdoors or in the shop, which Johnson regarded as the “most important place on our campus.” Every student did daily handwork in the shop, while students and teachers joined in daily folk dancing. Students did no homework and took no tests until high school; nor did they receive grades or report cards. Such features drew most of the attention so that observers tended to overlook the curriculum, which became more demanding and rigorous as students gained maturity.

Refusing to compare one student to another, Johnson rejected “external, competitive” standards in favor of the “inner, human” standard of simply doing one’s best. To critics who charged that the school was a “do-as-you-please” school—a common caricature of child-centered Progressive education—she countered that “children have no basis for judgment [and] do not know what is good for them” (Johnson 1974, p. 95). Teachers and parents, she insisted, were responsible for taking charge and directing young people away from “unwholesome” activities.

Such tough talk notwithstanding, Johnson was anything but authoritarian. She relied instead on personal appeal—a quiet but powerful presence—to convince people to do things her way. She was a charismatic woman who projected self-confidence. She shared some of these qualities with other women founders of early-twentieth-century progressive schools, most of which were elite private institutions. In an era when males imposed a business-oriented, measurement-driven version of progressivism on public schools, a few women opened private schools as child-centered alternatives. But Johnson was less autocratic than most of her peers, and her school also differed in significant ways.

Part of an experimental community, Organic operated as a quasi-public institution that charged local children no tuition. During Johnson’s lifetime, one-half to two-thirds of Fairhope’s white families chose to send their children to her school, which she hoped would become a model for reforming public education. She worked to create a climate of equal opportunity for females, accommodated disabled students, but reluctantly yielded to community pressure to bar African Americans.

Despite support from local tax revenue, Johnson fought an uphill battle to keep the Organic School solvent, a situation that forced her into a parallel career as a fundraiser. She spent much of her time on the lecture circuit, speaking throughout the United States and in several other countries, recruiting boarding students whose tuition and fees subsidized the attendance of local students. She was especially popular in the New York City area, where a group of socially prominent women organized the Fairhope Educational Foundation to support her efforts, particularly her work as director of the Edgewood School in Greenwich, Connecticut. A cofounder of the Progressive Education Association in 1919, Johnson tried with limited success to use the organization to promote organic education nationwide. Her efforts did inspire the founding of several private child-centered progressive schools, including the Peninsula School in Menlo Park, California, and a school in Rose Valley, Pennsylvania.

### **New Trends in Education**

While the Great Depression of the 1930s wreaked financial havoc on an already unstable Organic School, Johnson’s name lost some of its magic within the Progressive education movement, now dominated by social reconstructionists who dismissed her

as a “play schooler” despite her longstanding commitment to social reform. Disappointed that few public educators had accepted organic education, she died in poor health in 1938. Without Johnson, the Organic School has drifted far from its educational moorings at times, but unlike many such schools, it continues to offer, in the early twenty-first century, a version of its founder’s original vision.

*See also:* CURRICULUM, SCHOOL; PROGRESSIVE EDUCATION.

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JOSEPH W. NEWMAN

## JOURNALISM EDUCATION ASSOCIATION

When the Journalism Education Association (JEA) celebrated its seventy-fifth anniversary in 1999, it noted that the organization’s name and location had changed several times, but the goals are still very similar to those of its founders—to support secondary school journalism teachers and media advisers.

According to its mission, JEA supports free and responsible scholastic journalism by providing resources and educational opportunities, by promoting professionalism, by encouraging and rewarding student excellence and teacher achievement, and by fostering an atmosphere that encompasses diversity yet builds unity.

In 1924 a group of teachers attending the Central Interscholastic Press Association in Madison agreed unanimously to start a national association for high school journalism teachers. The group did not settle on a name and goals until 1929 when it became the National Association of High School Teachers of Journalism (NAHSTJ). Other name changes occurred in 1930 to National Association of Journalism Advisers (NAJA), in 1935 to National Association of Journalism Directors (NAJD), and in 1939 it became a department of the National Education Association with an advisory council. After World War II the group pushed for increased membership and by late 1949 had 800 members.

The current name, Journalism Education Association, was created in November 1963. At that time, a forward-looking curriculum commission chair, Sr. Ann Christine Heintz, oversaw the publication of several booklets for teachers, including ones that went beyond JEA’s previous focus on newspapers and yearbooks to include broadcast media, classroom teaching methods, and publication trends. In 1966 the journal *Communication: Journalism Education Today* (C:JET) was established, evolving into a quarterly publication about mass media in secondary schools. When two JEA members participated in the Robert F. Kennedy Commission of Inquiry into High School Journalism, the organization embraced a new concern. The commission’s findings, which included the pervasive presence of censorship in high school media, sparked JEA’s increased support of free student expression.

With a membership topping 2,000 in 1999, JEA is the only independent national scholastic journalism organization for teachers and advisers. A volunteer organization, its elected board consists of current or retired journalism teachers. In addition to its president, vice president, secretary, and immediate past president, who acts as parliamentarian and convention coordinator, the board has regional directors and commission chairs. These commissions represent the areas of interest and concern for JEA and, as of 2002, were Scholastic Press Rights, Certification, Multicultural, Development/Curriculum,

and Junior High/Middle School. A national headquarters at Kansas State University serves as a clearinghouse for programs and activities, maintains the JEA Bookstore and membership records, and is the office of JEA's executive director.

To achieve its mission, JEA hosts two conventions per year with the National Scholastic Press Association. These spring and fall meetings offer on-site contests, break-out sessions, media tours, hands-on training, and keynote speeches from media professionals. By 2002 attendance at these four-day conventions often topped 5,000.

Other activities include a voluntary certification program; awards, including High School Journalist of the Year, Future Journalism Teacher, and High School Yearbook Adviser of the Year; Adviser Institute summer training; an Internet site; and a member listserv, JEAHELP, which offers immediate connection and support between members.

*See also:* JOURNALISM, TEACHING OF.

#### INTERNET RESOURCE

JOURNALISM EDUCATION ASSOCIATION. 2002.  
<[www.jea.org](http://www.jea.org)>.

CANDACE PERKINS BOWEN

## JOURNALISM, TEACHING OF

Journalism in American secondary schools began at approximately the same time journalism programs appeared in colleges. The first known high school journalism class was in Salina, Kansas, in 1912. But student newspapers are not always tied to a class, so not surprisingly they appeared long before this date. The first recorded one, *The Student Gazette*, was handwritten by the students of William Penn Charter School in Philadelphia in June 1777. The first known printed school paper, *The Literary Journal*, was published at Boston Latin School on May 9, 1829.

The growth of journalism as part of the high school curriculum became significant in the 1920s. By the mid-1920s a number of state and national organizations had been founded to support secondary school journalism teachers and publications advisers. During the ensuing half century, substantial interest grew in such organizations as the Columbia

Scholastic Press Association, headquartered at Columbia University; the Quill and Scroll Society, an honorary organization of high school journalists at the University of Iowa; the National Scholastic Press Association, based at the University of Minnesota; and the Journalism Education Association, the only organization solely for teachers, which had several names and locations but in 1987 settled at Kansas State University.

Teachers indicate that support from such organizations is vital because a majority of journalism teachers have little specific media training and because keeping current in such a quickly changing field is difficult. Certification or licensing to teach journalism is not required at all in roughly half the states, and many others have only minimal formal academic demands, according to Marilyn Weaver of Ball State University, who conducted a 1993 survey reported in *Death By a Cheeseburger* (1994). By the end of the twentieth century, some states, such as Ohio and Oregon, offered licenses in Integrated Language Arts, which include journalism but require virtually no course work in it. The number one field of licensure among journalism teachers and advisers is English (80%). Journalism is next (26.2%), followed by social studies and speech or drama, according to respondents to a 1998 national survey reported by Jack Dvorak.

Because state requirements vary so greatly, voluntary "certification" became an option in 1990 when the Journalism Education Association launched its Certified Journalism Educator/Master Journalism Educator program. Although it is not designed to replace state licensure where it does exist, the JEA's program offers teachers a variety of ways to earn these designations and indicate their knowledge of the field, including combinations of course work, years in the classroom, tests, and projects. By 1998, 500 teachers had been named CJEs, and by 1999, 100 were MJEs.

### Curriculum and Teaching Standards

Teachers tap into state and national organizations to get help with curriculum, which changed significantly in the late twentieth century. Journalism programs range from those that offer English credit and allow students a variety of choices—from Journalistic Writing to Newspaper Production to Photojournalism—to those with only a yearbook staff meeting after school. However, a 1998 national study of the status of journalism in the nation's high schools re-

vealed that nearly 97 percent of them have at least one media-related activity—a journalism course for credit, a yearbook, a newspaper, a newsmagazine, or a television or radio station. More than 77 percent of the journalism educators who participated in the survey reported that at least one journalism class was offered at the school. About 90 percent of the schools offered a media laboratory for student journalists who work on newspaper, yearbook, or broadcast facilities. Projected onto the high school population in the United States, these percentages mean that about 453,576 students were enrolled in a course called “Journalism,” and nearly half a million students served on school media staffs in the late 1990s, as estimated by Dvorak’s research.

Course objectives and curriculum vary widely, but by the 1980s, teachers groups worked to emphasize the academic respectability of journalism. Some administrators who grew up in an era when high school publications were filled with jokes and puzzles question the educational value of the course. To combat this, the Dow Jones Newspaper Fund launched a project that offered workshops on various university campuses to train teachers for Intensive Journalistic Writing courses at their schools. The high school students in the classes they taught then took the College Board’s Advanced Placement English Language and Composition Examinations. Results since then have shown a higher percentage of journalism students than Advanced Placement English students passing the examination. This result motivated a group of JEA officers and college journalism educators to ask the College Board to create a course and corresponding test for Advanced Placement Journalism. By 2002 the College Board had surveyed educators at both the high school and college levels and was considering this.

**Standards.** National standards for journalism became a concern in the 1990s. Since so many programs are part of the English curriculum, a group of educators sought to show the parallels between the two disciplines. *Standards for the English Language Arts*, published in 1996 by the International Reading Association and the National Council of Teachers of English, established twelve standards for all language arts courses “to ensure that all students are knowledgeable and proficient users of language.” By 2002, *NCTE Standards in Practice as They Apply to Journalism* presented a series of lesson plans and vignettes to illustrate the way media and media-related projects also help teachers meet these standards.

In 2001 a committee of high school and college educators began developing national standards for journalism teacher education. Basing its work on newly created standards from Indiana, Michigan, and Kansas, the group prefaced its national standards with the following: “Educators who teach secondary school journalism must have a broad range of knowledge and performance abilities. Although their courses are frequently placed in a school’s English Department, their teaching responsibilities go beyond what most English or language arts curriculum requires. Therefore, these standards reflect their need to be skilled in teaching writing, listening, speaking, leadership skills, cooperative processes, press law and ethics, and media design and production. The combination of these helps them prepare their students as knowledgeable media producers and consumers who are essential to our democracy.”

An increasing amount of support for high school journalism came from the professional press in the late 1990s. Such groups as the Dow Jones Newspaper Fund and the Newspaper Association of America, which had sponsored programs for more than twenty years, were joined by the American Society of Newspaper Editors, which funded university training for more than 200 teachers each summer, and the Radio and Television News Directors Foundation, seeking to help advisers of all electronic media forms.

### Digital and Electronic Media in the Curriculum

The media that students study and produce shifted dramatically with the growth of digital technology in the 1990s, and teachers found the changes challenging. Instead of typing articles and pasting them on large sheets of paper as their predecessors did, students began using computers. First this was just for word processing, but soon research tools included e-mail for communication and the Internet for information gathering. Meanwhile, production switched to desktop publishing with specialized software and graphics programs, scanners, and digital cameras. By the beginning of the twenty-first century, students at a growing number of schools were creating online publications with timely updates of breaking news, reader response capabilities, and even video and audio clips of local events. Some student staffs collaborated with schools across town, across the country, or around the world to write related articles and share photos from events that would interest a wide teen audience.

In the 1990s many schools across the country found ways to acquire free broadcast equipment, so launching television stations became an option, as well. While some students merely delivered morning announcements, others hosted talk shows and created in-depth video packages for weekly viewing on area cable channels. Student-managed electronic media nearly doubled between 1991 and 1998.

### Law and Ethics

A final area of concern for journalism educators has been law and ethics. In 1974 the Robert F. Kennedy Commission produced *Captive Voices: The Report of the Commission of Inquiry into High School Journalism*. Among the findings of the 22-member commission was the extent of censorship in high school media: "(S)tudent rights are routinely denied, with little or no protest of the students." One result of the Commission was the formation of the Student Press Law Center in Washington, D.C. The SPLC is an advocate for student free-press rights and provides information, advice, and legal assistance at no charge to students and the educators who work with them. More than 2,000 of them contact the SPLC each year to get advice and support in producing media that allows free student expression and teaches journalism students the rights and responsibilities they have in a democracy.

Concern that student journalists were not learning about the First Amendment and how to apply it in their programs led a coalition of media organizations to launch the Let Freedom Ring Award in 2000. The Journalism Education Association, National Scholastic Press Association, Columbia Scholastic Press Association, Quill and Scroll, and the Freedom Forum's First Amendment Center developed a program to recognize and applaud schools that support all parts of the First Amendment in their student publications and their teaching.

*See also:* ENGLISH EDUCATION, *subentries on* PREPARATION OF TEACHERS, TEACHING OF; JOURNALISM EDUCATION ASSOCIATION; LANGUAGE ARTS, TEACHING OF; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; WRITING, TEACHING OF.

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## JUNIOR HIGH SCHOOLS

*See:* MIDDLE SCHOOLS.

## JUVENILE JUSTICE SYSTEM

### HISTORY OF JUVENILE COURTS

William Wesley Patton

### CONTEMPORARY JUVENILE JUSTICE SYSTEM AND JUVENILE DETENTION ALTERNATIVES

William Wesley Patton

### JUVENILE CRIME AND VIOLENCE

Dewey G. Cornell

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## HISTORY OF JUVENILE COURTS

The juvenile court and its philosophy of treating minors who violate the criminal law differently than adults is barely a century old. Historically, juvenile criminals were treated the same as adult criminals.

### The Law Prior to the Creation of the Juvenile Court

Punishment was the central criminal law philosophy in English common law. A conclusive presumption that children under seven could not form criminal intent eliminated the youngest from the criminal justice system. Children between the ages of seven

and fourteen were presumed incompetent to form the requisite criminal intent; the prosecutor, however, could rebut that presumption by demonstrating that the child knew the difference between right and wrong. Children over age fourteen were presumed to have the capacity to form criminal intent. There were no special courts for children, and they were treated as adult criminals. Minors were arrested, held in custody, and tried and sentenced by a court that had discretion to order the child imprisoned in the same jail as adult criminals. Although children received the same punishment as adults, they were not provided with many of the due process protections accorded adult criminals. For instance, minors did not have a right to “bail, indictment by grand jury, [and] right to a public trial” (Conward, p. 41).

Although the early American colonies adopted the English common laws regarding child criminals, from 1825 until 1899 several reform movements initiated significant changes both in philosophy and in treatment of juvenile delinquents. Quaker reformers spurred the New York Legislature in 1824 to pass legislation creating a House of Refuge, which separated poor children and juvenile delinquents from adult criminals. The goal of the House of Refuge movement was both to prevent predelinquents from becoming criminals and to reform those who had already committed crimes. The judge had discretion to determine which juvenile delinquents might properly benefit from the House of Refuge; child criminals unlikely to reform were maintained in adult prisons.

### The First Juvenile Court

Progressive reformers in Illinois persuaded the legislature to pass the 1899 Illinois Juvenile Court Act creating America’s first juvenile court. The act adopted the early English common law *parens patriae* philosophy in providing that “the care, custody and discipline of a child shall approximate as nearly as may be that which should be given by its parents.” Several unique features characterized the early juvenile court. First, because reformation was the goal, the system focused more on the individual child rather than on the nature of the criminal offense. Second, because the time within which reformation could be accomplished varied with the child, indeterminate sentences often exceeded the determinate sentences that adult criminals received for committing the identical criminal act. Third, juvenile delinquents were separated from adult criminals be-

cause they were different in kind. Adult criminals were morally blameworthy; children were merely the products of their environment and therefore retributive punishment was not warranted. Fourth, because juvenile court proceedings were not criminal, children were not entitled to the full panoply of due process protections accorded adult criminals. Informality permitted the court to consider all facts relevant to determining the child’s reformation plan. Petitions replaced criminal complaints, summons replaced warrants, custody replaced arrest, detention replaced confinement, initial hearings replaced arraignments, and delinquency replaced conviction. Fifth, juvenile courts had broad discretion to fashion innovative rehabilitation programs not always available in adult courts, such as release upon informal voluntary probation conditions. Sixth, technical evidentiary rules were inapplicable in juvenile court because they impeded the judge from determining all facts necessary to determine the individualized treatment necessary to rehabilitate the minor.

Although the goals of the juvenile court were laudable, many historians have bemoaned the system’s realities. In 1970 the harshest critic, Sanford Fox, termed the reformers’ legislation “a colossal failure” (p. 1224). It became apparent that the informal procedures and almost unbridled discretion of juvenile court judges often supplied minors with less-fair procedures and treatment than adults received. In a famous 1839 Pennsylvania case, *Ex parte Crouse*, the court expressed the general view of American courts that because the goal of juvenile justice is rehabilitation, not punishment, the due process protections afforded adult criminals need not be provided to juveniles: “The House of Refuge is not a prison, but a school. Where reformation, and not punishment is the end” the formalities of the criminal court are not required. In addition, the juvenile court’s goal of individualized treatment often lacked objective criteria and conflicted with notions of justice. By the 1960s critics spoke of the demise of the juvenile court, and they “raised questions about the effect on juveniles of the lack of due process procedures and protection of individual rights” (Sarri, p. 5).

### *In re Gault* and the Constitution

The assault on the reform movement began with a 1966 case in the U.S. Supreme Court, *Kent v. United States*, which held that under a District of Columbia statute the informal process of determining whether

a juvenile should be tried in juvenile or in adult court failed to provide sufficient due process protection for children. The Court held that before a minor is transferred to adult court the child is entitled to an informal hearing where the trial court must articulate the reasons for the transfer so that the child can have an adequate record for appellate review. Additionally, in response to the state's position that juvenile cases were civil, not criminal, the Court responded, "There is evidence, in fact, that there may be grounds for concern that the child receives the worst of both worlds; that he gets neither the protections accorded to adults nor the solicitous care and regenerative treatment postulated for children." The Court thereby rejected the reform movement's justification for informality in juvenile delinquency cases. And a year later in *In re Gault*, the Court set the due process boundaries between adult criminal procedure and juvenile delinquency trials. First, the Court rejected the reformers' claims that the juvenile justice system accurately and fairly determined children's criminal responsibility: "Under our Constitution, the condition of being a boy does not justify a kangaroo court." Second, although *Gault* rejected the argument that the Fourteenth Amendment due process clause requires identical due process procedures for adults and juveniles, the Court determined that juveniles must at least receive alternative equivalents. Thus, in a juvenile delinquency trial, children are entitled to: (1) notice of the charges, (2) a right to counsel, (3) a right to confrontation and cross-examination, and (4) a privilege against self-incrimination. The U.S. Supreme Court quickly followed the *Kent* and *Gault* cases with the 1970 case *In re Winship*, which held that juvenile delinquency requires the "beyond a reasonable doubt" adult standard of proof, and the 1971 case *McKiever v. Pennsylvania*, which held that juveniles charged with a criminal law violation are not entitled to a jury trial because the Sixth Amendment right to jury trial applies only to criminal actions and because juries would substantially eviscerate the beneficial aspects of the juvenile court's "prospect of an intimate, informal protective proceeding."

The U.S. Supreme Court's juvenile delinquency due process cases ushered in a period of reform in state juvenile court systems that lasted almost a decade. In 1974 the President's Commission on Law Enforcement and Administration of Justice was established to study the deficiencies in the juvenile delinquency system. The commission urged more

nonjudicial service agency intervention for predelinquents and recommended limitations on the confinement of minors.

### Increased and More Serious Juvenile Crime

From the mid-1980s to the early 1990s the national juvenile crime rate rose dramatically; "property crime by juveniles increased 11 percent nationally between 1983 and 1992, [and] violent crime increased by 57 percent" (Feld, pp. 976-977). During this same period, media coverage of juvenile crime dramatically increased. Even though the frequency and content of news coverage often exaggerated the rise in youth crime, the coverage had an enormous impact on the public's call for more protection for citizens and for harsher treatment of juveniles committing serious criminal acts. In reality, during the decade 1987-1997 only 6 percent of American juveniles were arrested and fewer than 0.5 percent were arrested for violent crimes. Nevertheless, state legislatures quickly responded to the public's fear of rising juvenile crime rates by substantially modifying the juvenile court process.

All fifty states modified their juvenile law codes to provide that, under certain circumstances, juveniles could be tried as adults in criminal court. These procedures fall into three distinct types: (1) judicial discretion to transfer a minor from juvenile court to adult court; (2) prosecutorial discretion to decide in which court the child will be tried; and (3) legislative mandates requiring juveniles who commit certain offenses to be tried in adult court. A second statutory change lowered the age at which children were eligible to be transferred to adult court. According to Elizabeth S. Scott, writing in 2000, "Between 1992 and 1995, eleven states lowered the age for transfer; twenty-four states added crimes to automatic/legislative waiver statutes, and ten states added crimes to judicial waiver statutes" (p. 585, fn. 145). A third major juvenile law modification was the development of blended sentences, which involve lengthy juvenile law confinements coupled with the transfer of the juvenile upon reaching the age of majority to serve the remainder of the sentence in adult prison. Finally, juvenile courts have opened their proceedings to the public in cases that involve certain specified serious crimes, and legislatures have substantially reduced minors' right to seal juvenile delinquency court records.

Both liberal and conservative experts and organizations have called for the elimination of the juve-

nile court either because it is a too lenient response to the perception of increasing serious juvenile crime or because it unfairly treats poor and minority children. It is uncertain whether the public's clamor for change will be quelled by the reduction in juvenile crime that began in the mid-1990s.

*See also:* JUVENILE JUSTICE SYSTEM, *subentries on* CONTEMPORARY JUVENILE JUSTICE SYSTEM AND JUVENILE DETENTION ALTERNATIVES, JUVENILE CRIME AND VIOLENCE; VIOLENCE, CHILDREN'S EXPOSURE TO.

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#### CONTEMPORARY JUVENILE JUSTICE SYSTEM AND JUVENILE DETENTION ALTERNATIVES

The juvenile justice system under English common law and early American colonial law did not differentiate between legally competent minors and adults regarding criminal sanctions. Juveniles aged seven or older who had sufficient criminal capacity were tried in adult courts and sentenced to adult institutions. In the United States from about 1825 until 1899 a reform movement ushered in dramatic changes in the philosophy toward juveniles in the criminal law system. Children were seen not as sinners but rather as immature, malleable, and developing individuals who were very different from adults. Rather than applying the retributive justice of the adult criminal system, the reformers argued that children should be educated and nurtured so that they could become productive members of society rather than being housed with adult criminals who would further mold them into hardened recidivists. By 1899 a separate juvenile court was established in Chicago. The reformers argued that in order for a judge to properly determine the specialized care necessary for each juvenile who came before the court, the formal due process structure of the criminal court must be abandoned so that judges could assess all relevant data.

By the middle of the twentieth century it became clear that the good intentions of the reformers had never materialized and that children in the juvenile court were receiving neither the specialized care nor the due process necessary for the public to have confidence in juvenile court determinations. From the mid-1960s through the mid-1970s the U.S. Su-

preme Court on several occasions held that the informal structures of the nineteenth century juvenile court denied juveniles due process of law under the Fourteenth Amendment of the U.S. Constitution. Except for the right to a jury trial and bail, the Court held that juveniles were entitled to a panoply of due process protections, including the right to timely notice of the charges, confrontation, and cross-examination; proof beyond a reasonable doubt; and the privilege against self-incrimination.

During the 1980s the public perceived an escalation in juvenile crime, and a new reform movement developed that aimed to make the juvenile justice system more responsive to public safety and to assure personal responsibility by juvenile delinquents. States experimented with mandatory juvenile sentences, mandatory transfer of serious juvenile offenders to adult criminal court, modification of confidentiality of juvenile records, active participation by victims, mandatory victim restitution, and new correctional alternatives for dangerous juvenile offenders.

Experts have identified a juvenile justice cycle that has continued to revolve since the nineteenth century. The initial cycle starts when the public perceives a dramatic increase in juvenile crime and that the juvenile justice system is providing too lenient dispositions and too little public protection. The system responds with harsher treatment of juvenile delinquents and a reduction in informal resolution processes. Then, according to a 2000 article by Sacha M. Coupet, "following a period of extreme harshness and largely punitive policies, when the level of juvenile crime remains exceptionally high, 'justice officials . . . are forced to choose [once again] between harshly punishing juvenile offenders and doing nothing at all'" (p. 1329). From 1990 to the early twenty-first century, the American public has viewed juvenile crimes as constantly escalating in number and severity. By the early twenty-first century, U.S. society was at that point in the cycle where retributive justice had substantially overtaken the nineteenth century reformers' notions of rehabilitation and individualized treatment of juvenile delinquents.

### The Reality of Juvenile Crime Statistics

There is a substantial disconnect between the public's perceptions of juvenile crime and the reality of juvenile crime statistics. Although juvenile crime is still a major social problem, contrary to the impres-

sion portrayed by the media regarding the explosion in youth crime, the juvenile crime rate began decreasing in 1995. In 1999 juveniles comprised only 17 percent of all arrests and 12 percent of all violent crime arrests. In 1999 the juvenile murder arrest rate fell 68 percent, to the lowest level since the 1960s, and juvenile arrests for violent crime dropped 23 percent from 1995 to 1999.

Many have argued that the most significant factor in the public's misinformation is the distortion of juvenile crime by the news media. A comprehensive examination of crime in the news conducted by Lori Dorfman and Vincent Schiraldi in 2001 found that: (1) the press reported juvenile crime out of proportion to its actual occurrence; (2) violent crime, although representing only 22 to 24 percent of juvenile crime from 1988 to 1997, dominated the media's coverage of juvenile offenses; (3) the media presented crimes without an adequate contextual base for understanding why the crime occurred; (4) press coverage unduly connected race and crime; and (5) juveniles were rarely covered by the news other than to report on their violent criminal acts.

Significant changes in the demographics of juvenile crime occurred between 1988 and 1998. Not only did the number of juvenile delinquency court cases increase, but also many changes in the age, sex, and race of delinquents altered the landscape of juvenile offenders. In 1988 the juvenile courts processed 1.2 million cases; by 1997 the total had increased to 1.8 million. According to a November 2001 fact sheet issued by the U.S. Department of Justice's Office of Juvenile Justice and Delinquency Prevention, a study of California delinquency cases found that "a small percentage (8%) of the juveniles were arrested repeatedly . . . and were responsible for 55 percent of repeat cases." The most important types of cases and trends during the period from 1988 to 1998 included violent juvenile crime, juvenile property offenses, juvenile drug offenses, and juvenile gangs.

**Violent juvenile crime.** In 1988, 24 percent of juvenile court cases involved crimes of violence against a person. Of those violent crimes, 20 percent were committed by females and 62 percent by children under age sixteen. White children represented 56 percent of violent delinquents while African-American children represented 40 percent. In 1998, by contrast, 23 percent of the juvenile court caseload involved crimes of violence, females committed 28 percent of the violent crimes, children under age six-

teen accounted for 64 percent, and 62 percent were committed by white youth and 35 percent by African-American children. Thus the juvenile population of violent offenders in 1998 was comprised of more females, more white children, and younger juveniles than in 1988. The percentage of violent crimes among children, however, remained relatively constant. The dispositions for juvenile offenses also changed during that same period. In 1989, 33 percent of juveniles found in court to have committed a violent crime were placed outside the home, compared to 27 percent in 1998. Also, in 1989, 54 percent were placed on probation, compared to 58 percent in 1998. During the period between 1988 and 1997, the number of adjudicated cases resulting in out-of-home placement increased more for African-American children (60%) than for white children (52%).

**Juvenile property offenses.** From 1988 through 1994 the juvenile arrest rate for property offenses was relatively stable. Between 1994 and 1999, however, the juvenile arrest rate for property offenses dropped 30 percent to the lowest level since the 1960s. The disposition of sustained property offense petitions in 1988 resulted in out-of-home placement in 28 percent of juvenile cases; by 1997, however, the rate had dropped to 26 percent. In addition, in 1988 property offenses comprised 52 percent of all juvenile court out-of-home dispositions, but that number dropped to 42 percent in 1997, reflecting a softening juvenile court attitude toward property offenses in relation to other juvenile crimes.

**Juvenile drug offenses.** Several dramatic shifts in the numbers and demographics of juveniles arrested for drug offenses occurred between 1988 and 1999. Drug abuse violation arrests were relatively constant from the 1980s until 1993. From 1993 and 1998, however, the number of drug offenses more than doubled. In 1994 drug offenses comprised 8 percent of all delinquency cases, and in 1998 the rate increased to 11 percent. Although the number of formally processed juvenile drug cases increased by more than 50 percent from 1994 until 1998, the percentage of out-of-home placements for drug offenses decreased from 36 percent in 1989 to 23 percent in 1998. This decline has been credited to an inadequate number of out-of-home placements and/or to a shift in juvenile court attitude regarding the seriousness of drug offenses in relation to violent person offenses. The age of juveniles arrested for drug cases remained relatively constant. In 1989

children age fourteen and younger comprised 18 percent of arrested juveniles compared with 19 percent in 1998. There was a dramatic shift, however, in the race of arrested juveniles. In 1989 whites represented 58 percent of those arrested for drug offenses and African Americans comprised 40 percent. In 1998 whites represented 68 percent and African Americans only 29 percent of all juvenile drug cases. Finally, the percentage of drug arrests for girls increased from 14 percent in 1989 to 16 percent in 1998. The drug arrest rate for both sexes was twice the average of the rate in the 1980s.

**Juvenile gangs.** Juvenile gang crime was a significant social issue during the last quarter of the twentieth century. The number of cities reporting youth gang activity rose from 300 in the 1970s to nearly 2,500 in 1998. In the 1970s only nineteen states reported gang problems, but in the 1990s all fifty states reported gang crimes. In 1999 there were approximately 26,000 gangs and 840,500 gang members in the United States. Compared to the figures for 1998, these numbers represented a decrease in gangs of 9 percent and an increase in gang members of 8 percent. Also, the average age of gang members increased; gang members aged fifteen to seventeen decreased 8 percent from 1996 to 1999. In addition, the number of girl youth gang members increased greatly from the 1970s through the 1990s. It is estimated that in the 1970s girls comprised only 10 percent of juvenile gangs; in the 1990s, however, girls made up between 8 and 38 percent of many gangs. Female youth gang members are arrested most frequently for drug offenses, and arrests for prostitution increased from 0.8 percent in 1993 to 9.8 percent in 1996. Youth gangs continue to be a major problem that the juvenile justice system has not yet begun to control.

### **An Increasing Emphasis on Juvenile Crime Prevention**

Even though the 1990s and early twenty-first century have ushered in a new era of retributive juvenile justice, federal government policies still emphasize a juvenile crime prevention model formally established in 1974 when the president and the U.S. Congress created the Office of Juvenile Justice and Delinquency Prevention (OJJDP) as part of the U.S. Department of Justice's Office of Justice Programs. The goal of the OJJDP, according to its 2000 annual report, is "to provide national leadership in addressing the issues of preventing and controlling delinquency

and improving the juvenile justice system.” The OJJDP operates a host of juvenile delinquency crime prevention programs and research in the following areas: gangs, girls, mental health, safe schools, state coordination, drug education, juvenile mentoring, national youth network, violence in the media, truancy reduction, very young offenders, child development, gun violence, children’s advocacy centers, and Internet crimes.

A unique and very controversial juvenile crime prevention policy of the latter part of the 1990s and the early twenty-first century is a partnership between police departments and public schools to identify, treat, and punish juvenile delinquents. This partnership is the result of four different intersecting juvenile problems. The first is the nexus between truancy and juvenile delinquency, drug abuse, gang activity, and adult crime and poverty. According to a 2001 bulletin by Myriam L. Baker, Jane Nady Simon, and M. Elaine Nugent, “adults who were frequently truant as teenagers are much more likely than those who were not to have poorer health and mental health, lower paying jobs, an increased chance of living in poverty, more reliance on welfare support, children who exhibit problem behaviors, and an increased likelihood of incarceration” (p. 1). Research conducted in 2000 determined that 60 percent of juvenile crime occurs between 8 A.M. and 3 P.M. when children should be in school. The most common truancy delinquency prevention programs include a sharing of data between schools and police and prosecutors, holding parents criminally responsible for their children’s truancy, assessing parents fines, and requiring parents to attend parent training classes.

A second partnership between public schools and law enforcement was spurred by a few high-profile multiple-victim homicides involving teenagers that occurred between 1993 and 1998. Because of the media attention on these very few high-profile school violence cases, parents pressured school districts to develop serious school violence prevention programs. In reality, according to a 2001 article by Margaret Small and Kellie Dressler Tetrick, “school-associated violent deaths are rare . . . less than 1 percent of the more than 1,350 children who were murdered in the first half of the 1998–99 school year . . . were killed at school” (p. 4). Public schools responded, in part, by using law enforcement as references in designing preventative and emergency re-

sponse programs and in monitoring and investigating suspicious student activity.

Third, after empirical studies demonstrated that the adult criminal conviction rate of children who bullied other children in school was almost twice as high as the rate for those children who did not engage in bullying, public schools began focusing on less-violent aggressive student behavior. A 2000 study by the National Institute of Child Health and Human Development found that 1.6 million children in grades six through ten were bullied at least once a week. Many schools have instituted “zero tolerance” programs that expel students after one sustained finding of bullying. These children are also often referred to law enforcement for consideration of juvenile justice intervention.

Finally, because research has demonstrated a correlation between abused children and high rates of juvenile delinquency, schools and law enforcement have partnered in establishing programs that identify, treat, and prosecute child abusers. All states mandate that teachers report suspected child abuse to either law enforcement or to children’s services workers.

### **Modern Juvenile Law Disposition Alternatives**

Because rehabilitation is no longer the central goal of the juvenile justice system, new forms of placement have developed to assure community safety and juvenile responsibility to victims. Traditional juvenile delinquency dispositions involved individualized indeterminate terms based upon the needs of the child for rehabilitation. During the 1990s the model shifted to a determinate sentence length based not on the child’s needs but rather on the seriousness and frequency of criminal law violations, with a goal of deterrence and retribution. Further, the trend in the early twenty-first century is to shift sentencing discretion in cases of violent crime from the juvenile court judge to the legislature. In 1997 Congress enacted the Innovative Local Law Enforcement and Community Policing Program, requiring those states that accept federal funds to create accountability-based dispositions that balance the interests of the community, victim, and offender. Therefore, juveniles whose delinquency hearings are litigated in juvenile court usually face one of the following disposition alternatives. If the child committed a minor offense and does not have a prior delinquency record, it is likely that the juvenile trial judge can grant a form of probation termed a “home of parent cus-

tody” order in which the child agrees to abide by relevant probation conditions; a violation of a probation condition, however, can lead to institutionalization. In 1998, 665,500 children were under probation supervision, an increase of 56 percent since 1989. Some juveniles are released home upon the condition that they wear electronic monitoring equipment, which limits the child’s freedom without the necessity of formal incarceration. If the crime charged is minor, but the juvenile has a prior delinquency record, the judge usually has discretion to order the child detained out of home in an institutional setting until the child reaches the age of majority in that jurisdiction. If the minor commits a serious offense, a modern trend is developing for the legislature to create a mandatory minimum sentence that may also involve a “blended sentence” in which the juvenile upon reaching the age of majority is transferred to an adult institution to serve the remainder of the mandatory minimum sentence. Prior to the blended sentence movement, juvenile courts did not have discretion to hold children accountable beyond the age of majority.

Because many juveniles are being transferred to adult courts, the adult correctional systems have responded with a new variety of sentencing schemes. The total number of juvenile delinquency cases transferred to adult criminal court peaked in 1994, and the number of children tried in adult courts increased 33 percent in 1998. In 2000 approximately 14,500 children were incarcerated in adult facilities; 9,100 were housed in adult jails and 5,400 in adult prisons. There was a 366 percent increase in the number of juveniles confined in adult jails from 1983 to 1998. Juveniles are more likely to be violently victimized and five times as likely to be sexually assaulted if they are placed in an adult rather than a juvenile facility. There are fewer sentencing alternatives in adult court than in juvenile court. In “straight adult incarceration” jurisdictions, juveniles are sentenced like adults with little or no differentiation in the terms of the confinement. In “graduated incarceration” models, juveniles receive adult sentences, but they are housed in juvenile or separate wings in an adult institution and are transferred to the adult wing upon reaching a defined age. In “segregated incarceration” models, juveniles are sentenced as adults but are housed in special young offender units that have many of the rehabilitative services available to delinquents in juvenile correctional facilities.

In order to reduce cost and recidivism, some states are experimenting with community-based programs in which the child’s family can participate in necessary therapy to cure or control the conditions that led to the child’s delinquency. Another innovation involves community-based aftercare programs that provide juveniles released from secure confinement facilities intensive supervision upon release. Ironically, these aftercare programs are based upon the rehabilitation model rejected by the contemporary retributive juvenile delinquency model. In exchange for intensive monitoring by a probation officer, mandatory drug testing, and the imposition of a curfew, the juvenile receives individualized analyses of the conditions that initially led to delinquency, including assessments of the juvenile’s relationships with family, peers, and the community. The goal is to reduce recidivism by mixing intensive services and surveillance. Whether this new juvenile model of “punishment first/rehabilitation second” will be effective is yet to be determined.

*See also:* JUVENILE JUSTICE SYSTEM, *subentries on* HISTORY OF JUVENILE COURTS, JUVENILE CRIME AND VIOLENCE; VIOLENCE, CHILDREN’S EXPOSURE TO.

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WILLIAM WESLEY PATTON

## JUVENILE CRIME AND VIOLENCE

Juvenile crime is a perennial public concern, although public perceptions of juvenile crime are often shaped by misconceptions and unwarranted fears rather than by objective facts. For example, in 1996 the cover of a national magazine (*Newsweek*, March 10) made the alarming claim that “Juvenile violence is soaring—and it’s going to get worse.” In contrast, a 1999 federal report by Howard Snyder and Melissa Sickmund cited national arrest statistics and other data showing that violent juvenile crime peaked in 1993 and began a steady decline. From 1995 to 1999, juvenile arrests for violent crime declined 23 percent, and homicides declined an astonishing 56 percent, despite an 8 percent increase in the population of juveniles. The murder rate for juveniles in 1999 was the lowest since 1966. Yet in 1999, public anxiety over a series of school shootings skyrocketed when two teenage boys murdered twelve classmates and a teacher at Columbine High School in Colorado.

The Surgeon General’s Report on Youth Violence, released by the U.S. Department of Health and Human Services in 2000, identified numerous public myths about youth violence. Among these misconceptions were: (1) the belief that the United States was threatened by a new, violent breed of young super-predators; (2) nothing works in treating or preventing juvenile violence; and (3) juvenile crime could be curbed by prosecuting juvenile offenders as adults. In fact, there was no evidence that young offenders in 2000 were more vicious or callous than previous generations, only that the availability of cheaper, more lethal firearms resulted in more homicides. Further, controlled scientific studies found that well-run prevention and intervention programs do reduce violent behavior and criminal recidivism among the young. And finally, studies found no crime reduction associated with transferring juveniles to adult court; in contrast, youths tried as adults were more likely to be physically and sexually victimized in adult institutions, and were more likely to commit additional offenses upon release to the community.

## Scope and Prevalence of Juvenile Crime

Juvenile crime traditionally refers to criminal acts committed by persons under age eighteen. If one includes status offenses, such as consuming alcohol, smoking, being truant from school, running away, and violating curfews, that are crimes only because the person committing them is underage, then the majority of youth in the United States might at some point be classified as delinquent offenders! Nonstatus offenses are much less common. According to Snyder and Sickmund’s 1999 report only about 5 percent of juveniles are ever arrested, and more than 90 percent of the arrests are for nonviolent crimes. Of course, arrest statistics undercount the true numbers of offenses, since an unknown number of offenses committed by juveniles go undetected. Self-report studies generally reveal higher prevalence rates; for example, among high school seniors, the annual prevalence of committing an assault with injury to the victim was 10 to 15 percent and the prevalence of robbery with a weapon was 5 percent.

Juveniles account for only about 16 percent of serious violent crimes, but nearly one-third (32%) of property crimes, according to FBI arrest statistics from the Uniform Crime Reports. Juveniles are involved in the majority (54%) of arson arrests and disproportionate numbers of vandalism (42%), motor vehicle theft (35%), and burglary (33%) arrests. Of the 2.5 million juvenile arrests in 1999, the most frequent charges were larceny-theft, simple assaults, drug abuse violations, curfew and loitering, disorderly conduct, and liquor law violations. Arrest statistics are difficult to interpret, because they do not correspond directly with the number of youth arrested or the number of crimes committed; several youths might be arrested for the same crime, a single youth might be arrested multiple times in the same year, or a youth might be arrested once, but charged with multiple offenses. Nevertheless, comparisons of adult and juvenile offenders, again as summarized by Snyder and Sickmund, indicate that juveniles are generally not predisposed to crime, and although they commit a disproportionate number of minor crimes, they are much less likely than adults, especially young adults, to commit serious violent crimes.

## Crime in Schools

Highly publicized episodes of gun violence at schools raised national concern that schools were not safe environments. Homicides at school, though

tragic, are fortunately quite rare. In a 2001 report, the National School Safety Center concluded that less than one percent of all juvenile homicides occur in school, and that the number of homicide deaths in schools declined from forty-two in the 1993–1994 school year to eleven in 1999–2000.

Schools are not crime-free sanctuaries, however, and crime rates in schools correlate with the crime rate of the surrounding community. A 1998 study by the National Center for Education Statistics found that approximately 21 percent of high schools, 19 percent of middle schools, and 4 percent of elementary schools experienced at least one serious violent crime (primarily aggravated assaults) per year, including crimes committed by nonstudents. Nevertheless, most juvenile crime takes place in the hours immediately after school, when students are less likely to be supervised.

Property crimes are three times more prevalent than violent crimes at school (including travel to and from school). According to the National Center for Education Statistics's 1998 report on school crime and safety, approximately 12 percent of students reported thefts of their personal property in a six-month period, whereas only 4 percent reported violent crimes, defined as physical attacks or robbery with threat of violence. The annual rate of serious violent crimes (sexual assault, robbery, and aggravated assault) at school is less than half the rate away from school.

According to noted Norwegian researcher Dan Olweus, as well as reports by the U.S. National School Safety Center, bullying is increasingly recognized as a serious and pervasive problem in schools, although it is often overlooked or disregarded by parents and teachers. Common bullying behaviors, such as pushing and shoving, verbal harassment, and threats of violence, would be regarded as crimes if they took place in an adult workplace, but often go undetected or unpunished in schools. Studies indicate that most students have been bullied at some time and that bullying is most common in the middle school grades, where more than 10 percent of students may be victims of chronic bullying.

### Juvenile Offenders

There is no single profile or adequate characterization of the diverse group of youth who come to be identified as juvenile offenders. Most youths who commit crimes as juveniles desist in early adulthood,

and most who come to juvenile court never return on a new referral. However, a small group of juveniles is prone to continued offending. Marvin Wolfgang's classic 1972 study of a Philadelphia birth cohort of 10,000 boys found that about 6 percent of the boys were responsible for more than fifty percent of the crimes committed by the entire sample. Subsequent studies, summarized by Snyder and Sickmund in 1995, found that 5 to 16 percent of all referrals to juvenile court are youths with five or more arrests, and these youths account for 50 to 80 percent of all juvenile offenses.

Why do youth commit acts of violence and other crimes? Theories abound, but there is general agreement that there are multiple developmental pathways associated with different contributory factors. Youth whose onset of problem behavior begins before puberty commit more frequent and more violent crimes in adolescence, and are more likely to persist in violent offending in adulthood, than youth with later onset.

**Family factors.** Many factors increase the risk that a juvenile will engage in criminal or violent behavior, but no single factor is necessary or sufficient. For example, poverty and single parent family status are widely recognized risk factors, but most poor children raised by single parents in low-income homes do not become criminals. Global factors such as poverty and parent marital status are too broad to specify the precise problems in the child's family environment. A single mother working long hours for low wages may not be able to provide supervision for her children, she may be under too much stress to maintain a warm, supportive relationship with her children, and she may be inconsistent in disciplining them. In contrast, there are many examples of poor, single parents who nevertheless manage to provide excellent care for their children. Risk factors might be buffered by protective factors such as a mentoring relationship, religious convictions, special talents, or strong motivation to achieve.

More intensive studies reveal patterns of inconsistent or inappropriate parental discipline, as well as poor monitoring and supervision, in families of children who develop conduct problems. In one common pattern, parents fail to respond to their child's misbehavior, or when they do respond, it is often with excessive force or harsh emotion. Such parents tend to threaten, hit, grab, or yell to coerce children into compliance. Not surprisingly, their children then respond similarly (e.g. yelling, stomp-

ing, or hitting) when parents try to limit their behavior. The parents intermittently overlook or acquiesce to their children's misbehavior, thereby reinforcing it and rendering it even more resistive to discipline. Other important family risk factors include child abuse, exposure to domestic violence, and parental substance abuse.

**Social factors.** Parental influences diminish markedly in adolescence and are often superceded by peer influences. Youths who associate with delinquent peers adopt more antisocial attitudes and engage in more delinquent behavior. Youths who are unpopular with conventional peers are especially likely to seek friendships with less conventional, more antisocial youths.

As youths spend increasing amounts of time unsupervised outside the home, they become more vulnerable to the negative influence of communities characterized by a high level of social disorganization—high residential turnover, high unemployment and few job opportunities, frequent crime, drug trafficking, gang activities, and a relative lack of recreational opportunities. Youths who feel endangered in the community are more likely to carry weapons and seek protection from gang affiliation, which ironically increases the risk of involvement in violent or criminal activities. Access to handguns is particularly problematic and was linked to a three-fold increase in juvenile homicide arrests from 1984 to 1993.

Adolescents are highly influenced by the entertainment industry. As noted by the 2001 Surgeon General's Report and many other authorities, more than forty years of research demonstrates that even brief exposure to film violence causes short-term increases in aggressive behavior, including physical aggression, in youth. Longitudinal studies show small but consistent correlations between childhood television viewing and young adult aggression, even after controlling for other factors such as socioeconomic status and parental discipline. The impact of violent music and video games has not been extensively studied, but early studies show similar effects. Advocates for the entertainment industry point out that many other factors influence the development of aggressive behavior, and that the link to serious violent crime is less clear.

**Individual factors.** Social toxins like poverty, neighborhood crime, and entertainment violence do not have the same impact on all children; individual dif-

ferences in personality, temperament, and aptitude play an important role in ways not fully understood. Children with attention problems, impulsivity, and low verbal intelligence are more likely to engage in violent and criminal behavior in adolescence and adulthood. A 2001 study by Linda Teplin found that as many as two-thirds of youth involved in the juvenile justice system have one or more diagnosable mental or substance abuse disorders.

Violence and crime can be regarded fundamentally as learned behaviors, and youth involvement in such behaviors may reflect a multitude of different learning experiences. Nevertheless, children can learn alternatives to crime and violence as well. Controlled outcome studies, described in the Surgeon General's report and by Rolf Loeber and David Farrington, demonstrate that many prevention efforts—preschool family services, social competence training and structured recreational programs for at-risk children, and multisystemic family therapy or multidimensional treatment foster care for juvenile offenders—are successful and cost-effective.

*See also:* AGGRESSIVE BEHAVIOR; JUVENILE JUSTICE SYSTEM, *subentries on* CONTEMPORARY JUVENILE JUSTICE SYSTEM AND JUVENILE DETENTION ALTERNATIVES, HISTORY OF JUVENILE COURTS; VIOLENCE, CHILDREN'S EXPOSURE TO.

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# K

## KANDEL, ISAAC L. (1881–1965)

A pioneer in the field of comparative education, Isaac Leon Kandel conducted extensive studies of educational systems around the world. Kandel was born in Botosani, Romania, to English parents. He attended the Manchester Grammar School and earned his B.A. in classics in 1902 and M.A. in education in 1906 at the University of Manchester. From 1906 to 1908 he taught classics at the Royal Academical Institute in Belfast, Ireland. After summer study with William Rein at the University of Jena, Kandel enrolled at Teachers College, Columbia University, completing his Ph.D. in 1910. Kandel served there as instructor and then as associate professor until 1923, when he became professor of education and an associate in the Teachers College International Institute until 1946. He then taught at the University of Manchester from 1947 to 1949. From 1924 until 1944, he edited the Teachers College International Institute's Educational Yearbook, the journal *School and Society* from 1946 to 1953, and *Universities Quarterly* from 1947 to 1949.

Over his long and prolific career, Kandel received many honors, including honorary doctorates from the University of North Carolina and the University of Melbourne, and the title of Chevalier of the Legion of Honor from France. Kandel's principal scholarly contributions were in the areas of the history of education, educational theory, and, notably, comparative and international education.

### **History of Education**

Kandel's *History of Secondary Education* (1930) represents his major contribution to the history of education. For Kandel, history should inform efforts to

resolve contemporary problems. As he put it, the historical study of education should be based upon

the sincere conviction that progress in any social field, and especially in education, is possible only with a clear understanding of the factors that have brought about the present situation, and with an intelligent appreciation of the forces that must be analyzed in order to construct a new philosophy or a new body of principles to guide in its further reconstruction. (p. x)

Accordingly, as he traced the history of secondary education, he devoted his greatest attention to developments that had the most direct bearing on the problems of his day.

Kandel identified liberal education as the "central tradition" in secondary education in Europe and the United States. He traced its foundations in ancient Rome and Greece and its development during the Middle Ages, Renaissance, and Enlightenment periods, and detailed the emergence of systems of secondary education in France, Germany, England, and the United States, emphasizing the latter two. He also devoted special attention to the education of girls. Kandel examined the impact of contemporary developments, including knowledge expansion, new social and economic circumstances wrought by the industrial revolution, and the widening acceptance of democratic ideals, on the tradition of liberal education in the secondary school.

Specifically, Kandel discerned among recent trends in secondary education in industrial democracies a recognition of the role of education in promoting national welfare and economic growth and an increasing respect for achieving the full develop-

ment of the individual regardless of social origins. Kandel identified the potential conflict between provision of educational opportunity to all individuals and selection for social and economic roles as a central problem of secondary education.

### Comparative and International Education

Kandel's approach to comparative education comprised more than sheer description of administrative, curricular, and instructional practices in particular countries. Such descriptions and the compilation of data pertaining, for example, to national expenditures, per pupil costs, enrollment figures, and dropout rates were necessary but insufficient tasks for understanding educational systems. He presciently warned of the limitations of comparative use of statistical measures of student achievement to determine educational purposes and standards of student performance. Kandel maintained that the sociopolitical milieu exerted a greater impact on school practice than educational theories. Kandel conceived comparative education as the study of the ways particular countries addressed educational problems in the context of their respective social, political, and cultural traditions. Comparative studies of education were therefore premised upon an understanding of the social and economic life of the culture under study.

In his most important work in the field, *Comparative Education* (1933), Kandel stated, "The chief value of a comparative approach to [educational] problems lies in an analysis of the causes which have produced them, in a comparison of the differences between the various systems and the reasons underlying them, and, finally, a study of the solutions attempted" (p. xix). Kandel viewed each national education system as a "laboratory" in which solutions to educational problems were tested and implemented. Kandel hoped that comparative education, by distilling common principles from variegated national contexts, would contribute to the development of a philosophy of education, that is, an educational theory, based not merely on metaphysical and ethical ruminations, but on practical, empirical grounds as well. Additionally, Kandel sought through comparative study of national education systems to promote international understandings and sympathies.

### Educational Theory

Kandel's work in the area of educational theory largely took the form of a critique of Progressive ed-

ucation. He wrote his most significant work in this area, *The Cult of Uncertainty* (1943), in a tone and temper marked by a vehemence uncharacteristic of his scholarship on educational history and comparative education. In this work Kandel detected "the American traditions of rootlessness, of practicality, and of desire for new sensations" manifest both in the philosophy of pragmatism and in Progressive education (p. 90). Kandel rejected the tendency of child-centered Progressives to advocate a "nothing-fixed-in-advance" approach to curriculum in which education began and ended with the individual student's present interests and inclinations. Kandel advocated inculcating "common understanding, common knowledge, common ideals, and common values" through liberal education (p. 126). Although Kandel advanced an incisive critique of the excesses of child-centered forms of Progressivism, his overgeneralization of his criticisms to all Progressive education (exclusive only of John Dewey and Boyd Bode, both of whom he evoked to attack other Progressives), undermined his argument.

An avowed essentialist, Kandel viewed subject matter not as potential evidence for the resolution of social problems, but as a stable source of values to guide social behavior. He criticized science as overly relativistic and touted the primacy of the liberal arts curriculum. Scholars have argued that Kandel's commitment to traditional liberal arts education contradicted his recognition of the need for reform engendered by changing social, economic, and political values and conditions. Indeed, Kandel's principal, if not sole, concession to Progressive education involved a recognition of its value for improving "traditional methods of instruction," although he gave principal credit for that to psychology (p. 94). Although he viewed essentialism as occupying a sort of educational middle ground between traditionalism and Progressivism, he held little hope for a synthesis of the two approaches.

*See also:* EDUCATION REFORM; INTERNATIONAL EDUCATION; SECONDARY EDUCATION.

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WILLIAM G. WRAGA

### KEPPEL, FRANCIS C. (1916–1990)

Educational leader and administrator, Francis C. Keppel was born in New York City. He was raised in an atmosphere of liberal reform; his father, Frederick P. Keppel, served as a dean at Columbia University and in 1923 was appointed president of the Carnegie Corporation of New York. Among the elder Keppel's many interests was the role of education in achieving social equality, and one of his most important decisions was to sponsor Gunnar Myrdal's groundbreaking study of racial inequality, leading to Myrdal's publication of *An American Dilemma* in 1944. Francis Keppel was educated at Groton before entering Harvard in 1934, and apparently inherited many of his father's liberal proclivities, helping to cultivate a vision of equality that came to influence the course of American education.

After earning a B.A. in English literature in 1938 and being elected to Phi Beta Kappa, Keppel decided to pursue an abiding interest in sculpture, spending a year at the American Academy in Rome. In this regard Keppel exhibited a sensibility he may have acquired from his grandfather, an art dealer. Finding that his talents did not match his aspirations, however, Keppel returned to Harvard to take a position as assistant dean of admissions, marking the beginning of a long association with that institution. After several years of service as an officer in the U.S. Army's Information and Education Division during World War II, Keppel returned once again to Harvard to

become assistant to the provost. It was in this capacity, through his efforts to locate candidates to lead the university's Graduate School of Education, that he caught the eye of Harvard President James Bryant Conant. Keppel so impressed Conant, who was unsettled at the lack of suitable candidates, that he appointed him to the job. Thus, at age thirty-two Keppel became the youngest dean at Harvard.

Conant's choice turned out to be judicious. Keppel was an energetic, imaginative, and effective leader for the Harvard Graduate School of Education, helping to transform it from a small concern focused on training administrators into a dynamic center of innovation and reform. During his fourteen years as dean, the school more than quadrupled in size, applications increased tenfold, and the endowment swelled. The school grew in influence as well. The thrust of Keppel's efforts at Harvard was in keeping with his liberal disposition: improving the quality of teaching, testing reform ideas, and suggesting innovations for practice. He expanded the master of arts in teaching program, an avenue for talented college graduates interested in becoming teachers. He also promoted experiments in team teaching, programmed learning, curricular reform, and educational television. Although most of these ideas had little long-term impact on educational practice, they reflected a spirit of innovation and originality that set Harvard apart from other education schools. At the same time, the school became an important center of education scholarship, and Keppel helped to forge ties to other departments in the social sciences and humanities at Harvard. He was a widely respected leader nationally as well, serving on a number of important committees, task forces and councils during his tenure as a dean.

In 1962 U.S. President John F. Kennedy appointed Keppel to the post of U.S. commissioner of education, the start of a four-year term in federal service. It was in this capacity that Keppel's liberal predilections and his abilities as a leader exerted their greatest influence. He was an aggressive proponent of civil rights, and threatened to withhold federal funds from racially segregated school districts under provisions for equal educational opportunity in the Civil Rights Act of 1964. It was this posture of assertive enforcement that many observers believe led southern schools to begin complying with desegregation directives in the 1960s.

In addition to this, Keppel generally is credited with being a major force behind the drafting and

passage of the Elementary and Secondary Education Act (ESEA) of 1965, which substantially increased the federal role in public education. Working closely with President Lyndon Johnson and legislative leaders, Keppel helped to craft provisions leading to the establishment of Title I of the act, providing funds for schools serving poor children. He was a strong believer in providing educational opportunities to all children, declaring that education “must make good on the concept that no child within our society is either unteachable or unreachable.” When the cabinet-level office of Health, Education and Welfare was established in 1965, Keppel became assistant secretary for education.

Keppel also played a leading role in the establishment of the National Assessment of Educational Progress (NAEP), which was intended to be a means of comparing the performance of schools in different parts of the country and helping to raise academic standards. He helped to secure the passage of groundbreaking federal legislation in the areas of higher education, workforce training, and library services. In each of these instances, the federal role in general education was expanded significantly.

Keppel’s reform propensities eventually landed him in trouble, and he departed Washington under a cloud of controversy. In 1965 he threatened to withhold some \$32 million in funds from the Chicago Public Schools in response to charges that the system was illegally segregated by race, a decision based largely on an investigation conducted by the U.S. Civil Rights Commission. This was a volatile issue in Chicago, where local leaders were under intense public criticism for inequities between schools attended by black and white students. Exercising his considerable political clout, Chicago Mayor Richard J. Daley made a decisive phone call to the White House that eventually resulted in a number of changes in the administration of federal funds. As a consequence, Chicago’s schools received their federal monies, and shortly thereafter Keppel left government service. Ultimately, responsibility for supervising withholding actions was shifted from the Office of Education to the Justice Department.

After leaving Washington, Keppel became chief executive officer of the General Learning Corporation, a publishing and broadcasting venture. In 1974 he became director of the Aspen Institute for Humanistic Studies for a Changing Society for several years before returning to Harvard in 1977 as a senior lecturer in the Graduate School of Education. He

also served on a number of boards in these years, including those of Harvard, the City University of New York, the International Development Research Centre in Ottawa, and Lincoln Center for the Performing Arts, as well as education reform commissions in New York and elsewhere. During the 1980s he continued to provide commentary on the state of American education from his post at Harvard, giving a final interview in tandem with his longtime colleague Harold Howe just before his death in 1990.

Equipped only with a B.A. in English literature, Francis Keppel enjoyed a career as one of the nation’s leading educational figures in the twentieth century. He helped to establish a prominent graduate school of education, and contributed directly to one of the greatest eras of educational expansion and reform in American history. An energetic proponent of expanding the federal role in education, he lived to see these ideas fall out favor toward the end of his life. Even this, however, cannot diminish the magnitude of his accomplishments, and the considerable imprint he has left on the schools of the early twenty-first century.

*See also:* ASSESSMENT, *subentry on* NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS; FEDERAL EDUCATIONAL ACTIVITIES, *subentry on* HISTORY.

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JOHN L. RURY

## KERSCHENSTEINER, GEORG (1854–1932)

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A dominating figure in the German Progressive education movement, Georg Kerschensteiner gained an international reputation as promoter of activity schools, civic instruction, and vocational education.

Born into an impoverished merchant family, Kerschensteiner taught at elementary schools (*Volksschule*) before he attended gymnasium and university, passed the state examination for secondary school teachers (1881), and earned the Ph.D. degree at the University of Munich (1883). In 1895, after twelve years of teaching at a gymnasium, he was elected school superintendent of Munich, a position he held until his retirement in 1919. In this capacity, he devoted his energies to a reorganization of elementary and vocational education, implementing in particular two innovations: the "activity school" (*Arbeitsschule*) and the "continuation school" (*Fortbildungsschule*). To the activity school, Kerschensteiner introduced workshops, kitchens, laboratories, and school gardens for the upper grades of the elementary school, and developed a kind of project method, with the intent to increase and elevate the students' learning motivation, their problem-solving capacities, their self-esteem, and their moral character. Kerschensteiner's continuation school was a mandatory part-time school for all boys and girls between the ages of fourteen and seventeen who had finished the compulsory eight-year elementary school and were working. As apprentices and young laborers they received eight to ten hours of instruction weekly; in addition to practical training they attended classes in religion, composition, mathematics, and civics—subjects that were taught in close connection with their specific trades.

In this way Kerschensteiner tried to foster their liberal education and further their social advancement; he stressed, however, that the main aim of education had to be citizenship (*staatsbürgerliche Erziehung*). The activity school and the continuation school were to make useful and purposeful citizens: first, by guiding the student to his proper life work;

second, by planting the idea that each vocation had its place in serving society; and third, by teaching the student that through a vocation society grew to a more perfect community. Kerschensteiner appealed to the students' practical bent by building the learning process upon their active participation in work projects and extracurricular activities chosen in accordance with their own interests. Participation and project work were to convert the school from a place of individual and intellectual singularity into a place of practical and socially serviceable plurality.

His work brought him high recognition, making Munich the "pedagogical Mecca" for educators from all over the world. He received invitations to lecture in Europe, Russia, and America; his books were even translated into Turkish, Chinese, and Japanese. An admirer of John Dewey and his foremost interpreter in Germany, Kerschensteiner toured the United States in 1910 on behalf of the National Society for the Promotion of Industrial Education. By this he hastened the most vigorous debate of the Progressive era with Dewey, David Snedden, Charles Prosser, Charles McCarthy as protagonists, resulting in the Munich system of vocational education (e.g. dual control and continuation schools) becoming in part the model for Wisconsin's Cooley Bill of 1911 and the Federal Smith-Hughes Act of 1917.

In England, Switzerland, and Japan his concept of compulsory continuing education had a similar impact on school reform and legislation. From 1912 to 1918 Kerschensteiner was, on the liberal ticket, member of the German Parliament (Reichstag) in Berlin. After his retirement, from 1918 to 1930, he served as professor of education at the University of Munich, publishing numerous books and articles, among them *Die Seele des Erziehers und das Problem der Lehrerbildung* (1921; The soul of the educator and the problem of teacher education), *Theorie der Bildung* (1926; Theory of culture), and *Theorie der Bildungsorganisation*, (1933; Theory of the educational system).

Kerschensteiner's philosophy of education was influenced by contemporary Neoidealists and opposed to the classical ideal of culture as conceived by Wilhelm von Humboldt. Whereas Humboldt (and Dewey for that matter) claimed that general education had to precede specific education, Kerschensteiner maintained that vocational, not general, education was to be the focal center of teaching and the "golden gate to culture and humanity." Only the individual, he claimed, who finds himself through

his work can, in the course of his development, become a truly cultivated person. Having worked his way up from humble beginnings, Kerschensteiner based all his educational innovations on a democratic impetus that was designed to overcome the rigid caste structure of German society, break up its inflexible school system, and increase the occupational opportunities for talented youth from the lower classes.

Apart from *Die Entwicklung der zeichnerischen Begabung* (1905; The development of talent for drawing) and *Wesen und Wert des naturwissenschaftlichen Unterrichts* (1914; Nature and value of science instruction), his most important books and articles published before World War I are available in English: *Education for Citizenship* (1911; *Die staatsbürgerliche Erziehung der deutschen Jugend* [1901]); *Three Lectures on Vocational Education* (1911); *A Comparison of Public Education in Germany and in the United States* (1913); *The Idea of an Industrial School* (1913; *Begriff der Arbeitsschule* [1912]); *The Schools and the Nation* (1914; *Grundfragen der Schulorganisation* [1907]).

*See also:* PROGRESSIVE EDUCATION; VOCATIONAL AND TECHNICAL EDUCATION.

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MICHAEL KNOLL

## KILPATRICK, WILLIAM H. (1871–1965)

Progressive educational philosopher and interpreter of John Dewey’s work, William Heard Kilpatrick was born in White Plains, Georgia, the son of a Baptist minister. Educated in village schools, he graduated from Mercer University in Macon, Georgia, moving on to do graduate work in mathematics at Johns Hopkins University. Kilpatrick served as a public school principal in Georgia before returning to his alma mater to teach and briefly serve as Mercer’s acting president. In 1906 he became embroiled in a series of controversies with the institution’s president that resulted in the board of trustees holding a “heresy” trial, after which Kilpatrick resigned. In 1908 he moved to New York City to begin his doctoral studies at Teachers College, Columbia University, where John Dewey, one of his major professors, called him the best student he ever had. His dissertation, which he defended in 1911, was a history of colonial Dutch schools in New York. Beginning his work at Teachers College as a part-time administrator in the Appointment Office and a history of education instructor, Kilpatrick eventually attained a full-time teaching appointment in the philosophy of education, which he held from 1912 to 1937.

Kilpatrick’s meteoric rise in educational circles began with the publication in 1918 of his article “The Project Method” in the *Teachers College Record*. In that article Kilpatrick provided a practical approach to implementing John Dewey’s educational philosophy. Drawing on Dewey’s earlier work, *Interest and Effort*, he attempted to demonstrate how students could engage in purposeful activity at the intellectual, physical, and affective levels. The inclusion of projects matched the child-centered approach advocated by Progressive educators at this time. The emphases that projects placed on individual learning, on reflective activity, and on the development of the whole child struck a resonant chord with teachers of the period. “The Project Method” was an immediate bestseller among educators and launched Kilpatrick’s national public career.

Other reasons for Kilpatrick's rising influence in American education were his effective teaching and charismatic public-speaking ability. Often teaching classes in excess of 600 students, he was able to use group work, discussion, and summary lectures to enrich the educational experience for his students. Kilpatrick was known for his cultured Georgian accent, his thick mane of white hair, and his perceptive blue eyes, all contained within a small, energetic frame. His popularity was such that the New York City press gave him the moniker "Columbia's Million Dollar Professor." Although his salary never approached that figure, the tuition his classes generated for the coffers of Columbia University did exceed that amount during his quarter century of service to Teachers College.

Kilpatrick's career at Teachers College came to a close amid controversy. Dean William Russell decided to enforce the institution's mandatory retirement age, and his action set off a national firestorm among educators when Kilpatrick was the ruling's first casualty. It became a cause célèbre at several national conferences during 1936, with John Dewey wading into the controversy to support Kilpatrick's continued appointment. Kilpatrick's final class in 1937 consisted of 622 students, bringing to 35,000 the number of students he had taught at Teachers College. Living almost another three decades, Kilpatrick was active in his retirement, leading the New York Urban League, the Progressive Education Association, and the John Dewey Society as its first president. He continued writing and speaking in addition to teaching summer school classes at such universities as Stanford, Northwestern, and Minnesota. His involvement in organizations often brought him into conflict with the major conservatives of the day, including Robert Hutchins, Father Charles Coughlin, and William Randolph Hearst. Kilpatrick's activities also placed him within the ranks of influential liberals in post-World War II America, including Eleanor Roosevelt, Ralph Bunche, and Bayard Rustin.

Kilpatrick's consistent Progressive message was that schools needed to be more child-centered, democratic, and socially oriented. After World War II, critics attacked many of the ideas and practices of Progressive education. They saw a curriculum that lacked rigor and students who were academically unprepared to compete with in a global economy. Specific criticism aimed at Kilpatrick emerged in the school reform literature of the 1980s and 1990s. Sup-

porters of a traditional curriculum, such as E.D. Hirsch and Diane Ravitch, viewed the Progressive philosophy that Kilpatrick had espoused as the principal cause for what, in their opinion, was a decline in the academic standards of American schools. Over the same period, though, numerous Progressive-oriented pedagogies were implemented in the nation's classrooms. These innovations included cooperative learning, team teaching, individualization of instruction, and the experiential elements of the middle school movement. These student-centered practices, along with Kilpatrick's unswerving commitment to democratic principals in the schools, form the bedrock of his legacy. In one of his final statements, John Dewey said that Kilpatrick's works "form a notable and virtually unique contribution to the development of a school society that is an organic component of a living, growing democracy" (Tenenbaum, p. x).

*See also:* CURRICULUM, SCHOOL; DEWEY, JOHN; INSTRUCTIONAL STRATEGIES; PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION.

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## KINDERGARTEN

*See:* EARLY CHILDHOOD EDUCATION.

### KNOWLEDGE BUILDING

In what is coming to be called the “knowledge age,” the health and wealth of societies depends increasingly on their capacity to innovate. People in general, not just a specialized elite, need to work creatively with knowledge. As Peter Drucker put it, “innovation must be part and parcel of the ordinary, the norm, if not routine.” This presents a formidable new challenge: how to develop citizens who not only possess up-to-date knowledge but are able to participate in the creation of new knowledge as a normal part of their work lives.

There are no proven methods of educating people to be producers of knowledge. Knowledge creators of the past have been too few and too exceptional in their talents to provide much basis for educational planning. In the absence of pedagogical theory, learning-by-doing and apprenticeship are the methods of choice; but this does not seem feasible if the “doing” in question is the making of original discoveries, inventions, and plans. Rather, one must think of a *developmental trajectory* leading from the natural inquisitiveness of the young child to the disciplined creativity of the mature knowledge producer. The challenge, then, will be to get students on to that trajectory. But what is the nature of this trajectory and of movement along it? There are three time-honored answers that provide partial solutions at best. Knowledge building provides a fourth answer.

One approach emphasizes foundational knowledge: First master what is already known. In practice this means that knowledge creation does not enter the picture until graduate school or adult work, by which time the vast majority of people are unprepared for the challenge.

A second approach focuses on subskills. Master component skills such as critical thinking, scientific method, and collaboration; later, assemble these into competent original research, design, and so forth. Again, the assembly—if it occurs at all—typically occurs only at advanced levels that are reached by only a few. Additionally, the core motivation—advancing the frontiers of knowledge—is missing, with the result that the component skills are pursued as ends

in themselves, lacking in authentic purpose. Subskill approaches remain popular (often under the current banner of “twenty-first century skills”) because they lend themselves to parsing the curriculum into specific objectives.

A third approach is associated with such labels as “learning communities,” “project-based learning,” and “guided discovery.” Knowledge is socially constructed, and best supported through collaborations designed so that participants share knowledge and tackle projects that incorporate features of adult teamwork, real-world content, and use of varied information sources. This is the most widely supported approach at present, especially with regard to the use of information technology. The main drawback is that it too easily declines toward what is discussed below as shallow constructivism.

Knowledge building provides an alternative that more directly addresses the need to educate people for a world in which knowledge creation and innovation are pervasive. Knowledge building may be defined as the production and continual improvement of ideas of value to a community, through means that increase the likelihood that what the community accomplishes will be greater than the sum of individual contributions and part of broader cultural efforts. Knowledge building, thus, goes on throughout a knowledge society and is not limited to education. As applied to education, however, the approach means engaging learners in the full process of knowledge creation from an early age. This is in contrast to the three approaches identified above, which focus on kinds of learning and activities that are expected to lead eventually to knowledge building rather than engagement directly in it.

The basic premise of the knowledge building approach is that, although achievements may differ, the *process* of knowledge building is essentially the same across the trajectory running from early childhood to the most advanced levels of theorizing, invention, and design, and across the spectrum of knowledge creating organizations, within and beyond school. If learners are engaged in process only suitable for a school, then they are not engaged in knowledge building.

#### **Learning and Knowledge Building: Important Distinctions**

An Internet search turned up 32,000 web pages that use the term “knowledge building.” A sampling of

these suggests that business people use the term to connote knowledge creation, whereas in education it tends to be used as a synonym for learning. This obscures an important distinction. Learning is an internal, unobservable process that results in changes of belief, attitude, or skill. Knowledge building, by contrast, results in the creation or modification of public knowledge—knowledge that lives “in the world” and is available to be worked on and used by other people. Of course creating public knowledge results in personal learning, but so does practically all human activity. Results to date suggest that the learning that accompanies knowledge building encompasses the foundational learning, subskills, and socio-cognitive dynamics pursued in other approaches, along with the additional benefit of movement along the trajectory to mature knowledge creation. Whether they are scientists working on an explanation of cell aging, engineers designing fuel-efficient vehicles, nurses planning improvements in patient care, or first-graders working on an explanation of leaves changing color in the fall, knowledge builders engage in similar processes with a similar goal. That goal is to advance the frontiers of knowledge as they perceive them. Of course, the frontiers as perceived by children will be different from those perceived by professionals, but professionals may also disagree among themselves about where the frontier is and what constitutes an advance. Dealing with such issues is part of the work of any knowledge building group, and so students must learn to deal with these issues as well. Identifying the frontier should be part of their research, not something preordained. The knowledge building trajectory involves taking increasing responsibility for these and other high-level, long-term aspects of knowledge work. This distinguishes knowledge building from collaborative learning activities. Keeping abreast of advancing knowledge is now recognized as essential for members of a knowledge society. Knowledge building goes beyond this to recognize the importance of creating new knowledge. The key distinction is between learning—the process through which the rapidly growing cultural capital of a society is distributed—and knowledge building—the deliberate effort to increase the cultural capital of society.

### Shallow versus Deep Constructivism

“Constructivism” is a term whose vagueness beclouds important distinctions. Knowledge building is clearly a constructive process, but most of what

goes on in the name of constructivism is not knowledge building. To clarify, it is helpful to distinguish between shallow and deep forms of constructivism. The shallowest forms engage students in tasks and activities in which ideas have no overt presence but are entirely implicit. Students describe the activities they are engaged in (e.g., planting seeds, measuring shadows) and show little awareness of the underlying principles these tasks are to convey. In the deepest forms of constructivism, people are advancing the frontiers of knowledge in their community. This purpose guides and structures their activity: Overt practices such as identifying problems of understanding, establishing and refining goals based on progress, gathering information, theorizing, designing experiments, answering questions and improving theories, building models, monitoring and evaluating progress, and reporting are all directed by the participants themselves toward knowledge building goals.

Most learner-centered, inquiry-based, learning community, and other approaches labeled “constructivist” are distributed somewhere between these extremes of shallow and deep constructivism. Participants in this middle ground are engaged to a greater or lesser extent with ideas and they have greater or lesser amounts of responsibility for achieving goals, but the over-arching responsibility and means for advancing the frontiers of knowledge are either absent or remain in the hands of the teacher or project designer. The idea of “guided discovery” suggests this middle ground. Middle-level constructivist approaches are best categorized as constructivist learning rather than knowledge building. Knowledge building calls for deep constructivism at all educational levels; it is the key to innovation.

### Knowledge Building Environments

In knowledge building, ideas are treated as real things, as objects of inquiry and improvement in their own right. Knowledge building environments enable ideas to get out into the world and onto a path of continual improvement. This means not only preserving them but making them available to the whole community in a form that allows them to be discussed, interconnected, revised, and superseded.

Threaded discourse, which is the predominant Internet technology for idea exchange, has limited value for this purpose. Typically, ideas are lodged within conversational threads, contributions are un-

modifiable, and there is no way of linking ideas in different threads or assimilating them into larger wholes. By contrast, CSILE/Knowledge Forum, a technology designed specifically to support knowledge building, has these required provisions and scaffolding supports for idea development, graphical means for viewing and reconstructing ideas from multiple perspectives, means of joining discourses across communities, and a variety of other functions that contribute to collaborative knowledge building. Contributions to a community knowledge base serve to create shared intellectual property, and give ideas a life beyond the transitory nature of conversation and its isolation from other discourses. Thus the environment supports sustained collaborative knowledge work, integral to the day-to-day workings of the community, as opposed to merely providing a discussion forum that serves as an add-on to regular work or study.

A shared workspace for knowledge building enables a self-organizing system of interactions among participants and their ideas and helps to eliminate the need for externally designed organizers of work. Advances within this communal space continually generate further advances, with problems reformulated at more complex levels that bring a wider range of knowledge into consideration. Thus there is a compounding effect, much like the compounding of capital through investment. Supporting such compounding and social responsibility for the collective work is the main challenge in the principled design of knowledge building environments.

In keeping with the belief that the process of knowledge building is fundamentally the same at beginning and advanced levels, and across sectors and cultures, Knowledge Forum is used from grade one to graduate school, and in a variety of knowledge-based organizations in countries around the world.

### **Social Aspects of Knowledge Building**

Educational approaches of all kinds are subject to what is called the “Matthew effect”: The rich get richer. The more you know the more you can learn. This is as close to a law of nature as learning research has come. It can be used to justify loading the elementary curriculum with large quantities of content. However, another potent principle is that knowledge needs to be of value to people in their current lives, not merely banked against future needs. This is part of the justification for activity and project-based methods where work is driven by students’ own

interests. In knowledge building this Deweyan principle is carried a step farther: Advances in understanding produce conceptual tools to achieve further advances in understanding. Thus there is a dynamism to knowledge building that can be a powerful motivator.

The Matthew effect foretells a widening gap between haves and have-nots in education, one that may already be manifesting itself in the widening income gap between the more and the less well-educated. No educational approach can be expected to solve the related equity problems, but knowledge building offers signal advantages. The knowledge building trajectory offers value all along its course, not just at its upper reaches. At all stages people are building authentic knowledge that is immediately useful to themselves and their community in making sense of their world. They are also developing skills and habits of mind conducive to lifelong learning. It is not assumed that everyone will come out equal in the end, but possibilities for continual advancement remain open for all.

From a social standpoint, the ability to connect discourses within and between communities opens new possibilities for barrier-crossing and mutual support. Successful knowledge-building communities establish socio-cognitive norms and values that all participants are aware of and work toward. These include contributing to collective knowledge advances, constructive and considerate criticism, and continual seeking of idea improvements. Grade one students, participants with low-literacy levels, and workers in knowledge-creating organizations can all adopt such norms, which then serve as a basis for cooperation across the developmental trajectory and among culturally diverse groups.

Knowledge building has been shown to yield advantages in literacy, in twenty-first century skills, in core content knowledge, in the ability to learn from text, and in other abilities. However, it is the fact that knowledge building involves students directly in creative and sustained work with ideas that makes it especially promising as the foundation for education in the knowledge age.

*See also:* CURRICULUM, SCHOOL, *subentry on* CORE KNOWLEDGE CURRICULUM; LEARNING THEORY, *subentry on* CONSTRUCTIVIST APPROACH; TEACHING, *subentry on* KNOWLEDGE BASES OF.

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## KNOWLEDGE MANAGEMENT

Due to the wealth of information, the knowledge explosion, and the rapid development of information and communication technologies at the start of the twenty-first century, it is essential to handle complex information and knowledge intelligently and responsibly. Therefore, it is necessary to manage knowledge on an individual as well as on an organizational level. Knowledge management basically encompasses the deliberate and systematic handling of knowledge and the precise use of knowledge in organizations (companies, schools, universities etc.). However, if knowledge management is to be established as a long-term strategy, it must address the following factors simultaneously: *individual, organization, and technology*.

In most cases an organization's involvement with knowledge management is not the end in itself

but connected to specific goals, that can be deduced from the organization's superordinate goals, either directly or indirectly. In other words, to be economically justifiable, knowledge management has to contribute added value to the organization's efforts to meet its overacting goals. This "value added" must be specific and measurable in relationship to organizational goals and their achievement.

### Basics of Knowledge Management

The formulation of knowledge goals is the starting point of knowledge management on an individual as well as on an organizational level. The process of knowledge evaluation can be seen as the end of the knowledge management processes. There is a feedback loop from evaluation to goals in that the results of the evaluation may lead to changes in the knowledge goals. A wide range of possible tasks and processes are relevant between goal setting and evaluation. These can be grouped into four kinds of processes that are closely connected and interactive: *knowledge representation, knowledge communication, use of knowledge, and development of knowledge*. These categories describe the knowledge management processes on an individual as well as on an organizational level.

**Knowledge goals.** The formulation and identification of knowledge goals is necessary to provide the initial direction for the knowledge management activities. Carefully planned knowledge management processes are the basis of knowledge goals on an individual as well as on an organizational level.

**Evaluation.** Evaluation can be seen as the final stage of the four knowledge management processes. On both an individual as well as on an organizational level it is necessary in evaluation to estimate if the knowledge goals have been reached within this context.

**Knowledge representation.** Knowledge representation describes the process of knowledge identification, preparation, documentation and actualization. The main goal of this category is to transform knowledge into a format which enhances the distribution and exchange of knowledge.

**Knowledge communication.** In knowledge communication, processes are combined which concern the distribution of information and knowledge, the mediation of knowledge, knowledge sharing, and the co-construction of knowledge, as well as knowledge-based cooperation. These activities necessitate two

or more people communicating directly, indirectly face-to-face, or in a virtual environment.

**Development of knowledge.** The development of knowledge includes not only processes of external knowledge procurement (i.e. through cooperative efforts, consultants, new contacts, etc.) or the creation of specific knowledge resources like research and development departments. The formation of personal and technical knowledge networks are also part of the development of knowledge.

**Use of knowledge.** Use of knowledge focuses on the *de facto* transformation of knowledge to products and services. This category is of special interest because it shows the effectiveness of the preceding actions in the range of the categories such as knowledge representation, knowledge communication and development of knowledge.

### **Knowledge Management in the Organization**

With the goal of knowledge management to develop the potential for learning of individuals and organizations by developing, exchanging, and using knowledge, knowledge management can be seen as a prerequisite for innovations in organizations.

In this context knowledge management is often regarded as a concept and instrument for the realization of the metaphor of the learning organization. Concepts regarding the learning organization emphasize almost the same goals as knowledge management; but in actuality knowledge management can be regarded as a prerequisite for the creation and maintenance of a learning organization. If an organization (company, school, university etc.) is able to handle its knowledge resources well, it can react to shifts in the marketplace faster and more flexibly. Thus it demonstrates its capability to learn. The learning ability of employees provides a major competitive advantage in the framework of the increasing market pressure. In this context, individual and team-based learning are as important as the documentation and distribution of knowledge within an organization.

### **Knowledge Management and the Individual**

The individual as the initial point of knowledge management has been neglected, especially as knowledge management has become a topic important in the business world. Most companies at first relied on technology-based knowledge management, which has mostly led to the implementation of databases.

On the basis of an intensive analysis of the subject of knowledge management, the conclusion can be drawn that most attempts to manage the resource of knowledge have failed. Today it is clear that knowledge management approaches can only be successful if the individual plays a major role in the process. But it is the individual acting as a member of a community that is critical. Etienne Wenger introduced the idea of communities of practice in the workplace as providing added value to companies. According to Wenger, a *community of practice* is a community in which the members are informally bound by what they do together and by what they have learned through mutual engagement in these activities. Communities are highly self-organized, and it is the responsibility of the members to control the community and distribute the work among its members. Thus self-management, communication skills, the capacity for teamwork and the handling of knowledge are valuable skills for the members of communities. These individual knowledge management competencies are not only important in the range of communities but also for life in a knowledge society. To be able to cope with the new challenges of a knowledge society these skills become core competencies of every individual.

### **Knowledge Management in Formal Education**

It is the task of schools and universities to provide students with basic knowledge management skills needed for life in a rapidly changing society. However, the traditional system of schools and universities does not meet the requirements of a knowledge society. Schools and universities should be transformed into learning organizations where knowledge management comes to life. The core aim should be the mediation of deep understanding of topics and the development of individual knowledge management skills. This new orientation requires a holistic change process in schools. In schools the analog of communities of practice is learning communities. Learning communities offer multifaceted possibilities for the integration of knowledge-management processes in schools and universities. Communities can be developed among the learners within the school. Thus long-term and deep engagement with a topic, interdisciplinary learning, and the development of social skills can be facilitated. At the same time, the exchange of knowledge between the teachers can be stimulated by implementing communities among teachers. In this context the initiation of a commu-

nity that reaches out over the school boundaries can further enhance this process of knowledge sharing and mutual learning.

### Issues in Implementation

In this context the question arises of how the implementation of knowledge management processes to organizations can be facilitated. Within the field of knowledge management, research activities are still limited primarily to case studies. On the basis of several case studies with focus on small and medium-sized companies, six critical success factors for the implementation of knowledge management processes have been found. These factors can also be applied to different kinds of organizations (companies, schools, universities, etc.).

**Corporate culture.** Successful implementation of knowledge management is closely related to the corporate culture. However, these cultural changes need time. In the context of the implementation of knowledge management activities, it is important to know how knowledge management initiatives interact with the culture and to determine how the culture should be changed.

**Qualification of employees.** The competencies and motivation of employees strongly influence the success of knowledge management. Thus human resource development and the design of incentive-systems are highly important.

**Learning culture.** The implementation of knowledge management can be seen as a step-by-step learning process which has to be nurtured.

**Management support.** Knowledge management activities only have the opportunity to be successful if they are supported by the executive board.

**Integration of knowledge processes to organization's processes.** It is important to connect knowledge management closely to the organization's processes in order to gain acceptance and for reasons of economical legitimacy.

**New information and communication technologies.** The implementation of knowledge management does not necessarily have to be connected to an investment in

new information and communication technologies. The potential for such technologies evolves only if the cultural and organizational conditions exist.

To confirm and empirically verify these findings further research—basic as well as applied research—is needed in the field of knowledge management. Basic and applied research should be closely connected. Moreover, research questions should be oriented on authentic and current problems. Research initiatives on knowledge management should be designed to be interdisciplinary and extremely precise. Furthermore they should be based on a wide range of methods.

*See also:* LEARNING, *subentry on* KNOWLEDGE ACQUISITION, REPRESENTATION, AND ORGANIZATION; SCIENCE LEARNING, *subentry on* KNOWLEDGE ORGANIZATION AND UNDERSTANDING; TEACHING, *subentry on* KNOWLEDGE BASES OF.

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HEINZ MANDL  
KATRIN WINKLER

## KOHLBERG, LAWRENCE (1927–1987)

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Lawrence Kohlberg virtually developed the fields of moral psychology and moral education through his pioneering cognitive developmental theory and research. Kohlberg's work grew out of a lifelong commitment to address injustice. After graduating from high school at the end of World War II, he volunteered as an engineer on a ship that was smuggling Jewish refugees from Europe to Palestine through the British blockade. He was captured, interred in Cyprus, escaped, fled to a kibbutz in Palestine, and made his way back to the United States where he joined another crew transporting refugees.

A passionate reader of the Great Books throughout his life, Kohlberg completed his undergraduate degree from the University of Chicago in one year. In 1958 he received his doctoral degree in psychology after writing a dissertation on developmental changes in children's moral thinking. This dissertation, which evaluated children's responses to the fictional dilemma of an impoverished man who steals an expensive drug for his dying wife, became one of the most cited unpublished dissertations ever. Kohlberg taught briefly at Yale, then at the University of Chicago, and finally at Harvard's Graduate School of Education, where he established the Center for Moral Education.

When Kohlberg began his graduate studies, American psychologists, who were for the most part behaviorists, did not even use the word *moral*. Kohlberg's broad intellectual pursuits, which embraced philosophy, sociology, and psychology, led him to challenge mainstream thinking. In his dissertation and subsequent research, he drew on a moral philosophical tradition extending from Socrates to Kant that focused on the importance of moral reasoning and judgment. Although Kohlberg was heavily influenced by Jean Piaget's research and played a major role in advancing Piaget's cognitive developmental paradigm in the United States, James Mark Baldwin,

John Dewey, and George Herbert Mead also significantly affected Kohlberg's thinking.

Kohlberg's empirical research yielded an original and fecund description of moral development. In his dissertation, he presented a cross-section of children and adolescents with a set of moral dilemmas and asked them to justify their judgments with a series of probing questions. Using an abductive "bootstrapping" method, he derived a sequence of moral types, which became the basis for his well-known six stages of moral judgment.

### Stages of Moral Judgment

Kohlberg modified his descriptions of the stages and method for coding them from the time of his dissertation to the publication of the *Standard Issue Scoring Manual* in 1987. Stage one is characterized by blind obedience to rules and authority and a fear of punishment. Stage two is characterized by seeking to pursue one's concrete interests, recognizing that others need to do the same, and a calculating instrumental approach to decision-making. Stage three is characterized by trying to live up to the expectations of others for good behavior, by having good motives, and by fostering close relationships. Stage four is characterized by a concern for maintaining the social system in order to promote social order and welfare. Stage five is characterized by judging the moral worth of societal rules and values insofar as they are consistent with fundamental values, such as liberty, the general welfare or utility, human rights, and contractual obligations. Stage six is characterized by universal principles of justice and respect for human autonomy.

Kohlberg hoped that his stages could provide a framework for moral education. He noted, however, that one could not simply assume that a higher stage was a better stage; one had to make a philosophical argument that the higher stages were more adequate from a moral point of view. It was only then that educators could find a warrant for pursuing moral development as an aim of education. In his provocative essay, "From Is to Ought: How to Commit the Psychological Fallacy and Get Away with It in the Study of Moral Development," Kohlberg demonstrated a parallelism between psychological descriptive and philosophical-normative analyses of the stages, a parallelism, which, he contended, led to a complementarity and even convergence of the two analyses.

In addition to the moral hierarchy of the stages, Kohlberg made four other fundamental claims for

his moral stage approach that are directly relevant to moral education. First, he, like Piaget, conceived of the stages as constructed and reconstructed by individuals through interacting with their social environment. Kohlberg sharply distinguished his constructivist/interactionist approach from approaches which emphasize primarily the environment (socialization approaches) or the individual (maturationist approaches). Second, he posited that the stages of moral development are universal. Third, he held that the stage formed an invariant sequence of development without skips or reversals. Finally, he maintained that his stages were holistic structures or organized patterns of moral reasoning. Kohlberg and his colleagues attempted to support these claims through twenty years of longitudinal and cross-cultural research.

### Moral Education

When he turned his attention to moral psychology to moral education, Kohlberg was faced with the objection that any form of teaching virtue involved the imposition of an arbitrary personal or religious belief. Kohlberg appealed to the U.S. Constitution to demonstrate the principles of justice upon which the American government is based are, in fact, the very principles at the core of his highest stages. For Kohlberg civic and moral development are one and the same. Kohlberg endorsed Dewey's view that development (intellectual as well as moral) ought to be the aim of education and that schools ought to provide an environment conducive to development. As a constructivist, Kohlberg advocated that schools provide an environment that encouraged active exploration rather than passive learning. Later Kohlberg would put these ideas into practice when he instituted the just community first in prisons and later in schools.

Kohlberg's first research-based contribution to moral education was the moral discussion approach. He started working on the approach in 1967 after his graduate student, Moshe Blatt, had found that the discussion of moral dilemmas led to a modest but significant development in moral reasoning. The moral discussion approach offered educators a way of promoting moral development while avoiding the Scylla of indoctrination and Charybdis of values relativism. The key to the moral discussion approach was to stimulate a lively exchange of points of view that would lead to the disequilibrium necessary for cognitive development. The discussion leader acted

as a facilitator and Socratic questioner, encouraging students to consider the perspective of others and to examine the adequacy of their own arguments.

The moral discussion approach should not be confused with the values clarification approach that was very prevalent in the 1960s and 1970s. The values clarification approach, which started with the assumption that values were a matter of individual preference, represented the extreme of individual relativism. According to this approach, the role of the teacher was limited to helping individual students to become aware of their own values and to tolerate the values of others.

Kohlberg saw the moral discussion approach as one way of promoting development to higher stages of moral reasoning through thoughtful and critical dialogue about moral issues. He was concerned that traditional approaches to character education with their emphasis on exhortation and role-modeling oversimplified the process of moral development and encouraged conformity. Kohlberg wanted an approach to moral education that could address the social issues of his day, such as racism and social inequality. He also wanted an approach to moral education that went beyond cultural relativism. Moral education, he believed, ought to be about fostering universal principles of justice, not transmitting the values of one's particular culture or subculture.

Kohlberg's abiding concern for building a more just society through moral education led him to question whether the moral discussion approach was sufficient. Classroom moral discussions focused on hypothetical dilemmas or problems in history and literature, but not the problems that students encountered in school. Dilemma discussions stopped at individual students' moral reasoning and did not address the school environment. Kohlberg challenged schools to take a more radical approach and become "little republics" ruled not by an aristocracy of philosopher-teachers but by a democracy of teachers and students, engaged in philosophical deliberation about the good of their community.

Kohlberg's most significant contribution to moral education was the just community approach, which he developed over the last thirteen years of his life by working closely with teachers and students in three alternative high schools. The just community approach has two major features: direct-participatory democracy and a commitment to building community, characterized by a strong sense

of unity. Direct participatory democracy not only involves students in moral discussions about problems in school, but also helps students to feel responsible for solving those problems. The role of democracy in the just approach cannot be understood, however, apart from the role that community plays in providing a goal for the democracy and shared expectations for student participation.

Kohlberg's view of community was heavily influenced by his observations of a kibbutz high school in Israel and his appropriation of Émile Durkheim's collectivist theory of moral education. Kohlberg believed that American schools were too focused on individual achievement and failed to offer students an opportunity to become attached to a group that could offer them a rich social and moral experience. He urged that teachers become advocates of community in democratic meetings by challenging students to commit themselves to upholding shared values of caring, trust, and collective responsibility. While asking teachers and students to devote themselves to promoting the welfare of the community, he established procedures for checking the power of the group over the individual. Kohlberg believed that the just community approach was needed not only to promote moral development but also to revitalize a sense of democratic civic engagement in a culture that had become excessively focused on private interest.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; EDUCATIONAL PSYCHOLOGY; MORAL DEVELOPMENT.

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F. CLARK POWER

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## **LABRANT, LOU L. (1888–1991)**

Lou L. LaBrant served as a language arts teacher and a Progressive-education leader from 1906 through 1971. Born in Hinkley, Illinois, LaBrant began her teaching career in public high schools and experimental schools throughout the Midwest during the first two decades of the twentieth century. She completed an undergraduate degree in Latin at Baker University (1911) and, after making a final commitment to education, pursued an M.A. from the University of Kansas (1925), followed by a Ph.D. from Northwestern University (1932). Her professional career spanned eight decades: She was a founding staff member of the University School of Ohio State University (1932–1942), a professor of education at New York University (1942–1953), president of the National Council of Teachers of English (1953–1954), and head of the humanities division at Dillard University (1958–1971), where she implemented the nationally recognized pre-freshman program for African-American students.

### **Teaching Reading and Writing**

An early and consistent proponent of Deweyan progressivism, LaBrant championed holistic and child-centered approaches to teaching reading and writing. She stood at the beginning of the nearly century-long debate between isolated and integrated instructional strategies for language arts classes. Throughout her career LaBrant focused on student choice in reading instruction. From her first years in teaching LaBrant both promoted and practiced free reading programs at experimental schools and major universities. John Dewey (1859–1952) had argued that educators could not know the exact needs of

students in their lives, and consequently LaBrant believed teachers had to provide students with conceptual understanding that could be applied in chaotic and unpredictable situations. Essentially, she argued that the reading process was far more important than the specific works students read. She rejected movements such as Great Books and traditional approaches to the canon of required works of literature.

From a late-twentieth-century perspective, LaBrant also spoke for holistic approaches to writing instruction. Isolated grammar instruction, a traditional approach (often taught through text or workbook exercises), had proved to have little or no transfer to student writing, LaBrant emphasized; thus students needed to choose their own topics and writing forms that would be polished after the piece was written—and if the content warranted polishing. LaBrant often chastised teachers who had students correct surface features of empty, mechanical writing. Her ultimate, though not simple, stance was that students learned to write by writing and grew as readers by reading.

### **Educational Leader**

As a writer, editor (*Journal of Educational Method*, 1939–1943), and educational leader (notably as president of the National Council of Teachers of English), LaBrant voiced her support for integrated language arts methodologies; further, she took a variety of stances on the many issues facing education and humanity through much of her career. Paradoxically, she always believed that reading and writing instruction should not be a separate course, traditionally called English, but an integrated part of all content areas. At the center of many of her beliefs

was her contention that language contributed directly to mental health; she warned repeatedly against belief in “word magic”—that saying something could make it happen or be true. Her focus on language instruction was a direct attack on provincialism. She offered, as many Progressives did, the scientific method as the touchstone for growing as a learned individual—a focus she contributed to and carried from her years at the University School of Ohio State University.

Further, she advocated experimental education, especially experimental schools that worked to move students toward content instead of imposing content on the student. As a member of the University School’s faculty at Ohio State University, she was directly involved in the eight-year study concerning Progressive education. Her interest in experimentalism included a call for educational methods to be research-based and child-centered. Since she lived through several back-to-basics movements, she also hoped that progressive measures would curb the many moves to standardized education: in her mind, an approach that stifles students’ abilities. Her work in research-based and child-centered educational methodologies places her in the constructivist camp of learning theory and in opposition to the traditional behaviorist slant of public education.

A more subtle contribution from LaBrant was her work with disenfranchised and minority students over her career. She applied her progressive methodologies to Native American students in the Midwest, Hispanic and multiethnic classes in New York (P.S. 65), and African-American students entering Dillard University. Her body of work helps to show that traditional education often failed minority students, and Progressive education could and did help bridge the gap left by traditional schooling.

### Teaching Teachers

LaBrant was characterized by those who knew her as a demanding person—a teacher with the highest of standards. Many recognized a rigidness and arrogance in LaBrant. She challenged teachers, especially when training them in the teaching of reading and writing.

Whether in her graduate courses or during her many lectures, LaBrant promoted research-based progressive ideas, presenting them assertively, even perhaps excessively so. She appeared to care little for feelings hurt, and was driven to seek and apply the

best practices known at that time to ensure that each student receive the most fulfilling and lasting education possible. In the wake of the advocate LaBrant were devoted followers and a sprinkling of angered opponents.

*See also:* LANGUAGE ARTS, TEACHING OF; LITERACY AND READING.

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P. L. THOMAS

## LAND-GRANT COLLEGES AND UNIVERSITIES

America’s land-grant colleges and universities were brought into being through the Morrill Act of 1862. This unprecedented federal legislation supported a new vision for higher education flowing from a confluence of agricultural, industrial, scientific, political and educational interests in the years before the U.S. Civil War.

By 1873, 26 land-grant colleges and universities were in operation; by 1900, 65; by 1975, 72; and by 2000, 106 (see Table 1). As these institutions developed, they influenced American higher education (and its more than 4,000 postsecondary institutions) well out of proportion to their number. According to the scholar Clark Kerr, the grant movement had a profound effect on the modern American university system and shaped its development throughout the late nineteenth and twentieth centuries.

By the beginning of the twenty-first century, U.S. land-grant colleges and universities had become a model for developing nations seeking to harness their own institutions of higher learning to promote economic development and higher standards of living. The motives typically attributed to the land-grant college movement include the democratization of higher education to serve the working class; the development of an educational system designed to meet utilitarian and “useful” ends; and a desire to emphasize the emerging applied sciences, particularly agricultural science and engineering.

New scholarship has shown that before the Civil War a number of American colleges had begun to accommodate these emerging needs. But these institutions were local in orientation and lacked the collective ability to call attention to the ways in which they were adapting to the demands of a growing nation. By contrast, the land-grant colleges were the outgrowth of a movement that culminated in conscious, organized action to affect federal and state policy. What made the land-grant colleges unique in American higher education was their exclusive relationship with the federal government and a shared set of obligations to their sponsoring states.

The 1850s saw unrelated efforts by Jonathan B. Turner, a professor at Illinois College, and U.S. Senator Justin S. Morrill of Vermont to champion bills calling for federally sponsored agricultural or industrial colleges, but these initiatives failed. Morrill’s penultimate bill passed Congress in 1859, but it was vetoed by President James Buchanan—largely on the grounds that a federal role in education was unconstitutional.

The Morrill Act of 1862, signed by President Abraham Lincoln, granted vast holdings of federal lands to states based on the size of their congressional delegations. The lands were to be sold to provide an endowment for the establishment of “at least one college where the leading object shall be, without ex-

cluding other scientific and classical studies and including military tactics, to teach such branches of learning as related to agriculture and the mechanic arts . . . in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.” Most states did a poor job of selling their lands, however. The meager profits used for the endowments were insufficient to sustain these growing educational institutions, which offered free tuition but had yet to receive any state funds.

The first institutions to function as land-grant colleges during the Civil War were two agricultural schools that had been chartered by their respective states in 1855: Michigan Agricultural College (now Michigan State University) and the Agricultural College of Pennsylvania (now The Pennsylvania State University). By 1873, twenty-four land-grant institutions enrolled 2,600 students—about 13 percent of the total U.S. collegiate population. Despite this early success, the quarter-century following the Civil War was a dismal period for land-grant colleges. Their facilities were sparse and primitive, and critics began to marshal their forces. Congress launched an investigation, which vindicated the schools. The farmers’ organization, the Grange, launched a similar inquest, condemning the colleges for their failure to attract agricultural students. Well into the twentieth century, engineering—not agriculture—was the most popular course of study at land-grant schools.

Land-grant colleges turned the corner from struggle to stability around 1890, chiefly because of two federal acts. The Hatch Act of 1887 established and annually funded agricultural experiment (research) stations at land-grant colleges. Then came the Morrill Act of 1890, best known for giving states the right to designate “separate-but-equal” land-grant colleges for blacks. Soon after this, seventeen such schools were operating in Southern and border states. But the act’s main purpose was to create annual federal appropriations to support general educational programs, from English to engineering. This dependable flow of funds provided the long-sought financial foundation the colleges needed and encouraged state governments to make annual appropriations as well. The pivotal figure in these legislative victories was George W. Atherton, president of The Pennsylvania State College. When his lobbying force of land-grant college presidents and agricultural scientists congealed in 1887 into the Association of American Agricultural Colleges and Experiment

TABLE 1

**The 106 U.S. land-grant colleges and universities, 2000****Alabama**

Alabama A&M University  
Auburn University  
Tuskegee University

**Alaska**

University of Alaska System

**American Samoa**

American Samoa Community College

**Arizona**

Diné College  
University of Arizona

**Arkansas**

University of Arkansas, Fayetteville  
University of Arkansas at Pine Bluff

**California**

D-Q University  
University of California (original 1862 campus: Berkeley)

**Colorado**

Colorado State University

**Commonwealth of the Northern Marianas Islands**

Northern Marianas College

**Connecticut**

Connecticut Agricultural Experiment Station  
University of Connecticut

**Delaware**

Delaware State University  
University of Delaware

**District of Columbia**

University of the District of Columbia

**Federated States of Micronesia**

College of Micronesia

**Florida**

Florida A&M University  
University of Florida

**Georgia**

Fort Valley State University  
University of Georgia

**Guam**

University of Guam

**Hawaii**

University of Hawaii

**Idaho**

University of Idaho

**Illinois**

University of Illinois (original 1862 campus: Urbana-Champaign)

**Indiana**

Purdue University

[continued]

**Iowa**

Iowa State University

**Kansas**

Haskell Indian Nations University  
Kansas State University

**Kentucky**

Kentucky State University  
University of Kentucky

**Louisiana**

Louisiana State University System (original 1862 campus: Baton Rouge)  
Southern University and A&M College System

**Maine**

University of Maine (original 1862 campus: Orono)

**Maryland**

University of Maryland, College Park  
University of Maryland Eastern Shore

**Massachusetts**

Massachusetts Institute of Technology (engineering)  
University of Massachusetts (original 1862 campus for agriculture: Amherst)

**Michigan**

Bay Mills Community College  
Michigan State University

**Minnesota**

Fond Du Lac Tribal and Community College  
Leech Lake Tribal College  
University of Minnesota, Twin Cities

**Mississippi**

Alcorn State University  
Mississippi State University

**Missouri**

Lincoln University  
University of Missouri System (original 1862 campus: Columbia)

**Montana**

Blackfeet Community College  
Dull Knife Memorial College  
Fort Belknap Community College  
Fort Peck Community College  
Little Big Horn College  
Montana State University  
Salish Kootenai College  
Stone Child College

**Nebraska**

Little Priest Tribal College  
University of Nebraska (original 1862 campus: Lincoln)

**Nevada**

University of Nevada, Reno

**New Hampshire**

University of New Hampshire

**New Jersey**

Rutgers, the State University of New Jersey

**TABLE 1 [CONTINUED]****The 106 U.S. land-grant colleges and universities, 2000****New Mexico**

Crownpoint Institute of Technology  
 Institute of American Indian Arts  
 New Mexico State University  
 Southwestern Indian Polytechnic Institute

**New York**

Cornell University

**North Carolina**

North Carolina A&T University  
 North Carolina State University

**North Dakota**

Fort Berthold Community College  
 Little Hoop Community College  
 North Dakota State University  
 Sitting Bull College  
 Turtle Mountain Community College  
 United Tribes Technical College

**Ohio**

The Ohio State University

**Oklahoma**

Langston University  
 Oklahoma State University

**Oregon**

Oregon State University

**Pennsylvania**

The Pennsylvania State University

**Puerto Rico**

University of Puerto Rico

**Rhode Island**

University of Rhode Island

**South Carolina**

Clemson University  
 South Carolina State University

SOURCE: Courtesy of author.

**South Dakota**

Oglala Lakota College  
 Sinte Gleska University  
 Sisston Wahpeton Community College  
 Si Tanka College  
 South Dakota State University

**Tennessee**

Tennessee State University  
 University of Tennessee (original 1862 campus: Knoxville)

**Texas**

Prairie View A&M University  
 Texas A&M University

**Utah**

Utah State University

**Vermont**

University of Vermont

**Virgin Islands**

University of the Virgin Islands

**Virginia**

Virginia Polytechnic Institute and State University  
 Virginia State University

**Washington**

Northwest Indian College  
 Washington State University

**West Virginia**

West Virginia State College  
 West Virginia University

**Wisconsin**

College of the Menominee Nation  
 Lac Courte Oreilles Ojibwa Community College  
 University of Wisconsin–Madison

**Wyoming**

University of Wyoming

Stations—the first formal organization of peer higher education institutions in America—Atherton was elected its first president.

Since 1900, land-grant institutions have been strengthened by more than a dozen federal acts. For example, the Smith-Lever Act of 1914 established the Cooperative Extension Service in agriculture and home economics, to be carried out by land-grant institutions in connection with U.S. Department of Agriculture. Eighty years later, in 1994, the Elementary and Secondary Education Reauthorization Act conferred land-grant status on twenty-nine Native American colleges.

The major land-grant universities are powerhouses of research and graduate education. Of the top twenty institutions in total research-and-development spending for fiscal 1998, eleven (55%) were land-grant universities, according to the National Science Foundation. Of the top twenty institutions awarding the most earned doctorates in fiscal 1998, twelve (60%) were land-grant institutions. The fruits of these research and graduate programs have profoundly benefited the world. The production of pure uranium, pioneering developments in television and the transistor, advances in meteorology, the field ion microscope and the cyclotron, the isolation of helium, new plant strains resistant to disease and

insects—these and much more have come from land-grant institutions.

The land-grant college movement has forged an enduring legacy. Egalitarianism and educational populism, practical or useful education, applied science and research, public service and outreach, and, perhaps most importantly, the idea that the federal government has a key role to play in educational policy—these tenets have become generalized throughout the whole of American higher education.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentries on* HISTORICAL DEVELOPMENT, SYSTEM.

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ROGER L. WILLIAMS

## LANGUAGE ACQUISITION

Almost every human child succeeds in learning language. As a result, people often tend to take the process of language learning for granted. To many, language seems like a basic instinct, as simple as breathing or blinking. But language is not simple at all; in fact it is the most complex skill that a human being will ever master. That nearly all people succeed in learning this complex skill demonstrates how well language has adapted to human nature. In a very real sense, language is the complete expression of what it means to be human.

Linguists in the tradition of Noam Chomsky tend to think of language as having a universal core from which individual languages select out a particular configuration of features, parameters, and settings. As a result, they see language as an instinct that is driven by specifically human evolutionary adaptations. In their view, language resides in a unique mental organ that has been given as a “special gift” to the human species. This mental organ contains rules, constraints, and other structures that can be specified by linguistic analysis.

Psychologists and those linguists who reject the Chomskyan approach often view language learning from a very different perspective. To the psychologist, language acquisition is a window on the operation of the human mind. The patterns of language emerge not from a unique instinct but from the operation of general processes of evolution and cognition. For researchers who accept this emergentist approach, the goal of language acquisition studies is to understand how regularities in linguistic form emerge from the operation of low-level physical, neural, and social processes. Before considering the current state of the dialog between the view of language as a hard-wired instinct and the view of language as an emergent process, it will be useful to review a few basic facts about the shape of language acquisition and some of the methods that are used to study it.

## The Basic Components of Human Language

Human language involves both receptive and productive use. Receptive language use occurs during the comprehension or understanding of words and sentences. Productive language use involves idea generation and the articulation of words in speech. Both reception and production utilize the four basic structural components of language:

1. **Phonology:** The system of the sound segments that humans use to build up words. Each language has a different set of these segments or phonemes, and children quickly come to recognize and then produce the speech segments that are characteristic of their native language.
2. **Semantics:** The system of meanings that are expressed by words and phrases. In order to serve as a means of communication between people, words must have a shared or conventional meaning. Picking out the correct meaning for each new word is a major learning task for children.
3. **Grammar:** The system of rules by which words and phrases are arranged to make meaningful statements. Children need to learn how to use the ordering of words to mark grammatical functions such as subject or direct object.
4. **Pragmatics:** The system of patterns that determine how humans can use language in particular social settings for particular conversational purposes. Children learn that conversations customarily begin with a greeting, require turn taking, and concern a shared topic. They come to adjust the content of their communications to match their listener's interests, knowledge, and language ability.

These four basic systems can be extended and elaborated when humans use language for special purposes, such as for poetry, song, legal documents, or scientific discourse. The literate control of language constructs additional complex social, cognitive, and linguistic structures that are built on top of the four basic structural components.

## Methods for Studying Language Acquisition

The methods used to study language development are mostly quite straightforward. The primary method involves simply recording and transcribing what

children say. This method can be applied even from birth. Tape recordings become particularly interesting, however, when the child begins systematic babbling and the first productions of words. Using videotape, researchers can link up the child's use of verbal means with their use of gesture and non-linguistic cries to draw attention to their desires and interests.

Methods for studying comprehension are a bit more complicated. During the first year, researchers can habituate the infant to some pattern of sounds and then suddenly change that pattern to see if the infant notices the difference. From about nine months onward, children can be shown pictures of toys along with their names, and then researchers can measure whether the children prefer these pictures to some unnamed distracter pictures. Later on, children can be asked to answer questions, repeat sentences, or make judgments about grammar. Researchers can also study children by asking their parents to report about them. Parents can record the times when their children first use a given sound or word or first make some basic types of child errors. Each of these methods has different goals, and each also has unique possibilities and pitfalls associated with it. Having obtained a set of data from children or their parents, researchers next need to group these data into measures of particular types of language skills, such as vocabulary, sentences, concepts, or conversational abilities.

## Phases in Language Development

William James (1890) described the world of the newborn as a "blooming, buzzing confusion." It is now known, however, that, on the auditory level at least, the newborn's world is remarkably well structured. The cochlea (in the inner ear) and the auditory nerve (which connects the inner ear with the brain) provide extensive preprocessing of signals for pitch and intensity. In the 1970s and 1980s, researchers discovered that human infants were specifically adapted at birth to perceive contrasts in sounds such as that between /p/ and /b/, as in the words *pit* and *bit*. Subsequent research showed that even chinchillas are capable of making this distinction. This suggests that much of the basic structure of the infant's auditory world can be attributed to fundamental processes in the mammalian ear. Moreover, there is evidence that some of these early perceptual abilities are lost as the infant begins to acquire the distinctions actually used by the native lan-

guage. Beyond this basic level of auditory processing, it appears that infants have a remarkable capacity to record and store sequences of auditory events. It is as if the infant has a tape recorder in the brain's auditory cortex that records input sounds, replays them, and accustoms the ear to their patterns.

Children tend to produce their first words sometime between nine and twelve months. One-year-olds have about 5 words in their vocabulary on average, although individual children may have none or as many as thirty; by two years of age, average vocabulary size is more than 150 words, with a range among individual children from as few as 10 to as many as 450 words. Children possess a vocabulary of about 14,000 words by six years of age; adults have an estimated average of 40,000 words in their working vocabulary at age forty. In order to achieve such a vocabulary, a child must learn to say at least a few new words each day from birth.

One of the best predictors of a child's vocabulary development is the amount and diversity of input the child receives. Researchers have found that verbal input can be as great as three times more available in educated families than in less educated families. These facts have led educators to suspect that basic and pervasive differences in the level of social support for language learning lie at the root of many learning problems in the later school years. Social interaction (quality of attachment; parent responsiveness, involvement, sensitivity, and control style) and general intellectual climate (providing enriching toys, reading books, encouraging attention to surroundings) predict developing language competence in children as well. Relatively uneducated and economically disadvantaged mothers talk less frequently to their children compared with more educated and affluent mothers, and correspondingly, children of less educated and less affluent mothers produce less speech. Socioeconomic status relates to both child vocabulary and to maternal vocabulary. Middle-class mothers expose their children to a richer vocabulary, with longer sentences and a greater number of word roots.

Whereas vocabulary development is marked by spectacular individual variation, the development of grammatical and syntactic skills is highly stable across children. Children's early one-word utterances do not yet trigger the need for syntactic patterns, because they are still only one-word long. By the middle of the second year, when children's vocabularies grow to between 50 and 100 words, they

begin to combine words in what has been termed "telegraphic speech." Utterances typical of this period include forms such as "where Mommy," "my shoe," "dolly chair," and "allgone banana."

At this same time, children are busy learning to adjust their language to suit their audience and the situation. Learning the pragmatic social skills related to language is an ongoing process. Parents go to great efforts to teach their children to say "please" and "thank you" when needed, to be deferential in speaking to adults, to remember to issue an appropriate greeting when they meet someone, and not to interrupt when others are speaking. Children fine-tune their language skills to maintain conversations, tell stories, ask or argue for favors, or tattle on their classmates. Early on, they also begin to acquire the metalinguistic skills involved in thinking and making judgments about language.

As children move on to higher stages of language development and the acquisition of literacy, they depend increasingly on broader social institutions. They depend on Sunday school teachers for knowledge about Biblical language, prophets, and the geography of the Holy Land. They attend to science teachers to gain vocabulary and understandings about friction, molecular structures, the circulatory system, and DNA. They rely on peers to understand the language of the streets, verbal dueling, and the use of language for courtship. They rely on the media for role models, fantasies, and stereotypes. When they enter the workplace, they will rely on their coworkers to develop a literate understanding of work procedures, union rules, and methods for furthering their status. By reading to their children, telling stories, and engaging in supportive dialogs, parents set the stage for their children's entry into the world of literature and schooling. Here, again, the parent and teacher must teach by displaying examples of the execution and generation of a wide variety of detailed literate practices, ranging from learning to write through outlines to taking notes in lectures.

### **Special Gift or Emergence?**

Having briefly covered the methods used to study language acquisition and the basic phases in development, it is now possible to return to this question: Is language development best characterized as the use of a "special gift" or as an emergent result of various cognitive, neural, physiological, and social pres-

tures? There are good arguments in favor of each position.

The special gift position views language as an instinct. People are often overpowered by the “urge to speak.” Young children must feel this urge when they interact with others and have not yet learned how to use words correctly. It is important to recognize, however, that crickets, birds, snakes, and many other species can be possessed by a similar urge to produce audible chirps, songs, and rattling. In themselves, these urges do not amount to a special gift for language learning. Better evidence for the special gift comes from the study of children who have been cut off from communication by cruel parents, ancient Pharaohs, or accidents of nature. The special gift position holds that, if the special gift for language is not exercised by some early age, perhaps six or seven, it will be lost forever. None of the isolation experiments that have been conducted, however, can be viewed as providing good evidence for this claim. In many cases, the children are isolated because they are brain-injured. In other cases, the isolation itself produces brain injury. In a few cases, children as old as six to eight years of age have successfully acquired language even after isolation. Thus, the most that can be concluded from these experiments is that it is unlikely that the special gift expires before age eight.

The second form of evidence in favor of the notion of a special gift comes from the observation that children are able to learn some grammatical structures without apparent guidance from the input. The argumentation involved here is sometimes rather subtle. For example, Chomsky noted that children would never produce “Is the boy who next in line is tall?” as a question deriving from the sentence “The boy who is next in line is tall.” Instead, they will inevitably produce the question as, “Is the boy who is next in line tall?” That children always know which of the forms of the verb *is* to move to the front of the sentence, even without ever having heard such a sentence from their parents, indicates to Chomsky that language must be a special gift.

Although the details of Chomsky’s argument are controversial, his basic insight here seems solid. There are some aspects of language that seem so fundamental that humans hardly need to learn them. Nevertheless, the specific structures examined by linguistic theory involve only a small set of core grammatical features. When looking more generally at the full shape of the systems of lexicon, phonology,

pragmatics, and discourse, much greater individual variation in terms of overall language proficiency appears.

To explain these differences, it is necessary to view language learning as emerging from multiple sources of support. One source of support is the universal concept all humans have about what language can be. A second source of support is input from parents and peers. This input is most effective when it directly elaborates or expands on things the child has already said. For example, if the child says “Mommy go store,” the parent can expand the child’s production by saying “Yes, Mommy is going to the store.” From expansions of this type, children can learn a wide variety of grammatical and lexical patterns. A third source of support is the brain itself. Through elaborate connections among auditory, vocal, relational, and memory areas, humans are able to store linguistic patterns and experiences for later processing. A fourth source of support are the generalizations that people produce when they systematize and extend language patterns. Recognizing that English verbs tend to produce their past tense by adding the suffix *-ed*, children can produce overgeneralizations such as “goed” or “runned.” Although these overgeneralizations are errors, they represent the productive use of linguistic creativity.

Individual children will vary markedly in the extent to which they can rely on these additional sources of support. Children of immigrant families will be forced to acquire the language of the new country not from their parents, but from others. Children with hearing impairments or the temporary impairments brought on by otitis media (ear infections) will have relatively less support for language learning from clear auditory input. Blind children will have good auditory support but relatively less support from visual cues. Children with differing patterns of brain lesions may have preserved auditory abilities, but impaired ability to control speech. Alternatively, other children will have only a few minor impairments to their short-term memory that affect the learning of new words.

Because language is based on such a wide variety of alternative cognitive skills, children can often compensate for deficits in one area by emphasizing their skills in another area. The case of Helen Keller is perhaps the best such example of compensation. Although Keller had lost both her hearing and her vision, she was able to learn words by observing how her guardian traced out patterns of letters in her

hand. In this way, even when some of the normal supports are removed, children can still learn language. The basic uses of language are heavily overdetermined by this rich system of multiple supports. As a child moves away from the basic uses of language into the more refined areas of literacy and specific genres, progress can slow. In these later periods, language is still supported by multiple sources, but each of the supports grows weaker, and progress toward the full competency required in the modern workplace is less inevitable.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; CATEGORIZATION AND CONCEPT LEARNING; LANGUAGE AND EDUCATION; LITERACY AND READING.

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#### LANGUAGE AND EDUCATION

In discussions of language and education, language is usually defined as a shared set of verbal codes, such as English, Spanish, Mandarin, French, and Swahili. But language can also be defined as a generic, communicative phenomenon, especially in descriptions of instruction. Teachers and students use spoken and written language to communicate with each other—to present tasks, engage in learning processes, present academic content, assess learning, display knowledge and skill, and build classroom life. In addition, much of what students learn is language. They learn to read and write (academic written language), and they learn the discourse of academic disciplines (sometimes called academic languages and literacies). Both definitions of language are important to understanding the relationship between language and education.

As suggested by M. A. K. Halliday, the relationship between language and education can be divided

into three heuristic categories: (1) learning language, (2) learning through language, and (3) learning about language.

### Learning Language

In their early years, children are learning both spoken and written language. They are developing use of complex grammatical structures and vocabulary; communicative competence (rules for the appropriate and effective use of language in a variety of social situations); comprehension of spoken and written language; and ways to express themselves.

Educational programs for young children often emphasize curriculum and instruction to facilitate language learning. With regard to spoken language, instructional programs may emphasize opportunities to comprehend a variety of genres from directions to narratives and opportunities to experiment with modes of expression. With regard to written language, classrooms for young children provide opportunities to learn alphabetic symbols, grapho-phonemic relationships (letter-sound relationships), basic sight vocabulary, and comprehension strategies; and also feature the reading of stories designed for young children. Young children may also have opportunities to learn how to express themselves through written language, including opportunities to form letters, words, sentences, and text structures, and opportunities to learn how to put together a written story.

There is debate about the extent to which classrooms for young children's language learning should provide didactic, teacher-centered instruction or student-centered instruction. Those who support a didactic approach argue that children whose language performance is below that of their peers need explicit instruction to catch up. These advocates argue that the home and community environments do not provide all children with the experiences needed to be proficient and effective users of language and that direct instruction with grammatical forms, vocabulary, and pronunciation can help certain students catch up with their peers. A similar argument is made for the didactic instruction of written language. Written language, it is argued, is sufficiently different from spoken language as to require explicit instruction. Research noting the importance of phonological awareness to reading development is cited as rationale for a parts (letters and sounds) to whole (fluent oral reading) curriculum.

The alternative argument is that children are inherently *wired* as language learners and that providing them with a stimulating, rich language environment supplies them with the tools they need for further developing their spoken and written language abilities. Although teachers may provide instruction, the instruction should follow the student's needs and interests rather than being prescribed in a predetermined manner. The complexity of language processes requires that children be allowed to engage in complete or whole-language activities rather than in isolated skill instruction activities that distort language processes by stripping them of their complexity (and also making them harder to learn). The learning of written language is not viewed as being much different from the learning of spoken language, and thus learning processes similar to those used in learning spoken language are advocated for the learning of written language.

In the United States another set of debates surrounds language learning by children whose native language is other than English. First, there are debates with regard to goals. Some educators advocate for a sole emphasis on the learning of English, whereas others advocate for continued language growth in English and in the child's native language. Arguments focus on the role of the public school in providing a common language that can produce national unity. Although few argue against the importance of learning English, questions are raised about whether national unity depends on English only as opposed to English plus additional languages. With regard to the learning of English, one side advocates for an immersion approach that prohibits use of the child's native, first language. Immersion is believed to provide the child with motivation and language input for becoming a fluent English speaker. The other side argues that stripping children of their native language also strips them of their culture and heritage. Further, these advocates point to studies that show that learning English is not inhibited by continued language growth in a native language or by bilingual educational programs. Learning to read in one's native language has been shown by research studies to provide a useful foundation for students learning to read in English.

At the secondary and postsecondary level, students learn the language of a broad range of disciplines. They must learn how to argue in discipline-specific ways and to read and write discipline-specific texts each with their own set of language

conventions. Studies have suggested, however, that in some classrooms and schools there is little difference in the texts or written assignments across disciplines. In both science and social studies, for example, students may encounter the same pattern of reading a textbook chapter and answering end-of-chapter questions.

### Learning through Language

Learning in classrooms is primarily accomplished through language. Teachers lecture, ask questions, orchestrate discussions, and assign reading and writing tasks. Students engage in academic tasks through reading, writing, exploring the Internet, giving verbal answers to teacher questions, listening to teacher lectures and student presentations, participating in whole-class and instructional peer group discussions, memorizing written text and vocabulary, and so on. A major thrust of classroom research since the 1970s has focused on the following question: What forms of classroom language practice facilitate what kinds of learning?

One classroom language practice of interest to educational researchers has been *scaffolding*. Scaffolding is the process through which teachers and students interact with each other by building on each other's immediately previous statement or utterance. For example, after making a statement, a teacher might ask a student a question intended to help the student elaborate or probe the academic topic a bit further. The student, building on the teacher's question or comment, produces a statement with more depth, complexity, or insight. The teacher might then ask another question to scaffold the learning even further, and so on. Through scaffolding, teachers may be able to help students explore and understand academic issues beyond what they are able to do on their own. Scaffolding can occur between teachers and students and also among students.

Another classroom language practice that has received a great deal of attention from educational researchers has been the teacher initiation–student response–teacher feedback/evaluation sequence (known as I-R-F). It is also referred to as the asking of known-information questions and recitation questioning. Of concern to researchers and educators are the constraints that such a conversational structure places on academic learning. I-R-F sequences rarely provide students with opportunities to provide long or in-depth responses, and the

knowledge displayed is contextualized by feedback or evaluation that subsequently comes from the teacher. I-R-F sequences rarely allow opportunities to explore explanations or to debate issues. The teacher always generates the topics, and thus students do not have opportunities to ask questions. Further, I-R-F sequences provide students with few opportunities to practice the creation of extended spoken text. Research on I-R-F sequences has also shown, however, that they may be more complex and malleable than previously recognized. For example, instead of just providing an evaluation of the correctness of a student response, a teacher might provide additional information and *revoice* a student response in a way that models for students how to phrase the statement in the academic jargon. Such revoicings can be considered a kind of scaffolding. I-R-F sequences may also be useful to display to the whole class what counts as the knowledge for which they are accountable. And I-R-F sequences may also be used by teachers as a classroom management tool, ensuring that students complete assignments and that they are paying attention.

A third classroom language practice that has received a lot of attention has been sharing time (also known as show-and-tell). Sharing time provides an opportunity for young children to develop narrative performance skills such as topic coherence, sequencing of events, structuring narrative events, and adjusting a narrative to an audience. Research shows that how students construct a narrative during sharing time may reflect narrative practices from their own families and communities. In such cases, the narrative produced by the child may differ from the narrative models that a teacher is using to evaluate the child's language performance, and as a result the teacher may negatively evaluate the child. The research on sharing time and similar classroom language practices shows that there is great variation in the narrative models, structures, and devices used across cultures and that children may experiment with many different types of narratives. Children adopt and adapt narrative models from a broad range of sources. In addition to suggesting the need for educators to be sensitive to cultural variation in narrative performance and in assessment of children's language abilities, the studies of sharing time show the close connections among education, language, and cultural variation.

Beyond questions about the effectiveness of various classroom language practices are questions

about who is able to engage in what language practices and language processes, when, and where. In other words, what constitutes equitable classroom language practices? Research on turn-taking practices has shown that a broad range of factors influence who gets a turn to talk during classroom conversations and who is less likely to get a turn. These factors may include race, gender, class, native language, and where the student is seated, among others. Some students may get or seek few turns to talk. Those students who do not get or seek turns to talk and who feel alienated from the classroom are sometimes referred to as having been *silenced*. Although students can be silenced by the behavior of the teacher or of other students, more often silencing involves a deeper social process whereby a student is inhibited from bringing into the classroom his culture, language, heritage, community, personal experience, and so on.

### Learning about Language

Perhaps the most obvious classroom practice for learning about language is through the study of grammar and spelling. As linguists point out, the grammar taught in school is a prescriptive grammar and is not what linguists mean by grammar (they mean a descriptive grammar). For those students who use Standard American English, prescriptive grammar is often very close to the language they speak. But for students who speak a variation of English other than Standard English or who speak African-American Language (which is also referred to as African-American English, Black Dialect, and Ebonics, among others), the teaching and learning of prescriptive grammar does not necessarily map onto the language they speak, and thus they are learning about a language different from the language they speak.

Another typical classroom practice for learning about language is the instruction of a second language. Learning a second language can mean one of two things: the learning of a foreign language (such as the learning of Latin, French, and Spanish in the United States) or the learning of English by those in the United States whose native language is not English. It is often the case that the teaching of a second language includes coverage of the grammar, vocabulary structures, and history of the language.

Beyond the teaching of prescriptive grammar and the explicit teaching of a second language, there is very little taught about language in K–12 class-

rooms. Although there have been experimental and one-off programs in K–12 schools that have taught students the practices of linguists, engaged them in sociolinguistic studies, helped them develop language autobiographies, and sensitized students and teachers to language variation, there exists no broad-based trend.

### African-American Language and Classroom Education

The lack of education about language and about language variation may explain, in part, the strong popular reaction to the issue of African-American Language and classroom education. In Ann Arbor, Michigan, and in Oakland, California, the issue of African-American Language and education created controversy. Despite substantial linguistic evidence as to its nature and characteristics, some observers characterized African-American Language as a non-language, as slang, or as sloppy English. As stated by a federal court in Ann Arbor in 1978 (in the case of *King v. Board of Education*), teachers sometimes negatively evaluated students' academic abilities and potential because they spoke African-American Language. The court offered a remedy designed to provide educators with the knowledge they needed to make appropriate assessments of students' academic abilities. In the popular press and in the general public there was a great deal of misunderstanding about the issues involved in the court case, with many mistakenly assuming that recognition of African-American Language as a language was either an attempt to force teachers to teach in African-American Language or an attempt to not teach African-American students to use Standard English effectively.

A similar problem occurred in 1996 when the Oakland School Board created a policy that recognized Ebonics as a language. It was widely assumed by the public that the board was recommending the use of African-American Language as a medium of instruction, and hence was abandoning African-American students to what was assumed to be a second-rate curriculum. Again popular views included mistaken assumptions: that African-American Language was not a language, that the Oakland School Board would not provide instruction in the effective use of Standard English, and that speakers of African-American Language would never be successful in the workplace. Both in the documents on which the resolution was based and in their response to the

controversy, however, the Oakland School Board made clear that their resolution was an attempt to focus attention on the educational needs of those students who spoke African-American Language and to provide them with effective instructional programs for reading, writing, academic subjects, and the learning of Standard English. The members of the board pointed out that their resolution was built on established linguistic principles and knowledge and on proven educational practices. In 1997 the Linguistic Society of America passed a resolution supporting the resolution of the Oakland School Board. That resolution pointed out that African-American Language was not slang, sloppy, or incorrect and asserted the importance of the maintenance of what the society termed "vernacular" languages.

The controversy over African-American Language in education points to the complex of relationships among language, education, national politics, and cultural politics. The languages that are spoken in schools, the languages that are taught, the use of language for learning and instruction, are all more than simple matters of pedagogical effectiveness. The definition and use of language and language education in schools are part of broader cultural and political debates about how the nation will be defined and about the structure of power relations among various ethnic, racial, economic, and linguistic groups.

*See also:* BILINGUALISM, SECOND LANGUAGE, AND ENGLISH AS A SECOND LANGUAGE; FOREIGN LANGUAGE EDUCATION; LANGUAGE ACQUISITION; LANGUAGE ARTS, TEACHING OF; LANGUAGE MINORITY STUDENTS; LITERACY AND CULTURE.

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DAVID BLOOME

## LANGUAGE ARTS, TEACHING OF

*Language arts* is the term typically used by educators to describe the curriculum area that includes four

modes of language: listening, speaking, reading, and writing. Language arts teaching constitutes a particularly important area in teacher education, since listening, speaking, reading, and writing permeate the curriculum; they are essential to learning and to the demonstration of learning in every content area. Teachers are charged with guiding students toward proficiency in these four language modes, which can be compared and contrasted in several ways. Listening and speaking involve oral language and are often referred to as *primary* modes since they are acquired naturally in home and community environments before children come to school. Reading and writing, the written language modes, are acquired differently. Although children from literate environments often come to school with considerable knowledge about printed language, reading and writing are widely considered to be the school's responsibility and are formally taught.

A different way of grouping the language modes is according to the processing involved in their use. Speaking and writing require constructing messages and conveying them to others through language. Thus they are “expressive” modes. Listening and reading, on the other hand, are more “receptive” modes; they involve constructing meaning from messages that come from others' language. (For those who are deaf, visual and spatial language modes—watching and signing—replace oral language modes.)

When one considers how children learn and use language, however, all of these divisions become somewhat artificial. Whatever we label them, all modes involve communication and construction of meaning. In effective language arts teaching, several modes are usually used in each activity or set of related activities. For example, students in literature groups may read literature, discuss it, and write about it in response journals. In 1976 Walter Loban published a study of the language growth of 338 students who were observed from kindergarten through grade twelve. He found positive correlations among the four language modes both in terms of how students developed competency in each, and of how well students ultimately used them. His study demonstrated the inter-relationships among the four language modes and influenced educators to address and more fully integrate all four of them in classrooms.

### Models of Language Arts Instruction

Many changes in language arts instruction have taken place in American schools since 1980. To understand these changes, one must be conversant with the three basic models that have given rise to variations in language arts curriculum over the years: the heritage model, the competencies model, and the process or student-centered model. Each model constitutes a belief system about the structure and content of instruction that leads to certain instructional approaches and methods. The *heritage model*, for example, reflects the belief that the purpose of language arts instruction is to transmit the values and traditions of the culture through the study of an agreed-upon body of literature. It also focuses on agreed-upon modes and genres of writing, to be mastered through guided writing experiences. The *competencies model*, on the other hand, emanates from the belief that the chief purpose of language arts instruction is to produce mastery of a hierarchy of language-related skills (particularly in reading and writing) in the learner. This model advocates the teaching of these skills in a predetermined sequence, generally through use of basal readers and graded language arts textbooks in which the instructional activities reflect this orientation. The majority of adults in this country probably experienced elementary level language arts instruction that was based in the competencies model, followed by high school English instruction that primarily reflected the heritage model. Instruction in both of these models depends heavily on the use of sequenced curricula, texts, and tests.

The third model of language arts instruction, the *process model*, is quite different from the other two models. The curriculum is not determined by texts and tests; rather, this model stresses the encouragement of language processes that lead to growth in the language competencies (both written and oral) of students, as well as exposure to broad content. The interests and needs of the students, along with the knowledge and interests of the teacher, determine the specific curriculum. Thus reading materials, writing genres and topics, and discussion activities will vary from classroom to classroom and even from student to student within a classroom.

“Authentic” assessment is the rule in these classrooms, that is, assessment that grows from the real language work of the students rather than from formal tests. Clearly the process model leads to more flexible and varied curriculum and instruction than

the other two models. While the heritage and competencies models have come under criticism for being too rigid and unresponsive to student differences, the process model has been criticized as too unstructured and inconsistent to dependably give all students sufficient grounding in language content and skills. In actuality, teachers of language arts generally strive to help their students develop proficiency in language use, develop understanding of their own and other cultures, and experience and practice the processes of reading and writing. Thus it seems that the three models are not mutually exclusive. They do, however, reflect different priorities and emphases, and most teachers, schools, and/or school systems align beliefs and practices primarily with one or another model.

### Focus on Outcomes

From a historical perspective, marked shifts in language arts instruction have taken place. In the early twentieth century, textbooks and assigned readings, writing assignments, and tests came to dominate the language arts curriculum. Instruction was characterized by a great deal of analysis of language and texts, on the theory that practice in analyzing language and drill in “correct” forms would lead students to improved use of language and proficiency in reading, writing, and discourse. Instruction was entirely teacher-driven; literature and writing topics were selected by the teacher; spelling, grammar, and penmanship were taught as distinct subjects; and writing was vigorously corrected but seldom really taught in the sense that composition is often taught today. In the 1980s a shift toward the process model emerged in the works of many language arts theorists and the published practices of some influential teachers including Donald Graves, Lucy M. Calkins, and Nancie Atwell. In 1987 the National Council of Teachers of English and the Modern Language Association sponsored a Coalition of English Associations Conference. Educational leaders from all levels came together at the conference to discuss past and present language arts teaching and to propose directions and goals to guide the teaching of language arts in the years leading up to and moving into the twenty-first century. The conference report specified the ideal outcomes of effective language arts instruction, in terms of the language knowledge, abilities, and attitudes of students. These outcomes were largely process oriented, as illustrated by the following examples of outcomes for students leaving the ele-

mentary grades, as reported by William Teale in *Stories to Grow On* (1989):

- *They will be readers and writers*, individuals who find pleasure and satisfaction in reading and writing, and who make those activities an important part of their everyday lives.
- *They will use language to understand themselves and others and make sense of their world*. As a means of reflecting on their lives, they will engage in such activities as telling and hearing stories, reading novels and poetry, and keeping journals.

Principles to guide curriculum development evolved from the conference participants’ agreed upon student outcomes, and, like the outcomes, the principles were broad and process-focused. For example, two of the original principles are: *Curriculum should evolve from a sound research knowledge base* and *The language arts curriculum should be learner-centered*. Elaborations on these and other curriculum goals deviated from earlier recommendations in that they included classroom-based ethnographic research, or action research, as well as traditional basic research in the knowledge base that informs the teaching of language arts. There was also agreement that textbooks serve best as resources for activities, but that the most effective language arts curricula are not text driven; rather they are created by individual teachers for varying communities of students.

### Language Arts Standards

During the 1990s a movement toward greater accountability in education gained momentum, leading to the development of articulated standards. Standards grow from the endeavor to link curriculum and instruction with specific outcomes—what students can demonstrate they know and are able to do. In response to this movement, the National Council of Teachers of English (NCTE) and the International Reading Association (IRA), two of the leading professional organizations in the language arts field, joined in developing a common set of national standards for the English Language Arts. These standards are more specific, detailed, and comprehensive than the guidelines from the earlier coalition conference, although that work provided a starting point for the development of the national standards. Advances in technology and communication have been rapid since 1987. In the national standards, the definition of English language arts in-

cludes viewing and visually representing as well as reading, writing, listening, and speaking. Perhaps the factor that has had the greatest impact on American schools is the immigration that has led to steadily increasing linguistic and cultural diversity in the population. The changing demographics of school populations are reflected in the newer national standards; students for whom English is not the first language are explicitly considered in the goals and recommendations.

### **IRA/NCTE Standards for the English Language Arts**

The following standards are taken from *Standards for the English Language*, published in 1996 by the National Council of Teachers of English.

Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.

Students read a wide range of literature from many periods in many genres to build an understanding of the many dimensions (e.g., philosophical, ethical, aesthetic) of human experience.

Students apply a wide range of strategies to comprehend, interpret, evaluate, and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies, and their understanding of textual features (e.g., sound-letter correspondence, sentence structure, context, graphics).

Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.

Students employ a wide range of strategies as they write and use different writing process elements appropriately to communicate with different audiences for a variety of purposes.

Students apply knowledge of language structure, language conventions (e.g.,

spelling and punctuation), media techniques, figurative language, and genre to create, critique, and discuss print and non-print texts.

Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources (e.g., print and non-print texts, artifacts, people) to communicate their discoveries in ways that suit their purpose and audience.

Students use a variety of technological and informational resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge.

Students develop an understanding of and respect for diversity in language use, patterns, and dialects across cultures, ethnic groups, geographic regions, and social roles.

Students whose first language is not English make use of their first language to develop competency in the English language arts and to develop understanding of content across the curriculum.

Students participate as knowledgeable, reflective, creative, and critical members of a variety of literacy communities.

Students use spoken, written, and visual language to accomplish their own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information).

### **Evolving Issues**

Evolving issues in language arts pedagogy hark back to the three models of instruction described earlier. The IRA/NCTE standards are process oriented, for the most part. Many individual state departments of education have developed their own language arts standards for students at various grade levels; these range from rigidly imposed standards and controlled curricula in the tradition of the skills-based model to process oriented standards and a good deal of local control over the curriculum. Educators are left with the task of reconciling such differences and designing curriculum and assessments that reflect their highest priorities. Issues similar to those in the United States have led to reforms in England—a leader, for many years, in the implementation of meaning-

based instruction in reading and writing. Recent reforms in England and Ireland maintain an emphasis on integrating language arts in instruction, while recommending increasingly structured curriculum and assessments geared toward student achievement of specified outcomes.

Large-scale immigration, one of the most important social developments of the late twentieth and early twenty-first centuries, is a global phenomenon, as noted in *Children of Immigration* (2001). As a result, increasing numbers of districts, schools, and educators in other countries as well as in the United States are faced with the necessity of adjusting the curriculum and the use of standards to make them appropriate for students of multiple language and cultural backgrounds. The tension between students' individual backgrounds and developmental levels on the one hand, and universal achievement goals in the language arts as reflected in standards on the other, provide the largest challenges to language arts teachers of the early twenty-first century.

*See also:* CHILDREN'S LITERATURE; INTERNATIONAL READING ASSOCIATION; NATIONAL COUNCIL OF TEACHERS OF ENGLISH; READING, *subentry on* TEACHING OF; SPELLING, TEACHING OF; STANDARDS FOR STUDENT LEARNING; WRITING, TEACHING OF.

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MARGO WOOD

## LANGUAGE MINORITY STUDENTS

#### SCOPE

Reynaldo F. Macías

#### IMPACT ON EDUCATION

Reynaldo F. Macías

#### SCOPE

Some nations across the globe are becoming more linguistically diverse as a result of the transnational migration of peoples. Others are experiencing an increase in their language diversity as a result of differential growths of their populations, resurgence of language and ethnic nationalism, language revitalization movements, and the official recognition and promotion of multiple languages. Governments may be recognizing the needs of regional or immigrant populations within their borders, or they may be recognizing the fruits of foreign language programs in their nations. This increase in linguistic diversity is taking place at the same time that the estimated total number of different languages in the world is decreasing. While most nations have a multilingual history they recognize as part of their heritage, some view themselves as predominantly monolingual in a dominant language—the United States is one such country. Language diversity in the United States is

not a new phenomenon, but language minorities begrudgingly receive recognition and continue to struggle for acceptance.

### Who Are Language Minorities?

Around the world, defining language minorities often sparks controversy. What constitutes a language? How big must a group be to be identified and recognized? In the United States there are some generally accepted definitions and concepts for describing these populations. Within the national population, there are groups of individuals who may be called *language minorities* or *non-English-language background* populations. These individuals are people who speak a language other than English, whether or not they also speak English, and/or they may have grown up, or lived in, an environment where a non-English language was present and influential (whether they were born in the United States or any of its jurisdictions, or because they were born and raised in a different country). It also includes the deaf and hearing-impaired. Often, there is also an ethnic dimension to these groups where language helps define identity. They are referred to as “minorities” not only because they are not a numerical majority in the nation (although they may be at more local levels), but also because they often wield little influence or power within the country. American Indians may be considered language minorities even if they speak only English because their history includes a non-English language and repressive language and cultural policies by the U.S. federal government, so that their current use of English was affected by that history.

Very often there is a concern for a subgroup of the language minority population that does not speak, understand, read, or write the dominant language—English—well enough to participate effectively in an English-only classroom. This group has been referred to in many government documents and academic studies as persons who are *non-English proficient* or *limited English proficient*. Beginning in 2000, some states have changed their official definitions for language minority students who do not know enough English to participate effectively in an English-only classroom and have begun to refer to them as *English language learners*. There is some controversy over whether this new label is sufficiently descriptive to be adequate and whether it is distinctive enough, because all school students in the United States are required to learn and master En-

glish throughout their schooling, whether or not they knew English when they entered the schools, and thus are also English language learners.

### The Size and Diversity of the Language Minority Population

In 2000 there were nearly 45 million people in the United States, about 17.6 percent of the national population (not including outlying jurisdictions such as Puerto Rico and Guam) over the age of five years, who spoke a language other than English at home. This was an increase of more than 14 million (41.1%) from the total in 1990. The largest single language spoken in the United States, after English, was Spanish, with about 26.8 million speakers (almost 60 percent of all persons who spoke a language other than English; see Table 1). The proportion of persons who spoke a language other than English who were approximately school-age (five to seventeen years of age) was just over one-fifth (21.7%) in 2000.

Three-fourths of the people who could speak a language other than English also reported that they could speak English very well or well, reflecting a high degree of bilingualism (see Table 2). This proportion varied slightly by language groups, with almost 72 percent of Spanish speakers, 86.8 percent of those who spoke another Indo-European language, 77.3 percent of those who spoke an Asian or Pacific Islander language, and 90.2 percent of those who spoke other non-English languages being able to speak English very well or well.

The number of language minority students in the public schools who were not proficient enough in English to participate effectively in an English-only classroom is more difficult to estimate than the total language minority population. The estimate for the fifty states and the District of Columbia of limited English proficient (LEP) students for 2000 was about 3.7 million. This represented about 8 percent of the total public school K–12 enrollment for the nation (46.6 million) and was an increase of about 10 percent over 1997–1998.

The largest numbers of LEP students were in the larger population states—California (about 1.5 million LEP students representing 24.9 percent of the state’s public school enrollment), Texas (555,000; 13.9%), Florida (235,000; 9.9%), New York (229,000; 8%), and Illinois (144,000; 7.1%).

In addition to the LEP students in the fifty states and the District of Columbia, there were about

TABLE 1

	1980 Total		1990 Total		2000 Total	
	Number	Percent	Number	Percent	Number	Percent
Non-English language speakers	22,973,410	100.0	31,844,979	100.0	44,945,452	100.0
5-17 years	4,529,098	19.7	6,322,934	19.9	9,769,120	21.7
18+ years	18,444,312	80.3	25,522,045	80.1	35,176,332	78.3
Spanish	11,117,606	100.0	17,345,064	100.0	26,771,035	100.0
5-17 years	2,947,051	26.5	4,167,653	24.0	6,650,575	24.8
18+ years	8,170,555	73.5	13,177,411	76.0	20,120,460	75.2
Other	11,855,804	100.0	14,499,915	100.0	18,174,417	100.0
5-17 years	1,582,047	13.3	2,155,281	14.9	3,118,545	17.2
18+ years	10,273,757	86.7	12,344,634	85.1	15,055,872	82.8

SOURCE: Courtesy of author.

685,600 LEP students in the seven outlying U.S. jurisdictions (Guam, Marshall Islands, Micronesia, Northern Mariana Islands, Palau, Puerto Rico, and the Virgin Islands). In four of these U.S. jurisdictions (Marshall Islands, Micronesia, Palau, and Puerto Rico), the entire public school enrollment was reported as limited in their English proficiency. Every state and jurisdiction in the United States included LEP students in their public schools in 2000, ranging from just under 1 percent to 100 percent.

The language backgrounds of these LEP students was fairly stable over the 1990s. The largest language background reported for the public school enrollment by the states in 2000 was Spanish (76.6 percent of all students with limited proficiency in English), followed by Vietnamese (2.3%), Hmong (2.2%), Haitian and French Creole (1.1%), Korean (1.1%), and Cantonese (1%). All other languages were represented with less than 1 percent of LEP students.

Regarding the literacy abilities of the national population, data from 1992 indicated that 89 percent of the national adult population, sixteen years and older (191.3 million), reported being literate (able to read and write very well or well) in English only, 7 percent biliterate in English and another language, and 3 percent literate only in a language other than English. About 1 percent reported they were not literate in any language.

While all of these data provide a profile of the language and literacy diversity of the United States, the data describe an even more diverse population. Many of these students were foreign born and immigrants or refugees from different parts of the world.

Many more were children of immigrant or refugee parents, and a smaller number were native born of native-born parents. The number and proportion of limited English proficient students tended to coincide with those groups who have a large proportion of foreign-born members—Latinos and Asian Americans in particular. Immigration from Mexico, Latin America, and Asia was relatively high in the 1980s and 1990s—representing, during the 1990s, 27.7 percent, 13.5 percent, and 22.5 percent, respectively, of all immigration (in comparison, immigrants from Europe and Canada represented 11.4 percent and 1.7 percent, respectively, of all immigrants during the 1990s). This reflects, in part, the reversal of the explicitly selective and restrictive immigration policy priorities favoring northern and western Europe in force between 1917 and 1965. It also reflects the foreign policies of the federal government in receiving refugees from Cuba beginning in the 1960s, Vietnam in the 1970s, and Communist Eastern Europe in the 1980s, and its involvement in the civil wars of El Salvador and Nicaragua during the 1980s and 1990s.

Aside from the association with immigration, language diversity is also correlated with low academic achievement—primarily as a result of the inability of the public school systems in the country to meet the communicative and learning needs of these students. There is much controversy over whether to teach limited English proficiency students using English alone as the language of instruction or to allow the use of languages other than English for communicative, informational, and instructional purposes in the classroom—despite evidence domestically and

TABLE 2

Non-English-speaking populations, United States, 2000, by English ability							
Language	Total		English ability of non-English-language speakers (percent)				
	Number	Percent	Total	Very well	Well	Not well	Not at all
Population, 5+ years	254,762,736	100.0	—	—	—	—	—
Speak English only	209,817,283	82.4	—	—	—	—	—
Speak a non-English language	44,945,452	100.0	100.0	56.6	20.1	16.0	7.4
Spanish	26,771,035	59.6	100.0	53.4	18.5	18.0	10.1
Indo-European language	9,493,791	21.1	100.0	67.2	19.6	10.4	2.8
Asian Pacific							
Islander language	6,884,637	15.3	100.0	50.5	26.8	17.7	5.0
Other languages	1,795,989	4.0	100.0	70.5	19.7	7.5	2.2

SOURCE: Courtesy of author.

globally that bilingual instruction can work well. This is complicated by the lack of adequate numbers of teachers able and credentialed to teach bilingually. In addition, a nativist English-only movement begun in the early 1980s has targeted bilingual education and the public and private uses of non-English languages for elimination through efforts to make English the official languages of jurisdictions, to mandate English as the dominant or exclusive language of instruction, or to otherwise officially regulate or prohibit the use of non-English languages. This movement has aligned itself with restrictive immigration groups and policies and has created a chilling climate for the use of languages other than English by individuals in schools as well as in workplaces.

### Language Trends

The changes in the numbers of speakers of languages across generations is known as language shift or maintenance. There are many reasons for each of these changes. Research involving European immigrants revealed that the dominant pattern established in the United States during the first half of the twentieth century was a three-generation immigrant process: the immigrant generation was monolingual or dominant in their non-English language, the children born and raised in this country tended to be bilingual in their heritage language and English, and their children were often monolingual in English. This research did not take into account the different intergenerational language patterns of indigenous language minorities, such as American Indian communities/nations, nor did it take into account those colonial language groups incorporated into the

country through war, such as Mexicans in the southwest, or the people of Puerto Rico.

More recent research indicates that the language shift from the non-English heritage language to English takes place much more quickly today—some even argue within a single generation—as a result of the more universal schooling and the much longer time spent in schools than in the beginning of the twentieth century. This change also seems to be a result of the increasing influence of the communications media, which are dominated by monolingual English networks and programming; the chilling atmosphere created by the English-only movement and other nativist activities; and other factors. Most of these studies have been short-term studies of individual language change or para-longitudinal in design. They have not been life-cycle studies or even biographical retrospectives of individuals that reflect different language uses at different times of a person's life.

One often-stated situation that results from these changes involves the interactions between parents who are dominant or exclusive speakers of a language other than English and their children who begin to acquire English, especially through the schools, and whose acquisition and development of the non-English language is arrested. In the case of many of these non-English languages, minority children often refuse to speak the non-English language with their parents and sometimes are unable to do so, thereby disrupting the natural and nurturing interactions within these families. This situation also results from the recognition of the low status that many non-English languages have in the country and the advice of many well-meaning but uninformed and ill-advised teachers who believe that one

must give up the heritage language in order to acquire English, and so they advise the students and their families to stop using the non-English language.

What these complex processes of language change mean is that the number of English monolinguals increases among language minorities across generations, at the same time that the numbers of speakers of these non-English languages increases in the country, fed by immigration, cross-generational language sharing, and language revitalization efforts.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; LANGUAGE AND EDUCATION; LITERACY AND CULTURE; RACE, ETHNICITY, AND CULTURE.

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REYNALDO F. MACÍAS

#### IMPACT ON EDUCATION

In 2000, the number of school-age persons (five to seventeen years of age) who spoke a language other than English in the United States was 9,769,120, or about one out of every five students (the national enrollment of public school students in 2000 was 46,857,321). This assumes, for the sake of argument,

that all of these school-age language minority children and youths were in the public schools. About 8 percent (3.7 million students) of the national public-school enrollment in 1999–2000 consisted of language minority students who were not able to use English well enough to participate effectively in an English-only classroom. The proportion of the total enrollment varies by state: In California, 25 percent of the public-school enrollment in 1999–2000 was *limited English proficient* (LEP), while the proportion was 24 percent in New Mexico, 15 percent in Alaska and Arizona, 14 percent in Texas, and 12 percent in Nevada. LEP students represent nearly 100 percent of the total public-school enrollment in the outlying areas of the United States (Marshall Islands, Micronesia, Palau, and Puerto Rico).

The diversity of students with limited ability in English is great. Some of these students are foreign-born immigrants to the United States—some with and some without prior schooling. Some of them are literate in their native language. They came to the United States at different ages and for different reasons—some to escape civil war or strife and political persecutions, while some were attracted to the opportunities in the United States, and still others drawn by its various programs of refuge and asylum. Most LEP students, however, are born in the United States to immigrant parents, and they start school with a native language other than English and with varying degrees of speaking ability in English (and so are increasingly referred to as *English language learners*, or ELLs).

The responses of the public schools to this language diversity vary, but they are generally neither comprehensive nor adequate. There are many reasons this is the case, not the least of which is the mismatch between the needs of the students and the resources and expectations of the school systems. A second reason is the ideologically based resistance to meeting language minority student needs promoted by the ethnocentric English-only movement and pro-assimilation groups throughout the country. These groups influence public and educational policy, curriculum and instruction, and school reform. The issues facing language minority students in the public schools are thus varied. Those faced by students with limited proficiency in English are particularly salient—involving the acquisition and development of English, access to the core curriculum, and high-stakes assessments.

## Learning English

Many surveys of immigrants to the United States have concluded that learning English is one of three priorities they have immediately after arriving in the country—along with gaining employment and finding a place to live. Parents of native-born language minority students also respond that they see learning English as a high priority for their children, even while they desire their children to keep their heritage languages. Unfortunately, despite the increasing numbers and proportions of language minority LEP students, most schools are neither prepared nor equipped to meet the needs of these students in teaching them English, or in providing them access to the core curriculum in other subject areas. Often the schools will sacrifice access to the core curriculum in favor of first teaching English to these students.

Students who speak a language other than English will often learn to speak and understand English before learning to read and write it, in and out of school. Much of this English-language acquisition and development depends on the age of their arrival in U.S. schools. The earlier they arrive, the more they are exposed to English—and the earlier and more easily they acquire a native-like pronunciation of the language. However, the older they are in age when they arrive, the more easily they are able to develop vocabulary in English (and the more likely they are to acquire English pronunciation with an accent). How much prior schooling students have received in their country of origin is also a factor affecting English-language acquisition. The more schooling they have had before they enter U.S. schools, the quicker they are able to adjust and excel. The more literate they are in their native language, the easier it is to learn to read and write English and succeed in U.S. schools. In addition, the kind of program students receive when they enter U.S. public schools can affect the learning of English.

Language minority students will often learn a conversational form of English before they learn an academic form of the language. It may take a relatively short time (one to three years) to gain fluency in conversational English, but it will take longer (five to seven years) to be proficient in academic English, assuming adequate instruction.

The acquisition and development of English reading and writing for language minority students who are limited in their English proficiency depends

as well on whether the students have already learned to read and write in their non-English language. If these students have learned to read in their native language first (*mother-tongue*, or *native-language literacy*), then much of the general knowledge about reading (e.g., one can make sense of print) can be transferred to learning English reading and writing (*second-language literacy*). If a student's native language uses a phonemic or alphabetic system of writing, then additional knowledge about the writing system can also be transferred to second-language literacy in English.

It is a more difficult task for a language minority student who is not proficient in English to learn how to read and write initially in English. These students must develop their oral English-language abilities *and* learn how to read and write English. The older the student, the more frequently this is required by the schools to be done simultaneously rather than sequentially (oral language development before literacy). This is more difficult for these language minority students than for native English speakers because it is being done in a more compressed time period and includes learning more language skills at one time than what is required of native English speakers (who bring to elementary school a fully-developed ability in English).

## Language of Instruction

Most language minority students with limited English abilities receive their instruction entirely through English. While there is not much good data on the services that LEP students receive in the schools, some generalizations can be made based on several national surveys. In 1993, less than 50 percent of elementary school students limited in their English proficiency received at least a quarter of their instruction in their native language. In middle schools, the percentage was 28 percent, and in high schools, 25 percent. This study also indicated that LEP students of Spanish-language background were more apt to receive this instruction in their heritage language than LEP students of other language backgrounds. In 1998, twenty-six states (which included about 40 percent of the national LEP student enrollment for that year), provided information to the federal government on the language of instruction used to teach these students. They reported that almost 26 percent of all LEP students received some of their instruction in the non-English language through bilingual education (academic instruction through

English and a non-English language); while 14 percent received all of their instruction in English only—through various forms of English-as-a-second-language programs. About 12 percent of these students received no special instructional services at all. The language of instruction was not reported for the other 48 percent of LEP students.

The size of the language minority LEP enrollment with a common language background seems to be a good predictor of the use of a non-English language for instruction. In a 1998 survey of big city school districts, the use of a non-English language (along with English) as the language of instruction was found to be more frequent for the largest language group of students of the district (usually Spanish, except for two school districts in Minnesota, which reported Hmong language LEP students as their largest group), and usually in the elementary grades. Otherwise, the preferred language of instruction was exclusively English through some form of an English-as-second-language program.

California enrolls about 40 percent of all of the LEP students in the country. The language of instruction for the great majority of these students has been exclusively English since the adoption of an initiative in 1998 that mandated the language of instruction for the state to be English and the default program for LEP students to be structured English immersion (a form of English-as-second-language instruction in which English is used exclusively or predominantly for instruction). In the spring of 2001, California school districts reported that 46.6 percent of the 1,511,299 LEP students in the state were receiving all of their instruction in English; another 26.6 percent were receiving almost all of their instruction in English, but with a small amount of the non-English language used for communication support; and 5.4 percent were receiving no special instructional services at all. Only 11.1 percent of California's LEP students were receiving bilingual education—academic instruction in both languages—as compared to 30 percent prior to the adoption of the 1998 initiative.

While most language minority students with limited English abilities are receiving some special instructional services, it is clear that almost all of these services use English as the medium of instruction. The most successful model of bilingual instruction—two-way bilingual immersion—was used in only 260 programs in twenty-three states in 2001. In addition, only half of the those enrolled in these pro-

grams were LEP students—hardly a major impact on the instructional services received by this population.

### **Access to the Core Curriculum**

The single most difficult aspect of the schooling of language minority LEP students is providing them adequate access to the core curriculum. Most school districts have opted to enforce a policy of learning English first—before these students can be taught other subject matter. This puts language minority LEP students in a precarious academic situation. Many schools are beginning to require special preparation, professional development, and even licensing for their teachers to instruct these students in English. Many language minority students who enter the schools early in their life can sometimes catch up academically with native English speakers when they work harder than these peers. However, the concentrations of language minority students are in high-minority, high-poverty schools, which are often under-resourced and struggle with hiring a fully credentialed and qualified teaching workforce. Receipt of adequate instruction is the exception, not the rule, for language minority students.

### **School–Home Communication**

The absence of teachers and other school staff who can communicate with parents of language minority students is also a problem in informing parents about the academic performance of their children, about the activities of the schools, or even about the expectations of the teachers. As language minority students, especially children, acquire some English, they often abandon the use of their heritage language. This creates another communication difficulty between children and parents in these homes that strains the quality of family interactions.

### **High-Stakes Testing**

During the 1990s the amount and frequency of high-stakes, standardized testing of students increased dramatically. Much of this testing was used as an accountability measure to identify unsuccessful schools and to measure progress towards educational standards set by the states and the federal government. These tests were given exclusively in English to all students. Language minority students with limited English abilities were often excused from this testing in the early 1990s, but increasingly were included throughout the decade and into the first de-

cade of the new millennium. This practice increased despite the fact that LEP students could not understand the language of the tests (which made the results invalid), despite the ethical concerns about such high-stakes testing, and despite the apparent violation of the Office for Civil Rights regulations on language minority testing. In contrast, local school districts tend to use a variety of tests for identification, classification, and reclassification of LEP students, and a set of multiple criteria for these administrative decisions.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; LANGUAGE AND EDUCATION; LITERACY AND CULTURE; TESTING, *subentry on* STANDARDIZED TESTS AND HIGH-STAKES ASSESSMENT.

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## LATCHKEY CHILDREN

*Latchkey child* was a term coined to describe children who wore or carried house keys to school so that they could let themselves into their home when they returned from school. Those children were at home without adult supervision until their parents returned from work, school, or other occupations away from home.

Currently, the term *self care* is used to refer to elementary and middle school children who are without adult supervision during the after-school hours whether they are at home, at friends' houses, or in public places. Preschool children usually have not been included in studies measuring self care because it is considered inappropriate for preschool children to be unsupervised for any amount of time. However, one national study that included preschool children found that 67,000 (less than 1 percent of the preschool population) spent some time in self care. Adolescents attending high school also have not been included in studies of self care because researchers and the public consider it developmentally appropriate for high school students to care for themselves after school without direct adult supervision.

Several studies of large nationally representative samples in the United States have measured how many children are in self care by surveying parents about their children's after school care. Those studies have found that a very small percentage of families use self care as the main arrangement for their elementary and middle school age children. For example, researchers estimate that, overall, 12 percent of children between the ages of five and twelve years old care for themselves at least one afternoon per week. That report is probably an underestimate for several reasons. For one, parents have an interest in underreporting self care. Although very few states have laws governing self care, many people do not perceive self care as an optimal arrangement. For another, most families depend on a patchwork of arrangements during the week. The evidence indicates that self care is used for part of the after-school hours either regularly or on occasion by far more than 12 percent of families with elementary school children. For example, a study in one U.S. city found that approximately 33 percent of the third-grade children, 44 percent of the fourth-grade children, and slightly more than half of the fifth-grade children spent some part of the after school hours in self

care. A recent estimate of the time lag between when schools are dismissed and when parents return from work suggests that time can amount to twenty to twenty-five hours per week. Self care is one type of arrangement that fills in part of that time for the many families struggling to maintain supervision of their children during the after school hours.

Parental discretion is important in determining when and how much self care children experience. In determining when children can be unsupervised, parents often consider age, emotional maturity, and competence of the child. In general, time spent in self care increases with the age of the child. Most parents gradually transition their children to self care. Families usually start using self care by having their children spend short amounts of time unsupervised after school. As children demonstrate that they are mature enough to handle those short bouts of time alone, most parents increase the frequency and duration of self care about the time that children are entering middle school. Often, children of about ten years of age begin to desire greater autonomy than is afforded by many formal after-school programs. At about that age, children sometimes lobby their parents for more time in self care, especially if the children are dissatisfied with available after-school programs.

More boys than girls experience self care during elementary school, probably because parents tend to be more protective of daughters than sons. However, according to the findings of a large nationally representative study, boys and girls are equally likely to be unsupervised after school during eighth grade.

Family and neighborhood characteristics also are factors affecting when and how often children experience self care. Single parents employed full-time use self care more than dual parent families or than families with part-time adult workers or unemployed adults. Contrary to popular belief, children from families with higher incomes spend more time in self care than children from families with lower incomes. The reason for this is probably related to safety considerations because those families with higher incomes usually live in suburban neighborhoods that the parents rate as being safe. Indeed, urban children are in self care less often than suburban and rural children.

Researchers who have studied self care have described variations in the situations unsupervised children are in after school. Some children are alone,

others are with siblings, and yet others are with peers. Generally, children who are with siblings less than fourteen years of age have been considered to be in self care because they are unsupervised by an adult. Some self care children are at home after school. Others are out and about in their neighborhoods and communities. For example, a national study of public libraries found that the vast majority of librarians reported that latchkey children regularly used their libraries as a place to be after school. Other studies in local areas have found that some young adolescents who are unsupervised after school "hang out" with friends at shopping malls, video arcades, parks, and other such public locations.

Teachers and principals have expressed concern about their students who care for themselves after school. Those educators believe that the self-care children are not safe and that the children are at risk for academic and social emotional problems. There is some indication from surveys that the public agrees with them that self-care children are at risk developmentally. Researchers have been interested in investigating the developmental consequences of self care to determine whether those children who experienced self care suffer negative consequences. Surprisingly, despite the concern of educators and the public about safety, few studies have examined the physical dangers of self care. One report from the early 1980s found that self-care children were more likely than supervised children to be injured. No recent studies were found estimating the number of injuries from accidents, fire, or crime when children were unsupervised. Studies from the 1970s and 1980s appeared to report contradictory results about academic, behavioral, and social emotional development associated with self care. Some studies reported that there were no negative effects of self care for children's academic and social emotional adjustment. Other studies reported poorer academic and social-emotional adjustment of children experiencing self care. Since that time, a number of studies described below that were conducted in the 1990s have found that the effects of self care depend on the type and amount of self care, characteristics of the children in self care, and the circumstances in which the children live. Most of the available studies, however, have used small, nonrepresentative samples in one city or state. So, the findings of those studies must be interpreted cautiously.

Characteristics of the children themselves have been found to contribute to outcomes of self care.

The Child Development Project conducted in Tennessee and Indiana by Gregory Pettit and his colleagues investigated the associations between self care during first grade or third grade and developmental outcomes in sixth grade. That longitudinal study of 466 children from economically diverse circumstances took children's previous behavioral functioning into account in analyzing the effects of first-grade self care on sixth-grade functioning. The researchers found that, for children who were well adjusted in kindergarten, there was virtually no relationship between self care experienced during first grade and the children's behavior problems in sixth grade. However, sixth-grade children who experienced self care in first grade and who were above average in aggression and acting out behavior in kindergarten had far higher scores on aggression and acting out behavior problem scales than those children who experienced no self care in first grade.

Researchers from the Child Development Project also considered the child's age as a factor. They found that more self care in either first or third grade (second-grade self care was not measured) was associated with negative academic and social development in sixth grade. Children who experienced more self care during the primary grades received lower grades, lower achievement test scores, and lower teacher ratings of social competence in sixth grade than did children who experienced less than three hours of self care per week in first or third grade.

Deborah Lowe Vandell and Jill Posner followed 216 low-income urban children living in a Midwestern industrial city from third grade through fifth grade and examined the adjustment of the children by the children's age and the type of self care children experienced. They found that the amount of time children spent alone in third grade predicted children's behavior problems in both third and fifth grade. However, the amount of time alone in fifth grade did not predict subsequent behavior problems.

Posner and Vandell also investigated the effect of unsupervised time with peers. The amount of unsupervised time children spent with peers predicted behavior problems at home and school as well as lower academic functioning. Like Posner and Vandell, Michele Goyette-Ewing investigated the association between types of self care and developmental consequences. She studied the after-school experiences of suburban seventh graders. Those unsupervised children who were "hanging out" with peers

were more likely to report behavior problems, alcohol use, susceptibility to negative peer pressure, and lower school achievement than were children who were at home alone or with siblings. Laurence Steinberg found that, among unsupervised middle school students, those who hung out with peers at malls and other public locations were more susceptible to peer pressure than the students who were at a friend's house or at home. Another study of sixth graders conducted by Nancy Galambos and Jennifer Maggs found that girls who hung out with peers after school were more likely to report engaging in problem behaviors than were boys who hung out with peers after school. Taken together, these studies suggest that unsupervised time with peers is detrimental to both the academic and behavioral adjustment of children throughout elementary and middle school.

The amount of time young adolescents spend in self care has been related to their academic, behavioral, and social emotional functioning. The Michigan Middle Start study included 46,000 young adolescents who reported how often and how many hours they were without adult supervision after school. The researchers found that the amount of self care each day mattered a great deal in predicting outcomes. Those young adolescents who experienced self care for less than three hours at a time did not differ from young adolescents who were supervised at all times on depression, self-esteem, behavior problems, or academic success. However, young adolescents who were in self care more than three hours at a time had dramatically lower adjustment scores on all measures when compared to young adolescents who experienced less than three hours of self care. A study of middle school students by Peter Mulhall and his colleagues found that young adolescents in self care more than two days per week used alcohol far more often than young adolescents who were always supervised by an adult after school. Those young adolescents who were not monitored two or more days per week got drunk after school four times more often than their supervised peers. Yet another study, by researchers in Southern California, found that those young adolescents who were unsupervised more than eleven hours per week were truant from school 1.5 times more often than young adolescents who were not unsupervised after school. Researchers who analyzed data from the National Educational Longitudinal Study (NELS) of 1988, a large nationally representative sample of more than 20,000 eighth-grade students, examined associations

between amount of self care and the academic performance and after school activities of those students. Those eighth graders who were unsupervised for more than one hour at a time had lower academic achievement than students who were supervised more often.

One reason that self care might contribute to problematic development is that there are limited activities available for children when they are home alone. For example, the NELS study found that television watching was related to the amount of self care such that more hours spent unsupervised after school predicted more hours of television watching. Television watching has been related to self care in several other studies, as well. There have been many studies on the consequences of watching television for children's academic achievement and aggression. In her longitudinal qualitative study of children in Boston, Deborah Belle found that the children were more likely to be lonely, bored, afraid, and unengaged in productive activities during the time they spent in self care than when supervised. Those negative feelings might be related to rules parents establish for safety purposes such as requiring children to stay in the house alone.

Family and neighborhood characteristics have been related to whether self care is problematic for children. Self care has been associated consistently with problematic adjustment among children who live in distressed circumstances such as low-income families and dangerous inner city neighborhoods. However, self care has not been shown to be detrimental to the development of children from middle class families who live in rural or suburban communities. The Child Development Project investigated associations between self care during first grade and developmental outcomes in sixth grade. The researchers found that the relationships between first-grade self care and sixth-grade externalizing behavior problems (aggression and delinquency) as reported by their teachers (who used a standardized checklist of behavior problems) were more pronounced for children from low-income families than for children from middle-income families. Nancy Marshall and her colleagues studied the after school arrangements of 206 urban first- through fourth-grade children in a multiracial sample in Boston. The children's families ranged in socioeconomic status from low to middle income. The researchers asked parents to report about their children's externalizing and internalizing behavior problems using

scales developed for that purpose. Externalizing behavior problems were measured by parent reports about the conduct disorders, restlessness, disorganization, and hyperactivity of the children; internalizing behavior problems were measured by parent report about the anxiety-shyness and psychosomatic symptoms of the children. Time spent in self care was associated with externalizing behavior problems for the children from lower but not middle income families. Internalizing problems were not related to self care among children from either lower- or middle-income families.

In cross-cultural studies of children conducted in traditional societies, some anthropologists have described developmental benefits for children who care for younger siblings. There have been few investigations of possible developmental benefits of self care in the United States. Goyette-Ewing did investigate that question and failed to find any developmental benefits associated with self care. Self-care children were not found to be more competent or mature than their counterparts who were supervised.

In conclusion, the developmental impact of self care appears to depend on the circumstances. Research findings suggests that child characteristics, type and amount of self care, and family circumstances are factors in the outcomes of self care. Younger children and children who were experiencing behavior problems before self care began appear to be more adversely affected by it. Children and young adolescents who hang out with peers and who spend long amounts of time unsupervised also seem to experience more negative outcomes than other children. Children from low-income urban families also appear to be at greater risk from self care.

*See also:* FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; PARENTING.

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LEE SHUMOW

## LATIN AMERICA AND THE CARIBBEAN

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Countries in Latin America and the Caribbean (LAC) that are undergoing (or expecting to undergo) rapid economic growth are in need of better-trained workers, but the education system in these countries is still far behind the developed world. Latin American nations have tried hard to advance toward universal education and to increase enrollments in secondary and higher education, but they have not been able to improve the quality levels. While universal coverage in primary education is close to being a reality, quality levels in primary and secondary education are rather low and unequally distributed. Higher education has also increased at a fast pace—25 percent of college-age individuals were enrolled in postsecondary institutions in 2001. However, the quality of the higher education faculty is poor, and there is a need for an effective agenda for action.

The 12 billion dollars invested in LAC nations in the 1990s, with the support of the World Bank (WB) and the Inter-American Development Bank (IADB), has been instrumental in providing universal access to primary education (showing that the region really wants to improve its education). The famous Jomteín meeting of 1990 generated the International Education for All program to be implemented in the 1990–2000 decade. A world meeting in Dakar in 2000 discussed a World Report, in which the Education for All evaluation for Latin America shows that 95 percent of each age group eventually enrolls in primary school, but only 33 percent gets some type of infant or preschool education. In addition, socioeconomic factors drastically reduce enrollment in secondary and higher education.

Comparative information on learning in the region—made available through the UNESCO Regional Office for Latin America and the Caribbean (OREALC) regional study on learning in third and fourth grades—shows that the average student in eleven Latin American countries answered about 50 percent of the questions of the UNESCO test correctly, compared to about 85 percent for Cuban students. The study also shows that student scores in rural areas are lower than in urban areas; capital-city scores are better than in smaller urban areas; and private-school scores are better than in public schools. The Third International Mathematics and Science Study (TIMSS 99) confirmed the OREALC findings by that eighth grade Chilean students had lower achievement levels than students in OECD-member countries.

### **Development Expectations and Quality Education**

Demands for better quality education in the LAC region are supported by a growing awareness of the role education played in successful economic changes in East Asia, as well as by recent research on the multiple impacts of education and international comparisons of educational achievement. The experience of East Asian nations has been widely commented on in the LAC region. Mass media and academic groups have noted that better education and reduced inequality contributed to economic growth in East Asia and how, in turn, economic growth contributed to investment in education. Mass media also paid attention to the World Economic Forum's World Competitiveness Report, which showed that the weakest aspect of LAC countries was related to their human resources. This was confirmed by a 2000 report on functional literacy published by the Organization for Economic Cooperation and Development (OECD).

The International Adult Literacy Survey (ILAS) carried out by OECD in 2000 showed that 80 percent of Chilean workers were not able to perform at the minimum levels required to participate in the labor market of a developed country. Given that Chilean students perform above the regional average, the ILAS report confirmed the need to raise the quality of all levels of education. In spite of the low quality of education, the rates of return obtained on the amount of money invested in one additional school year generated by salaries (before the economic crisis of the late 1990s) were near 20 percent for primary

and secondary education and more than 10 percent for higher education. In spite of these important incentives for general training, market salaries have not provided enough incentives for further technical training.

### **Universal Education**

Since the 1960s remarkable progress has been made in LAC countries in expanding access to education and increasing the number of days students attend per year. However little has changed in most classroom processes (e.g., group work, reading and discussion, interviews, visits, formative evaluation, types of questions), and "scores on national and international exams are alarmingly low," according to Partnership for Educational Revitalization in the Americas. More children than ever are involved in the educational system, and access to basic education is almost universal. Primary school access jumped from 60 percent in the early 1960s to more than 90 percent in the 1990s, with enrollment for nine-year-olds close to 95 percent.

In the early twenty-first century, more than two-thirds of eligible children attend secondary school. In addition, between 1960 and 1990, higher education enrollment ratios increased from 6 percent to 25 percent in LAC nations. However, while several countries have established a comprehensive structure for advanced training, the actual research produced by universities has had very little impact on the economies of these countries.

Scholastic productivity is low in LAC nations. Students attend, on average, more than six years of schooling, but students generally pass only four grades. Income inequality has not been a constraint for enrolling in primary education, but it has played a role in the ability to achieve minimal levels of learning and enrollment in secondary education. The majority of public schools have not been able to deliver adequate education on a sustained basis, and research productivity is low in Latin American universities. On the other hand, there are enough successful education projects to suggest that effective reform can be implemented.

### **Quality of Education**

In spite of the expansion of student enrollments and multiple reform attempts, both the quality and relevance of the education that students receive are inadequate in most countries of the region. In addition to lineal expansion (more of the same educational

policies and methods), countries have: (1) enacted curricular reforms and constitutional provisions for minimum budgets or free education; (2) launched educational radio and TV programs and adult literacy campaigns; (3) organized nuclear groupings of schools and created comprehensive secondary schools; (4) instituted on-the-job training of teachers; (5) decentralized decisions and changed administrative structures; and (6) launched testing programs. However, the testing programs have shown that students are learning at roughly half the expected levels (those achieved by students in good private schools), and that only half of the students in the fourth grade are able to understand what they read. Furthermore, only in the elite private schools do students perform close to the average of students in developed countries. International comparisons carried out by the International Association for the Evaluation of Educational Achievement (IEA) show that cognitive achievement in Trinidad and Tobago and Venezuela—which are representative of the best systems in the LAC region—is closer to the levels of Africa than East Asia. In addition, there are serious equity problems. Even in the case of Chile, which has improved most inputs (e.g., teacher time, books, rooms, libraries, remedial training, buses, food) and effectively implemented structural reforms, achievement scores remained constant between 1982 and 2000 for every socioeconomic group.

As detected in the IEA study, achievement scores of students in marginal urban public schools and in rural primary schools (especially among indigenous populations) are usually equivalent to half the scores of wealthy students. Poor public schools also have a shorter school year and daily schedule, which, in many cases, give students less than 800 hours per year of potential learning opportunities (compared with 1200 or more hours offered to students in good private schools, a figure close to the average in developed countries). This limited amount of time for learning is usually due to using public school space in double shifts, and to a lack of teachers' time, even though this is mainly related to poor allocation of the public teaching staff in countries with a student/teacher ratio below thirty to one. In poor schools, a substantial amount of the time available for learning is, in fact, wasted in unproductive activities such as silence (discipline), roll call, and disruptions.

### Possible Causes of the Low Quality of Education

These poor regional results seem to be linked to the lack of formal evaluations of most of the implemented projects, and to poor professional review of the strategies included in each project. Most of these educational investments were made on the basis of untested or partially tested assumptions about the cost-effectiveness of particular interventions. This is because current knowledge about cost-effectiveness in education is extraordinarily inadequate, especially considering the amount of money that goes into education. In fact, education projects implemented in this region in the 1990s did not include the three highest cost-effective strategies suggested by a group of ten world experts (M. Carnoy and H. Levin, Stanford; N. McGinn and F. Reimers, Harvard; C. Moura Castro, Inter-American Development Bank; S. Heyneman, H. Martinez, and E. Velez, World Bank; J. Velez, PREAL; and J.C. Tedesco, UNESCO). According to their estimations, countries should start by undertaking interventions that do not cost much but do have an impact. For example, the best teacher should be assigned to the first grade in order to help students to learn to read as well as possible (this is particularly relevant in Latin America, where there is such a poor reading and writing record). These experts also highlighted the need for students to have enough time to learn, and they suggest that the official length of school year should be enforced. The third priority was given to a policy not to switch the classroom teacher during the year. It appears that not a single project undertaken during the 1990s in LAC countries supported these strategies.

It is also puzzling that the approaches and methodologies used in a successful Colombian program, *Escuela Nueva*, have not been adapted in education projects designed to develop basic education in other Latin American countries. In spite of being one of the few programs successfully evaluated in the region, it has only been used by the U.S. Agency for International Development (USAID) to improve primary education in Guatemala and Nicaragua.

Above all, the poor quality of the public education system in LAC countries is linked to a vicious circle, perpetuated by complex social factors resistant to reform. Few high school graduates are interested in a teaching career, as low salary levels and poor student achievement levels have created a low level of professional satisfaction. Therefore, most teachers select the profession not due to its intrinsic interest, but because they are not accepted in more

prestigious careers. The difference between the required and actual levels of training tends to raise demands for salaries because all teachers assume they meet the required standards. There are, in fact, no effective methods for assessing the individual ability of teachers. Salary demands are also affected by gender and by time schedules. More than two-thirds of all teachers are female, and all teachers have a part-time schedule, but the expected salary level is the salary of a full-time male teacher.

The problem in the public system is more serious because the best teachers tend to move to good private schools, where salaries may be five times higher than in the public system. Thus, there is continuous pressure for better salaries in the public sector. The pressure also involves annual strikes, because public school teachers make up a large share of the civil servants, which are organized in powerful unions and backed by congress members and political leaders. In addition, some teachers are leading local figures who play a critical role in elections. Even though salaries have not increased, strikes have eroded achievements levels and unions have not tried to improve teaching methods.

Most teachers use a *frontal*, or *whole-class*, teaching method, neglecting the needs of individual learners and distorting key educational objectives. Some 80 percent of Chilean secondary school teachers dictate their classes to students. Furthermore, frontal teaching implies an acceptance of an authoritarian teaching structure, the need to learn by rote, a single correct answer (and no opportunity to discuss divergent answers), lack of peer group discussion, and failure to link teaching with the local context.

There is consensus that improving primary and secondary education requires better educated teachers, but change strategies cannot rely on additional voluntary time spent by teachers or recruitment of better trained replacements. Since most teachers in these countries have poor training (there are few “good” teachers available for hire), teachers must be upgraded and provided with relevant tools such as learning guides. In addition, to get an extra effort from present teachers they must be paid more (e.g., one extra hour per day would increase the total cost by 20 to 25 percent). These tough conditions have been fulfilled in only a few successful projects. In these cases, suitable textbooks have played a key role in helping teachers to complement frontal teaching with other teaching models that support an active

role for students. However, evaluations of textbooks in several countries have shown that they: (1) do not suggest activities that students should carry out to grasp the main concepts; (2) contain no instructions for effective group work; (3) present no options for the student to make decisions about how to engage in the learning experience; (4) give few instructions for writing conclusions or reporting the work carried out; (5) do not include activities to be carried out with the family; and (6) provide limited opportunity (in the book) for students to self-evaluate their work. Usage of traditional books is constrained by the inability of teachers to change the predominant frontal teaching method used during their training.

### Teacher Training

Basic inputs are a required condition for learning, but they are not the only required condition. Without basic inputs, little learning may occur, but basic inputs do not necessarily generate expected achievement levels. Key inputs include classroom activities, the amount of time available for learning, materials for students to carry out their work (paper, pencils, learning guides and textbooks, and computers), and, of course, buildings. In addition, food and health programs are important, especially for deprived students. However, provision of these (and other) basic inputs does not guarantee that learning will improve, as observed in Chile. On the other hand, multigrade teaching without learning guides—learning materials with clear instructions for the students and teacher to generate an interesting learning experience—will be a failure. Without these guides, which complement the learning process, learning will be drastically reduced.

Even in LAC countries where more time, computers, and learning materials have been provided, no improvements have been measured, mostly due to the traditional frontal teaching style. Forty percent of students repeat the first grade, a fact that can only be explained in terms of poor teaching techniques. Lack of student discussions, learning tasks that are not related to context or expectations, few opportunities for composition writing, and lack of formative evaluation of students’ writing and homework are all related to the lack of suitable training of teachers. In fact, it has been determined that while most training institutions provide theoretical training (e.g., structural grammar, linguistic, or learning models), they do not train teachers with specific

strategies for teaching. In LAC countries, “teachers are poorly trained, poorly managed, and poorly paid. Superior teaching is seldom recognized, supported, or rewarded” according to Partnership for Educational Revitalization in the Americas. The training of future teachers is not likely to change as long as those doing the training continue using the frontal techniques now prevalent in teacher training institutions.

### Effects of Higher Education

Higher education has expanded the supply of teachers (mainly through private programs) and increased tuitions in professional careers, but less than one-fifth of the faculty has training in doctoral programs. Net enrollment rates of those between eighteen and twenty-two years of age increased from less than 4 percent in 1960 to nearly 25 percent in the late 1990s. Unfortunately, this rapid expansion of undergraduate enrollment was not preceded by an increase in graduate training. Therefore, graduates from undergraduate programs (those training for professional careers) were recruited to fill the additional higher education faculty positions.

Poor training in secondary education and professional careers starting in the first year of postsecondary studies are linked to high dropout and repetition rates in the first years of higher education, and to transfers to other programs. Some universities are trying out one or two years of college (similar to community colleges in the United States) to reduce the wastage of time and tuitions and the high levels of disappointment and rage found among the student population.

Master’s degree programs in certain areas, particularly those sought by private business, are being offered by joint ventures of local and foreign universities. Some distance education or visiting professors are usually included in the training packages. The Technological Institute of Monterrey (Mexico) is one of the leading institutions in this area, and has students all over Latin America. But improving the quality of the higher-education staff requires doctoral training linked with research. During the 1990s less than 20 percent of the higher education faculty had completed training in doctoral programs. Furthermore, there are few doctoral programs available for academic personnel willing to improve their training; salaries do not provide incentives for faculty with doctoral degrees; almost no scholarships are available for potential candidates; and few research

grants are available for preparing the doctoral thesis required for graduating. However, some advances were made in the 1990s in the allocation of research grants.

### Lack of Relevant Research

UNESCO and the OAS recommend that financing of research should be increased to reach at least 1 percent of gross domestic product (GDP), which for many LAC countries would be a twofold increase. In the past, the additional funds provided to universities were not channeled to research, but to many competing objectives. Therefore, present trends to allocate grants through competitive research contests should be reinforced, and contributions by private business (with some reduction in taxes) should be explored in order to link research activities with the problems faced by the private sector.

In some areas more public support seems to be required. For example not enough time has been devoted to identifying, understanding, and defining key educational problems, especially those that happen at the classroom level in primary and secondary education and those related to the development of a tradition of empirical research at the university level. Conventional wisdom has prevailed, however, and too much time has been spent in addressing irrelevant problems (e.g., class size, outdated curricula, labs, and libraries). According to research findings (for example, Gene Glass), class size is not related to achievement. Labs have been provided in most LAC countries through loans, but most of them are used as regular classrooms. Libraries are not used in primary and secondary education. All these elements are used when teachers have been trained in a different way. There is a lack of analysis of the real nature and causes of the poor quality of education observed in LAC countries, and of the probable effects of reforms (in most cases reform means gradual, complex changes, rather than drastic simple changes). Even though everything seems to have been tried in LAC education, the effective fight for quality reform has yet to start.

### Lack of Relevant Incentives

The staffs of ministries of education and of development cooperation agencies (and their children) are enrolled in private schools—they do not use the public schools they are managing and thus are not affected by the classroom impact of their projects, nor are their professional careers. They therefore

have limited incentives for searching out better strategies to improve the performance of the education system. Fortunately, personal commitment often compensates for this lack of built-in incentives.

The learning process is affected by the gap between the educational background of decision makers and the education delivered to students in rural areas or in urban marginal schools of developing countries. The gap is so wide that policymakers or lending and project officials have problems understanding the key elements of the educational development process. Furthermore, these leaders, who enroll their children in private schools, are not going to be affected by the final outcomes of the recommended strategies or projects, so the effort spent in the design of good education projects only depends on their personal values and commitment. The lack of incentives for educational leaders to do their utmost to achieve success with their policies seems to be sadly reflected in poor educational outcomes.

The lack of evaluation of the impact of projects in students' achievement (and, ideally, in the personal development of students) and the lack of good estimations of the cost-effectiveness of specific strategies, constrain professional judgment and tend to support old approaches focused on traditional goals or on timely implementation of disbursements. Therefore, progress in a teacher's professional career is not related to student improvement. Educational policies have thus been detached from improvement of human resources in the LAC region.

*See also:* INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION; INTERNATIONAL EDUCATION; HIGHER EDUCATION, INTERNATIONAL ISSUES; TEACHER EDUCATION, *subentry on* INTERNATIONAL PERSPECTIVE.

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## LATIN IN SCHOOLS, TEACHING OF

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Since it was first instituted as a formal course of study—first for Roman children, and then for members of the ever-expanding Roman Empire—Latin has been a staple of formal curricula. And for almost all of that time, controversy has swirled around the methodologies that should be used to teach Latin, its precise role in the curricula, and the aims and goals of teaching Latin. As the arguments and counterarguments have evolved, definite (and cyclical) trends have emerged.

### Enrollments

At the turn of the twentieth century, more than 50 percent of the public secondary-school students in the United States were studying Latin. Until 1928 Latin enrollments in U.S. secondary schools were greater than enrollments in all other foreign languages combined, and in the mid-1930s the number of Latin students rose to 899,000. This is not surprising, since Latin was commonly required for admission to college and was seen as the mark of an educated individual. Latin continued to be the front-runner for about another twenty years, until Spanish took the lead. Still, over the next ten years, Latin enrollments generally kept pace, rising 46 percent, compared to 56 percent for Spanish and 90 percent for French. Despite a sudden postwar drop in Latin studies (the number of students fell to about 429,000), Latin was fairly secure in the curriculum, and the numbers grew steadily thereafter.

In 1958 in response to a national concern in the United States over the nation's global status in mathematics and science, Congress passed the National Defense Education Act, which omitted support for all Latin, except at the graduate level. Latin soon began a gradual decline, though it retained much of its old cachet. This would soon change, however. In

1962 there were 702,000 students enrolled in Latin classes in U.S. secondary schools. By 1976 the number had dropped 79 percent, to 150,000, largely due to pressure for more relevant and elective courses at all education levels. The classics profession began a swift counteroffensive, and by 1978 enrollments were on the rise once more. More recent data suggest a slight leveling off at grades nine through twelve, with a total enrollment of 188,833 students in 1994, representing some 1.6 percent of the total enrolled population. New growth areas include middle-school Latin, with more than 25,349 enrolled in grades seven and eight, and 4,265 elementary students of Latin.

At the college level, the overall number of Latin students has changed less dramatically, with 39,600 reported in 1965 and 25,897 in 1995. But given the surge in college enrollments, this represents a percentage drop from .669 percent in 1965 to only .180 percent in 1995. While hard data are not readily available, it is fair to say that the 1980s and 1990s saw a definite decline in traditional classics majors (concentrating in Latin and Greek language study) and an increasing move toward those minoring, and majoring, in classical civilization or classical studies, a curriculum that demands only the rudimentary study of the actual languages. As a result, while K–12 Latin enrollments have increased slightly, an aging population of Latin teachers is facing retirement, with an inadequate number of qualified teachers available to take their place.

Latin is also taught at the junior college level, but with no regularity. Here also, courses in classical civilization, history, and mythology are far more common than the actual study of the languages themselves. It is also worth noting that Latin retained its special status in countries such as England and Germany far longer than it did in the United States. But recent curricular reforms in these countries have put Latin at risk there as well.

### Teaching Methods and Textbooks

Few methodologies have been both as traditional and as innovative as those associated with Latin. For the Romans themselves, the goal of learning Latin was totally utilitarian—to learn, as Quintilian put it, “the ability to speak Latin properly and to elucidate the poets” (*recte loquendi scientiam et poetarum enarrationem*) (Marrou, p. 274). In its higher forms, of course, it aimed at the proper use of the language in the fine art of rhetoric, for the way to success in the

Roman world was through the effective use of oratory. What we know of the way in which Romans taught their children Latin would not stand the scrutiny of twenty-first-century educational theorists for very long, for there was a heavy emphasis on rote memorization and corporal punishment. Once the students had the rudiments down, they moved on to the grammar school, where, from roughly age six through age twelve, they began the acquisition of Latin grammar under the tutelage of the appropriately named *grammaticus*. Historian Henri Marrou carefully defines the subject matter as a dull analysis of each word in a text from as many perspectives as possible.

But the ultimate goal of Roman education was the *enarratio poetarum*, and to this day most claim that the sole aim of studying Latin is to acquire a proper appreciation of the Latin classics. Roman students were expected to be able to read, aloud and with expression, a given passage from the works of a poet. Then they were grilled, line by line and word by word, on the many intricacies of the grammar, rhetorical figures, and mythological allusions. Advanced students went on to rhetorical studies to prepare them for public life.

In the Middle Ages Latin continued to be taught as a living tongue. Though no country had Latin as its language, the ability to speak, read, and write Latin was still essential for advancement in church or state circles. Thus, in the elementary schools, “the chief objective and emphasis of teachers and pupils was the ability to speak Latin with ease. Success in this almost automatically entailed ability to read and write it as well” (Ganss, p. 122). A well-written survey of teaching methods, some of them rather innovative, remains to be written for this and subsequent periods.

Much has been made about the emphasis on the study of Latin and Greek in early America. To be sure, any educated American needed Latin and Greek to enter college, but Latin was commonly charged with being irrelevant, poorly taught, and dull. Throughout the nineteenth century, and until 1924, the *grammar/translation* method held sway. In this method the grammar was laid out in orderly charts for the student to memorize. Only after endings and forms were memorized and usage had been thoroughly explained was the new material to be applied to practice sentences and, finally, to translation from the Latin. This method traditionally exposed the student to all the basic grammar in Latin in one

year. The second year was traditionally given over to reading Caesar, the third to Cicero, and the fourth to Virgil. In these courses the emphasis was on accurate translation and meticulous grammatical explanation of the text. Under this methodology, it was found that in the mid-1920s only about 30 percent of students continued beyond the second year, and only 15 percent beyond the third. In 1924 the American Classical League commissioned a study of the teaching of Latin. The so-called Advisory Committee published its *Classical Investigation*, in which it recommended some forward-thinking reforms for Latin teaching, such as adding cultural materials to be read in English, a change from the traditional grammar/translation paradigm (and a move to have students read Latin more naturally as Latin), and the inclusion of other authors in the curriculum. The report was farsighted, but largely ignored. As Judith Sebesta has shown, textbooks remained essentially unchanged until well after the sharp decline in enrollments of the 1960s and 1970s. Several of these grammar/translation texts are still in use in the early twenty-first century (e.g., Wheelock, Jenney) and other, newer texts, still follow their essential format (e.g., Goldman and Nyenhuis, Johnson).

A major break with this tradition was in response to the theories of behaviorism and structural linguistics, which led to Waldo Sweet's text based on *programmed learning*, where the student is allowed to acquire forms at the student's own pace. Glenn Knudsvig's *Latin for Reading* (1986) was influenced by Sweet and relied heavily on linguistic theory to help the student learn how to read Latin in a less rigid and more flowing fashion.

Cognitive psychology and the theories of Noam Chomsky led to the creation of a series of textbooks generally referred to as *reading method* texts. These texts have as their main goal enabling students to read extensive passages in Latin with relative ease. They are marked by their lack of formal grammar explication, use of stories with a connected plot written for the volumes, little if any use of authentic texts in the earlier volumes, and a reliance on illustrations to help students grasp new concepts. Only after a student has seen a new construction used several times is the construction explained. These textbooks are widely used at all levels today, and similar textbooks have been created for special use at the elementary and middle school levels.

## Trends, Issues, and Controversies

Latin has made a remarkable comeback in U.S. schools at the start of the twenty-first century. In many districts it ranks as the second most popular language—second only to Spanish. Yet the continued presence of Latin in K–12 curricula depends on the profession's prompt attention to many different forces at work in education. The first problem is a direct result of the profession's aggressive promotion of Latin in the face of the dramatic decline in Latin study during the 1960s and 1970s. The United States is facing an increasingly severe shortage of Latin teachers. Many school districts drop Latin programs each year for lack of teachers, and each year the standard placement services show many more openings for Latin teachers than job applicants.

The placement services also show an increasing call for Latin teachers who can teach one other language, most commonly Spanish. Since Spanish is closely related to Latin it represents a natural alliance that has had great success in pilot programs combining the two languages. Further, as Latin continues to expand at the elementary and middle school levels, the field will be increasingly called upon to devise further curricula and materials suitable for these levels.

Many national initiatives have influenced Latin in the K–12 curriculum. For example, both block scheduling and the International Baccalaureate (which initially did not accommodate the study of Latin) have, over recent years, caused Latin professionals once more both to mount proactive campaigns and to modify outdated teaching methodologies. Such change is facilitated by alliances between such national groups as The American Classical League (ACL; traditionally a K–12 organization) and the American Philological Association (APA; traditionally a college and university organization). As such alliances increase, insularity among Latin teacher groups is becoming a thing of the past. Likewise, the national classics organizations have increasingly allied themselves with modern language groups such as The American Council for the Teaching of Foreign Languages (ACTFL) and the Modern Language Association (MLA). As a result, Latin is routinely included whenever issues affecting all languages are discussed.

This was never more evident than in the matter of the national standards movement. The resurgence of Latin occurred along several tracks at once, with

markedly different goals and target audiences. The profession first took note of the disparity among curricula in the late 1980s and early 1990s. This insight was spurred on by ACTFL's *Standards for Foreign Language Learning: Preparing for the Twenty-First Century* and a broad coalition of classicists from all levels gathered to produce *Standards for Classical Language Learning*, which was jointly published by the ACL and APA and has become the accepted standard in its field.

The future of Latin in the schools is somewhat unclear at present. The president of a major state university, looking back at the "good old days" put it well: "I do not know, of course, what is to become of classical study in this country, but personally I should regard it as a great blow to the development of some of the finest and most important sides of American life if the study of Greek and Latin should fall to the relatively unimportant place now occupied by the study of Assyrian and Babylonian, as some people think it is bound to do" (West, p. 188). This nervous statement, however, was made in 1917 by Edmund J. James of the University of Illinois. The study of Latin, it seems, will always have its challenges, and its doubters, but if the past is any indication, it will rise to meet the future as well as it has the past.

*See also:* CURRICULUM, SCHOOL; FOREIGN LANGUAGE EDUCATION; INTERNATIONAL BACCALAUREATE DIPLOMA; SECONDARY EDUCATION, *subentries* on CURRENT TRENDS, HISTORY OF.

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## LAW EDUCATION

The law deals with all aspects of human life in its individual and collective expression, searching for economic and social justice, addressing past injustice, and ruling on divisive issues. As dynamic as the society it represents, the law changes as the zeitgeist or spirit of the times reflects emerging interests and concerns. Those interested in a career in law will find it a route to understanding American culture in all its dimensions.

A career in law requires dedication, persistence, and the analytical skills that are essential for interpreting past and current legal decisions. Liberal arts undergraduate programs or degree programs that have a concentration on critical thinking skills, along with a number of advanced courses—such as logic, English literature, foreign language, business and/or education law, sociology, and philosophy—prepare students for law school. Pre-law school advisers are available on campuses to assist students in planning for a career in law and choosing law schools. Mentoring services are available in most law schools.

Each law school has its own unique culture and admissions process. Although law schools differ in many aspects, a common goal is training well-qualified graduates to represent the highest ideals of the profession in practice. Prospective students are encouraged to review the specifics of individual law school policies and procedures through campus visits and/or websites that are comprehensive and detailed. All law schools now have websites with information about admissions processes.

## Criteria for Admission to Law School

Law schools are highly competitive and selective, and there is a wide range of criteria used for admissions. Students can find a law school whose admissions acceptance rates meet their individual profiles.

Although some law schools admit students from the third year of undergraduate studies, most require a bachelor's degree. Since applying to law schools is a time-consuming and costly process, students are encouraged to use a centralized processing agency (Law School Data Assembly Service, or LSDAS), which for a fee will assist them in preparing multiple applications. Law school admission review boards examine a student's GPA (grade point average), Law School Admission Test (LSAT) score, plus a variety of other factors including extracurricular experiences such as leadership activities, debate clubs, foreign language, and travel. A student's résumé should include volunteer service, work experience, and extracurricular activities together with the LSAT test score, also a personal statement about long-term and short-term goals, reasons for choosing law as a profession, and any other information that candidates wish to share. Three or four personal recommendations should be included. It is very important to carefully proofread materials submitted to assure accuracy and grammatical correctness. Admissions offices are inundated with applications; those not correctly filled out may be discarded.

There is no specific formula for admission to law school beyond a good academic record and LSAT score, along with experiences that show a commitment toward community improvement. Students who have low grades in first-year undergraduate courses but who show marked improvement in later studies demonstrate improved achievement and often the review committee will review these applicants favorably. Students need to apply to several law schools to ensure their admission. Applications a year or a year and half before matriculation dates are advised, except for students transferring from other law schools at home or abroad, who should apply earlier than regular law students. Law school admissions officers must receive letters of good standing from previous law schools. Law schools differ in the time frame but applying for the fall term should take place from October through February.

Law schools are interested in having a faculty and student body representative of the larger society.

To ensure ethnic and cultural diversity in enrollment the Council on Legal Education Opportunity, the Association of American Law Schools, the National Bar Association, and the American Bar Association (ABA) support special programs, mentors, individual and group tutors, and remedial courses in reading, writing, and grammar together with practice examinations. In addition, efforts to fund students' tuition costs based on financial need are continuing.

The American Bar Association's list of approved schools provides detailed information about a number of factors important to review prior to submitting applications. Some of these include the credentials of part-time and full-time law school faculty, percentages of dropouts through the three or four years, advanced and joint degree offerings, professional associations program approval, library and special facilities, gender and minority enrollment statistics, costs including available grants, loans, job assistance for spouses, and availability of housing and costs.

### Applying to Law School

Students interested in applying to a law school should engage in networking to learn about the school's culture, history, and curriculum. It is helpful to contact current and former students to discuss the admission process as well as to learn about the campus, instructional methods, competitive ranking, and the quality of students, faculty, and administrators. Applying to three or four law schools can give students a range of options from highly competitive institutions with international reputations to "safe schools," or those that have a broader range of admissions acceptance. Study guides and tutorial programs are available to aid in preparation for the LSAT, which is a multiple-choice test given four times a year at strategic sites throughout the country. The Law School Admission Council offers publications such as *The Right Law School for You* and *Financing Your Law School Education*.

### Curriculum and Degrees

Full time students are expected to complete a three-year program, while part-time students often take four or more years for completion. Both full-time and part-time students complete their degree more quickly by taking summer school courses. The first year of law school is the most challenging, with the greatest dropout rate. Law schools with the fewest

dropouts have very selective admissions processes. Although there are a number of students who drop out at the second year, generally most students who complete the first year of law school complete the degree requirements. Few drop out in the third and fourth year of law school.

A typical first-year law school curriculum includes contracts, criminal law, constitutional law, civil procedure, civil law, property, and torts. Second and third year courses offer students a variety of concentrations such as business and tax law, commercial law, constitutional law, labor and employment law, civil liberties and civil rights, and environmental law. Generally there is no formal second and third year curriculum, but some law schools require legal research and writing courses.

There are a variety of law degrees, including the most common J.D. (Juris doctor), LL.M (Master of Laws), and S.J.D. (Doctor of Juridical Science). Joint degrees are available, including the J.D./M.B.A. (Master of Business Administration), J.D./M.Ed. (Master of Education), and the J.D./Ph.D. (Doctor of Philosophy). Non-ABA-accredited law degree programs offer J.D. degrees. They are often accredited by state agencies. In many states practicing lawyers are required to have graduated from an ABA-accredited school.

Online law schools are available for individuals who are place bound, those who enjoy studying at their own pace, or those who have other needs requiring flexibility in time and place. Online law programs provide unlimited access to faculty and law resources twenty-four hours per day, seven days per week. As in other professions, so in law, online degree programs with their nontraditional formats have challenged accreditation agencies. Accreditation of these programs will be under review as accrediting agencies work through the challenge of innovative, emerging models for legal education. Concord University, one of the first online law degree programs, is accredited by the Distance Education Learning Council and a Committee of Bar Examiners in California.

In a litigious society, well-prepared, well-qualified lawyers will continue to be in demand. Law provides a career well worth a prospective student's best efforts.

*See also:* LAW SCHOOL ADMISSION TEST.

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## LAW SCHOOL ADMISSION TEST

The Law School Admission Test (LSAT) is the half-day, standardized entrance exam required by the 198 law schools (184 in the United States and 15 in Canada) that constitute the membership of the Law School Admission Council (LSAC) as of July 2001. The LSAC, a nonprofit corporation located in Newton, Pennsylvania, is the sole administering body of the LSAT. The LSAT is administered to large groups of individuals four times per year (February, June, October, and December) at numerous test centers. Approximately 107,000 individuals took the LSAT in 2000.

### History

During the first half of the twentieth century the generic intelligence test and its various offspring gained popularity. The use of intelligence tests dur-

ing World War I by the U.S. military was followed quickly by the introduction in 1920 of the National Intelligence Test for American school children and in 1926 with the Scholastic Aptitude Test. The first LSAT was administered twenty-two years later in 1948. Although the methodology used to score the LSAT has undergone changes over time, the general format and substance of the LSAT has remained relatively constant.

### Format

The 2001 LSAT is representative of the contemporary examination. It consists of five multiple-choice sections of thirty-five minutes each and an additional, non-scored thirty-minute writing sample. Two of the test sections focus on logical reasoning by testing the ability of the test-taker to perceive logical fallacies in statements. Another section focuses on analytical reasoning skills by challenging the test-taker to solve complex puzzles based on systems of relationships. The final section is a high-level reading comprehension exercise that examines the individual's ability to digest complex passages of text and identify the author's purpose. An additional fifth experimental section may be any of the other three types and is used to pilot questions for future LSAT exams. The experimental section does not contribute to the individual's score.

### Scoring

The LSAT score reported for an individual is a *scaled score* that is generated using a mathematical conversion formula unique for each particular version of the exam. The *raw score*, on the other hand, is a direct representation of the number of test questions the individual answered correctly. With a total of approximately 101 questions on each LSAT, an individual receives a single raw point score for each correctly answered question. The raw score is then converted to a scaled score that falls between 120, the minimum LSAT score, and 180, the maximum LSAT score.

### Role of the LSAT in Legal Education

The LSAT is the primary vehicle through which individuals gain entrance to the system of legal education officially approved by the American Bar Association (ABA). The LSAT is analogous to the Medical College Admission Test (MCAT) and the Graduate Management Admission Test (GMAT); it is the standardized mechanism used by a profession-

al school in evaluating applicants for potential ability within the professional school setting and, thus, for possible entry into the profession itself. The impact of the LSAT as the gatekeeper to the legal profession cannot be overstated.

The LSAT is used to make important decisions about the path of law school applicants' lives. It seems unavoidable under these circumstances that the test itself has become a source of ongoing controversy. Questions persist as to whether the LSAT measures the ability to succeed in the modern law school and as to the proper weight to give to LSAT scores during the admissions process. Accordingly, criticisms abound regarding a number of aspects of the LSAT.

The LSAT score is the most heavily weighted criteria considered by those involved in the law school admissions decision-making process. The most common criticism associated with the process is that those making the admissions decisions rely on LSAT scores as an obvious indicator of those who will succeed in law school. Critics argue that the LSAT is not conclusive in its predictive ability of academic performance in law school. They point out the impact of other factors, including support systems, financial demands, and individual motivation, as important in determining the long-term success of a student in law school. The Law School Admission Council itself, however, has always urged law school admissions professionals to resist the urge to make the LSAT score the sole criteria used in the admissions process.

Concerns about the validity of the LSAT bring serious issues of fairness and equity into the dialogue concerning the law school admissions process. The debate surrounding gender, racial, and ethnic bias in the LSAT system generates the majority of the academic literature about the test and supports a flow of legal cases over admissions decisions. Various studies have offered data suggesting that the LSAT serves as a barrier to the admission of women and ethnic applicants into a professional system that has traditionally been dominated by white males. The underlying rationale for the use of the LSAT, however, is to avoid the biases that come with more arbitrary methods of selection. Standardized testing theoretically offers a mechanism for the selection of students based on academic ability rather than more subjective characteristics, such as social standing.

The predictive accuracy of the LSAT will remain under question. Logic demands continued and con-

scious attention to the standardized test that provides admittance to a modern legal education. Indeed, the baseline justification behind using the LSAT in the admission process is the assumption that the test is a strong predictor of performance during the first year of law school. Regardless of the various concerns regarding the test, the LSAT remains the best measure of academic ability developed to date to aid in the law school admissions process.

*See also:* LAW EDUCATION.

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MADISON GRAY

## LEADERSHIP

*See:* EDUCATIONAL LEADERSHIP.

## LEARNING

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### ANALOGICAL REASONING

Dedre Gentner  
Jeffrey Loewenstein

### CAUSAL REASONING

Joseph P. Magliano  
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### CONCEPTUAL CHANGE

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### KNOWLEDGE ACQUISITION, REPRESENTATION, AND ORGANIZATION

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### NEUROLOGICAL FOUNDATION

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### PERCEPTUAL PROCESSES

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### PROBLEM SOLVING

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### TRANSFER OF LEARNING

Daniel L. Schwartz  
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## ANALOGICAL REASONING

Analogy plays an important role in learning and instruction. As John Bransford, Jeffrey Franks, Nancy Vye, and Robert Sherwood noted in 1989, analogies can help students make connections between different concepts and transfer knowledge from a well-understood domain to one that is unfamiliar or not directly perceptual. For example, the circulatory system is often explained as being like a plumbing system, with the heart as pump.

### The Analogical Reasoning Process

Analogical reasoning involves several sub-processes: (1) retrieval of one case given another; (2) mapping between two cases in working memory; (3) evaluating the analogy and its inferences; and, sometimes, (4) abstracting the common structure. The core process in analogical reasoning is mapping. According to structure-mapping theory, developed by Dedre Gentner in 1982, an analogy is a mapping of knowledge from one domain (the base or source) into another (the target) such that a system of relations that holds among the base objects also holds among the target objects. In interpreting an analogy, people seek to put the objects of the base in one-to-one correspondence with the objects of the target so as to obtain the maximal structural match. The corre-

sponding objects in the base and target need not resemble each other; what is important is that they hold like roles in the matching relational structures. Thus, analogy provides a way to focus on relational commonalities independently of the objects in which those relations are embedded.

In explanatory analogy, a well-understood base or source situation is mapped to a target situation that is less familiar and/or less concrete. Once the two situations are aligned—that is, once the learner has established correspondences between them—then new inferences are derived by importing connected information from the base to the target. For example, in the analogy between blood circulation and plumbing, students might first align the known facts that the pump *causes water to flow through* the pipes with the fact that the heart *causes blood to flow through* the veins. Given this alignment of structure, the learner can carry over additional inferences: for example, that plaque in the veins forces the heart to work harder, just as narrow pipes require a pump to work harder.

Gentner and Phillip Wolff in 2000 set forth four ways in which comparing two analogs fosters learning. First, it can highlight common relations. For example, in processing the circulation/plumbing analogy, the focus is on the dynamics of circulation, and other normally salient knowledge—such as the red color of arteries and the blue color of veins—is suppressed. Second, it can lead to new inferences, as noted above. Third, comparing two analogs can reveal meaningful differences. For example, the circulation/plumbing analogy can bring out the difference that veins are flexible whereas pipes are rigid. In teaching by analogy, it is important to bring out such differences; otherwise students may miss them, leading them to make inappropriate inferences. Fourth, comparing two analogs can lead learners to form abstractions, as amplified below.

### What Makes a Good Analogy

As Gentner suggested in 1982, to facilitate making clear alignments and reasonable inferences, an analogy must be structurally consistent—that is, it should have one-to-one correspondences, and the relations in the two domains should have a parallel structure. For example, in the circulation/plumbing system analogy, the pump cannot correspond to both the veins and the heart. Another factor influencing the quality of an analogy is systematicity: Analogies that convey an interconnected system of

relations, such as the circulation/pumping analogy, are more useful than those that convey only a single isolated fact, such as “The brain looks like a walnut.” Further, as Keith Holyoak and Paul Thagard argued in 1995, an analogy should be goal-relevant in the current context.

In addition to the above general qualities, several further factors influence the success of an explanatory analogy, including base specificity, transparency, and scope. Base specificity is the degree to which the structure of the base domain is clearly understood. Transparency is the ease with which the correspondences can be seen. Transparency is increased by similarities between corresponding objects and is decreased by similarities between noncorresponding objects. For example, in 1986 Gentner and Cecile Toupin found that four- to six-year-old children succeeded in transferring a story to new characters when similar characters occupied similar roles (e.g., squirrel → chipmunk; trout → salmon), but they failed when the match was cross-mapped, with similar characters in different roles (e.g., squirrel → salmon; trout → chipmunk). The same pattern has been found with adults. Transparency also applies to relations. In 2001 Miriam Bassok found that students more easily aligned instances of “increase” when both were continuous (e.g., speed of a car and growth of a population) than when one was discrete (e.g., attendance at an annual event). Finally, scope refers to how widely applicable the analogy is.

### Methods Used to Investigate Analogical Learning

Much research on analogy in learning has been devoted to the effects of analogies on domain understanding. For example, in 1987 Brian Ross found that giving learners analogical examples to illustrate a probability principle facilitated their later use of the probability formula to solve other problems. In classroom studies from 1998, Daniel Schwartz and John Bransford found that generating distinctions between contrasting cases improved students’ subsequent learning. As reported in 1993, John Clement used a technique of bridging analogies to induce revision of faulty mental models. Learners were given a series of analogs, beginning with a very close match and moving gradually to a situation that exemplified the desired new model.

Another line of inquiry focuses on the spontaneous analogies people use as mental models of the world. This research generally begins with a ques-

tionnaire or interview to elicit the person’s own analogical models. For example, Willet Kempton in 1986 used interviews to uncover two common analogical models of home heating systems. In the (incorrect) valve model, the thermostat is like a faucet: It controls the rate at which the furnace produces heat. In the (correct) threshold model, the thermostat is like an oven: It simply controls the goal temperature, and the furnace runs at a constant rate. Kempton then examined household thermostat records and found patterns of thermostat settings corresponding to the two analogies. Some families constantly adjusted their thermostats from high to low temperatures, an expensive strategy that follows from the valve model. Others simply set their thermostat twice a day—low at night, higher by day, consistent with the threshold model.

### Analogy in Children

Research on the development of analogy shows a relational shift in focus from object commonalities to relational commonalities. This shift appears to result from gains in domain knowledge, as Gentner and Mary Jo Rattermann suggested in 1991, and perhaps from gains in processing capacity as suggested by Graeme Halford in 1993. In 1989 Ann Brown showed that young children’s success in analogical transfer tasks increased when the domains were familiar to them and they were given training in the relevant relations. For example, three-year-olds can transfer solutions across simple tasks involving familiar relations such as stacking and pulling, and six-year-olds can transfer more complex solutions. In 1987 Kayoko Inagaki and Giyoo Hatano studied spontaneous analogies in five- to six-year-old children by asking questions such as whether they could keep a baby rabbit small and cute forever. The children often made analogies to humans, such as “We cannot keep the baby the same size forever because he takes food. If he eats, he will become bigger and bigger and be an adult.” Children were more often correct when they used these personification analogies than when they did not. This suggests that children were using humans—a familiar, well-understood domain—as a base domain for reasoning about similar creatures.

### Retrieval of Analogs: The Inert Knowledge Problem

Learning from cases is often easier than learning principles directly. Despite its usefulness, however,

training with examples and cases often fails to lead to transfer, because people fail to retrieve potentially useful analogs. For example, Mary Gick and Holyoak found in 1980 that participants given an insight problem typically failed to solve it, even when they had just read a story with an analogous solution. Yet, when they were told to use the prior example, they were able to do so. This shows that the prior knowledge was not lost from memory; this failure to access prior structurally similar cases is, rather, an instance of “inert knowledge”—knowledge that is not accessed when needed.

One explanation for this failure of transfer is that people often encode cases in a situation-specific manner, so that later reminders occur only for highly similar cases. For example, in 1984 Ross gave people mathematical problems to study and later gave them new problems. Most of their later reminders were to examples that were similar only on the surface, irrespective of whether the principles matched. Experts in a domain are more likely than novices to retrieve structurally similar examples, but even experts retrieve some examples that are similar only on the surface. However, as demonstrated by Laura Novick in 1988, experts reject spurious reminders more quickly than do novices. Thus, especially for novices, there is an unfortunate dissociation: While accuracy of transfer depends critically on the degree of structural match, memory retrieval depends largely on surface similarity between objects and contexts.

### Analogical Encoding in Learning

In the late twentieth century, researchers began exploring a new technique, called analogical encoding, that can help overcome the inert knowledge problem. Instead of studying cases separately, learners are asked to compare analogous cases and describe their similarities. This fosters the formation of a common schema, which in turn facilitates transfer to a further problem. For example, in 1999 Jeffrey Loewenstein, Leigh Thompson, and Gentner found that graduate management students who compared two analogical cases were nearly three times more likely to transfer the common strategy into a subsequent negotiation task than were students who analyzed the same two cases separately.

### Implications for Education

Analogies can be of immense educational value. They permit rapid learning of a new domain by

transferring knowledge from a known domain, and they promote noticing and abstracting principles across domains. Analogies are most successful, however, if their pitfalls are understood. In analogical mapping, it is important to ensure that the base domain is understood well, that the correspondences are clear, and that differences and potentially incorrect inferences are clearly flagged. When teaching for transfer, it is important to recognize that learners tend to rely on surface features. One solution is to minimize surface features by using simple objects. Another is to induce analogical encoding by asking learners to explicitly compare cases. The better educators understand analogical processes, the better they can harness them for education.

*See also:* LEARNING, *subentry on* TRANSFER OF LEARNING; LEARNING THEORY, *subentry on* HISTORICAL OVERVIEW.

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## CAUSAL REASONING

A doorbell rings. A dog runs through a room. A seated man rises to his feet. A vase falls from a table and breaks. Why did the vase break? To answer this question, one must perceive and infer the causal relationships between the breaking of the vase and other events. Sometimes, the event most directly causally related to an effect is not immediately apparent (e.g., the dog hit the table), and conscious and effortful thought may be required to identify it. People routinely make such efforts because detecting causal connections among events helps them to make sense of the constantly changing flow of events. Causal reasoning enables people to find meaningful order in events that might otherwise appear random and chaotic, and causal understanding helps people to plan and predict the future. Thus, in 1980 the philosopher John Mackie described causal reasoning as “the cement of the universe.” How, then, does one decide which events are causally related? When does one engage in causal reasoning? How does the ability to think about cause–effect relations originate and develop during infancy and childhood? How can causal reasoning skills be promoted in educational settings, and does this promote learning? These questions represent important issues in research on causal reasoning

### Causal Perceptions and Causal Reasoning

An important distinction exists between causal perceptions and causal reasoning. Causal perceptions refer to one’s ability to sense a causal relationship without conscious and effortful thought. According to the philosopher David Hume (1711–1776), perceptual information regarding contiguity, precedence, and covariation underlies the understanding of causality. First, events that are temporally and spatially contiguous are perceived as causally related. Second, the causal precedes the effect. Third, events that regularly co-occur are seen as causally related. In contrast, causal reasoning requires a person to reason through a chain of events to infer the cause of that event. People most often engage in causal reasoning when they experience an event that is out of the ordinary. Thus, in some situations a person may not know the cause of an unusual event and must search for it, and in other situations must evaluate whether one known event was the cause of another. The first situation may present difficulty because the causal event may not be immediately apparent. Philosophers have argued that causal reasoning is based

on an assessment of criteria of necessity and sufficiency in these circumstances. A necessary cause is one that must be present for the effect to occur. Event A is necessary for event B if event B will not occur without event A. For example, the vase would not have broken if the dog had not hit the table. A cause is sufficient if its occurrence can by itself bring about the effect (i.e., whenever event A occurs, event B always follows). Often, more than one causal factor is present. In the case of multiple necessary causes, a set of causal factors taken together jointly produces an effect. In the case of multiple sufficient causes, multiple factors are present, any one of which by itself is sufficient to produce an effect.

### The Development of Causal Perception and Causal Reasoning Skills

Causal perception appears to begin during infancy. Between three and six months of age, infants respond differently to temporally and spatially contiguous events (e.g., one billiard ball contacting a second that begins to roll immediately) compared to events that lack contiguity (e.g., the second ball begins to roll without collision or does not start to move until half a second after collision). Thus, the psychologist Alan Leslie proposed in 1986 that infants begin life with an innate perceptual mechanism specialized to automatically detect cause–effect relations based on contiguity. However, psychologists Leslie Cohen and Lisa Oakes reported in 1993 that familiarity with role of a particular object in a causal sequence influence ten-month-old infants’ perception of causality. Therefore, they suggest that infants do not automatically perceive a causal connection when viewing contiguous events. The question of whether infants begin with an innate ability to automatically detect causality, or instead gradually develop casual perception through general learning processes remains a central controversy concerning the origins of causal thought.

Although infants perceive causal relationships, complex causal reasoning emerges during early childhood and grows in sophistication thereafter. Thus, information about precedence influences causal reasoning during childhood. When asked to determine what caused an event to occur, three-year-olds often choose an event that preceded it, rather than one that came later, but understanding of precedence becomes more consistent and general beginning at five years of age. Unlike contiguity and precedence, information about covariation is not

available from a single casual sequence, but requires repeated experience with the co-occurrence of a cause and effect. Children do not begin to use co-variation information consistently in their casual thinking before eight years of age. Because the various types of information relevant to causality do not always suggest the same causal relation, children and adults must decide which type of information is most important in a particular situation.

In addition to the perceptual cues identified by Hume, knowledge of specific causal mechanisms plays a central role in causal reasoning. By three years of age, children expect there to be some mechanism of transmission between cause and effect, and knowledge of possible mechanisms influences both children's and adults' interpretation of perceptual cues. For instance, when a possible causal mechanism requires time to produce an effect (e.g., a marble rolling down a lengthy tube before contacting another object), or transmits quickly across a distance (e.g., electrical wiring), children as young as five years of age are more likely to select causes that lack temporal spatial contiguity than would otherwise be the case. Because causal mechanisms differ for physical, social, and biological events, children must acquire distinct conceptual knowledge to understand causality in each of these domains. By three to four years of age, children recognize that whereas physical effects are caused by physical transmission, human action is motivated internally by mental states such as desires, beliefs, and intentions, and they begin to understand some properties of biological processes such as growth and heredity. Furthermore, conceptual understanding of specific causal mechanisms may vary across cultures and may be learned through social discourse as well as through direct experience.

A fundamental understanding of causality is present during early childhood; however, prior to adolescence children have difficulty searching for causal relations through systematic scientific experimentation. Preadolescents may generate a single causal hypothesis and seek confirmatory evidence, misinterpret contradictory evidence, or design experimental tests that do not provide informative evidence. In contrast, adolescents and adults may generate several alternative hypotheses and test them by systematically controlling variables and seeking both disconfirmatory and confirmatory evidence. Nevertheless, even adults often have difficulty designing valid scientific experiments. More generally,

both children and adults often have difficulty identifying multiple necessary or sufficient causes.

### Teaching Causal Reasoning Skills

The psychologist Diane Halpern argued in 1998 that critical thinking skills should be taught in primary, secondary, and higher educational settings. Casual reasoning is an important part of critical thinking because it enables one to explain and predict events, and thus potentially to control one's environment and achieve desired outcomes.

Three approaches to teaching causal reasoning skills may be efficacious. First, causal reasoning skills can be promoted by teaching students logical deduction. For example, teaching students to use counterfactual reasoning may help them assess whether there is a necessary relationship between a potential cause and an effect. Counterfactual reasoning requires student to imagine that a potential cause did not occur and to infer whether the effect would have occurred in its absence. If it would occur, then there is no causal relationship between the two events.

Second, causal reasoning skills can be promoted by teaching students to generate informal explanations for anomalous events or difficult material. For instance, learning from scientific texts can be particularly challenging to students, and often students have the misconception that they do not have adequate knowledge to understand texts. The psychologist Michelene Chi demonstrated in 1989 that students who use their general world knowledge to engage in causal, explanatory reasoning while reading difficult physics texts understand what they read considerably better than do students who do not draw upon general knowledge in this way. Furthermore, in 1999 the psychologist Danielle McNamara developed a reading training intervention that promotes explanatory reasoning during reading. In this program, students were taught a number of strategies to help them to use both information in the text and general knowledge to generate explanations for difficult material. Training improved both comprehension of scientific texts and overall class performance, and was particularly beneficial to at-risk students.

Third, the psychologist Leona Schauble demonstrated in 1990 that causal reasoning skills can be promoted by teaching students the principles of scientific experimentation. A primary goal of experimentation is to determine causal relationships

among a set of events. Students may be taught to identify a potential cause of an effect, manipulate the presence of the cause in a controlled setting, and assess whether or not the effect occurs. Thus, students learn to use the scientific method to determine whether there are necessary and sufficient relationships between a potential cause and an effect. Because the principles of science are often difficult for students to grasp, teaching these principles would provide students with formal procedures for evaluating causal relationships in the world around them.

*See also:* LEARNING, *subentry on* REASONING; LEARNING THEORY, *subentry on* HISTORICAL OVERVIEW; LITERACY, *subentry on* NARRATIVE COMPREHENSION AND PRODUCTION; READING, *subentries on* COMPREHENSION, CONTENT AREAS.

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#### CONCEPTUAL CHANGE

The term *conceptual change* refers to the development of fundamentally new concepts, through restructuring elements of existing concepts, in the course of knowledge acquisition. Conceptual change is a particularly profound kind of learning—it goes beyond revising one's specific beliefs and involves restructuring the very concepts used to formulate those beliefs. Explaining how this kind of learning occurs is central to understanding the tremendous power and creativity of human thought.

The emergence of fundamentally new ideas is striking in the history of human thought, particularly in science and mathematics. Examples include the emergence of Darwin's concept of evolution by natural selection, Newton's concepts of gravity and inertia, and the mathematical concepts of zero, negative, and rational numbers. One of the challenges of education is how to transmit these complex products of human intellectual history to the next generation of students.

Although there are many unresolved issues about how concepts are mentally represented, conceptual-change researchers generally assume that explanatory concepts are defined and articulated within theory-like structures, and that conceptual

change requires coordinated changes in multiple concepts within these structures. New concepts that have arisen in the history of science are clearly part of larger, explicit theories. Making an analogy between the organization of concepts in scientists and children, researchers have proposed that children may have “commonsense” theories in which their everyday explanatory concepts are embedded and play a role. These theories, although not self-consciously held, are assumed to be like scientific theories in that they consist of a set of interrelated concepts that resist change and that support inference making, problem solving, belief formation, and explanation in a given domain. The power and usefulness of this analogy is being explored in the early twenty-first century.

A challenge for conceptual-change researchers is to provide a typology of important forms of conceptual change. For example, conceptual differentiation is a form of conceptual change in which a newer (descendant) theory uses two distinct concepts where the initial (parent) theory used only one, and the undifferentiated parent concept unites elements that will subsequently be kept distinct. Examples of conceptual differentiation include: Galileo’s differentiation of average and instantaneous velocity in his theory of motion, Black’s differentiation of heat and temperature in his theory of thermal phenomena, and children’s differentiation of weight and density in their matter theory. Conceptual differentiation is not the same as adding new subcategories to an existing category, which involves the elaboration of a conceptual structure rather than its transformation. In that case, the new subcategories fit into an existing structure, and the initial general category is still maintained. In differentiation, the parent concept is seen as incoherent from the perspective of the subsequent theory and plays no role in it. For example, an undifferentiated weight/density concept that unites the elements *heavy* and *heavy-for-size* combines two fundamentally different kinds of quantities: an extensive (total amount) quantity and an intensive (relationally defined) quantity.

Another form of conceptual change is *coalescence*, in which the descendant theory introduces a new concept that unites concepts previously seen to be of fundamentally different types in the parent theory. For example, Aristotle saw circular planetary and free-fall motions as natural motions that were fundamentally different from violent projectile motions. Newton coalesced circular, planetary, free-fall,

and projectile motions under a new category, *accelerated motion*. Similarly, children initially see plants and animals as fundamentally different: animals are behaving beings that engage in self-generated movement, while plants are not. Later they come to see them as two forms of “living things” that share important biological properties. Conceptual coalescence is not the same as simply adding a more general category by abstracting properties common to more specific categories. In conceptual coalescence the initial concepts are thought to be fundamentally different, and the properties that will be central to defining the new category are not represented as essential properties of the initial concepts.

Different forms of conceptual change mutually support each other. For example, conceptual coalescences (such as uniting free-fall and projectile motion in a new concept of accelerated motion, or plants and animals in a new concept of living things) are accompanied by conceptual differentiations (such as distinguishing uniform from accelerated motion, or distinguishing dead from inanimate). These changes are also supported by additional forms of conceptual change, such as re-analysis of the core properties or underlying structure of the concept, as well as the acquisition of new specific beliefs about the relations among concepts.

### Mechanisms of Conceptual Change

One reason for distinguishing conceptual change from belief revision and conceptual elaboration is that different learning mechanisms may be required. Everyday learning involves knowledge enrichment and rests on an assumed set of concepts. For example, people use existing concepts to represent new facts, formulate new beliefs, make inductive or deductive inferences, and solve problems.

What makes conceptual change so challenging to understand is that it cannot occur in this way. The concepts of a new theory are ultimately organized and stated in terms of each other, rather than the concepts of the old theory, and there is no simple one-to-one correspondence between some concepts of the old and new theories. By what learning mechanisms, then, can scientists invent, and students comprehend, a genuinely new set of concepts and come to prefer them to their initial set of concepts?

Most theorists agree that one step in conceptual change for both students and scientists is experiencing some form of *cognitive dissonance*—an internal

state of tension that arises when an existing conceptual system fails to handle important data and problems in a satisfactory manner. Such dissonance can be created by a series of unexpected results that cannot be explained by an existing theory, by the press to solve a problem that is beyond the scope of one's current theory, or by the detection of internal inconsistencies in one's thinking. This dissonance can signal the need to step outside the normal mode of *applying* one's conceptual framework to a more meta-conceptual mode of *questioning, examining, and evaluating* one's conceptual framework.

Although experiencing dissonance can signal that there is a conceptual problem to be solved, it does not solve that problem. Another step involves active attempts to invent or construct an understanding of alternative conceptual systems by using a variety of heuristic procedures and symbolic tools. Heuristic procedures, such as analogical reasoning, imagistic reasoning, and thought experiments, may be particularly important because they allow both students and scientists to creatively extend, combine, and modify existing conceptual resources via the construction of new models. Symbolic tools, such as natural language, the algebraic and graphical representations of mathematics, and other invented notational systems, allow the explicit representation of key relations in the new system of concepts.

In analogical reasoning, knowledge of conceptual relations in better-understood domains are powerful sources of new ideas about the less-understood domain. Analogical reasoning is often supported by imagistic reasoning, wherein one creates visual depictions of core ideas using visual analogs with the same underlying relational structure. These depictions allow the visualization of unseen theoretical entities, connect the problem to the well-developed human visual-spatial inferencing system, and, because much mathematical information is implicit in such depictions, facilitate the construction of appropriate mathematical descriptions of a given domain. Thought experiments use initial knowledge of a domain to run simulations of what should happen in various idealized situations, including imagining what happens as the effects of a given variable are entirely eliminated, thus facilitating the identification of basic principles not self-evident from everyday observation.

Case studies of conceptual change in the history of science and science education reveal that new intellectual constructions develop over an extended

period of time and include intermediate, bridging constructions. For example, Darwin's starting idea of evolution via directed, adaptive variation initially prevented his making an analogy between this process and artificial selection. He transformed his understanding of this process using multiple analogies (first with wedging and Malthusian population pressure, and later with artificial selection), imagistic reasoning (e.g., visualizing the jostling effects of 100,000 wedges being driven into the same spot of ground to understand the tremendous power of the unseen force in nature and its ability to produce species change in a mechanistic manner), and thought experiments (e.g., imagining how many small effects might build up over multiple generations to yield a larger effect). Each contributed different elements to his final concept of natural selection, with his initial analogies leading to the bridging idea of selection acting in concert with the process of directed adaptive variation, rather than supplanting it.

Constructing a new conceptual system is also accompanied by a process of evaluating its adequacy against known alternatives using some set of criteria. These criteria can include: the new system's ability to explain the core problematic phenomena as well as other known phenomena in the domain, its internal consistency and fit with other relevant knowledge, the extent to which it meets certain explanatory ideals, and its capacity to suggest new fruitful lines of research.

Finally, researchers have examined the personal, motivational, and social processes that support conceptual change. Personal factors include courage, confidence in one's abilities, openness to alternatives, willingness to take risks, and deep commitment to an intellectual problem. Social factors include working in groups that combine different kinds of expertise and that encourage consideration of inconsistencies in data and relevant analogies. Indeed, many science educators believe a key to promoting conceptual change in the classroom is through creating a more reflective classroom discourse. Such discourse probes for alternative student views, encourages the clarification, negotiation, and elaboration of meanings, the detection of inconsistencies, and the use of evidence and argument in deciding among or integrating alternative views.

### **Educational Implications**

Conceptual change is difficult under any circumstances, as it requires breaking out of the self-

perpetuating circle of theory-based reasoning, making coordinated changes in a number of concepts, and actively constructing an understanding of new (more abstract) conceptual systems. Students need signals that conceptual change is needed, as well as good reasons to change their current conceptions, guidance about how to integrate existing conceptual resources in order to construct new conceptions, and the motivation and time needed to make those constructions. Traditional education practice often fails to provide students with the appropriate signals, guidance, motivation, and time.

Conceptual change is a protracted process calling for a number of coordinated changes in instructional practice. First, instruction needs to be grounded in the consideration of important phenomena or problems that are central to the experts' framework—and that challenge students' initial commonsense framework. These phenomena not only motivate conceptual change, but also constrain the search for, and evaluation of, viable alternatives. Second, instruction needs to guide students in the construction of new systems of concepts for understanding these phenomena. Teachers must know what heuristic techniques, representational tools, and conceptual resources to draw upon to make new concepts intelligible to students, and also how to build these constructions in a sequenced manner.

Third, instruction needs to be supported by a classroom discourse that encourages students to identify, represent, contrast, and debate the adequacy of competing explanatory frameworks in terms of emerging classroom epistemological standards. Such discourse supports many aspects of the conceptual-change process, including making students aware of their initial conceptions, helping students construct an understanding of alternative frameworks, motivating students to examine their conceptions more critically (in part through awareness of alternatives), and promoting their ability to evaluate, and at times integrate, competing frameworks.

Finally, instruction needs to provide students with extended opportunities for applying new systems of concepts to a wide variety of problems. Repeated applications develop students' skill at applying a new framework, refine their understanding of the framework, and help students appreciate its greater power and scope.

*See also:* CATEGORIZATION AND CONCEPT LEARNING; LEARNING, *subentry on* KNOWLEDGE ACQUISITION, REPRESENTATION, AND ORGANIZATION.

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## KNOWLEDGE ACQUISITION, REPRESENTATION, AND ORGANIZATION

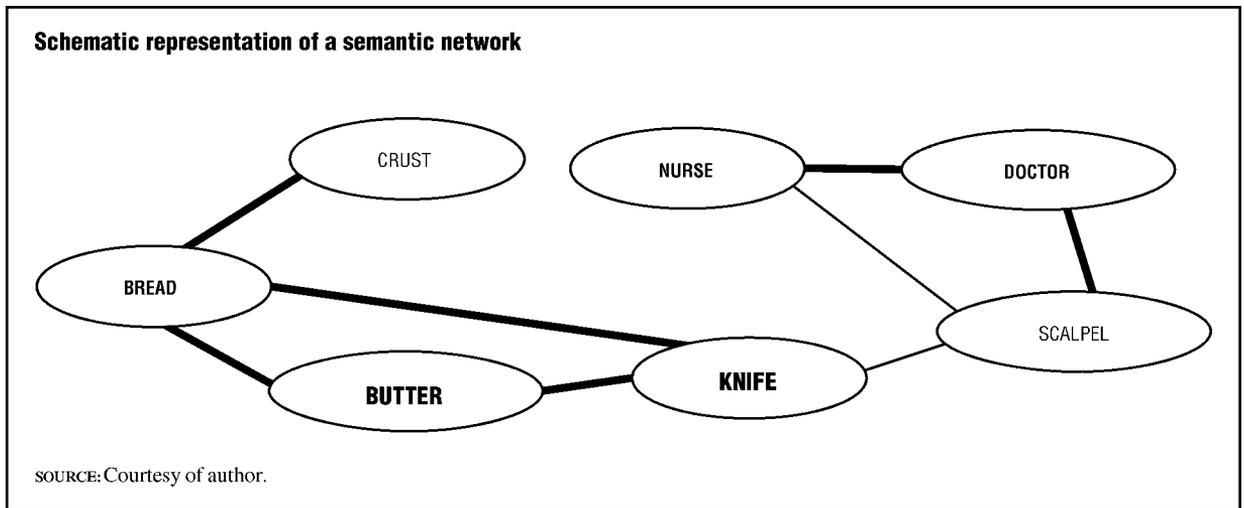
Knowledge acquisition is the process of absorbing and storing new information in memory, the success of which is often gauged by how well the information can later be remembered (retrieved from memory). The process of storing and retrieving information depends heavily on the representation and organization of the information. Moreover, the utility of knowledge can also be influenced by how the information is structured. For example, a bus schedule can be represented in the form of a map or a timetable. On the one hand, a timetable provides quick and easy access to the arrival time for each bus, but does little for finding where a particular stop is situated. On the other hand, a map provides a detailed picture of each bus stop's location, but cannot efficiently communicate bus schedules. Both forms of representation are useful, but it is important to select the representation most appropriate for the task at hand. Similarly, knowledge acquisition can be improved by considering the purpose and function of the desired information.

### Knowledge Representation and Organization

There are numerous theories of how knowledge is represented and organized in the mind, including rule-based production models, distributed networks, and propositional models. However, these theories are all fundamentally based on the concept of *semantic networks*. A semantic network is a method of representing knowledge as a system of connections between concepts in memory.

### Semantic Networks

According to semantic network models, knowledge is organized based on meaning, such that semantically related concepts are interconnected. Knowledge networks are typically represented as diagrams of nodes (i.e., concepts) and links (i.e., relations). The nodes and links are given numerical weights to represent their strengths in memory. In Figure 1, the node representing DOCTOR is strongly related to SCALPEL, whereas NURSE is weakly related to SCALPEL. These link strengths are represented here in terms of line width. Similarly, some nodes in Figure 1 are printed in bold type to represent their strength in memory. Concepts such as DOCTOR and BREAD are more memorable because they are

**FIGURE 1**

more frequently encountered than concepts such as SCALPEL and CRUST.

Mental excitation, or activation, spreads automatically from one concept to another related concept. For example, thinking of BREAD spreads activation to related concepts, such as BUTTER and CRUST. These concepts are *primed*, and thus more easily recognized or retrieved from memory. For example, in David Meyer and Roger Schvaneveldt's 1976 study (a typical semantic priming study), a series of words (e.g., BUTTER) and nonwords (e.g., BOTTOR) are presented, and participants determine whether each item is a word. A word is more quickly recognized if it follows a semantically related word. For example, BUTTER is more quickly recognized as a word if BREAD precedes it, rather than NURSE. This result supports the assumption that semantically related concepts are more strongly connected than unrelated concepts.

Network models represent more than simple associations. They must represent the ideas and complex relationships that comprise knowledge and comprehension. For example, the idea "The doctor uses a scalpel" can be represented as the proposition USE (DOCTOR, SCALPEL), which consists of the nodes DOCTOR and SCALPEL and the link USE (see Figure 2). Educators have successfully used similar diagrams, called concept maps, to communicate important relations and attributes among the key concepts of a lesson.

### Types of Knowledge

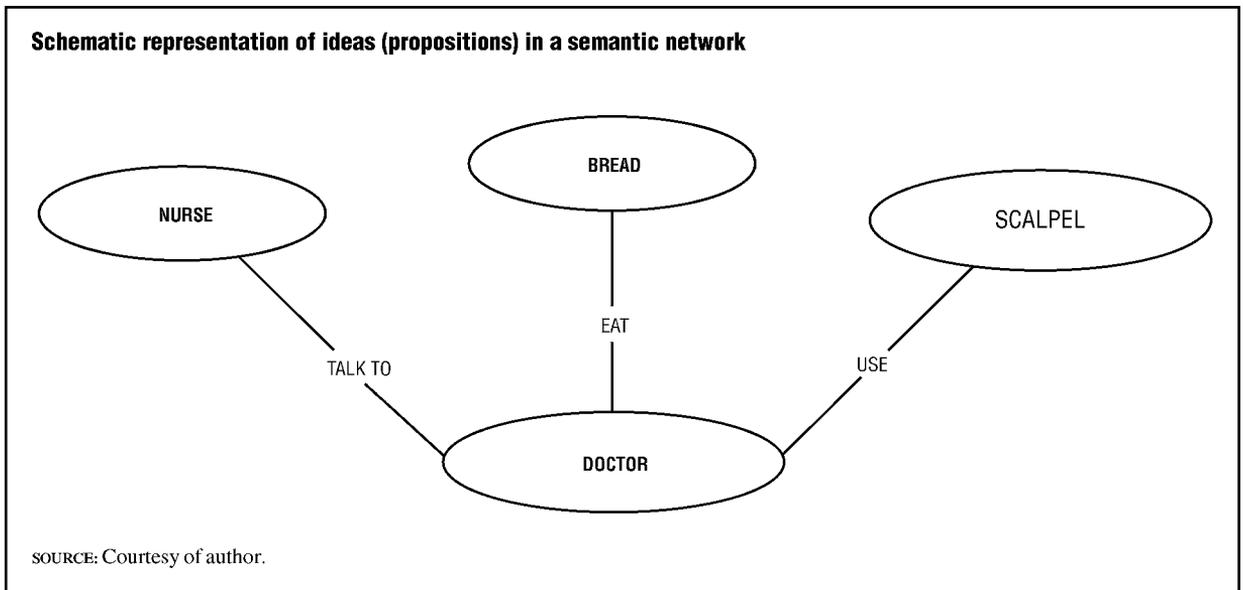
There are numerous types of knowledge, but the most important distinction is between *declarative* and *procedural* knowledge. Declarative knowledge refers to one's memory for concepts, facts, or episodes, whereas procedural knowledge refers to the ability to perform various tasks. Knowledge of how to drive a car, solve a multiplication problem, or throw a football are all forms of procedural knowledge, called *procedures* or *productions*. Procedural knowledge may begin as declarative knowledge, but is proceduralized with practice. For example, when first learning to drive a car, you may be told to "put the key in the ignition to start the car," which is a declarative statement. However, after starting the car numerous times, this act becomes automatic and is completed with little thought. Indeed, procedural knowledge tends to be accessed automatically and require little attention. It also tends to be more durable (less susceptible to forgetting) than declarative knowledge.

### Knowledge Acquisition

Listed below are five guidelines for knowledge acquisition that emerge from how knowledge is represented and organized.

**Process the material semantically.** Knowledge is organized semantically; therefore, knowledge acquisition is optimized when the learner focuses on the meaning of the new material. Fergus Craik and Endel Tulving were among the first to provide evidence for the importance of semantic processing. In their studies, participants answered questions con-

FIGURE 2



cerning target words that varied according to the depth of processing involved. For example, semantic questions (e.g., Which word, *friend* or *tree*, fits appropriately in the following sentence: “He met a \_\_\_ on the street?”) involve a greater depth of processing than phonemic questions (e.g., Which word, *crate* or *tree*, rhymes with the word *late*?), which in turn have a greater depth than questions concerning the structure of a word (e.g., Which word is in capital letters: *TREE* or *tree*?). Craik and colleagues found that words processed semantically were better learned than words processed phonemically or structurally. Further studies have confirmed that learning benefits from greater semantic processing of the material.

**Process and retrieve information frequently.** A second learning principle is to test and retrieve the information numerous times. Retrieving, or self-producing, information can be contrasted with simply reading or copying it. Decades of research on a phenomenon called the *generation effect* have shown that passively studying items by copying or reading them does little for memory in comparison to self-producing, or *generating*, an item. Moreover, learning improves as a function of the number of times information is retrieved. Within an academic situation, this principle points to the need for frequent practice tests, worksheets, or quizzes. In terms of studying, it is also important to break up, or *distribute* retrieval attempts. Distributed retrieval can include studying or testing items in a random order,

with breaks, or on different days. In contrast, repeating information numerous times sequentially involves only a single retrieval from long-term memory, which does little to improve memory for the information.

**Learning and retrieval conditions should be similar.** How knowledge is represented is determined by the conditions and context (internal and external) in which it is learned, and this in turn determines how it is retrieved: Information is best retrieved when the conditions of learning and retrieval are the same. This principle has been referred to as *encoding specificity*. For example, in one experiment, participants were shown sentences with an adjective and a noun printed in capital letters (e.g. The CHIP DIP tasted delicious.) and told that their memory for the nouns would be tested afterward. In the recognition test, participants were shown the noun either with the original adjective (CHIP DIP), with a different adjective (SKINNY DIP), or without an adjective (DIP). Noun recognition was better when the original adjective (CHIP) was presented than when no adjective was presented. Moreover, presenting a different adjective (SKINNY) yielded the lowest recognition. This finding underscores the importance of matching learning and testing conditions.

Encoding specificity is also important in terms of the questions used to test memory or comprehension. Different types of questions tap into different levels of understanding. For example, recalling in-

formation involves a different level of understanding, and different mental processes, than recognizing information. Likewise, essay and open-ended questions assess a different level of understanding than multiple-choice questions. Essay and open-ended questions generally tap into a conceptual or situational understanding of the material, which results from an integration of text-based information and the reader's prior knowledge. In contrast, multiple-choice questions involve recognition processes, and typically assess a shallow or text-based understanding. A text-based representation can be impoverished and incomplete because it consists only of concepts and relations within the text. This level of understanding, likely developed by a student preparing for a multiple-choice exam, would be inappropriate preparation for an exam with open-ended or essay questions. Thus, students should benefit by adjusting their study practices according to the expected type of questions.

Alternatively, students may benefit from reviewing the material in many different ways, such as recognizing the information, recalling the information, and interpreting the information. These latter processes improve understanding and maximize the probability that the various ways the material is studied will match the way it is tested. From a teacher's point of view, including different types of questions on worksheets or exams ensures that each student will have an opportunity to convey their understanding of the material.

#### **Connect new information to prior knowledge.**

Knowledge is interconnected; therefore, new material that is linked to prior knowledge will be better retained. A driving factor in text and discourse comprehension is prior knowledge. Skilled readers actively use their prior knowledge during comprehension. Prior knowledge helps the reader to fill in contextual gaps within the text and develop a better global understanding or situation model of the text. Given that texts rarely (if ever) spell out everything needed for successful comprehension, using prior knowledge to understand text and discourse is critical. Moreover, thinking about what one already knows about a topic provides connections in memory to the new information—the more connections that are formed, the more likely the information will be retrievable from memory.

**Create cognitive procedures.** Procedural knowledge is better retained and more easily accessed. Therefore, one should develop and use cognitive proce-

dures when learning information. Procedures can include shortcuts for completing a task (e.g., using *fast 10s* to solve multiplication problems), as well as memory strategies that increase the distinctive meaning of information. Cognitive research has repeatedly demonstrated the benefits of memory strategies, or *mnemonics*, for enhancing the recall of information. There are numerous types of mnemonics, but one well-known mnemonic is the *method of loci*. This technique was invented originally for the purpose of memorizing long speeches in the times before luxuries such as paper and pencil were readily available. The first task is to imagine and memorize a series of distinct locations along a familiar route, such as a pathway from one campus building to another. Each topic of a speech (or word in a word list) can then be pictured in a location along the route. When it comes time to recall the speech or word list, the items are simply *found* by mentally traveling the pathway.

Mnemonics are generally effective because they increase semantic processing of the words (or phrases) and render them more meaningful by linking them to familiar concepts in memory. Mnemonics also provide ready-made, effective cues for retrieving information. Another important aspect of mnemonics is that mental imaging is often involved. Images not only render information more meaningful, but they provide an additional route for finding information in memory. As mentioned earlier, increasing the number of meaningful links to information in memory increases the likelihood it can be retrieved.

Strategies are also an important component of *meta-cognition*, which is the ability to think about, understand, and manage one's learning. First, one must develop an awareness of one's own thought processes. Simply being aware of thought processes increases the likelihood of more effective knowledge construction. Second, the learner must be aware of whether or not comprehension has been successful. Realizing when comprehension has failed is crucial to learning. The final, and most important stage of meta-cognitive processing is fixing the comprehension problem. The individual must be aware of, and use, strategies to remedy comprehension and learning difficulties. For successful knowledge acquisition to occur, all three of these processes must occur. Without thinking or worrying about learning, the student cannot realize whether the concepts have been successfully grasped. Without realizing that in-

formation has not been understood, the student cannot engage in strategies to remedy the situation. If nothing is done about a comprehension failure, awareness is futile.

### Conclusion

Knowledge acquisition is integrally tied to how the mind organizes and represents information. Learning can be enhanced by considering the fundamental properties of human knowledge, as well as by the ultimate function of the desired information. The most important property of knowledge is that it is organized semantically; therefore, learning methods should enhance meaningful study of new information. Learners should also create as many links to the information as possible. In addition, learning methods should be matched to the desired outcome. Just as using a bus timetable to find a bus-stop location is ineffective, learning to recognize information will do little good on an essay exam.

*See also:* LEARNING, *subentry on* CONCEPTUAL CHANGE; READING, *subentry on* CONTENT AREAS.

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## NEUROLOGICAL FOUNDATION

Learning is mediated by multiple memory systems in the brain, each of which involves a distinct anatomical pathway and supports a particular form of memory representation. The major aim of research on memory systems is to identify and distinguish the different contributions of specific brain structures and pathways, usually by contrasting the effects of selective damage to specific brain areas. Another major strategy focuses on localizing brain areas that are activated, that is, whose neurons are activated during particular aspects of memory processing. Some of these studies use newly developed functional imaging techniques to view activation of brain areas in humans performing memory tests. Another approach seeks to characterize the cellular code for memory within the activity patterns of single nerve cells in animals, by asking how information is represented by the activity patterns within the circuits of different structures in the relevant brain systems.

Each of the brain's memory systems begins in the vast expanse of the cerebral cortex, specifically in the so-called cortical association areas (see Figure 1). These parts of the cerebral cortex provide major inputs to each of three main pathways of processing in subcortical areas related to distinct memory functions. One system mediates *declarative memory*, the memory for facts and events that can be brought to conscious recollection and can be expressed in a variety of ways outside the context of learning. This system involves connections from the cortical association areas to the hippocampus via the parahippocampal region. The main output of hippocampal and parahippocampal processing is back to the same cortical areas that provided inputs to the hippocampus, and are viewed as the long-term repository of declarative memories.

The other two main pathways involve cortical inputs to specific subcortical targets that send direct outputs that control behavior. One of these systems mediates *emotional memory*, the attachment of affiliations and aversions towards otherwise arbitrary stimuli and modulation of the strength of memories that involve emotional arousal. This system involves cortical (as well as subcortical) inputs to the amygdala as the nodal stage in the association of sensory inputs to emotional outputs effected via the hypothalamic-pituitary axis and autonomic nervous system, as well as emotional influences over widespread brain areas. The second of these systems mediates

*procedural memory*, the capacity to acquire habitual behavioral routines that can be performed without conscious control. This system involves cortical inputs to the striatum as a nodal stage in the association of sensory and motor cortical information with voluntary responses via the brainstem motor system. An additional, parallel pathway that mediates different aspects of sensori-motor adaptations involves sensory and motor systems pathways through the cerebellum.

### The Declarative Memory System

Declarative memory is the “everyday” form of memory that most consider when they think of memory. Therefore, the remainder of this discussion will focus on the declarative memory system. Declarative memory is defined as a composite of episodic memory, the ability to recollect personal experiences, and semantic memory, the synthesis of the many episodic memories into the knowledge about the world. In addition, declarative memory supports the capacity for conscious recall and the flexible expression of memories, one's ability to search networks of episodic and semantic memories and to use this capacity to solve many problems.

Each of the major components of the declarative memory system contributes differently to declarative memory, although interactions between these areas are also essential. Initially, perceptual information as well as information about one's behavior is processed in many dedicated neocortical areas. While the entire cerebral cortex is involved in memory processing, the chief brain area that controls this processing is the prefrontal cortex. The processing accomplished by the prefrontal cortex includes the acquisition of complex cognitive rules and concepts and *working memory*, the capacity to store information briefly while manipulating or rehearsing the information under conscious control. In addition, the areas of the cortex also contribute critically to memory processing. Association areas in the prefrontal, temporal, and parietal cortex play a central role in cognition and in both the perception of sensory information and in maintenance of short-term traces of recently perceived stimuli. Furthermore, the organization of perceptual representations in cerebral cortical areas, and connections among these areas, are permanently modified by learning experiences, constituting the long term repository of memories.

The parahippocampal region, which receives convergent inputs from the neocortical association

areas and sends return projections to all of these areas, appears to mediate the extended persistence of these cortical representations. Through interactions between these areas, processing within the cortex can take advantage of lasting parahippocampal representations, and so come to reflect complex associations between events that are processed separately in different cortical regions or occur sequentially in the same or different areas.

These individual contributions and their interactions are not conceived as sufficient to link representations of events to form episodic memories or to form generalizations across memories to create a semantic memory network. Such an organization requires the capacity to rapidly encode a sequence of events that make up an episodic memory, to retrieve that memory by re-experiencing one facet of the event, and to link the ongoing experience to stored episodic representations, forming the semantic network. The neuronal elements of the hippocampus contain the fundamental coding properties that can support this kind of organization.

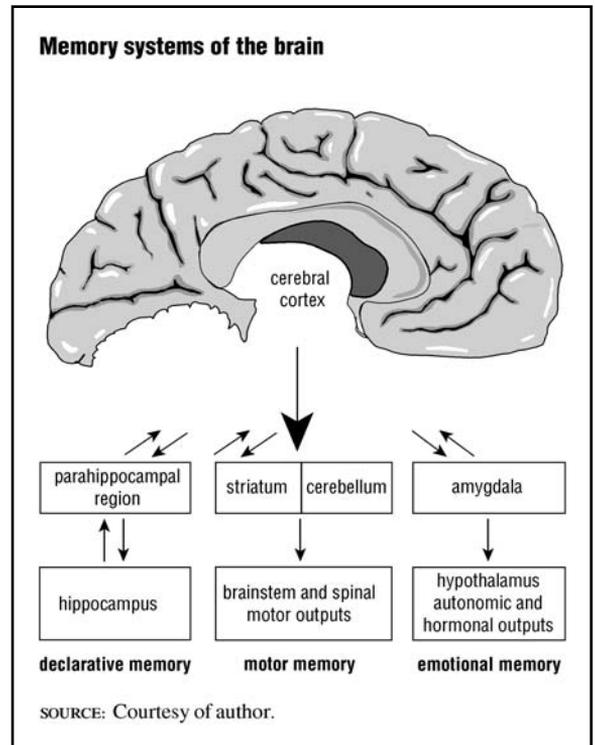
However, interactions among the components of the system are undoubtedly critical. It is unlikely that the hippocampus has the storage capacity to contain all of one's episodic memories and the hippocampus is not the final storage site. Therefore, it seems likely that the hippocampal neurons are involved in mediating the reestablishment of detailed cortical representations, rather than storing the details themselves. Repetitive interactions between the cortex and hippocampus, with the parahippocampal region as intermediary, serve to sufficiently coactivate widespread cortical areas so that they eventually develop linkages between detailed memories without hippocampal mediation. In this way, the networking provided by the hippocampus underlies its role in the organization of the permanent memory networks in the cerebral cortex.

*See also:* BRAIN-BASED EDUCATION.

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**FIGURE 1**



SCHACTER, DANIEL L., and TULVING, ENDEL, eds. 1994. *Memory Systems 1994*. Cambridge, MA: MIT Press.

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HOWARD EICHENBAUM

## PERCEPTUAL PROCESSES

As Eleanor Gibson wrote in her classic text *Principles of Perceptual Learning and Development*, perceptual learning results in changes in the pickup of information as a result of practice or experience. Perception and action are a cycle: People act in order to learn about their surroundings, and they use what they learn to guide their actions. From this perspective, the critical defining features of perception include the exploratory actions of the perceiver and the knowledge of the events, animate and inanimate objects, and surrounding environment gained while

engaged in looking, listening, touching, walking, and other forms of direct observation. Perception often results in learning information that is directly relevant to the goals at hand, but sometimes it results in learning that is incidental to one's immediate goals.

Perception becomes more skillful with practice and experience, and perceptual learning can be thought of as the education of attention. Perceivers come to notice the features of situations that are relevant to their goals and not to notice the irrelevant features. Three general principles of perceptual learning seem particularly relevant. First, unskillful perceiving requires much concentrated attention, whereas skillful perceiving requires less attention and is more easily combined with other tasks. Second, unskillful perceiving involves noticing both the relevant and irrelevant features of sensory stimulation without understanding their meaning or relevance to one's goals, whereas skillful perceiving involves narrowing one's focus to relevant features and understanding the situations they specify. And third, unskillful perceiving often involves attention to the proximal stimulus (that is, the patterns of light or acoustic or pressure information on the retinas, cochleae, and skin, respectively), whereas skillful perceiving involves attention to the distal event that is specified by the proximal stimulus.

### Different Domains

Perceptual learning refers to relatively durable gains in perception that occur across widely different domains. For example, at one extreme are studies demonstrating that with practice adults can gain exquisite sensitivity to vernier discriminations, that is, the ability to resolve gaps in lines that approach the size of a single retinal receptor. At the opposite extreme, perceptual learning plays a central role in gaining expertise in the many different content areas of work, everyday life, and academic pursuits.

In the realm of work, classic examples include farmers learning to differentiate the sex of chickens, restaurateurs learning to differentiate different dimensions of fine wine, airplane pilots misperceiving their position relative to the ground, and machinists and architects learning to "see" the three-dimensional shape of a solid object or house from the top, side, and front views.

In the realm of everyday life, important examples include learning to perceive emotional expres-

sions, learning to identify different people and understand their facial expressions, learning to differentiate the different elements of speech when learning a second language, and learning to differentiate efficient routes to important destinations when faced with new surroundings.

In "nonacademic" subjects within the realm of academic pursuits, important examples involve music, art, and sports. For example, music students learn to differentiate the notes, chords, and instrumental voices in a piece, and they learn to identify pieces by period and composer. Art students learn to differentiate different strokes, textures, and styles, and they learn to classify paintings by period and artist. Athletes learn to differentiate the different degrees of freedom that need to be controlled to produce a winning "play" and to anticipate what actions need to be taken when on a playing field.

Finally, perceptual learning plays an equally broad role in classically academic subjects. For example, mathematics students gain expertise at perceiving graphs, classifying the shapes of curves, and knowing what equations might fit a given curve. Science students gain expertise at perceiving laboratory setups. These range widely across grade levels and domains, including the critical features of hydrolyzing water in a primary school general science setting, molecular structures in organic chemistry and genetics, frog dissections in biology, the functional relation of the frequency of waves and diffraction in different media in physics, and the critical features of maps in geology.

The borders separating perceptual learning from conceiving and reasoning often become blurred. And indeed, people perceive in order to understand, and their understanding leads to more and more efficient perception. For example, Herbert A. Simon elaborated on this in 2001 in his discussion of the visual thinking involved in having an expert understanding of the dynamics of a piston in an internal combustion engine. When experts look at a piston or a diagram of a piston or a graph representing the dynamics of a piston, they "see" the higher order, relevant variables, for example, that more work is performed when the combustion explosion moves the piston away from the cylinder's base than when the piston returns toward the base. The ability to "see" such higher-order relations is not just a question of good visual acuity, but it instead depends on content knowledge (about energy, pressure, and work) and on an understanding of how

energy acts in the context of an internal combustion engine. In a 2001 article, Daniel Schwartz and John Bransford emphasized that experience with contrasting cases helps students differentiate the critical features when they are working to understand statistics and other academic domains. In a 1993 article, J. Littlefield and John Rieser demonstrated the skill of middle school students at differentiating relevant from irrelevant information when attempting to solve story problems in mathematics.

### Classical Issues in Perceptual Learning and Perceptual Development

Perceptual development involves normative age-related changes in basic sensory sensitivities and in perceptual learning. Some of these changes are constrained by the biology of development in well-defined ways. For example, the growth in auditory frequency during the first year of life is mediated in part by changes in the middle ear and inner ear. Growth in visual acuity during the first two years is mediated in several ways: by changes in the migration of retinal cells into a fovea, through increasing control of convergence eye movements so that the two eyes fixate the same object, and through increasing control of the accommodate state of the lens so that fixated objects are in focus. The role of physical changes in the development of other perceptual skills, for example, perceiving different cues for depth, is less clear.

Nativism and empiricism are central to the study of perception and perceptual development. Stemming from philosophy's interest in epistemology, early nativists (such as seventeenth-century French mathematician and philosopher René Descartes and eighteenth-century German philosopher Immanuel Kant) argued that the basic capacities of the human mind were innate, whereas empiricists argued that they were learned, primarily through associations. This issue has long been hotly debated in the field of perceptual learning and development. How is it that the mind and brain come to perceive three-dimensional shapes from two-dimensional retinal projections; perceive distance; segment the speech stream; represent objects that become covered from view? The debate is very lively in the early twenty-first century, with some arguing that perception of some basic properties of the world is innate, and others arguing that it is learned, reflecting the statistical regularities in experience. Given that experience plays a role in some forms of perceptual learn-

ing, there is evidence that the timing of the experience can be critical to whether, and to what degree, it is learned effectively.

The “constancy” of perception is a remarkable feat of perceptual development. The issue is that the energy that gives rise to the perception of a particular object or situation varies widely when the perceiver or object moves, the lighting changes, and so forth. Given the flux in the sensory input, how is it that people manage to perceive that the objects and situations remain (more or less) the same? Research about perceptual constancies has reemerged as an important topic as computer scientists work to design artificial systems that can “learn to see.”

Intersensory coordination is a major feature of perception and perceptual development. How is it, for example, that infants can imitate adult models who open their mouths wide or stick out their tongues? How is it that infants can identify objects by looking at them or by touching them and can recognize people by seeing them or listening to them?

The increasing control of actions with age is a major result of perceptual learning, as infants become more skillful at perceiving steps and other features of the ground and learn to control their balance when walking up and down slopes.

In 1955 James Gibson and Eleanor Gibson wrote an important paper titled “Perceptual Learning: Differentiation or Enrichment?” By differentiation they meant skill at distinguishing smaller and smaller differences among objects of a given kind. By enrichment they meant knowledge of the ways that objects and events tend to be associated with other objects and events. Their paper was in part a reaction to the predominant view of learning at the time: that learning was the “enrichment” of responses through their association with largely arbitrary stimulus conditions. The authors provided a sharp counterpoint to this view. Instead of conceiving of the world as constructed by add-on processes of association, they viewed perceivers as actively searching for the stimuli they needed to guide their actions and decisions, and in this way coming to differentiate the relevant features situated in a given set of circumstances from the irrelevant ones.

*See also:* ATTENTION; LEARNING THEORY, *subentry on* HISTORICAL OVERVIEW.

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JOHN J. RIESER

## PROBLEM SOLVING

Cognitive processing aimed at figuring out how to achieve a goal is called *problem solving*. In problem solving, the *problem solver* seeks to devise a method for transforming a problem from its current state into a desired state when a solution is not immediately obvious to the problem solver. Thus, the hallmark of problem solving is the invention of a new method for addressing a problem. This definition has three parts: (1) problem solving is *cognitive*—that is, it occurs internally in the mind (or cognitive system) and must be inferred indirectly from behavior; (2) problem solving is a *process*—it involves the manipulation of knowledge representations (or carrying out mental computations); and (3) problem solving is *directed*—it is guided by the goals of the problem solver.

The definition of problem solving covers a broad range of human cognitive activities, including educationally relevant cognition—figuring out how to manage one's time, writing an essay on a selected topic, summarizing the main point of a textbook section, solving an arithmetic word problem, or determining whether a scientific theory is valid by conducting experiments.

A *problem* occurs when a problem solver has a goal but initially does not know how to achieve the goal. This definition has three parts: (1) the *current state*—the problem begins in a given state; (2) the *goal state*—the problem solver wants the problem to be in a different state, and problem solving is required to transform the problem from the current (or given) state into the goal state, and (3) *obstacles*—the problem solver does not know the correct solution and an effective solution method is not obvious to the problem solver.

According to this definition a problem is personal, so that a situation that is a problem for one person might not be a problem for another person. For example, “ $3 + 5 = \underline{\quad}$ ” might be a problem for a six-year-old child who reasons, “Let’s see. I can take one from the 5 and give it to the 3. That makes 4 plus 4, and I know that 4 plus 4 is 8.” However, this equation is not a problem for an adult who knows the correct answer.

### Types of Problems

**Routine and nonroutine problems.** It is customary to distinguish between routine and nonroutine problems. In a routine problem, the problem solver knows a solution method and only needs to carry it out. For example, for most adults the problem “ $589 \times 45 = \underline{\quad}$ ” is a routine problem if they know the procedure for multicolored multiplication. Routine problems are sometimes called exercises, and technically do not fit the definition of *problem* stated above. When the goal of an educational activity is to promote all the aspects of problem solving (including devising a solution plan), then nonroutine problems (or exercises) are appropriate.

In a nonroutine problem, the problem solver does not initially know a method for solving the problem. For example, the following problem (reported by Robert Sternberg and Janet Davidson) is nonroutine for most people: “Water lilies double in area every twenty-four hours. At the beginning of the summer, there is one water lily on the lake. It takes sixty days for the lake to be completely covered with water lilies. On what day is the lake half covered?” In this problem, the problem solver must invent a solution method based on working backwards from the last day. Based on this method, the problem solver can ask what the lake would look like on the day before the last day, and conclude that the lake is half covered on the fifty-ninth day.

**Well-defined and ill-defined problems.** It is also customary to distinguish between well-defined and ill-defined problems. In a well-defined problem, the given state of the problem, the goal state of the problem, and the allowable operators (or moves) are each clearly specified. For example, the following water-jar problem (adapted from Abraham Luchins) is an example of a well defined problem: “I will give you three empty water jars; you can fill any jar with water and pour water from one jar into another (until the second jar is full or the first one is empty); you can fill and pour as many times as you like. Given water

jars of size 21, 127, and 3 units and an unlimited supply of water, how can you obtain exactly 100 units of water?” This is a well-defined problem because the given state is clearly specified (you have empty jars of size 21, 127, and 3), the goal state is clearly specified (you want to get 100 units of water in one of the jars), and the allowable operators are clearly specified (you can fill and pour according to specific procedures). Well-defined problems may be either routine or nonroutine; if you do not have previous experience with water jar problems, then finding the solution (i.e., fill the 127, pour out 21 once, and pour out 3 twice) is a nonroutine problem.

In an ill-defined problem, the given state, goal state, and/or operations are not clearly specified. For example, in the problem, “Write a persuasive essay in favor of year-round schools,” the goal state is not clear because the criteria for what constitutes a “persuasive essay” are vague and the allowable operators, such as how to access sources of information, are not clear. Only the given state is clear—a blank piece of paper. Ill-defined problems can be routine or nonroutine; if one has extensive experience in writing then writing a short essay like this one is a routine problem.

### Processes in Problem Solving

The process of problem solving can be broken down into two major phases: *problem representation*, in which the problem solver builds a coherent mental representation of the problem, and *problem solution*, in which the problem solver devises and carries out a solution plan. Problem representation can be broken down further into *problem translation*, in which the problem solver translates each sentence (or picture) into an internal mental representation, and *problem integration*, in which the problem solver integrates the information into a coherent mental representation of the problem (i.e., a mental model of the situation described in the problem). Problem solution can be broken down further into *solution planning*, in which the problem solver devises a plan for how to solve the problem, and *solution execution*, in which the problem solver carries out the plan by engaging in solution behaviors. Although the four processes of problem solving are listed sequentially, they may occur in many different orderings and with many iterations in the course of solving a problem.

For example, consider the butter problem described by Mary Hegarty, Richard Mayer, and Christopher Monk: “At Lucky, butter costs 65 cents per

stick. This is two cents less per stick than butter at Vons. If you need to buy 4 sticks of butter, how much will you pay at Vons?" In the problem translation phase, the problem solver may mentally represent the first sentence as "Lucky = 0.65," the second sentence as "Lucky = Vons - 0.02," and the third sentence as "4 x Vons = \_\_\_\_." In problem integration, the problem solver may construct a mental number line with Lucky at 0.65 and Vons to the right of Lucky (at 0.67); or the problem solver may mentally integrate the equations as "4 x (Lucky + 0.02) = \_\_\_\_." A key insight in problem integration is to recognize the proper relation between the cost of butter at Lucky and the cost of butter at Vons, namely that butter costs more at Vons (even though the keyword in the problem is "less"). In solution planning, the problem solver may break the problem into parts, such as: "First add 0.02 to 0.65, then multiply the result by 4." In solution executing, the problem solver carries out the plan:  $0.02 + 0.65 = 0.67$ ,  $0.67 \times 4 = 2.68$ . In addition, the problem solver must monitor the problem-solving process and make adjustments as needed.

### Teaching for Problem Solving

A challenge for educators is to teach in ways that foster meaningful learning rather than rote learning. Rote instructional methods promote retention (the ability to solve problems that are identical or highly similar to those presented in instruction), but not problem solving transfer (the ability to apply what was learned to novel problems). For example, in 1929, Alfred Whitehead used the term *inert knowledge* to refer to learning that cannot be used to solve novel problems. In contrast, *meaningful instructional methods* promote both retention and transfer.

In a classic example of the distinction between rote and meaningful learning, the psychologist Max Wertheimer (1959) described two ways of teaching students to compute the area of a parallelogram. In the rote method, students learn to measure the base, measure the height, and then multiply base times height. Students taught by the  $A = b \times h$  method are able to find the area of parallelograms shaped like the ones given in instruction (a retention problem) but not unusual parallelograms or other shapes (a transfer problem). Wertheimer used the term *reproductive thinking* to refer to problem solving in which one blindly carries out a previously learned procedure. In contrast, in the meaningful method, students learn by cutting the triangle from one end of

a cardboard parallelogram and attaching it to the other end to form a rectangle. Once students have the insight that a parallelogram is just a rectangle in disguise, they can compute the area because they already know the procedure for finding the area of a rectangle. Students taught by the insight method perform well on both retention and transfer problems. Wertheimer used the term *productive thinking* to refer to problem solving in which one invents a new approach to solving a novel problem.

### Educationally Relevant Advances in Problem Solving

Recent advances in educational psychology point to the role of domain-specific knowledge in problem solving—such as knowledge of specific strategies or problem types that apply to a particular field. Three important advances have been: (1) the teaching of problem-solving processes, (2) the nature of expert problem solving, and (3) new conceptions of individual differences in problem-solving ability.

**Teaching of problem-solving processes.** An important advance in educational psychology is cognitive strategy instruction, which includes the teaching of problem-solving processes. For example, in Project Intelligence, elementary school children successfully learned the cognitive processes needed for solving problems similar to those found on intelligence tests. In Instrumental Enrichment, students who had been classified as mentally retarded learned cognitive processes that allowed them to show substantial improvements on intelligence tests.

**Expert problem solving.** Another important advance in educational psychology concerns differences between what experts and novices know in given fields, such as medicine, physics, and computer programming. For example, expert physicists tend to store their knowledge in large integrated chunks, whereas novices tend to store their knowledge as isolated fragments; expert physicists tend to focus on the underlying structural characteristics of physics word problems, whereas novices focus on the surface features; and expert physicists tend to work forward from the givens to the goal, whereas novices work backwards from the goal to the givens. Research on expertise has implications for professional education because it pinpoints the kinds of domain-specific knowledge that experts need to learn.

**Individual differences in problem-solving ability.** This third advance concerns new conceptions of in-

tellectual ability based on differences in the way people process information. For example, people may differ in cognitive style—such as their preferences for visual versus verbal representations, or for impulsive versus reflective approaches to problem solving. Alternatively, people may differ in the speed and efficiency with which they carry out specific cognitive processes, such as making a mental comparison or retrieving a piece of information from memory. Instead of characterizing intellectual ability as a single, monolithic ability, recent conceptions of intellectual ability focus on the role of multiple differences in information processing.

*See also:* CREATIVITY; LEARNING, *subentry on* ANALOGICAL REASONING; MATHEMATICS LEARNING, *subentry on* COMPLEX PROBLEM SOLVING.

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RICHARD E. MAYER

#### REASONING

*Reasoning* is the generation or evaluation of claims in relation to their supporting arguments and evidence. The ability to reason has a fundamental impact on one's ability to learn from new information and experiences because reasoning skills determine how people comprehend, evaluate, and accept claims and arguments. Reasoning skills are also crucial for being able to generate and maintain viewpoints or beliefs that are coherent with, and justified by, relevant knowledge. There are two general kinds of reasoning that involve claims and evidence: formal and informal.

##### Formal Reasoning

Formal reasoning is used to evaluate the form of an argument, and to examine the logical relationships between conclusions and their supporting assertions. Arguments are determined to be either *valid* or *invalid* based solely on whether their conclusions necessarily follow from their explicitly stated premises or assertions. That is, if the supporting assertions are true, must the conclusion also be true? If so, then the argument is considered valid and the truth of the conclusion can be directly determined by establishing the truth of the supporting assertions. If not, then the argument is considered invalid, and the truth of the assertions is insufficient (or even irrelevant) for establishing the truth of the conclusion. Formal reasoning is often studied in the context of *categorical syllogisms* or "*if-then*" conditional proofs. Syllogisms contain two assertions and a conclusion.

An example of a logically valid syllogism is: *All dogs are animals; all poodles are dogs; therefore poodles are animals.* A slight change to one of the premises will create the invalid syllogism: *All dogs are animals; some dogs are poodles; therefore all poodles are animals.* This argument form is invalid because it cannot be determined with certainty that the conclusion is true, even if the premises are true. The second premise does not require that all poodles are dogs. Thus, there may be some poodles who are not dogs and, by extension, some poodles who are not animals. This argument is invalid despite the fact that an accurate knowledge of dogs, poodles, and animals confirms that both the premises and the conclusion are true statements. This validity-truth incongruence highlights the important point that the conceptual content of an argument or the real-world truth of the premises and conclusion are irrelevant to the logic of the argument form.

Discussions of formal reasoning may sometimes refer to the rules of logic. It is common for formal reasoning to be described as a set of abstract and prescriptive rules that people must learn and apply in order to determine the validity of an argument. This is the oldest perspective on formal reasoning. Some claim that the term *formal reasoning* refers directly to the application of these formal rules.

However, many theorists consider this perspective misguided. Describing formal reasoning as the evaluation of argument forms conveys a more inclusive and accurate account of the various perspectives in this field. There are at least four competing theories about how people determine whether a conclusion necessarily follows from the premises. These theories are commonly referred to as *rule-based perspectives*, *mental models*, *heuristics*, and *domain-sensitive theories*. People outside the rule-based perspective view the rules of logic as descriptive rules that simply give labels to common argument forms and to common errors or fallacies in logical reasoning. These theories are too complex to be detailed here, and there is currently no consensus as to which theory best accounts for how people actually reason. A number of books and review articles provide comprehensive discussions of these theories and their relative merits; one example is *Human Reasoning: The Psychology of Deduction* by Jonathan Evans, Stephen Newstead, and Ruth Byrne.

There is a consensus that human reasoning performance is poor and prone to several systematic errors. Performance on formal reasoning tasks is

generally poor, but can be better or worse depending upon the particular aspects of the task. People perform worse on problems that require more cognitive work, due to excessive demands placed on their limited processing capacity or working memory. The required cognitive work can be increased simply by having more information, or by the linguistic form of the argument. Some linguistic forms can affect performance because they violate conventional discourse or must be mentally rephrased in order to be integrated with other information.

In addition, people's existing knowledge about the concepts contained in the problem can affect performance. People have great difficulty evaluating the logical validity of an argument independent of their real-world knowledge. They insert their knowledge as additional premises, which leads them to make more inferences than is warranted. Prior knowledge can also lead people to misinterpret the meaning of premises. Another common source of error is *belief bias*, where people judge an argument's validity based on whether the conclusion is consistent with their beliefs rather than its logical relationship to the given premises.

The systematic errors that have been observed provide some insights about what skills a person might develop to improve performance. Making students explicitly aware of the likely intrusion of their prior knowledge could facilitate their ability to control or correct such intrusions. Students may also benefit from a detailed and explicit discussion of what logical validity refers to, how it differs from real-world truth or personal agreement, and how easy it is to confuse the two. Regardless of whether or not people commonly employ formal rules of logic, an understanding and explicit knowledge of these rules should facilitate efforts to search for violations of logical validity. Theorists of informal reasoning such as James Voss and Mary Means have made a similar argument for the importance of explicit knowledge about the rules of good reasoning. Errors attributed to limited cognitive resources can be addressed by increasing reasoning skill, and practice on formal reasoning tasks should increase proficiency and reduce the amount of cognitive effort required. Also, working memory load should be reduced by external representation techniques, such as Venn diagrams.

## Informal Reasoning

Informal reasoning refers to attempts to determine what information is relevant to a question, what conclusions are plausible, and what degree of support the relevant information provides for these various conclusions. In most circumstances, people must evaluate the justification for a claim in a context where the information is ambiguous and incomplete and the criteria for evaluation are complex and poorly specified. Most of what is commonly referred to as “thinking” involves informal reasoning, including making predictions of future events or trying to explain past events. These cognitive processes are involved in answering questions as mundane as “How much food should I prepare for this party?” and as profound as “Did human beings evolve from simple one-celled organisms?” Informal reasoning has a pervasive influence on both the everyday and the monumental decisions that people make, and on the ideas that people come to accept or reject.

Informal and formal reasoning both involve attempts to determine whether a claim has been sufficiently justified by the supporting assertions, but these types of reasoning differ in many respects. The vast majority of arguments are invalid according to formal logic, but informal reasoning must be employed to determine what degree of justification the supporting assertions provide. Also, the supporting assertions themselves must be evaluated as to their validity and accuracy. Formal reasoning involves making a binary decision based only on the given information. Informal reasoning involves making an uncertain judgment about the degree of justification for a claim relative to competing claims—and basing this evaluation on an ill-defined set of assertions whose truth values are uncertain.

Based on the above characterization of informal reasoning, a number of cognitive skills would be expected to affect the quality of such reasoning. The first is the ability to fully comprehend the meaning of the claim being made. Understanding the conceptual content is crucial to being able to consider what other information might bear on the truth or falsehood of a claim. Other cognitive processes involved in reasoning include the retrieval of relevant knowledge from long-term memory, seeking out new relevant information, evaluating the validity and utility of that information, generating alternatives to the claim in question, and evaluating the competing claims in light of the relevant information.

Successful reasoning requires the understanding that evidence must provide information that is independent of the claim or theory, and that evidence must do more than simply rephrase and highlight the assumptions of the theory. For example, the assertion “Some people have extrasensory perception” does not provide any evidence about the claim “ESP is real.” These are simply ways of restating the same information. Evidence must be an assertion that is independent of the claim, but that still provides information about the probable truth of the claim. An example of potential evidence for the claim that “ESP is real” would be “Some people know information that they could not have known through any of the normal senses.” In other words, evidence constitutes assertions whose truth has implications for, but is not synonymous with, the truth of the claim being supported.

Without an understanding of evidence and counterevidence and how they relate to theories, people would be ineffective at identifying information that could be used to determine whether a claim is justified. Also, lack of a clear distinction between evidence and theory will lead to the assimilation of evidence and the distortion of its meaning and logical implications. This eliminates the potential to consider alternative claims that could better account for the evidence. People will also fail to use counterevidence to make appropriate decreases in the degree of justification for a claim.

Discussions of informal reasoning, argumentation, and critical thinking commonly acknowledge that a prerequisite for effective reasoning is a belief in the utility of reasoning. The cognitive skills described above are necessary, but not sufficient, to produce quality reasoning. The use of these skills is clearly effortful; thus, people must believe in the importance and utility of reasoning in order to consistently put forth the required effort. The epistemology that promotes the use of reasoning skills is the view that knowledge can never be absolutely certain and that valid and useful claims are the product of contemplating possible alternative claims and weighing the evidence and counterevidence. Put simply, people use their reasoning skills consistently when they acknowledge the possibility that a claim may be incorrect and also believe that standards of good reasoning produce more accurate ideas about the world.

Inconsistent, selective, and biased application of reasoning skills provides little or no benefits for

learning. Greater reasoning skills are assumed to aid in the ability to acquire new knowledge and revise one's existing ideas accordingly. However, if one contemplates evidence and theory only when it can be used to justify one's prior commitments, then only supportive information will be learned and existing ideas will remain entrenched and unaffected. The development of reasoning skills will confer very little intellectual benefit in the absence of an epistemological commitment to employ those skills consistently.

### General Reasoning Performance

Reports from the National Assessment of Educational Progress and the National Academy of Sciences consistently show poor performance on a wide array of tasks that require informal reasoning. These tasks span all of the core curriculum areas of reading, writing, mathematics, science, and history.

Some smaller-scale studies have attempted to paint a more detailed picture of what people are doing, or failing to do, when asked to reason. People demonstrate some use of informal reasoning skills, but these skills are underdeveloped and applied inconsistently. Children and adults have a poor understanding of evidence and its relationship to theories or claims. Only a small minority of people attempt to justify their claims by providing supporting evidence. When explicitly asked for supporting evidence, most people simply restate the claim itself or describe in more detail what the claim means. It is especially rare for people to generate possible counter-evidence or to even consider possible alternative claims.

The inconsistent application of informal reasoning skills could have multiple causes. Some theorists suggest that reasoning skills are domain specific and depend heavily on the amount of domain knowledge a person possesses. Alternatively, underdeveloped or unpracticed skills could lead to their haphazard use. A third possibility is that people's lack of explicit knowledge about what good reasoning entails prevents them from exercising conscious control over their implicit skills.

Inconsistent use of informal reasoning skills may also arise because people lack a principled belief in the utility of reasoning that would foster a consistent application of sound reasoning. People have extreme levels of certainty in their ideas, and they take this certainty for granted. In addition, the applica-

tion of reasoning skills is not random, but is selective and biased such that prior beliefs are protected from scrutiny. This systematic inconsistency cannot be accounted for by underdeveloped skills, but can be accounted for by assuming a biased motivation to use these skills selectively. Regardless of whether or not people have the capacity for sound reasoning, they have no philosophical basis that could provide the motivation to override the selective and biased use of these skills.

### Development of Reasoning Skills

There is only preliminary data about how and when informal reasoning skills develop. There is preliminary support that the development of reasoning takes a leap forward during the preadolescent years. These findings are consistent with Piagetian assumptions about the development of *concrete operational thinking*, in other words, thinking that involves the mental manipulation (e.g., combination, transformation) of objects represented in memory. However, younger children are capable of some key aspects of reasoning. Thus, the improvement during early adolescence could result from improvements in other subsidiary skills of information processing, from meta-cognitive awareness, or from an increase in relevant knowledge.

A somewhat striking finding is the lack of development in informal reasoning that occurs from early adolescence through adulthood. Some evidence suggests that college can improve reasoning, but the overall relationship between the amount of postsecondary education and reasoning skill is weak at best. The weak and inconsistent relationship that does exist between level of education and reasoning is likely due to indirect effects. Students are rarely required to engage in complex reasoning tasks. However, the spontaneous disagreements that arise in the classroom could expose them to the practice of justifying one's claim. Also, engagement in inquiry activities, such as classroom experiments, could provide implicit exposure to the principles of scientific reasoning.

There are relatively few programs aimed at developing informal reasoning skills; hence, there is little information about effective pedagogical strategies. Where they do exist, curricula are often aimed at developing general reasoning skills. Yet, many believe that effective reasoning skills are domain- or discipline-specific. Nevertheless, given the pervasive impact of reasoning skills on learning in general, it

is clear that more systematic efforts are needed to foster reasoning skills at even the earliest grade levels. Of the approaches that have been attempted, there is some evidence for the success of *scaffolding*, which involves a teacher interacting with a student who is attempting to reason, and prompting the student to develop more adequate arguments. Another approach is to explicitly teach what *good reasoning* means, what *evidence* is, and how evidence relates to theories. This approach could be especially effective if classroom experiments are conducted within the context of explicit discussions about the principles of scientific reasoning. Also, if reasoning skills are discussed in conjunction with the content of the core subject areas, then students may develop an appreciation for the pervasive utility and importance of reasoning for the progress of ideas.

A number of theorists have suggested that debate between students with opposing views could foster the basic skills needed for informal reasoning. Debates could give students practice in having to consider opposing viewpoints and having to coordinate evidence and counterevidence in support of a claim. Also, providing justification for one's positions requires some cognitive effort, and the norms of social dialogue could provide the needed motivation. However, interpersonal debates are most commonly construed as situations in which individuals are committed to a position ahead of time, and in which their goal is to frame the issue and any evidence in a manner that will persuade their opponent or the audience that their own position is correct. Students' reasoning is already greatly impaired by their tendency to adopt a biased, defensive, or non-contemplative stance. Debate activities that reinforce this stance and blur the difference between defending a claim and contemplating a claim's justification may do more harm than good. To date, there is no empirical data that compare the relative costs and benefits of using interpersonal debate exercises to foster critical reasoning skills.

*See also:* LEARNING, *subentry on CAUSAL REASONING*; LEARNING THEORY, *subentry on HISTORICAL OVERVIEW*.

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## TRANSFER OF LEARNING

Imagine that every time that people entered a new environment they had to learn how to behave without the guidance of prior experiences. Slightly novel tasks, like shopping online, would be disorienting and dependant on trial-and-error tactics. Fortunately, people use aspects of their prior experiences, such as the selection of goods and subsequent payment, to guide their behavior in new settings. The ability to use learning gained in one situation to help with another is called *transfer*.

Transfer has a direct bearing on education. Educators hope that students transfer what they learn from one class to another—and to the outside world. Educators also hope students transfer experiences from home to help make sense of lessons at school. There are two major approaches to the study of transfer. One approach characterizes the knowledge and conditions of acquisition that optimize the chances of transfer. The other approach inquires into the nature of individuals and the cultural contexts that transform them into more adaptive participants.

### Knowledge-Based Approaches to Transfer

There are several knowledge-based approaches to transfer.

**Transferring out from instruction.** Ideally, the knowledge students learn in school will be applied outside of school. For some topics, it is possible to train students for the specific situations they will subsequently encounter, such as typing at a keyboard. For other topics, educators cannot anticipate all the out-of-school applications. When school-based lessons do not have a direct mapping to out-of-school contexts, memorization without understanding can lead to inert knowledge. Inert knowledge occurs when people acquire an idea without also learning the conditions of its subsequent application, and thus they fail to apply that idea appropriately. Memorizing the Pythagorean formula, for example, does not guarantee students know to use the formula to find the distance of a shortcut.

Knowing when to use an idea depends on knowing the contexts in which the idea is useful. The ideas that people learn are always parts of a larger context, and people must determine which aspects of that context are relevant. Imagine, for example, a young child who is learning to use the hook of a candy cane to pull a toy closer. As the child learns the action,

there are a number of contextual features she might also learn. There are incidental features—it is Christmas; there are surface features—the candy is small and striped; and there are deep features—the candy cane is rigid and hooked. Instruction for transfer must help the child discern the deep features. This way the child might subsequently use an umbrella handle to gather a stuffed animal instead of trying a candy-striped rope.

When people learn, they not only encode the target idea, they also encode the context in which it occurs, even if that context is incidental. For a study published in 1975, Gooden and Baddeley asked adults to learn a list of words on land or underwater (while scuba diving). Afterwards, the adults were subdivided; half tried to remember the words underwater and half on land. Those people who learned the words underwater remembered them better underwater than on land, and those people who learned the words on land remembered them better on land than underwater. This result reveals the context dependency of memory. Context dependency is useful because it constrains ideas to appear in appropriate contexts, rather than cluttering people's thoughts at odd times. But context dependency can be a problem for transfer, because transfer, by definition, has to occur when the original context of learning is not reinstated—when one is no longer in school, for example.

Surface features, which are readily apparent to the learner, differ from incidental features, because surface features are attached to the idea rather than the context in which the idea occurs. Surface features can be useful. A child might learn that fish have fins and lay eggs. When he sees a new creature with fins, he may decide it is a fish and infer that it too lays eggs. Surface features, however, can be imperfect cues. People may overgeneralize and exhibit *negative transfer*. For example, the child may have seen a dolphin instead of a fish. People may also undergeneralize and fail to transfer. A child might see an eel and assume it does not lay eggs. Good instruction helps students see beneath the surface to find the deep features of an idea.

Deep features are based on structures integral to an idea, which may not be readily apparent. To a physicist, an inclined plane and scissors share the same deep structure of leverage, but novices cannot see this similarity and they fail to use a formula learned for inclined planes to reason about scissors.

Analogies are built on deep features. For example, color is to picture as sound is to song. On the surface, color and sound differ, as do pictures and song. Nonetheless, the relation of *used to create* makes it possible to compare the common structure between the two. Analogy is an important way people discover deep features. In the 1990s, Kevin Dunbar studied the laboratory meetings of cell biologists. He found that the scientists often used analogies to understand a new discovery. They typically made transfers of *near* analogies rather than *far* ones. A far analogy transfers an idea from a remote body of knowledge that shares few surface features, as might be the case when using the structure of the solar system to explain the structure of an atom. A near analogy draws on a structure that comes from a similar body of knowledge. The scientists in Dunbar's study used near analogies from biology because they had precise knowledge of biology, which made for a more productive transfer.

Instruction can help students determine deep features by using analogous examples rather than single examples. In a 1983 study, Mary Gick and Keith Holyoak asked students how to kill a tumor with a burst of radiation, given that a strong burst kills nearby tissue and a weak burst does not kill the tumor. Students learned that the solution uses multiple weak radiation beams that converge on the tumor. Sometime later, the students tried to solve the problem of how a general could attack a fortress: If the general brought enough troops to attack the fortress, they would collapse the main bridge. Students did not propose that the general could split his forces over multiple bridges and then converge on the fortress. The students' knowledge of the convergence solution was inert, because it was only associated with the radiation problem. Gick and Holyoak found they could improve transfer by providing two analogous examples instead of one. For example, students worked with the radiation problem and an analogous traffic congestion problem. This helped students abstract the convergence schema from the radiation context, and they were able to transfer their knowledge to the fortress problem.

**Transferring in to instruction.** In school, transfer can help students learn. If students can *transfer in* prior knowledge, it will help them understand the content of a new lesson. A lesson on the Pythagorean theorem becomes more comprehensible if students can transfer in prior knowledge of right triangles.

Otherwise, the lesson simply involves pushing algebraic symbols.

Unlike transfer to out-of-school settings, which depends on the spontaneous retrieval of relevant prior knowledge, transfer to in-school settings can be directly supported by teachers. A common approach to help students recruit prior knowledge uses *cover stories* that help students see the relevance of what they are about to learn. A teacher might discuss the challenge of finding the distance of the moon from the earth to motivate a lesson on trigonometry. This example includes two ways that transferring in prior knowledge can support learning. Prior knowledge helps students understand the problems that a particular body of knowledge is intended to solve—in this case, problems about distance. Prior knowledge also enables learners to construct a mental model of the situation that helps them understand what the components of the trigonometric formulas refer to.

Sometimes students cannot transfer knowledge to school settings because they do not have the relevant knowledge. One way to help overcome a lack of prior knowledge is to use contrasting cases. Whereas pairs of analogies help students abstract deep features from surface features, pairs of contrasting cases help students notice deep features in the first place. Contrasting cases juxtapose examples that only differ by one or two features. For example, a teacher might ask students to compare examples of acute, right, and obtuse triangles. Given the contrasts, students can notice what makes a right triangle distinctive, which in turn, helps them construct precise mental models to understand a lesson on the Pythagorean theorem.

### Person-Based Approaches to Transfer

The second approach to transfer asks whether person-level variables affect transfer. For example, do IQ tests or persistence predict the ability to transfer? Person-based research relevant to instruction asks whether some experiences can transform people in general ways.

**Transferring out from instruction.** An enduring issue has been whether instruction can transform people into better thinkers. People often believe that mastering a formal discipline, like Latin or programming, improves the rigor of thought. Research has shown that it is very difficult to improve people's reasoning, with instruction in logical reasoning

being notoriously difficult. Although people may learn to reason appropriately for one situation, they do not necessarily apply that reasoning to novel situations. More protracted experiences, however, may broadly transform individuals to the extent that they apply a certain method of reasoning in general, regardless of situational context. For example, the cultural experiences of American and Chinese adults lead them to approach contradictions differently.

There have also been attempts to improve learning abilities by improving people's ability to transfer. Ann Brown and Mary Jo Kane showed young children how to use a sample solution to help solve an analogous problem. After several lessons on transferring knowledge from samples to problems, the children spontaneously began to transfer knowledge from one example to another. Whether this type of instruction has broad effects—for example, when the child leaves the psychologist's laboratory—remains an open question. Most likely, it is the accumulation of many experiences, not isolated, short-term lessons, that has broad implications for personal development.

**Transferring in to instruction.** When children enter school, they come with identities and dispositions that have been informed by the practices and roles available in their homes and neighborhoods. Schools also have practices and roles, but these can seem foreign and inhospitable to out-of-school identities. Na'ilah Nasir, for example, found that students did not transfer their basketball "street statistics" to make sense of statistics lessons in their classrooms (nor did they use school-learned procedures to solve statistics problems in basketball). From a knowledge approach to transfer, one might argue that the school and basketball statistics were analogous, and that the children failed to see the common deep features. From a person approach to transfer, the cultural contexts of the two settings were so different that they supported different identities, roles, and interpretations of social demands. People can view and express themselves quite differently in school and nonschool contexts, and there will therefore be little transfer.

One way to bridge home and school is to alter instructional contexts so children can build identities and practices that are consistent with their out-of-school personae. Educators, for example, can bring elements of surrounding cultures into the classroom. In one intervention, African-American students learned literary analysis by building on

their linguistic practice of signifying. These children brought their cultural heritage to bear on school subjects, and this fostered a school-based identity in which students viewed themselves as competent and engaged in school.

### Conclusion

The frequent disconnect between in-school and out-of-school contexts has led some researchers to argue that transfer is unimportant. In 1988, Jean Lave compared how people solved school math problems and best-buy shopping problems. The adults rarely used their school algorithms when shopping. Because they were competent shoppers and viewed themselves as such, one might conclude that school-based learning does not need to transfer. This conclusion, however, is predicated on a narrow view of transfer that is limited to identical uses of what one has learned or to identical expressions of identity.

From an educational perspective, the primary function of transfer should be to prepare people to learn something new. So, even though shoppers did not use the exact algorithms they had learned in school, the school-based instruction prepared them to learn to solve best-buy problems when they did not have paper and pencil at hand. This is the central relevance of transfer for education. Educators cannot create experts who spontaneously transfer their knowledge or identities to handle every problem or context that might arise. Instead, educators can only put students on a trajectory to expertise by preparing them to transfer for future learning.

**See also:** LEARNING, *subentries on* ANALOGICAL REASONING, CAUSAL REASONING, CONCEPTUAL CHANGE.

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NA'ILAH NASIR

## LEARNING COMMUNITIES AND THE UNDERGRADUATE CURRICULUM

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Educational observers have long argued that student involvement is important to student education. Indeed a wide range of studies, in a variety of settings and of a range of students, have confirmed that academic and social involvement, sometimes referred to as academic and social integration, enhances student development, improves student learning, and increases student persistence. Simply put, involvement matters. But getting students involved can be difficult. This is especially true for the majority of college students who commute to college, who work while in college, or have substantial family responsibilities beyond college. Unlike students who reside on campus, these students have few, if any, opportunities to engage others beyond the classroom.

For that reason an increasing number of universities and colleges, both two- and four-year, have turned their attention to the classroom—the one place, perhaps the only place, where students meet each other and the faculty. Researchers have asked how that setting can be altered to better promote student involvement and in turn improve student education. In response, schools have begun to institute a variety of curricular and pedagogical reforms ranging from the use of cooperative and problem-based learning to the inclusion of service learning in the college curriculum. One reform that is gaining attention, that addresses both the need for student involvement and the demands for curricular coherence, is the use of learning communities.

Learning communities, in their most basic form, begin with a kind of co-registration or block scheduling that enables students to take courses together, rather than in isolation. In some cases, learning communities will help students make connections with linked courses—tying two courses together, typically a course in writing with a course in selected literature or current social problems. In other cases, it may mean sharing the entire first-semester curriculum so that students in the learning community study the same material throughout the semester. In some large universities such as the University of Oregon and the University of Washington, the twenty-five to thirty students in a learning community may attend lectures with 200 to 300 other students but stay together for a smaller discussion section, often called the Freshman Interest Group, led by a graduate student or upperclassman. In still other cases, students will take all their classes together either as separate, but linked, classes (Cluster Learning Communities) or as one large class that meets four to six hours at a time several times per week (Coordinated Studies). Figure 1 shows examples of these learning community models.

The courses in which students co-register are not coincidental or random. They are typically connected by an organizing theme that gives meaning to their linkage. The point of doing so is to engender a coherent interdisciplinary or cross-subject learning that is not easily attainable through enrollment in unrelated, stand-alone courses. For example, a Coordinated Studies Program at Seattle Central Community College is titled “Body and Mind.” It links courses in human biology, psychology, and sociology, and asks students to consider how the connected fields of study pursue a singular piece of knowledge, namely how and why humans behave as they do.

As described by Faith Gabelnick and her colleagues in their 1990 book *Learning Communities: Creating Connections among Students, Faculty, and Disciplines*, many learning communities do more than co-register students around a topic. They change the manner in which students experience the curriculum and the way they are taught. Faculty have reorganized their syllabi and their classrooms to promote shared, collaborative learning experiences among students across the linked classrooms. This form of classroom organization requires students to work together in some form of collaborative groups and to become active, indeed responsible, for the learning of both group and classroom peers. In

this way students are asked to share not only the experience of the curriculum, but also of learning within the curriculum.

### Learning Communities as Curriculum Structure

Although the content may vary, nearly all learning communities have three things in common. One is *shared knowledge*. By requiring students to take courses together and organizing those courses around a theme, learning communities seek to construct a shared, coherent curricular experience that is not just an unconnected array of courses in, say, composition, calculus, history, Spanish, and geology. In doing so they seek to promote higher levels of cognitive complexity that cannot easily be obtained through participation in unrelated courses.

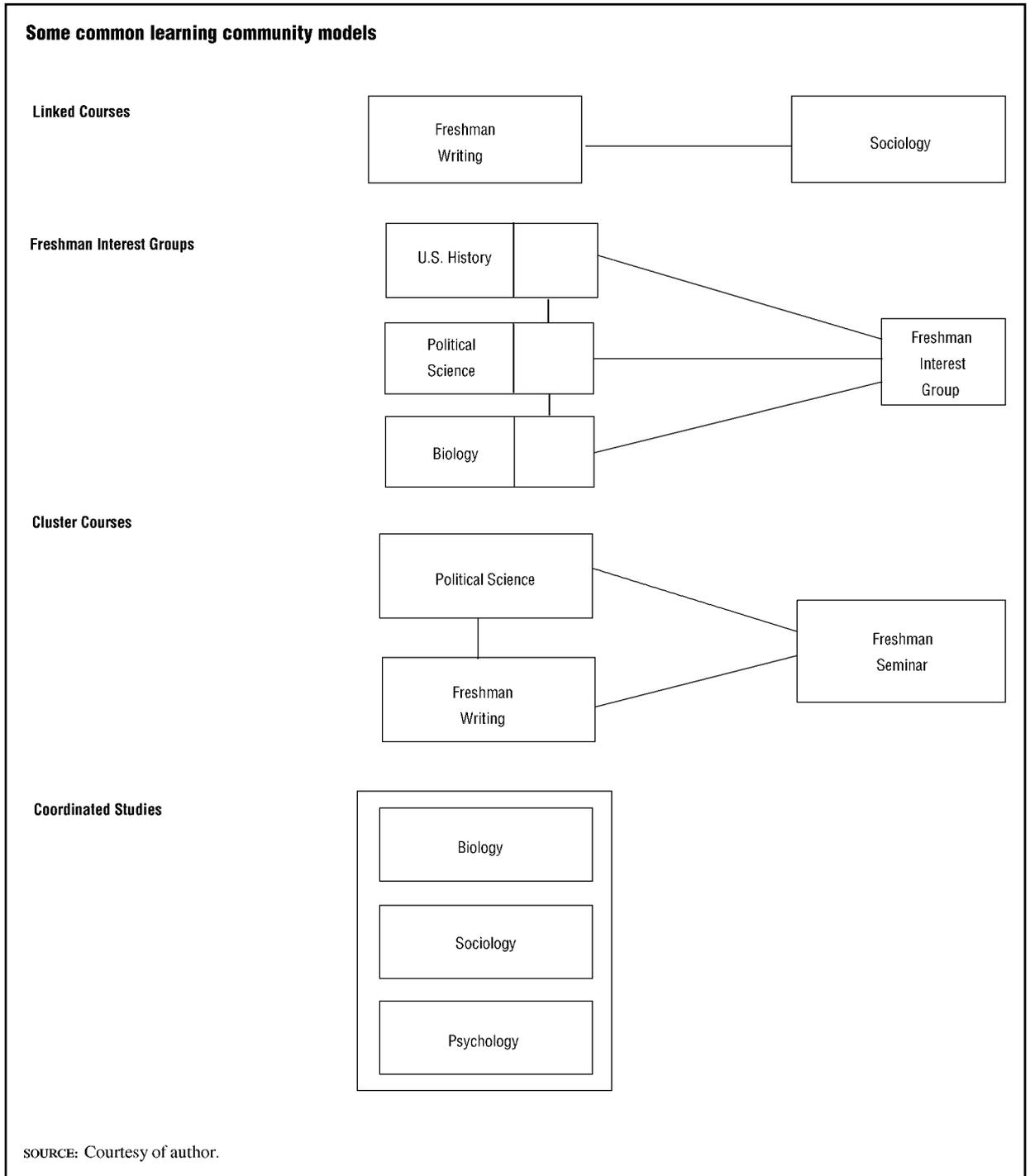
The second common element is *shared knowing*. Learning communities enroll the same students in several classes so they get to know each other quickly and fairly intimately and in a way that is part and parcel of their academic experience. By asking students to construct knowledge together, learning communities seek to involve students both socially and intellectually in ways that promote cognitive development as well as an appreciation for the many ways in which one’s own knowing is enhanced when other voices are part of that learning experience.

The third common thread is *shared responsibility*. Learning communities ask students to become responsible to each other in the process of trying to know. They participate in collaborative groups that require students to be mutually dependent on one another so that the learning of the group does not advance without each member doing her or his part.

As a curricular structure, learning communities can be applied to any content and any group of students. Most often they are designed for the needs of beginning students. In those instances, one of the linked courses becomes a Freshman Seminar. Increasingly they are also being adapted to the needs of undecided students and students who require developmental academic assistance. In these cases one of the linked courses may be a career exploration or developmental advising course or, in the latter case, a “learning to learn” or study skills course.

In residential campuses some learning communities have moved into the residence halls. These “living learning communities” combine shared courses with shared living. Students, typically those beginning their first semester of college, enroll in a

**FIGURE 1**



number of linked courses and live together in a reserved part of a residence hall.

More recently a number of institutions have used community service as a linking activity or theme for learning communities. The Evergreen

State College, Portland State University, St. Lawrence University, and colleges in the Maricopa Community College District have added service learning to one or more of their linked courses. As an extension of traditional models of community service and experiential learning, service learning combines in-

tentional educational activities with service experience to meet critical needs identified by the communities being served. Unlike voluntarism, notes Barbara Jacoby in her 1996 book on the topic, *service learning* is a pedagogical strategy; an inductive approach to education grounded in the assumption that thoughtfully organized experience is the foundation for learning. When connected to learning communities and the collaborative pedagogy that underlies them, service learning becomes a shared experience in which students and faculty are able to engage in time-intensive, interdisciplinary study of complex social problems that may be used to apply and test theory learned in the classroom or to generate knowledge from experience. In either case service learning in a collaborative setting seems to promote not only the acquisition of course content, but also enhanced intellectual development and a shared sense of responsibility for the welfare of others.

### Faculty and Staff Collaboration

When applied to particular groups of students, as described above, the faculty of the learning community almost always includes both academic and student affairs professionals. Such learning communities call for, indeed require, the collaborative efforts of both parties. This is the case because the staff of student affairs are typically the only persons on campus who possess the skills and knowledge needed to teach some of the linked courses. Take the case of learning communities for students requiring developmental assistance. In Cluster Learning Communities, for example, the faculty of the learning community may consist of a faculty person who teaches a regular introductory course in economics and two members of a learning support center who teach developmental writing and mathematics.

To be effective such learning communities require their faculty, that is the academic and student affairs professionals who staff the learning community, to collaborate on both the content and pedagogy of the linked courses. They must work together, as equal partners, to ensure that the linked courses provide a coherent shared learning experience. One of the many benefits of such collaboration, where all voices are heard, is that the academic staff often discover the wealth of knowledge that student affairs professionals bring to the discourse about teaching and learning. Furthermore, in leaving, at least momentarily, their respective “silos,” both come to discover the many benefits of looking at one’s work from fresh eyes.

### Benefits to Students

There is now ample evidence that learning communities enhance student learning and persistence in both two- and four-year institutions. Program assessments and multi-institution studies indicate that learning communities promote student achievement in a variety of ways. Though intentionally limited in scope, studies of learning communities have yielded a number of important insights into the impact of learning communities on student learning and persistence. First, students in learning communities tended to form their own self-supporting groups that extended beyond the classroom. Learning community students spent more time together out of class than did students in traditional, unrelated stand-alone classes and they did so in ways that students saw as supportive. Indeed, some students at the urban community colleges saw those groups as critical to their ability to continue in college.

Second, learning community students became more actively involved in classroom learning, even after class. They spent more time learning together both inside and outside the class. In this way, learning communities enabled students to bridge the divide between academic classes and student social conduct that frequently characterizes student life. They tended to learn and make friends at the same time. And as students spent more time together learning, they learned more.

Third, participation in the learning community seemed to enhance the quality of student learning. By learning together, everyone’s understanding and knowledge was, in the eyes of the participants, enriched. At the same time, students in the learning community programs perceived themselves as having made significantly greater intellectual gains over the course of the semester than did similar students in the comparison classes.

Fourth, as students learned more and saw themselves as more engaged both academically and socially, they persisted at a higher rate than did comparable students in the traditional curriculum. At Seattle Central Community College, for example, learning community students continued at a rate approximately twenty-five percentage points higher than did students in the traditional curriculum.

Finally, student participants’ stories highlighted powerful messages about the value of collaborative learning settings in fostering what could be called “the norms of educational citizenship,” that is to say

norms that promote the notion that individual educational welfare is tied inexorably to the educational welfare and interests of other members of the educational community. Students in these programs reported an increased sense of responsibility to participate in the learning experience, and an awareness of their responsibility for both their learning and the learning of others.

Learning communities do not represent the final answer to student learning. As with any other pedagogy, there are limits to their effectiveness. Some students do not like learning with others and some faculty find collaborating with other faculty and staff difficult. Nevertheless, like other efforts to enhance student involvement in learning, such as cooperative learning and service learning, there is ample evidence to support the contention that their application enhances student learning and persistence and enriches faculty professional lives. It is no surprise then that so many institutions have initiated learning communities and a number of foundations have established programs to support their development.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE STUDENT RETENTION; CURRICULUM, HIGHER EDUCATION; GENERAL EDUCATION IN HIGHER EDUCATION; LIVING AND LEARNING CENTER RESIDENCE HALLS; RESIDENTIAL COLLEGES.

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## LEARNING DISABILITIES, EDUCATION OF INDIVIDUALS WITH

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The term *learning disability* was first introduced in the early 1960s. Up until that time, children with relatively normal intelligence who experienced learning difficulties were referred to as *minimally brain injured*, *slow learners*, *dyslexic*, or *perceptually disabled*. Despite their learning problems, these children had not received special attention in schools. Parents' unyielding efforts to get their children's educational needs addressed played a major role in the United States federal government's recognition of *specific learning disability* as a special education category in the late 1960s. The learning disability category has since become the largest category of special education in the United States, accounting for over half of all students identified by public schools as needing special education services.

Since the formal inception of the learning disability category in the 1960s, those working in that field have grappled with issues of definition, identifi-

cation, treatment, and placement. A definition of learning disabilities that provides unambiguous identification criteria does not yet exist; however, there is growing consensus regarding some aspects of a definition (e.g., presumption of central nervous system dysfunction; association with underachievement and psychological process disorders; variance within and among individuals). In practice, the principal method for determining identification is discrepancy: the difference between ability—usually measured by standardized intelligence tests—and achievement—usually measured by standardized achievement tests. Many authorities, however, object to the reliance on discrepancy because of invalid assumptions and unreliable scores.

Students with learning disabilities, like other students with disabilities, receive special education services under the Individuals with Disabilities Education Act (originally passed in 1975 as the Education for All Handicapped Children Act). Early attempts (i.e., in the mid-1960s to early 1970s) to alleviate the academic problems of students with learning disabilities involved a focus on perceptual motor training (e.g., tracing embedded figures, connecting dots) in isolation of academic skills. Most teachers no longer use these types of exercises, as research failed to demonstrate their effectiveness. The end result of individuals' and organizations' capitalizing on the appeal of "quick fixes" and "cures" is the emergence of other questionable treatments. In the 1980s, tinted lenses and the Neural Organization Technique—the manual manipulation of the skull—were purported to be effective treatments for severe reading problems.

Notwithstanding some ineffective methods, much progress has been made to identify effective means of addressing the learning needs of students with disabilities. Extensive research syntheses summarized by Sharon Vaughn, Russell Gersten, and David J. Chard indicate that students with learning disabilities learn best when they are taught in small groups (i.e., six or fewer), wherein teachers control tasks to ensure high levels of student success and use procedures to teach students self-questioning (e.g., What do I think this story is about? What mathematical operation should I use to solve this problem?). Best practices in writing instruction, for example, include explicit teaching of the steps in the writing process, explicit teaching of the structure of various types of writing, and guided feedback. Unfortunately, many special educators are inadequately trained

to meet the needs of exceptional students; as a result, many instructional practices validated by research are not reaching students.

The most appropriate setting in which to provide special education services is an issue of considerable debate. For most students with learning disabilities, services are provided in general education classrooms as a result of the controversial trend toward policies of inclusion (i.e., placing students with disabilities in general-education classrooms for most or all of the school day). Advocates of full inclusion, such as the Association for Persons with Severe Handicaps, declare that all students, regardless of disability, belong in general education classrooms; others, including the Learning Disabilities Association of America, advocate that decisions regarding placement should be made on an individual basis to optimize academic and social gains for students with disabilities. In accordance with the Individuals with Disabilities Education Act, a full continuum of alternative placements, ranging from general-education classrooms to home instruction, must be available to students with disabilities. To date, evidence indicates that the preservation of the continuum of placements is in the best interest of students with learning disabilities. As special educators of the twenty-first century improve teacher training and refine and replicate research efforts, the educational needs of students with learning disabilities will be met by the most qualified teachers, through the most effective means, in the most appropriate settings.

**See also:** COUNCIL FOR EXCEPTIONAL CHILDREN; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## LEARNING THEORY

### HISTORICAL OVERVIEW

Diane F. Halpern  
Beth Donaghey

### CONSTRUCTIVIST APPROACH

Mary Lamon

### SCHEMA THEORY

William F. Brewer

## HISTORICAL OVERVIEW

Learning theories are so central to the discipline of psychology that it is impossible to separate the history of learning theories from the history of psychology. Learning is a basic psychological process, and investigations of the principles and mechanisms of learning have been the subject of research and debate since the establishment of the first psychological laboratory by Wilhelm Wundt in Leipzig, Germany, in 1879. *Learning* is defined as a lasting change in behaviors or beliefs that results from experience. The ability to learn provides every living organism with the ability to adapt to a changing environment. Learning is an inevitable consequence of living—if we could not learn, we would die.

The evolution of learning theories may be thought of as a progression from broad theories developed to explain the many ways that learning occurs to more specific theories that are limited in the types of learning they are designed to explain. Learning theories are broadly separated into two perspectives. The first perspective argues that learning can be studied by the observation and manipulation of stimulus-response associations. This is known as the

*behaviorist* perspective because of its strict adherence to the study of observable behaviors. This perspective was first articulated in 1913 by John Watson, who argued that psychology should be the study of observable phenomena, not the study of consciousness or the mind. Watson believed that objective measurement of observable phenomena was the only way to advance the science of psychology.

The second type of learning theory argues that intervening variables are appropriate and necessary components for understanding the processes of learning. This perspective falls under the broad rubric of *cognitive learning theory*, and it was first articulated by Wilhem Wundt, the acknowledged “father of psychology,” who used introspection as a means of studying thought processes. Although proponents of these two perspectives differ in their view of how learning can be studied, both schools of thought agree that there are three major assumptions of learning theory: (1) behavior is influenced by experience, (2) learning is adaptive for the individual and for the species, and (3) learning is a process governed by natural laws that can be tested and studied.

### Behavior Theory

The behaviorist perspective dominated the study of learning throughout the first half of the twentieth century. Behaviorist theories identified processes of learning that could be understood in terms of the relationships between the *stimuli* that impinge on organisms and the way organisms *respond*, a view that came to be referred to as *S-R theories*. A central process in S-R theories is *equipotentiality*. Equipotential learning means that learning processes are the same for all animals, both human and nonhuman. By studying learning in nonhuman animals, the early behaviorists believed they were identifying the basic processes that are important in human learning. They also believed that learning could only be studied by observing events in the environment and measuring the responses to those events. According to the behaviorists, internal mental states are impossible topics for scientific inquiry, and thus are not necessary in the study of learning. For behaviorists, a change in behavior is the only appropriate indicator that learning has occurred. According to this view, all organisms come into the world with a blank mind, or, more formally, a *tabula rasa* (blank slate), on which the environment writes the history of learning for that organism. Learning, from the behaviorist perspective, is what happens to an organism as a result of its experiences.

**Types of behavioral learning.** There are two main types of learning in the behaviorist tradition. The first is *classical conditioning*, which is associated with the work of Ivan Pavlov (1849–1936), a Russian physiologist who studied the digestive processes of dogs. Pavlov noticed that dogs salivated in the absence of food if a particular stimulus was present that had previously been paired with the presentation of food. Pavlov investigated the way in which an association between a neutral stimulus (e.g., a lab technician who fed the dogs), an unconditioned stimulus (food), and an unconditioned reflex (salivation) was made. Pavlov’s classic experiment involved the conditioning of salivation to the ringing of a bell and other stimuli that were not likely to make a dog salivate without a previously learned association with food.

In the initial stages of the classical conditioning paradigm, an unconditioned response (UCR; in this case, salivation) is elicited by the presentation of an unconditioned stimulus (UCS; in this case, food). If a neutral stimulus (one that does not elicit the UCR, such as a bell) is paired with the presentation of the UCS over a series of trials, it will come to elicit a *conditioned* response (CR; also salivation in this example), even when the UCS (food) is absent. In the paradigm of classical conditioning, the previously neutral stimulus (bell) becomes a conditioned stimulus (CS), which produces the conditioned response (CR) of salivation. In other words, the animal in the experiment learns to associate the bell with the opportunity to eat and begins to salivate to the bell in the absence of food. It is as though the animal came to think of the bell as “mouthwatering,” although behaviorists never would have used terms like *think of*, because thinking is not a directly observable behavior.

Even though the original work on classical conditioning was performed using nonhuman animals, this type of learning applies to humans as well. Learned taste aversions and the development of specific phobias are examples of classical conditioning in humans. For example, the first time a person hears a drill at a dentist’s office, it probably will not cause the palms to sweat and the heart rate to quicken. However, through the pairing of the sound with the unpleasant sensation of having a cavity drilled, the sound itself may come to elicit symptoms of fear and anxiety, even if one is not in the dentist’s chair. Feelings of fear and anxiety may generalize so that

the same fear response is elicited by the sight of the dentist's lab coat or the dental chair.

The second type of learning that is categorized in the behaviorist tradition is *instrumental* or *operant*, conditioning. The main difference between instrumental conditioning and classical conditioning is that the emphasis is on behavior that is voluntary (emitted), not reflexive (elicited). The target behavior (e.g., a peck at a lever if one is studying birds) comes before the conditioning stimulus (e.g., food), as opposed to the classical model, which presents the conditioning stimulus (e.g., bell) prior to the target behavior (e.g., salivation).

In the instrumental paradigm, behaviors are learned as a result of their consequences. Edward Thorndike (1874–1949) was a pioneer in instrumental conditioning, although he resisted the label of *behaviorist*. In his view, the consequences of behaving in a particular way controlled learning. Behavior was instrumental in obtaining a goal, and the consequences of the behavior were responsible for the tendency to exhibit (and repeat) a behavior. Thorndike named this principle of instrumental conditioning the *law of effect*. He argued that if a behavior had a positive consequence or led to a satisfying state of being, the response (behavior) would be strengthened. If, on the other hand, a behavior had a negative consequence, the response would be weakened. Thorndike developed the principles of instrumental conditioning using a puzzle box that required that an animal exhibit a certain behavior (push a latch) to obtain a goal (open a door for access to food). The animal was given the opportunity, through trial and error, to discover the required behavior, and the behavior was reinforced through the opening of the door and access to food. With practice, the animal decreased the time that it needed to open the door. In the instrumental paradigm, the animal learned an association between a given situation and the response required to obtain a goal.

**Operant conditioning and reinforcement.** B. F. Skinner (1904–1990) is credited with the development of the operant-conditioning paradigm. Similar to instrumental conditioning, operant conditioning requires that an organism operate on the environment to achieve a goal. A behavior is learned as a function of the consequences of the behavior, according to a schedule of reinforcement or punishment. Unlike Thorndike, who used the concept of reward and satisfying states, Skinner emphasized the influence of *reinforcers*. Reinforcers are events that

follow a response and increase the likelihood that the response will be repeated, but they do not suggest the operation of a cognitive component such as reward (or pleasure). Learning is influenced according to the schedules of reinforcement in the operant paradigm. Skinner tested the operant theory by carefully controlling the environment to study behavior and the effects of reinforcement.

According to Skinner, operant conditioning has two laws. The first is the *law of conditioning*, which states that reinforcement strengthens the behavior that precedes it, which makes it more likely that the behavior will be repeated. The second is the *law of extinction*, which states that lack of reinforcement for a behavior will make that behavior less likely to reoccur. Reinforcement consists of two types of events, those that are *positive*, which means that when they are presented (e.g., present tasty food) the probability of a behavior occurring is increased (e.g., press a lever to get the tasty food), and those that are *negative*, which means that when they are removed (e.g., stop a loud sound or painful shock) the probability of a behavior occurring is increased (e.g., press a lever to stop a loud sound or painful shock). Punishment is defined as an event that weakens the tendency to make a response. Punishment could involve presenting an aversive stimulus (e.g., presenting a loud sound or painful shock), or it could involve removing access to a positive stimulus (e.g., removing a tasty food when a lever is pressed).

Skinner also experimented with different reinforcement schedules, and he found that different schedules produced different patterns of responding. Continuous schedules of reinforcement deliver a reinforcer every time the target behavior is exhibited. These schedules are effective in establishing the target behavior, but the behavior disappears quickly if the contingency is not met. Intermittent schedules of reinforcement deliver the reinforcer on a ratio schedule. For example, an experimenter may decide to reinforce every fourth response that an animal makes, or a reinforcer may be presented after a fixed or random time interval. The two types of intermittent schedules that maintain a high rate of responding and are very resistant to extinction are variable ratio and variable interval schedules.

Strict adherence to the behaviorist tradition excluded analysis of mental or internal events. However, Skinner acknowledged the role of thought. He maintained that thought was caused by events in the environment, and therefore a theory of learning that

was concerned with the influence of the environment was appropriate. Like Pavlov and Thorndike, Skinner's work was primarily conducted with non-human animals, but the principles of operant conditioning can be applied to humans as well, and they are widely used in behavior therapy and education.

### Cognitive Theories

Although behaviorism was a prolific and dominant theory in learning through the early decades of the twentieth century, certain concerns and observations led to a resurgence of interest in cognitive theories of learning. One area of concern was the distinction between performance and learning—that is, does behaviorism describe the factors that influence performance of learned behavior, rather than the act of learning itself? Within the behaviorist literature, evidence of cognitive elements like expectation and categorization exist. Under an intermittent reinforcement schedule, for example, animals increase their rate of response immediately before a reinforcer is delivered, thus acting as though they expect it. Similarly, animals can be trained to distinguish between types of stimuli that belong to different classes. Learning this type of distinction seems to involve classification, which is a cognitive process. Most importantly, scientists who studied learning recognized that the behaviorist theories could not account for all types of learning. Humans and animals can learn something without exhibiting what they have learned, meaning that performance does not always reflect what has been learned.

Cognitive theories grew from the concern that behavior involves more than an environmental stimulus and a response, whether it be voluntary or reflexive. These theories are concerned with the influence of thinking about and remembering experiences or behavior. The assumptions about learning under cognitive theories are not the same as those for behaviorist theories, because thinking and remembering are internal events. Inferences about the internal events such as thinking and remembering can be made as long as they are paired with careful observation of behavior. Cognitive theorists assume that some types of learning, such as language learning, are unique to humans, which is another difference between these two perspectives. Cognitive theories also focus on the organism as an active processor of information that modifies new experiences, relates them to past experiences, and organizes this information for storage and retrieval. Cognitive psy-

chologists also recognize that learning can take place in the absence of overt behavior.

Edward Tolman (1886–1959) was among the first psychologists to investigate the organization of behavior and learning. He conducted research in the behaviorist tradition (objective research on nonhuman species), but he introduced cognitive elements to his explanation of learning. In Tolman's theory, however, the cognitive elements were based on observed behavior, not on introspection. He believed that learning involved more than stimulus and response events; it involved the development of an organized body of knowledge or expectations about a given situation. Tolman conducted many of his learning experiments using rats whose learning task was to run through a maze. By varying the conditions in the maze, he came to the conclusion that learning involved an understanding about events and their consequences, and this led to purposive, goal-directed behavior. Tolman emphasized the role of expectation and its reinforcing influence on the repetition of behavior. He popularized the concept of cognitive maps, which represent an organism's understanding of the relationship between parts of the environment, as well as the organism's relationship to the environment.

In a clear break with behaviorists, Tolman noted that reinforcement was not a necessary component of learning, and that organisms could demonstrate *latent learning*. Latent learning is displayed only when an organism is motivated to show it. Tolman was also concerned with differences in behavior that might be attributed to internal states of the organism, a consideration that had been largely rejected by earlier theorists. In identical learning paradigms, two organisms can show different behaviors based on their different moods, physiology, or mental states.

**Social learning theory.** Social learning theory focuses on the sort of learning that occurs in a social context where modeling, or observational learning, constitutes a large part of the way that organisms learn. Social learning theorists are concerned with how expectations, memory, and awareness influence the learning process. Both humans and nonhumans can learn through observation and modeling. Consider, for example, the acquisition of sign language by the offspring of language-trained apes who learn to sign by watching their trained parents. Children learn many behaviors through modeling. A classic experiment by Albert Bandura (1961) allowed one

group of children to observe an adult who aggressively pounded on a bobo doll (an inflatable doll used for punching), while another group watched a nonaggressive model and a third group had no model at all. The children who saw the aggressive adult often modeled (imitated) this behavior when given an opportunity to play with the same doll. The children who saw the nonaggressive model showed the least amount of aggressive play when compared to the other two groups. Social learning theorists retain the behaviorist principles of reinforcement and response contingencies, but they also extend the area of inquiry for learning to include components of cognitive processing such as attention, remembering, the processing of information about the environment, and the consequences of behavior.

Appreciation of the cognitive components of learning focused attention on the need to remember an experience over various time intervals. Information-processing theories developed from the cognitive perspective and involve the processes of coding, storing, and retrieving information about the environment. Information processing is used to study the processes of memory, a central cognitive component in modern learning theories. Theories of information processing are a by-product of the computer revolution, and they use the language of computers (e.g., sequential processing stages, input, output) to describe the processes of learning and memory. According to a human information-processing perspective, learning occurs in sequential stages, beginning with *encoding* information from the environment. Encoding of information involves the process by which information from the environment is translated into usable information. The next stage is *storage*, which involves keeping the information that has been encoded. Stored information builds the “database” of past learning. The final stage in the information-processing approach is *retrieval*, which involves accessing the stored information so that it can be used to perform a task. Organisms are seen as active participants in the information-processing model. They do not experience the environment passively or simply absorb information, but instead they seek out certain information, and then manipulate, modify, and store it for later use.

Learning theories have often been used to provide a guide for education. Earlier applications were concerned with the use of appropriate rewards and punishment, concerns that mirrored the major tenets of behaviorist theories. More recently, cognitive

perspectives have shaped the field of education, and there has been more concern with learning methods that enhance long-term retention and the transfer of information and skills that are learned in schools to novel problems in out-of-school settings. For example, variability in encoding (learning material in different ways, e.g. video and text) produces more durable long-term retention, even though it is a more effortful (and generally less enjoyable) way to learn. In addition, students can become better thinkers when they receive specific instruction in thinking skills—and when the instruction is designed to enhance transfer. Teaching strategies that enhance transfer include spaced practice (viewing material over time versus cramming), using a variety of examples so learners can recognize where a concept is applicable, and practice at retrieval (repeatedly remembering material over time) with informative feedback.

Learning theories are facing new challenges as people grapple with increases in the amount of available information that needs to be learned, rapidly changing technologies that require new types of responses to new problems, and the need to continue learning throughout one’s life, even into old age. Contemporary learning theories supported by empirical research offer the promise of enhanced learning and improved thinking—both of which are critical in a rapidly changing and complex world.

*See also:* SKINNER, B. F.; THORNDIKE, EDWARD; WATSON, JOHN B.

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## CONSTRUCTIVIST APPROACH

Constructivism is an epistemology, or a theory, used to explain how people know what they know. The basic idea is that problem solving is at the heart of learning, thinking, and development. As people solve problems and discover the consequences of their actions—through reflecting on past and immediate experiences—they construct their own understanding. Learning is thus an active process that requires a change in the learner. This is achieved through the activities the learner engages in, including the consequences of those activities, and through reflection. People only deeply understand what they have constructed.

A constructivist approach to learning and instruction has been proposed as an alternative to the objectivist model, which is implicit in all behaviorist and some cognitive approaches to education. Objec-

tivism sees knowledge as a passive reflection of the external, objective reality. This implies a process of "instruction," ensuring that the learner gets correct information.

## History of Constructivism

The psychological roots of constructivism began with the developmental work of Jean Piaget (1896–1980), who developed a theory (the theory of genetic epistemology) that analogized the development of the mind to evolutionary biological development and highlighted the adaptive function of cognition. Piaget proposed four stages in human development: the sensorimotor stage, the preoperational stage, the concrete operational stage, and the formal operational stage. For Piaget, the development of human intellect proceeds through adaptation and organization. Adaptation is a process of assimilation and accommodation, where external events are assimilated into existing understanding, but unfamiliar events, which don't fit with existing knowledge, are accommodated into the mind, thereby changing its organization.

Countless studies have demonstrated—or tried to discredit—Piaget's developmental stages. For example, it has become clear that most adults use formal operations in only a few domains where they have expertise. Nonetheless, Piaget's hypothesis that learning is a transformative rather than a cumulative process is still central. Children do not learn a bit at a time about some issue until it finally comes together as understanding. Instead, they make sense of whatever they know from the very beginning. This understanding is progressively reformed as new knowledge is acquired, especially new knowledge that is incompatible with their previous understanding. This transformative view of learning has been greatly extended by neo-Piagetian research.

The Russian psychologist Lev Vygotsky's (1896–1934) relevance to constructivism derives from his theories about language, thought, and their mediation by society. Vygotsky held the position that the child gradually internalizes external and social activities, including communication, with more competent others. Although social speech is internalized in adulthood (it becomes thinking), Vygotsky contended that it still preserves its intrinsic collaborative character.

In his experiments, Vygotsky studied the difference between the child's reasoning when working in-

dependently versus reasoning when working with a more competent person. He devised the notion of the *zone of proximal development* to reflect on the potential of this difference. Vygotsky's findings suggested that learning environments should involve guided interactions that permit children to reflect on inconsistency and to change their conceptions through communication. Vygotsky's work has since been extended in the *situated approach* to learning.

Vygotsky and Piaget's theories are often contrasted to each other in terms of individual cognitive constructivism (Piaget) and social constructivism (Vygotsky). Some researchers have tried to develop a synthesis of these approaches, though some, such as Michael Cole and James Wertsch, argue that the individual versus social orientation debate is over-emphasized. To them, the real difference rests on the contrast between the roles of cultural artifacts. For Vygotsky, such artifacts play a central role, but they do not appear in Piaget's theories.

For the American philosopher and educator John Dewey (1859–1952), education depended on action—knowledge and ideas emerge only from a situation in which learners have to draw out experiences that have meaning and importance to them. Dewey argued that human thought is practical problem solving, which proceeds by testing rival hypotheses. These problem-solving experiences occur in a social context, such as a classroom, where students join together in manipulating materials and observing outcomes. Dewey invented the method of progressive education in North America. The Fostering Communities of Learners (FCL) program, devised by Ann Lesley Brown and Joseph Campione, is a current attempt to put Dewey's progressive education theory to work in the classroom.

In summary, Piaget contributed the idea of transformation in learning and development; Vygotsky contributed the idea that learning and development were integrally tied to communicative interactions with others; and Dewey contributed the idea that schools had to bring real world problems into the school curriculum.

### Constructivist Processes and Education

There are a number of competing constructivist views in education. Constructivists tend to celebrate complexity and multiple perspectives, though they do share at least a few educational prescriptions.

**Prior knowledge.** Constructivists believe that prior knowledge impacts the learning process. In trying to

solve novel problems, perceptual or conceptual similarities between existing knowledge and a new problem can remind people of what they already know. This is often one's first approach towards solving novel problems. Information not connected with a learner's prior experiences will be quickly forgotten. In short, the learner must actively construct new information into his or her existing mental framework for meaningful learning to occur.

For example, Rosalind Driver has found that children's understanding of a phenomenon (interpretations that fit their experiences and expectations) differ from scientific explanations. This means that students distinguish school science from their "real world" explanations. Studies of adult scientific thinking reveal that many adults hold non-normative scientific explanations, even though they have studied science. This is what the philosopher Alfred Whitehead (1861–1947) referred to as *inert knowledge*. Asking students what they already know about a topic and what puzzles them affords an opportunity to assess children's prior knowledge and the processes by which they will make sense of phenomena.

**Real and authentic problems.** Constructivist learning is based on the active participation of learners in problem-solving and critical thinking—given real and authentic problems.

In *anchored instruction*, for example, as advanced in the work of the Cognition and Technology Group at Vanderbilt University, learners are invited to engage in a fictitious problem occurring in a simulated real-world environment. Rich and realistic video contexts are provided—not only to provide relevant information for solving the problem, but also to create a realistic context. If the students buy in to the proposed problems, they will be engaged in problem solving similar to what the people in the video are engaged in.

There are also many examples of project-based learning in which students take on tasks such as building a vehicle that could cross Antarctica. It is unclear whether these constitute authentic problems—or what students learn from project-based learning.

**Constructivist curriculum.** A constructively oriented curriculum presents an emerging agenda based on what children know, what they are puzzled by, and the teachers' learning goals. Thus, an important part of a constructivist-oriented curriculum

should be the negotiation of meaning. Maggie Lampert, a mathematics teacher, guides students to make sense of mathematics by comparing and resolving discrepancies between what they know and what seems to be implied by new experience.

In constructivist classrooms, curriculum is generally a process of digging deeper and deeper into big ideas, rather than presenting a breadth of coverage. For example, in the Fostering Communities of Learners project where students learn how to learn, in knowledge-building classrooms where students seek to create new knowledge, or in Howard Gardner's classrooms where the focus is on learning for deep understanding, students might study endangered species, island biogeography, or the principles of gravity over several months. As students pursue questions, they derive new and more complex questions to be investigated. Building useful knowledge structures requires effortful and purposeful activity over an extended period.

**Cognitive conflict and social context.** According to Dewey, "Reflection arises because of the appearance of incompatible factors within an empirical situation. Then opposed responses are provoked which cannot be taken simultaneously in overt action" (p. 326). To say this in another way, cognitive conflict or puzzlement is the stimulus for learning, and it determines the organization and nature of what is being learned. Negotiation can also occur between individuals in a classroom. This process involves discussion and attentive listening, making sense of the points of views of others, and comparing personal meanings to the theories of peers. Justifying one position over another and selecting theories that are more viable leads to a better theory. Katerine Bielaczyc and Allan Collins have summarized educational research on learning communities in classrooms where the class goal is to learn together, to appreciate and capitalize on distributed expertise, and to articulate the kinds of cognitive processes needed for learning.

**Constructivist assessment.** Assessment of student learning is of two types: formative and summative. Formative assessment occurs during learning and provides feedback to the student. It includes evaluations of ongoing portfolios, and demonstrations of work in progress. Student collaboration also provides a form of formative assessment. In FCL, for example, students report to each other periodically on their research. In knowledge-building classrooms, students can read and comment on each other's

work with the Knowledge Forum software. Formative assessment rarely occurs in classrooms.

Summative assessment occurs through tests and essays at the end of a unit of study. Summative assessments provide little specific feedback. From a constructivist perspective, formative assessments are more valuable to the learner, but with the recent emphasis in North America on standards, and due to the poor alignment of constructivist approaches and standards, it is very difficult to harmonize formative and summative assessments.

**Technology and constructivism.** Cognitive research has uncovered successful patterns in tutorial, mentoring, and group discussion interactions. However, typical Internet chat and bulletin-board systems do not support a constructivist approach to learning and instruction. During the 1990s, researchers created tools such as Knowledge Forum, the Knowledge Integration Environment, and CoVis to more fully address constructivist principles. Each of these tools invites collaboration by structuring the kinds of contributions learners can make, supporting meaningful relationships among those contributions, and guiding students' inquiries. Teachers who use information and communication technologies in their classrooms are more likely to have a constructivist perspective towards learning and instruction. Additionally, sophisticated information and technology communications tools can capture the cognitive processes learners engage in when solving problems. This affords teacher reflection and coaching to aid deeper learning. It also affords teachers the chance to learn from each other.

**The teacher's role.** The teacher's role in a constructivist classroom isn't so much to lecture at students but to act as an expert learner who can guide students into adopting cognitive strategies such as self testing, articulating understanding, asking probing questions, and reflection. The role of the teacher in constructivist classrooms is to organize information around big ideas that engage the students' interest, to assist students in developing new insights, and to connect them with their previous learning. The activities are student-centered, and students are encouraged to ask their own questions, carry out their own experiments, make their own analogies, and come to their own conclusions. Becoming a constructivist teacher may prove a difficult transformation, however, since most instructors have been prepared for teaching in the traditional, objectivist manner. It "requires a paradigm shift," as well as

“the willing abandonment of familiar perspectives and practices and the adoption of new ones” (Brooks and Brooks, p. 25).

A constructivist approach to education is widely accepted by most researchers, though not by all. Carl Bereiter argues that constructivism in schools is usually reduced to project based learning, and John Anderson, Lynn Reder, and Herbert Simon claim that constructivism advocates very inefficient learning and assessment procedures. In any event, the reality is that constructivism is rarely practiced in schools.

*See also:* KNOWLEDGE BUILDING; PIAGET, JEAN; VYGOTSKY, LEV.

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### INTERNET RESOURCES

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MARY LAMON

## SCHEMA THEORY

Schemata are psychological constructs that have been proposed as a form of mental representation for some forms of complex knowledge.

### Bartlett's Schema Theory

Schemata were initially introduced into psychology and education through the work of the British psychologist Sir Frederic Bartlett (1886–1969). In carrying out a series of studies on the recall of Native American folktales, Bartlett noticed that many of the recalls were not accurate, but involved the replacement of unfamiliar information with something more familiar. They also included many inferences that went beyond the information given in the original text. In order to account for these findings, Bartlett proposed that people have *schemata*, or unconscious mental structures, that represent an individual's generic knowledge about the world. It is through schemata that old knowledge influences new information.

For example, one of Bartlett's participants read the phrase "something black came out of his mouth" and later recalled it as "he foamed at the mouth." This finding could be accounted for by assuming that the input information was not consistent with any schema held by the participant, and so the original information was reconstructed in a form that was consistent with one of the participant's schemata. The schema construct was developed during the period when psychology was strongly influenced by behaviorist and associationistic approaches; because the schema construct was not compatible with these worldviews, it eventually faded from view.

### Minsky's Frame Theory

In the 1970s, however, the schema construct was re-introduced into psychology through the work of the

computer scientist Marvin Minsky. Minsky was attempting to develop machines that would display human-like abilities (e.g., to perceive and understand the world). In the course of trying to solve these difficult problems, he came across Bartlett's work. Minsky concluded that humans were using their stored knowledge about the world to carry out many of the processes that he was trying to emulate by machine, and he therefore needed to provide his machines with this type of knowledge if they were ever to achieve human-like abilities. Minsky developed the *frame* construct as a way to represent knowledge in machines. Minsky's frame proposal can be seen as essentially an elaboration and specification of the schema construct. He conceived of the frame knowledge as interacting with new specific information coming from the world. He proposed that fixed generic information be represented as a frame comprised of slots that accept a certain range of values. If the world did not provide a specific value for a particular slot, then it could be filled by a default value.

For example, consider the representation of a generic (typical) elementary school classroom. The frame for such a classroom includes certain information, such as that the room has walls, a ceiling, lights, and a door. The door can be thought of as a slot which accepts values such as wood door or metal door, but does not accept a value such as a door made of jello. If a person or a machine is trying to represent a particular elementary school classroom, the person or machine *instantiates* the generic frame with specific information from the particular classroom (e.g., it has a window on one wall, and the door is wooden with a small glass panel). If, for some reason, one does not actually observe the lights in the classroom, one can fill the lighting slot with the default assumption that they are fluorescent lights. This proposal gives a good account of a wide range of phenomena. It explains, for example, why one would be very surprised to walk into an elementary classroom and find that it did not have a ceiling, and it accounts for the fact that someone might recall that a certain classroom had fluorescent lights when it did not.

### Modern Schema Theory

Minsky's work in computer science had a strong and immediate impact on psychology and education. In 1980 the cognitive psychologist David Rumelhart elaborated on Minsky's ideas and turned them into

an explicitly psychological theory of the mental representation of complex knowledge. Roger Schank and Robert Abelson developed the *script* construct to deal with generic knowledge of sequences of actions. Schema theory provided explanations for many experiments already in the literature, and led to a very wide variety of new empirical studies. Providing a relevant schema improved comprehension and recall of opaquely written passages, and strong schemata were shown to lead to high rates of inferential errors in recall.

### Broad versus Narrow Use of Schema

In retrospect, it is clear that there has been an ambiguity in schema theory between a narrow use and a broad use of the term *schema*. For example, in Rumelhart's classic 1980 paper, he defined a schema as "a data structure for representing the generic concepts stored in memory" (p. 34). Yet he went on to state that "there are schemata representing our knowledge about all concepts: those underlying objects, situations, events, sequences of events, actions and sequences of actions" (p. 34). Thus, schemata are frequently defined as the form of mental representation for generic knowledge, but are then used as the term for the representation of all knowledge.

There are severe problems with the use of the term *schema* to refer to all forms of complex knowledge. First, there is no need for a new technical term, since the ordinary term *knowledge* has this meaning. In addition, if schema theory is used to account for all knowledge, then it fails. A number of writers have pointed out that schema theory, as presently developed, cannot deal with those forms of knowledge that do not involve old generic information. Thus, schema theory provides an account for the knowledge in long-term memory that the state of Oklahoma is directly above the state of Texas. However, schema theory does not provide an account of the new representation one develops of a town as one travels through it for the first time.

Therefore it seems best to use the term *schema* in the narrower usage, as the form of mental representation used for generic knowledge. However, if one adopts the narrower usage one has to accept that schemata are only the appropriate representations for a subset of knowledge and that other forms of mental representation are needed for other forms of knowledge. For example, *mental models* are needed to represent specific nonschematic aspects of knowledge, such as the layout of an unfamiliar town, while

*naive theories* or *causal mental models* are needed to represent knowledge of causal/mechanical phenomena.

### Schema Theory in Education

Richard Anderson, an educational psychologist, played an important role in introducing schema theory to the educational community. In a 1977 paper Anderson pointed out that schemata provided a form of representation for complex knowledge and that the construct, for the first time, provided a principled account of how old knowledge might influence the acquisition of new knowledge. Schema theory was immediately applied to understanding the reading process, where it served as an important counterweight to purely bottom-up approaches to reading. The schema-theory approaches to reading emphasize that reading involves both the bottom-up information from the perceived letters coming into the eye and the use of top-down knowledge to construct a meaningful representation of the content of the text.

### Broad versus Narrow Use of Schema in Education

The problem with the broad and narrow use of the term *schema* surfaced in education just as it had in cognitive psychology. For example, in Anderson's classic 1977 paper on schemata in education, he clearly takes the broad view. He attacks the narrow view and says that it is impossible "that people have stored a schema for every conceivable scene, event sequence, and message" (p. 421), and that "an adequate theory must explain how people cope with novelty" (p. 421). However in a paper written at roughly the same time (1978), Anderson states that "a schema represents generic knowledge" (p. 67), and he adopts the narrow view systematically throughout the paper. In a 1991 paper on terminology in education, Patricia Alexander, Diane Schallert, and Victoria Hare note that the systematic ambiguity between the narrow and broad views has made it very difficult to interpret a given writer's use of the term *schema* in the education literature.

### Instructional Implications of Schema Theory

A number of writers have derived instructional proposals from schema theory. They have suggested that relevant knowledge should be activated before reading; that teachers should try to provide prerequisite knowledge; and that more attention should be given

to teaching higher-order comprehension processes. Many of these proposals are not novel, but schema theory appears to provide a theoretical and empirical basis for instructional practices that some experienced teachers were already carrying out.

### Impact of Schema Theory on Education

Schema theory has provided education with a way to think about the representation of some forms of complex knowledge. It has focused attention on the role old knowledge plays in acquiring new knowledge, and has emphasized the role of top-down, reader-based influences in the reading process.

*See also:* LEARNING, *subentry on* CAUSAL REASONING; LITERACY, *subentry on* NARRATIVE COMPREHENSION AND PRODUCTION; READING, *subentries on* COMPREHENSION, CONTENT AREAS.

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## LEARNING TO LEARN AND METACOGNITION

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Since the time of the Greek philosopher Socrates, educators have realized that teachers cannot possibly teach students everything they need to know in life. Thus, a major goal of educational systems has been to prepare students for a lifetime of learning. To this end, a large part of the educational endeavor involves teaching general skills and strategies that can be applied to a variety of problems and learning situations.

Although strategy instruction has been shown to improve learning, knowledge of strategies may not be sufficient to produce higher levels of learning. For instance, in 1973 Earl C. Butterfield, Clark Wambold, and John M. Belmont taught learning disabled students a strategy for learning a list of items. When these students used the strategy, their performance reached the level of normal achieving students—however, the learning disabled students did not spontaneously use it. To obtain higher levels of performance, learning disabled students had to be told when to use the strategy.

Similarly, young children may have knowledge of strategies but fail to use them. Michael Pressley, John G. Borkowski, and Julia T. O'Sullivan suggested in 1984 that strategy instruction should therefore provide students information about the utility of the strategy and when and how to use it. Put differently, strategy instruction should also include a metacognitive component.

Metacognition broadly defined is knowledge that a person has of his own cognitive processes. In 1979 John H. Flavell proposed that metacognitive knowledge consists of three components: (1) knowledge of self (e.g., knowing that one learns better when studying in a quiet setting than in front of the television); (2) knowledge of task (e.g., knowing that it's easier to prepare for a multiple-choice test than an essay test); and (3) knowledge of strategies (e.g., when and how to use them).

There is a significant relation between learning outcomes and knowledge of specific strategies. For instance, when strategy-training programs include assessing knowledge of the strategy and the utility of the strategy being taught, test performance is greater for children with more knowledge of the strategy than for children with less knowledge. Thus, knowing about a strategy is important. It is also important to know when to use one strategy versus another.

Ideally, children will be able to monitor the effectiveness of a particular strategy in a given situation and change strategies if necessary. To do this, they must accurately monitor their own learning (the degree to which material has been learned). Models of self-regulated learning provide a theoretical framework for understanding the role of metacognition in learning.

These models suggest that a person begins study by setting a learning goal (desired state of learning). As a person studies, she monitors how well the material has been learned. If this monitoring indicates that the goal has been reached, the person will terminate study. By contrast, if the learning goal has not been reached, the person will adjust her study (e.g., selecting a different study strategy or allocating more study time to the material).

According to this framework, accurate metacognitive monitoring is necessary for effective regulation of study, and these together contribute to more optimal learning. Thus, if a person does not accurately monitor his current state of learning, the person may fail to regulate study effectively. For instance, if a person inaccurately assesses progress toward a learning goal, he may prematurely stop studying or may continue using a less-effective strategy when another would be more effective. Therefore, accurately monitoring learning is critical.

A number of factors affect how accurately learning is monitored and how well this information is used to regulate study. Age-related differences are perhaps most relevant to educators. The capability to monitor the effectiveness of one strategy versus another develops with age. Adults discover the utility of a strategy spontaneously by using the strategy and through experiences with tests, and they will use this information to regulate subsequent study—selecting more effective strategies. Older children, although less accurate than adults, also monitor the utility of a particular strategy by using it and gaining feedback through tests; however, they fail to use this information to regulate study without explicit feedback regarding test performance. Young children do not appear to accurately monitor the utility of a strategy even when given an opportunity to monitor their test performance.

One approach to improving the accuracy of monitoring strategy effectiveness is to provide strategy-monitoring training. Marguerite Lodico and colleagues in 1983 trained young children to moni-

tor their performance while using different strategies and to explain how the strategy influenced their performance. Throughout this training, the children received feedback regarding their answers. Children who received this training were better able to derive the utility of the strategies and, in subsequent study, more frequently chose to use the more effective strategy.

The capability to monitor learning during study (prior to test) also develops with age. Annette Dufresne and Akira Kobasigawa showed that children as young as third grade recognized that it was easier to learn related items (e.g., bat and ball) than unrelated items (e.g., frog and table), whereas first graders fail to monitor the difference between these items. This difference in monitoring accuracy influenced regulation of study. Older children chose to restudy the more difficult items, whereas younger children appeared to randomly select items for restudy.

In some cases, adults quite accurately monitor their own learning (e.g., when monitoring associative learning after a delay). That is, in these situations, adults accurately discriminate better-learned material from less-learned material. However, in other cases, such as attempting to monitor comprehension of texts, even adult's monitoring accuracy is less than remarkable. Nonetheless, adults use this monitoring to guide subsequent study, typically opting to restudy material perceived as less well learned over material perceived as better learned. Moreover, monitoring accuracy is related to learning—higher accuracy is associated with greater test performance.

These findings regarding the importance of monitoring lead to the question of how educators can improve monitoring accuracy. First, they can encourage students to assess their own learning. As noted above, strategy-monitoring training involves giving students practice at monitoring the effectiveness of strategies. With practice, students also become more accurate at discriminating better-learned material from less-learned material. Second, they can frequently test student learning and provide explicit feedback on performance. Tests and feedback related to performance helps at least older students monitor the effectiveness of strategies. Tests also help students monitor their learning.

Learning to learn requires that students accurately monitor the effectiveness of their study and problem-solving behavior. Higher-achieving stu-

dents engage in more self-assessment than lower-achieving students. By encouraging self-assessment and developing monitoring skills in students, teachers can provide students with skills that will help them well after they leave the classroom.

*See also:* LEARNING, *subentry on* CONCEPTUAL CHANGE; READING, *subentries on* COMPREHENSION, CONTENT AREAS.

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KEITH THIEDE

## LESBIAN, GAY, BISEXUAL, TRANSGENDERED STUDENTS

See: SEXUAL ORIENTATION.

### LIABILITY OF SCHOOL DISTRICTS AND SCHOOL PERSONNEL FOR NEGLIGENCE

A tort is a civil wrong—a violation of a duty—that causes harm. In the U.S. judicial system, an individ-

ual who is injured by a breach of duty can sue the other person to collect compensation for that injury. There are basically three types of civil wrongs.

- **Intentional torts** include trespass, assault, battery and defamation.
- **Unintentional torts** include negligence and strict liability. Strict liability is when someone is held liable, even though they are not at fault. It is often used when an individual is engaged in an ultrahazardous activity.
- **Constitutional torts** occur when a government agent has violated an individual's constitutional rights.

Some intentional torts also can be crimes, and a tort-feasor can be required by a civil court to pay money damages to compensate the injured person and also be required by a criminal court to pay a fine or suffer imprisonment.

Negligence differs from these in that it is an unintentional tort. It occurs when one person unintentionally causes an injury to another through a breach of a duty or violation of a general standard of care. The general standard of conduct is conduct that reasonable people may expect others to observe as they go about their daily lives. Negligence is the failure to exercise due care when carrying out a duty or subjecting another to a risk that causes harm. A negligent tort is a tort that, although not intended, was committed in disregard of the rights or reasonable expectations of another person. This is the area of tort law that has given rise to the most litigation.

The money a tort-feasor must pay to compensate the accuser for the harm the accuser has sustained is called damages. Factors for which money damages are awarded in a tort case include property damage, medical expenses, pain and suffering, and lost wages. If the conduct of the tort-feasor is a particularly outrageous or offensive violation of the reasonable standard of conduct expected, the civil court will add to its award of regular damages to the injured person and amount of money known as exemplary, or punitive, damages. The damages constitute a civil, or private, fine against the tort-feasor and are analogous to the fines imposed by a criminal court.

The sixth edition of *Black's Law Dictionary* defines *negligence* as "the omission to do something which a reasonable man, guided by those ordinary considerations which ordinarily regulate human affairs, would do, or the doing of something which a reasonable or prudent man would not do."

Schools and their employees are not automatically responsible for every injury that may occur within the school. In order to be held liable for negligence, the following four questions must be answered in the affirmative:

1. Did the defendant owe a duty to the plaintiff?
2. Did the defendant breach that duty?
3. Was the plaintiff injured?
4. Was the breach the proximate cause of the injuries?

Further, there can be no defenses to the action. Generally speaking, to recover damages, it must be shown that the defendant owes a duty to the injured person, that the behavior fell short of that required, that this caused a real injury to the person, and that the injured person was not responsible for causing the injury.

### Duty

There is a duty of due care that the law recognizes one person owes to another. This duty may arise from a contract, a statute, common sense, or a special relationship the parties have to one another. Regarding students, the courts have found that schools and their employees have the duty to supervise students, provide adequate and appropriate instruction prior to commencing an activity that may pose a risk of harm, and provide a safe environment. Usually, that duty extends to students while they are in the custody or control of the school. Schools may have a duty to supervise students off school grounds when they have caused them to be there such as while on field trips or extracurricular events.

Schools may have a duty to supervise students on school grounds before and after school when they have caused them to be there, for example, when the bus drops them off. A duty can be extended if a person assumes additional responsibilities, such as assuming the duty to supervise students before and after school. Schools may acquire a duty to supervise when they have, by their previous actions, assumed the duty to supervise at this time such as when some staff has supervised intermittently or consistently before official time to arrive.

Schools also have a duty to warn of known dangers even when they do not have a duty to supervise. In the general workforce, a supervisor, and ultimately the company, is responsible for the negligent acts of employees under the doctrine of *respondeat supe-*

*rior*. However, in education, generally no one is automatically responsible for the acts of another. School administrators are not automatically responsible for the negligent acts of teachers. In school situations, usually a plaintiff must find a separate duty on the part of each defendant.

### Breach of Duty

Once a duty has been established, the injured individual must show that the duty was breached. The duty has been breached when the individual unreasonably fails to carry out the duty.

In carrying out duties, one is expected to act as an ordinary, prudent, and reasonable person considering all of the circumstances involved. The court or jury makes a determination of how the reasonable person would have acted; if the individual did less, he or she is found negligent.

The standard varies for professionals; for example, a reasonable teacher or principal. Defendants who are professionals will be held to a standard based on the skills or training they should have acquired for that position. Thus, the question to be answered is: What would the reasonable professional have done under the same or similar circumstances?

The standard varies also with the individual circumstances of the situation. Each situation gives rise to a unique set of circumstances. Some of the factors which may be considered in determining the standard of care include the following:

- Age and maturity
- Nature of the risk
- Precautions taken to avoid injury
- Environment and context (including characteristics of students, location, physical characteristics, and so forth)
- Type of activity
- Previous practice and experience

In determining negligence, children are not held to the same standard of care as adults; instead their actions must be reasonable for a child of similar age, maturity, intelligence, and experience. Some states further classify children according to a presumption of capabilities. In those states, children under seven are not held responsible for negligence or unreasonable acts. The noted exception, however, is that a child may be held to an adult standard of care when engaged in an adult activity, for example, driving a car or handling a weapon.

## Injury

The plaintiff must show an actual loss or real damage, for instance a physical bodily injury or a real loss. Compensation may include direct monetary damages for medical expenses, replacement of property, lost wages, and so forth.

The plaintiff may recover also for intangible injuries, such as pain and suffering, and emotional distress. In some situations an intangible injury is sufficient for recovery. However, there are states that require at least a physical manifestation of an injury if there are no tangible injuries.

## Causation

To recover for an injury, the plaintiff must show that the defendant's negligence was the cause of the injury. If the accident would have occurred anyway, there can be no liability.

The defendant's negligent act must be a continuous and active force leading up to the actual harm. When there is a lapse of time between the defendant's negligence and the injury, other contributing causes and intervening factors may be the actual cause of the injury.

When there is a series of events leading up to an injury, the person starting that chain of events may be liable for the resultant injury if it was a foreseeable result of his negligence. If the injury at the end of the chain of events was not a logical (foreseeable) result of the negligence, there is no liability.

When another independent act occurs in between the defendant's negligent act and the plaintiff's injury, it may cut off the liability. In other words, someone else's actions may have been the cause of the injury. Intervening acts will not cut off liability when those intervening acts were foreseeable.

## Defenses

Once the basic elements have been established, the court looks to the possibility of defenses before a damage award is granted. Defenses vary greatly between states; the most common defenses being governmental immunity; assumption of the risk; and comparative or contributory negligence.

In states that still have strict governmental immunity, an individual may not bring legal action against the state. In these states, immunity is a complete bar to an action. Governmental immunity has

greatly eroded in recent years, generally allowing an individual to recover for injuries, but not allowing an action that would undermine the state's decision-making power when carrying out its state or official functions. Governmental actions are those the state undertakes as a policymaker. Thus, an individual is not allowed to sue the school for an injury caused by a policy decision such as making a curriculum choice or setting the date and time for school to start. Some states have abrogated sovereign immunity up to a particular dollar limit or to the extent of insurance coverage. These states usually have strict notice and pleading requirements at the outset of a legal action.

Assumption of the risk is also an affirmative defense that, if successful, presents a complete bar to plaintiff's recovery. This defense is based on the idea that if the plaintiff knowingly and voluntarily accepted the risks of an activity, he or she should not be allowed to recover for injuries caused by those known risks. For knowing acceptance to occur, it is important that all risks inherent in an activity are apparent or explained and that they are voluntarily assumed.

Students in athletic activities are asked to assume the risk of playing that sport. It must be shown that the plaintiff understood how the specific activity was dangerous and nonetheless voluntarily engaged in it. Students should be told of the risks of injury during the regular course of play; therefore if an injury were to occur, the school would not be responsible.

Many people mistakenly believe that parents assume all risks for their children when they sign permission slips. While the parents may assume the normal risks associated with the activity, they do not waive their rights for any and all injuries that may occur. They cannot assume risks of which they have no knowledge. In sum, some permission slips are worthless in terms of waiving liability. They often only serve to provide parents an opportunity to opt their children out of certain activities.

The defenses of contributory and comparative negligence offer a complete bar or a reduction in the damage award due to the plaintiff being partially responsible for his or her own injuries. Making this determination is similar to making the determination of the defendant's negligence—did the plaintiff fail to exercise reasonable care, which resulted in the injury. Contributory negligence is a total bar from

recovery. Under contributory negligence, if the plaintiff is responsible for the injuries sustained in any way, no matter how slight, he or she cannot be awarded any damages. Recognizing that this all-or-nothing approach often results in severe consequences, most states have moved to the less severe system of comparative negligence.

In comparative negligence, the damage award is apportioned depending on the degree of fault or contribution to the injuries. Comparative negligence is distinguished between pure and modified forms. Pure comparative negligence allows the plaintiff to recover any amount of damages for which the defendant was negligent. In states that have adopted a modified comparative negligence, damages are awarded only if the defendant's negligence is greater than that of the plaintiff. In the early twenty-first century, a majority of states operate within some type of comparative negligence system.

### Malpractice

As in medical malpractice, the term *educational malpractice* refers to negligence on the part of a professional. However, the courts have not recognized educational malpractice as a cause of action for damages. The seminal case is *Peter W. v. San Francisco Unified School District* (1976). Here the student was graduated from high school while still being illiterate. The court found no legal duty on which to base an action against the school district. Further, it concluded that there was no workable standard of care for teaching against which the defendant's actions could be judged. Finally, the court noted that the degree of certainty that the plaintiff had suffered any injury, the extent of the injury, and the establishment of a causal link between defendant's conduct and the plaintiff's injuries were uncertain. The primary motive for courts not recognizing educational malpractice as a cause of action is generally public policy. The concern typically expressed is that recognition of this cause of action would require the courts to make judgments on the validity of educational policies. Additionally, court have noted there are other, more appropriate avenues of relief if an individual is dissatisfied with the public schools, such as individual administrative review and school board elections.

*See also:* PRINCIPAL, SCHOOL; SCHOOL BOARDS; SPORTS, SCHOOL.

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JULIE K. UNDERWOOD

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## LIBERAL ARTS COLLEGES

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Rather than emphasizing a specific course of study or professional training, liberal arts colleges aim to expose students to a wide breadth of courses in the humanities and both physical and social sciences. Although the curriculum varies from college to college, a student's coursework at a liberal arts school would include many or all of the following subjects: history, philosophy, religion, literature, physical sciences (e.g., biology, chemistry, physics), social sciences (e.g., psychology, sociology, economics, politics), the arts (e.g., theater, music, art), languages, and mathematics. Liberal arts colleges tend to stress the importance of teaching by faculty and usually have smaller enrollments.

The Carnegie Classification of Institutions of Higher Education is a typology of colleges and universities in America that orders colleges and universities by category. Within the Carnegie Classification system there is a separate and distinct category for liberal arts colleges called "Baccalaureate Colleges—Liberal Arts." Baccalaureate Colleges—Liberal Arts are identified as institutions that "are primarily undergraduate colleges with major emphasis on baccalaureate programs. During the period studied, they awarded at least half of their baccalaureate degrees in liberal arts fields" (Carnegie Foundation for the Advancement of Teaching website). There are 228 liberal arts institutions, which comprise 15.4 percent of all colleges and universities in the United States. Of these 228 colleges and universities twenty-six are public institutions, comprising 15 percent of this category, and 202 are private not-for-profit institu-

tions, comprising 88.6 percent of this category. There are no private for-profit liberal arts institutions. Clearly, private liberal arts colleges outnumber public liberal arts colleges in the United States.

### History of Liberal Arts Colleges

American universities began with the founding of Harvard in 1636, which was modeled after Emmanuel College at Cambridge University. After the founding of Harvard and into the early 1800s, several colleges were founded. These colleges, like Harvard, were small, religiously affiliated institutions. Appropriate curriculum for these colleges became widely debated in the early part of the nineteenth century. As science and technology became more prevalent and began to shape the world, American society called upon its colleges to provide coursework that suited the new era. In reply to these demands, Yale President Jeremiah Day organized a committee to address the aforementioned debates. The resultant document was “The Yale Report of 1828.”

“The Yale Report of 1828” called for breadth in curriculum as the writers of the document doubted “whether the powers of the mind can be developed, in their fairest proportions, by studying languages alone, or mathematics alone, or natural or political science alone” (p. 173). The document further states that “the course of instruction which is given to undergraduates in the college is not designed to include professional studies. Our object is not to teach what is peculiar to any one of the professions; but to lay the foundation which is common to them all” (p. 173). Since its publication, “The Yale Report of 1828” has become the classic argument for a liberal education and liberal arts colleges in the United States.

In the mid-nineteenth century, Americans began traveling to Germany to obtain their Ph.D.s. The influx of German-educated scholars into the United States bought a new model for the American college, and created what is now the research university. During this same time, land-grant colleges and technical schools began to develop in the United States. All three of these new types of colleges were focused on specific training, and therefore were antithetical to the liberal arts college. Many of the colleges that were founded on ideals closer to those of liberal arts colleges (e.g. Harvard, Yale, Princeton) became research universities. Other colleges pur-

posefully chose to remain small and committed to a liberal education.

Over time the American liberal arts college has become a small part of the American higher education system. Yet the liberal arts college is flourishing at the beginning of the twenty-first century. Perhaps this is because the liberal arts college is unique in character or perhaps because of the unique character of the students that the liberal arts college produces.

### Characteristics of Liberal Arts Colleges

At the heart of the liberal arts colleges are their missions. Most mission statements of liberal arts colleges endeavor to educate the whole student and emphasize education for its own sake rather than for job preparation. Liberal arts colleges tend to be small and private. Many liberal arts colleges have total enrollments of less than 2,000 students with low student-to-teacher ratios. They are also usually residential and value the idea of community. The liberal arts college is invested in teaching, and students and professors often collaborate with one another in the learning process. Oscar Paige, the president of Austin College, characterized the liberal arts college by saying:

The residential nature of our college and of many liberal arts colleges is unique and adds to the value of the educational experience. The liberal arts community is a community that encourages inquiry and investigation and as a result students are challenged to think “outside the box” more on this type of campus than in other settings. Critical thinking, innovation, interdisciplinary curriculum and personal interaction with faculty all characterize this type of institution. (personal communication with author)

Most liberal arts colleges in the United States were founded by various religious dominations. For example, there are colleges founded by Lutherans (e.g., St. Olaf College, Luther College), Baptists (e.g., Arkansas Baptist College), and Presbyterians (e.g., Rhodes College, St. Andrews Presbyterian College). Many of these colleges have maintained strong religious affiliations into the twenty-first century. Many others maintain links with the church that founded the institution, but have a limited religious presence on campus. Some liberal arts colleges have abandoned all former religious ties.

Liberal arts colleges are often innovative in their programs. In fact, there are many distinct types of liberal arts colleges because of their unique programs. At Colorado College and Cornell College students can take one course at a time. At St. John's College, students study the Great Books. Another special program at several liberal arts colleges is the 4-1-4 semester. Students take four classes in the fall semester, one in-depth class in the month of January, and four classes in the spring semester. Austin College, Calvin College, and Eckerd College are examples of colleges that have 4-1-4 programs. At some colleges students get to design their own program (e.g., Marlboro College). One liberal arts college, Virginia Military Institute, is a military college. Another liberal arts college, Reed College, provides students with written assessments for their complete coursework rather than grades.

Some liberal arts colleges focus on serving particular populations. There are all-women's colleges. Smith College and Mills College are two such liberal arts colleges. Among the nation's historically black colleges and universities are liberal arts colleges (e.g., Morehouse College, Spelman College). One of the few all-men's colleges left in the United States, Washburn College, is a liberal arts institution.

### Role of Liberal Arts Colleges in the U.S. System

Liberal arts colleges serve students who wish to become educated citizens and productive members of society. The liberal arts college strives to produce thoughtful, well-rounded citizens of the world. The promise of a liberal arts education is well summed up by Michele Myers, president of Sarah Lawrence College, when she notes that liberal arts colleges provide "an education in which students learn how to learn, an education that emphasizes the forming rather than filling of minds, an education that renders our graduates adaptive to any marketplace, curious about whatever world is around them, and resourceful enough to change with the times."

*See also:* ACADEMIC DISCIPLINES; CARNEGIE CLASSIFICATION SYSTEM, THE; HIGHER EDUCATION IN THE UNITED STATES.

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STACY A. JACOB

## LIBRARIES, SCHOOL

*See:* SCHOOL LIBRARIES.

## LICENSING AND CERTIFICATION

*See:* TEACHER EVALUATION.

## LIFE EXPERIENCE FOR COLLEGE CREDIT

As higher education continues to attract an increasing number of adult students, many colleges and universities are developing programs to meet their distinctive needs. These students, age twenty-five and over, comprise 38 percent of the undergraduate population, according to the U.S. Bureau of the Census in 1999, and bring with them rich clusters of college-level knowledge gleaned from a variety of sources. They provide challenges to higher education not seen with traditional-age college students, including financial concerns, time constraints, and a distinct desire not to repeat learning what they have already gained from their professional or life experience. As a result, the practice of awarding college credit for learning from life experience has become a popular effort to attract and retain adult students.

Although the awarding of such credit is a legitimate academic process to some, it is not without controversy. The idea of granting college credit for learning that takes place outside the classroom challenges the very foundation of higher education. Some look upon the practice as a radical doctrine of giving away credit or of granting credit just for living, and it may seem inappropriate for the carefully regulated university setting. If the assumption is made that learning takes place everywhere, and that higher education is a part of a larger system of human learning that includes family, church, school, media, social institutions, and the work place, the rationale behind the practice may become more apparent.

Advocates of the practice find support in the teachings of John Dewey, who asserted that “all genuine education comes about through experience.” Such experience is not limited to the classroom; in fact, the academy has no monopoly on learning. If learning takes place, it should not matter how it is accomplished, as long as the outcome is realized. If the outcome is college-level learning, then the awarding of college credit for the experience can be justified.

The granting of college credit for learning outside the classroom is not a new practice. As early as 1942 the American Council on Education (ACE) worked with branches of the military to evaluate service members' learning through military education and training. The resulting *Guide to the Evaluation of Educational Experiences in the Armed Services* documents secondary and postsecondary credit equivalencies, and has grown from one volume in its first printing in 1946 to three volumes covering all branches of the military and the U.S. Department of Defense in 2000.

Formalized testing programs as a means of assessing prior learning first made their appearance in the mid-1960s. Standardized examinations, designed by various national organizations, are intended to be applicable to large populations and to measure levels of accomplishment in many subjects.

A program to evaluate the in-house training that was sponsored by business and industry was begun in 1974. The Program on Noncollegiate Sponsored Instruction (PONSI) began by evaluating training courses offered by eight major corporations and recommending college credit when the learning experiences were found to be at the college level. In

the process, a model-reviewing system was designed, which resulted in the publication of *A Guide to Educational Programs in Noncollegiate Organizations*. Replaced in 1985 by *College Credit Recommendations*, the 2000 edition serves nearly 300 organizations across the nation and evaluates more than 5,000 training courses and programs.

At about the same time, the Educational Testing Service (ETS) began a research and development project designed to establish procedures for academic recognition of noncollege learning. Known in 1974 as the Cooperative Assessment of Experiential Learning (CAEL), the project focused on gathering data about prior learning assessment practices throughout the country. As a result, faculty and student handbooks were published for the first time that documented the practice of portfolio assessment. By 1979 ACE, the Council on Postsecondary Accreditation (COPA), and the American Association of College Registrars and Admissions Officers (AACRAO) endorsed the assessment of noncollege learning with the understanding that it would be conducted according to CAEL standards. Now known as the Council for Adult and Experiential Learning, CAEL is an independent organization recognized as a premier authority in the field. CAEL has established and disseminated standards for the awarding of credit for noncollege learning, training faculty evaluators, and implementing research on the outcomes of these efforts. The organization maintains a quality assurance program to monitor and evaluate current assessment programs throughout the nation.

### Standards of Assessment

As institutions determine their level of commitment to the practice of granting credit for noncollege learning, a number of standards must be addressed to ensure legitimacy. ACE, PONSI, and CAEL have developed guidelines based upon national practices and research studies. These guidelines are available to any institution for adoption or modification. Colleges and universities can also initiate their own internal processes if they are willing to invest money, time, and resources. In either case, the institution must be aware that credit should only be granted for the learning that accompanies the experience, not for the experience itself. In addition, criteria must be determined for what constitutes college-level learning. Previous research has suggested that college-level learning must exhibit the following characteris-

tics, being (1) demonstrable in some form; (2) conceptual as well as practical; (3) applicable outside the setting in which it was learned; (3) related to an academic field; (4) reasonably current; and (4) traditionally taught at the college level.

### Methods of Assessment

For the purpose of determining if college-level learning has taken place in a noncollegiate setting, a prior learning assessment must be conducted. This can be accomplished in a number of ways, including the process of standardized examinations; course challenge or departmental examinations; ACE recommendations on military education and training; PONSI recommendations on corporate education and training programs; and individualized programs, including portfolio assessment, oral interviews, and competence demonstrations.

Standardized examinations may include the College-Level Examination Program (CLEP), the Defense Activity for Nontraditional Educational Support (DANTES), the Student Occupational Competency Achievement Test (SOCAT), Advanced Placement (AP) examinations, and others. They may cover a variety of subject areas and are available at testing centers across the country. Each individual institution must develop policies and practices for acceptance of learning indicated by examination results.

Course challenge or departmental examinations are designed by the institution, the department, or the faculty member responsible for the course for which the student is seeking credit. Challenge examinations are not standardized and may not be available for all subject areas. Credit granted for challenge examinations is subject to university and/or departmental discretion, regulations, and fees.

Military personnel often complete college-level courses while in the service. These include service school courses, monitored correspondence courses, Department of Defense (DoD) courses, and occupation specialty training. A record of completed training appears on a service member's discharge papers and may be assessed with the aid of the *ACE Guide to the Evaluation of Educational Experiences in the Armed Services*. No test or examination is necessary to receive credit through this method.

The National Program on Noncollegiate Sponsored Instruction (PONSI) evaluates courses and programs offered by corporations, unions, govern-

ment agencies, health care organizations, and professional groups and publishes equivalencies in its annual *College Credit Recommendations* series. Again, no test or examination is necessary to receive credit through this method.

Often learning outside the classroom is accumulated over an extended period or in a number of different situations. In such a case documentation may be difficult to provide. Individualized assessment is often the method of choice in such a situation because it is a more flexible means of allowing the student to explain the learning and give evidence of its validity. Individual assessment is designed at the institutional level and may include portfolio evaluation, oral interview, competence demonstration, or any combination of these methods. Although extensive guidelines are available through such advisory services as CAEL, each college or university must adopt its own set of procedures for assessment.

The portfolio is a document compiled by the learner in support of the request for credit. It typically consists of an essay describing background, goals and prior learning, a description of the learnings for which credit is requested, an explanation of how the learnings were acquired, a body of evidence documenting that the learnings are valid, and a request for specific equivalent credit. Often, institutions require that the learner enroll in a portfolio preparation course to provide structure to the process of negotiating for credit. The instructor is a trained faculty member who assists the learner in preparation of the portfolio, conducts interviews and demonstrations as necessary, and makes recommendations for the awarding of credit. Interaction with other faculty with content expertise is also necessary to ensure concurrence with credit recommendations.

### Further Considerations

For institutions that adopt the practice of granting credit for learning from life experience, there are other considerations which must be addressed. Financial commitments, faculty training, fee assessment, accreditation outcomes, transcript notations, and transfer issues are just a few of the university processes that may be affected. Just as adult students have changed the face of the early-twenty-first-century university, so does the very practice of assessing the learning that they bring with them.

*See also:* ASSESSMENT, *subentry on* PORTFOLIO ASSESSMENT; CURRICULUM, HIGHER EDUCATION, *sub-*

entry on INNOVATIONS IN THE UNDERGRADUATE CURRICULUM; DISTANCE LEARNING IN HIGHER EDUCATION; LIFELONG LEARNING.

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NELL NORTINGTON WARREN

## LIFELONG LEARNING

*Lifelong learning* is a broad, generic term that is difficult to define with specificity. Its overlap, or its interchangeable use, with other closely related concepts, such as lifelong, permanent, recurrent, continuing, or adult education; learning organizations; and the learning society (society in which learning is pervasive), makes this even more true. For some it includes learning from childhood and early schooling, while others treat it in terms of the adult learning process. It has grown to a global concept, with differing manifestations that vary with national political and economic priorities, and with cultural and social value systems.

*Lifelong learning* is used here in an inclusive sense that accommodates this heterogeneity. A statement resulting from a collaboration of the European Lifelong Learning Initiative and the American Council on Education provides a workable expression of this broader acceptance:

*Lifelong learning is the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire all the knowledge, values, skills, and understanding they will require throughout their lifetimes and to apply them with confidence, creativity and enjoyment in all roles, circumstances, and environments.* (Longworth and Davies, p. 22)

This definition includes several basic elements of the lifelong learning ideal: (1) a belief in the idea of lifetime human potential and the possibility of its realization; (2) efforts to facilitate achievement of the skills, knowledge, and aptitudes necessary for a successful life; (3) recognition that learning takes place in many modes and places, including formal educational institutions and nonformal experiences such as employment, military service, and civic participation and informal self-initiated activity; and (4) the need to provide integrated supportive systems

adapted to individual differences that encourage and facilitate individuals to achieve mastery and self-direction. Society should make these systems available to learners with flexibility and diversity.

### Evolution of the Lifelong Learning Movement

Lifelong learning crystallized as a concept in the 1970s as the result of initiatives from three international bodies. The Council of Europe advocated *permanent education*, a plan to reshape European education for the whole life span. The Organisation for Economic Co-operation and Development (OECD) called for *recurrent education*, an alternation of full-time work with full-time study similar to sabbatical leaves. The third of these initiatives, a United Nations Educational, Scientific and Cultural Organization (UNESCO) report, *Learning to Be* (1972), drew most attention and had the broadest influence. Commonly known as the Faure Report, this was a utopian document that used the term *lifelong education* instead of lifelong learning, and it foresaw lifelong education as a transformative and emancipatory force, not only in schools, but in society at large. One commentator, Charles Hummel, called the UNESCO concept a Copernican revolution in education.

U.S. educational and political leaders took note of these ideas. Usually, they adopted the term *lifelong learning* (rather than lifelong education) and applied it to adult education, leaving initial and secondary education to the existing system. The American discussion tended to be more pragmatic than visionary, addressing specific categories of educational need rather than proposing systems. The Mondale Lifelong Learning Act of 1976 included in its scope a laundry list of nearly twenty areas, ranging from adult basic education to education for older and retired persons, a charge that proved too diffuse to address with public policy. European and American policy interest in lifelong learning waned after the early 1980s, although interest continued among educational institutions and nongovernmental organizations.

Interest in lifelong learning revived in the early 1990s, both in Europe and the United States. A fresh round of studies and reports popularized the idea of lifelong learning, and it became part of national policy discussion, particularly as global competition and economic restructuring toward knowledge-based industries became more prevalent. In a full-employment economy, corporations perceived a

benefit from investment in human capital, while a new workforce of *knowledge technologists* expected their employers to maintain their employability by investing in their education. The focus on learning thus shifted from personal growth to human resource development. Meanwhile, education and training approaches became central to a transition away from unemployment and welfare dependency.

### Implementation of Lifelong Learning

Adult participation rates suggest that a mass population has embraced lifelong learning and that the learning society may have arrived. U.S. data for 1998–1999 show that an estimated 90 million persons (46% of adults) had enrolled in a course during the preceding twelve months, an increase from 32 percent in 1991. There are indications that large increases also occurred in other developed countries. Field called this a “silent explosion” that makes the most of the people inhabiting learning societies.

The U.S. figures stated above include only formal courses led by an instructor, divided into six categories: (1) English as a second language (ESL), (2) adult basic education and high school completion courses, (3) postsecondary credential programs, (4) apprenticeship programs, (5) work-related courses, and (6) personal development courses. The largest categories of participation during the twelve-month period were work-related and personal development courses. Informal learning was not included.

To serve such a vast population, and to absorb a nearly 50 percent rate of increase in less than a decade, implies a major increase in providers and services. An exhaustive discussion is not possible in this brief space, but some indications of change can be suggested. Public schools and community colleges in large measure serve ESL, adult basic education, and high school completion needs, especially preparation for the General Educational Development (GED) examination. Data on dropouts who have attained high school equivalency by age twenty-four indicate that these institutions are being successful in this mission. Many community colleges have increased their ESL programs to serve new immigrant populations, and a large number of voluntary and community organizations have joined them, especially in literacy programs.

Programs related to employment come from several sources: apprenticeship programs, work-related courses, and credential programs. An inter-

esting development has been the collaboration between different providers attempting to enhance credentials by offering joint curricula; such as the collaboration between community colleges and corporations to offer apprenticeships and training in conjunction with the associate degree. Work-related courses touch on a broad range of content, providers, and delivery settings. They may be freestanding, self-contained experiences of a single course, or they may include sustained, interrelated courses that lead to a certificate or other qualification. Many sustained programs focus less on technical skills and more on the general education needed in the knowledge-based workforce. In some cases, largely depending on their size and commitment to workforce development, corporations may create their own internal *corporate universities* to offer extensive programs designed for their own needs. Others prefer to access the resources and experience of external providers, such as higher education institutions or professional education and training organizations. Community colleges have foreseen a major role for themselves in this work.

Around 1970 colleges and universities began to attract greater numbers of adult, nontraditional learners—this population increased from 27.7 percent of all higher education enrollments in 1970 to a range between 42 and 44 percent in the mid-1990s. Many programs adapted their practices and created new programs in response. A generation of innovation in higher education has opened many opportunities for adult learners. Changes have included greater flexibility in admissions and in time and place of instruction, more individualization of curricula, assessment for credit of previous courses and informal learning, transformation of faculty from teacher experts into mentors or facilitators, and provision of more intensive adult-oriented student services, including services responsive to the unpredictable exigencies of adult learners' lives.

Two other developments have attracted considerable attention. One is the rapid growth in the number of for-profit degree-granting institutions, which usually offer high-demand career-related curricula in cohort formats, providing learners with predictability in their time-to-degree and cost commitments. The record of accreditation at these institutions has established a reputation for quality. The other novelty is high-level for-profit certificate programs in information technology. These programs maintain quality through self-regulation, but they

stand outside the usual quality-control systems. There is a fear, however, that they may draw lifelong learners away from institutions of higher education.

Personal development courses, which made up 23 percent of the 1998–1999 adult enrollments, are even more heterogeneous than work-related courses, both in their content and their providers. This may be the sector where lifelong learning serves its richest menu, ranging from health and fitness to recreation and hobbies, civic and political engagement, travel and cultural experiences, and religious and Bible studies. It can include every level of interest and every age or stage of development. For instance, major areas of growth have occurred in areas of interest to older learners. Organizations such as Institutes of Learning in Retirement and Elderhostel have played a role in this growth.

### Ongoing Issues in Lifelong Learning

Despite a generation of discussion of the concept, a number of questions divide lifelong educators and policymakers. Several still prefer the term *lifelong education* because it implies a more explicitly intentional learning than the casual, unintended learning implied by *lifelong learning*. To many observers, lifelong learning itself is a contested concept with varying meanings and values. Some believe the broad humanistic and democratic idealism of the Faure Report has been sacrificed to an instrumental goal of human capital development, thus weakening the commitment to personal enrichment, civic participation, and social capital development.

Early advocates of lifelong learning not only regarded it as extending to the end of life, but also commencing in the earliest years. In practice, most innovation has come in programs conceived specifically for adults. By 2000, however, appeals to engage early schools in the lifelong learning enterprise began to reappear.

Finally, lifelong learning (and the creation of autonomous, self-directed individuals) implies a risk to learners and to social cohesion. Such emancipated persons can become less likely to defer to established institutions or to be guided by common social and cultural norms, adopting instead an analytical stance that isolates them from others and fragments society. The freedom of choice rests with them, but so also does the burden of responsibility in what some call critically reflective societies.

## Conclusion

Few, if any, of the comprehensive, integrated lifelong learning systems envisioned by the Council of Europe and the Faure Report in the 1970s have been realized. On the other hand, observers cannot deny how closely linked learning and well-being have become in the twenty-first century—and how pervasive both awareness of and participation in lifelong learning activities are among contemporary populations. Numerous questions remain, not least among them the inequality of opportunity between well-educated persons and the less advantaged in given societies, and between developed and developing countries. Lifelong learning advocates can only hope that enough of the early fervor and optimism of the movement remain to find solutions to these issues.

*See also:* CONTINUING PROFESSIONAL EDUCATION; CORPORATE COLLEGES; DISTANCE LEARNING IN HIGHER EDUCATION; EXPERIENTIAL EDUCATION.

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## LINCOLN SCHOOL

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The Lincoln School (1917–1940) of Teachers College, Columbia University, was a university laboratory school set up to test and develop and ultimately to promulgate nationwide curriculum materials reflecting the most progressive teaching methods and ideas of the time. Originally located at 646 Park Avenue in New York, one of the most expensive pieces of real estate in the city, the Lincoln School was also a training ground for New York City's elite, including the sons of John D. Rockefeller, Jr., who provided the funding for the school. Among the school's chief architects were Charles W. Eliot, a former president of Harvard University and an influential member of the New England Association of Colleges and Secondary Schools; his protégé Abraham Flexner, a member of the controversial Rockefeller philanthropy, the General Education Board; Otis W. Caldwell, a professor of science education at Teachers College and the school's first director; and the dean of Teachers College, James E. Russell.

In the 1920s and 1930s the Lincoln School was the most closely watched experimental school in the educational world, making solid contributions in the work of laboratory schools. It provided a select number of Teachers College students with clinical teaching experience, engaged in curriculum design and development, and provided an observation and demonstration site for teachers from around the United States and abroad. Its own experimental research institute promoted staff development and student teaching, and it distributed its printed materials in national journals and in mass mailings to schools throughout the United States.

Caldwell and his staff constructed an interactive or "experience" curriculum designed to relate classroom materials to the realities of everyday urban-industrial as well as agricultural life. Science and mathematics courses emphasized the practical application of these subjects to life in the contemporary world. Students learned through nonacademic community resources—the fire department, markets, churches, transportation and communication facilities—that were used as models for the reorganization of school life, and through music, language, art, and social studies where students imbibed principles that, in the language of the school's literature, were "foundational to effective and upright living."

Experiences were rarely spontaneous, however, in classrooms where carefully planned experiments

guided every phase of the work and where teachers used modern laboratory methods of collection, organization, and interpretation of data. In keeping with the dual purpose of the school—experimental curriculum development and character training in new forms of social responsibility—children were led through a sequence of avowedly "modern" courses. "Modern" meant practical and useful, with a direct bearing upon the everyday work of the world in finance, industry, agriculture, government and the arts. It also meant a great deal more science and mathematics instruction than one found in the traditional curriculum. Science teaching, according to Caldwell, a biologist, and Harold Rugg, his colleague in mathematics, was valuable because it taught good citizenship defined as "the increased respect which the citizen should have for the expert." This was in an age which had become "amazingly complicated [and] incalculably difficult to understand" and in which the salient feature was "the political and economic ignorance and indifference of the common man."

The classical defenders of liberal culture found much to hate in the program of the Lincoln School, which they regarded as devoid of emotion, imagination, poetry, beauty, and art. Critics also worried about the involvement of the General Education Board and the powerful industrial statesmen who headed it, pointing to the ambiguous position of the charitable trust in a democratic society.

What kind of a school was it, historians still want to know, that could combine cultural epoch theory, the doctrine of interest, and parvenu notions of social efficiency with the relatively remote, patrician sensibilities of founders and supporters like Eliot and the Rockefellers? What kind of a school was it that would teach vocational math and science to its upper and upper-middle class students, but not Greek and Latin, the traditional foundations of elite culture? The School itself could never quite decide what it was: An experiment in progressive practices? A hedge against those practices when they shifted dangerously toward bureaucratic centralism? Or the harbinger of something entirely new and novel and distinctly modern? This last possibility was allowed to die early, a sacrifice to child-centeredness, to subject-matter fetishism, and to an experimental tradition that controlled for these factors but otherwise ignored them for larger, correlative and integrative purposes. In 1940 the Lincoln School collapsed under the weight of its own contra-

dictions. A Special Committee of the Board of Trustees of Teachers College in the interest of both intellectual and practical economy recommended its amalgamation with the larger and less research-intensive Horace Mann School.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; INSTRUCTIONAL DESIGN; NEWLON, JESSE; PROGRESSIVE EDUCATION.

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JOHN M. HEFFRON

### LINDQUIST, E. F. (1901–1978)

One of the foremost applied statisticians and educational testing pioneers of the 1900s, Everet Franklin

Lindquist received his Ph.D. from the University of Iowa in 1927 and was a member of the faculty there from 1927 until his retirement in 1969. During his long professional career, he made substantial contributions to the field of education in the areas of test development, test-scoring technology, measurement theory, and research methodology. His textbooks on design of experiments and statistical analysis had considerable influence on educational and psychological research.

#### Test Development

As director of Iowa Testing Programs at the University of Iowa, Lindquist was responsible for the development of the first editions of both the Iowa Tests of Basic Skills (ITBS) and the Iowa Tests of Educational Development (ITED). In the 1940s he served as an advisor to the United States Armed Forces Institute and to the American Council on Education (ACE). He played a major role in formulating policies with respect to granting academic credit for general educational growth during military service. These policies resulted in the development of the General Educational Development Test (GED). Lindquist oversaw the creation of the initial forms of the GED, which were modeled after the ITED. In the late 1950s Lindquist also was responsible for the design and construction of the first forms of the National Merit Scholarship Qualifying Test (NMSQT). In 1959 Lindquist and Ted McCarrel, registrar at the University of Iowa, cofounded the American College Testing Program (ACT) as an alternative to the College Entrance Examination Board. Lindquist was personally responsible for the design and development of the early editions of the ACT tests.

All of these tests continue to be published and used in the early twenty-first century. Although the tests have evolved over the years, it is a tribute to Lindquist's vision and creativity that he recognized the need for such tests and that the philosophy underlying them continues to be reflected in recent editions.

#### Test-Scoring Technology

In the late 1940s the Iowa tests developed under Lindquist's direction were being administered to large numbers of students in Iowa and throughout the nation. The demand to have the answer sheets of these tests scored at a central agency was growing. It became apparent to Lindquist that this demand would require a more efficient way of processing the

answer sheets than the hand-scoring procedures then being used. Although crude scoring machines were available, they were not adequate for large-scale testing. Thus, in the early 1950s Lindquist undertook a major project to design a high-speed electronic scoring machine. He and his colleagues at the University of Iowa succeeded in building such a machine in the mid-1950s. The original version scored at the rate of 4,000 sheets per hour. They developed faster machines fairly quickly, and by 1970 the scoring machine could scan 40,000 sheets per hour. Without question, the availability of such scoring machines had a significant impact on testing practices in the United States.

### Measurement Theory

Lindquist's major contributions to the field of measurement theory occurred primarily through two publications. The first of these was the influential volume *Educational Measurement* (1951), for which he served as general editor. Eighteen of the most distinguished measurement experts, including Lindquist himself, wrote chapters for this landmark publication. It served as the major reference for the educational measurement community until the second edition was published twenty years later.

Lindquist's second major contribution, and perhaps his most technical work in measurement, was published as the last chapter in his textbook *Design and Analysis of Experiments in Psychology and Education* (1953). In this chapter, "Estimation of Variance Components in Reliability Studies," Lindquist explicated techniques, which were not new in the statistical sense. But their relevance to educational and psychological measurement had not been appreciated. Lindquist saw these tools as a significant improvement over traditional methods of estimating measurement error variance and hit-or-miss methods of designing efficient, cost-effective measures. In essence, he provided the foundations for an area known as generalizability theory ten years before the first publications of Lee Cronbach et al. on this approach appeared in the literature of educational and psychological measurement.

### Research Methodology

Lindquist's influence in the field of educational research occurred primarily through his textbooks. Early in his career, he concluded that a textbook constituted a more valuable vehicle than journal articles or conference presentations in reaching the ed-

ucational research community. Thus many of his innovative ideas and original insights were published in his books. In *Statistical Analysis in Educational Research* (1940), he assumes the role of statistical translator for the educational research community. He was concerned about the slow adoption of the techniques of analysis of variance and covariance, including factorial designs, in the behavioral sciences. The implications of the work of Ronald A. Fisher had made little impression on educational and psychological researchers. Lindquist perceived this failure to be the result of a widespread inability of research workers to read the relevant literature and to translate terms such as *blocks*, *plots*, *treatments*, and *yields* into *schools*, *classes* or *pupils*, *educational methods*, and *test scores*. In this 1940 text, he undertook to facilitate this translation.

In a second influential book, published in 1953, *Design and Analysis of Experiments in Psychology and Education*, Lindquist again had the goal of translating statistical analyses developed in other fields into language understandable to researchers in psychology and education. However, he soon recognized that the adaptation of certain designs developed for use in industry and agriculture was by no means straightforward. The educational and psychological researcher's alternatives with respect to the choice of the unit of analysis often had no obvious analog in the original industrial and agricultural contexts. The phenomenon of repeated measurements on the experimental units took on a unique character in the behavioral sciences. Certain designs, such as Latin square designs, were seen to be potentially useful in the behavioral sciences. But their purposes and implementation differed significantly from the classical applications. The entire area of multidimensional, repeated-measurements designs had to be reworked. Analyses appropriate to factorial experiments that involve independent groups on some dimensions and repeated measurements on others had to be formulated almost without helpful precedent from other sciences. Thus his 1953 book represented far more than a statistical translation. It incorporated a number of original insights and formulations, particularly in the area of "mixed" designs involving both independent and dependent measurements. In sum, Lindquist's ability to bridge the statistical gap between education and other areas enabled him to exert a significant influence on educational research from the 1940s through the 1970s.

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LEONARD S. FELDT  
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**LINGUISTICS AND LANGUAGE LEARNING**

*See:* LANGUAGE AND EDUCATION.

**LITERACY****EMERGENT LITERACY**

Emilia Ferreiro

**INTERTEXTUALITY**

David M. Bloome

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**LEARNING FROM MULTIMEDIA SOURCES**

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**MULTIMEDIA LITERACY**

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**NARRATIVE COMPREHENSION AND PRODUCTION**

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**VOCABULARY AND VOCABULARY LEARNING**

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**WRITING AND COMPOSITION**

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**EMERGENT LITERACY**

William Teale and Elizabeth Sulzby coined the term *emergent literacy* in 1986 from Mary Clay's dissertation title, "Emergent Reading Behavior" (1966). Their term designated new conceptions about the relationship between a growing child and literacy information from the environment and home literacy practices. The process of becoming literate starts before school intervention.

Important changes took place around 1975 to 1985 in the way researchers approached young children's attempts at reading and writing, which were influenced by previous language acquisition studies of children actively engaged in learning oral language.

In English-speaking countries, literacy acquisition was traditionally focused on acquisition of reading. Writing was considered an activity undertaken after reading. Carol Chomsky's 1971 article "Write Now, Read Later" was for this reason provocative. It is worth noting that these two opposite views (reading before writing or writing before reading) are alien to other cultural traditions. For instance, in the Spanish school tradition both activities have been traditionally considered as complementary.

Teale and Sulzby maintained that "in the schools, the reading readiness program and the notion of the need to teach prerequisites for reading became fixed. Furthermore, using reading readiness programs in the kindergarten literacy curriculum became a widespread practice. The reading readiness program which became so firmly entrenched during the 1960s remains extremely prevalent in the 1980s" (p. xiii).

The concept of emergent literacy was intended to indicate a clear opposition with the then prevailing notion of "reading readiness." This new concept arises from changes in the research paradigm, mainly in developmental psycholinguistics, and not in the practical educational field.

**The Original Meaning of the Concept**

Several pioneering researchers (among them Clay in New Zealand, Yetta Goodman and Sulzby in the United States, and Emilia Ferreiro in Latin American countries) share several main ideas that can be summarized as follows:

1. Before schooling, a considerable amount of literacy learning takes place, provided that

children are growing in literate environments (homes where reading and writing are part of daily activities; urban environments where writing is everywhere—in the street, in the markets, on all kinds of food containers or toys—as well as on specific objects like journals, books, and calendars).

2. Through their encounters with print and their participation in several kinds of literacy events, children try to make sense of environmental print. Indeed, they elaborate concepts about the nature and function of these written marks.
3. Children try to interpret environmental print. They also try to produce written marks. Their attempts constitute the early steps of reading and writing. Thus, reading and writing activities go hand in hand, contributing to literacy development as comprehension and production both contribute to oral language acquisition. The use of the term *literacy* in the phrase *emergent literacy* indicates that the acquisition of reading and writing take place simultaneously.
4. The pioneer authors of the emergent literacy approach avoid the use of terms like *pretend reading* or *pre-reading*, *pretend writing* or *pre-writing*. Such terms, in fact, establish a frontier in the developmental process instead of a developmental continuum.
5. From a careful observation of spontaneous writing and reading activities as well as from data obtained through some elicitation techniques, it becomes possible to infer how children conceive the writing system and the social meaning of the activities related to it.
6. Emergent literacy is a child-centered concept that not only takes into account relevant experiences (like sharing reading books in family settings), but also takes into consideration that children are always trying to make sense of the information received in a developmental pathway that is characterized both by some milestones common to all and by individual stories.

### Transformations of the Original Meaning

What is the use of the expression *emergent literacy* fifteen years after its first introduction into the literature? This expression competes with others such as

*beginning literacy*, *early literacy*, or even *preschool literacy*. It is not unusual to see alternative terms used by the same authors (for instance Dorothy Strickland and Lesley Morrow). The term *emergent* remains restricted to English users. It is not used in Spanish nor in Italian or French, where expressions like “*éveil au monde de l’écrit*” (“awakening to the world of writing”) convey similar ideas.

The emergent literacy approach affects preschool settings and shapes new educational practices. Instead of exercises to train basic skills as a prerequisite to reading, researchers frequently observe teachers and children engaged in real reading activities. Instead of exercises of copying letter forms, teachers encourage children to produce pieces of writing.

Independent research conducted in the linguistic and historical fields by such people as David Olson, Florian Coulmas, and Geoffrey Sampson contributed, during the closing decades of the twentieth century, to a reconsideration of writing systems. As long as alphabetical writing systems (AWS) are being conceived as visual marks for elementary units already done (i.e., the phonemes), the task of the child is reduced to the learning of a code of correspondences. But AWS are highly complex because they are the result of a long history, in which phonic considerations interfere with historical, pragmatic, and even aesthetic considerations.

However, the old pedagogical ideas are still so strong that the term *emergent literacy* has begun to be used as a new component of old practices. Expressions such as *to teach beginning literacy*, *evaluation of emergent literacy skills*, and even *emergent literacy teachers* are a commonplace in books, articles, and papers devoted to teachers, parents, and decision-makers. It is clear that emergent literacy cannot be taught, even if it can be improved or stimulated. The reduction of this concept to a set of trainable skills goes against the term’s original meaning.

In the meantime, “phonological awareness” began to be considered the single strong predictor of school reading skills (reading, in that case, is evaluated in tasks of letter-sound correspondences in front of lists of words and pseudo-words). Some authors started to look for the components of emergent literacy—a set of skills—to allow similar assessment as phonological awareness.

When emergent literacy skills include phonological awareness it is clear that the new label is being

applied to old ideas: emergent literacy originally indicated concepts built up by children through many encounters with print other than explicit teaching, whereas phonological awareness is clearly an acquisition that does not develop without explicit intervention, even if it is closely related to the acquisition of an AWS. For instance, when parents engage in shared reading, they offer the child the opportunity to learn about many relevant aspects of books but they are not explicitly teaching a particular literacy component.

This shaping of new ideas into old paradigms is present also in psychological research, such as the 1998 publication by Grover Whitehurst and Christopher Lonigan. It could seem, at first glance, entirely justified to inquire about the components of early literacy, and the weight of each one of them as predictors of school achievements in reading. However, the identification of these components and the assessment of their individual weight shows that literacy continues to be conceived mainly as reading behavior and that written language is still conceived as a coding of already given elementary units (the phonemes) into a graphic form (the letters of an alphabet). The persistent confusion between the teaching activities and learning processes (i.e., how children contribute to the task, how they transform the available information through their own assimilatory processes) is at the core of the weak results that try to discover the relevant correlations between early literacy and future school achievements.

### Policy

For the time being, the best recommendation for any preschool program is to offer children many opportunities to engage in real reading and writing activities, with the grounded conviction that children—who are intelligent human beings—are eager to learn and will take advantage of a stimulating environment. The old view that prevented children from sharing literacy learning opportunities until they were ready to learn lessons is a discriminatory one, as not all parents all over the world are able to provide literacy experiences.

*See also:* EARLY CHILDHOOD EDUCATION; LITERACY AND READING; READING, *subentry on* BEGINNING READING.

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EMILIA FERREIRO

### INTERTEXTUALITY

A teacher asks students to find ways in which the stories "The Emperor's New Clothes" and "Chicken Little" are similar and ways they are different. A member of a book club compares last month's selec-

tion to the current month's. A book review includes some of the dialogue from the reviewed book. People leaving the movie theater after seeing *Lord of the Rings* comment that the book was better. The movie *Pocahontas* is criticized by historians for misrepresenting established historical events. In each of these examples, different texts are brought together, related to one another, or connected in some way. This juxtaposition of different texts is called *intertextuality*. Intertextuality occurs at many levels, in many forms, and serves a variety of functions; the foregoing examples reflect only a small subset of the possibilities.

### Levels, Forms, and Functions of Intertextuality

Juxtapositions may occur at multiple levels including word or phrase, sentence or utterance, larger units of connected text such as a paragraph or stanza, and genre. Intertextuality can be created through the following means:

- duplication (a string of words occurring in two texts such as occurs in quotation) and stylistic means (repetition of a stress, sound, or rhyme pattern across two or more texts)
- naming and reference (as occurs in citations)
- proximal association (as occurs among chapters in an edited book which are presumed to have some relationship to each other)
- sequential association (an established sequence of related texts such as a reply to a letter or e-mail).

Intertextuality can be explicit or implied through a variety of literary devices (e.g., allusion, metonymy, synecdoche).

Intertextuality can be viewed as a function of social practices associated with the use of language. It is a social practice of scholars to refer to previous scholarly works through the use of quotations, citations, and bibliographies. The reading and use of book reviews, movie reviews, and similar texts can be viewed as social practices, which by definition are overt intertextual practices. Intertextuality can be created when an unexpected text occurs within a social practice. For example, if instead of receiving a report card at the end of a grading period, a student received a poem, part of the meaning of the poem would be from its placement in a particular social practice and its contrast with the genre of report card.

### Locations of Intertextuality

A key question to ask about intertextuality is its location, because questions about location reveal different definitions and approaches to the analysis of intertextuality. Some scholars locate intertextuality in the text itself when explicit or implied reference is made to another text. The intertextual relationship exists whether or not it is detected by the reader and whether or not it was intended by the author of the text. From this perspective questions can be asked about how one text signals another text and what meaning is conveyed by the text through the intertextual reference.

A second location of intertextuality is in the person. As a person interacts with the target text (whether spoken, written, or electronic), the person brings to the interaction with the text previous texts and his or her experience with them. Some of these previous texts may be conversations, books, or other printed texts, narratives of personal experience, memories, and so forth. The person may use these previous texts to create meanings for the target text or to help with the process of comprehending the text. For example, previous experience in reading a mathematics text provides guidance and procedures for reading a new mathematics text. Because, for example, individuals have different background experiences and histories of encounters with conversational and written texts, the texts a particular person might bring to any interaction with a target text would vary. So too would their use of those texts. Other questions of interest pertain to understanding the cognitive processes involved in using texts from previous experiences.

Closely related to locating intertextuality in the person is locating intertextuality in the task. For example, an academic task might require a person to interact with multiple texts in order to understand some phenomenon, such as a historical event. In such a case, the task explicitly requires the use and juxtaposition of multiple texts. In some cases, multiple texts may even be provided as part of the presentation of the task. However, it may also be the case that the person addressing the task conceives of the task as involving multiple texts, whether or not it is an explicit part of the task. For example, a student given a literary text to explicate may conceive of the task as involving the juxtaposition of the target text, other texts written by the author, the teacher's lectures on the target text, and his or her previous efforts at explicating literary texts with the resultant

teacher comments and grades. From this perspective, questions of interest concern the explicit and implicit intertextual demands made by the task and the interpretation of those demands. Interpretation reflects the person's representation of the task and its intertextual demands and are manifest in what and how texts are used to address the task. Questions can also be asked about the cognitive processes involved in the representation of the task and in its completion. There are interesting questions about the cognitive, affective, and social dimensions of the task, including their role in task interpretation and execution.

A fourth location of intertextuality is in the social practices of a community or social group. Over time, a social group establishes shared standards and expectations for what texts can and should be juxtaposed, and under what circumstances. That is, there are shared, abstract models for the use and juxtaposition of texts in particular types of situations. For example, in a court room, it is a shared social practice of lawyers and judges to interpret testimony and evidence in terms of previous court cases and a specific sets of legal documents (such as the U.S. Constitution). Within an academic discipline, there are specific intertextual practices and these vary from discipline to discipline. For example, in scholarly publications in the social sciences it is customary to cite previous work on the topic of interest. In writing a novel, however, authors do not cite previous novels that have addressed similar themes. In classrooms, teachers and students establish shared intertextual practices for engaging in academic work. For example, there are shared intertextual practices for completing worksheets (e.g., using the text book to answer the worksheet questions), for studying for tests, for writing an essay, and so on.

Although individuals enact intertextual practices, what they are enacting is an abstract model that has evolved over time. As such, the material environment that people encounter may be structured to facilitate certain intertextual practices and inhibit others. For example, many scholastic literature texts are organized to facilitate genre study and the comparison of texts within a particular genre. They do not foster comparison of texts across genre (e.g., poems and short stories). Textbooks often have end-of-chapter questions that refer readers to material in that chapter, but which do not ask readers to use information from previous chapters. From the perspective of intertextuality as located in social

practices of communities and groups, questions can be asked about the intertextual demands of the social practices that make up an institution such as schooling and how various intertextual practices came to be associated with particular social institutions.

A fifth location of intertextuality is in the social interaction of people in an event. As people interact with each other they propose intertextual links, acknowledge the proposals, recognize the intertextual links, and give the intertextual links meaning and social consequence. That is, intertextuality is socially constructed as people act and react to each other. In classroom conversations, a teacher may propose an intertextual link between a story the class is reading, a movie being shown at a local theater, and a mural in the surrounding community. But the proposed intertextuality does not become actualized until the students acknowledge that an intertextual link has been made, recognize the story, the movie, and the mural and the potential connections among them, and give meaning and consequence to those connections. As people interact with each other, the proposed intertextual link may be negotiated and transformed such that the construction of intertextuality is a joint accomplishment shared by all involved in the event. From this perspective, questions can be asked about the interpersonal processes involved in proposing, ratifying, and giving meaning and consequence to intertextuality.

The multiple locations of intertextuality reflect, in part, different disciplinary perspectives on intertextuality, as suggested by the kinds of questions proposed for each location. Cognitive perspectives tend to locate intertextuality either in the text, in the person, or in the task; social, anthropological, and related perspectives tend to locate intertextuality in social, cultural, and historical practices; perspectives associated with sociolinguistic ethnography and symbolic interactionism tend to locate intertextuality in the social interaction of people in an event. Regardless of perspective, intertextuality is inherent to every use of language whether written or spoken, verbal, or graphic. It is ubiquitous in education, in every classroom conversation, instructional task, curriculum guide, educational policy document, and debate. What may be less obvious about intertextuality is the impact it has on delimiting texts that may be juxtaposed as well as establishing participation roles, rights, and responsibilities for interacting with texts. This aspect of intertextuality can be discussed in terms of power relations.

### Intertextuality and Power Relations

Two kinds of power relations associated with intertextuality can be distinguished for heuristic purposes. The first concerns the establishment of boundaries on the set of texts that may be intertextually related in any specific instance. Through historical practice, some authority, material circumstances, or simply the limitations of a person's experience, boundaries are placed on what texts may be candidates for juxtaposition. For example, consider the set of texts that may be considered for a high school course on American literature. It is unlikely that folk songs, rap music, personal journals of ordinary people, or comic books would be considered as possible candidates—much less be included in the course. By establishing particular boundaries some texts and the ideas, people, places, and ideologies they represent are centralized, others are marginalized. However, these boundaries can be crossed; indeed, the *Norton Anthology of African American Literature* includes folk songs, rap music, and a compact disc of oral performances, and the *Norton Anthology of Jewish American Literature* includes a comic-book-like entry.

The second kind of power relations related to intertextuality concerns intertextual participation rights—who gets to make what intertextual links, when, where, how, and to what social consequence. Intertextual rights are not necessarily distributed equally or equitably. Consider a classroom example. A low-achieving student might propose an intertextual link between a novel being read in a class and a rap song. The teacher might dismiss the proposed intertextual link simply because the low-achieving student proposed it. A high-achieving student might make a similar intertextual proposal that is accepted by the teacher and other students. Precisely because intertextuality is ubiquitous in academic and social practices, severely circumscribed and differentially distributed participation rights have important consequences for individuals, the institutions within which they may operate, and the ways in which they operate within those institutions.

### The Educational Significance of Intertextuality

In many ways, teachers and researchers have been using the construct of intertextuality without naming it. Teachers often ask students to relate one text to another, and researchers are often interested in how various conversations and written texts have been juxtaposed. Thus, the explicit naming of in-

tertextual processes and attention to them can be seen as an attempt to create systematic inquiry about intertextuality and to build an understanding of its nuances and consequences.

Recognition of the ubiquitous nature of intertextuality provides educational researchers with a set of heuristics for analysis of classroom conversations, reading processes, writing processes, instructional practices, and assessment practices. Similarly, attention to intertextuality can lead to redesign of curriculum in reading, language arts, literature studies, and social studies. Emphasis can be placed on ways to create understanding and meaning through intertextuality rather than the current emphasis on understanding texts as if they stood alone. There is preliminary evidence to suggest that such an emphasis increases academic achievement, although such increases are probably related to the ways in which texts are juxtaposed rather than simply juxtaposition. Attention to intertextuality also provides ways to enhance connections between academic texts and texts outside of the classroom, including community texts, workplace texts, and family texts.

*See also:* LITERACY, *subentries on* LEARNING FROM MULTIMEDIA SOURCES, MULTIMEDIA LITERACY; READING, *subentry on* LEARNING FROM TEXT.

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## LEARNING FROM MULTIMEDIA SOURCES

The predominant means of instruction has traditionally been through verbal medium, either as spoken lecture or written text. As more instructional resources of many different media types become available to students through the Internet, there is a need for educators to understand when these sources may be used effectively for instruction, as well as a need for students to develop an additional set of literacy skills in order to learn from these sources. Although there is much optimism that multimedia sources will be a great tool for instruction, research in cognitive science has demonstrated that the use of these resources does not always lead to better learning. It is important to recognize the potential cognitive implications of multimedia presentations, including text, graphics, video, audio, and virtual reality simulations. Multimedia has been incorporated into instructional materials in a variety of ways: decoration, illustration, explanatory simulation, and "situating" simulation. The first three uses may be best thought of as adjuncts to a verbal lesson, while in the final use, the entire "lesson" is embedded and conveyed by situating the learner in a virtual context.

### Uses

Often multimedia is used to decorate text, with the goal of making the text more interesting for the reader. A second use for multimedia, illustration or description, can be used to help a reader visualize a place or time or object. A third use of multimedia

involves the explanation or explication of concepts. Especially in complex domains, understanding often requires that learners develop a dynamic mental model of phenomena or processes. Multimedia animations, narrations, and diagrams have all been used to support the understanding of complex subject matter by illustrating or highlighting important relations, thereby attempting to convey a correct mental model directly to the student.

### Improved Learning

One reason why multimedia might be expected to lead to improved learning is consistent with a constructivist approach that posits that conditions that make knowledge acquisition more self-directed and active are beneficial for student understanding. The presentation of loosely connected texts and images in hypermedia environments allow learners to navigate information with more flexibility. At the same time, in order to build coherence, students must construct their own elaborations, inferences, and explanations. Thus, there has been reason for optimism surrounding the benefits of learning from hypermedia.

Another reason one might expect benefits from illustrated text and multimedia presentation in general is that it allows for information to be represented in multiple ways (i.e., both verbal and visual). A great deal of previous research within cognitive psychology, such as that of Allan Paivio in 1986, has suggested that the more codes one has for a given memory, the more likely one is to remember that information. Multiple media may also make the learning experience more vivid or distinctive. And, given the different preferences of different learners, multimedia may allow learners to choose the code best suited to their abilities.

A related reason why multimedia, and graphics in particular, may improve learning is that some particular domains may lend themselves to visual presentation, such as when information is inherently spatial. For instance, learning about different ecologies and climate zones may benefit greatly from the presentation of a map. Further, even when the understanding of the subject matter does not require a visual representation, images can still facilitate understanding if the image provides the basis for an abstract model of the content of the text. Figures, graphs, or flow charts that may allow the reader to think about abstract concepts and relations through images support the creation of more complete men-

tal models and as a consequence may improve comprehension of text. Also, when subject matter is as complex and dynamic as streams of data from weather satellites or space stations, then visuals and animations may be especially important. Similarly, visual or audio representations (sonitizations) of complex data can give human thinkers the ability to consider many more dimensions, and the salient relationships between those dimensions, than they might otherwise.

Finally, it should not be overlooked that instructional materials with visual or audio adjuncts are simply more interesting to readers than plain text. Such motivational issues may contribute to advantages in learning with any multimedia presentation.

### Criticisms

With all these potential benefits of images, it is perhaps surprising that since the 1960s, the empirical results on learning from illustrated text have been less than positive. In a 1970 review of studies using illustrated texts, Spencer Jay Samuels found little support for the superiority of illustrated text over plain text. In fact, in some cases illustration leads to poorer learning than simple text presentation. Follow-up investigations suggest that one reason for the lack of a consistent positive effect of images on learning is that any learning effect depends greatly on the kind of image that is used. In a 1987 review of Joel Levin and colleagues that discriminated between decorative illustrations, and conceptually-relevant images, decorative illustrations were found to lead to the smallest improvements and sometimes negative effects in learning. Decorative illustrations are often not relevant for the concepts that are described by the text, yet they are still interesting for the reader, and will attract the reader's attention. For this reason, interesting but irrelevant illustrations can be seen as part of a larger class termed *seductive details* as coined by Ruth Garner and colleagues, and others. Similarly, color, sound effects, and motion are preattentive cues that necessarily attract a reader's focus. If they are not used to emphasize conceptually important information, they too can seduce the reader.

Even when images are relevant for understanding the target concept, there is a further danger that images or animations can make learners overestimate their level of comprehension. People tend to feel that a short glimpse of an image is generally sufficient for understanding. This can lead to an illu-

sion that they understand a graphic or image, even when they have not really engaged in deeper thought about the information. Further, students are notoriously bad at comprehending complex graphics, especially data-related charts or figures, and will interpret the data in support of their own ideas.

Another danger with images and especially animations, is that they can provide so much information so easily that although the reader is able to grasp a basic idea of "how" a dynamic system works, a good understanding of "why" the system works the way it does is lacking (i.e., they are unable to recreate the system or apply their knowledge to a new instance). This effect has in fact been demonstrated in several studies. The research of Mary Hegarty and colleagues, and other research, indicated that still pictures, or still sequences of pictures, in which the reader needs to infer movement for themselves, led to better understanding of dynamic systems than animations that actually show the motions. Similarly, animations that are reproductions of real-world actions are more effective if they are "doctored" to emphasize important features of the display. And, animations that are stoppable and restartable under the learner's control may lead to better learning than real-time simulations. However, images that provide readers with the basis of a mental model, and animations that show the dynamics of a model, may be especially important for people who lack knowledge and spatial ability. Finally, even conceptually relevant adjuncts run the risk of distracting the learner, and they need to be presented in a way that does not compete with the processing of the text. A number of studies, such as the work of Wolfgang Schnotz and Harriet Grzondziel, have shown that students learn better from diagrams and animated graphics when they were presented separately from text. Alternatively, learning from multimedia has been supported by structured computer learning environments, where different media and sources are presented to students, but students are given instruction both in how to use the environment, and are given a specific learning goal.

Other multimedia adjuncts have been studied, most notably narrations and sound effects. The bottom line from these investigations is that narrations only benefit learning when they are nonredundant with text. However, narrations may be especially helpful for poorer readers, especially when they accompany diagrams, and highlight the conceptually important features. Sound effects and music in gen-

eral are distracting, and as adjuncts to text, they do not contribute to better conceptual learning. They do however help simulated environments seem more authentic, and may be helpful for situated learning and anchored instruction. Realistic sound effects may be especially important in skill learning environments. Similarly, in terms of conceptual learning, animations may help only when readers cannot generate mental models on their own, although realistic video may help when learning a procedural task and also in “situating” contexts.

### **The Simulation of Reality**

The final use of multimedia considered here is where multimedia is used, not as an adjunct to verbal instruction, but more extensively as the entire means of presentation. In these lines of application, multimedia is used to simulate reality, through video and audio streams, to produce a sense of learning “in context.” This may be especially important in skill-training environments, when learning in an actual cockpit or surgical operating room would be unsafe and costly. In more academic domains, simulations can give students the feel of an authentic experience, and both situated learning and anchored learning approaches have attempted to capitalize on this advantage of multimedia presentation. Another application of multimedia simulation is the creation of artificial agents that can act as tutors or peers. The presence of an interactive human-like entity may be an especially important coaching tool, and multimedia simulation may make such tutoring experiences more effective than feedback or prompts that appear in text messages. Simulations may also be used to support distance education and collaboration, again by providing a sense of real “co-presence” to the users.

Virtual reality is the ultimate multimedia tool, combining realistic video and audio streams (i.e., three-dimensional), and sometimes even tactile experience. Here, the potential exists to convey an understanding of new concepts in ways that surpass real experience, and many have heralded virtual reality as a powerful educational tool. Most researchers refer to the multisensory-based sense of “presence” that virtual reality affords the user as the characteristic that separates it from other training approaches. Where procedural knowledge and visuo-spatial skills are concerned there seems to be support for this optimism. However, results on more academic subject matter understanding have been less convincing.

Most studies that have been performed on people’s uses of virtual reality have included only self-report data that reflect the user’s interpretation of her or his experience in the virtual environment, while fewer investigations include more direct measures of learning. Among the few virtual reality studies with learning measures, Chris Dede and colleagues examined in 1999 students’ understanding of electromagnetic field concepts from a virtual environment called Maxwell World. Students in the virtual reality condition were better able to define concepts and demonstrate them in three-dimensional terms.

At the same time, pilot studies, such as those of Andrew Johnson and colleagues in 1999, on using virtual reality to promote understanding of astronomical physics concepts have found that the virtual reality environment can also be prone to seductive distractions. For example, to learn that the earth’s shape is round, younger elementary school-age children engaged in a virtual reality game, which included traversing a spherical asteroid to gather objects. The students failed to exhibit a substantial and robust improvement in their understanding, presumably because of the distracting and nonrelevant aspects of the game.

It would seem that virtual reality would be a prime candidate to demonstrate the positive effects of multimedia sources on learning. Yet, virtual reality experiences are not easily translated into learning experiences, and the results of studies on the educational uses of virtual reality underscore the same principles as have been discussed above. Virtual reality may add value to educational contexts when real training is not possible, and where it goes beyond “realistic” experiences in ways that emphasize conceptual understanding.

### **As an Effective Strategy**

As the nature of instructional materials changes to include more images, sounds, animations and simulations, it is important to recognize the conditions under which multimedia can be an effective learning tool, and that new literacy skills are needed to learn from those materials. Instead of being presented with a single message, multimedia learners are presented with many information sources on a topic, and those sources can represent a number of media. The sheer number of resources available through the Internet is enormous. The availability of so much information means that students have the ability to di-

rect their own learning, by performing searches and selecting documents, evaluating sources of information, and allocating attention to images and animations, without being confined by the linear structure of a single text or lecture. Although this flexibility in the learning environment has been seen as an opportunity for more active student learning, it is clear that in order to learn from multimedia and electronic sources, students will likely need additional skills in searching, document evaluation, strategic reading, strategic understanding of graphics, and integrating information across sources, including the integration across text and graphics. A specific set of skills may also be necessary for learning in more immersive multimedia environments.

A recurrent question focuses on how multimedia helps learning. Some have suggested that positive effects due to multimedia may be simply due to the motivating effect of its novelty. Unfortunately the literature of the early twenty-first century contains few controlled studies and few tests of when multimedia helps understanding. Further research is needed to identify what conditions enable the best learning from multimedia, and what new literacy skills students will need to support that learning.

*See also:* MEDIA AND LEARNING; LITERACY, *subentry on* MULTIMEDIA LITERACY; TECHNOLOGY IN EDUCATION.

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## MULTIMEDIA LITERACY

The term *multimedia* is among several terms that have been associated with literacy to emphasize that literacy extends beyond reading and writing the alphabetic code, and should include a variety of audiovisual forms of representation. Associating multimedia with literacy also highlights a belief among many scholars and educators that conceptions of literacy and how it is developed should not focus exclusively on printed materials, but should include electronic media that have moved into the mainstream of communication, especially at the end of the twentieth century. Implicit in these views is that research and practice related to literacy must be transformed to accommodate new ways of accessing, processing, and using information.

## Related Concepts

Kathleen T. Tyner argued in 1998 that in the information age the concept of literacy has been simultaneously broadened and splintered into many literacies in part because "the all purpose word literacy seems hopelessly anachronistic, tainted with the nostalgic ghost of a fleeting industrial age" (p. 62). Associating the term *multimedia* with literacy is consistent with that trend, although it might be thought of as encompassing a diverse set of related and sometimes ill-defined terms used in scholarly, and often popular, discourse. For example, related terms highlighting media and forms that go beyond the alphabetic code include *media literacy*, *visual literacy*, *technological literacies*, *metamedia literacies*, and *representational literacy*. Broader terms, such as the following, might also be included in this set because they typically acknowledge the role of diverse media and new technologies in broadening conceptions of literacy: *multiliteracies*, *information literacies*, *critical literacy*, and even the negatively stated term *cultural illiteracy*. Narrower terms such as *computer literacy* and neologisms such as *numeracy* also reflect expanding views of literacy, but such terms focus on specific skills and abilities.

## Past and Present Conceptions

Broadening the scope of literacy, specifically in relation to diverse media, is not entirely a phenomenon of the late twentieth and early twenty-first centuries. Interest in how new media might affect conceptions of literacy can be traced to the widespread use of electronic audiovisual media such as television and film in the first half of the twentieth century. For example, Edgar Dale, well known among a earlier generation of educators and researchers for his work related to literacy, discussed the need for critical reading, listening, and observing in contending with the new literacies implied by audiovisual media of the 1940s.

Nonetheless, beginning in the latter decades of the twentieth century, the impetus for broadening the scope of literacy has been the increasing integration of digital technologies into the mainstream of everyday communication and the inherent capability of those technologies to blend diverse modes of representation. New modes of digital communication exist not only in parallel with conventional printed forms, but they have replaced or moved to the margins conventional forms of reading and writing. For example, the obsolescence of the typewriter,

the ascendance of e-mail as the preferred alternative to diverse forms of correspondence on paper, the emergence of the Internet as a prominent cultural phenomenon, and the appearance of the electronic book represent a steady yet incomplete and unpredictable progression away from conventional printed forms. Likewise, students in the early twenty-first century routinely encounter digital information employing diverse audiovisual media presented in formats that are more interactive and dynamic than printed texts, although those encounters have been more likely to occur outside the school, as revealed in a national survey sponsored by *Education Week* in 2001.

Nonetheless, the opportunities for seeking out and creating such texts in schools have grown steadily. For example, the availability and use of the Internet, applications for creating digital documents and presentations, and similar digital activities has increased substantially since the mid-1990s. The parallel increase of electronic texts in academia, which includes electronic versions of dissertations and the gradual recognition of electronic journals as respected outlets for rigorous scholarship, suggests a continued expansion of multimedia forms into the mainstream of literate activity at all academic levels.

A further impetus to broadening the scope of literacy in relation to multimedia is the shift from viewing literacy primarily as a set of isolated, minimal, functional skills for reading and writing in schools: Literacy is a much larger sociocultural phenomenon that has implications for personal agency and for a nationalistic competitiveness and globalization. The imperatives for literacy, the definitions of its importance in world of the early twenty-first century, and the ideas about how it might best be developed have changed rapidly in both a technological and a sociocultural sense. Multimedia literacy, and the constellation of contemporary literacies that it encompasses, implies a broad conception of educational imperatives and an understanding that digital transformations of reading and writing go far beyond the development of technological competence.

Thus, multimedia means can be thought of as an orientation of perspectives and values about a variety of literate activities across the sociocultural spectrum. For example, in law and ethics it may mean a transformation of concepts such as plagiarism, intellectual property, and copyright. In government and politics it may mean a transformation

of the possibilities for shaping or controlling public opinion through the dissemination of information. In economics it may mean a transformation of commerce and how people purchase goods and services and how they manage their personal finances. In mass communication it may mean the transformation of how news organizations gather and disseminate information and who has access to it. In popular culture it may mean a transformation of the pragmatics of writing and reading texts such as determining what is acceptable and unacceptable when using e-mail. In education it may mean a transformation in what is considered a text, how texts are written and used, and ultimately perhaps the goals of education and the roles of teachers and students. Such potential transformations and how they might be accommodated in educational endeavors define the broad imperatives for considering literacy in terms of multimedia.

### Theory and Research

On a theoretical plane, it is challenging to define precisely the relation between multimedia and literacy. What exactly comprises literacy has always been debatable and has increasingly been so in light of sociocultural perspectives. But, defining precisely what is meant by the term *multimedia* is equally challenging. That challenge is reflected in what might be considered a grammatical redundancy or, at least, an ambiguity. Media is technically a plural form of the word *medium*, making multimedia somewhat redundant in a literal sense. Yet, media in popular usage has become a collective noun that originated in the field of advertising to designate agencies of mass communication. Whereas considering multimedia in relation to literacy may include an understanding and critical analysis of mass media in the collective sense, it implies much more in light of the digital forms of representation. That is, digital forms of representation often blend what might intuitively seem to be individual media into combinations heretofore not possible or feasible. Doing so, however, begs the question of where the boundaries are between media. Put another way, what precisely is a medium? Is a medium elemental in terms of a perceptual mode? That is, might audio and visual presentations be different media? Or, is a medium defined in terms of its technological materiality? That is, the writing of a conventional essay with pen, pencil, typewriter, or word processor employs the use of distinctly different media with potentially dif-

ferent effects. Or might a medium be defined in terms of technological capabilities? That is, a picture or video on a television and computer screen may be identical in appearance, but they are not necessarily equal in their potential opportunities for viewer interaction, and might, thus, be considered different media. Or, does identifying an individual medium require considering all these differences in some ill-defined way? Addressing these and similar questions and issues may be important in translating how literacy might be seen in terms of multimedia into agenda for practice and for research. In other words, knowing what a medium is and what individual media, if any, comprise a means of communication seem fundamental to understanding literacy from the perspective of multimedia and how such literacy might be developed.

In 1979 Gavriel Salomon offered a well-developed and often-cited theory of media and learning relevant to these questions and issues, and it illustrates the type of theory that might be useful. It is useful in part because it transcends more superficial, popular definitions of media that are linked to longstanding forms of communication, and it more readily recognizes and accommodates rapid changes in the technologies of communication. In his scheme a medium can be defined, and thus analyzed and reflected upon, as a configuration of four elements: symbol systems, technologies, contents, and situations. Symbol systems and the technologies used to present them are intertwined and critical because they define the cognitive requirements for extracting information from a medium and consequently what skills become necessary for those who wish to use the medium successfully. In this view, a conventional musical score and a topographical map are different media because they require different cognitive skills for extracting information. Symbol systems and technologies also importantly set the limits of the degree to which a medium can assist those who do not have the requisite skills to extract useful information. For example, Salomon demonstrated that the technological capabilities of the film camera (now also the video camera), specifically the capability to zoom in for a close-up, could increase attention to relevant detail among learners who had difficulty doing so on their own. Contents and situations, the remaining components that define a medium, are more socially defined correlates than necessary qualities of individual media. For example, textbooks rarely have overt advertisements (con-

tents), although they could, and breaking news events are rarely viewed in a movie theater (situations), although they indeed used to be. Thus, among its other advantages, this theoretical perspective accommodates both cognitive and sociocultural dimensions of multimedia and literacy.

There are other relevant theoretical perspectives that might define multimedia and guide research. Research and practice in relation to multimedia literacy has frequently been ad hoc and atheoretical, however. Further, within mainstream literacy research there have been relatively few published studies guided by an awareness of new technologies and media. The body of research focusing on literacy is overwhelmingly aimed at the conventional use of printed materials. However, three studies illustrate the range of possibilities for research in this area and the type of approaches that may lead to important understandings about literacy in terms of multimedia, including learning from texts, integrating multimedia into instruction, and expanding students' sociocultural awareness of textual information. For example, in 1991 Mary Hegarty and colleagues used a cognitive perspective to demonstrate how students with low mechanical ability learned more from text describing a machine when its operation was animated on a computer screen than when it was shown as a series of static pictures in a conventional printed text. Ruth Garner and Mark G. Gillingham, using case studies, documented in 1996 how literate activity as well as the roles of teachers and students changed when e-mail and Internet access were introduced into classrooms. Jamie Myers and colleagues described in 1998 how involving students in creating multimedia hypertexts about literacy and historical figures such as Pocahontas led to a critical stance toward various sources of information.

### Further Thoughts

For the early twenty-first century, considering literacy in terms of multimedia relates directly to important changes and trends in conceptions of literacy beginning in the late twentieth century. This perspective makes particularly poignant the shift from printed to digital texts and the implications of that shift for reconceptualizing literacy in light of new and diverse modes of communication. Yet, incorporating multimedia into conceptions of literacy remains imprecise and has yet to provide an unambiguous guide for theory, research, and practice.

*See also:* LITERACY, *subentry on* LEARNING FROM MULTIMEDIA SOURCES; MEDIA AND LEARNING; TECHNOLOGY IN EDUCATION.

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DAVID REINKING

#### NARRATIVE COMPREHENSION AND PRODUCTION

Narratives convey causally and thematically related sequences of actual or fictional events. Narratives have a hierarchical schematic structure. At the highest level, they consist of a setting, a theme, a plot, and a resolution. The components of the setting are

characters, a location, and a time. Thus, the typical opening sentence of a fairy-tale, “Once upon a time in a far-away kingdom, there was a princess who . . .” conveys the setting in a nutshell, as does the more colloquial “Last night I was at a restaurant when . . .”. The theme can consist of a goal (the princess wanted to get married) or an event and a goal (a fire broke out at the restaurant and I was trying to call 911). The plot is a causally related sequence of events, usually describing the character’s attempts to achieve his or her goal. The resolution describes the achievement of the character’s goal. Of course, many literary narratives omit the resolution. An example is Samuel Beckett’s play *Waiting for Godot* (1953), whose main characters, Vladimir and Estragon, are waiting for a third character, Godot, to arrive. But Godot never arrives, thus spawning decades of literary analysis about the meaning of the play. However, most stories exhibit the stereotypical structure described above.

Aristotle in *Poetics* identified the plot as the major organizing structure of narratives and admonished poets to describe events only when they are relevant to the plot, just as Homer had done centuries before them. They were to refrain from giving a blow-by-blow chronological account of an episode. This Aristotle considered to be the province of historians.

### Cohesion and Coherence in Narratives

In order to make sense, narratives need to be cohesive and coherent. Two successive sentences are said to be cohesive when they share information, as indicated by linguistic markers, such as pronouns or connectives. Thus, the sentence pair in (1) is cohesive because the pronoun *he* in the second sentence refers back to the runner mentioned in the first sentence.

(1) The runner jumped over the puddle. He did not want to get his feet wet.

On the other hand, the sentence pair in (2) is not cohesive; there is no word in the second sentence that directly refers back to the first.

(2) The runner jumped over the puddle. It is unpleasant to get your feet wet.

Yet, sentence pair (2) does seem to make sense: The second sentence provides a motivation for the action in the first sentence. Thus, the two sentences can be connected by generating a bridging inference. A sentence pair like (2) is said to be locally coherent. Now consider sentence pair (3).

(3) The runner jumped over the puddle. Airplanes seldom leave on time.

This pair is neither cohesive nor locally coherent (i.e., it is not easy to generate a bridging inference). Thus, the connection between successive sentences can be established through cohesion markers or through bridging inferences (or a combination of the two). Is this sufficient to produce a coherent text? Consider the following passage.

The runner jumped over the puddle. There were some frogs in the puddle. Frogs are often used as characters in fairy tales. Fairy tales are narratives. This entry is about narratives.

Although this “text” maintains local coherence—each sentence can be connected with its predecessor—it lacks an overall point. Thus, an important characteristic of narratives is that they have an overarching point or theme. This is called global coherence.

### Empirical Approaches to the Study of Narrative

Cognitive psychologists have been able to uncover a great deal about how people understand narratives by assessing, among other things, what people recall from a story, how quickly people read certain words or sentences, or how quickly they respond to probe words. For example, it is clear that people use their expectations about the stereotypical structure of stories when understanding a story. It is also clear that people make inferences about the motives behind characters’ actions and about the causes of events when these are not explicitly stated in the text in order to establish both local and global coherence. Consider the two sentence pairs below.

(5) The spy threw the report in the fire. The ashes floated up the chimney.

(6) The spy threw the report in the fire. Then he called the airline.

In sentence pair (5) the bridging inference that the report burned is needed to establish local coherence between the two sentences, but in (6) no such inference is needed because of the cohesive link between *spy* and *he*. In experiments, participants respond more quickly to the probe word *burn* after sentence pair (5) than after sentence pair (6), suggesting that the inference about the report burning was activated during the reading of (5) but not during the reading of (6).

There is a wealth of evidence that comprehenders do more than simply generate bridging in-

ferences to connect sentences. What they do is construct mental representations of the situations that are described in the text, situation models, rather than just mental representations of the text itself. Consider sentence pairs (7) and (8).

(7) Mike started playing the piano. A moment later, his mother entered the room.

(8) Mike stopped playing the piano. A moment later, his mother entered the room.

Participants in experiments responded more quickly to the probe word *playing* after sentences such as (7) than after sentences such as (8). The reason for this is that in (7) Mike is still playing the piano after his mother has entered, whereas in (8) he is not. Thus, in (7) playing the piano is still part of the situation, but in (8) it is not. If the subjects were merely constructing representations of the texts, no difference should have been found, given that the word *playing* appeared in both texts.

### Narrative Production as a Window into Comprehension

Writing involves cognitive operations that are the result of thinking, such as collecting information, generating ideas, turning these ideas into written text, and reviewing the text for its meaningfulness. In narratives, the thoughts, perceptions, fantasies, and memories of the writer are incorporated in a coherent narrative structure, either in oral or written language.

Knowledge of the prototypical structure of a mode of discourse is important for its construction and comprehension. A narrative about a major disaster, such as the explosion of the *Challenger* shuttle, will be written and processed in a different manner than a newspaper article about it. Whereas a newspaper article will focus on the facts, a narrative would include other elements, such as a plot and a narrator or a character-based perspective leading the reader through the sequence of events. The comprehension strategies of a narrative or a newspaper article about the explosion will be different as well, with a stronger focus on stylistic aspects and smaller focus on criteria of truth when using literary comprehension strategies than when using expository text comprehension strategies.

Although the boundaries between narratives and other forms of discourse are not clear-cut, narratives share certain features, such as a narrative structure that enables the reader to seek meaning

and generate meaning from the narrative, and a potential to have an emotional impact on the reader or listener.

### Affective and Esthetic Aspects of Narrative Comprehension and Production

Most narratives possess a dramatic quality that is created from an imbalance between narrative components, for instance different characters with opposing goals or a sequence of events leading to a tragic outcome for one of the characters. The dramatic quality as well as the style of the narrative will draw the reader into a convincing fictional world of goals, emotions, and motivations. Narrative style will stir the reader's imagination. For example, foregrounding of narrative elements, such as references to the devil in Elizabeth Bowen's *The Demon Lover* (1959), will aid the reader in imagining the true nature of the relationship between the main characters.

An imbalance in the sequence of events can affect the emotional response of the reader, in particular suspense, curiosity, and surprise. According to the structural affect theory, suspense is evoked by postponing the narrative's outcome, thereby creating uncertainty for the reader on the issue of what is going to happen next in the narrative. Curiosity arises when the outcome of the narrative is presented before the preceding events, whereas surprise occurs as a result of an unexpected event in the narrative, such as the sudden appearance of the pawnbroker's half-sister when Raskolnikov kills the pawnbroker in Dostoyevsky's *Crime and Punishment* (1866).

The kinds of emotions that readers experience while reading or listening to a narrative can be the result of being drawn into the fictional world of the narrative and identifying with the characters. These emotions are called "fictional emotions." Reader emotions can also be the result of analyzing and appreciating the narrative structure and techniques, called "artifact emotions" by Eduard Tan. The overall enjoyment of reading the narrative is based on both types of emotions. Narrative techniques, in particular switches in the role of narrators, can be used to make the reader go from observation to identification in different parts of the narrative or throughout the narrative.

### Comparisons of Narratives in Different Cultures

Apart from being entertaining, many narratives also reflect moral values as a commentary on a society,

include the preservation of events central to a culture, or aim to create an identity of a group. A culture is a shared perspective regarding ways of life and symbolic systems maintained within a social group. Narratives can help to establish an identity in a multicultural context, such as postmodernist literature, or preserve or create a group's identity within one culture, such as feminist poetry or Navajo narratives. Group identity is especially important for minority groups within a multicultural society. These groups share common interests and customs that act as a basis for constructive memory to be passed on to future generations.

The preservation of cultural elements from a group and the manner in which they are delivered can be one focus of narratives in cultural groups. Many Native American narratives preserve and transfer cultural traditions and tribal discourse through oral techniques of pause, pitch, and tempo. Another focus of narratives in cultural groups is the reflection of moral and aesthetic values within those groups. This can be the result of exclusionary mechanisms from a dominant cultural group that urges minority cultures to develop their own means of literary production and aesthetic norms with their own unique features. The incorporation of blues lyrics in African-American poetry is unique to that group, as is the inclusion of the native or modified language into poems and narratives in Chicano, Caribbean, and African-American cultures.

Narrative production and reception in one culture will strengthen and preserve the aesthetic norms and traditions within that culture. For individuals from other cultures, reading or listening to these narratives may help to translate these specific cultural elements into their own experiences and provide a better understanding of cultures and cultural issues other than their own, such as the dual personality issue in Chinese-American and Japanese-American culture. The narrative structure and the elicitation of fictional and artifact emotions will help this process. As Eileen Oliver suggests, part of the reception process may be that readers and listeners become more aware of the dynamics of cultural exchange in which assimilation, retention, and transformation of new cultural features are in constant progress.

*See also:* LITERACY AND READING; READING, *subentries on* COMPREHENSION, READING FROM TEXT.

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## VOCABULARY AND VOCABULARY LEARNING

How does one help students learn vocabulary? Solutions take two general directions: one focuses on learning word meanings from context through wide reading and the other on the need for direct instruction about word meanings.

### What Is Known and How to Know It

The divergent recommendations of wide reading versus direct instruction derive from different assumptions about the extent of vocabulary knowledge, that is, how many words children typically know, and how readily new words are learned. For example, rapid word learning and large vocabularies would indicate a lesser role for instruction, while slower growth would indicate need for intervention.

**Vocabulary size and growth.** A key issue is that estimates of vocabulary size vary widely. For example, estimates of total vocabulary size for first graders have ranged from about 2,500 (Edward Dolch and Madorah E. Smith) to about 25,000 (Burleigh Shibles and Mary Katherine Smith), and for college students from 19,000 (Edwin Doran and Edwin Kirkpatrick) to 200,000 (George Hartmann).

Situations with such wide variations make it impossible to simply ask people how many words they know, so estimates must be based on testing people's word knowledge of a sample of words and extrapolating to a final figure. To construct such tests, decisions must be made about what is taken as evidence of knowledge of a word, what constitutes a single

word (e.g., should individuals who know the word *walk* be credited with knowing the word *walking*?), and how a sample of words is chosen to represent the language. All these decisions open the door to wide discrepancies in vocabulary size estimations.

Work on what constitutes a word and on techniques for constructing a language sample have helped bring estimates into greater agreement. Consequently, estimates in the early twenty-first century place vocabulary size for five- to six-year-olds at between 2,500 and 5,000 words. But although the problems of older work on vocabulary size are understood, there are (as of 2001) no recent, large-scale studies that correct these problems.

Estimates of vocabulary size at different ages are also used to estimate rates of vocabulary growth. Specific estimates of vocabulary growth, not surprisingly, vary widely, from three (Martin Joos) to twenty new words per day (George Miller). A figure of seven words per day is probably the most commonly cited.

Whatever the reality, it is certain that there are wide individual differences in both vocabulary size and growth. Studies have found profound differences among learners from different ability or socioeconomic groups, from toddlers through high school. For example, Mary Katherine Smith reported that high-knowledge third graders had vocabularies about equal to lowest-performing twelfth graders. These differences, once established, appear difficult to ameliorate. This is because children whose backgrounds provide rich verbal environments not only learn more words initially, but they also acquire understanding about language that enables them to continue to learn words more readily.

**Learning from context.** Most word meanings are learned from context. This is true from the earliest stages of a child's language acquisition onward, but the type of context changes. Early learning takes place through oral context, while later vocabulary learning shifts to written context. Written context lacks many of the features of oral language that support learning new word meanings, features such as intonation, body language, and shared physical surroundings. Thus, written context is a less efficient vehicle for learning. Research shows that learning from written context occurs, but in small increments. Machteld Swanborn and Kees de Glopper estimate that of one hundred unfamiliar words met in reading, between three and eight will be learned.

Thus, students could substantially increase vocabulary if two conditions are met. First, students must read widely enough to encounter a substantial number of unfamiliar words. Second, students must have the skills to infer word-meaning information from the contexts they read. The problem is that many students in need of vocabulary development do not engage in wide reading, especially of the kinds of books that contain unfamiliar vocabulary, and these students are less able to derive meaningful information from context. So depending on wide reading as a source of vocabulary growth could leave some students behind.

**Direct instruction.** The most commonly cited problem with direct instruction to address students' vocabulary needs is that there are too many words to teach. This is certainly true if the goal is to teach all the words in a language. Consider, however, a mature vocabulary as comprising three tiers. The first tier consists of basic words—*mother, ball, go*—that rarely require instructional attention. The third tier contains words of low frequency that are typically limited to specific domains—*isotope, peninsula, refinery*. These words are appropriate for specific needs, such as introducing the word *peninsula* during a geography lesson. The second tier contains high frequency, general words, such as *compromise, extraordinary, and typical*. Because of the large role tier-two words play in a language user's repertoire, instruction directed toward these could be valuable in contributing to vocabulary growth.

What kind of instruction should be offered? The answer depends on the goal. Typically, educators want students to know words well enough to facilitate reading comprehension and to use the words in their own speech and writing. Facilitating comprehension seems a reasonable goal, given the well-established relationship between vocabulary knowledge and comprehension. Although virtually all studies that present vocabulary instruction result in students learning words, few have succeeded in improving comprehension. In analyzing this discrepancy, researchers, such as Steven Stahl and Marilyn Fairbanks, found that to influence comprehension instruction needs to: (1) present multiple exposures of words; (2) involve a breadth of information, beyond definitions; (3) engage active processing by getting students to think about and interact with words.

Effective instruction should accomplish the following:

- Begin with information about the word's meaning, but not necessarily a formal definition.
- Immediately prompt students to use the word.
- Keep bringing the words back in a variety of formal and informal ways.
- Get students to take their word learning beyond the classroom.
- Help students use context productively.

### Status of Vocabulary Issues

Although there is general consensus on effective vocabulary instruction, little of this kind of instruction is found in classrooms. Attention to vocabulary in classrooms focuses on looking up definitions and perhaps writing sentences for new words. The typical dictionary definitions, however, do not promote students' learning of new word meanings. In fact, often students do not even understand the definitions of the words they look up. Thus it is important to implement what is known about effective instruction into classrooms.

Much about the way vocabulary is learned and stored in memory is still unknown. How much learning comes from oral contexts past initial stages of acquisition? How much do early learning experiences matter and is it possible for children who lag early to catch up? What characteristics of verbal environments are most useful for word learning? For example, what are the roles of the amount of talk in a child's environment, the kinds of words used, and interactions within the environment? How is word knowledge organized? Research makes it clear that a person's vocabulary knowledge does not exist as a stored list of words, but rather as networks of relationships. This leads to the question, how do these networks of word relationships affect how readily and how well words are learned?

To help students improve their vocabulary, it will be necessary to put into practice what is already known about vocabulary learning and evaluate and refine the results.

*See also:* INSTRUCTIONAL DESIGN, *subentry on* DIRECT INSTRUCTION; LITERACY AND READING; READING, *subentries on* COMPREHENSION, CONTENT AREAS; SPELLING, TEACHING OF.

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## WRITING AND COMPOSITION

Skills or process? Visible in the history of writing instruction is the same controversy found in the rest of the language arts. Historically, writing instruction focused on handwriting and on correctness of the product produced through emphasis on what are sometimes referred to as the mechanics of writing (i.e., sentence structure, spelling, correct punctuation, etc.) and on rules. Students were usually asked to write to assigned topics or for purposes such as essay exams. They were seldom asked to write for an audience other than the teacher and the quality of the writing was much more likely to be judged on the basis of the correctness of its content and mechanics than on style or creative expression of ideas.

### Writing Process Instruction

Gradually research began to make visible the processes of writing. With the writing project movement in the mid- to late 1970s concern for teaching the writing process emerged as a strong force. In the early stages of that movement the process was often described in a linear fashion as a series of four steps: pre-writing, writing, editing, and revision. Over time those concerned with writing instruction came to recognize and acknowledge through instruction that real writing is a much more messy reflexive and recursive process. With this understanding came the push to encourage students to write on topics of their own choosing, write for their own purposes, and perhaps most significantly, write to real audiences. As with most swings of the educational pendulum, by the late 1980s writing instruction in some schools had reached an extreme point where students might write exclusively in the genre of their choice and where attention to mechanics was seldom taught and/or required, even in pieces for publication.

During the 1990s politicians and the public at large increasingly called for rigorous academic standards and writing instruction shifted once again. In the early twenty-first century, teachers of writing or composition typically try to balance their desire to

have students engage in writing in which they are personally invested, with the challenges of attention to correctness issues and to writing in a range of genres. Often these demands are tied to distinguishing between private and public writing. When the intended reader is an audience other than the author, the needs and expectations of that reader must be addressed if the writer's work is to be positively received.

With these shifts in the view of the writing process came the realization that the idea that *writing is writing* is not valid. That is, each discipline, indeed each piece of writing, has its own demands in terms of genre, audience, purpose, situation, and even what is viewed as correctness. This realization, coupled with the belief that engaging in writing can influence cognitive development, led to the writing across the curriculum movement, resulting in pressure on all teachers, not just English or Language Arts teachers, to be teachers of writing. After all, which teacher is better prepared to help students develop the genre of lab report writing, the chemistry teacher or the English teacher? Accompanying this movement has been increased emphasis on tying reading and writing instruction together.

### Technology As Tool

Within a decade of the emergence of the writing process movement, technology began to exert a significant influence on writing instruction. Early arguments centered around whether or not classrooms (especially elementary classrooms) should have a computer, and how or even if that computer should play a role in language arts instruction. Some argued for placing computers in one centralized lab, which students would visit as a whole class once or twice a week, rather than distributing computers across classrooms. Most of the educational software available by the mid-1980s provided little more than computerized versions of skill drills or workbook sheets, occasionally accompanied by programs to teach typing or rudimentary word processing. Even under these less than ideal circumstances, students and teachers recognized the potential of technology for contributing to the writing process. When one fourth grader was asked how the computer helped her to revise she stated succinctly, "you don't have to worry about the paper ripping." What she and others recognized was the power of technology to assist writers with the physical process of encoding their messages so that more time and effort could be given to the composing process.

While educators were arguing about if or how computer technology should affect classrooms, technology was continuing to evolve at a rapid pace and the accessibility of affordable computers outside the classroom soon rendered the argument moot. Children who came to school computer literate were supported by their parents in expecting (sometimes demanding) similar access at school. The impact on the school writing curriculum was profound, with computer literacy quickly becoming a major issue for both students and teachers.

As computers have become more affordable and pervasive in society at large they affect not just formal writing instruction in K–12 schools, but also instruction in other educational venues. Adult education and community college programs offer a variety of classes and programs aimed at developing computer literacy in a wide range of students and for a huge variety of uses. Colleges and university now typically expect their students to be computer literate, even in some cases providing or requiring a personal computer for each entering student.

### **Technology in Development of Writing and Composition Skills**

These new writing technologies provide new choices and, in some cases, have led to a shifting emphasis in the development of writing abilities. Where there previously was an emphasis on traditional (paper-and ink-based) products and processes, there is now an emphasis toward an evolving set of products and processes enabled by electronic technologies. Handwriting is no longer an issue. To a large extent issues of mechanics (e.g., spelling, grammar) are taken care of by employing the computer as editor.

At the same time, shifting definitions of literacy have affected technology and software use in educational settings. Moving from the early days of computer drills and grammar checkers, to expressive freewriting or “invisible” writing on computer screens, to cognitive-based heuristic programs, to social functions of networked writing, technology use in writing instruction has mirrored the important theoretical and empirical approaches to teaching writing in traditional classrooms. This emphasizes a shift from viewing writing technology as a tool for delivering instruction to a technology that engages students as socially interactive participants. A new genre of writing with its own vocabulary and conventions has been born through such technology-related venues as e-mail, chat rooms,

listservs, and MOOs (Multiple User Dimensions/Object Oriented, which arose out of online game-playing in text-based virtual reality environments). Writing in hypertext, with its ability to link writing through the click of a pointing device, is one example of this powerful new interactivity for writers and readers.

Traditional writing concerns such as understanding purpose and the importance of audience awareness have a renewed emphasis in technologically rich writing environments. Some teachers have successfully used technology to show students the importance of these traditional writing concerns in a writing environment with social relevance to students’ lives. For example, discussions about audience naturally follow when writing is published on the Internet, whether to a known audience, as in personal e-mail, or a potentially unknown audience, as part of a website. Likewise, purposeful writing is given new importance when writers communicate with readers via electronic mail, electronic bulletin boards, synchronous discussion, or web sites—how readers interpret meaning in these contexts may shift, and students writing electronically need to carefully consider the crucial role of purpose in their writing.

Although issues of organization and style have always been important aspects of writing and composition (though sometimes underemphasized instructionally), technology provides a myriad of new options for writers to consider. Issues that previously were the concern of copy editors, publishers, and graphic artists have become the concern of authors. Developing writing skills in technologically rich environments may include elements of visual literacy skills, such as using graphics or integrated images within a text. Word processing and publishing software give developing writers the option, or in some cases the need, to learn about document design as it relates to writing. Composing in hypertext allows the writer to insert links from one part of a document to another, or if the document is made available online, writers can link to different texts and sites available over the network. Whether a document is composed on a word processor or marked-up for World Wide Web publication, writers are presented with previously unavailable choices of font styles, sizes, colors, and other symbols, including moving or still images and graphics. Writers can vary patterns of organization manipulating texts using electronic “cut and paste” tools, and writing in

hypertext offers a nearly infinite number of organizational options controlled, in part, by the reader.

Taken together, these new choices and shifting emphases represent a changing literacy landscape. In this new context, writing instruction continues to evolve as the uses and processes of writing change.

*See also:* TECHNOLOGY IN EDUCATION; WRITING, TEACHING OF.

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## LITERACY AND CULTURE

Literate practices are learned within dynamic cultural systems that structure roles and scripts (alphabetic, pictographic), privilege modes of reasoning, and offer tools through which such practices may be carried out. In modern, often Westernized, societies, these tools include books, newspapers, magazines, film, digital technology, and television. Historically, the advent of new technologies—such as the printing press—made possible new explorations of literacy and opportunities for more people to become literate. With greater global immigration, more students for whom English is a second language are entering U.S. classrooms. In some cases both U.S.-born and immigrant populations are involved in literate practices that operate under different assumptions than those that characterize school-based literacies. The digital age in particular offers opportunities to many more people to self-publish, create and interpret multimedia texts, privilege non-linear approaches to reading, for example, in hypermedia texts, engage in visual as well as oral communication across borders, and access rich databases internationally. These and other advances are ushering in new kinds of literate practices that now challenge schools to learn to integrate them meaningfully and to provide equitable access across groups. This entry will focus on literate practices defined by ethnicity (including language use) and by academic discipline, considering their implications for classroom instruction and student learning.

Induction into literate practices involves socialization in the ability to decode scripts and to reason in patterned ways. People demonstrate their membership in literate communities through ways they use language—knowing the right lexicon, the structure of appropriate genres, as well as when, where, and how talk should proceed. In reading and writing, such cultural models may be influenced by ethnicity, nationality, disciplines, and professions. Reading literature, for example, requires one to infer motives, goals, and internal states of characters based not only on clues from the text, but also from one's reading of the social world. Reading primary historical texts requires readers to invoke disciplinary norms, questioning the point of view of the author, drawing on knowledge of historical contexts. Some challenges that students face in literacy instruction derive from differences between community-based cultural models and school-based literacies.

CAROL N. DIXON  
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### Cultural Conflicts in Classroom Practices

Schools are seen as the repository of “standard” English, which is assumed to be the proper medium of communication for advancement in the marketplace and the academy. Not only is the standard a historically moving target (syntactical and lexical forms considered proper, say, in eighteenth-century Great Britain or the United States are considered archaic and inappropriate in the twenty-first century); in addition, certain syntactic markers have different values. For example, “It is me” is not considered “improper” English (as opposed to the “standard” form “It is I”), whereas “It be me,” a marker of African-American Vernacular English (AAVE) is seen as “incorrect.” In the 1970s researchers documented how students of color, English Language Learners (ELL), and students living in low-income communities were marginalized through classroom practices, particularly in the area of literacy instruction.

Susan Phillips’s work helped the field to understand how opportunities to participate in instruction were actualized in classrooms. She examined relationships of power that are constructed through norms for talk in classrooms. She documented the conflicts between norms for talk in the Navajo Nation and ways Anglo teachers expected Navajo students to participate. Using Anglo norms, teachers interpreted long stretches of silence by Navajo students as evidence that students were not learning.

In a similar vein other researchers, such as Courtney Cazden and colleagues, documented how oral language practices by low-income African-American primary level students were interpreted as deficits rather than resources. The function of sharing time is to scaffold young children from oral storytelling to the production of features of the kinds of academic writing that they will be expected to produce in later grades. Teachers viewed the African-American children’s stories as ill formed and saw the students’ language as a deficit. By contrast, Sarah Michaels analyzed the children’s stories as fitting a different structure, which she termed topic-associative in contrast to the topic-centered stories of the Anglo children. James Gee extended Michaels’s analysis to claim that the topic-associative story structure included complex literary elements. The consequences of teachers’ abilities to recognize the literate features of children’s oral language has important consequences for the ways they are or are not able to extend the funds of knowledge that stu-

dents bring to classrooms in order to help students learn school-based ways of reading and writing.

Other research has found more African-American students employing topic-centered stories than topic-associative. Tempii Champion identified an array of narrative genres used by African-American children. Champion’s findings illustrate how children across different communities “take up various narrative styles, structures, and content [that] include formal instruction, informal instructional contexts, family contexts and others” (p. 72). If one moves away from the social address model that categorizes people into discrete cultural communities, one can understand the ways that children and adolescents, for example, traverse multiple cultural communities. In the process they adopt, adapt, and hybridize a variety of oral and textual genres that become part of their literate repertoires. They learn to engage such repertoires in different contexts, with different actors, for different purposes.

Language is central to literate practices. Research in bilingual education has explored how ELL use resources in the first language as they engage in reading and writing in the second language. When faced with a breakdown in comprehension while reading English texts, Spanish-speaking students, for example, would think in Spanish to repair comprehension. How a first language other than English may be drawn upon in support of school literacy often depends on how much formal schooling students had in the first language before entering U.S. schools.

Another area of study is literate practices of children and families outside school, shedding light on how schools can make connections with what students know and ways they learn that are not currently reflective in mainstream school literacy practices. The church in many low-income communities is a site for multilingual literate practices. For Spanish-speaking families, researchers documented literate practices associated with *doctrina*, catechism classes for children that involve reading and writing extended texts in both Spanish and English. Beverly Moss documents the oral as well as reading-writing practices in African-American Christian churches. For example, call and response is a dominant discourse pattern in black churches that requires the audience to attend closely to nuances of the delivered text and invites a high level of engagement by the audience. However, call and response is seldom invoked in

classrooms serving African-American students (Carol Lee reports exceptions).

Schools value children's emergent literacy experiences outside school as preparation for learning to read, write, and speak. Reading books to young children at home is seen as an important predictor of future school success and white middle-class patterns of storybook reading are considered a norm that all families should emulate. However, Carol Schneffer Hammer reports both low-income and middle-class African-American mothers employing an interactive storybook reading style different from the white middle-class model. These mothers did not employ a question-asking routine but were still able to elicit appropriate language responses. Others have noted the value of oral storytelling as an emergent literacy practice, with an emphasis on its performative features; comparable mismatches with low-income Anglo students, particularly Appalachian students, have also been documented.

Many communities and individuals grapple with the question of which community-based language and literate practices to abandon in order to succeed in school. Ethnic and language cultural communities are not homogeneous in their response to this challenge. For immigrant populations, socioeconomic status and the number of generations removed from the country of origin are the most significant factors. Gail Weinstein-Shr documented two Hmong communities in Philadelphia with very different orientations toward cultural integration into U.S. "mainstream" values. Daniel McLaughlin has reported similar debates regarding reading and writing in Navajo versus English.

Community-based literate practices in low-income neighborhoods often involve reading functional and religious texts, and forms of writing such as letters, lists, and journals. Such reading and writing often involve both English and the community-based language. By contrast, the standards movement in literacy focuses on longer and discipline-based texts. Basil Bernstein characterizes language practices of working-class students as localized to the immediate context and not characterized by the more abstract and generalizable strategies that many associate with school-based literacies. The counter-voice to this position argues that literate practices are always context bound, socially co-constructed by the participants.

### **Culturally Responsive Pedagogy as Zones of Proximal Development**

Lower literacy achievement rates for African-American, Latino, some Asian-American, and most low-income students have been attributed to three sources: cultural mismatches between instruction and the backgrounds of students; structural inequalities in the society manifested in the organization of and resources allocated to schools serving these populations; and ineffective instruction that is not based on enduring best practices. Culturally responsive pedagogy (CRP) is one response that addresses cultural mismatches directly and often addresses macro-level structures indirectly.

Studies of culture and cognition show that through repeated and patterned experience in the world, we develop schema through which we filter future experiences. New learning is strongest when we are able to make connections to prior knowledge. CRP explicitly fosters connections between students' cultural funds of knowledge and disciplinary knowledge to be learned.

This approach is particularly relevant to literacy because both language use and socially shared knowledge are central to acts of reading and writing. In addition, CRP often structures ways of talking that appropriate cultural norms for discourse from students' home communities. Examples below illustrate CRP focusing on generic reading and writing.

A classic example is the KEEP Project with Native Hawaiian children. Discussions of stories read were structured to resemble Talk Story, a community-based genre that involved multiparty overlapping talk. Students achieved significant gains in reading. Luis Moll coined the phrase "cultural funds of knowledge" in an ethnographic investigation of routine practices in a Mexican origin community in Tucson, Arizona. Moll documented ways adults in the community engaged in practices involving carpentry, plumbing, and other skills, and the literate practices embedded in them. He then designed an after-school structure that allowed teachers to learn about these practices and forge relationships with community residents, resulting in teachers' incorporation of adult mentors in the classroom. Students learned to build projects around the cultural practices of the community, each requiring extensive reading, writing, and speaking.

Other work with ELL focuses on the competencies children and adolescents develop as language

brokers, translating in high-stakes settings for their parents. Translating involves negotiating across different codes, understanding appropriate registers, anticipating audience, negotiating perspective, and often involves reading and writing in two languages.

The Fifth Dimension Project (FD) is a network of after-school computer clubs operating nationally and internationally. Through play, adults and children together work their way through a maze by developing competencies in commercial computer games and board games. The children are low income, many ELL for whom Spanish is the language used at home. Literate practices involve reading game instructions, writing to a mythical wizard who responds to questions, and communicating orally and in writing to others. Through this project children have structured access to multiple mediational means—invited use of English and Spanish/AAVE, and so forth, peer and adult mentors, the mythical wizard, and opportunities to move fluidly across roles. FD students have shown significant increases in reading achievement, despite the fact that didactic teaching of reading and writing are not the focus of the intervention.

Carol Lee has developed a design framework for CRP called Cultural Modeling (CM). CM has focused on response to literature and narrative composition. CM works on the assumption that students—in this case speakers of AAVE—already tacitly engage in modes of reasoning required to interpret literary tropes and genres. Instruction engages students in what Lee calls metacognitive instructional conversations where the focus is on how students know, for example, that rap lyrics are not intended to be interpreted literally, and what clues/strategies students use to reconstruct the intended meaning. In addition, in CM classrooms—with African-American students—classroom discourse reflects AAVE norms with overlapping multiparty talk, high use of gesture, and rhythmic prosody. In CM classrooms, high school students with low standardized achievement scores in reading display very complex literary reasoning with rich, canonical texts. A. F. Ball found secondary African-American students displayed in their writing a preference for a set of expository features that are rooted in what Geneva Smitherman has called the African-American Rhetorical Tradition. Smitherman found that the presence of these features correlated positively with higher evaluations on National Assessment of Educational Progress samples.

*See also:* INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; LANGUAGE AND EDUCATION; LITERACY; RACE, ETHNICITY, AND CULTURE.

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CAROL D. LEE

## LITERACY AND READING

The terms *literacy* and *reading*, though related, are neither synonymous nor unambiguous. Typically reading is subsumed by literacy, with the latter term referring to reading, writing, and other modes of symbolic communication that are valued differently for social, economic, and political reasons often imposed by a dominant culture. Simply broadening the definition, however, does not alleviate the ambiguity. For instance, the assumption that literacy exists

in the singular has been criticized by Brian Street in 1995 and others for ignoring the socially situated aspects of one's multiple literacies (print, nonprint, computer, scientific, numeric) and their accompanying literate practices.

A preference for literacies, as opposed to literacy in the singular, also signals a critique of the autonomous model of reading that has dominated Western thinking up to the present. It is a model that views reading largely from a cognitive perspective—as a "natural" or neutral process, one supposedly devoid of ideological positioning and the power relations inherent in such positioning. Conceiving of literacies in the plural and as ideologically embedded does not require giving up on the cognitive aspects of reading. Rather, according to Street, the ideological model subsumes the autonomous model of reading in an attempt to understand how reading is encapsulated within broader sociocultural structures (schools, governments, families, media) and the power relations that sustain them. This focus on literacies and reading as social practices within various contexts is central to untangling the "realities" (the so-called knows), unsupported assertions, and controversies that surround the practices.

### Realities

Definitive paradigm shifts since the last quarter of the twentieth century have marked transitions from behaviorist to cognitivist to sociocultural models of the reading process. Although these changing conceptions have altered how researchers and practitioners think about the reading process generally (and instruction, specifically), overall the field has remained largely focused on two major topics: reading acquisition and comprehension. This is not to say that other topics have been neglected. For instance, sufficient evidence exists for linking reading directly and inextricably to writing, such as the work of Robert Tierney and Timothy Shanahan, and Ian Wilkinson and colleagues; and other evidence connects various instructional practices to students' reading engagement and motivation to learn content, such as that of John Guthrie and Allan Wigfield. In terms of sheer quantity of research findings, however, the focus remains on reading acquisition and comprehension.

### Reading Acquisition Research

Reading acquisition is no longer seen as the sole responsibility of the school; nor is it viewed as a "lock-

step” process that moves from oral language development (speaking and listening) to print literacy (reading and writing). Currently, learning to read is viewed as a developmental process, one that emerges gradually from the time a child is born. The role of the family is paramount in fostering a child’s growth in language and in creating a literacy-rich environment. Parents, educators, researchers, and policymakers constantly look for ways to provide all children with access to the world of print, largely because knowing how to read and knowing what to do with information gained from reading is thought to be key to a child’s future well-being.

The Report of the National Reading Panel in the year 2000, a major reference for U.S. education policymakers, is an evidence-based assessment of the experimental and quasi-experimental research literature on reading. The National Reading Panel (NRP) used strict selection criteria in analyzing a comprehensive body of research that focused primarily on early reading and reading in grades three to eight, with the research being limited to studies published in peer-reviewed journals written in the English language. One of the panel’s goals was to report how instruction in phonemic awareness, phonics, and fluency impacts children’s early reading development and achievement in school settings.

**Phonemic awareness.** Phonemic awareness and knowledge of the alphabetic principle (commonly known as letter recognition) are said to be the best school-entry predictors of a child’s success in reading during the first two years of schooling in an alphabetic language, such as English. Phonemic awareness is not an innate skill; it can and must be taught. Children are said to be phonemically aware when they are able to manipulate phonemes (the smallest sound units of a word that impact meaning) in spoken words. The NRP found that children (regardless of socioeconomic class) who received between fifteen and eighteen hours of phonemic awareness instruction, prior to being taught how to read and/or before entering the first grade, benefited greatest from such instruction.

**Phonics.** Unlike phonemic awareness, which refers to the blending and pulling apart of the various sounds that make up spoken words in an alphabetic language, phonics refers to the sound-symbol correspondences in that language. Phonics is a tool for decoding words; it is not a reading program. Knowledge of phonics does not ensure that one will com-

prehend printed texts because reading is a far more complex process than simply sounding out words.

The NRP concluded that children (regardless of socioeconomic class) who receive systematic phonics instruction in kindergarten and first grade show greater improvement in word recognition skills than do children who receive no such instruction; however, phonics instruction after first grade does not significantly contribute to gains in children’s word recognition abilities. The panel also concluded that the type of systematic phonics instruction (e.g., synthetic, analytic, analogy) children receive, either individually or in small or large group settings, does not significantly affect the contribution such instruction makes to reading achievement.

**Fluency.** According to the NRP, phonemic awareness and knowledge of phonics are tools for helping children achieve fluency in reading. Fluent readers can decode words rapidly and accurately with good comprehension. Caution needs to be exercised, however, in interpreting these findings. Possessing well-developed word recognition skills—a condition often associated with having knowledge of phonics—does not necessarily translate into fluent reading. As the NRP pointed out, fluency is thought to develop when individuals have sufficient opportunities for, and practice in, reading. Typically, such practice is associated with independent or recreational reading both in and out of school. At this point, however, only correlational data exist to support the hypothesized connection between increased reading practice and improved reading achievement.

The NRP examined research on guided repeated oral reading practice as well as on methods that attempt to increase the amount of time a child engages in independent and/or recreational reading. The panel concluded that explicit guidance during oral reading has consistent and positive effects on word recognition, fluency, and comprehension. However, researchers have yet to agree on the best approach for helping children achieve reading fluency. In sum, although many have applauded the efforts of the NRP for its concise compilation of relevant research pertaining to reading in schools, others have criticized the panel for failing to address the early learning that occurs before a child goes to school, and for failing to provide information about home support for literacy development. Still others have called attention to the fact that the studies the NRP selected for analysis did not address issues related to teaching

children whose first language is other than English how to read.

### Comprehension Research

Research on reading comprehension has been limited largely to print-based texts and various strategies for studying and learning from those texts. The NRP concluded that seven comprehension strategies (comprehension monitoring, cooperative learning, using graphic and semantic organizers, generating questions, answering questions, using story structure, and summarizing) are effective in helping students learn from text. Although the NRP reported trends supporting conventional wisdom that vocabulary instruction leads to improved comprehension, it offered no conclusive evidence on this point due to the limited number of studies that met its strict criteria for inclusion. Nor did the NRP draw conclusions about the most effective instructional methods for teaching vocabulary.

Caution needs to be taken in interpreting the NRP's findings. The report did not include research on second language reading and reading to learn in domain-specific areas. Nor did it include studies using qualitative research designs, the absence of which severely limits what can be known about the contexts in which instruction occurred. Moreover, six of the seven comprehension strategies that were considered effective were ones that teachers would use if they believe reading comprehension consists of students working individually to extract information from printed texts. This rather narrow view of comprehension instruction risks disenfranchising students who may learn better in more socially interactive settings or whose literacies span a broader range than those typically associated with school or assessed by traditional reading measures.

Beyond strategic knowledge, readers who possess and activate relevant prior knowledge, who demonstrate an awareness of text structure, and who apply appropriate metacognitive skills to comprehending texts are more proficient learners than those who either do not possess such skills or who lack appropriate background knowledge. That is to say, constructing meaning involves using information and experiences gained previously to interpret new information in light of the old. It also entails recognizing the various reasons that authors structure their texts as they do (e.g., to inform, to persuade, to elicit appreciation for certain literary devices). Finally, comprehension calls for monitoring the de-

mands of a particular reading task, knowing what background knowledge and strategies are relevant to the task, evaluating the inferences one makes while reading, and applying any of a number of fix-up strategies when understanding falters or breaks down completely.

### Unsupported Assertions

Intuitively appealing literacy practices are often linked to improved reading achievement without adequate support in the research literature. Although a lack of empirical evidence for their use does not make such practices wrong, it does call into question the wisdom of making curricular or programmatic decisions on the basis of custom alone or anecdotal evidence at best. A good example of this phenomenon is the widespread acceptance of the idea that encouraging students to read more will translate into improved fluency and higher reading achievement. As the Report of the National Reading Panel has shown, most of the studies that met the panel's stringent criteria for qualifying as scientifically sound research failed to find a positive relation between encouraging students to read and improved reading fluency and achievement.

Another intuitively appealing practice—using technology to improve reading instruction—has only a meager research base to date. Its overall and long-term effectiveness is simply an unknown according to the NRP. Although the panel described several trends suggesting the usefulness of computer technology for reading instruction, too little evidence presently exists to make informed recommendations. Lacking evidence as to whether or not the knowledge students gain from online instruction is superior to that gained from more traditional instruction, reading educators are likely to remain ambivalent about making drastic changes in the way instruction is delivered.

Equally unclear is the degree to which integrated literacy instruction fosters outcomes such as authentic reading tasks, better applicability of learning, deeper and more coherent understanding of subject matter, and greater efficiency in teaching and learning. Thought to be one of education's most elusive constructs, integrated literacy instruction generally involves organizing the curriculum in ways that promote students' use of language and literacy processes to learn school subjects (e.g., science, social studies, math). An extensive review of the research literature on integrated literacy instruction led James Gavelek

and colleagues to remark in the year 2000 on the exceedingly low ratio of data-driven articles to general papers on the topic. Although they remained optimistic about integrative approaches, these researchers questioned whether or not the push toward such integration was a bit premature, or possibly ill-founded.

### Controversies

A controversy exists in the United States about how to teach reading effectively and efficiently to students whose home or first language is not English, the language of mainstream education. The U.S. Census Bureau of 2000, relying on data from the 1990 census, reported that 6.3 million children, ages 5 through 17, speak a language other than English in the home; of these children, 4.1 million speak Spanish. Since 1990 the Hispanic population has increased by 57.9 percent in the United States, a demographic factor that accounts no doubt for people of Hispanic, Latino, and/or Spanish origin receiving the most attention in terms of educational program development. Programs developed primarily to facilitate English language learners' entry into English-speaking schools vary in the degree to which they provide support in the students' home language. Depending on the English language learners' needs and the availability of funding, children may be submersed in classrooms where English is the medium of instruction. This means they will not be offered any first-language literacy support; nor will they receive the three to six years of transitional bilingual education that has been shown to be effective. Although sheltered English language programs are becoming more popular in the United States, they do not offer opportunities for children to become bilingual, biliterate, and bicultural. Two-way bilingual programs, with their emphasis on instruction in both the home language (in many cases in the United States, Spanish) and English, provide such opportunities.

Elizabeth Bernhardt reported in 2000 three possible ways of looking at the relationship between first and second language learning experiences. She noted a transfer relationship where the knowledge and skills of the dominant language transfer to the learning of the second language; an interference relationship where the dominant language impedes the learning of the second language; and a dominance effect where the behaviors of the first language control those of second language literacy. Bernhardt

pointed out that in the case of second language reading, it is unclear as to whether first language skills transfer or interfere with learning to read in a second language. Controversies surrounding the interference model show no sign of abating. In fact, literacy educators, such as Georgia Ernest García, who question the validity of such a model, often cite a well-known longitudinal study of Spanish-speaking children by J. David Ramírez and colleagues, which showed in 1991 that instruction that fosters bilingualism and biliteracy does not place youngsters at an academic disadvantage. In that study, children who were enrolled in a late-exit bilingual program scored higher on standardized tests of English language and reading proficiency than did their monolingual peers.

Another controversy surrounding reading instruction has its roots in what Harvey Graff has labeled in 1988 the "literacy myth." Part of the dominant world view of the Western world for over two centuries, the so-called literacy myth equates the ability to read with personal and individual worth, social order, and economic prosperity. Its tenets reach deep into the American psyche, and its implications for reading instruction regularly place teachers in the public eye. Evidence of the literacy myth's stranglehold on the teaching profession is the fact that educators in the United States often fall under attack by politicians, the media, and the general public for not serving students well enough to ensure that they join the U.S. workforce and compete favorably in the rigors of a world market place.

The problem deepens when the media and other information sources convince the general public that a literacy crisis exists. Word of such a crisis leads parents, teachers, administrators, and policymakers to search for a universally effective way to teach all children to read, and just as predictably, to a proliferation of commercially prepared reading programs. School districts adopt commercially prepared programs in an attempt to solve the perceived problem. For example, programs such as Success for All, Core Knowledge, Accelerated Reader, and Saxon Phonics exist side by side (and in company with many other such programs) in the current educational market. Many of these programs are intended to help teachers concentrate more of their attention on student learning and less on lesson preparation. The developers of these programs also claim they offer continuity and consistency of instruction. Individuals who are critical of commercially prepared reading

programs point to their scripted nature and to the narrow focus of their academic content. Teachers, in particular, sense a loss of autonomy and professionalism when local or state mandates force them to rely on one particular kind of commercial reading program. They know that in the field of literacy instruction the concept of “one-size-fits-all” does not apply to the children they teach. Nor does this type of instruction take into account the multiple literacies children living in the twenty-first century already possess or need to develop.

*See also:* LITERACY, *subentries on* EMERGENT LITERACY, LEARNING FROM MULTIMEDIA SOURCES, MULTIMEDIA LITERACY, NARRATIVE COMPREHENSION AND PRODUCTION; LITERACY AND CULTURE; READING.

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## LIVING AND LEARNING CENTER RESIDENCE HALLS

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American higher education can mark the beginning of living and learning centers (LLCs) with the founding of the Harvard house program in 1926, made possible by a gift from William Harkin. The intent of this gift was for Harvard to develop a residential experience similar to those at Oxford and Cambridge universities. Yale University established a similar housing program in 1933, and a few years later Princeton University established what is commonly referred to as the quadrangle plan. All these plans focused on joining the classroom experience with the out-of-class experiences in the residence halls. The goal was to bring faculty and students into closer contact and to promote an environment that allowed students increased opportunities to discuss classroom subjects and other academic topics with peers in their residence halls.

Based on the English residential college model, the LLC environment is designed to foster a closer relationship between students' classroom experiences and their experiences outside the classroom. LLCs offer one of the best environments for partnerships between faculty and student affairs professionals to advance student learning.

Students usually gain residence in an LLC following an application and selection process. Academic courses for credit and enriched educational and cultural programs for student residents are part of the LLC experience. LLCs are usually compared with conventional residence halls, which commonly offer educational programs, organize recreational

activities, and have some form of hall counsel or student government organization. The primary differences between conventional residence halls and LLCs are the programs and class experiences that are offered and the selection and application process used. Students who live in LLCs usually take one or more of their courses in the residence hall and/or take one or more courses with the other residents of their living unit. In addition, the administrative organization of LLCs differs from conventional residence halls in that faculty members have some administrative responsibilities in the LLC and some faculty often live in the LLC. Faculty normally do not have administrative responsibilities or live in conventional residence halls.

At the beginning of the twenty-first century, hundreds of universities have some version of the living and learning center. Some are based around a particular academic college such as the college of engineering, but most are interdisciplinary.

#### Organization and Administration

There are many versions of LLCs. They vary with regard to their history, academic programs, and degree of involvement with the faculty. The most successful of these programs place the students' living environment in the closest proximity to the location of faculty offices. Residence halls specifically designed as LLCs usually have classrooms, faculty offices, and one or more faculty apartments built into the residence hall. LLCs are most often organized to house both male and female students in the same building.

LLCs bring together the expertise of faculty and student affairs professionals to build a residence hall community focused on fostering students' personal and intellectual growth. Management of the LLC facilities, room assignments, crisis intervention, hall government, and the enforcement of institutional policies are usually responsibilities of the student affairs professionals. Classroom instruction, selection of LLC participants, and criteria for common courses or similar academic experiences are usually the responsibility of the LLC faculty. Educational programming, the selection of resident assistants, and issues concerning individual students or groups of students commonly are shared responsibilities.

Because of the way residence halls are built and funded, LLCs are usually the financial responsibility of the director of housing and residence life and the vice president for student affairs. Staffing in LLCs is

similar to a conventional residence hall with undergraduate resident assistants (RAs) living on each floor and a student affairs professional living in the building. The faculty head of the residence hall might be called something like head of house, headmaster, or director. The closer the integration between the student affairs professional and the faculty of the LLC, the more likely the program will be successful.

### Research Findings in Living and Learning Centers

Educational advantages supported by the LLC environment are derived through a combination of factors. Among these are increased opportunities for informal interaction with faculty, an enriched academic experience with a greater intellectual atmosphere, a greater sense of community among students, and support for a wider range of creative endeavors. The benefits of LLCs have been recognized by the National Institutes of Education, the Wingspread Group on Higher Education, and the National Association of State Universities and Land Grant Colleges. Reports by these institutions cite the LLC as a model that details how to integrate the academic experience of the classroom with student life outside the classroom. Research on colleges that have been successful in broadening the undergraduate experience point to the benefits of LLCs, giving as examples programs that integrate and involve students in the campus community.

Research on residence halls shows that students living in conventional residence halls have an advantage over students who are living at home with parents, at least in their first year of college. These advantages include greater psychosocial development, higher retention and graduation rates, greater satisfaction, greater educational aspiration, and similar positive outcomes associated with student learning. The question addressed by most of the research on LLCs concerns the extent to which living in an LLC may further enhance the college experience.

On most educational criteria, research shows that living in an LLC is more beneficial to students than living in a conventional residence hall. Students in LLCs, when controlling for past academic performance, perform better academically, perceive the intellectual atmosphere of their living environment to be more academic, have more faculty interaction, and report a better social climate. Some studies have

also shown that students living in LLCs have lower attrition rates and higher graduation rates.

### Problems Associated with Creating and Sustaining Living and Learning Centers

Despite the benefits of LLCs, most attempts at creating and sustaining them fail. LLCs require a faculty commitment to spend more out-of-class time with students and to focus an increased amount of their creative energy on designing programs and activities with students. Unfortunately, the reward system for faculty, including tenure and promotion, does not always recognize the value of these contributions. Unless the academic department and the LLC are closely joined, faculty can be drawn between the departmental culture of scholarship and the LLC culture of student engagement. The most successful LLC programs are tied closely with an interdisciplinary department. This relationship allows for a wider range of faculty expertise and for the faculty reward system to more generously recognize the value of out-of-class commitments to student learning.

LLCs usually demand a greater financial commitment for educational programming and complicate the campus room assignments procedures because of the selection process used to admit LLC students. Both factors can be sources of concern for housing and residence-life professionals who must consider every student living in residence halls when allocating resources and meeting the demand for on-campus student housing. Even with these concerns, institutions that have invested in LLC residence halls find that the benefits to student learning, graduation, retention, and the value of an engaged and committed student body, outweigh the difficulties that must be overcome.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE AND UNIVERSITY RESIDENCE HALLS; COLLEGE STUDENT RETENTION; RESIDENTIAL COLLEGES.

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## LOCAL GOVERNANCE

*See:* FINANCIAL SUPPORT OF SCHOOLS, *subentry on* CAPITAL OUTLAY IN LOCAL

SCHOOL SYSTEMS; INTERGOVERNMENTAL RELATIONS IN EDUCATION; IMPACT AID, PUBLIC LAWS 815 AND 874; SCHOOL BOARD RELATIONS; SCHOOL BOARDS; SCHOOL REFORM.

## LOOPING

*Looping* is a practice in which a teacher stays with the same class for more than one year; it is a multiyear placement for both the students and the teacher. For example, a teacher begins with a group of first-grade students and rather than sending those students on to a new teacher continues with them through second grade. Looping can occur for two or more consecutive years. In this example, the teacher could choose to remain with those students and move up to third grade. Looping can be used in conjunction with, or as a transition to, multiage programs but does not necessarily include students of a wider age range.

### How Widespread Is Its Use?

The level of implementation varies widely. In some school districts looping options are offered at every grade level. In other instances, an individual teacher or pairs of educators initiate looping. Looping occurs most frequently in elementary schools and occasionally in middle schools. It is used in public and private school settings. Looping has gained popularity, but it is still considered innovative.

### Rationale

The rising interest in looping has been in direct response to the diverse needs of students. Looping provides stability for the growing number of students with less stable home environments. Looping classes develop a family-like environment, providing teachers with the opportunity to build strong, meaningful relationships with students. Students also have the additional time to develop positive relationships with classmates.

More instructional time is another benefit of this teaching design. Teachers and students "hit the ground running" at the beginning of the school year instead of starting from scratch each year. Teachers begin instruction immediately, rather than spending time assessing student achievement or developing classroom procedures. Students pick up where they

left off instructionally and socially and are able to get into the swing of school quickly. Instructional time is gained at the end of the school year as well. Instead of packing up and checking out, looping teachers are able to continue instruction through the end of the year and end the year on a high note. The additional four to six weeks of instructional time allows teachers to gain an understanding of students' academic and social strengths and to plan instruction accordingly.

Another benefit is that teachers are able to give students projects to complete over the summer, in between the looping years, which keep students involved in learning. The momentum of learning continues and more continuity is provided for the students. These extended learning opportunities help students to realize that learning can occur outside of the classroom.

Increased parental involvement is another advantage of looping. Parents are able to gain a better understanding of their child's educational development and needs. Looping provides a means by which stronger parent-teacher relationships may be built. This bridge between home and school can help create a more family-like atmosphere in the classroom and beyond.

Looping requires minimal additional funding and is easy to implement. Additional curriculum resources and staff development are useful in implementing a looping classroom; however, most teachers will have the necessary skills to move up a grade with their students. Looping does not require additional classroom space and teachers can loop without disrupting other organizational aspects of the school.

By working with two or more sequential grades and the related content, teachers develop an overall view of the scope and sequence of the curriculum and the school program. This in-depth understanding allows them to maximize instructional time and provide remediation or enrichment based on student needs.

Although most teachers and students have positive experiences with looping, it is not appropriate for all schools, teachers, or students. Difficulties can and do occur. Integrating new students into an established looped class can be a challenge. Class dynamics and peer relationships can also go awry; there are times when too much togetherness wears on the students. Occasionally a personality conflict

between a student and teacher may arise. These conflicts are most often resolved. However, if resolution seems unreachable, then the student is transferred to a different class. Another concern with looping is that students and teachers become emotionally attached and separations are difficult when the looping cycle ends.

### **Evidence Supporting Its Use**

*The Looping Handbook* by Jim Grant, Bob Johnson, and Irv Richardson provides evidence supporting the use of looping. Beyond the benefits reported by teachers and parents, there is evidence that looping results in increased student attendance, decreased retention rates, a decline in discipline problems and suspensions, and increased staff attendance.

The Attleboro, Massachusetts, School District has provided looping assignments to its entire first-through eighth-grade students and all of its 400-some teachers. In addition there are cited examples of looping around the country, such as Ashby Lee Elementary School in Virginia, Liberty Center Elementary School in Ohio, Lac du Flambeau in rural Wisconsin, and schools in Chicago, Illinois. *The Looping Handbook* provides a list of several schools that are open to visitors. In addition, there exist numerous educational studies and articles on looping.

The Waldorf school system, with private schools located around the country, follows the tenets of its founder, Rudolf Steiner. One of these practiced beliefs is looping. A Waldorf teacher in the United States stays with a group of students from first through eighth grade.

It has been suggested that looping has occurred in thousands of schools across the United States. However, many of the looping classes have not been documented. For example, a teacher in California has looped with his students from second grade through sixth grade, but this case has not been tied or documented in educational research.

In a report from the National Middle School Association (NMSA), Paul S. George and John H. Lounsbury stated that looping is a major way of achieving long-lasting teacher-student relationships. According to the report, "increasing numbers of middle school educators believe that the education of young adolescents can be enhanced when teachers and students are members of classroom and small team groups characterized by long-lasting relationships" (p. 2).

The authors also reported that several middle schools around the country have implemented looping with success in an attempt to make a big school small. For many students the transition from a small elementary school environment with one teacher a year to a large middle school with several teachers a day can be overwhelming. Looping at the middle school level provides a nonthreatening environment for students. This allows the students to succeed academically and socially.

*See also:* ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; STEINER, RUDOLF.

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## LOWENFELD, VIKTOR (1903–1960)

Viktor Lowenfeld, professor of art education at the Pennsylvania State University, helped to define and develop the field of art education in the United States. His life and career have been a continuing topic of study in the field.

### Early Career and Influences

Lowenfeld was born in Linz, Austria, of Jewish parents. He taught art in the elementary schools in Vienna while attending the Vienna Academy of Fine Arts, which he found “very dry and academic.” Lowenfeld then transferred to the Vienna Kunstgewerbeschule, which he likened to a “Vienna

Bauhaus.” He studied sculpture under Edward Steinberg, who required that his students blindfold themselves when working with clay. Lowenfeld visited the Institute for the Blind to validate or disprove Steinberg’s approach. He also studied at the University in Vienna in art history and psychology, graduating in 1928. While still engaged in his studies, he became a member of the staff at the Institute for the Blind.

Sigmund Freud read an article about Lowenfeld’s work with the blind and visited him at the institute. As a result, Lowenfeld became more seriously involved in research as a scientific venture. His ideas on the therapeutic uses of creative activity in the arts resulted in several books. The first was titled *Die Entstehung der Plastik* (The genesis of sculpturing, 1932), which was based on his doctoral dissertation. The second was titled *Plastische Arbeiten Blinder* (Sculptures of the blind, 1934). A third, though initially written in German, became his first English publication, *The Nature of Creative Activity* (1939).

### Lowenfeld’s American Career

With the German invasion of Austria in 1938, Lowenfeld and his family fled to England, later settling in the United States, where he met Victor D’Amico, who was director of education at the Museum of Modern Art in New York City. D’Amico took credit for introducing Lowenfeld into the circles of American art education. During World War II Lowenfeld taught psychology at the Hampton Institute in Virginia. Having experienced racial prejudice at the hands of the Nazis, he was acutely aware of the racism experienced by his African-American students at Hampton. Though his field was psychology, Lowenfeld was directly responsible for establishing the art department at Hampton. A number of his Hampton students became prominent artists, including John Biggers, Elizabeth Catlett, and Samela Lewis. In 1945 Lowenfeld was invited to teach summer courses at Pennsylvania State College (now the Pennsylvania State University) and, in the following year, was invited to become chairman of art education, a position he held until his death in 1960. Several of his Hampton students followed him to Pennsylvania State College to continue their studies.

In 1947 *Creative and Mental Growth* was published and became the single most influential textbook in art education during the latter half of the twentieth century, having gone through seven editions. This text was widely adopted in courses for

prospective elementary school teachers throughout the United States, a time when teacher education programs were undergoing rapid expansion in response to the shortage of teachers that followed World War II. This book describes the characteristics of child art at each stage of development and prescribes appropriate types of art media and activities for each age. Its strong psychological orientation provides a scientific basis for creative expression and the practices that cultivate it.

Lowenfeld's views of child art were grounded in constructs drawn from two sources. One was the psychoanalytic school of psychology in which evidence of aesthetic, social, physical, intellectual, and emotional growth is reflected in the art of children. The second was the concept of stages of growth in art, which originated in German and Austrian sources. The stages consisted of (1) scribble—uncontrolled, controlled, naming of scribble: two to four years; (2) preschematic: four to six years; (3) schematic: seven to nine years; (4) dawning realism/gang age: nine to eleven years; (5) pseudorealistic/age of reasoning: eleven to thirteen years; and (6) period of decision/crisis of adolescence: fourteen years and older.

Lowenfeld did not claim to originate these stages but adapted them from earlier sources. He also identified two expressive types of individuals that arise with the onset of adolescence. The first is the *haptic type*, which is primarily concerned with bodily sensations and subjective experiences in which individuals are emotionally involved. By contrast, the *visual type* usually approaches the world from the standpoint of appearances. Such students feel more like spectators than participants. Lowenfeld suggested that each creative type needed a different instructional approach.

He saw the free expression of children in artistic media as necessary for the healthy growth of the individual. Emotional or mental disturbance results when children are thwarted, either by a loss of self-confidence or by the imposition of adult concepts of so-called good art.

Concern for mental health had social consequences as well. In the second edition of *Creative and Mental Growth* (1952) he injected a personal note:

“Having experienced the devastating effect of rigid dogmatism and disrespect for individual differences, I know that force does

not solve problems and that the basis for human relationships is usually created in the homes and kindergartens. I feel strongly that without the imposed discipline common in German family lives and schools the acceptance of totalitarianism would have been impossible.” (p. ix)

Lowenfeld never regarded child art as an end in itself. He was critical of his former teacher Franz Cizek, who emphasized the aesthetic aspects of child art as the sole purpose for art education. This “is much against our philosophy, and I believe also against the needs of our time.” The goal of education “is not the art itself, or the aesthetic product, or the aesthetic experience, but rather the child who grows up more creatively and sensitively and applies his experience in the arts to whatever life situations may be applicable” (Michael, p. xix).

### Influence on Art Education

A number of students were drawn to Lowenfeld both through his text *Creative and Mental Growth*, and through extensive lectures and presentations given at state and national conferences throughout the late 1940s and 1950s. Many came to the Pennsylvania State University to study, and by 1960 its graduate program had become the largest one in art education in the United States. Lowenfeld wrote about the similarity of creativity in the arts with that of the sciences, suggesting that general creativeness might transfer from the arts. A number of doctoral dissertations were inspired by these views on the psychological importance of creativity cultivated in the arts for creative abilities in general.

Although revered by numerous students, Lowenfeld was not without his critics. D'Amico felt that Lowenfeld had over-psychologized art education and that too many future teachers were pursuing psychological research rather than deepening their powers of creative expression. In addition, with the onset of the curriculum reform movement that was spurred by Soviet space achievements, such as the launch of *Sputnik* in 1957, the importance of discipline-oriented forms of study began to challenge Lowenfeld's ideas about creativity as the central purpose of art education.

*See also:* ART EDUCATION, *subentry on* SCHOOL; BARKAN, MANUEL.

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ARTHUR D. EFLAND

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## **MACDONALD, JAMES (1925–1983)**

The work in curriculum theory of James Macdonald (1925–1983), Distinguished Professor of Education at the University of North Carolina at Greensboro, helped move the field beyond the traditional and scientific orientations of the 1950s and 1960s and toward an approach centered on human, ethical, and even spiritual considerations. Recognizing that schools were often dehumanizing and impersonal, Macdonald was a consistent critic of educational theory and practice that neglected the important work of helping students achieve their fullest potential as human beings in a democratic society.

Macdonald grew up in a small town in southern Wisconsin. First certified as a secondary school teacher in social studies, he briefly taught elementary school before enrolling in the doctoral program at the University of Wisconsin–Madison. There he studied under Virgil Herrick, a prominent professor of education whose analytic and conceptual work in curriculum theory would serve as a basis for Macdonald’s own thought. Upon completing his doctoral degree, Macdonald taught at the University of Texas–Austin (1956–1957) and New York University (1957–1959) before returning to Wisconsin in 1959 as director of School Experimentation and Research at the University of Wisconsin–Milwaukee. In 1963 he moved to the University of Wisconsin–Madison as a professor in the Department of Curriculum and Instruction and the Department of Educational Policy. He returned to University of Wisconsin–Milwaukee in 1966 as a professor of Curriculum and Social and Philosophical Foundations of Education. In 1972 he accepted a position as Distinguished Professor of Education at the University

of North Carolina at Greensboro, where he remained until his death in 1983.

Throughout the course of its development, Macdonald’s work reflected a systematic attempt to formulate a comprehensive curriculum theory that balanced the institutional, technocratic realities of schooling and educational research with human, ethical, and social ideals. He identified four stages through which his own thinking had evolved during the span of his career. The first stage was based on scientific theory and method and is reflected in Macdonald’s work from the late 1950s and early 1960s. Taking his cue from Herrick, Macdonald’s focus during this period was on building and explaining curriculum theory through scientific and empirical means.

Macdonald characterized the second stage of his thought as personalized humanism. During this time, Macdonald’s work focused on understanding how schooling helped and hindered the development of students’ self-concept. In his 1964 article, “An Image of Man: The Learner Himself,” Macdonald extended humanist concepts popularized by psychologists like Carl Rogers and Abraham Maslow to processes of schooling. His concern was with human development, or becoming, and how schools and teachers could best facilitate the self-actualizing processes of their students.

By the late 1960s and early 1970s, Macdonald’s thought had moved into a third stage, social humanism, which placed his earlier humanist concerns within a social and political context. His work of this period undertook an analytic critique of the social, bureaucratic, and institutional pressures on schooling and curriculum. His 1971 essay “The School as a Double Agent” took note of the conflict between

the democratic ideals of schooling and the repressive realities of its organizational, procedural, and institutional demands. In the 1978 essay "Curriculum, Consciousness, and Social Change," Macdonald reiterated his belief that the curriculum work done in schools should liberate the spiritual, intellectual, and physical potentiality of students in the interest of realizing the ideals inherent to democratic society.

Macdonald called the fourth stage in the development of his thought transcendentalism. In this stage, Macdonald extended his personalized and social humanist concerns into the area of culture. He argued for the need to transcend normal patterns of cultural awareness in order to promote the fullest realization of a student's sense of what it is to be human. In his 1974 article "A Transcendental Developmental Ideology of Education," Macdonald critiqued four basic conceptual models, or ideologies, of education and found each inadequate with respect to the justification of its underlying values. As an alternative to these four models, he proposed a transcendental developmental ideology based in part on the notion of aesthetic rationality, a form of knowledge that is both rational and intuitive.

Although Macdonald never published a book-length manuscript, he was a prolific essayist whose work appeared in a variety of scholarly and professional journals, edited books, and monographs. He was a regular presenter at professional conferences and gatherings. His work is widely associated with the curriculum field's reconceptualization, a movement in 1970s that sought to broaden the means and aims of curriculum theorizing by borrowing insights and methods from the humanities.

*See also:* CURRICULUM, SCHOOL.

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## MAGNET SCHOOLS

Magnet schools are public K–12 schools, or programs within schools, developed around a particular theme to promote racial and ethnic diversity. Magnet schools are based on the premise that all students do not learn in the same ways, and that if educators find a unifying theme or a different organizational structure for students with similar interests, those students will be motivated to learn more in all areas. In addition, magnet schools provide public choice within school districts.

If a magnet school attracts students and teachers, its chance of succeeding is greatly improved because those in attendance want to be there—they will have chosen that school. When a parent chooses a school for his or her child, that school is more likely to succeed for that child than would one to which that child was randomly assigned. These tenets underlie the development of magnet schools in America.

### History

In the United States during the 1960s some options to traditional public schools sprang up as a protest against racially segregated schools. These schools emphasized the basic subjects of reading, writing, and arithmetic, but they also included the study of the history of African Americans and the civil rights movement, and they were concerned with how schools could be tied to community needs. Some of these schools, called *street academies*, led to more permanent structures. Harlem Prep, for example, first funded by foundations, businesses, and industry, became one of the public schools of New York City.

The history of magnet schools is tied to the 1960s protest over school desegregation, and to the

educational reform model of public choice as a way to address educational inequality. Until the early 1970s federal district courts had directed school systems to implement desegregation policies. In Detroit the courts did not impose a multiple-district solution to segregation, but did approve special enrichment programs intended to help overcome the effects of past discrimination. In the wake of this decision, nearly every court order mandating that schools desegregate also included a voluntary component, which became known as magnet schools. The courts learned that by using a carrot instead of a stick, more desegregation would occur, and quality of education would improve at the same time.

In the late 1960s school districts across America were being torn apart by resistance to forced desegregation of the schools. Many parents moved to a suburban district to keep from having their children bused to a school away from the neighborhood. Others chose private education for their children. School administrators and boards of education began to try to find a voluntary way to reduce racial isolation.

The highly publicized violence and protests, as well as the *white flight* from public schools, made public school choice a school segregation remedy. As Lauri Steele and Roger Levine noted, by making available a curricular alternative, magnet schools were intended to provide incentives to parents to remain in the public school system while sending their children to integrated schools.

The first public school designed to reduce racial isolation by offering a school choice to parents was McCarver Elementary School in Tacoma, Washington, which opened in 1968. In 1969 Trotter Elementary School, in Boston, Massachusetts, opened for the same reasons. Both of these first attempts offered a new organizational pattern. They guaranteed continuous-progress education, in which students would progress at their own rates. Neither of these schools was called a magnet; they were referred to as alternative schools.

In 1970, with the assistance of \$6 million from the federal government, Minneapolis, Minnesota, mounted an alternative experiment in the southeast section of the city. This district opened four elementary schools and one high school with different organizational designs. Of the four elementary schools, the least structured was referred to as *free*, in which the students directed their own education. The sec-

ond type was called *open*, and had an informal classroom design. The third was a continuous-progress school, and the fourth used a traditional approach, which Minneapolis called *contemporary*.

Following the pattern established in Minneapolis, Haaren High School in New York City, with the assistance of the Urban Coalition, broke into smaller units with more personalized instruction. Berkeley, California, also following the pattern established in the Minneapolis elementary schools, embarked on a full-scale alternative schools program, featuring basic-skills centers, environmentally-oriented programs, independent contracting for curriculum delivery with businesses, and more. The word *magnet* was still not being used, although these programs looked much like schools that are called magnets in the early twenty-first century.

Dallas, Texas, opened the first *super* high school in 1971. Designed around the concept of career strands, Skyline High School attracted students of all kinds—rich, poor, Hispanic, African-American, Asian, white—from all over the city. It even offered adult classes in the evenings. In fact the school rarely closed its doors. Some students came for a full-day program, others came part-time, and still others came after school.

### Magnet Schools

It was about this time that school administrators in Houston, Texas, in describing the effect of its Performing and Visual Arts School, said that it worked like a “magnet” in attracting students. The word appeared to catch on. By 1975 the term was being used to describe various types of fiscal assistance contemplated by the federal government.

In 1973 Cincinnati opened a wide range of school options, among them the first Montessori school in the public sector and the first foreign language school, both beginning in the primary grades. By 1980 most major cities had systems of magnets, but it was the federal courts, in ruling against school segregation, that caused the greatest surge in magnet education.

### Magnet Schools in the Early Twenty-First Century

Magnet schools and magnet programs continue to be used to reduce racial isolation, but they are increasingly considered superior options within the public sector for all students, even in districts of pri-

marily one race. School districts offer anywhere from one to more than one hundred *themes* to attract students, including fine and performing arts, communications, humanities, wellness and health, education, international studies, language arts, technology, foreign languages, and many others.

North Dade Center for Modern Languages in Miami, Florida, specializes in modern languages and multicultural education for elementary students. The school's "magnet" is instruction in Spanish and French. Students at North Dade have excelled in all areas of the Stanford Achievement Test, scoring well above the national median. The Carver Center for the Arts and Technology in Baltimore, Maryland, is a public school with students in the ninth through twelfth grades that attracts students from a 600-square-mile area. The students at Carver take ninety-minute block schedules that enable them to earn eleven additional credits beyond the Maryland state graduation requirements. Mabel Hoggard Magnet School is a K–5th grade school in Las Vegas, Nevada, that emphasizes math and science across the curriculum. The school has a partnership for student experience with the University of Nevada, Las Vegas, Engineering Department.

There are more than 4,000 magnet schools in the United States, and they are springing up in other countries, such as Canada and the Netherlands. The Dayton Accord, an agreement made to resolve the conflict in the former Yugoslavia, included a plan to develop a magnet school in Bosnia-Herzegovina. This school would promote cultural and ethnic diversity. Magnet schools in the United States come together to share their successes and struggles in a national non-profit membership organization: Magnet Schools of America (MSA).

### **Magnet Schools of America**

MSA is a national organization representing more than 4,000 magnet schools. It was founded to promote and advance the cause of magnet-school education. According to former executive director Dr. Donald Waldrip, MSA had its beginning in 1977, in the Dallas Independent School District. The first MSA conference featured Dr. Mario Fantini, dean of the University of Massachusetts School of Education and an advocate of public school choice; Dr. John B. Davis Jr., former Superintendent of the Minneapolis Public Schools, which was the first school system to adopt magnet schools; U.S. Senator John Glenn, who sponsored the first funding bill for magnet

schools; and the Honorable George Edwards, Chief Judge of the Sixth Circuit Court of Appeals and a voice for equity. Two more annual conferences were held—in 1978 in New Orleans and in 1979 in San Diego. Although Dr. Waldrip believed in 1979 that "everyone who was going to organize magnet schools had done so," after a seven-year hiatus the fourth conference was held in Milwaukee, and has been an annual event ever since. The conference offers staff development sessions, informational workshops, and opportunities to showcase magnet schools.

In 1991 Magnet Schools of America became a more formalized organization. At the tenth conference in Columbus, Ohio, a national board was elected, with Dr. Judith S. Stein serving as the first president. In 1994 MSA became a not-for-profit, 501(c)(3) corporation. For federally funded magnet schools (i.e., Magnet School Assistance Program grant recipients), MSA provides special technical assistance workshops on the development of new magnet schools, as well as programs for the improvement of existing schools.

### **Mission of Magnet Schools of America**

MSA's mission is to (1) promote the goals of desegregation, equity, and excellence through the expansion and improvement of magnet schools; (2) encourage the passage of legislation at both the state and national levels that will promote the development and improvement of magnet schools, (3) explore and establish linkages with other professional groups with similar interests, and (4) promote networking among magnet schools. MSA seeks to encourage America's businesses to become actively involved in magnet schools by supporting them both conceptually and financially. It also provides information for parents and community members on the benefits of magnet schools as public schools of choice, and acts as a national clearinghouse for information dissemination on magnet schools.

### **The Federal Magnet Schools Assistance Program**

The U.S. Department of Education has a competitive funding program for magnet schools, the Magnet School Assistance Program, which works in three-year cycles. Schools complete extensive applications based on a Request for Proposals from the federal government. Grant proposals can be quite extensive, sometimes running to several volumes. They include data on the community and school system, and re-

quire either a court-ordered or voluntary desegregation plan. The grant proposals are read by educators representing the various parts of the United States and the U.S. Department of Education and have a lengthy approval and encumbering process. The average grant is \$2 million, but grants can range upwards to \$4 million.

According to magnet school researchers Steele and Marion Eaton, the Magnet School Assistance Program was begun in 1984 to provide federal support for magnet schools that had desegregation plans, whether court-ordered or voluntary. The program provides funds to support the elimination, reduction, or prevention of minority isolation in elementary and secondary schools. Steel and Eaton note that federal support for magnet programs over the decade of the 1990s was substantial.

### Research and Popular Press

The National Educational Longitudinal Survey (NELS) is a popular study that surveyed all types of schools in 1988. After examining the NELS study, Adam Gamoran stated that he “found that magnet schools are more effective than regular schools at raising the proficiency of students in science, reading, and social studies.” Furthermore, “magnet schools are more likely to serve disadvantaged students than comprehensive schools, yet they rate at least as well in academic climate, social attachment, and course taking” (Brooks, Stein, Waldrup, and Hale, p. 37).

Texas and Florida have the most magnet schools. Miami, Florida, and Orlando, Florida, were each labeled in 2001 as one of the “10 best cities for families” by *Child* magazine, based upon the magnet schools in these cities. Miami-Dade County and Palm Beach County, Florida, both have extensive magnet school programs. According to *Working Mother* magazine the “only downside [to magnet schools] seems to be that there aren’t enough of them to fill the demand, and not enough space in the ones that exist” (Hanson-Harding, pp. 67–68). Magnet schools can be located by contacting the local education agency or Magnet Schools of America.

*See also:* ALTERNATIVE SCHOOLING; MULTICULTURAL EDUCATION.

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## MAINSTREAMING

*See:* SPECIAL EDUCATION.

## MAJOR

*See:* ACADEMIC MAJOR, THE.

## MANAGED CARE AND CHILDREN

Since the early 1980s the health care system in the United States has been radically transformed from

one dominated by fee-for-service arrangements to one dominated by managed care. Between 1980 and 2000 the number of Americans enrolled in some form of managed care rose fourteenfold. By that year, an estimated 140 million people were enrolled in health maintenance organizations (HMOs), one form of managed care. Because many children are beneficiaries of employment-based insurance, they are increasingly enrolled in managed-care plans, along with their parents. It is estimated that as of 1996, half of all insured children were enrolled in managed-care plans. Children are also being enrolled in managed-care plans through the nationwide conversion of state Medicaid programs from fee-for-service to managed care, and through the adoption of the State Child Health Insurance Program (SCHIP), which was enacted by Congress in 1997 to extend health insurance to low-income children who are ineligible for Medicaid, but whose family incomes are too low to afford private insurance. By 2000 most states had implemented managed-care programs for Medicaid and SCHIP beneficiaries.

### What Is Managed Care?

The term *managed care* refers to a variety of health care financing and delivery arrangements. The single unifying characteristic of these various approaches is that those enrolled are either encouraged or required to obtain care through a network of participating providers—providers that are selected by the managed-care organization and agree to abide by the rules of that organization. This is in contrast to fee-for-service arrangements, in which patients typically may seek care from any licensed health care professional or organization, and providers may perform services based on their individual judgments about what care is appropriate or needed. Under fee-for-service, however, an insurer may decide after the fact not to reimburse the health care provider or the patient for certain services received.

The primary purposes of limiting the range of providers available to enrolled patients under managed care are twofold: to control the patient's access to services, and to control the behavior of the providers. A limited network of providers not only restricts utilization to those providers in the plan, but also permits the plan to control participating providers with respect to patient utilization. By controlling access and utilization, plans can better control costs.

The ways in which managed-care plans control access and utilization varies among the different managed-care models. Plans vary in terms of the degree of risk that is placed on the physicians (as opposed to the plan or the payer); the relationship among the physicians within the network; and the exclusivity of the relationship between the plan (or an intermediary) and the medical group.

HMO plans generally have two defining characteristics: providers are at direct or indirect financial risk for providing services, and enrollees usually have no coverage for out-of-network use. The types of HMO plans are distinguished from each other by the type of physicians organization that delivers the services, and by the exclusivity of the relationship between the plan or intermediary and large medical groups.

Preferred provider organization (PPO) plans have three defining characteristics. First, they do not capitate or put their network physician members at risk. (Capitation is defined as a single payment to a provider per member per month of service, regardless of patient encounters.) PPOs generally pay physicians on a fee-for-service basis, often at a discount from usual, customary, and reasonable charges. Second, enrollees in a PPO plan usually receive services from a network of solo or small-group physicians and a network of hospitals that have nonexclusive relationships with the PPO (though some PPO enrollees receive services from large group practices). Third, PPO enrollees receive some benefit coverage if they obtain health care services from a non-network provider.

Point-of-service (POS) plans may be thought of as HMOs with a PPO *wraparound*. They are defined by one typical characteristic. When services are needed (the *point-of-service*), enrollees can choose to obtain services out-of-network and still obtain some coverage for that service. POS-plan enrollees pay higher premiums than do those enrolled in traditional HMOs.

### Trends in Managed Care among Children

Since 1973, when Congress enacted the Health Maintenance Organization Act to support the development of HMOs, managed care has rapidly taken hold. By 1995 nearly three-quarters of Americans who received their health insurance through an employer were enrolled in a managed-care plan, up from 51 percent just two years earlier. Total mem-

bership in insurer-sponsored managed care at the end of the 1990's approached \$132 million. This widespread move toward managed care is largely a reflection of payers' interest in controlling their costs. Employers and government sponsors face increasing pressure to contain costs, including those related to health insurance for their employees. In some employer plans, as well as most Medicaid and SCHIP programs, consumers are no longer given the choice between managed care and open fee-for-service but are required to accept managed-care enrollment. Although both health insurance premium increases and Medicaid spending growth slowed in the late 1990s and into the twenty-first century, forecasters have predicted that managed care will continue to assume a greater proportion of the market.

The largest increases in managed-care enrollment have occurred in the private market. In 1996, 43 percent of insured persons were enrolled in HMOs. Managed care has also taken over government insurance programs such as Medicaid. Since the early 1980s, when federal restrictions on managed-care enrollment were significantly relaxed, the number of Medicaid beneficiaries enrolled in managed care has risen. As a result, national enrollment rates in managed care grew fivefold during the 1990s. In California, where managed-care penetration is the greatest, half of all children with Medicaid coverage were enrolled in managed-care organizations in 1999. All states with SCHIP programs enroll participants in managed-care plans. Since Medicaid managed care involves mostly children, and SCHIP is exclusively for children, the adoption of managed care by these programs is significant. Indeed, managed care is becoming the norm for children. Nearly half of all insured children were enrolled in managed-care plans in 1996.

### **Is Managed Care Good or Bad for Children?**

Most observers agree that the transition from fee-for-service arrangements to managed care presents both challenges and opportunities in the provision of services to children. Managed care has the potential to affect access to health care, the quality of care received, and health care costs in countless ways. Advocates of managed care contend that it can result in improvements over fee-for-service through improved coordination and convenience of health services, an emphasis on prevention, and establishing a medical home or continuity in health care. Opponents of managed care argue the opposite, contend-

ing that it has the potential to create barriers for children through financial disincentives to provide quality care, limitations on providers and services, and other system-related obstacles to care, particularly specialty care. Which of these perspectives is correct remains an unresolved question.

### **Access, Quality, and Costs**

**Access.** A major advantage of managed care over traditional fee-for-service delivery systems is that managed-care plans normally have more comprehensive information about their enrolled populations and can more effectively track service-use patterns. Managed-care plans can use data systems to develop strategies aimed at improving access to care and the quality of services received by children. A potential disadvantage is the strong incentive to control costs, which may limit needed medical services, particularly for vulnerable populations.

Despite these theoretical advantages and disadvantages, neither has been definitively proven. Studies assessing the impact of managed care on access to care among Medicaid-enrolled children in the early 1980s found that the use of routine preventive services was the same or slightly increased under Medicaid managed care compared to fee-for-service. However, compliance was below the recommended standards for check-ups set by the American Academy of Pediatrics and the federal Early Periodic Screening, Diagnostic, and Treatment (EPSDT) program, which is a component of Medicaid specifying benefits that must be made available to enrolled children. Several more recent studies confirm this general finding. Researchers who examined eighteen access indicators found that only three of them showed statistically significant differences between children enrolled in managed care and children enrolled in traditional health plans. Children enrolled in managed care were more likely to receive physician services, more likely to have access to office-based care during evening or weekend hours, and more likely to report being very satisfied with the overall quality of care. However, the analysis also revealed some problem areas, including challenges getting appointments and contacting medical providers by telephone. Lack of strong evidence of differences in access to care has been found in other recent studies, as well.

One exception to this general finding relates to access to specialty medical care. There is evidence that children in managed-care plans face greater dif-

facilities than others in obtaining pediatric specialty services. This is especially problematic for children with special health care needs (such as disabilities and chronic health problems) who are enrolled in plans that are more restrictive in terms of parents' ability to self-refer their children for specialty care.

Among general populations of HMO enrollees, children get more primary and preventive care, but they also get less specialist care and experience more provider access and organizational barriers to care. HMO enrollees are more likely to report a regular source of care than those enrolled in other types of insurance, but they are more likely to report access problems related to the organization of care delivery.

**Quality.** Little is known about the quality of care children receive in managed-care settings. Detecting differences related to quality is impeded by imprecise definitions of quality, as well as the lack of uniform methods of measuring it. While measuring quality is problematic regardless of the population of interest or the type of plans within which the population is enrolled, the lack of consistent and reliable methods of assessing quality in managed-care settings (especially given its widespread and rapid adoption), is of concern to many.

Nonetheless, some studies have attempted to assess the quality of managed care for children. By and large, these studies rely on parents' reported satisfaction with care and other services within the plan. (To date, no studies have been published that examined clinical differences or other direct measures of health status.) In general, the results are mixed. One major study found that over 95 percent of families generally reported high levels of satisfaction with their children's care regardless of the type of plan in which they are enrolled. This study found no strong evidence of significant differences in satisfaction with care or quality of care between children enrolled in managed care and fee-for-service health plans. This is in contrast to another study, which found evidence that families and providers are sometimes less satisfied under managed care.

Such mixed findings are also found when examining the experience of children in Medicaid managed care. One major study found no significant differences in parents' ratings of the health care experience comparing those of children in Medicaid managed care versus fee-for-service, while another found that Medicaid managed-care enrollees were slightly more satisfied than their counterparts in fee-

for-service plans. Interestingly, it appears that racial and ethnic minorities are generally less satisfied than their white counterparts. One study that found such differences concluded that language barriers largely account for the racial and ethnic disparities in satisfaction with care in Medicaid managed-care plans. These findings suggest the need for further research with diverse populations, such as African Americans, where language is not an issue in receiving care.

More research has been conducted on the impact of managed-care enrollment among general populations (rather than by age) and the majority of this work has focused on patient satisfaction. In general, these studies report that satisfaction with overall care was lower among HMOs, which also received fewer excellent ratings from enrollees regarding their visits with physicians. In addition, HMO enrollees were less confident that their physicians would refer them to needed specialty care than were consumers in non-HMO plans. All together, HMOs scored lower on eight out of nine satisfaction measures, with differences ranging from 3 to 7 percentage points, and enrollees reporting less satisfaction, lower levels of care, and less trust in their physicians.

**Costs.** Managed-care plans are nearly always designed to achieve some cost-savings. Despite this, few studies have examined the extent to which this promise is realized. Moreover, the bulk of pediatric research conducted thus far has focused on Medicaid populations. By and large, the research suggests that the extent to which managed care can lead to savings, at least among low-income children, is unclear. One major analysis of twelve evaluations of Medicaid managed-care programs for children found that seven studies reported a decrease in costs, two reported increased costs, and the remaining studies had mixed, unchanged, or unknown results. Other research has found savings up to 15 percent among children on welfare in managed care (compared with traditional fee-for-service Medicaid), while other experiments have produced little or no savings.

Among the general population, the findings are more certain. Compared to fee-for-service, enrollment in managed care has led to cost savings, particularly lower out-of-pocket costs for patients. Specifically, 10 percent of families enrolled in HMOs in one study paid more than \$1,000 in out-of-pocket expenses, compared with 17 percent of families enrolled in other types of plans. Consequently, HMO enrollees were less likely to cite financial problems

as a barrier to care. However, they were more likely to report administrative barriers to care. It appears, though, that future cost savings may be limited, largely because lower costs to patients have translated into reduced profits for the health plans. As plans attempt to recoup these profits, out-of-pocket costs, such as co-payments for services, may rise.

### Conclusion

Because of the variability in managed-care plan organization and financing, much of the literature on managed care appears contradictory in its findings. In general, the research suggests that the extent to which managed care improves or impedes children's access to and utilization of quality care depends on the type of managed care, the health status of children who are enrolled, and the circumstances under which they are enrolled (voluntary versus mandatory enrollment).

However, lack of more definitive data on access, quality, and costs, particularly among nonpoor children, suggests a need for more research on this subject. More and better information of the impact of managed-care enrollment on costs and quality are especially needed. These remain areas in which most information is anecdotal and largely speculative. Given that managed care is likely to remain a major, if not dominant, method of health care financing and delivery, it is critical that more is understood about its impact on children, so that any needed modifications in the design and organization can be made.

*See also:* HEALTH AND EDUCATION; HEALTH CARE AND CHILDREN.

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## MANN, HORACE (1796–1859)

Principal advocate of the nineteenth-century common school movement, Horace Mann became the catalyst for tuition-free public education and established the concept of state-sponsored free schools. The zeal with which Mann executed his plan for free schools was in keeping with the intellectual climate of Boston in the early days of the republic. The Mann contribution, state government sponsored education unfettered by sectarian control, made possible a democratic society rather than a government by elites. The atmosphere of early-nineteenth-

century Boston stimulated keen minds to correct social disharmonies caused by ignorance, intemperance, and human bondage. Reform that emanated from the Lockean notion that human nature may be improved by the actions of government motivated these New Englanders, who shaped social and political thought for generations.

Horace Mann was born in Franklin, Massachusetts, to Thomas Mann and Rebecca Stanley Mann. His parents lacked the means to educate their children beyond rudimentary ciphering and elementary reading. Therefore Mann's education consisted of no more than eight or ten weeks a year of sitting in tight rows on slab benches, learning from a schoolmaster barely out of his teens. Of his early schooling, Mann recalled, "Of all our faculties, the memory for words was the only one specially appealed to." A small lending library in Franklin circulated such books as John Bunyan's *The Pilgrim's Progress*. School days were minimal as the majority of the year was spent in haying, planting, and plowing. When Horace's father died of tuberculosis in 1809, the farm was left to an older son, Stanley Mann. The modest sum of \$200 was left to each child. Horace saved tuition by teaching his sister, Lydia, to read and write, instead of her attending school.

### Education and Training

Part of the bequest of Thomas Mann to Horace was spent on his tuition at Barrett's school. Horace was twenty in 1816, and his education to that point amounted to several dozen weeks scattered over nine years. At Barrett School under an exacting but sometimes intemperate schoolmaster, Mann first conjugated Latin verbs.

A half year at Barrett School fitted Mann for admission to the sophomore class at Brown University, where penury remained a constant problem for Mann. Mann graduated first in his class (1819) two years after arriving at the university. His oration, entitled "The Gradual Advancement of the Human Species in Dignity and Happiness," linked the success of the American political experiment directly to the development of its educational system. No valedictory speech has ever been more prophetic. Brown University president Asa Messer honored Mann by making him an instructor soon after his graduation. From 1820 until 1822 he taught Latin classics. Nine years later, Mann married Messer's daughter, Charlotte.

Mann's ambition was to train in the law at Judge Tapping Reeve's prestigious law school in Litchfield, Connecticut. At the time there was no better preparation for legal and political careers than Reeve's plain, free-standing law library located in the yard of his stately home in Litchfield. Meanwhile, Mann clerked in the office of Judge Fiske for thirteen months to earn tuition money. Mann arrived in Litchfield in 1822 for the course of study that took a year and a half and cost \$160. Then Mann became a clerk for Judge James Richardson in Dedham, Massachusetts, for several months until he was admitted to practice before the bar of the State of Massachusetts in 1823.

### Career and Contribution

Intemperance and the humane treatment of criminals were topics debated in polite society around Dedham, and Mann championed reforms ranging from temperance to religious toleration. He realized that through proper educating of the public, lasting change could be effected.

The positions of trust Mann achieved in Dedham in the 1820s made him confident to offer for the legislature in Massachusetts. The same year he was elected to the Dedham School Commission, he was also elected to the state's general assembly. Mann added the title legal counsel to the state supreme court, as well as commissioner to the new mental hospital, to his growing list of responsibilities.

After the death of his wife Charlotte in 1832, Mann liquidated his estate and resigned all offices, including his seat in the legislature. To those around him, it was apparent he planned to immerse himself in his work. Taking lodging at a boarding house in Boston, Mann joined the law firm of his old friend, Edward Loring. Boarders there were Boston notables such as Elizabeth Peabody, social crusader, and Reverend William Ellery Channing, the voice of Unitarianism in Boston. Elizabeth Peabody's sister, Mary, was there as well.

Friends persuaded him that he should stand for the Massachusetts senate in 1834 as a Whig. Mann had never competed politically at this level, and campaigns for senate races brought vitriolic debates not seen in his career before. As he celebrated his forty-first birthday, he contemplated his newest responsibility, president of the Massachusetts senate. This honor as a junior senator typifies the trust and

respect colleagues placed in his judgment. One issue that the senate wrestled with for several years prior to Mann's election was how public education could better prepare people for citizenship in this expanding young republic. As senate president, Horace signed into law the bill creating the Massachusetts State Board of Education, unique for its time and designed to disseminate education information state-wide and to improve curriculum, method, and facilities.

Educating the masses was also the concern of James G. Carter of Boston, and he published in 1825 the *Outline for an Institute for the Education of Teachers*. He wrote on the necessity of training teachers in the art of teaching. Normal schools were an outgrowth of this important early work in educational thought. Carter, a legislator, and Mann, president of the senate, maneuvered a revolutionary bill through both houses and to the desk of Governor Edward Everett.

The members of the board of the newly created State Department of Education selected Mann as its first secretary. Mann resigned his seat in the state senate. Mann, like many Bostonians, believed that the emphasis on public education held more promise than either government or religion for yielding lasting social reform. He accepted a 50 percent cut in pay, from \$3,000 a year to \$1,500. His personal journal records, "I have faith in the improbability of the race, in their accelerating improvability. . . ."

The struggle for common schools in Massachusetts defined the parameters of the free school movement for decades to come. Though Mann engaged in reforms such as temperance and the treatment of the insane, the perfection of the common school concept occupied his waking hours for the rest of his life. Mann argued that all citizens, regardless of race or economic status, should have equal access to a tuition-free, tax-supported public school system. Such a system must be responsive to all races and nonsectarian if society is to achieve the unshackled status of a true democracy.

Mann knew he had to convince the entire state that the common school system was desirable and worth the increased tax revenue. He conducted town meetings across the state, giving a speech "The Means and Objects of Common School Education." The obstacle was a populace that did not care whether more schooling was offered.

Mann's tour of the state's schools concluded with Salem, the town where Mary Peabody was

teaching. Once more, he pleaded for a statewide system of tuition-free education that would, he claimed, break down the troubling hierarchy of class in American society. Mann had spent months on tour, and much of what he had encountered discouraged him. Revenue would have to be raised to build adequate schools and staff them with learned teachers. There was the problem of poor versus wealthy districts; and that of the poor counties' being able to offer an education comparable to that of wealthy counties. Inadequate instruction troubled Mann as much as broken-down school buildings. He contemplated teacher training academies, called *normal schools*, as a solution.

Required by state law to make an annual report to the legislature on the condition of the state's school districts and programs, Mann turned the legal mandate into a yearly treatise on educational philosophy and methods. His annual reports became his platform for launching new programs and educating the public on new ideas in pedagogy. He explored new ideas in school design and the teaching of reading by words rather than by alphabet letters. Simple instruction in daily hygiene was emphasized along with more interesting ways of teaching science. Mann saw education as the uniting force to bring understanding and toleration between factions of the populace, as well as between the various states themselves. One novel idea Mann put forth was that teachers should gather together periodically to share ideas.

Mann developed the special teacher training colleges that he called normal schools. Instruction expertise rose yearly because the normal schools graduated capable teachers and eliminated the unfit. With teaching skills garnered from the normal school programs, teachers looked forward to a higher pay scale. Horace Mann was certain that better schools coupled with compulsory education would cure the ills of society. Traditional education did not vanish quickly in Massachusetts, however. Many found that curriculum and instruction varied little from content and materials of their grandparents' time.

Mann recalled the small library he had known while growing up. He believed that every child should have that advantage, so he set up a library expansion program. Mann also liked the German kindergarten idea that his confidant, Mary Peabody, espoused. Horace married Mary Peabody in 1843 in the bookstore that her sister, Elizabeth, ran on West

Street, a store that was a gathering place for William Ellery Channing, Ralph Waldo Emerson, Margaret Fuller, Nathaniel Hawthorne, and Henry David Thoreau. Mary's sister, Sophia, had wed Nathaniel Hawthorne there a few months earlier. Horace wished to take a trip to Europe to visit common schools, so they settled upon that idea as their honeymoon.

One person Mann wanted to meet in England was Charles Dickens, the social reformer and novelist. Dickens gave Mann and his wife a tour of London's wretched east side. The squalor was worse by far than anything Mann had seen in America. The English schools did not impress Mann, either. Recitation and Anglican dogma dulled the student's appetite for intellectual stimulation. He was amazed that teachers talked in monotone voices and stood transfixed during lecture. The Manns traveled widely in England and on the continent. While touring the University of Berlin, Horace learned that Alexander von Humboldt had implemented a state certification process and written examinations for teachers. Horace realized that this is what he must do in Massachusetts to eliminate the problem of incompetent teachers.

Mann's seventh annual report to the board was written partly on the voyage home. The comparisons he made with European schools, especially German schools, offended school administrators. Critics questioned Mann's credentials to lead school reform. Mann stood his ground for five more years and continued to bring uniformity to programs and quality of instruction.

Mann saw revenue for education rise precipitously over the twelve years of his tenure (1836–1848). He popularized the idea of a centralized bureaucracy to manage primary and secondary education. He advised the legislature on fiscal responsibility in implementing equal programs throughout the state. He standardized the requirements for the diploma.

When the eighth congressional seat became vacant due to the death of John Quincy Adams, Mann ran for the office and was successful in his first federal election. The two terms he spent in Washington were neither satisfactory nor productive. He had disagreements with his loyal political friends Daniel Webster and Charles Sumner. Against a backdrop of the rising tension over slavery, Horace sought a way out after his second term.

In 1852 Mann heard of a new college being built in Yellow Springs, Ohio, with support from a liberal Christian denomination. He decided that if the college presidency were offered, he would accept and resign from Congress. The post was offered, and Mann became the first president of Antioch College. The Ohio churchmen were so liberal in their doctrinal beliefs that they accepted Mann, a Unitarian. Antioch was a sectarian foundation and chapel attendance was not compulsory. Antioch College opened its doors to eight young men in 1850.

The Ohio frontier proved a different world from the East. Money was a problem from the start, grand illusions in the minds of the trustees never bore fruit, and paydays were missed regularly. Mann never compromised his expectations in scholarship. The financial problems at Antioch began before the buildings went up, and they steadily got worse.

The curriculum and methodology had all been Mann's development, and it was a creditable program. A preparatory school was added to accept the less qualified and was open to all no matter what race or gender. The mood of the populace, however, turned against Mann due to his Unitarian belief.

Mann turned his attention to the idea of publicly funded universities. He believed that church-sponsored colleges and universities undid the work of the free-school movement. The fight for the publicly funded university would be someone else's battle as Mann had developed a form of debilitating cancer. Mann's last educational act was to salvage the bankrupt Antioch College with a syndicate of New England investors. Mann died August 2, 1859. He could not have realized that he would become part of the legend of democracy built upon the foundation of a tuition-free public school system. Mann's last professional statement concluded the commencement address at Antioch College: "I beseech you to treasure up in your hearts these my parting words: Be ashamed to die until you have won some victory for humanity."

*See also:* COMMON SCHOOL MOVEMENT.

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THOMAS B. HORTON

## MASTER'S DEGREE, THE

The master's degree is awarded upon completion of one to two years of advanced graduate study beyond the bachelor's degree, with the length depending on the field of study and the conferring institution. It recognizes heightened expertise in an academic discipline or professional field of study, gained through intensive course work and, in most cases, the preparation of a culminating project, scholarly paper, thesis, or a comprehensive examination.

### History

The master's degree has had somewhat a "checkered reputation" (Spencer, p. 5) in the United States. Since its debut in the 1850s at the University of Michigan, for instance, critics have questioned the academic legitimacy of the master's degree, dismissing it as a stepping-stone to the Ph.D. or as a consolation prize for those who failed to complete their doctoral studies.

Although historically viewed as ancillary to the doctorate, the changing nature of the U.S. workplace has contributed to a redefinition of the purpose and value of the master's degree in the latter quarter of the twentieth century. According to Eileen O'Brien, this "transformation occurred on an institution-by-institution basis, with the degree being adapted to offer an educational program focusing on specialization, professionalization, and career enhancement

and development” (p. 4). Findings from the Council of Graduate Schools’ sponsored National Study of Master’s Degrees, outlined in Clifton F. Conrad et al.’s 1993 work, established that the master’s degree is now frequently recognized as a significant—and often terminal—credential designating advanced preparation and training in a specialized area of study, most commonly for the purposes of entry into or advancement within the world of professional practice.

### **A Growing Demand**

The popularity of the master’s degree grew considerably during the last quarter of the twentieth century. Between 1970 and 1997, the number of master’s degrees annually conferred almost doubled from 230,000 to just over 430,000. In 2001 master’s degrees accounted for nearly one of every four degrees earned at the bachelor’s level and above in the United States.

Student and employer demand for advanced education and certification within professional fields of study has sparked much of the growth in master’s degree enrollments. These increases in demand have been spurred by broader global shifts toward a technology-driven, information-centered economy in which the need for highly trained, “expert” professionals in management, finance, information technology, and health care has skyrocketed. In 1970 for example, seven professional fields of study—business, computer and information science, education, engineering, health professions, library science, and public administration—accounted for slightly more than two-thirds of all master’s degrees annually conferred. In 1997 these professional fields combined for slightly more than three-fourths of all master’s degrees awarded. Particularly since the 1980s, it appears that the master’s degree has, at least for employers outside of academe, taken on a new “gatekeeper” role, functioning as an important credential for managing entry into and advancement within the professions. In physical therapy and library science, for example, the master’s is now generally regarded as an entry-level credential. In business, education, engineering, and nursing, the master’s is almost always required for advancement into more financially lucrative specialty and leadership positions.

### **A Changing Clientele**

As the reach of master’s education has expanded, the population of students earning the degree has diver-

sified. The percentage of women earning master’s degrees increased steadily over the past three decades, growing from 41 percent of degree recipients in 1970 to 56 percent in 1996. During this same time frame, the proportion of part-time and older students enrolling in master’s programs shifted considerably; by the mid-1990s, approximately three-fifths of all master’s students were enrolled part-time, and more than one-half were thirty years of age or older.

Educators have developed various strategies for meeting the needs of this changing clientele. Especially during the 1980s, a large number of colleges and universities began to offer master’s-level courses (and, in some cases, entire programs) in the evenings and on weekends. In the 1990s, the use of satellite-, videotape-, and web-based courses (and, again, entire programs) likewise became increasingly popular at the master’s level.

The overwhelming majority of master’s degree programs are course-work driven, but the number of required courses or credit hours varies by field of study and type of degree (for example, some master’s programs may be completed in as few as twenty-four semester credit hours; other master’s programs—including several in education—may require up to sixty semester credit hours). While approximately 70 percent of master’s degrees no longer require the completion of a thesis, most still include a comprehensive examination, which tests students on foundational knowledge in their field of study. Since the mid-1980s, a rising number of programs have begun to offer students the option of completing a final—or culminating—master’s project or paper as an alternative to a scholarly thesis. These projects or papers typically focus on applied problems, issues, or concerns relevant to the world of professional practice.

The growing practitioner orientation that has accompanied the increasing professionalization of the master’s degree has led to several interesting curricular changes in master’s programs. To begin with, the inclusion of part-time instructors who have extensive practitioner-based professional experience has become more commonplace. These practitioner faculty instructors are assumed to bring a real-world edge to the courses they teach, creating stronger linkages between theory and practice in the professions. Increasingly common as well is the inclusion of relevant professional work experience as a requirement for admission, particularly within the professional fields of business, education, and nurs-

ing. Finally, growing professionalization has also invited greater oversight by specialized accrediting bodies. In recent years several accrediting bodies that had traditionally focused largely on undergraduate education have begun to monitor the content and quality of master's degree programs in various fields, including business (Association to Advance Collegiate Schools of Business), education (National Council for Accreditation of Teacher Education), and nursing (National League for Nursing).

Unlike the National Research Council's *Survey of Earned Doctorates*, a national database is not maintained to study or track master's degree programs, students, or degree recipients. Other than the findings of a few scholars, there is comparatively little known about the general purposes, quality, and value of the master's degree and master's education in the United States.

*See also:* BUSINESS EDUCATION, *subentry on* COLLEGE AND GRADUATE STUDY; DOCTORAL DEGREE, THE; GRADUATE SCHOOL TRAINING.

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## MATHEMATICS EDUCATION, TEACHER PREPARATION

Mathematics teachers are educated in diverse ways, depending to a great extent on the context in which the education occurs. Typically, pre-service teacher preparation occurs at the baccalaureate level, while in-service education occurs at the graduate level or is conducted by the local school systems in which the teacher is employed. There are, however, some pre-service programs in which participants acquire a masters' degree prior to beginning their teaching career.

In preparation for teaching at the elementary level, most undergraduate students take two mathematics courses that are either part of the institution's core liberal arts program or are designed specifically for elementary teaching majors. Additionally, it is likely that prospective elementary teachers will have one or two courses that deal specifically with the teaching of elementary school mathematics. Concerns that teachers at the elementary level need more background in mathematics have resulted in recent trends toward upgrading the mathematical education of prospective elementary teachers. Secondary teachers typically have a major in mathematics, or a closely related field, with an additional course (or courses) in mathematics education. Smaller programs are more likely to offer only a single course in mathematics education. The education of prospective middle school teachers is very dependent on the type of institution. In some schools, middle school teaching majors follow a program similar to the elementary majors, but with extra courses in mathematics; in others, they take a program for secondary school pre-service teachers specializing in mathematics, with one or more additional courses in middle school education. A few larger universities have programs designed specifically for the prospective middle school mathematics teacher. The following sections focus on the intent and foci of the different programs.

### The Evolution of Mathematics Teacher Education

Before 1960 most teacher education programs for secondary school mathematics teachers consisted of training in mathematics, a methods course of some kind, and student teaching. Smaller programs at colleges or universities tended to have generic methods courses that addressed the needs of secondary teach-

ers of all subjects. One can glean an understanding of the content-specific methods courses by considering the methods texts of that time. For example, the popular 1960 methods text by Charles Butler and Frank Wren (first published in 1941) consisted of two sections. The first section dealt with general issues such as planning for instruction. The second section was decidedly mathematical, with specific suggestions for teaching topics such as arithmetic, algebra, geometry, and trigonometry. There was a clear distinction between these two sections. Donovan Johnson and Gerald Rising's innovative 1967 text was based on what mathematics teachers do in the classroom. As such, it addressed issues specific to the teaching and learning of mathematics. A 1975 text by Thomas Cooney, Edward Davis, and Kenneth Henderson for secondary mathematics teachers also had a very distinct pedagogical orientation based on research on how teachers teach mathematics. Whereas the Johnson and Rising text was based primarily on teachers' daily responsibilities, the Cooney, Davis, and Henderson text was based on a theoretical analysis of teachers' verbal actions, called moves, and the way those moves were used to teach mathematical concepts, generalizations, and skills.

During the 1960s and 1970s educators began to see the value in studying the teaching and learning of mathematics more specifically. Out of this new focus on research grew an interest in developing a psychological basis for understanding why some students learned but others did not, and what kind of teaching methods and curricula could affect student learning. This growing knowledge base contributed to mathematics teacher education as well.

### The Evolution of Mathematics Education as a Field of Inquiry

Prior to 1960 there was little research on how children learn mathematics and how teachers teach mathematics. The teacher's job was seen primarily as a matter of telling students the mathematics they were expected to learn. But as research in mathematics education matured, questions arose about how students understand mathematics. Consider, for example, the variation in understanding of mathematics conveyed in the responses of two students to the following questions:

Are there any numbers between 440 and 450 that are divisible by 7? Why or why not?

**Response of Student 1:** There must be a number because 7 is less than 10. So in

every 10 numbers there has to be at least one that is divisible by 7. (Student elaborates for entire page.)

**Response of Student 2:** There is no number because 440 and 450 is not divisible by 7—44 is not, 45 is not, and 0 is not.

The response of student 1 reveals a deep understanding of how numbers work, while the response of student 2 demonstrates some understanding of divisibility, since 44 and 45 are not divisible by 7, but fails to capture the mathematical essence of the question. If the interest of teacher educators in evaluating these two responses goes beyond one student having gotten it right and the other student not, then they can begin to ask how a teacher could enable the second student to better understand divisibility. Indeed, teacher education today focuses, in part, on enabling teachers to create and use such questions so that they can better analyze their students' understanding of mathematics. Simply put, the education of mathematics teachers entails a certain kind of knowledge that involves mathematics, psychology, and ways of teaching mathematics that are more effective than simply telling students what mathematics is and what the answers to various problems are. This knowledge base has grown substantially over the past decades because of the extensive research in mathematics education.

### In-Service and Staff Development Programs

An appreciation of the complexity of teaching has led teacher educators to move toward programs in which teachers are provided with extensive training and support to implement new practices—such as problem-solving techniques or infusing technology into their teaching. There is mounting evidence that teachers need support and time if they are to reform their practice. For example, the successful professional development program by Raffaella Borasi, Judith Fonzi, Constance Smith, and Barbara Rose not only emphasizes having teachers interact with materials designed to foster student inquiry but also provides teachers with support as they use the materials in their classroom. Some in-service programs engage teachers in deep experiences with the mathematics they are teaching, thereby giving them new insights into their students' understanding of that mathematics. Programs that encourage teachers to reflect on the types of experiences they have and are providing to their students are becoming increasingly popular.

### Trends, Issues, and Controversies

Perhaps the single most significant force affecting mathematics teacher education today has been the development of standards for school mathematics by the National Council of Teachers of Mathematics (NCTM). Through these standards, the NCTM has taken the view that mathematics is a subject suitable for inquiry and not just memorization, a subject that can be learned by all students and should be taught with an emphasis on processes such as problem solving, reasoning, communicating mathematically, and connecting mathematics to the real world. One way or another, most teacher education programs today embody the NCTM standards. Controversies about this approach stem from several questions, including: What constitutes mathematics? and, Should mathematics teacher education programs be about reform or about maintaining the status quo?

### The Nature of Mathematics

Different segments of society possess different views about what constitutes mathematics. Some think of mathematics as a collection of rules and procedures to be learned and applied for basic living. From this perspective, the teaching of mathematics relies on those methods best suited to promote the acquisition of skills. Others see mathematics as a basis for developing critical thinking and problem-solving skills. From this second perspective, which is closely aligned to the NCTM Standards, teacher education encourages reflection and promotes attention to problem solving and critical thinking. How a community defines mathematics affects what, and how, mathematics gets taught in the local schools. It can also have an impact on how teachers are trained to teach in those schools.

### The Intent of Teacher Education Programs

There is always a certain tension between the intellectual preparation of teachers and the practice of teaching as manifested in student teaching. Those from outside the field of mathematics education often take the position that teacher education should be modeled after an apprenticeship program. That is, one learns mathematics and then works in the schools to acquire the necessary pedagogical skills to be a successful teacher. This type of program tends to promote the status quo, as young teachers model those methods of teaching that they experienced as students. Teacher educators, however, usually take the position that a greater part of the program

should be devoted to transforming the teaching of mathematics from a “teaching is telling” approach to an inquiry-based teaching style that is student centered. The notion of *constructivism* is often used to describe this latter kind of teaching; that is, children construct their own mathematical ideas, and teachers need to be aware of these constructions in order to effectively teach the children.

The preparation and education of mathematics teachers, like any educational endeavor, exists in a sociopolitical environment that ultimately shapes the enterprise. Conditions of the workplace also shape what transpires in classrooms. These circumstances affect mathematics teacher education programs as well. Schools today are run much as they were in yesteryear, thus perpetuating a certain conservatism with respect to reform. This approach strengthens the position of those who advocate an apprenticeship form of teacher education. Evidence suggests that the United States is experiencing, and will continue to experience, serious teacher shortages, particularly in mathematics. Such shortages usually preclude more extensive training in favor of short, intense programs that are less demanding on the schools’ staffing resources.

On the other hand, reform-based teacher education programs enjoy the support of such national organizations as the NCTM and are rooted in the thinking of scholars such as John Dewey. Dewey’s notion of *reflective thinking*, albeit adapted and modified, is part and parcel of most current teacher education programs. Indeed, if the position is taken that education is about educating young people to become thinking citizens in a democratic society, then the education of teachers to infuse problem solving, reasoning, and critical thinking into their teaching should be of paramount importance. In some sense, the notion of what constitutes a good teacher education program is dependent on what one values regarding society’s education of its young people.

*See also:* MATHEMATICS LEARNING; NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS.

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THOMAS J. COONEY

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## MATHEMATICS LEARNING

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### ALGEBRA

Algebraic reasoning is a major development (circa 800), both culturally and individually. Culturally, the invention of algebraic representations in graphical and symbolic form is viewed as central for the advancement of mathematics and science. Algebra provides a succinct notation for recording mathematical relationships and describing computational algorithms and scientific laws. Algebraic reasoning is viewed as a major conceptual advancement beyond arithmetic thinking. For individuals, algebra can serve as a *thinking tool*, or, more aptly, a toolkit, for describing relationships in terms of unknown quantities and modeling complex and dynamic situations. For many, algebra instruction is the sole source for the formal study of abstract representations and problem solving.

Algebra has also been identified as a societal gatekeeper for further development of mathematical

and scientific instruction, and for wide-ranging economic opportunities. Consequently, at the beginning of the twenty-first century, there is a major shift in the United States to move algebra education into the middle and primary grades, and to reconceptualize instruction appropriately for these age groups. The utility of algebra is boundless. However, learning and teaching algebra, particularly algebra word problems, is often viewed as the bane of mathematics education.

### What Is Algebra?

Abstract algebra refers to the use of formal mathematical structures and symbols, such as  $F(X)$ , to represent relations between terms or objects. It includes the operations that operate on those structures, such as the inverse,  $F^{-1}(X)$ , and the identity,  $I(X)$ . An especially important structure is the *function*, which specifies a one-to-many relationship (or mapping) between an independent variable (the *input*) and a set of dependent variables (the *output*).

School-based algebra is most commonly viewed as the generalization of arithmetic to include the use of literal symbols (such as the letters  $X$  and  $Y$ ) and arbitrarily complex symbolic expressions. School algebra also includes the study of functions as well as the construction of abstract formalisms that inductively describe a pattern of instances, predict future instances, and characterize the general form of the pattern (e.g., linear).

### Challenges of Learning Algebra

To encompass the multifaceted nature of school-based algebra, new concepts arise that contribute to its learning difficulties. The *variable* is expanded from being a place-holder (or box) in arithmetic, to representing an unknown value or set of values that stand in relation to (and may covary with) other values and expressions. Symbols that represent variables in algebra must denote the same thing everywhere in a problem, but generally take on new meanings with each new problem.

Detailed analyses of problem solving show that result-unknown problems, such as  $25x+8=?$ , are solvable by direct application of the arithmetic operators, or by using counting objects to physically model the number sentence; whereas start-unknown problems, such as  $25Y+8=108$ , defy modeling and are considered to be algebraic. Both children and adults exhibit lower levels of performance with start-unknown than with result-unknown problems.

In algebra, the equal sign ( $=$ ) takes on a relational or structural role, as when two sides of an equation are compared, such as  $25Y=108$ . This is in addition to its operational role in arithmetic where the equal sign signals one to perform a computation, as with  $25x+8=?$ . Facility with and among multiple representations, including symbolic, tabular, graphical, and verbal formats, is an important aspect of algebraic reasoning, as is an understanding of the relative utility of each. Each representational format has unique advantages. However, in practice, equations receive far more attention than other representations, such as graphs.

The prototypical activities for school-based algebra are solving symbolic equations and word problems. Equation solving most typically involves applying legal rules of symbolic manipulation to isolate an unknown value (see Figure 1, part a). Legal rules typically entail performing the same symbolic calculations to both sides (such as subtracting 10 from both sides of Equation 1 in step 1) to maintain the relations specified in the original problem.

Novices often perform actions that violate the syntactic, hierarchically nested relationships contained in equations, and so inappropriately change their original meanings. For example, in Figure 1 it is algebraically illegal to combine 10 and 5 in step 1 because the original relation is no longer preserved. However, preconceptions from reading and arithmetic, where processing is done from left to right, can lead students to misstep.

Word-problem solving is the next most common activity in algebra education. Word problems can be in the form of a story (Figure 1, part b), or a word equation (Figure 1, part c). Although based on the same quantitative relations as Equation 1, students perform very differently on these three tasks. A misconception generally held by high school mathematics teachers is that high school students solve Equation 1 more easily than a matched story problem or word equation. Teachers justify this prediction by noting that a student must first write a symbolic equation that models the verbal statement, and that this invites other types of errors. While translation from words to mathematical expressions is error-ridden for novices, high school students typically circumvent this step when permitted. Instead, they use highly reliable informal methods, such as guess-and-test and working backwards, which produce higher levels of performance than equation solving.

FIGURE 1

**Three forms of a start-unknown problem: (a) symbolic form, and the manipulation steps for solving the algebraic equation; (b) story problem; and (c) word equation**

(a) Solve for X:  $10+5X=30$  (Equation 1)

1.  $10+5X-10=30-10$
2.  $(10-10)+5X=(30-10)$
3.  $0+5X=20$
4.  $(5X)/5=20/5$
5.  $(5/5)X=4$
6.  $X=4$

(b) Story problem: Starting at the 10-mile mark, Robin walked 5 mph. How much time will it take her to travel 30 miles?

(c) Word equation: If I multiply some number by 5 and then add 10, I get 30. What is the original number?

SOURCE: Courtesy of author.

### Curricular and Technological Advances in Algebra Education

Like many algebra teachers, traditional algebra textbooks take a largely *symbol precedence* view of the development of algebraic reasoning, introducing algebraic concepts through symbolic problem solving, and later applying them to verbal reasoning activities. In contrast, several alternative curricula have recently emerged that begin by eliciting students' invented strategies and representations for describing patterns and data, and developing from these inventions algebraic equations and graphs through a process called *progressive formalization*. These reform-based curricula typically draw on problem-based learning (PBL), which emphasizes complex, multi-day, collaborative problem solving. Three of these approaches, Mathematics in Context, Connected Mathematics, and The Adventures of Jasper Woodbury, have produced commercially available curricula that cover the major topics in middle grade mathematics, such as geometry and algebra.

Technology has also been effectively wedded to innovative curriculum designs. Graphing calculators have had a profound effect on the teaching of algebra using graphical, tabular, and programming forms. The Algebra Sketchbook supports the relationship between verbal descriptions and graphics. The Animate system helps students to construct situation-based meaning for equations. Jasper uses multimedia to present rich problem contexts and encourage production of Smart Tools, representa-

tions that support modeling, analysis, and comparison. The Pump Algebra Tutor provides individualized computer-based instruction by relying on adaptive cognitive models of individual students.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION; MATHEMATICS LEARNING, *subentries on* COMPLEX PROBLEM SOLVING, GEOMETRY, LEARNING TOOLS, WORD-PROBLEM SOLVING.

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MITCHELL J. NATHAN

## COMPLEX PROBLEM SOLVING

In April 2000, the National Council of Teachers of Mathematics (NCTM) published *Principles and Standards for School Mathematics*, a document intended to serve as "a resource and a guide for all who make decisions that affect the mathematics education of students in prekindergarten through grade 12," and that represented the best understandings regarding mathematical thinking, learning, and problem solving of the mathematics education community at the dawn of the twenty-first century. It also reflected a radically different view from the perspective that dominated through much of the twentieth century.

*Principles and Standards* specifies five mathematical content domains as core aspects of the curriculum: number and operations, algebra, geometry,

measurement, and data analysis and probability. These content areas reflect an evolution of the curriculum over the course of the twentieth century. The first four were present, to various degrees, in 1900. Almost all children studied number and measurement, which comprised the bulk of the elementary curriculum in 1900. Algebra and geometry were mainstays of the secondary curriculum, which was studied only by the elite; approximately 10 percent of the nation's fourteen-year-olds attended high school. Data analysis and probability were nowhere to be seen. Over the course of the twentieth century, the democratization of American education resulted in increasing numbers of students attending, and graduating from, high school.

Curriculum content evolved slowly, with once-advanced topics such as algebra and geometry becoming required of increasing numbers of students. The study of statistics and probability entered the curriculum in the 1980s, and by 2000 it was a central component of most mathematics curricula. This reflected an emphasis on the study of school mathematics for "real world" applications, as well as in preparation for mathematics at the collegiate level.

While content changes can thus be seen as evolutionary, perspectives on mathematical *processes* must be seen as representing a much more fundamental shift in perspective and curricular goals. Given equal weight with the five content areas in *Principles and Standards* are five process standards: problem solving, reasoning and proof, communication, connections, and representation. All of these are deeply intertwined, representing an integrated view of complex mathematical thinking and problem solving. Problem solving might be viewed as a "first among equals," in the sense that the ultimate goal of mathematics instruction can be seen as enabling students to confront and solve problems—not only problems that they have been taught to solve, but unfamiliar problems as well. However, as will be elaborated below, the ability to solve problems and to use one's mathematical knowledge effectively depends not only on content knowledge, but also on the process standards listed above.

Solving difficult problems has always been the concern of professional mathematicians. Early in the twentieth century, *problem books* were viewed as ways for advanced students to develop their mathematical understandings. Perhaps the best exemplar is George Pólya and Gabor Szegő's *Problems and Theorems in Analysis*, first published in 1924. The

book offered a graded series of exercises. Readers who managed to solve all the problems would have learned a significant amount of mathematical content, and (although implicitly) a number of problem-solving strategies.

The idea that one could isolate and teach strategies for problem solving remained tacit until the publication of Pólya's *How to Solve It* in 1945. Pólya introduced the notion of *heuristic strategy*—a strategy that, while not guaranteed to work, might help one to better understand or solve a problem. Pólya illustrated the use of certain strategies, such as drawing diagrams; “working backwards” from the goal one wants to achieve; and decomposing a problem into parts, solving the parts, and recombining them to obtain a solution to the original problem. Pólya's ideas resonated within the mathematical community, but they were exceptionally difficult to implement in practice. For example, while it was clear that one should draw diagrams, it was not at all clear which diagrams should be drawn, or what properties those diagrams should have. A problem could be decomposed in many ways, but it was not certain which ways would turn out to be productive.

Means of addressing such issues became available in the 1970s and 1980s, as the field of artificial intelligence (AI) flourished. Researchers in AI wrote computer programs to solve problems, basing the programs on fine-grained observations of human problem solvers. Allen Newell and Herbert Simon's classic 1972 book *Human Problem Solving* showed how one could abstract regularities in the behavior of people playing chess or solving problems in symbolic logic—and codify that regularity in computer programs. Their work suggested that one might do the same for much more complex human problem-solving strategies, if one attended to fine matters of detail. Alan Schoenfeld's 1985 book *Mathematical Problem Solving* (and his subsequent work) showed that such work could be done successfully. Schoenfeld provided evidence that Pólya's heuristic strategies were too broadly defined to be teachable, but that when one specified them more narrowly, students could learn to use them. His book provided evidence that students could indeed learn to use problem-solving strategies—and use them to solve problems unlike the ones they had been taught to solve. It also indicated, however, along with other contemporary research, that problem solving involved more than the mastery of relevant knowledge and powerful problem-solving strategies.

One issue, which came to be known as *metacognition* or *self-regulation*, concerns the effectiveness with which problem solvers use the resources (including knowledge and time) potentially at their disposal. Research indicated that students often fail to solve problems that they might have solved because they waste a great deal of time and effort pursuing inappropriate directions. Schoenfeld's work indicated that students could learn to reflect on the state of their problem solving and become more effective at curtailing inappropriate pursuits. This, however, was still only one component of complex mathematical behavior.

Research at a variety of grade levels indicated that much student behavior in mathematics was shaped by students' beliefs about the mathematical enterprise. For example, having been assigned literally thousands of “problems” that could be solved in a few minutes each, students tended to believe that all mathematical problems could be solved in just a few minutes. Moreover, they believed that if they failed to solve a problem in short order, it was because they didn't understand the relevant method. This led them to give up working on problems that might well have yielded to further efforts. As Magdalene Lampert observed, “Commonly, mathematics is associated with certainty; knowing it, with being able to get the right answer, quickly. These cultural assumptions are shaped by school experience, in which *doing* mathematics means following the rules laid down by the teacher; *knowing* mathematics means remembering and applying the correct rule when the teacher asks a question; and mathematical *truth is determined* when the answer is ratified by the teacher. Beliefs about how to do mathematics and what it means to know it in school are acquired through years of watching, listening, and practicing” (p. 31).

Lampert argued that the very practices of schooling resulted in the development of inappropriate beliefs about the nature of mathematics, and that those beliefs resulted in students' poor mathematical performance. Given the link between students' experiences and their beliefs, the necessary remedy was to revise instructional practices—to create instructional contexts in which students could engage in mathematics as an act of sense-making, and thereby develop a more appropriate set of knowledge, beliefs, and understandings.

Research on mathematical thinking and problem solving conducted in the 1970s and 1980s estab-

lished the underpinnings for the first major “reform” document, *Curriculum and Evaluation Standards for School Mathematics* (1989), also published by NCTM. The climate was right for change, for the nation was concerned about its students’ mathematical performance. Reports such as *A Nation at Risk* (1983) had documented American students’ weak mathematical performance in comparison to that of students from other nations, and there was a sense of national crisis regarding the nation’s mathematical and scientific capacities. In the early 1990s the U. S. National Science Foundation began to support the development of curricular materials consistent with emerging research on mathematical thinking and learning. The first wave of curricula developed along these lines began to be adopted in the late 1990s.

Many of the new curricula call for students to work on complex problems over extended periods of time. In some cases, important mathematical ideas are introduced and developed through working on problems, rather than taught first and “applied” later. Either way, the fundamental idea is that students will need to have opportunities to develop both the content and process understandings described in *Principles and Standards*. As indicated above, this calls for changes in classroom practices. The best way for students to develop productive mathematical dispositions and knowledge is for them to be supported, in the classroom, in activities that involve meaningful mathematical problem solving. Given a complex problem, students can work together, under the guidance of a knowledgeable teacher, to begin to understand the task and the resources necessary to solve it. This can help them develop productive mathematical dispositions (i.e., the understanding that complex problems will yield to sustained, systematic efforts) and analytic skills. Complex problems may span mathematical areas or be drawn from real-world applications, thus helping students make mathematical connections.

Understanding and working through such problems calls for learning various representational tools—the symbolic and pictorial languages of mathematics. Tasks that call for explaining one’s reasoning (i.e., asking students to make a choice between two options and to write a memo that justifies their choice on mathematical grounds) can help students develop their skills at mathematical argument. They also reinforce the idea that obtaining an answer is not enough; one must also be able to convince

others of its correctness. Teachers can help students understand that there are standards for communicating mathematical ideas. The arguments students present should be coherent and logical, and ultimately, as students develop, formalizable as mathematical proofs. In these ways, complex problem solving becomes a curricular vehicle as well as a curricular goal.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION; MATHEMATICS LEARNING, *subentries* on LEARNING TOOLS, MYTHS, MYSTERIES, AND REALITIES, NUMBER SENSE, WORD-PROBLEM SOLVING.

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## GEOMETRY

Geometry originated in the ancient practice of earth measurement used in agriculture, the building of pyramids, and the observation of the patterns in the movement of the stars applied in navigation. In spite of the very practical origin of geometry in the investigation of the world, geometry is also the subject area where the development of abstract reasoning began, culminating in the first systematic organization of mathematical knowledge by Euclid around 300 B.C.E. Euclid's deductive system, built on definitions, postulates, theorems, and proofs, has served as the blueprint for representing mathematical knowledge since its inception.

Tension between the experiential, empirical origins of geometry and its abstract deductive representation characterizes contemporary instructional practice and research. Critics of the traditional Euclidean approach to the teaching and learning of geometry argue that the severance of geometric knowledge from its foundation in an inherently geometric world is a pedagogical error.

Educators in the United States have been reluctant to introduce geometry in the primary grades. The traditional view of geometry as an exemplification of abstract reasoning and a fear of exposing students prematurely to formal thinking may be among the reasons for this reluctance. When primary grade teachers choose to spend a short instructional period on geometry, it is usually limited to having students

recognize and recall the names of prototypical two-dimensional shapes like triangles, squares, and rectangles. This practice fails to take advantage of the host of informal geometric knowledge children bring to school.

Even before entering school, children develop intuitions about geometric shapes and their characteristics during their early explorations with their environment. For example, in exploring the objects around them, children experience that surfaces can be bumpy or smooth. Building with blocks or stacking other objects, children learn about differences in forms and sizes. Using boxes and other containers, they form intuitive ideas of space-filling or volume. As children walk around in their neighborhood they develop informal notions of spatial arrangements, distance, and directionality. The learning of geometry can be built on this naturally acquired spatial sense. Guiding children to reflect on the characteristics and regularities of their spatial experience can easily lead to the development of the basic concepts (abstractions) of geometry, such as straight and curved lines, points as intersections, planes, and planar and three-dimensional shapes. Uncultivated or ignored, however, children's natural spatial sense fades away, and it is difficult to retrieve it for use when students enroll in their first official geometry course in high school.

A programmatic document, the 1989 *Curriculum and Evaluation Standards for School Mathematics*, produced by the National Council of Teachers of Mathematics (NCTM) to guide reform in mathematics education, recommends that geometric topics be introduced and applied to real-world situations whenever possible. However, this does not imply that immersing children in real-world situations automatically leads to mathematical or geometrical understanding. Hands-on activities are a popular way to establish a connection between instruction and real life, but as instructional means they are only as good as the meanings derived from them. The challenge of geometry instruction is to elevate children's experience with real-world objects to the level of mathematics.

This happens in well-designed instructional tasks that promote reflection on the geometric features of real-life situations, leading to the development of geometric concepts and spatial reasoning. Children learn to generate geometric arguments by participating in carefully orchestrated conversations where they articulate, share, and discuss their ideas

regarding spatial problems. Children develop skills of modeling spatial situations when they are invited to publicly display and discuss their visualizations in drawings. These drawings can then be turned into mathematical representations during revision cycles, in the course of which the geometrical features are accentuated while the mathematically irrelevant features (e.g., material, color, and other decorative elements) gradually fade away.

At the secondary level, the traditional Euclidean geometry curriculum that revolves around deductive proof procedures has been criticized because it separates geometry from its empirical, inductive foundation. Critics refer to the typical lack of student appreciation for the subject—often accompanied by low achievement. The deductive organization of the geometry course has been seen as a viable model to help introduce students to mathematical reasoning. However, this is a misrepresentation of the actual reasoning that goes on among expert mathematicians. The deductive logic applied in proofs constitutes only a subset of the rules, and it seldom accounts for the actual thought processes that contributed to the discovery communicated in a proof. Actual discovery usually follows an inductive line of reasoning that begins with empirical investigation and the observation of regularities. It continues with making conjectures based on the observed regularities, and then testing them on multiple examples. Attempts at explaining and generalizing the observed relationship with the help of proof come only after the long process of empirical exploration.

Alternatives to a traditional Euclidean secondary geometry curriculum have been offered based on this more grounded view of mathematical reasoning that incorporates exploration and induction. In the process of exploration, students learn to deconstruct geometric objects into their constitutive elements, and to rely on properties—such as the number and relative size of the sides of the objects, the measure of angles, and their relationships—rather than a prototypical or customary presentation of an image when they identify shapes. Ideally, students will learn to go beyond the appearance of an actual drawing of a shape and argue about generalized concepts of shapes as defined by their properties (for example, a rectangle is a quadrilateral with four right angles and with opposite sides equal and parallel). These skills serve as the foundation of geometrical understanding and need to be acquired—ideally in the primary grades—before students are exposed to proofs.

Some of the new secondary geometry curricula have been organized around technology tools, including geometry construction programs such as the Geometer's Sketchpad and the Geometric Super-Supposer. These programs provide an electronic environment for geometric explorations and allow the learner to generate multiple solutions of geometric construction problems, thus facilitating the generation and testing of hypotheses. Proofs gain a different meaning in this context, becoming the means of explaining why the conjectures developed by the students themselves hold beyond the examples created by the program. This has a motivating effect on the learner. Without such an inductive foundation, students see proofs as an unnecessary procedure to arrive at a simple truth that they already know and accept.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION; MATHEMATICS LEARNING, *subentries on* ALGEBRA, COMPLEX PROBLEM SOLVING, LEARNING TOOLS, WORD-PROBLEM SOLVING.

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VERA KEMENY

## LEARNING TOOLS

The manner in which students learn mathematics influences how well they understand its concepts, principles, and practices. Many researchers have argued that to promote learning with understanding, mathematics educators must consider the tasks, problem-solving situations, and tools used to represent mathematical ideas. Mathematical tools foster learning at many levels—namely, the learning of facts, procedures, and concepts. Tools can also provide concrete models of abstract ideas, or, when dealing with complex problems, they can enable students to manipulate and think about ideas, thereby making mathematics accessible and more deeply understood.

Mathematical learning tools can be traditional, technological, or social. The most frequently employed tools are traditional, which include physical objects or manipulatives (e.g., cubes), visualization tools (e.g., function diagrams), and paper-and-pencil tasks (e.g., producing a table of values). Technological tools, such as calculators (i.e., algebraic and graphic) and computers (e.g., computation and multiple-representation software), have gained attention because they can extend learning in different ways. Social tools, such as small-group discussions where students interact with one another to share and challenge ideas, can be considered a third type of learning tool. These three tools can be used independently or conjointly, depending on the type of learning that is intended.

### Learning Tools in Mathematics

A learning tool can be as simple as an image or as complex as a computer-based environment designed to improve mathematical understanding. The key characteristic of a learning tool is that it supports learners in some manner. For example, a tool can aid

memory, help students to review their problem-solving processes, or allow students to compare their performance with that of others, thereby supporting self-assessment. Learning tools can represent mathematical ideas in multiple ways, providing flexible alternatives for individuals who differ in terms of learner characteristics. For example, learners who have difficulty understanding the statistical ideas of arithmetic mean (center) and variance (spread) may be assisted through interactive displays that change as data points are manipulated by the learner. A mathematical learning tool can scaffold the learner by performing computations, providing more time for students to test mathematical hypotheses that require reasoning. In the statistics example, learners can focus on why changes to certain parameters affect data—and in what ways, rather than spending all their time calculating measures.

**Traditional Tools.** Traditional tools are best suited for facilitating students' learning of basic knowledge and skills. Objects that can be manipulated, such as cubes, reduce the abstract nature of concepts, such as numbers, thereby making them real and tangible, particularly for younger children. Such tools support the development of children's understanding of arithmetic by serving as a foundation for learning more complex concepts. Visualization tools, such as graphs, can support data interpretation, while paper-and-pencil tools that provide practice of computational skills can support memory for procedures and an ability to manipulate symbols. Combining physical tools with visualization tools can substantively increase students' conceptual knowledge. Dice and spinners, for example, can be used to support elementary school students in creating graphs of probability distributions, helping them develop an understanding of central tendency.

**Technological Tools.** Technological tools are most effective in facilitating students' understanding of complex concepts and principles. Computations and graphs can be produced quickly, giving students more time to consider why a particular result was obtained. This support allows students to think more deeply about the mathematics they are learning. Electronic tools are necessary in mathematics because they support the following processes: (a) conjectures—which provide access to more examples and representational formats than is possible by hand; (b) visual reasoning—which provides access to powerful visual models that students often do not create for themselves; (c) conceptualization and

modeling—which provide quick and efficient execution of procedures; and (d) flexible thinking—which support the presentation of multiple perspectives.

Spreadsheets, calculators, and dynamic environments are sophisticated learning tools. These tools support interpretation and the rapid testing of conjectures. Technology enables students to focus on the structure of the data and to think about what the data mean, thereby facilitating an overall understanding of a concept (e.g., function). The graphics calculator supports procedures involving functions and students' ability to translate and understand the relationship between numeric, algebraic, and graphical representations. Transforming graphical information in different ways focuses attention on scale changes and can help students see relationships if the appropriate viewing dimensions are used. Computers may remove the need for overlearning routine procedures since they can perform the task of computing the procedures. It is still debatable whether overlearning of facts helps or hinders deeper understanding and use of mathematics. Technology tools can also be designed to help students link critical steps in procedures with abstract symbols to representations that give them meaning.

Video is a dynamic and interactive learning tool. One advantage of video is that complex problems can be presented to students in a richer and more realistic way, compared to standard word problems. An example is *The Adventures of Jasper Woodbury*, developed by the Learning Technology Center at Vanderbilt University. Students are required to solve problems encountered by characters in the Woodbury video by taking many steps to find a solution. This tool supports students' ability to solve problems, specifically their ability to identify and formulate a problem, to generate subgoals that lead to the solution, and to find the solution. However, the information presented in a video cannot be directly manipulated in the same way that data can be changed in spreadsheets and calculators.

Learning tools that present the same information in several ways (e.g., verbal equation, tabular, graphic) are referred to as multiple-representation tools. The ability to interpret multiple representations is critical to mathematical learning. There is evidence to suggest that multiple representations can facilitate students' ability to understand and solve word problems in functions, and to translate words into tables and graphs. However, interpretation is not easy without some kind of support. One type of

support involves highlighting common elements between the different representations to make the relationship between each explicit, thereby facilitating interpretation in both contexts. In some cases, this type of support is insufficient and students need to be explicitly taught to make the connections. Multiple representations can be a powerful learning tool for difficult problems—when students have acquired a strong knowledge base.

Additional research is needed to determine the exact benefits of multiple representational tools. It is important to emphasize that, as with any educational innovation, mathematical learning tools must be designed with a consideration of the teacher, curriculum, and student in mind. For example, with the help of curricular teams and teachers, complex computer environments that present students with multiple representation tools for learning algebra and geometry were successfully adopted in several school systems in the United States.

**Social tools.** Social tools are a fairly recent consideration. In the 1990s, small-group work where students share strategies for solving problems began to be used as a powerful learning tool. This tool facilitates students' ability to solve word problems and to understand arithmetic. Group collaboration while learning with technology can help students develop the perspectives and practices of mathematics, such as what constitutes acceptable mathematical evidence. Peers and computers can provide feedback that makes students aware of contradictions in their thinking. In this way, social tools can assist learning and transform understanding.

### Issues for Further Consideration

Mathematical learning tools should be an important part of students' educational experience. However, a few issues must be addressed before their potential is fully realized. First, use of technological tools is fairly limited in classrooms, despite their potential in changing the nature of mathematical learning. Moreover, software used in schools is often geared towards the practice of computational skills. For example, there may be a potential misuse of the graphing calculator if it is not utilized in the context of sense-making activities. There is a fine line between using a tool for understanding and using it because problems cannot be solved without its use.

Second, learning tools should be an integral part of instructional activities and assessment tasks.

Learning tools should be a regular part of the mathematics experience at every educational level, and different tools should be used for various purposes. The question of ethics and equity is raised when technological tools that are used in instruction are not accessible in assessment situations.

Third, learning tools will only meet their promise through professional development. Teachers who understand the strengths and weaknesses of tools can have a strong impact on how they are used. Support is needed at all levels of education to ensure that sophisticated learning tools are available for use in every mathematics classroom. Learning tools are only as good as the activities that provide the mathematical experiences. The effectiveness of such tools is thus highly dependent on the purpose of the activity and the learning that is intended.

*See also:* MATHEMATICS LEARNING, *subentry on* COMPLEX PROBLEM SOLVING; SCIENCE LEARNING, *subentry on* TOOLS; TECHNOLOGY IN EDUCATION, *subentry on* CURRENT TRENDS.

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#### MYTHS, MYSTERIES, AND REALITIES

According to the National Research Council, "Much of the failure in school mathematics is due to a tradition of teaching that is inappropriate to the way most students learn" (p. 6). Yet, despite the fact that numerous scientific studies have shown that traditional methods of teaching mathematics are ineffective, and despite professional recommendations for fundamental changes in mathematics curricula and teaching, traditional methods of teaching continue. Indeed, mathematics teaching in the United States has changed little since the mid-twentieth century—essentially, teachers demonstrate, while students memorize and imitate.

#### Realities

Although research indicates that learning that emphasizes sense-making and understanding produces a better transfer of learning to new situations, traditional classroom instruction emphasizes imitation and memorization. Even when traditional instruction attempts to promote understanding, most students fail to make sense of the ideas because classroom derivations and justifications are too formal and abstract. Though research indicates that mathematical knowledge is truly understood and us-

able only when it is organized around and interconnected with important core concepts, traditional mathematics curricula make it difficult for students to meaningfully organize knowledge. This is because such curricula provide little time for, or attention to, the type of sense-making activities that enable students to genuinely understand and organize mathematical knowledge. Indeed, the major finding that caused the authors of the Third International Mathematics and Science Study (TIMSS) to characterize the U.S. mathematics curricula as “a mile wide and inch deep” is that traditional curricula cover far too many topics, almost all superficially. As a result, though the same topics are retaught yearly, many are never learned, and few are truly understood.

Furthermore, because traditional instruction focuses so much on symbolic computation procedures, many students come to believe that mathematics is mainly a matter of following fixed and rigid procedures that have no connection to their thinking about realistic and meaningful situations. Instead of seeing mathematics as thoughtful, reflective reasoning, students see it as a matter of parroting procedures, as an academic ritual that has no genuine usefulness. Such ritualistic mathematics, stripped of its power to explain anything that matters and devoid of the interconnections that arise from sense-making, becomes a hodgepodge of memorized—and easily forgotten—rules. The National Research Council dubbed such knowledge “mindless mimicry mathematics.”

**The modern scientific view of mathematics learning.** Almost all current major scientific theories describing how students learn mathematics with genuine understanding (instead of by rote) agree that: (a) mathematical ideas must be mentally constructed by students as they intentionally try to make personal sense of situations; (b) how students construct new ideas is heavily dependent on the cognitive structures students have previously developed; and (c) to be effective, mathematics teaching must carefully guide and support the processes by which students construct mathematical ideas. According to these *constructivist-based* theories, the way a student interprets, thinks about, and makes sense of newly encountered mathematical ideas is determined by the elements and the organization of the relevant mental structures that the student is currently using to process his or her mathematical world. Consequently, instruction that promotes understanding cannot ignore students’ current ideas and ways of

reasoning, including their many informal, and even incorrect, ideas.

However, despite the value of the general notion that students must actively construct their own mathematical knowledge, a careful reading of research in mathematics education reveals that the power and usefulness of these *constructivist* theories arise from: (a) their delineation of specific learning mechanisms, and (b) the detailed research they have spawned on students’ mental construction of meaning for particular mathematical topics such as whole-number operations, fractions, and geometric shapes. It is this elaboration and particularization of the general constructivist theory to specific mathematical topics and classroom situations that make the theory and research genuinely relevant to teaching mathematics.

**The modern view of mathematics teaching.** Both research and professional recommendations suggest a type of mathematics instruction very different from that found in traditional classrooms. In the spirit of inquiry, problem solving, and sense-making, such instruction encourages students to invent, test, and refine their own ideas, rather than unquestioningly follow procedures given to them by others. This type of instruction guides and supports students’ construction of personally meaningful ideas that are increasingly complex, abstract, and powerful, and that evolve into the important formal mathematical ideas of modern culture.

However, unlike instruction that focuses only on classroom inquiry, this type of instruction is based on detailed knowledge of students’ construction of mathematical knowledge and reasoning. That is, this teaching is based on a deep understanding of: (a) the general stages that students pass through in acquiring the concepts and procedures for particular mathematical topics; (b) the strategies that students use to solve different problems at each stage; and (c) the mental processes and the nature of the knowledge that underlies these strategies. This teaching uses carefully selected sequences of problematic tasks to provoke appropriate perturbations and reformulations in students’ thinking.

An abundance of research has shown that mathematics instruction that focuses on student inquiry, problem solving, and personal sense-making—especially that guided by research on students’ construction of meaning for particular topics—produces powerful mathematical thinkers who not

only can compute, but have strong mathematical conceptualizations and are skilled problem solvers.

### Myths and Misunderstandings

**Misunderstanding the nature of mathematics.** One of the most critical aspects of effective mathematics learning is developing a proper understanding of the nature of mathematics. The chairperson of the commission that wrote the National Council of Teachers of Mathematics (NCTM) *Standards* stated, “The single most compelling issue in improving school mathematics is to change the epistemology of mathematics in schools, the sense on the part of teachers and students of what the mathematical enterprise is all about” (Romberg, p. 433).

Mathematics is first and foremost a form of reasoning. In the context of analytically reasoning about particular types of quantitative and spatial phenomena, mathematics consists of thinking in a logical manner, making sense of ideas, formulating and testing conjectures, and justifying claims. One does mathematics when one recognizes and describes patterns; constructs physical or conceptual models of phenomena; creates and uses symbol systems to represent, manipulate, and reflect on ideas; and invents procedures to solve problems. Unfortunately, most students see mathematics as memorizing and following little-understood rules for manipulating symbols.

To illustrate the difference between mathematics as reasoning and mathematics as rule-following, consider the question: “What is  $2\frac{1}{2}$  divided by  $\frac{1}{4}$ ?” Traditionally taught students are trained to solve such problems by using the “invert and multiply” method:  $2\frac{1}{2} \div \frac{1}{4} = \frac{5}{2} \times \frac{4}{1}$ . Students who are lucky enough to recall how to compute an answer can rarely explain or demonstrate why the answer is correct. Worse, most students do not know when the computation should be applied in real-world contexts.

In contrast, students who have made genuine sense of mathematics do not need a symbolic algorithm to compute an answer to this problem. They quickly reason that, since there are 4 fourths in each unit and 2 fourths in a half, there are 10 fourths in  $2\frac{1}{2}$ . Furthermore, such students quickly recognize when to apply such thinking in real-world situations.

Obviously, not all problems can be easily solved using such intuitive strategies. Students must also

develop an understanding of, and facility with, symbolic manipulations. Nevertheless, students’ use of symbols must never become disconnected from their powerful intuitive reasoning about actual quantities. For when it does, students become overwhelmed with trying to memorize countless rules.

**The myth of coverage.** One of the major components of traditional mathematics teaching is the almost universal belief in the myth of *coverage*. According to this myth, if mathematics is “covered” by instruction, students will learn it. This myth is so deeply embedded in traditional mathematics instruction that, at each grade level, teachers feel tremendous pressure to teach huge amounts of material at breakneck speeds. The myth has fostered a curriculum that is superficially broad, and it has encouraged acceleration rather than deep understanding. Belief in this myth causes teachers to criticize as inefficient curricula that emphasize depth of understanding because students in such curricula study far fewer topics at each grade level.

But research on learning debunks this myth. Based on scientific evidence, researchers John Bransford, Ann Brown, and Rodney Cocking explain that covering too many topics too quickly hinders learning because students acquire disorganized and disconnected facts and organizing principles that they cannot make meaningful. Indeed, in his article “Teaching for the Test,” Alan Bell, from the Shell Centre for Mathematical Education at the University of Nottingham, presents research evidence showing the superiority of sense-making curricula. Consistent with Bell’s claim, TIMSS data suggest that Japanese teachers, whose students significantly outperform U.S. students in mathematics, spend much more time than U.S. teachers having students delve deeply into mathematical ideas.

In summary, because students in traditional curricula learn ideas and procedures rotely, rather than meaningfully, they quickly forget them, so the ideas must be repeatedly retaught. In contrast, in curricula that focus on deep understanding and personal sense-making, because students naturally develop and interrelate new and rich conceptualizations, they accumulate an ever-increasing network of well-integrated and long-lasting mathematical knowledge. Thus, curricula that emphasize deep understanding may cover fewer topics at particular grade levels, but overall they enable students to learn more material because topics do not need to be repeatedly taught.

**Putting skill before understanding.** Many people, including teachers, believe that students, especially those in lower-level classes, should master mathematical procedures first, then later try to understand them. However, research indicates that if students have already rote memorized procedures through extensive practice, it is very difficult for later instruction to get them to conceptually understand the procedures. For example, it has been found that fifth and sixth graders who had practiced rules for adding and subtracting decimals by lining up the decimal points were less likely than fourth graders with no such experience to acquire conceptual knowledge from meaning-based instruction.

**Believing that bright students are doing fine.** Although there is general agreement that most students have difficulty becoming genuinely competent with mathematics, many people take solace in the belief that bright students are doing fine. However, a closer look reveals that even the brightest American students are being detrimentally affected by traditional teaching. For instance, a bright eighth grader who was three weeks from completing a standard course in high school geometry applied the volume formula in a situation in which it was inappropriate, getting an incorrect answer:

Observer: How do you know that is the right answer?

Student: Because the equation for the volume of a box is length times width times height.

Observer: Do you know why that equation works?

Student: Because you are covering all three dimensions, I think. I'm not really sure. I just know the equation. (Battista, 1999)

This student did not understand that the mathematical formula she applied assumed a particular mathematical model of a real-world situation, one that was inappropriate for the problem she was presented. Although this bright student had learned many routine mathematical procedures, much of the learning she accomplished in her accelerated mathematics program was superficial, a finding that is all too common among bright students. Indeed, only 38 percent of the students in her geometry class answered the item correctly, despite the fact that all of them had scored at or above the ninety-fifth percentile in mathematics on a widely used standardized mathematics test in fifth grade. Similarly, in the

suburbs of one major American city in which the median family income is 30 percent higher than the national average, and in which three-quarters of the students were found to be at or above the international standard for computation, only between one-fifth and one-third met the international standard for problem solving.

**Misunderstanding inquiry-based teaching.** Many educators and laypersons incorrectly conceive of the inquiry-based instruction suggested by modern research as a pedagogical paradigm entailing nonrigorous, intellectual anarchy that lets students pursue whatever interests them and invent and use any mathematical methods they wish, whether these methods are correct or not. Others see such instruction as equivalent to cooperative learning, teaching with manipulatives, or *discovery* teaching in which a teacher asks a series of questions in an effort to get students to discover a specific, formal mathematical concept. Although elements of the latter three conceptions are, in altered form, similar to components of the type of instruction recommended by research in mathematics education, none of these conceptions is equivalent to the modern view. What separates the new, research-based view of teaching from past views is: (a) the strong focus on, and carefully guided support of, students' construction of personal mathematical meaning, and (b) the use of research on students' learning of particular mathematical topics to guide the selection of instructional tasks, teaching strategies, and learning assessments.

To illustrate, consider the topic of finding the volume of a rectangular box. In traditional didactic teaching, students are simply shown the procedure of multiplying the length, width, and height. In classic discovery teaching, students might be given several boxes and asked to determine the boxes' dimensions and volumes using rulers and small cubes. The teacher would ask students to determine the relationship between the dimensions and the volumes, with the goal being for students to discover the "length times width times height" procedure. In contrast, research-based inquiry teaching might give students a sequence of problems in which students examine a picture of a rectangular array of cubes that fills a box, predict how many cubes are in the array, then make the box and fill it with cubes to check their prediction. The goal would be for each individual student to develop a prediction strategy that not only is correct but also makes sense to the student.

Research shows that the formula rarely makes sense to students, and that, if given appropriate opportunities, students generally develop some type of layering strategy, for instance, counting the cubes showing on the front face of an array and multiplying by the number of layers going back. Because the layering strategy is a natural curtailment of the concrete counting strategies students initially employ on these problems, it is far easier for students to make personal sense of layering than using the formula.

Modern research further guides inquiry teaching by describing the cognitive obstacles students face in learning and the cognitive processes needed to overcome these obstacles. For instance, research indicates that before being exposed to appropriate instruction, most students have an incorrect model of the array of cubes that fills a rectangular box. Because of a lack of coordination and synthesis of spatial information, students can neither picture where all the cubes are nor appropriately mentally organize the cubes. Instruction can support the development of personal meaning for procedures for finding volume only if it ensures that (a) students develop proper mental models of the cube arrays, and (b) students base their enumeration strategies on these mental models.

**Forgetting the need for fluency.** Because of mistaken beliefs about the type of instruction suggested by research and professional recommendations, low-fidelity implementations of reform curricula often focus so much on promoting class discussions and reasoning that they lose sight of the critical need to properly crystallize students' thinking into a sophisticated and fluent use of mathematics. Although modern approaches to instruction have rightly shifted the instructional focus from imitating procedures to understanding and personal sense-making, it is clearly insufficient to involve students only in sense-making, reasoning, and the construction of mathematical knowledge. Sound curricula must also assure that students become fluent in utilizing particularly useful mathematical concepts, ways of reasoning, and procedures. Students should be able to readily and correctly apply important mathematical strategies, procedures, and lines of reasoning in various situations, and they should possess knowledge that supports mathematical reasoning. For instance, students should know the *basic number facts*, because such knowledge is essential for mental computation,

estimation, performance of computational procedures, and problem solving.

### Mysteries and Challenges

**To inquire or not to inquire.** Scientific research and professional standards recommend inquiry-based instruction because such instruction elicits classroom cultures that support students' genuine sense-making, and because such classrooms focus on the development of students' reasoning, not the disconnected rote acquisition of formal, ready-made ideas contained in textbooks. However, the critical ingredient in research-based teaching is the focus on fostering students' construction of personal mathematical meaning. This focus suggests that inquiry-based teaching that does not focus on students' construction of personally meaningful ideas is not completely consistent with research-based suggestions for teaching. It also suggests that demonstrations, and even lectures, might create meaningful learning if students are capable of, and intentionally focus on, personal sense-making and understanding. However, the question of whether, and when, lecture/demonstration—the most common mode of teaching found in American schools—can produce meaningful mathematics learning has not received much research attention. Research is needed that thoroughly investigates the role that this cherished traditional instructional tool can play in meaningful mathematics learning.

**Scientific practice versus tradition.** One of the major reasons that school mathematics programs in the U.S. are so ineffective is because they ignore modern scientific research on mathematics learning and teaching. For instance, many popular approaches to improving mathematics learning focus on getting students to “try harder” or take more rigorous courses. Or, in attempts to increase students' motivation, educators use gimmicks to try to make mathematics classes—but not mathematics itself—more interesting. But almost all of these approaches are rooted in a traditional perspective on mathematics learning; they ignore the cognitive processes that undergird mathematical sense-making. So even when these approaches are “successful,” they produce only mimicry-based procedural knowledge of mathematics.

It is not that increasing motivation and effort are bad ideas. If students are unwilling to engage in intellectual activity in the mathematics classroom, there is little chance that mathematics instruction of

any kind, no matter how sound, will induce or support their mathematics learning. However, students' motivation and effort to learn mathematics are strongly dependent on their beliefs about the value that mathematics, and school in general, has for their lives. The nature of these beliefs is determined partly by students' interaction with family, peers, schools, and community, but also by the quality of their mathematics instruction. Instruction that does not properly support students' mathematical sense-making builds counterproductive beliefs about mathematics learning.

Thus, because instructional approaches that are not based on modern scientific research on the learning process ignore the workings of the very process they are attempting to affect, they cannot support genuine mathematical sense-making or produce productive beliefs about learning mathematics. One of the greatest challenges is to determine how to get teachers, administrators, and policymakers to base their instructional practices and decisions on modern scientific research.

**Assessment.** Because commonly used assessments inadequately measure students' mathematics learning, there is a critical need for the creation and adoption of new assessment methods that more accurately portray student learning. Assessments are needed that not only determine *if* students have acquired particular mathematical knowledge, skills, and types of reasoning, but also determine precisely *what* students have learned. Such assessments must be firmly and explicitly linked to scientific research on students' mathematics learning, something that is sorely missing in traditional assessment paradigms. To be consistent with such research, assessment must focus on students' mathematical cognitions, not their overt behaviors.

*See also:* INSTRUCTIONAL STRATEGIES; MATHEMATICS EDUCATION, TEACHER PREPARATION.

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## NUMBER SENSE

What does it mean to suggest that an individual possesses good *number sense*? The ability to see patterns and relationships between numbers, to work flexibly with operations and procedures, to recognize order and relative quantities, and to utilize estimation and mental computation are all components of what is termed *number sense*. Individuals who quickly calculate a 15 percent gratuity at a restaurant, know that the seven-digit display 0.498732 is approximately  $1/2$ , or recognize that calculating  $48 \times 12$  will be less problematic than calculating  $48 \times 13$  are said to manifest qualities associated with good number sense.

Most mathematics educators agree that developing number sense is important, yet there is no single definition that is unanimously accepted. Number sense is highly personalized and thought to develop gradually. It includes self-regulation, an ability to make connections in number patterns, and an intuition regarding numbers. Number sense "refers to a person's general understanding of number and operations along with the ability and inclination to use this understanding in flexible ways to make mathematical judgments and to develop useful strategies for handling numbers and operations" (McIntosh et al., p. 3).

## Historical Background

Before the term *number sense* came into use, the word *numeracy* was coined in 1959 to denote those within the realm of mathematics who had a propensity to comprehend higher-level mathematical concepts. Yet the general public took numeracy to be the mathematical analogue of literacy, and therefore reduced its meaning to connote the propensity to comprehend basic arithmetic. A book by John Allen Paulos, *Innumeracy: Mathematical Illiteracy and Its Consequences* (1988), demonstrated the dangers of a population that lacks a basic understanding of mathematics and that views the subject as enigmatic due to poor education or psychological anxiety. Many of those involved with mathematics education felt that math pedagogy was in need of serious reform due to a superficial acquisition of knowledge based merely on a procedural understanding of mathematics (e.g., “just follow this algorithm”).

In the late 1980s and the 1990s researchers and educators saw a heightened need to examine the role of computation as it related to elementary mathematics, reflecting on both the process and result of employing algorithmic strategies. It was during this period that the term *number sense* gained wide acceptance, epitomizing the desired outcome for the teaching and learning of mathematics. Yet due to its implicit nature, succinctly describing how number sense is revealed can be problematic. The mathematician Stanislas Dehaene, in his 1997 book *The Number Sense: How the Mind Creates Mathematics*, states, “Our number sense cannot be reduced to the formal definition provided by rules or axioms” (p. 240). In addition, James Greeno relates, “We recognize examples of number sense, even though we have no satisfactory definition that distinguishes its features” (p. 171).

Similar to the ambiguous implications of common sense, number sense is open to a variety of interpretations. The National Council of Teachers of Mathematics, in *Curriculum and Evaluation of Standards for School Mathematics* (1989), defines number sense as “an intuition about numbers that is drawn from all the varied meanings of number. It has five components: (1) having well-understood number meanings, (2) developing multiple relationships among numbers, (3) understanding the relative magnitudes of numbers, (4) developing intuitions about the relative effect of operating on numbers, (5) developing referents for measures of common objects” (pp. 39–40). However, others would argue

that such descriptors and boundaries for the nature of number sense do not characterize it in forms that guide instruction. Lauren Resnick and Judith Sowder categorize number sense as an open-ended form of reasoning that is nonalgorithmic, complex, and involves uncertainty. These multiple views are highlighted merely to show the somewhat amorphous nature of number sense and qualities ascribed to it.

## Examples of Number Sense

Most often, number sense is recognized through example. One ascribed attribute is the ability to use numbers flexibly when mentally computing an abstract numerical operation. This flexibility evolves through infixing connections and relationships between numbers and their representations. By augmenting the number of connections to analogous situations, more flexibility and utility ensues. For example, a simple computation involving subtraction is the problem  $7 - 4$ . The ability to place this abstraction of symbols into multiple situations signifies a certain number sense, such as: (1) a set or group—seven cookies take away four cookies; (2) a distance—in order to move from space 4 to space 7 in a board game, 3 moves are required; (3) a temperature reading—to change from  $7^{\circ}\text{C}$  to  $4^{\circ}\text{C}$ , the temperature must drop  $3^{\circ}\text{C}$ . These mental models seem natural to most adults and children who have been guided to think with such models. With the simple transition of this problem, reversing the minuend and subtrahend mandates an ability to move into negative numbers:  $4 - 7$  equals what? For a child who has only the group mental model (4 cookies take away 7 cookies), this operation seems problematic or impossible. A child who has multiple models can utilize the one that gives a more intuitive representation of the abstract operation—if the temperature is  $4^{\circ}\text{C}$  and then falls  $7^{\circ}\text{C}$ , then the new temperature would be negative (or minus)  $3^{\circ}\text{C}$ .

In addition, being able to compare the relative size of numbers would be a sign of number sense. Students should recognize that 4,562 is large compared to 400 but small compared to 400,000. There should also be emphasis placed on providing context to compare large numbers. For example, a million and a billion are ubiquitous quantities in many economies. Therefore, to recognize that it takes roughly eleven-and-a-half days for a million seconds to pass and nearly thirty-two years for a billion seconds to pass connotes a deeper appreciation for the relative magnitude of quantities.

Number sense extends beyond the set of whole numbers and integers. Consider a more frequent area of concern for many school children, fractions. Consider the following example:  $\frac{2}{3} + \frac{1}{4}$ . For conceptual understanding, fractions and ratios necessitate the skill of proportional reasoning in order to make sense of this abstract representation. Considering a part-to-a-whole relationship, the adroit student can recognize the necessity to compare equal size parts (and therefore find a common denominator) before total parts can be computed:

$$\frac{2}{3} + \frac{1}{4} = \frac{8}{12} + \frac{3}{12} = \frac{11}{12}$$

In contrast, a child who has no intuitive grasp for fractions will most likely commit the error of adding the numerators and adding the denominators. This algorithmic error might also be attributed to those who rely on a strictly procedural understanding, because this procedure is correct when it relates to multiplying fractions,

$$\left( \frac{2}{3} \times \frac{1}{4} \text{ does equal } \frac{2 \times 1}{3 \times 4} = \frac{2}{12} \text{ or } \frac{1}{6} \right)$$

and students often confuse these two rules. Furthermore, this nonconventional result for addition can be justified with concrete examples. If Barry Bonds plays in both games of a double-header, and he bats 2 for 3 in the first game and 1 for 4 in the second game, then his correct batting average for the day is 3 for 7, which, in terms of the traditional procedure for adding fractions, is not conventionally correct:

$$\frac{2}{3} + \frac{1}{4} = \frac{2+1}{3+4} = \frac{3}{7} \text{ or } \approx 0.429$$

Therefore, number sense involves knowing *when* a specific model is applicable.

Sometimes, number sense can be grasped intuitively through visual clues as well. Some people have an affinity for understanding visual models, which they might then internalize and incorporate into their personal number sense. Figure 1 contains no symbolic representation of numerals; rather, actual quantities are depicted as the objects themselves. The question at hand is to compare the available cake for girls and for boys and determine in which of the two groups does an individual receive more cake. Students who are versed in strictly procedural understandings might set up ratios that symbolize

the situation, then try to rely on memorized algorithms to simplify the symbols:

$$\begin{aligned} & \frac{3}{8} \text{ compared with } \frac{1}{3} \\ & \text{assume equality } \therefore \frac{3}{8} = \frac{1}{3} \\ & \text{cross multiply } \rightarrow \frac{3}{8} = \frac{1}{3} = 3 \cdot 3 = 8 \cdot 1 \\ & \therefore 9 > 8 \text{ so } \frac{3}{8} > \frac{1}{3} \end{aligned}$$

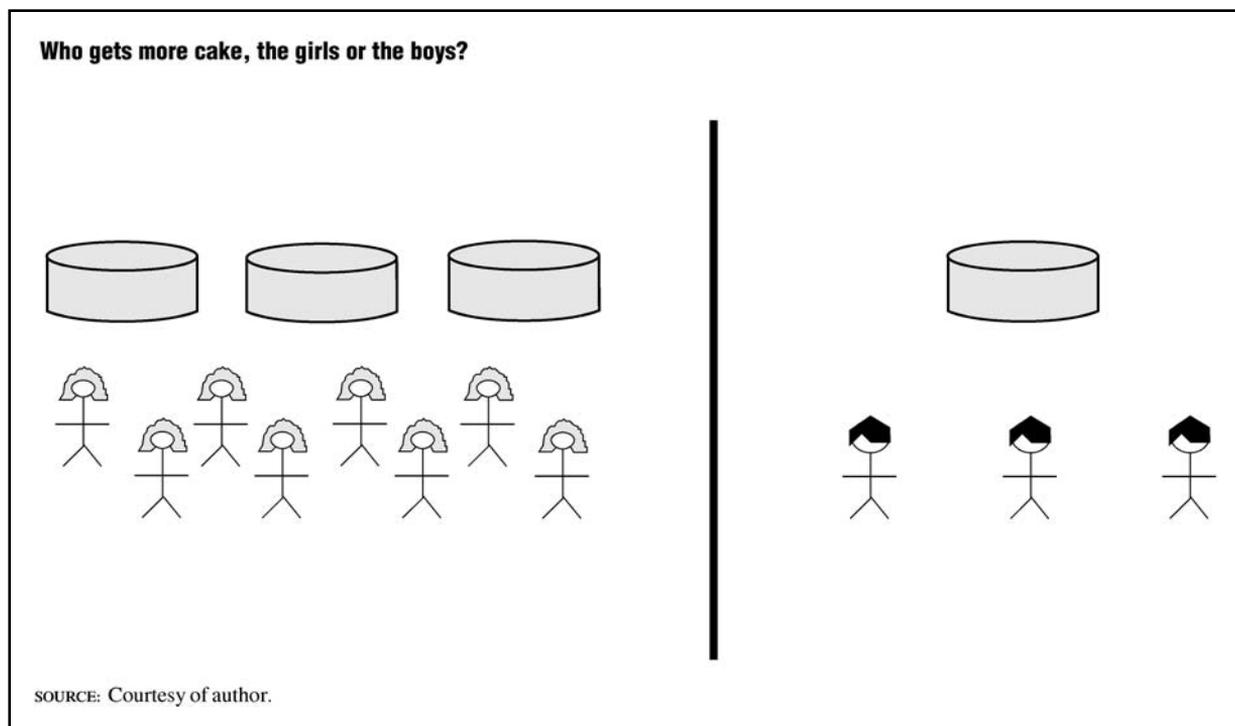
Someone with a more flexible understanding might simply notice that for the boys there is one cake for a group of three; therefore, an equal ratio based on three cakes would be a group of nine girls. From this equivalency, they would deduce that since there are less than nine girls, then each girl must receive more cake than each boy.

### Developing Number Sense

The acquisition of number sense is often considered to develop as stages along a continuum, rather than as a static object that is either possessed or not. Dehaene reports that most children enter preschool with a well-developed understanding of approximation and counting. Dehaene presents research from cognitive psychologists, such as Jean Piaget, Prentice Starkey, and Karen Wynn, suggesting contradictory results about what skills are innate, when skills are developed, and how they are acquired. Part of the complexity to succinctly describe a development of number sense stems both from the subtlety of multiple factors it encompasses and the lack of explicit demonstrability. For example, with the problem  $18 \times 5$ , someone demonstrating number sense might recognize the relationship of the quantity 5 compared to 10 is simply half, and knowing that, taking half of this result would give the desired result, 90. This sophisticated innovation may be entirely internal, with only the final solution given and no account of the process. Although we can recognize number sense when we see it, the question as to how one's cognitive process completes individual tasks is less certain. It is similar to mathematicians' demands for valid proofs to be *rigorous*, though they are unable to adequately describe what is meant by *rigor*.

There are several factors regarding the development of number sense that mathematics educators have come to agree upon from empirical research during the 1990s. Results from Paul Cobb et al., Judith Sowder, Sharon Griffin and Robbie Case, and

FIGURE 1



Eddie Gray and David Tall have provided a more clearly agreed upon framework regarding advantageous skills for building number sense. Sowder notes that computational estimation and mental computation are important links to building number sense. Both Cobb et al. and Greeno state that both the use of mental models and creating a conceptual environment are necessary facilitators to make these links. Educators see a necessity to incorporate rich examples that guide students toward conceptual understandings, instead of superficial procedures that are not considered malleable. Developing mental models and utilizing mental computation are increasingly considered vital skills in mathematics; however research about reasoning with mental models is in a preliminary state.

### Current Trends and Their Effects on Mathematics Education

The twentieth century saw its share of reforms in mathematics pedagogy—from the algorithmic framework of connectionist theory attributed to Edward L. Thorndike to the axiomatic formalization of modern mathematics pursued by Bourbaki (a pseudonym taken by a group of French mathematicians) and Piaget's constructivist theory, which dominated the second half of the century and em-

phasized individuals as constructing their own knowledge through a process of abstraction, generalization, and concept formation. The concern in the 1990s surrounding a superficial (or merely procedural) understanding of mathematics with a lack of conceptual understanding was the catalyst that galvanized a push toward interpreting mathematics not as rote and memorization, but as problem solving, intuitive reasoning, and pattern recognition. The concept of number sense sprang forth from these shifts in philosophy regarding mathematics education. With this shift, a question arises: What significance does number sense have on mathematics education and pedagogy?

Another difficulty in encapsulating pedagogy that develops number sense stems from the fact that most mathematicians fail to recognize their own number sense and how they employ it. Their ability to move beyond procedures and definitions into the realm of concepts is rarely a conscious process. To a mathematician, the act is incorporated into their thinking process such that its nature becomes an involuntary action, like blinking or breathing. The mathematical paradox of striving for efficiency, both in notation and procedures, can oftentimes add to a lack of understanding for the student. To commu-

nicate efficiently, all those involved must be fluent in the language of mathematics.

Obviously, some students are successful in mathematics regardless of the pedagogical approach used. If this were not the case, the explosion within the new fields of mathematics that occurred after 1950 would not have occurred. Philip Davis and Reuben Hersh attest that more than half of all of mathematics was discovered after World War II. The question, then, is what percentage of those who completed traditional education were finding this success. Gray and Tall speculate that only 30 percent of students were able to develop an intuitive grasp of mathematics and higher-order thinking with previous pedagogies. So what about the other 70 percent? The research by Paul Cobb et al., Sharon Griffin and Robbie Case, and others consider this a central focus of current pedagogical issues.

This search for conceptual understanding seems to be the focus of research and pedagogy in the beginning of the twenty-first century. Empirical evidence supports a curriculum that stresses practical, intuitive, and rich real-world examples within mathematics. The Rightstart project, developed by Case and Griffin in 1997, is one such example. Their research focused on children living in urban, low-income communities who were lagging behind their peers in terms of age-level mathematics abilities. After participating in forty twenty-minute sessions that incorporated numerical games and concrete materials (using thermometers, board games, and number lines) these children were propelled to the top of their class, and they maintained this placement over a longitudinal study lasting several years. This success was achieved by focusing on two main goals: (1) to help students to develop a set of symbolic states and operations that are intimately tied to real-world quantities, and (2) to develop students' explicit knowledge of notational systems in conjunction with their implicit and intuitive knowledge, thus ensuring that these two types of knowledge act as natural companions to each other. Both of these goals coincide with the parameters of developing number sense.

The mathematician Warren McCulloch (1965) once observed, "What is a number, that a man may know it, and a man, that he may know a number?" The answer to this question, which has been posed in various forms since antiquity, changes with the understanding of mathematics. Since the 1990s, mathematics educators have been researching how

number sense ameliorates students' understanding of mathematics. Mathematics educators have embraced this shift toward a pedagogy that strives to merge intuition, formal notation, and conceptual understanding. Number sense helps students eschew the notion that mathematics is merely a collection of rules to memorize. Number sense fosters students' ability to make judgments about the reasonableness of solutions and to build on their intuitions and insights. Number sense helps convince students that mathematics makes sense.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION; MATHEMATICS LEARNING, *subentries on* MYTHS, MYSTERIES, AND REALITIES, NUMERACY AND CULTURE.

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## NUMERACY AND CULTURE

In simple terms, *numeracy* can be defined as the ability to understand basic mathematical concepts and operations. Numeracy thus encompasses a wide range of topics, including formal symbolic mathematics, cultural practices, children's intuitions about mathematics, and everyday behaviors mediated by mathematics. There are different forms of numeracy,

and their realization in various cultural contexts has commonly been called *ethnomathematics*. Researchers have explored how pedagogy can be changed to incorporate cultural practices related to numeracy.

### Numeracy in Cultural Context

All cultures have developed various representational systems that provide ways of thinking about quantitative information. Different systems highlight different aspects of knowing. For example, the Oksapmin of Papua New Guinea have a counting system that uses body parts to express numbers from one to twenty-seven. Though no base is used in this system, it is adequate when trading goods using a one-to-one correspondence. It is inadequate, however, for computing or counting objects beyond twenty-seven. A contrasting example is the enumeration system of many Asian languages that is congruent to the structure of base ten. Asian children using this system tend to recite more number names in correct sequence and show earlier mastery of place-value concepts (i.e., relations among number words, multi-digit numerals, and quantities) than children using less regular base-ten systems.

In addition to enumeration systems, cultures have developed representational systems for locating (geometry, navigation), measuring, designing (form, shape, pattern), playing (rules, strategies), and explaining (abstraction). These representational systems entail beliefs and values associated with numeracy, and they support numeracy activities using tools such as abaci, clocks, and digital computers. A broad array of human activities to which mathematical thinking is applied is thus interwoven with cultural artifacts, social conventions, and social interactions.

Cultural variations in mathematical behavior are also seen in the ways people use mathematical representations in their everyday activities. For example, children working as street vendors in Brazil were found to use different computational strategies when selling than when doing school-like problems. While selling they used such strategies as oral computation, decomposition, and repeated groupings, whereas when given school-like problems they used standard algorithms. These children were found to be much more accurate in the context of selling than in the school setting. Research in other domains, such as measurement and proportional reasoning, further confirms that informal mathematics can be

effective and does not depend upon schooling for its development.

Mathematics is used in everyday life in pursuit of goals that differ from the goals of academic mathematics found in schools and universities. This type of mathematics is often referred to as *informal*, or *naive*, mathematics. Representational systems and practices deriving from everyday activities are modified as new goals emerge. Thus, everyday mathematics is an adaptive system that can be used to creatively meet new challenges. For example, as the Oksapmin became more involved with the currency system, their body counting system described earlier began to change toward a base system. Although knowledge acquired through informal experiences are often distinguished from school mathematics, skills developed in the informal domain can be used to address goals and practices in the school setting. For example, the most successful elementary students in Liberian schools combine the strategies from their indigenous mathematics with school algorithms. Use of informal mathematics in school settings, therefore, may be an effective way to help children learn school mathematics. Several authors have argued for building bridges between informal and formal mathematics.

Although most research on numeracy and culture has been done outside of the United States, understanding informal and everyday mathematics is important for educators in the United States for a number of reasons. According to the census conducted in October 1999, about 2.5 million foreign-born children came to U.S. schools, bringing with them different mathematics representational systems and associated computational skills. In addition, everyday mathematical activities and language repertoires for American children of different ethnic groups have been shown to differ both across groups and when compared to the school curriculum. In the case of some groups, such as Native Americans, mathematical reasoning derived from cultural traditions is distinct from that of the schools, posing major conceptual problems for these children in the regular school curriculum.

### Research on Curricular Change

A number of projects have attempted to make mathematics instruction more culturally relevant for groups of children who have traditionally underachieved in the U.S. school system. Mary Brenner has worked with teachers to improve mathematics

teaching for Native Hawaiian children. She interviewed parents and children and observed children in everyday settings to determine what kinds of numerical skills children brought with them to school. At the kindergarten level, adapting the existing curriculum consisted of reordering topics to begin with counting and computation (areas of student strength), more use of the students' nonstandard dialect in mathematics lessons, and more emphasis upon hands-on and game-like activities. At the higher grade levels, adaptations focused more on including activities, such as a school store, that enabled students to move from informal mathematical activities to more standard mathematical practices.

Ethnographic research has revealed many mathematically rich activities in everyday adult life. Luis Moll and James Greenberg have developed a culturally relevant pedagogy for Latino students by building classroom activities from the "funds of knowledge" that are present in their family networks. Teachers and researchers worked together to plan lessons based upon ethnographic data, and they also invited parents to teach. New mathematics units, such as one involving candy making, were developed as the contexts for teaching specific mathematical ideas.

In a different approach, Jerry Lipka and Ester Ilutsik, who work with the Yup'ik people in Alaska, advocate giving the community control over the process of curriculum development. The goal is to make the schools a local institution, rather than having schools act as representatives of the dominant society. Researchers, Yup'ik teachers, and tribal elders have worked together to translate Yup'ik mathematical knowledge into a form that can be utilized in classrooms. Like the Funds of Knowledge project, this group has analyzed everyday adult activities, such as fish camps, to understand the culturally relevant mathematics. In addition, they have worked to better understand the Yup'ik number system and how it can be used in the classroom. The goal is to create an entire mathematics curriculum based upon Yup'ik culture, rather than adapting existing curricula.

Gloria Ladson-Billings has conducted research on culturally relevant mathematics instruction for African-American children. This research has highlighted a variety of attitudinal changes that teachers must make in their teaching, including expecting higher academic standards for students, emphasizing

ing cultural competence, and instilling critical consciousness in students.

### Teaching and Cultural Context

Teaching is an inherently cultural activity; it is situated in a bed of routines, traditions, beliefs, expectations, and values of students, teachers, administrators, parents, and the public. Thus, the inclusion of cultural and everyday mathematical knowledge in school mathematics must take into account the school-based assumptions about the appropriate way to teach mathematics.

For example, cultural assumptions about effective ways to improve teaching in Japan include life-long professional development activities carried out by ordinary teachers. Typically, a few teachers with similar goals and interests form a study group. They select a few lessons that need improvement and analyze what is and is not working in the current practice in terms of learning goals for students, students' misunderstandings, and use of activity. They gather information on the topics by reading about other teachers' ideas, as well as other sources of recommended practices. A revised lesson is then planned, and one of the teachers from the group implements it while the others observe and evaluate what is and is not working. This process of evaluation, planning, and implementation is repeated until a satisfactory lesson is crafted, and may consume an entire school year. This is in sharp contrast to the type of model lesson developed by expert teachers and handed down to ordinary teachers in the United States. This is also different from the "one-day, make-it-and-take-it" type professional development workshops often implemented in the United States—a practice whose long-term effectiveness is questionable.

### Ideas for Teachers

The importance of raising awareness of cultural diversity among teachers has been extended to the teaching of mathematics in the United States. For example, in the mid-1990s a task force for the National Council of Teachers of Mathematics recommended the publication of a series, *Changing the Faces of Mathematics*, in order to help make the slogans of *Mathematics for All* and *Everybody Counts* real. Particular efforts were made to focus on education of ethnic and cultural minority students. Included in this series are volumes on African-American perspectives, Latino perspectives, and Asian-American and Pacific Islander perspectives.

Each of these volumes includes articles that discuss successful pedagogical strategies for culturally diverse groups of students. The volumes also feature articles that may help educators develop a deeper understanding of the cultural differences that influence classroom dynamics, behavior, and environment.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION; MATHEMATICS LEARNING, *subentries on* LEARNING TOOLS, MYTHS, MYSTERIES, AND REALITIES, NUMBER SENSE.

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## WORD-PROBLEM SOLVING

A *word problem* is a verbal description of a problem situation wherein one or more questions are posed, the answers to which can be obtained by the application of mathematical operations to information (usually numerical data) available in the text. In its most typical form, a word problem describes the essentials of some situation assumed to be familiar to the solver. Within the text, certain quantities are explicitly given, while others are not. The student is required to give a numerical answer to a stated question by making exclusive use of the quantities given—and of the mathematical relationships between these quantities. Simple examples include: “Pete wins 3 marbles in a game and now has 8 marbles. How many marbles did he have before the game?” and “One kilogram of coffee costs 12 euros. Susan buys 0.75 kilogram of coffee. How much does she have to pay?”

Despite its label, a word problem need not constitute a *problem* in the cognitive-psychological sense of the word—higher-order thinking going beyond the application of a familiar routine procedure is not necessarily required. Indeed, in typical elementary mathematics instruction, many word problems provide thinly disguised practice in adding, subtracting, multiplying, or dividing.

### Structural Dimensions of Word Problems

Several structural dimensions can be distinguished in word problems that affect their difficulty and how they are solved:

- *Mathematical structure*, which includes the nature of the given and unknown quantities of the problem, and the mathematical operations by which the unknowns can be derived from the givens.
- *Semantic structure*, which includes the ways in which an interpretation of the text points to

particular mathematical relationships. For example, addition or subtraction is indicated when the text implies a combination of disjoint subsets into a superset, a change from an initial quantity to a subsequent quantity by addition or subtraction, or the additive comparison between two collections.

- *Context*, meaning the nature of the situation described. For example, an additive problem involving combination of disjoint sets might deal with physically combining collections of objects or with conceptually combining collections of people in two locations.
- *The format*, meaning how the problem is formulated and presented. Format involves such factors as the placement of the question, the complexity of the lexical and grammatical structures, the presence of superfluous information, and so on.

Over several decades, numerous studies have analyzed the role of these task variables on the difficulty of problems, on the kind of strategies students use to solve these problems, and on the nature of their errors, particularly for simple word problems involving addition and subtraction or multiplication and division.

### Roles of Word Problems

Why does school mathematics include word problems? Perhaps simply because they are there, and have been for many centuries. Indeed, their role in mathematics education dates back to antiquity; the oldest known being in Egyptian papyri dating from 2000 B.C.E., with strikingly similar examples in ancient Chinese and Indian manuscripts. The following example is from the first printed mathematical textbook, a Treviso arithmetic of 1478: “If 17 men build 2 houses in 9 days, how many days will it take 20 men to build 5 houses?”

Despite this striking continuity across time and cultures, until recently there was little explicit discussion of why word problems should be such a prominent part of the curriculum, or of the variety of purposes behind their inclusion. Some have a puzzle-like nature and act as “mental manipulatives” (Toom, p. 36) to guide thinking within mathematical structures. Such problems are intended to train students to think creatively and develop problem-solving abilities. By contrast, the type mainly used educationally consists of a text representing (at

least putatively) a real-world situation in which the derived answer would “work.” Ostensible goals for the use of this type include offering practice for the situations of everyday life in which the mathematics learned will be needed, thereby showing students that the mathematics they are learning will be useful.

### Apparent Suspension of Sense-Making

In recent years, the characteristics, use, and rationale of word problems have been critically analyzed from multiple perspectives, including linguistic, cultural, and sociological perspectives. In particular, it has been argued by many mathematics educators that the stereotyped and artificial nature of word problems typically represented in mathematics textbooks, and the discourse and activity around these problems in traditional mathematics lessons, have detrimental effects. Many observations have led to the conclusion that children answer word problems without taking into account realistic considerations about the situations described in the text, or even whether the question and the answer make sense. The most dramatic example comes from French researchers who posed children nonsensical questions such as: “There are 26 sheep and 10 goats on a ship. How old is the captain?” It was found that the majority of students were prepared to offer an answer to such questions. In another study, thirteen-year-old students in the United States were asked the following question: “An army bus holds 36 soldiers. If 1,128 soldiers are being bussed to their training site, how many buses are needed?” The division was correctly computed by 70 percent of the students to get a quotient of 31 and remainder 12—but only 23 percent gave the appropriate answer, “32 buses.” Nineteen percent gave the answer as “31 buses” and 29 percent gave the answer as “31, remainder 12.”

To explain the abundant observations of this “suspension of sense-making” when doing word problems, it has been suggested by Erik De Corte and Lieven Verschaffel that the practice surrounding word problems is controlled by a set of (largely implicit) rules that constitute the “word-problem game.” These rules including the following assumptions: (1) every problem presented by the teacher or in a textbook is solvable and makes sense; (2) there is only one exact numerical correct answer to every word problem; and (3) the answer must be obtained by performing basic arithmetical operations on all numbers stated in the problem.

### Reconceptualizing Word Problems as Modeling Exercises

One reaction to criticisms of traditional practice surrounding word problems in schools is to undermine the approach that allows students to succeed using superficial strategies based on the “rules.” This is done by breaking up the stereotypical nature of the problems posed. For example, by including problems that do not make sense or contain superfluous or insufficient data, students can be guided to interpret word problems critically.

A more radical suggestion is to treat word problems as exercises in mathematical modeling. The application of mathematics to solve problem situations in the real world, termed *mathematical modeling*, is a complex process involving several phases, including understanding the situation described; constructing a mathematical model that describes the essence of the relevant elements embedded in the situation; working through the mathematical model to identify what follows from it; interpreting the computational work to arrive at a solution to the problem; evaluating that interpreted outcome in relation to the original situation; and communicating the interpreted results.

This schema can be used to describe the process of solving mathematical word problems as application problems. In the simplest cases, situations may be directly modeled by addition, subtraction, multiplication, or division, and children need to learn the variety of prototypical situations that fit unproblematically onto these operations. In other cases, the modeling is not so straightforward if serious attention is given to the reality of the situation described. In the example from the Treviso arithmetic, attention would be drawn to the assumptions that underpin an answer based on direct proportionality—and to the fact that the answer thus derived would at best provide a rough approximation in the real situation. In the bus problem, the “raw” result of the computation has to be appropriately refined in the context of the situation described.

### Reforming the Teaching of Word Problems

In line with the above criticisms and recommendations with respect to the traditional practice surrounding word problems in schools, researchers have set up design studies to develop, implement, and evaluate experimental programs aimed at the enhancement of strategies and attitudes about solv-

ing mathematical word problems. In these studies, positive outcomes have been obtained in terms of both outcomes (test scores) and underlying processes (beliefs, strategies, attitudes). Characteristics common to such experimental programs include:

- The use of more realistic and challenging tasks than traditional textbook problems.
- A variety of teaching methods and learner activities, including expert modeling of the strategic aspects of the competent solution process, small-group work, and whole-class discussions.
- The creation of a classroom climate that is conducive to the development in pupils of an elaborated view of mathematical modeling, and of the accompanying beliefs and attitudes.

To some extent, these characteristics of a new approach to word-problem solving are beginning to be implemented in mathematical frameworks, curricula, textbooks, and tests in many countries. Much remains to be done, however, to align the teaching of word problems with widely accepted principles that children should make connections between mathematics and their lived experience—and that mathematics should make sense to them.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION; MATHEMATICS LEARNING, *subentries on* COMPLEX PROBLEM SOLVING, LEARNING TOOLS, MYTHS, MYSTERIES, AND REALITIES, NUMBER SENSE.

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BRIAN GREER  
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## MAYS, BENJAMIN (1895–1984)

Benjamin Elijah Mays was born to former slaves Hezekiah and Louvenia (Carter) Mays in Epworth, Greenwood County, South Carolina. The youngest of eight children, he became a theologian, theoretician, orator, author, college president, civil rights activist, and school board president. Casting himself as a "rebel," he greatly influenced the country and the world with his ideals and activities.

### The Formative Years

The 1890s was an especially difficult period for blacks as whites in the South were angry in the aftermath of Reconstruction: lynchings and violence were common. Born on an isolated cotton farm, Mays's earliest recollections were of the Phoenix Riots in Greenwood County during November 1898 in which several black people were lynched. He wrote in his autobiography, "That mob is my earliest memory" (p. 1). Mays's intellectual prowess became known in church and school. He, however, attended the Brickhouse School only from November to February as he was needed to help his sharecropping family bring in the harvest. In 1911 he abandoned the farm to enroll in the High School Department of South Carolina State College, graduating as valedictorian at age twenty-one in 1916.

Following one year of study at Virginia Union University, Mays tired of the bitter racial climate in the South, and gained admission to Bates College in Lewiston, Maine. He worked as a Pullman porter before winning scholarships. Encouraged by the relatively liberal racial climate of New England, Mays flourished. He graduated from Bates with honors in 1920 and became committed to a life of teaching and learning. After one year of sampling assorted graduate courses at the University of Chicago, Mays taught psychology, math, and religion at Morehouse College in Atlanta from 1921 to 1923. While in Atlanta, he was ordained a Baptist minister in 1922. He returned to the University of Chicago's School of Religion and completed a master's degree in New Testament Studies in 1925.

Mays returned to teach English at South Carolina State College for a year. Hoping to make a difference in the lives of deprived black people, he then moved, with his new wife Sadie Gray, to the Urban League in Tampa, Florida for two years. Working with his wife, a case worker, his title at the Urban League was executive secretary of the Family Service

## MATHEMATICS, TEACHING OF

See: MATHEMATICS EDUCATION, *subentry on* TEACHER PREPARATION; MATHEMATICS LEARNING.

Association. After two years, he accepted a position as student secretary of the YMCA in Atlanta, where he hoped to once again influence the larger community.

In 1930, the Institute of Social and Religious Research, funded by the Rockefeller family, embarked on the most ambitious study to date on the black church and its influence on the African-American population. Mays and Joseph W. Nicholson, a minister in the Colored Methodist Episcopal (CME) Church, conducted a fourteen-month study of 691 churches in 12 large cities. That study would establish Mays as an important scholar and “rebel” theoretician.

### Early Religious Scholarship

The result of the Mays/Nicholson collaboration was published in 1933 as the iconoclastic work *The Negro's Church*, which was premised upon the church's importance at the center of black culture and social life. The authors argued that the church belonged to the Negro and provided a place of refuge, expression, democracy, fellowship, and freedom surrounded by the lack of all those things elsewhere. They spoke of the “genius” of the black church. Mays (and Nicholson), however, also found that it possessed significant constraints.

Throughout the work, the authors explored sensitive and rarely addressed issues such as denominational rivalry, misplaced ministerial ambition, poor theological training, irrelevant sermon content, unnecessary emotionalism, appeals to fear, and finally the “overchurching” of the Negro. The provocative work concluded that “analysis reveals that the status of the Negro church is in part the result of the failure of American Christianity in the realm of race-relation” (p. 278).

This critique, followed by a companion book, *The Negro's God: As Reflected in His Literature* (1938), catapulted Mays to a new level of scholarship.

### The Howard Years

In 1932 Mays had returned to the University of Chicago to complete his doctorate in three years. One year before completing the doctorate, Mordecai Johnson, the respected president of Howard University in Washington, D.C., persuaded Mays to assume the deanship at Howard's School of Religion. From 1934 to 1940 Mays worked to elevate that depart-

ment to one of national prominence. Increased enrollment, enriched curriculum, a better-credentialed faculty, higher revenues, and improvements to the physical plant and library gained the department a Class “A” rating from the American Association of Theological Schools and national attention for Mays.

During the Howard years, Mays traveled widely, expanding his network of colleagues and friends, working to strengthen other black colleges, and most importantly developing his version of a liberation theology. Mid-1930s visits to Europe, China, North Africa, the Middle East, Asia, and the Indian subcontinent provided Mays with a startling look at poverty, hatred, oppression, racism, and caste. His personal audience with Mahatma Gandhi, whom he already admired, reinforced his belief in nonviolence as an “active force” for social change. Mays emerged from these experiences as one of the most influential black men in the South. In early 1940, banker and Morehouse trustee John Wheeler was dispatched by the Board of Trustees to recruit Mays for the presidency of the school. Reluctant to leave Howard, Mays spent months seeking the advice of leading educators. With the blessing of Mordecai Johnson he became president of Morehouse on August 1, 1940.

### Morehouse College

Benjamin Mays became the sixth president of Morehouse College, which would be his home base for the next twenty-seven years. A man of great faith and vision, Mays was also politically astute. He understood that the plight of black people had always been at the center of the social, political, economic, and cultural life of the South and the nation. He sensed that Morehouse College could and would play an important role in the lives of black America, and ultimately the country. Although its student body was relatively small and resources meager, the school was situated in an important place at an important time.

By 1940 Morehouse College was well established among the nation's historically black colleges. The notion of an intellectually capable “Morehouse Man” was emergent. Morale problems had, however, surfaced as the school was seen by students and alumni as falling behind the other black colleges of Atlanta. Between 1930 and 1940 the faculty at Atlanta University increased by 220 percent and the faculty at Spelman increased by 78 percent, while Morehouse's faculty had decreased by 16 percent. Morehouse students were taught by Atlanta University and Spelman faculty. In addition, uncollected

tuition and a feeble endowment inhibited expansion.

As president, Mays immediately began exhorting alumni to increase contributions. Secondly, he appealed for contributions from philanthropic foundations and friends of the college. Most importantly, he began aggressively collecting the considerable tuition arrears from students. Students were not allowed to register for classes, obtain transcripts, or graduate until debts were cleared. Those efforts earned Mays the nickname “Buck Benny” around the campus. His obsession with quality faculty, previously noted during his years at Howard, quickly became evident at Morehouse.

He searched widely for faculty with doctorates. Despite social and residential problems in rigidly segregated Atlanta, white professors were welcomed by Mays. Where high-quality professors could not be hired, Mays offered existing faculty financial support to seek higher degrees.

During Mays’s presidency, the campus land area increased from 10.7 to 20.2 acres. New buildings included five small dormitories housing 115 men, a large dormitory housing 120 men, a physical educational and health building, an infirmary, a dining hall, a small academic building, a meditation chapel, a dormitory for students enrolled in the Morehouse School of Religion, a music studio, and three faculty apartments.

### The Morehouse Mentor

Beyond those accomplishments, Benjamin Mays is far better known for his spiritual guidance and intellectual leadership. Reared in an environment of hatred, Mays could talk of uplift because he lived it. The testimony of former students and public figures such as Martin Luther King Jr., Julian Bond, Lerone Bennett and many others suggests that his students listened to his exhortations.

Leadership and the pursuit of further education became watchwords at Morehouse. Its students became distinguished by their accomplishments after graduation. By the mid-1960s more than half the school’s graduates had entered graduate or professional schools; of its graduates, 118 had earned Ph.D.s, and by 1967, more than 300 Morehouse graduates earned M.D. and D.D.S. degrees. By that time Morehouse graduates held teaching or administrative positions at 58 black and 22 white institutions of higher learning. Twenty-one institutions of

higher learning had Morehouse graduates as president. Between 1945 and 1967 Morehouse ranked second among Georgia institutions in the production of Woodrow Wilson Fellows. Mays’s figures also reveal a large number of Morehouse graduates occupying high administrative positions in school districts scattered around the country.

Mays was particularly proud of the School of Religion, where he invested significant personal attention. Several of its graduates, including Martin Luther King Jr., Howard Thurman, Dillard H. Brown, Thomas Kilgore, and George Kelsey, have been singled out for high honors and distinction.

With great pride, Mays identified the group of Morehouse graduates who occupied high profile positions in the world of politics, law, and business. Widely known scholars and writers such as Lerone Bennett Jr., James Birnie, Benjamin Brawley, Michael Lomax, and Ira Reid inspired Mays to petition for the establishment a Phi Beta Kappa chapter at the college which was granted in 1967.

No discussion of Mays at Morehouse would be complete without mention of chapel. Chapel was a longstanding tradition at Morehouse, where students were required to attend every day except Saturday. Mays used chapel to build community and expand learning outside the classroom. Martin Luther King Jr. recalled chapel and Mays’ motivational talks as among his most inspirational college experiences.

### Philosopher and Liberation Theologian

Mays developed a religious philosophy of morality, justice, and humanity rooted in the quest for freedom. While the term *liberation theology* perhaps belongs to a later time period, it is nevertheless applicable to Mays’s views.

Beyond an individual morality, Mays reflected on the wider role of the black church in the lives of its people, concluding that the church must go beyond providing comfort, freedom of expression, and socializing. It must engage a social consciousness offering visions of freedom, empowerment, and equality. It must go beyond the personal and into the political.

Stephen Preskill (1996) sees Mays’ views as the ideological antecedent of the liberatory views of Cornel West, a contemporary African-American scholar-activist and social critic. He examines three propositions advanced by West: (1) human discern-

ment, or understanding the present from a social analysis of the past, more specifically understanding how to practice democracy in a racist society; (2) human connection, embracing the lived concrete realities of oppressed people; and (3) human hypocrisy, exposing the contradictions between deeds and words. In all cases Preskill traces West's three propositions to Mays' affirmation of the common people's right to make change.

Mays's nascent liberation theology is outlined in his little-known work *The Negro's God: As Reflected in His Literature* (1938). In this study Mays explores portrayals of God in a wide variety of biblical, classical, political, and sociological literature. He identifies salient themes recurring in the literature, arguing that these themes resonate with and contribute to the prevailing culture of African Americans. Mays clusters and describes Negro views about God into three categories: traditional biblical themes; justice and equality; and social change.

Mays retired from Morehouse in 1967. By then the modern civil rights movement was well under way. Mays remained a quiet mentor, staying in touch and offering advice to his former students who were leading the movement. Additionally, he sat on many committees and commissions, including the Ford Foundation and the Department of Health, Education, and Welfare, advising presidents, governors, and policymakers on civil rights matters.

Upon the assassination of Dr. Martin Luther King, Mays concluded his eulogy for his former student and long-standing friend by saying, "If physical death was the price he had to pay to rid America of prejudice and injustice, nothing could be more redemptive."

His last great task was to serve the city he always saw as crucial in American race relations. He joined the Atlanta School Board of Education, becoming its first black president, from 1969 through 1981. In his last years, Mays continued to advise leaders from politics and business on matters of race. He served as an adviser to President Jimmy Carter, and received forty-three honorary degrees (including honorary doctorates from Harvard and Brandeis), the Dorie Miller Medal of Honor, and the Older Citizen Award.

*See also:* HISTORICALLY BLACK COLLEGES AND UNIVERSITIES; MULTICULTURAL EDUCATION.

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WILLIAM H. WATKINS

## MCCALL, WILLIAM A. (1891–1982)

Professor of educational psychology, William Anderson McCall was an expert in the construction of tests and measurements to evaluate student learning and achievement. Born in Wellsville, Tennessee, McCall received his early education in a one-room schoolhouse, near Red Ash, Kentucky. Reared in a family of limited means, he spent up to half of each calendar year, from the time he was nine years old through his teenage years, working as a coal digger in the mines in Red Ash and neighboring Jellico, Tennessee. Encouraged by local educators who recognized his intellectual abilities, McCall continued his education at Cumberland College in Kentucky, where he received an A.B. degree in 1911, and at Lincoln Memorial University, in Tennessee, where he taught psychology and earned a second undergraduate degree in 1913. In the same year he enrolled at Teachers College, Columbia University, where he earned a Ph.D. in 1916, under the reputed behavioral psychologist, Edward L. Thorndike.

McCall began his graduate studies at Teachers College at the height of the Progressive educational reform movement, which began in the 1890s and

stretched into the early decades of the twentieth century. No other university-affiliated school of education rivaled Teachers College in terms of its influence in shaping the Progressive educational agenda, which among other objectives aimed to establish a scientific basis for the study and practice of education and to ensure greater order, accountability, and economy in school management. Over the course of his forty-year professorship at Teachers College, Thorndike generated in collaboration with his students—McCall counting prominently among them—a body of quantitative knowledge in the field of mental measurements that was a central, supporting element of these overlapping goals.

Standard measures of educational objectives and statistical analyses of learning and achievement favored by Thorndike and his students formed the basis, among other new administrative practices, for the homogenous grouping of students by intellectual ability and became cornerstones of the efficiently managed schools that educational reformers envisioned.

As McCall remembered, he first attracted the attention and respect of Thorndike, who he grew to revere, based on the proficiency he demonstrated, in his first year at Teachers College, at navigating a series of mazes with which Thorndike challenged a class of students. By any measure, McCall's professional career advanced quickly at Teachers College. In the same year he completed his doctoral studies, he was appointed an instructor in elementary education and published the results of experimental work he conducted with Thorndike, measuring the relationship between different conditions of air ventilation and mental functioning. In 1919 he was appointed an assistant professor of elementary education, and in 1927 he became professor of measurement, research, and statistics.

In the intervening years, McCall published two of his most noteworthy books, *How to Measure in Education* and *How to Experiment in Education*. Both volumes, which are in effect practical guides for educators to the field of mental measurements, address the need for precise means of quantifying student intelligence and for experimental projects to test the validity of educational theory and the effectiveness of classroom practice. Building on Thorndike's well-known maxim that "whatever exists at all, exists in some amount" (p. 16), McCall reasons in *How to Measure* that "there is never a quantity that does not measure some existing quality, and never an existing

quality that is non-quantitative" (1923a, p. 4). In response to contemporary educational critics, who framed educational questions in philosophical and qualitative terms, or who otherwise questioned the true limits of quantification, McCall insists that "all the abilities and virtues for which education is consciously striving can be measured and be measured better than they ever have been. The measurement of initiative, judgment of relative values, leadership, appreciation of good literature and the like," he asserts, "is entirely possible" (1923b, p. 4).

In keeping with his view of educational reform, McCall wrote extensively over the course of his career about the technical aspects of constructing, implementing, scaling, and scoring tests to evaluate intellectual competency and achievement. In addition, he was the author or coauthor of numerous tests and courses of instruction in the fields of reading, arithmetic and spelling, including the *Thorndike-McCall Reading Scale*, the *Multi-Mental Scale*, the *McCall Speller*, *Woody-McCall Mixed Fundamentals in Arithmetic Language*, and *McCall-Crabbs Standard Test Lessons in Reading*.

McCall's expertise in mental measurements was not limited to the reform of American education. On leave from Teachers College, McCall spent the 1922–1923 academic year in China, where he served as director of psychological research for the Chinese National Association for the Advancement of Education. The enrollment of Chinese students at Teachers College, beginning in 1910, paved the way during a period of educational modernization in China for intellectual exchange between Teachers College faculty and leading Chinese educators. McCall traveled to China, following visits there by Paul Monroe, who was a professor of history and education, and the philosopher John Dewey, who taught courses in education at Teachers College. Eager to encourage the scientific study of education in China, McCall worked diligently, overseeing the construction of educational tests and measurements and their use in Chinese schools nationwide. He was firmly committed to realizing the same objectives in China that shaped his work to improve education in the United States. In a 1923 report, *Scientific Measurement and Related Studies in Chinese Education*, which outlines his work in China, McCall notes that "to test all things and hold fast that which is good is as prerequisite to progress in education as it has been to the correction of our practical philosophy,

or the improvement of every form of life upon the earth" (1923b, p. 19).

Although McCall had hoped to spend an additional year in China to further the work he had begun, his request for another leave of absence was denied by Teachers College. He resumed his teaching duties there until 1927, when he contracted tuberculosis and was forced to abandon his professional responsibilities to convalesce. He returned to Teachers College sometime around 1930. He never fully recovered from his illness though and left active duty with the faculty in 1941. He moved with his wife, Gretchen Schweizer McCall, to the Smoky Mountains in North Carolina. McCall continued to be active professionally, revising and constructing new tests and courses of reading instruction, and consulting on various educational projects. In 1952 he published the results of a study, *Measurement of Teacher Merit*, that he conducted for the North Carolina State Education Commission, which measured the effectiveness of classroom teachers in relationship to pupil progress and growth. In 1975 he published *I Think Me a Thaut*, a compilation of the diary entries he wrote in Appalachian dialect, beginning when he was eight years old, about his boyhood. McCall eventually made his home in Coral Gables, Florida, where he died.

*See also:* EDUCATIONAL PSYCHOLOGY; THORNDIKE, EDWARD L.

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BETTE WENECK

### MCMURRY, CHARLES (1857–1929)

The principal disseminator of Herbartian pedagogical ideas in the United States, Charles Alexander McMurry formulated the concept of interdisciplinary curriculum. He grew up in rural Illinois and took the classical high school course in the training school of the Illinois State Normal University (ISNU), followed by two years of classical study at the University of Michigan. He then taught in Illinois country schools for two years and in Colorado for two years. He returned to Illinois and in 1882 was persuaded by a colleague to go to Halle, Germany, to study Christian theology. Through conversations with Charles DeGarmo, he became interested in the pedagogical ideas being disseminated by the German Herbartians, who believed that the development of moral character in the elementary school was achieved by a structured academic curriculum. McMurry returned to Halle in 1886, accompanied by his younger brother Frank, who was also interested in finding a theoretical grounding for teaching. After completing his Ph.D. in 1887, Charles joined his brother in the newly established Herbartian pedagogical seminar of Professor Wilhelm Rein at the University of Jena. There, teacher preparation and practice teaching were carried out according to a full interpretation of Herbartian psychology and pedagogy. It was this experience with the integration of theory and practice that led the brothers to launch American Herbartianism in the 1890s.

Convinced of the potential value of the Herbartian approach for American teachers, by the time McMurry arrived home in 1888 he had a complete ten-year writing plan to bring those ideas to teachers, and he began testing them in practice as a principal in Evanston, Illinois, and then as head of the training school at the Winona State Normal School in Minnesota in 1889. He and Frank published a translation from Wilhelm Rein's work as *The Method of the Recitation* in 1890. In 1892 Charles published *The Elements of General Method Based on the Principles of Herbart*, the same year that he returned to Illinois to become assistant in the training school

at ISNU. He soon became its director and over the next seven years produced the first volumes in his series of special methods books that carried Herbartian ideas into normal schools all over the country. In spring of 1892 the McMurry brothers and Charles DeGarmo spearheaded the formation of a National Herbart Club, modeled on the German *Verein der wissenschaftliche Pädagogik*, which disseminated Herbartian ideas through local discussion clubs.

Through the interest of such national figures as Francis W. Parker, the Herbartian notion of correlated curriculum gained sufficient attention to prompt calls in the National Education Association's Committee of Ten report for more correlation, and the establishment of a special subcommittee to report on the efficacy of correlation as a guiding principle for elementary school curriculum. That 1895 report, written by U.S. Commissioner of Education William Torrey Harris, in effect ignored the Herbartian notion, provoking vociferous objections and prompting the McMurrays, DeGarmo, and others to found and publicize the National Herbart Society for the Scientific Study of Education (NHS) in 1895 as a forum for open discussion of new educational ideas. McMurry served as its secretary and yearbook editor for eight years, carrying it through its transition to the National Society for the Study of Education (NSSE) in 1902 and actively recruiting members for local clubs. Harris's resistance to Herbartianism on philosophical grounds was overridden; most educators believed in the pedagogical utility of Herbartian ideas and in particular by the semiscientific nature of their expression. McMurry disseminated Herbartianism through book production and through summer school teaching at the universities of Minnesota, Chicago, Illinois, Columbia, and Cornell, and through his work as secretary of both the NHS and the Illinois Society for Child Study.

In 1899 McMurry established the teacher education program at the new Northern Illinois State Normal School at DeKalb along Herbartian lines. In 1906 to 1907 he served as acting president of the California State Normal School of Pennsylvania. He returned to DeKalb to begin a process of integrating the city schools into the teacher education program, becoming superintendent in 1911. During this period he wrote extensively, revising his special methods books in history, geography, literature, arithmetic, natural science, and language, and reworked his translation and adaptation of the Herbartian eight-year course of study. He gave particular emphasis to

the development of "type studies," units that examined a "typical" phenomenon (such as a forest community) in depth in order to develop a thorough understanding of principles that could then be applied to the study of other phenomena. In 1915 he became professor of elementary education at the newly reorganized Peabody College of Education at Vanderbilt University. He died in 1929, remembered by his colleagues and students as a master teacher at all levels.

*See also:* EDUCATIONAL PSYCHOLOGY; EIGHT-YEAR STUDY; HERBART, JOHANN.

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## MEDIA AND LEARNING

Educators have examined the impact of media on learning since at least 1912, when the American psychologist Edward L. Thorndike recommended pictures as a labor saving device for instruction. Five questions about media and learning will be briefly examined. The first section will define media and summarize the results of research on learning from media, the relative cost of media use, and the impact of media on access to education. The second section

describes new research on the economic benefits of instructional media, including suggestions for “cognitive efficiency” studies. The third section presents new information about learning problems caused by poor design of instructional media “displays.” The fourth part will examine claims that new media enhance student’s motivation to learn. The final section will describe work on technology integration that focuses on learning how to solve problems.

### Definitions and Summary of Research

*Media* are generally defined as the means by which information is conveyed from one place to another. In the past century, various forms of media have been used to convey instruction and to support learning. Examples of instructional media include traditional means of delivering instruction (chalkboards, textbooks, overhead projectors, and teachers), mass media used for education (newspapers, movies, radio, and television), and the newer “electronic” instructional media (computers, interactive video, and multimedia systems). All instruction requires the selection and use of at least one medium to deliver instruction. Many alternative media and mixtures of media may be chosen for any given learning goal and group of students. Thus, research questions have compared the learning benefits of various media and mixes of media for different types of learning goals and students at different ages and aptitude levels. Thousands of studies have been and continue to be conducted.

**Do some media produce more learning than others?** In his 2001 book *Learning from Media*, Richard E. Clark concluded that there are no learning benefits from any specific medium or mix of media. He summarized the research on this issue in an analogy that is often repeated: “The best . . . evidence is that media are mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition. Basically, the choice of vehicle might influence the cost or extent of distributing instruction, but only the content of the vehicle can influence achievement” (p. 13). While some media will not convey certain types of information necessary for learning (for example, newspapers cannot transmit sound or “real-time” visual events), any necessary information can be conveyed by a number of media (sound and visual events can be conveyed by many media other than newspapers). A more positive way to state this conclusion is that educators

can expect similar levels of learning from a great variety of media provided that essential instructional methods are used. When more than one medium can provide the instructional method needed for learning, the choice of medium is based on expected economic benefits such as the per-student cost of instruction, not learning benefits. An alternative view was expressed in 1994 by Robert B. Kozma, who contended that media and method should not be separated.

**Media and method.** The key issue here is that when media are used for instruction, they may often be confused with the instructional methods and information they convey. For example, computer-based instruction is often thought to be highly “interactive” because computers permit high levels of exchange between student and computer-delivered instructional programs. Yet most media permit interaction, although some media do so more quickly and economically.

Any medium seems to be able to increase learning provided that the information content and instructional methods they convey are adequate to support student learning. The existing research suggests that when learning is influenced by external events, those events must support the use of mental processes that are required for learning goals by students who are unable or unwilling to provide them for themselves. The specification for these external events is what Clark called an “instructional method.” Instances of common instructional methods are learning plans, examples, and practice exercises with interactive, corrective feedback. Since a variety of media will present any of the common instructional methods required to learn, the benefits of media are not in their impact on learning but instead in their economic impact and their capacity to increase access to educational information and instructional programs.

### Do Media Influence the Cost and Access to Instruction?

It appears that media can significantly influence the cost of learning and the ease and cost of access to instruction by students. Determining the per-student cost of instruction and access to information requires careful analysis. In 2000 Brenda Sugrue and Clark reviewed the research and practice in media selection and cost analysis. They described different methods of performing cost analysis prior to selecting media for instruction or training.

**Cognitive efficiencies from media.** A twist in the discussion about the economic benefits of media came from a suggestion made by Thomas Cobb in a 1997 article. He argued that some media and symbol systems lead to quicker and/or less demanding learning results than other media or symbolic modes for some students. Cobb's suggestion opens an area of research where there are at least two possibilities: First, any medium or representational mode used for presenting an instructional method (for instance, an example presented in either pictorial or verbal modes) might help some individuals to learn easier and/or faster (for instance, high visual but low verbal ability learners may learn faster from pictures than from narrative descriptions of examples). Second, the cost of learning is, after all, one of the most important issues for those concerned with the application of research to solving practical problems. The expectation that currently guides research in this area could be stated as: Whenever a given instructional method is necessary for learning, different media or symbolic modes will have different learning efficiencies for learners with different aptitudes.

**Visual and aural learning aids.** Compelling examples of possible cognitive efficiencies can be found in several studies, including a 1995 study by Samuel Mousavi and colleagues, and a 1997 study by Richard E. Mayer. These researchers provided evidence that presenting novel and difficult science concepts to learners in both auditory and visual symbolic modes results in more efficient (quicker, easier) learning than information presented in either mode alone for high visual ability and low prior knowledge learners. The researchers' explanation for their findings is that the conscious human mind is supported by both auditory and visual "buffers" that specialize in storing different symbolic representations of information to be learned. These buffers permit instructional information to be stored in both visual and aural (sound) forms. Conscious consideration of information to be learned or used in problem solving can be held in the mind only briefly (approximately six to eight seconds) unless the person repeats it or elaborates it somehow. Imagine a person who is trying to remember a new telephone number someone gave them verbally as they walk a long distance to find a telephone. Unless the person repeats the information or writes it down, he or she will tend to forget it before reaching the telephone. Giving information content in two different modalities (visual and auditory) apparently results in storage by two

different, sensory-based memory buffers, which increases the duration and quality of information available to learners while they mentally process the information. Thus, providing key instructional information in both pictorial and auditory (narrative) forms might extend the duration of "thinking time" during learning for some learners. It is critical to note that in their 2000 article Roxana Moreno and Mayer limited this "learning efficiency" impact of both visual and aural modes of instruction to a small group of learners. The increased efficiency was primarily useful for students who had a very low prior knowledge and very high visual ability. One might wonder what percentage of students received a significantly enhanced efficiency from both visual and aural forms of instruction.

### Media Display Problems

There is increasing evidence that the "busy" screen designs that are typical in computer-based and multimedia learning environments often cause learning problems. Many media designers are tempted toward instructional presentations that include active animated figures, music, sounds, and other visually and aurally exciting displays. While most people welcome the visual and aural entertainment, the best evidence suggests that learners are often overloaded by these "seductive details" and their learning is reduced. Screen designs that separate visual and text-based explanations or demonstrations, and/or are heavily text laden, seem to damage learning because they overload a person's thinking while she is trying to learn. Mayer and his students recommend the spatial (visual) and temporal (time) integration of verbal and visual information. They also recommend the use of narration rather than large bodies of text. This line of research provides important guidance for screen design. It strongly indicates that instructional designers and teachers must focus learners constantly on learning goals and resist the temptation to offer enticing and aesthetically pleasing but irrelevant formats and features.

### Do Some Media Motivate Learning More than Other Media?

While many advocates of new forms of instructional media have argued for motivational benefits, existing evidence suggests that important components of motivation may actually be decreased by common features of, for example, computer or multimedia instruction. In a 1984 article Gavriel Salomon pres-

ented evidence that students who express strong preferences for any medium or mix of media tend to expect that it will be a less demanding way to learn. This expectation results in the investment of lower levels of mental effort and lower achievement levels when compared to instructional conditions that are perceived as more demanding. Yet, it is likely that other motivational benefits might exist with newer media. For example, students may be more enthusiastic about enrolling in instruction presented by newer media because of optimistic expectations about ease of access and flexibility of scheduling. Delays in finishing online courses and rumors about high “drop-out” rates suggest the need for more research on whether students persist in courses offered using new media.

Not much is known about the direct impact of new media on mental effort (aside from Salomon’s cautions), but the early research is not promising. Some studies indicate that many instructional strategies and complex screen displays risk overloading working memory and causing “automated” cognitive defaults where mental effort is both reduced and directed to nonlearning goals. Educators are thus faced with an ironic contradiction where students are attracted to media qualities that are known to reduce their learning. Complicating this finding is strong evidence that learners are not aware when they become overloaded by too much visual and/or verbal information.

### Technology Integration

This discussion of media has thus far focused on media as a delivery device. Educators have typically viewed media in two ways. First, media are viewed as a means to amplify the teacher’s message, such as with the use of an overhead projector or a video projector. Second, media are viewed as a way to deliver instruction using computer-based instruction or television. For example, Alfred Bork suggested that computer-based instruction would revolutionize schools and change the way students would learn. Yet, by the beginning of the twenty-first century the computer-based instruction revolution had yet to materialize.

Subsequent efforts shifted attention away from using computers to deliver instruction through a tutorial or drill-and-practice instructional method toward using computers as a tool that is integrated into other classroom activities to facilitate problem solving and learning. In their 2002 book *Integrating*

*Computer Technology into the Classroom*, Gary R. Morrison and Deborah L. Lowther described technology integration as the process of using application software (for example, spreadsheets, databases, and web browsers) as tools to help students learn problem solving. An example of technology integration is the NteQ (Integrating Technology for Inquiry) model. This model provides teachers with a ten-step approach for developing problem-based instructional units that integrate technology. Students use computers to gather, manipulate, and present information related to solving academic problems. The emphasis at this level is on the use of the computer as a tool in the same way that scientists and business professionals use computers in their work.

This shift in focus from using computers and other media to deliver instruction to one of using computers as an integrated problem-solving tool places a greater emphasis on the development of media-based instructional methods. The emphasis of the research also shifts from comparing two media conditions (e.g., classrooms with and without computers) to one of investigating the effectiveness of the media-based instructional strategies employed in the classroom. An extensive description of a classroom-based example of technology integration can be found in an online article from 2000, written by Steven M. Ross, Morrison, Lowther, and Robert T. Plants, that investigated a school district’s pilot of an Anytime Anywhere Learning project focused on writing achievement. Teachers in the pilot project, where the students had laptop computers, were more likely to use problem-based learning, cooperative learning, facilitation, and sustained writing than teachers in traditional classrooms. Similarly, students in the pilot project had significantly higher scores on a writing sample collected at the end of the year. These differences were attributed to the student-centered environment created by the teachers rather than the computer technology.

*See also:* LITERACY, *subentry on* LEARNING FROM MULTIMEDIA SOURCES; TECHNOLOGY IN EDUCATION, *subentry on* CURRENT TRENDS.

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## MEDIA CENTERS, SCHOOL

See: SCHOOL LIBRARIES.

## MEDIA, INFLUENCE ON CHILDREN

According to the American Academy of Pediatrics (AAP), "Children are influenced by media—they learn by observing, imitating, and making behaviors their own" (2001, p.1224). The influence of media on children has been the subject of increased attention among parents, educators, and health care professionals. The significance of this issue becomes obvious when one notes the diversity of Americans who share this concern. Included in this group of concerned citizens are those, most notably politicians, who typically stand in opposition to one another on many issues, but who stand together in agreement on this one.

Media influence on children has steadily increased as new and more sophisticated types of media have been developed and made available to the American public. Availability, as well as greater affordability for American families, has provided easier access to media for children. Beneficial effects include early readiness for learning, educational enrichment, opportunities to view or participate in discussions of social issues, exposure to the arts through music and performance, and entertainment. Harmful effects may result from sensationalization of violent behavior, exposure to subtle or explicit sexual content, promotion of unrealistic body images, presentation of poor health habits as desirable practices, and exposure to persuasive advertising targeting children.

In the following discussion, some attention will be given to the beneficial effects of media on children, but the primary focus will be on negative influences, which have been more widely researched.

### History of Media for Children

The twentieth century was a time of phenomenal growth and development of new kinds of media. In the early twentieth century, film, radio, and newspapers were the media forms to which children had access, though limited. Beginning in the early 1940s and continuing through the end of the century, children's media experiences expanded to include television, recorded music, videotapes, electronic games, interactive computer software, and the Internet. Print media, such as comic books and children's magazines, also expanded during this period, though not at the same accelerated rate as the visual electronic media.

Commercial television made its debut in 1941, initiating a new era of media influence. One of the earliest documented examples of the effect of advertising in the media was the introduction in 1952 of television ads for Mr. Potato Head, a toy manufactured by Hasbro. Gross sales were more than \$4 million in its first year of television advertising. At that time, more than two-thirds of television sets were owned by families with children under twelve years of age.

Educational programming, offered primarily on public television stations, was the next milestone in television's early influences on children. In the larger discussion of media influence on children, educational programming is without question the source of the most significant and long-lasting positive effects.

A pioneer in educational programming was the Children's Television Workshop, founded in 1968 by Joan Ganz Cooney, Lloyd Morrisett, Gerald Lesser, and others. The creation of a television production company dedicated to children's educational programming was a result of Cooney's study of television for preschool children for the Carnegie Corporation of New York. The project that evolved was a research-based collaboration by educators, psychologists, child development experts, writers and musicians. *Sesame Street* was the first program produced, making its televised debut in 1969. *Sesame Street* was designed to combine education with entertainment and to target children of preschool age.

The development of *Sesame Street* was research-driven to ensure that the most effective strategies for early learning through media were employed. Other children's programs subsequently developed by the Children's Television Workshop included *3-2-1 Contact*, *The Best of Families*, *The Electric Company*, and *Feeling Good*. Programming produced by the Children's Television Workshop was innovative, was well received by the public, and became a model for other programs, both in the media and as in school settings, for providing effective early learning experiences to prepare young children to enter school. The positive influence of the Children's Television Workshop on American children was widespread.

During the 1980s and 1990s, unprecedented growth occurred in the field of computer technology, resulting in the increased availability of computers to children, both in their homes and schools. Improved access for children resulted in expanded media influence on children, with a new interactive element that was not previously seen in media.

During this same period, media content underwent a transformation that was characterized by increased use of sexual themes and violent behavior. This change was evident in movies, television programming, music lyrics, video games, cartoons, and magazines. There was an outcry from parents and concerned adults who objected to children's exposure to content that was age inappropriate and who were troubled by the probable negative effects of such exposure. In an attempt to inform adults who were monitoring children's media exposure, ratings systems were developed that identified content categories and frequency or intensity of specific incidents. Rating codes were used to label movies, television programs, and music lyrics. Although rating systems served their purpose of informing the public, it is questionable to what extent children were actually affected by their implementation.

### General Considerations

There are two important factors that must be included in the discussion of media influence on children. One factor, called *media literacy*, was addressed by Renee Hobbs. Hobbs contended that:

Just because our students can use media and technology doesn't mean they are effective at critically analyzing and evaluating the messages they receive. Students need a set of skills to ask important questions

about what they watch, see, listen to and read. Often called media literacy, these skills include the ability to critically analyze media messages and the ability to use different kinds of communication technologies for self-expression and communication.

A child who is media illiterate is more vulnerable to being influenced by messages in all kinds of media.

The second factor that can affect how children are influenced by media is the amount of parental involvement in supervising media exposure of children. The U.S. Department of Education's Office of Educational Research and Improvement published guidelines in 1994 that said:

Parental monitoring is a key factor, since the research studies show that increasing guidance from parents is at least as important as simply reducing media violence. Children may learn negative behavior patterns and values from many other experiences as well as TV programs, and parental guidance is needed to help children sort out these influences and develop the ability to make sound decisions on their own.

An important media literacy skill, which can be developed through parental guidance, is a child's ability to distinguish between reality and fantasy in media messages. Children may not be capable of making this distinction without an adult's help, resulting in a child's confused perception of fantasy as reality. But with proper adult guidance, they can learn to critique what they view and become more discriminating consumers of media.

### **Studies of Media Influence**

Media violence and its effects on children was the first area in which extensive scientific research was done. In 1972 the Office of the Surgeon General conducted studies on media violence and its effects on children who viewed it. The conclusions of these studies were confirmed and extended by studies performed at the National Institute of Mental Health in 1982. Three years later, the American Psychological Association (APA) published a report that reaffirmed the previous studies. A landmark report of media influence on children was published by the AAP in 1999. The study was done by the Committee on Public Education, and presented in their policy statement of August 1999. In July 2000, at a Congressional Public Health Summit, the AAP, the

American Medical Association, the American Academy of Child and Adolescent Psychiatry, and the APA issued an unprecedented "Joint Statement on the Impact of Entertainment Violence on Children." Speaking for members of the national public-health community, the statement presented a consensus opinion on the effects of violence in the media on children. The joint statement, however, included an interesting and important distinction that addressed the context of violence in the media, stating: "It is not violence itself but the context in which it is portrayed that can make the difference between learning about violence and learning to be violent." With the important caveat in mind, the overwhelming consensus of the aforementioned studies was that there is substantial evidence that exposure to violence in the media has harmful effects on children and has been linked to children's aggressive behavior.

Violence in interactive media forms (Internet, computer and video games) as opposed to passive media forms (television, movies, videos) may have even stronger effects on children and, as a result, has become a focus of new research. According to the Office of the Surgeon General, "children are theoretically more susceptible to behavioral influences when they are active participants than when they are observers." To further legitimize these concerns, the AAP reported that initial studies of interactive media show that the element of child-initiated virtual violence may result in even more significant effects than those of passive media. Because research has already shown that passive media violence has significant influence on children, the implications of increased effects from interactive media are troublesome.

Despite the research reports, there was debate between television broadcasters and scientists regarding the harmful effects of television violence on children. Broadcasters asserted that there was not enough evidence to link viewing television violence to children's aggressive behavior. Scientists, nevertheless, stood by their research findings.

### **Domains of Influence**

Research studies have identified the following domains of influence in which media content has been shown to have negative effects on children: violence and aggressive behavior, sexual content, body image and self-esteem, and physical health and school performance. Information on media violence has been taken from the following primary sources: the 2002 APA study titled "Violence on Television" and the

1999 and 2001 policy statements of the Committee on Public Education of the AAP. The 2001 policy statement is recommended as a comprehensive source of information on the topic of media violence. Other studies were referenced for information on sexual content, body image, and health issues.

**Violence and aggressive behavior.** The question of violence in the media and its influence on children is probably the most widely researched domain of media influence. Studies over a span of three decades, beginning in the early 1970s, have shown that significant exposure to media violence increases the risk of aggressive behavior in certain children and adolescents. Other effects on children include desensitization to others' pain and suffering and the tendency to be fearful of the world around them, viewing it as a dangerous place. Research has also shown that news reports of violent crimes can traumatize young children.

**Sexual content.** Increased attention has been given to the second domain, sexual content in the media. The sexualization of American media has become the focus of widespread discussion and criticism by children's advocates. According to studies commissioned by the Kaiser Family Foundation collectively labeled "Sex, Kids, and the Family Hour," there was a 400 percent increase from 1976 to 1996 in sexual references during the evening television viewing time period commonly referred to as "family hour." It was determined that by 1996 children were exposed to about eight sexual references per hour during this time slot. In *Media, Children, and the Family*, Jennings Bryant and Steven Rockwell reported the results of their studies that investigated the effects of exposure to sexual content on television. They found that such exposure affected adolescents' moral judgment. They qualified the results, however, by saying that parental discussion and clear expression of personal values mitigated the effects on adolescents.

**Body image and self-esteem.** The third domain, body image and self-esteem, is widely affected by advertising in the media. Researchers have suggested that media may influence the development of self-esteem in adolescents through messages about body image. Television, movies, magazines, and advertisements present images that promote unrealistic expectations of beauty, body weight, and acceptable physical appearance. Efforts to sell an image that adheres to certain standards of body weight and size may be a catalyst for eating disorders suffered by some adolescents. And, when adolescents fall short

of their own expectations based on media images, self-esteem can suffer. Media theorists and researchers have determined that the effects of this trend are being seen in both boys and girls, with negative psychological affects. Advertisement of appealing, but often financially unaffordable, clothing and promotion of negative gender stereotypes are other areas of concern. Further research on the connections among media messages, body image, and self-esteem is warranted.

**Physical health and school performance.** The fourth domain involves the amount of time that children spend engaged with media activities. The average American child or adolescent spends more than twenty hours per week viewing television. Additional time is often spent watching movies, listening to music, watching music videos, playing video or computer games, or spending computer time on the Internet. This increase in time spent by children using media for recreation has been shown to be a significant factor in childhood obesity due to associated physical inactivity. School achievement may also be affected as a result of decreased time spent on homework or school assignments. And parents often unintentionally contribute to this negative influence by using the television as a way to occupy their children's attention—as a babysitter of sorts. Educators have expressed concerns that the passive nature of media exposure undermines the ability of students to be active learners. Conversely, there have been concerns that overstimulation due to excessive media use might be related to attention deficit disorder or hyperactivity. There has been no research to date that indicates a clear relationship.

Increasingly, tobacco, alcohol, and illicit drugs have been glamorized in the media. Tobacco manufacturers spend \$6 billion per year and alcohol manufacturers \$2 billion per year in advertising that appeals to children. Movies and television programs often show the lead character or likeable characters using and enjoying tobacco and alcohol products. On the other hand, media also provide factual information and venues for discussion, typically through public service announcements or through public programming, informing children and warning them of the dangers of addictions to these substances. These educational messages, however, are on a much smaller scale and are much less appealing in their presentation.

## Recommendations

The AAP, the Office of the Surgeon General, and the APA have offered recommendations to address the issues of media influence on children. Included in these recommendations are suggestions for parents, educators, and health care professionals to advocate for a safer media environment for children through media literacy. They urge media producers to be more responsible in their portrayal of violence. They advocate for more useful and effective media ratings.

A consistent recommendation in studies, however, is proactive parental involvement in children's media experiences. By monitoring what children hear and see, discussing issues that emerge, and sharing media time with their children, parents can moderate the negative influences as well as increase the positive effects of media in the lives of their children.

*See also:* LITERACY, *subentry on* MULTIMEDIA LITERACY; MEDIA AND LEARNING; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; TECHNOLOGY IN EDUCATION, *subentry on* CURRENT TRENDS.

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## MEDICAL COLLEGE ADMISSION TEST (MCAT)

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The Medical College Admission Test (MCAT) is the standardized test required of all applicants to allopathic (M.D.), osteopathic (D.O.), and podiatric medical schools. It is also accepted as an option for some veterinary and allied health schools. The MCAT tests the mastery of basic biology, chemistry, and physics concepts, problem solving requiring the integration of these disciplines, critical thinking, and writing skills. The test consists of four sections. The Verbal Reasoning section contains multiple-choice questions based on reading selections drawn from a multitude of sources, many outside of the sciences. The intent of this section is to test reading comprehension, evaluation of ideas, analysis of data, and the application of new information. The Physical Sciences section contains multiple-choice questions involving basic knowledge in physics and general chemistry as well as the ability to apply that knowledge and interpret new information. The Writing Sample requires two brief essays written in response to a brief topic statement and assesses the presentation and development of an idea as well as the technical writing skills of the writer. The Biological Sciences section involves multiple-choice questions about basic concepts in biology and organic chemistry as well as the application of that knowledge and interpretation of new information.

The MCAT is a five and three-quarters hour test and is offered in April and August of each year. The Verbal Reasoning, Physical Science, and Biological Science scores are reported on a scale from 1 (low) to 15 (high). The Writing Sample is reported on a scale from *J* (low) to *T* (high), representing the sum of the two essay scores. Although there is no limit to the number of times the test may be taken, special permission must be obtained after the third time. Registration for the MCAT is done online by accessing the website of Association of American Medical Colleges (AAMC). Five practice tests have been released by the AAMC.

The MCAT plays a substantial role in the medical school admissions process. How much emphasis is placed on MCAT scores varies from school to school. Other factors that are considered include: grades (overall and science), the interview, letters of recommendation, research, activities, experience in medicine, application essays, and state of residence. The two most important factors, however, are grades

and MCAT scores. High grades and test scores, though, will not guarantee acceptance. If an applicant with strong grade and test credentials has poor interpersonal skills, poor references, or no experience in medicine, gaining acceptance is very unlikely. On the other hand, a very personable individual with a great deal of medical experience is very unlikely to gain acceptance if MCAT scores or grades are low. It may be useful to think of MCAT scores and grades as threshold criteria. Once the threshold is reached, the other factors become more significant. It is important to note that scores in individual sections of the MCAT may be considered as important as the overall score. For example, an applicant with 10s in each section of the test would probably be considered more favorably than an applicant with scores of 12, 12, and 6. Both total scores are 30, but the former shows consistency and the latter indicates one rather weak area.

The MCAT scores are required for several reasons. First, they validate an applicant's grades. They help the medical school admissions committee compare applicants from many different schools of varying rigor. MCAT scores are particularly useful when considering an applicant from a school that is not well known to the admissions committee. A second reason for the reliance on MCAT scores is that they are predictive of an applicant's success in the academic course work generally taken during the first two years of medical school. Finally, MCAT scores are evidence of an applicant's test-taking ability. This is relevant because successful applicants will face at least three additional major standardized tests that must be passed before they can obtain a license to practice medicine.

Work is underway in 2002 to revise and update the MCAT, although it is likely to be several years before any changes are actually made. One thing is certain, though: the MCAT will continue to play an important role in evaluating applicants for medical school.

*See also:* MEDICAL EDUCATION.

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KIRSTEN A. PETERSON

## **MEDICAL EDUCATION**

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The path to a career in medicine in the United States is well defined. Aspiring physicians must earn an undergraduate degree, complete four years of medical school, participate in a minimum of three years of graduate medical training, and pass three national examinations for licensure. Becoming a physician also demands a desire to work with people; intellectual, emotional, and physical stamina; and an ability to think critically to solve complex problems.

Preparation for one of the world's most highly respected careers often starts in high school by taking courses in biology, chemistry, and physics. Preparation continues during college, with particular attention to the courses needed for admission to medical school. Although the specific number of credits required for admission to medical school varies, the minimum college course requirements include one year of biology, two years of chemistry (one year of general/inorganic chemistry and one year of organic chemistry), and one year of physics, all with adequate laboratory experiences. Medical schools may require or strongly recommend taking mathematics and computer science courses in college, though only a small number demand a specific sequence of mathematics courses. Candidates for admission to medical schools are also expected to have a solid background in English, the humanities, and the social sciences.

There is an expectation that aspiring physicians will participate in health-oriented research and in volunteer activities to demonstrate their commitment to the profession. These types of extracurricular activities provide opportunities to explore one's motivations, specific interests, and aptitude for a career in medicine.

Typically, the process of applying to medical school begins during the junior year of undergraduate study. One of the first steps is to take the Medical College Admission Test (MCAT) in the spring of the junior year. The MCAT is a standardized test designed to measure knowledge in the biological and

physical sciences, the ability to read and interpret information, and communication skills. Students indicate which medical schools they want to receive their MCAT scores.

The American Medical College Application Service (AMCAS) facilitates applying to medical school by centralizing the submission of information and supporting materials. Of the 125 medical schools in the United States, 114 participate in AMCAS. Students submit one set of application materials and one official transcript to AMCAS, which in turn distributes the information to participating institutions as designated by the applicant. Deadlines for receiving applications are determined by the individual medical schools. Applications to non-AMCAS medical schools are submitted directly to those institutions in accordance with their individual requirements and deadlines.

Admission committees, composed of faculty members from the basic and clinical sciences departments, screen and prioritize the applications. Academic ability and personal qualities are used to discern applicants' qualifications for medical school. Academic ability is measured in terms of grades on undergraduate courses (with emphasis on the required science courses) and MCAT scores. College grades and MCAT scores are considered the most important predictors of medical school performance during the first two years. Most students admitted to medical school have above average (3.0 and higher) undergraduate grade point averages. An undergraduate major in the sciences is not a mandatory requirement for admission to medical school. Most admission committees look for well-rounded individuals and strive to admit a diversified class. The importance of MCAT scores to admission decisions varies by institution.

Admission committees also look for evidence of maturity, self-discipline, commitment to helping others, and leadership qualities. Candidates' personal statements, letters of evaluation, and the breadth and variety of extracurricular activities in health-related settings are used as indicators of personal attributes. Many medical schools have specific programs for recruiting and enrolling minority students to help increase the number of underrepresented minorities who practice medicine. Interviews with faculty members also provide information about the applicant's personal background and motivation to become a doctor.

Each medical school decides the number of students that will be admitted each year. Some medical schools accept high school graduates into combined bachelor's and medical degree programs, or combined medical and graduate degree programs.

Medical school applicants are urged to submit applications for financial assistance in conjunction with applications for admission. Loans, primarily sponsored by the federal government, are the major source of financial aid for medical school. Some schools offer academic scholarships.

For the 1998–1999 academic year, the American Association of Medical Colleges (AAMC) reported that 41,004 individuals applied to medical school. AMCAS participants applied to an average of 11.5 AMCAS-participating schools. Among first-time applicants, 45.9 percent (27,525) were accepted to a medical school. AAMC data further indicates that 6,353 candidates were accepted to two or more medical schools in 1998. Medical schools start issuing acceptances to the entering class by March 15 each year.

Medical schools typically provide four years of medical education, with the goal of preparing students to enter three- to seven-year programs of graduate medical training, which are referred to as residency programs. Medical school programs leading to the medical degree (M.D.) generally consist of two years of study in the basic sciences and two years in the clinical sciences. The basic sciences include anatomy, biochemistry, physiology, microbiology, pharmacology, pathology, and behavioral sciences. Clinical education begins in the third year with required clinical clerkships in internal medicine, pediatrics, family medicine, obstetrics and gynecology, surgery, and psychiatry. During six- to twelve-week rotations, students learn how to take a medical history, conduct a physical examination, and recognize familiar disease patterns. Students are allowed to shape their own course of study during the fourth year with elective courses in the clinical specialties or research. Most medical schools strive to integrate basic science and clinical science instruction throughout the four-year curriculum.

In addition to written examinations and direct observations of performance, Step 1 and Step 2 of the United States Medical Licensing Examination (USMLE) are also used to measure the acquisition of medical knowledge. Medical students take Step 1, which measures understanding and ability to apply

key concepts in the basic sciences, after completion of the second year of medical school. Passing Step 1 is a requirement for graduation at the majority of medical schools. Step 2, which is taken at the beginning of the senior year, evaluates medical knowledge and understanding of the clinical sciences. More than half of all American medical schools require passing Step 2 as a condition for graduation.

The Liaison Committee on Medical Education (LCME) monitors the quality of education that is provided by American medical schools that award the medical degree. Similar accrediting bodies exist for schools of osteopathic medicine and schools of podiatry.

Students apply to graduate medical programs through the Electronic Residency Application Service (ERAS), a centralized computer-based service that transmits applications, personal statements, medical school transcripts, and Dean's Letters to residency program directors. Students register their first, second, and third choices for residency placements through the National Resident Matching Program (NRMP). The NRMP provides an impartial venue for matching applicants and programs. The "match" facilitates placements by establishing a uniform procedure for communication between students and residency directors, and for announcing residency selections. Matches are usually announced in March of the senior year of medical school.

Graduate medical education programs (residencies) provide extensive, direct patient-care experiences in recognized medical specialties. Three-year residencies in family practice, emergency medicine, pediatrics, and internal medicine are typical. Several other specialties require one year of general practice followed by three to five years of advanced training. Participation in an accredited residency program and passing the USMLE Step 3 are requirements for licensure in most states.

*See also:* MEDICAL COLLEGE ADMISSION TEST.

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## MEIKLEJOHN, ALEXANDER (1872–1964)

The youngest of eight sons, Alexander Meiklejohn (1872–1964) was born in Rochdale, England, of Scottish parents. His family moved to Rhode Island when he was eight, and he later attended nearby Brown University where he earned his baccalaureate and master's degrees in philosophy. He followed his graduate adviser and close friend James Seth to Cornell University to pursue his doctorate. A few years later, Meiklejohn married his first wife, Nannine, and they began a family.

Upon receiving his doctorate, Meiklejohn returned to Brown as an assistant professor of logic and metaphysics. He attained the rank of professor after nine years, having earned the respect of his colleagues and the admiration of his students. In 1901 Meiklejohn was named dean at Brown (his title was later changed to dean of undergraduates). His most distinctive act as dean was to disqualify Brown's championship baseball team over questions of sportsmanship and honesty. Brown's trustees supported this action and the students accepted it, but the alumni were outraged.

Even as he was establishing himself at his alma mater, Amherst College sought Meiklejohn as a new president who could bring energy and innovation to a college facing declining admissions and sagging academic standards. Inaugurated as president of Amherst in October 1912, Meiklejohn quickly set to

work to institute his educational ideals. Almost as quickly, his policies created enemies among the faculty, trustees, and alumni. He opposed the newly popular elective system, believing that students could better understand human culture and the natural world if they were not educated in narrowly specialized classes. He proposed a variety of options for a required curriculum, none of which the faculty accepted.

Turning his attention to other passions, Meiklejohn set up college extension classes in local mills and factories where students taught and interacted with laborers. He hired many new faculty members, terminated many older professors, and chose to ignore those whose tenure was beyond challenge. He irritated additional alumni by refusing to emphasize athletics and by maintaining the tradition of part-time basketball and football coaches. Even within the local community, Meiklejohn was unpopular: Neither he nor his wife were active in the predominant Congregationalist church, and she wrote children's books, traveled to Europe alone, and smoked cigarettes. Meiklejohn himself was known as a socialist, although he never affiliated himself with the Socialist Party. His outspoken opposition to the World War I eroded further the base of supporters of his presidency at Amherst. Nevertheless, he persevered.

By 1923 Meiklejohn was accused by his enemies of financial mismanagement, and the board of trustees asked for his resignation. In protest, twelve graduating seniors refused their diplomas, and eight faculty members resigned their positions. Though he resigned from Amherst, Meiklejohn capitalized on the media controversy surrounding his departure. He toured the country and delivered speeches to promote his first two books: *The Liberal College*, published in 1920, and *Freedom and the College* released in 1923.

President Glenn Frank offered Meiklejohn a professorship at the University of Wisconsin in Madison, but struggling with the death of his wife Nannine, he refused the appointment. The next year, however, Frank asked Meiklejohn to create an experimental college within the university, for which he would be given free reign to institute many of the reforms that he had advocated at Amherst and in his books and speeches. Meiklejohn took the post in March, 1926.

The Experimental College at the University of Wisconsin opened in 1927 with an incoming class of

119 men, who signed up for the two-year prescribed program of study. During the first year, students studied Athens in the fifth century B.C.E.; in their second year they traced the history of America through the nineteenth and twentieth centuries. Between academic years, students were expected to write an anthropological report on the region where they grew up. Faculty members (called advisers to defuse traditional expectations) met with students throughout each week in full-class meetings, but also held regular sessions with subgroups of twelve and engaged in many personal discussions with students.

External opposition to the program mounted quickly. University faculty criticized its independent governance and eclectic curriculum, and newspaper editorials and press reports lambasted its egalitarian pedagogy and Meiklejohn's arrogant style. Responding to these threats and to the economic problems of the Great Depression, the university administration proposed significant changes in the Experimental College in the 1930–1931 academic year. Standardized testing was to be introduced, and curriculum modifications made. Meiklejohn and the faculty refused to comply, and the university senate and administration closed the program in the spring of 1932. The short-lived experiment, however, gave birth to a long-lived legacy: Over the next half-century, the Experimental College inspired scores of innovative undergraduate programs across the United States.

Following the closure of his college, Meiklejohn and his second wife, Helen, moved to Berkeley, California, where they helped found the San Francisco School for Social Studies. The school was open and free to all applicants—from traditional students to housewives, laborers, and retired persons. Beginning with the first class of 300 students in 1934, readings and discussions centered on classical social thinkers and contemporary social problems. By 1942, when the school closed due to economic pressures from World War II, more than 1,700 students were enrolling each year. Meiklejohn pursued his interests in constitutional rights to free speech, protesting against the permanent installation of the House Un-American Affairs Committee and loyalty oaths. He published *Free Speech and its Relation to Self Government* in 1948, and received honors from the American Civil Liberties Union and the Socialist League for Industrial Democracy. He served as vice president of the league for almost forty years. Alexander Meiklejohn died at the age of ninety-two.

Alexander Meiklejohn's influence is still felt in higher education. Scott Buchanan and Stringfellow Barr rebuilt St. John's College based on Meiklejohn's Experimental College in Wisconsin and Robert M. Hutchins' reforms at the University of Chicago. In Meiklejohn's later years, he was a "sympathetic observer" and senior guide for Joseph Tussman and others who founded the Experimental College at the University of California, Berkeley. Tussman described himself in those years as a "direct spiritual descendent" of Alexander Meiklejohn.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; LIBERAL ARTS COLLEGES.

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## MEMORY

### AUTOBIOGRAPHICAL MEMORY

Charles P. Thompson

### DEVELOPMENT OF

Patricia J. Bauer

Rebecca M. Starr

### GRAPHICS, DIAGRAMS, AND VIDEOS

Priti Shah

### IMPLICIT MEMORY

Henry L. Roediger III

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### MENTAL MODELS

Gabriel A. Radvansky

David E. Copeland

### METAMEMORY

Gregory Schraw

John Nietfeld

### MYTHS, MYSTERIES, AND REALITIES

Elizabeth J. Marsh

### STRUCTURES AND FUNCTIONS

Peter E. Morris

## AUTOBIOGRAPHICAL MEMORY

In the early twenty-first century there is general agreement among memory researchers that memory

consists of a number of distinctly different types of memory rather than one single memory. A brief overview of the major divisions in memory will help put autobiographical memory in context. Philosophers have long made a distinction between *knowing how* (e.g., knowing how to ride a bicycle) and *knowing what* (e.g., knowing what a bicycle is). Modern research has verified the distinction between these two types of memory, and they are currently called procedural or implicit memory (knowing how) and declarative or explicit memory (knowing what). In 1972 Endel Tulving divided declarative memory into semantic and episodic memory. Semantic memory, because it contains general information such as facts, names, and important historical dates, could be described as a person's knowledge of the world. Episodic memory refers to a person's memory of events.

Autobiographical memory is a large and important subset of episodic memory containing those events that constitute the story of one's life. In the words of Katherine Nelson, autobiographical memory is "specific, personal, long-lasting, and (usually) of significance to the self-system. Phenomenally, it forms one's personal life history" (p. 8). If the first meeting with a loved one involves going to a movie, that event stands a good chance of becoming part of autobiographical memory. Other occasions on which movies are attended, however, will be remembered for a short time but probably will not become part of autobiographical memory. Instead, those events will contribute to generic memory. Generic memory contains memory for frequently occurring events such as brushing teeth or going to a movie. When asked about such events, it is unlikely that a specific instance of toothbrushing or going to a movie will be remembered.

### The Organization of Autobiographical Memory

Autobiographical memory is organized as nested clusters of events that are all highly interconnected. Take the memory of a lawyer as a hypothetical example. Under the topic of school, that person would find events for elementary school, secondary school, college, and law school. Nested under each of those categories would be the events for each year (e.g., sophomore in college). Under the category of sophomore in college would be the events for each semester, which, in turn, would be grouped in categories such as academic events (e.g., classes), jobs, and friends. All these autobiographical events would be accessible in a number of ways. A particular event

might involve a certain year in college, a particular job, and certain friends. That event could be accessed when thinking about school, friends, or jobs.

The topic of school is just one example of the many topics that have many subcategories. Other such topics include marriage, jobs, and military service. Just like the clusters of events nested under topics, the topics also are highly interconnected. The end result is a memory system that has the ability to retrieve the memory of a particular event from a large number of starting points. The most obvious example of the power of autobiographical memory to retrieve events is involuntary memory—memories that just pop into mind. In a 1998 article Dorthe Berntsen described her studies of involuntary memories, which showed that people average six to eight such memories every day.

### Memory for Autobiographical Events

Remembering an autobiographical event usually involves both retrieving the content of the event (remembering what) and placing it in time (remembering when). Of course, memory for both fades over time. Autobiographical memory can be either reproductive or reconstructive. When it is reproductive, virtually all the details are retrieved from memory. When it is reconstructive, a few major points are retrieved from memory and the rest is constructed from generic memory. People are very good at reconstructing memory from generic events, and they are usually not aware that they are doing so. One of the consequences is that memory for old events is often wrong. Sometimes the error is minor and sometimes it is not.

Memory researchers have shown that memory for the content of the event gradually changes from being almost entirely reproductive to being, after about a year, almost entirely reconstructive. By contrast, memory for when an event occurred is almost always entirely reconstructive.

There are three additional distinctive characteristics of memory for autobiographical events. First, as time passes, the number of events that can be recalled drops off rapidly at first and then more slowly—a negatively decelerating curve. Second, older people show what David C. Rubin and his colleagues called a "reminiscence bump." Older people recall more events for the period when they were in their twenties than predicted by the negatively decelerating memory curve. Typically, many important life

events (such as college graduation, marriage, and children) occur when people are in their twenties. Research has shown that the reminiscence bump can be attributed to these important life events. Third, almost all people show infantile amnesia. When people are asked to recall events from their childhood, they usually cannot recall events prior to age three. Not only are they unable to recall memories before age three, but the number of memories retrieved between ages three and six is also markedly below the number available after that period. Infantile amnesia is an intriguing puzzle because researchers have shown that children under age three can report details of isolated specific events and, most important, can remember them for up to two years. There is a growing consensus that the answer to the puzzle may lie in the development of autobiographical memory.

### **The Development of Autobiographical Memory**

By the early twenty-first century there was considerable evidence that children learn how to talk about memories with others. They learn how to tell their life stories as a narrative. This is the social interaction view of autobiographical memory. This view proposes that infantile amnesia is overcome when children learn how to retain their memories in a recoverable form by turning them into narratives.

One strong source of support for the social interaction view has been the investigation of mother-child discussions of past events. These discussions can be classified as narrative or pragmatic. The narrative conversations focused on what happened when, where, and with whom. The pragmatic conversations used memory to retrieve specific information such as “Where did you put your book?” Children of mothers who used the narrative type of discussion remember more about the events than children of mothers who used the pragmatic type of discussion.

### **Autobiographical Memory as an Expert System: Implications for Learning**

Experts learn new material in their field much faster than novices, and they retain that material much better as well. The reason for their outstanding performance in learning and memory is that they have a highly organized and detailed memory for their area of expertise. This allows them to relate new material to one or more pieces of information that they already know. Metaphorically speaking, they have many potential pegs on which they can hang new in-

formation. When they have to retrieve the new information, they can follow a well-beaten path to that information.

Autobiographical memory is also a highly organized and detailed memory. When it is possible to relate new information to life events, autobiographical memory functions in the same way as an expert system. The new information will be learned faster and remembered better than information that cannot be related to life events (or to another expert system).

### **Life Is Pleasant—and Autobiographical Memory Makes It Better**

In studies of subjective well-being conducted around the world, people generally report that they are happy with their life. In the United States, this positive feeling is found in people with physical disabilities, people with mental illness, low-income people, minorities—in short, it is found for virtually all categories. Research on autobiographical memory shows two sources for this positive feeling of well-being. First, life events are generally pleasant with positive events occurring roughly twice as often as negative events. This is true for childhood memories, involuntary memories, and adult memories.

Second, the general level of pleasantness typically is enhanced when remembering life events. That occurs because the emotion attached to the events fades over time but the emotion for unpleasant events fades much faster than the emotion for pleasant events. Thus, the overall emotional tone becomes more pleasant for autobiographical memory. The mechanism responsible for this change appears to be the rehearsal (thinking about or talking about) of pleasant events.

For most people, autobiographical memory is a very positive and useful part of memory. It is equivalent to an expert system and therefore can be very helpful in learning new material. Most important, it holds the story of one’s life. That story is typically very pleasant and, because negative emotions fade rapidly, becomes more pleasant as time passes. People’s lives would be much reduced without their access to autobiographical memory.

*See also:* MEMORY, *subentries on* DEVELOPMENT OF, MYTHS, MYSTERIES, AND REALITIES.

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CHARLES P. THOMPSON

**DEVELOPMENT OF**

Traditionally, the construct of memory has been divided into a number of different types, defined large-

ly in terms of the length of time over which information is retained or stored. For example, memory is divided into a very brief (on the order of milliseconds) sensory store for visual or acoustic properties of a stimulus; short-term or working memory, in which information can be stored and manipulated for about twenty seconds; and long-term memory, in which information can be stored virtually permanently. Long-term memory can be further divided into storage of procedures or skills, such as how to tie a shoe, and storage of explicit or declarative memories, such as memories of personal events or of general knowledge about the world. The study of the development of each of these systems can aid in understanding the cognitive abilities of both children and adults. Because working memory has important implications for learning and education, it is the focus of this entry.

**Defining and Measuring Working Memory**

Whereas short-term memory refers to the storage of information over brief delays, working memory refers to the capacity to store information for brief periods and to manipulate it during storage. A prominent model of working memory suggests that it is a multicomponent resource consisting of a limited-capacity central executive or "work space," where processing takes place, and two storage components, one for verbal information and one for spatial information. Working memory underlies a variety of complex cognitive tasks, including reading comprehension and mental arithmetic. For example, mentally adding the numbers 12 and 49 requires that both numbers be held in mind as the operation of addition is performed. Because conscious manipulation of information depends on working memory, one must examine its development in order to understand the abilities of different aged children to comprehend, learn, and remember the information taught to them.

Unlike the capacity for long-term memory, which is considered to be virtually unlimited, the capacity for working memory is limited to a few items. Indeed, the increase in the number of items that can be stored and manipulated at a time (referred to as the working memory "span") is a major source of age-related change in working memory. Moreover, at any given age, there are differences among individuals in their working memory spans. Measures of working memory span thus are integral to the study of working memory. Methods of assessing working

memory include the reading span task, the A-not-B task, and the imitation task.

**The reading span task.** A classic measure of working memory in adults is the reading span task. Reading span is assessed by having adults read a series of sentences and then recall the final word of each of the sentences in the order that they read them. The reading span task requires both the storage and manipulation of information: The reader must store the last word of each sentence while reading subsequent words and sentences. Measures have also been developed to assess working memory throughout childhood, and these measures reveal systematic increases in working memory capacity across age.

**The A-not-B task.** In the second half of the first year of life, working memory most frequently is assessed by the A-not-B task. In the A-not-B task, a small toy is hidden in one of two identical wells (Well A) in full view of the infant. After a brief delay, the infant is allowed to reach into Well A to find the toy. Following several "A" trials, the toy is hidden in the second well (Well B). Even though the infants watch as the toy is hidden in Well B, they often reach to Well A again, making the "A-not-B error." Overcoming the A-not-B error, and thus, successfully searching in Well B, requires that infants (1) remember where they saw the toy hidden (requiring storage of information) and (2) inhibit the learned tendency to reach to Well A (requiring processing of information). As working memory ability increases, infants are able to withstand longer delays without making the A-not-B error. The delay that infants are able to tolerate without making the error increases about two seconds per month between the ages of seven to twelve months.

**The imitation task.** In the second year of life, working memory can be assessed using imitation. In a standard imitation task designed to assess short-term or long-term memory, props are used to produce a sequence of actions (e.g., making a rattle by putting a ball into a nesting cup [step 1], covering it with another cup [step 2], and shaking the cups to make a rattle [step 3]). The child then is allowed to imitate the sequence either immediately (as a measure of short-term memory) or after a delay (as a measure of long-term memory). To assess working memory, the steps of several sequences are presented in interleaved order. That is, rather than the steps of a single event in sequence (A-1, A-2, A-3, with the alphabetic character referring to the sequence and the number referring to a step in the sequence), the

child sees, for example, A-1, B-1, C-1, A-2, B-2, C-2, A-3, B-3, C-3. The child is then provided with the materials for each of the sequences in turn (e.g., all of the materials for sequence A) and is encouraged to produce the sequences. The interleaving of the sequences during presentation requires that the child not only store the information for each individual step but also attend to subsequent steps and integrate the steps into their respective sequences. Researchers have used the imitation task with seventeen- and twenty-month-old children, finding increases in performance, and therefore in working memory, with age.

**Tasks for assessing older children.** Working memory may be assessed in older children with an adaptation of the reading span task and with a similar task using numbers. Both tasks indicate increases in working memory across the age range of seven to thirteen years. In addition, children with reading disabilities perform at lower levels on both tasks than do their normal age-mates, and children with arithmetic disabilities have trouble with the number task. Thus, working memory plays an important role in the development of reading and number skills during middle childhood. Adult levels of performance on working memory tasks are reached by the high school years.

### Factors Affecting Developmental Changes in Working Memory

Developmental changes in working memory may be due to several factors, including brain maturation, increases in the speed of information processing, increases in knowledge, better use of strategies, and more effective management of attention. For example, the processes involved in working memory are largely dependent on the prefrontal cortex of the brain. The prefrontal cortex matures late relative to other brain regions, such as those involved in sensory and motor processes, and does not reach full maturity until adolescence or even early adulthood. Thus, the time courses of development of the functions of working memory and of the brain regions thought to support them are closely linked. Brain maturation also involves a process called myelination, in which a fatty substance surrounds the nerve cells and aids in the conduction of brain impulses. Myelination may increase the speed of processing, thereby increasing working memory abilities as children mature: Faster processing allows for the storage of more information before it decays from working memory.

Other factors that may affect the development of working memory include increased knowledge, strategy use, and management of the focus of attention. Breadth of knowledge affects working memory to the extent that new information can be linked to existing knowledge. For example, it is easier to store nine letters that form three words that are already stored in long-term memory (e.g., p-e-n, d-o-g, h-a-t) than to store a list of nine random letters in working memory (e.g., p-o-h-e-d-t-n-g-a). The learning of and increased efficiency in the use of strategies also aids working memory. For example, as children reach the late grade-school years, they begin to spontaneously use rehearsal (the strategy of repeating the information mentally) when they attempt to remember something new. Working memory also develops with age as children gain increasing control over the focus of their attention. This permits them to attend to more information, switch the focus of attention as needed, and inhibit attention to irrelevant information. All three of these factors—increased knowledge, strategy use, and management of attention—likely play a role in the development of working memory throughout childhood.

### Summary

Working memory involves the conscious storage and manipulation of information that is integral to the performance of complex cognitive tasks. It is clear that working memory develops throughout childhood, as children are able to hold increasingly more information “online” even as they perform a greater number of mental manipulations on the information. Because working memory underlies so much of mental functioning, it is important to understand its development, as well as the sources and implications of individual differences in it.

*See also:* MEMORY, *subentry on* MYTHS, MYSTERIES, AND REALITIES.

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## GRAPHICS, DIAGRAMS, AND VIDEOS

Graphics, diagrams, and videos are frequently used to enhance learning of verbal material. Indeed, as much as half of the space in K–12 textbooks is devoted to graphics and diagrams, and videos are frequently presented in classrooms. Furthermore, recent technological advances have made possible the use of additional, primarily visual, materials for instruction, such as animation and hypertext.

Presumably, graphics, diagrams, video, and other visual materials are used to make information accessible and memorable. But how might such visual materials be exploited to facilitate learning and memory? When are such displays actually beneficial for learning, and when are they simply decorative or even distracting? This brief review begins with a discussion of general research on how visual media displays aid comprehension and enhance memory for verbal material, and the circumstances in which visual materials are distracting and perhaps even reduce comprehension memory of verbal material. This discussion incorporates guidelines for the design of visual displays for effectively enhancing memory in the context of specific commonly used displays such as graphic organizers, graphs, diagrams, and videos.

### Main Benefits of Graphics, Diagrams, and Videos

Visual displays and videos play a number of important roles in learning. Perhaps the most cited cognitive explanation for the benefits of presenting information both visually and verbally is Allan Paivio's dual-coding theory. In classic memory studies, Paivio and his colleagues demonstrated that people were better at remembering lists of words coded visually and verbally, rather than merely verbally. One explanation for the superiority of dual-coding is that by encoding information to be learned in two modalities rather than a single modality, people have multiple retrieval cues that help them access information, thus enhancing memory.

A second general benefit of visuospatial displays is that they are visually appealing. Viewers' attention is attracted to these displays, and viewers are more likely to study them for longer periods of time. This, in turn, can lead to enhancement of memory for information depicted in them. For example, one study of memory for materials taught in introductory psychology courses found that stu-

dents recalled ideas and examples presented in videos and in-class demonstrations better than information presented in the text alone.

In addition to directly enhancing memory for information, diagrams, graphics, and videos can also make complex information easier to comprehend. Specifically, visual representation can make complex information "visually obvious" and thus require less cognitive effort to understand than text-based descriptions of the same information. Better comprehension, along with more cognitive resources that can be allocated to learning and memory, will together enhance memory for the information to be learned.

### Concepts that Visual Displays Are Most Useful in Communicating

Visual displays are particularly beneficial to the comprehension of some classes of concepts that often involve specialized types of displays. First, visual displays are useful for communicating cause-and-effect information. For example, a diagram can help illustrate how turning a key can unlock a door. When such displays are designed to highlight the cause-and-effect sequence (e.g., by animating one portion at a time or by using a sequence of arrows), viewers' comprehension and memory for the cause-and-effect information is enhanced.

Second, visual displays are frequently useful for representing relationships amongst elements (e.g., a Venn diagram, a text-based graphic organizer, a scientific model). One benefit of such representations is that they can facilitate problem solving. Another benefit is that they provide concrete representation of key concepts or elements and their relationships. Graphic organizers, for example, are often used to represent relationships among the main ideas in a text. For example, information in a text can be summarized in matrix form such that similar concepts are closer together along one or more dimensions. Research has suggested that representations that group relevant concepts, such as matrices, can significantly enhance memory for text compared to representations that simply summarize materials, such as outlines. Indeed a general principle that is relevant for any diagram intended to represent relationship elements, including graphic organizers but also including graphs, flowcharts, and so on, is that information that is closely related be placed close together on a page or related visually (e.g., via Gestalt principles of grouping).

Third, visual displays are useful for communicating information that is intrinsically visuospatial. For example, visual displays of a map of a building or a drawing of how different parts of a car engine fit together communicate information that is difficult to describe verbally. Not all intrinsically visuospatial displays, however, are equally beneficial. One general guideline is to design displays that facilitate integrating relevant information (placing text and graphics together) to reduce working memory load and allow viewers to focus on learning relevant content. A 2001 book by Richard Mayer on multimedia learning includes a number of guidelines for the design of such displays.

Fourth, visual displays provide natural mappings to quantitative information (e.g., more is higher) and thus increase comprehension and memory for quantitative information. One difficulty associated with graphs is that students often make interpretation errors and therefore remember erroneous data. In a 2002 article, Priti Shah and James Hoeffner discuss a set of guidelines for teachers and other graph designers who need to depict data for students. These guidelines include making relevant trends visually salient in the graph and writing text to be compatible with information in the graph.

### **Additional Benefits of Visual Displays**

In addition to making some concepts easier to understand, diagrams, graphics, and videos tend to focus viewers' or readers' attention and thus highlight important information. Displays or videos can guide a viewer's attention from one step to the next in a description of causal information or in instructions. For example, a sequence of arrows might highlight how a mechanical device, such as a bicycle pump or a toilet, works, or a sequence of panels might instruct someone how to bake cookies. Such displays, by highlighting information or key elements in a sequence, help students learn and remember relevant information.

In addition to the cognitive aspects of how they influence memory, visual displays and videos serve a social function beneficial to memory. In particular, visual displays and videos provide a common motivating experience for students. In "anchored instruction," students view movies with built-in problems that serve as a reference point for lessons on a wide variety of topics such as solving mathematical problems, discussing social issues, and understanding physics concepts. The common anchor

may provide a social and personal context for information to be learned.

The use of graphics, diagrams, and videos includes not just presenting such visual information to students but also asking them to create them. Creating visual artifacts or inscriptions appears to be motivating to students, especially when they share their products with fellow students. Furthermore, developing them forces students to consider the important elements and relationships and also to identify what information they understand and what they do not. Thus, the creation of graphics, diagrams, and videos can be used to enhance comprehension and memory for to-be-learned information.

### **Drawbacks of Displays and Videos**

Despite the benefits of graphics, diagrams, and videos for helping students comprehend and remember important information, there are some cases in which displays and videos can be harmful. Specifically, because graphics, diagrams, and videos attract attention, it is possible that in many cases such visual presentations serve as seductive details detracting attention from important information and thus impair rather than enhance learning. A concrete example of a display that may serve as a seductive detail is a picture, in a scientific text about how lightning is formed, of someone who was struck by lightning. Although the intention of such a picture might be to interest the students in the content of the text, research has found that, in fact, displays such as these are actually distracting and reduce the quality of readers' understanding of the scientific content of the text. Videos, also, can serve as or include seductive details detracting viewers from the main message of a particular lesson.

In summary, this general discussion of visual displays suggests that diagrams, graphics, and videos can help users comprehend relevant information and enhance memory for that information. The content and format of the information, however, should be consistent with the goals of communication. When the content is not consistent with the goals of communication, students may remember irrelevant or inaccurate information.

*See also:* LITERACY, *subentry on* LEARNING FROM MULTIMEDIA SOURCES; MEDIA AND LEARNING; READING, *subentry on* CONTENT AREAS.

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PRITI SHAH

**IMPLICIT MEMORY**

Implicit memory refers to the expression of past events on current behavior when people are not try-

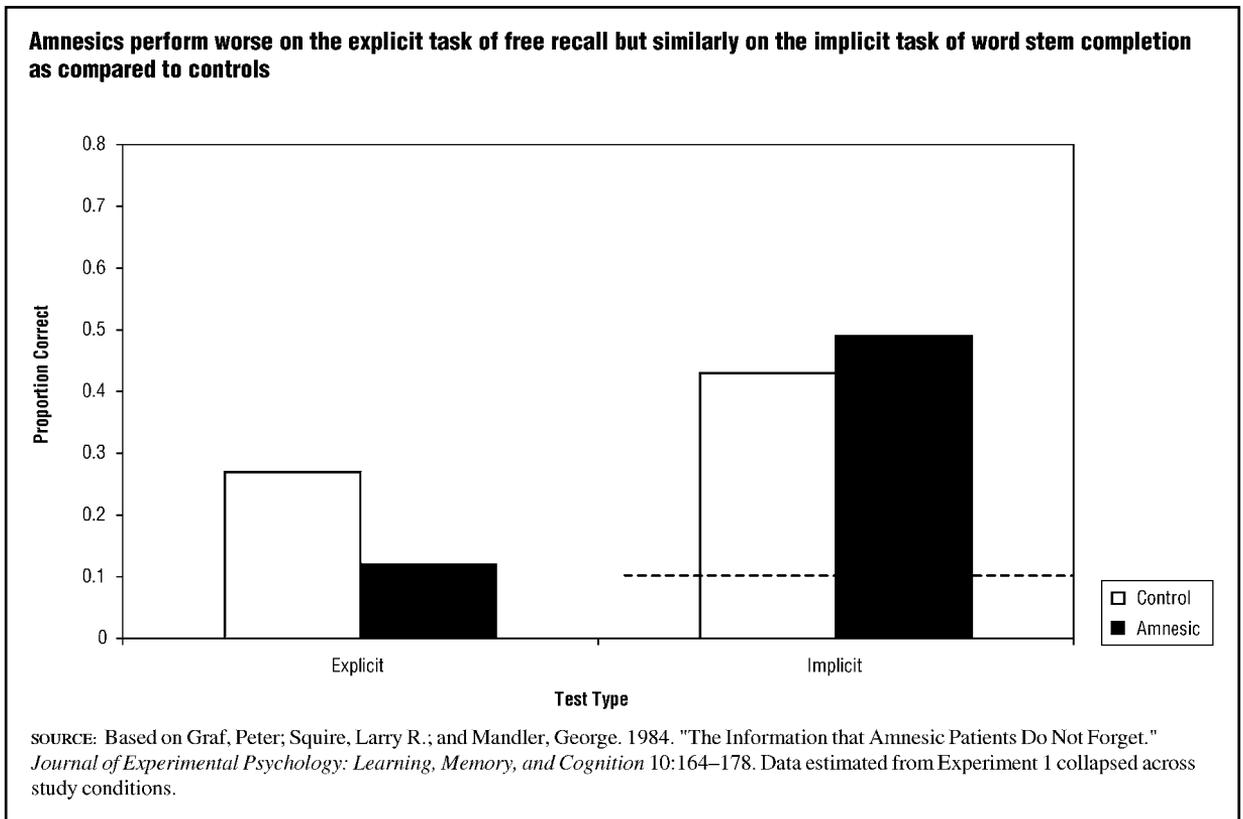
ing to retrieve these past events and when they are usually not even aware of the events' influence. This process is different from explicit memory, which refers to conscious attempts to retrieve memories of past events; in implicit memory tests there is no conscious effort to retrieve. The customary use of the terms *memory* or *remembering* refers to explicit, conscious recollection during which people attempt to travel back in time to mentally relive or reexperience past events. Many behaviors people perform, however, reflect past learning even when they are not consciously attempting to retrieve; therefore, these behaviors reflect the manifestation of implicit memory. Some of these behaviors involve motor skills. When people tie their shoes or ride a bicycle or walk, they need not consciously retrieve their first attempts to learn these skills. The same is true of other types of learning. It is much easier to read a passage of text that one has read before, even if not consciously trying to remember the original time the passage was read. As these examples indicate, implicit learning is sometimes referred to as occurring rather automatically or at least to having an automatic component.

**As a Reflection of Conscious Learning**

Implicit memory measures are sometimes said to reflect unconscious learning because densely amnesic brain-damaged patients typically show intact uses of implicit memory. The data in Figure 1 are from a 1984 experiment by Peter Graf, Larry Squire, and George Mandler. They compared brain-damaged participants who displayed serious impairments on explicit memory tests such as recall and recognition to age- and education-matched control participants. In one test condition, both groups of participants studied lists of words and attempted to recall them in any order (free recall). As can be noted on the left of the graph in Figure 1, the patients recalled the words much worse than did the controls. This pattern reflects the patients' deficit on an explicit memory test, in which they were asked to consciously retrieve past events.

In the implicit test, both groups studied the lists of words but were tested by being shown three-letter stems of words with the instruction to produce the first word that came to mind in response to each stem clue. So, if the word *chair* had been in the list, participants would get *cha* and be asked to say the first word that came to mind (*chain, chapter, challenge* and so on—each stem had at least ten possible

FIGURE 1



completions). If *chair* had not been presented in the list, people in both groups produced it about 10 percent of the time (the dashed line on the right side of Figure 1). However, if *chai* had been presented in the list, both patients and the control participants produced the word about 45 percent of the time. The fact that both groups completed the word so much above the base rate reflects priming, the basic measure of implicit memory tests. Priming is defined as the difference between performance on a test when the relevant information has been presented and performance when the relevant information has not been recently presented. Therefore, the amount of priming reflected in the data in Figure 1 was about 35 percent (45% in the primed condition minus the 10% base rate). Although the participants were told to produce any word that came to mind, the presentation of *chair* in the list primed them to produce that word rather than another on the test.

This priming effect reflects a use of memory, but not a conscious or intentional use of memory. Because the patients were densely amnesic and probably did not remember even studying the list of words, the priming may be said to be unconscious

(in this sense). The amnesic patients produced just as much priming as did control participants. Because the patients had suffered brain damage that impaired their use of explicit memory processes, it appears that the brain mechanisms and processes that underlie explicit and implicit memory tests are quite different. Put another way, the results show that memory is not a unitary entity; people with certain types of brain damage can be severely impaired on one type of memory test and unaffected on other types of tests.

### Implicit Memory Tests

The study of implicit memory began in psychology in the early 1980s and in the early twenty-first century there is a large amount of literature on the topic. There seem to be at least two distinct types of implicit memory tests, perceptual and conceptual.

**Perceptual memory tests.** Perceptual implicit memory tests challenge the perceptual system by presenting impoverished test stimuli to which participants respond. The word stem completion test already described (*cha*) is one such test. Others are word iden-

tification (presenting words very briefly and having participants guess what they are), and word fragment completion (naming words from fragments such as *l\_p\_a\_t*. (That fragment is hard if not recently primed [with word *elephant*].) If pictures are used as study materials, then the test can involve giving fragmented forms of pictures or having them be gradually clarified through a series of successively fuller fragments until the participant can identify the picture. Again, the measure in all cases is priming—as reflected by more accurate or faster completion of the target when it has been studied relative to when it has not been studied.

Factors that greatly affect priming on perceptual implicit memory tests are often quite different from those that affect performance on most explicit memory tests in both patients and in healthy control participants, indicating further that these two types of tests seem to be measuring different processes. For example, modality of presentation of words strongly affects performance on perceptual implicit tests. Visual presentation of words enhances priming on visual tests, whereas auditory presentation enhances priming on auditory implicit tests (e.g., presenting words describing noise with auditory cues for identification). Modality generally matters little in tests of explicit memory. On the other hand, factors that can have a great effect on explicit memory tests can have little or no effect on priming on implicit tests. For example, when participants read pairs of words (*hot* and *cold*) or generate the second word from a clue such as “opposite of cold,” they scored better on an explicit test of recognition for the words they generated, but exhibited more priming for the words they just read on an implicit test, in which they had to quickly identify the word. The data are shown in Figure 2.

The results described above can be explained, at a general level, by the theory of transfer appropriate processing. This principle states that performance on memory tests will be enhanced if there is a match between the conditions of study and test, which will permit the study experience to transfer better to the test. For example, if the test involves deciphering a fragmented or briefly presented word given visually (classified as a perceptual test), then performance on this test should benefit from prior visual presentation more than from a prior auditory presentation or from generating the word, as is indeed the case. Practice reading a visual word (versus hearing or

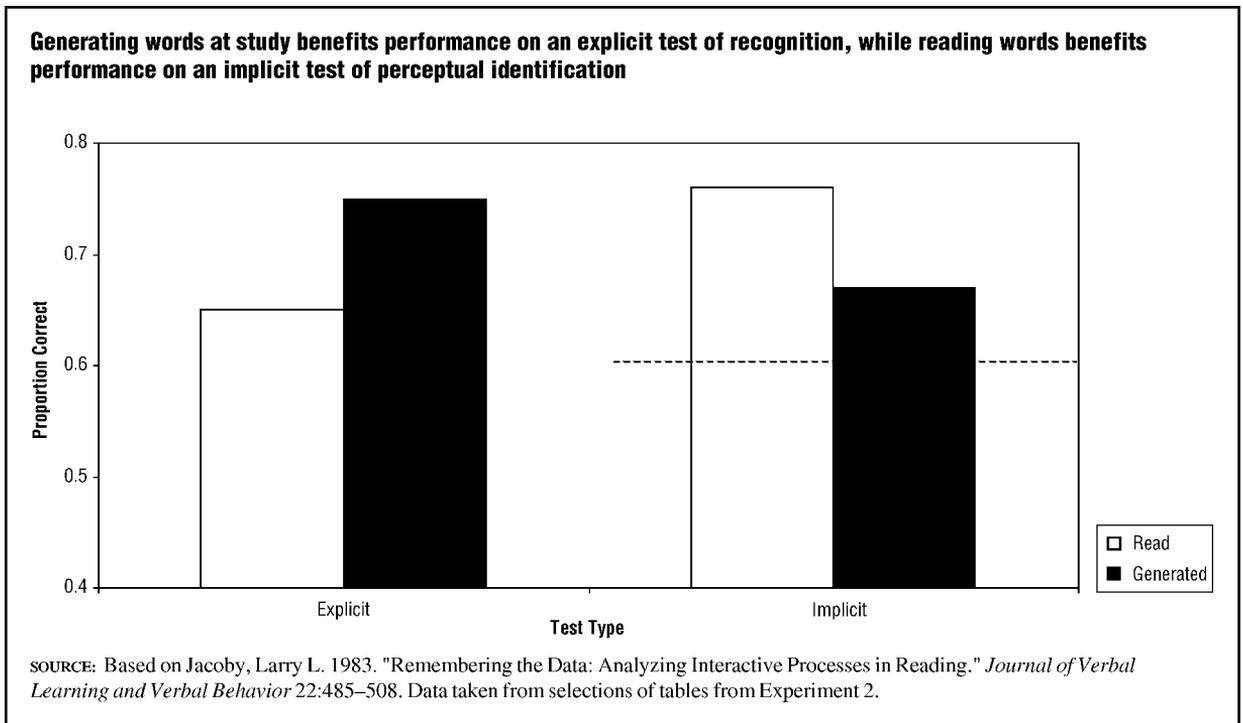
generating it) transfers better to a test that also involves reading words.

**Conceptually driven tests.** Whereas most implicit tests depend on perceptual processing, most explicit memory tests depend heavily on the meaning of the concepts or events that are being remembered. These tests are called conceptually driven tests because, when people are trying to retrieve past events, it is the meaning of the events that is important. Generating a word involves more attention to meaning than simply reading it, and so generating produced greater explicit recognition in results shown in Figure 2. Again, this finding is in accord with the transfer appropriate processing theory. The transfer appropriate processing theory can account for a large body of findings although some problems remain.

Although explicit memory tests are usually driven by meaning or by conceptual information, there is a class of implicit memory tests that is also conceptually driven. These tests are probably the most relevant for education, but they have not yet been studied as much as perceptual implicit tests. One class of conceptual implicit memory tests that has been studied is the general knowledge test. “What animal did Hannibal use to help him cross the Alps in his attack on Rome?” and “What is the name of the ship that carried the pilgrims to America in 1620?” are examples of questions on general knowledge tests. Prior exposure to the words *elephant* or *Mayflower* before the questions are asked increases correct answers to these questions, which reflects priming of concepts. Free association tests (“say the first word that you think of to the stimulus word *tusk*”) and category association tests (“list as many African animals as you can in thirty seconds”) are other examples of conceptually driven implicit memory tests. These priming effects again seem to be indicative of implicit retrieval because they also appear in brain-damaged patients with severe difficulties in explicit expressions of memory.

In some sense, much of education is intended to permit people the automatic, unconscious retrieval of facts, routines, and principles when they need them. Education is meant to provide learning experiences that will, at least in some cases, last a lifetime. Of course, not all facts and principles will be remembered for that long. Much information learned in the classroom will be forgotten (at least when explicit tests are given). The hope is that one’s general knowledge and skills (writing, thinking logically)

FIGURE 2



will survive. There are no studies of residual, implicit retention of formal education but such studies will surely come in the future.

*See also:* MEMORY, *subentries on* MYTHS, MYSTERIES, AND REALITIES, STRUCTURES AND FUNCTIONS.

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## MENTAL MODELS

Mental models, also called situation models, are mental representations of the state of affairs in a real or possible world. They serve as mental simulations of events. For reading, a mental model represents the situation described by the text rather than the text itself. The creation of a coherent mental model is the goal of comprehension.

Mental models are complex representations that contain many different types of information. This includes a spatial-temporal framework about the spatial context in which an event occurred and the time period in which the event transpired (i.e., where and when it occurred). They also contain tokens to represent entities, such as people, animals, objects, and ideas. These tokens might have properties associated with them, such as physical characteristics, emotions, or names. Within a framework there may be structural relations that define the event. This can include spatial relations (e.g., the umpire is behind home plate), ownership relations (e.g., the players are using the shortstop's ball), social relations (e.g., the two teams are bitter rivals), and so forth. Finally, because events are dynamic, several frameworks can be joined by linking relations that contain temporal order and causal information.

### The Role of Experience

Mental model creation involves integrating prior knowledge with what has been given. This allows inferences to be drawn for information that has not been provided. Of course, the more knowledge a person has, the more likely it is that an adequate mental model will be constructed. For example, when watching a baseball game, a person with a lot of baseball knowledge will better understand the structure of the game, the causal and goal-related re-

lations among the players, and the sequence of events.

The structure of one's experience influences the creation of mental models. Suppose a person reads a text on a topic that the reader has a fair amount of knowledge of, such as going to a baseball game. In this case, there is a certain sequence in which the events occur (e.g., buying a ticket before finding one's seat). Even if two events are adjacent in the text, reading times increase as the distance between them in the standard sequence increases. So when building mental models, people consult their knowledge systematically. It is as if they are scanning sequentially through their knowledge to assess where the current events fit. The greater the distance, the longer the scanning process and the more that needs to be inferred.

Mental models are essentially an amalgam of the given information that can be acquired through a film, book, lecture, discussion, and so forth, along with prior knowledge that a person has in long-term memory. The use of mental models is found in a wide variety of circumstances, including language comprehension and memory.

### Comprehension

Mental models are critical for understanding. When people comprehend language, they create three types of mental representations. The simplest is a verbatim representation of what was heard or read. This is forgotten very quickly unless there is something important about the exact wording, as with a joke. At a more abstract level is the propositional textbase. This is a representation of the idea units that were expressed. For example, the sentences "The ball was hit by the batter" and "The batter hit the ball" would correspond to the same propositional representation. This representation is forgotten less rapidly. Finally, at the most abstract and highest level is the mental model. This is a referential representation of the described events. The mental model is a representation of what the message is about. In contrast, the verbatim and textbase levels are representations of the message itself but may serve as scaffolding from which to build a mental model.

While the goal of comprehension is to construct a mental model, its organization and function can influence comprehension itself. During reading, people keep track of what is going on in the described situation. For example, readers may keep

track of the spatial location of a protagonist in a story. When that person moves from one location to another, knowledge about people or objects in the old location become less available. Switching from one spatial framework to another influences what information is readily available during comprehension. Moreover, the further the protagonist moves from the original location, the less available the information becomes. A similar thing occurs for temporal frameworks. Short time periods are more likely to be part of the same time frame, whereas long time periods are more likely to include a shift to a new time frame, and hence a new situation. Information that was relevant to the original situation is less available after a large time shift. Finally, people also monitor a protagonist's goals. Information that is relevant to current, unsatisfied goals is more available than information relating to goals that were successfully completed. The prior goal information is no longer maintained in the current mental model.

When the structure of the situation changes, reading times increase, as if readers are monitoring the described events. This includes changes in space, time, entities, causality, or the goals of the protagonist. When a major change in the described situation occurs, people update their mental models. In addition to monitoring event changes, people may also notice inconsistencies with what has been described before. Such inconsistencies result in increased reading times as the reader tries to resolve what they know of the situation with the current information.

One of the most important dimensions that people monitor is causality. Information varies in the degree of its causal importance. Information that plays an active role in the described situation is causally more important. Such information is typically read more quickly. Presumably, this is because it can be more easily integrated into the current mental model.

### Memory

Mental models are also involved in memory. At very long periods of time, this is the representation that will dominate a person's recollections. Many of the influences during comprehension carry over into memory. For example, shifts in a situation during comprehension result in the memory being organized around those shifts. Also, causally important parts of an event are better remembered than less important parts. It should be noted that the ease

with which information is integrated into a mental model has an influence on the ability to identify that situation later. Continuous and consistent descriptions are remembered better than discontinuous, inconsistent descriptions.

Mental models include both given information and inferences a person generates. With the passage of time, it becomes difficult to disentangle these two. People often mistakenly identify information as having been encountered before if it is consistent with the previously described situation, even when that information is new.

How information refers to the world is important for how it is represented in mental models. This has important consequences for memory. When given a large set of related information, a person can integrate this information into one mental model if the information can be interpreted as being consistent with a single situation in the world. Otherwise, it may be stored in separate mental models. When a person needs to remember one piece of information, if there are related mental models containing related but irrelevant information, this will produce interference, causing the memory retrieval to be slower and more error prone. If, however, the information is integrated into a single model, there is no such cost to memory.

While these findings suggest that a mental model can influence memory retrieval, it is also possible to remove these influences to a certain degree. As mentioned earlier, people create multiple representations during comprehension, including verbatim, propositional, and mental model representations. The mental model will contain many inferences and will also capture the perspective of the comprehender. If the mental model is discredited in some way, such as asking a person to take a different perspective on the text that was read, then the person will rely less on the mental model and more on the propositional representation. For example, people reading a description of a baseball game might originally be told that the home team was going to make the playoffs. Then when the person is asked to recall the story, they could be told that the story was about a team that ended up in last place. This shift in perspective will cause a decrease in the number of inferences a person reports and also increase memory for those previously unremembered propositions that are consistent with the new perspective. Thus, the person has disregarded their mental model during memory retrieval.

## Summary

Mental models are mental representations of specific states of affairs in the world. They are created using the knowledge a person has at hand, along with prior knowledge. The organization and extensiveness of this prior knowledge is of great importance. People use mental models during comprehension as the basis for their understanding. Changes in the described situations cause people to update their mental models, which has a tangible effect on the comprehension process itself. Finally, mental models appear to be the form of mental representation that is stored in memory for long periods of time. The ability of a person to remember information in part reflects the organization and structuring of information into mental models.

*See also:* LEARNING, *subentry on* KNOWLEDGE ACQUISITION, REPRESENTATION, AND ORGANIZATION; READING, *subentry on* COMPREHENSION.

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## METAMEMORY

Metamemory refers to a person's knowledge about the contents and regulation of memory. The term originally derives from the work of John H. Flavell in the early 1970s. Metamemory enables a person to reflect on and monitor her memory. In addition, metamemorial knowledge plays an important role in planning, allocation of cognitive resources, strategy selection, comprehension monitoring, and evaluation of performance.

This entry begins with a description of the two main structural components of metamemory—declarative knowledge, which enables a person to evaluate the contents of memory, and procedural knowledge, which enables a person to monitor and regulate memory performance. It next summarizes important developmental trends in metamemory, then discusses several important educational implications of metamemory research, including the rela-

tionships among metamemory, strategy instruction, and self-regulation.

### **Declarative and Procedural Aspects of Metamemory**

Most theorists distinguish between declarative and procedural components of metamemory. The declarative component corresponds to storable knowledge about the contents and contexts of memory use and includes knowledge of memory's contents, knowledge of essential intellectual tasks such as reading and problem solving, and conditional knowledge about why and when strategies are most effective. The procedural component includes knowledge about procedural skills necessary to manage memory efficiently, including control processes such as planning and evaluating and monitoring processes such as judgments of learning. Some theorists, but especially those interested in the relationship between metamemory and social cognition, have proposed a third component, usually referred to as a beliefs component, that regulates affect, social cognition, and efficacy judgments of memory performance. The focus here, however, is on the declarative and procedural components.

The declarative component includes at least three distinct subcomponents: knowledge of contents and capacity, knowledge of tasks, and conditional knowledge about optimal memory performance. The content subcomponent enables a person to assess whether he possesses enough knowledge to meet task demands. The task subcomponent allows a person to determine whether he fully understands task demands and possesses adequate resources to perform the task. The conditional knowledge subcomponent, which many view as the most important of the three, helps a person determine why, when, and where to use a particular strategy or under what conditions he is most likely to achieve optimal performance. Conditional knowledge plays an especially important role in self-regulation.

The procedural component includes control and monitoring subcomponents. The control subcomponent includes regulatory processes such as planning, selection of relevant information, resource allocation decisions, selection of relevant strategies, and inferencing. The monitoring subcomponent includes a variety of self-assessment strategies such as ease-of-learning judgments, judgments of learning prior to beginning a task, feeling-of-knowing judg-

ments made during learning, and comprehension-monitoring judgments made during or after a task. Most theories of metamemory assume that control processes directly regulate cognition and performance, whereas monitoring processes inform the precision of control decisions. Thus, control processes are at a higher level than monitoring processes, even though both reciprocally inform one another.

### **Development of Metamemory**

A number of researchers have studied the development of metamemory, and four main conclusions can be drawn from this research. The first conclusion is that metamemory awareness is rather poor in children until the age of ten or older. Younger children frequently find it difficult to monitor the contents of memory, estimate the resources needed to complete a task, select appropriate strategies for a task, and monitor their learning. As a consequence, self-regulation is quite poor among children younger than ten years of age. Even among adults, however, metamemory awareness is poor, sometimes leading to overconfidence and illusions of knowing.

A second conclusion is that metamemory development is incremental and continuous. Development appears to be linear in nature with a steady increase in metamemory awareness, control, and monitoring from preschool through early puberty. Research generally does not reveal significant breaks or jumps in metamemory ability, suggesting continuous development over a ten-year period from early childhood through adolescence. It is less clear whether metamemory awareness continues to develop in adults, although most research indicates that awareness increases within specific domains as expertise develops.

A third conclusion is that metamemorial knowledge is self-constructed in nature through individual and interactive problem solving, as well as explicit strategy instruction and monitoring training. One essential element of the construction process is self-generated and other-generated feedback that increases knowledge of the contents of memory and tasks. A second essential element is modeling, in which an individual has the opportunity to observe and emulate skilled models. Thus far, researchers have failed to detect a strong link between metamemory and either intellectual ability or traditional measures of working memory speed and capacity. This suggests that metamemory awareness

develops independent of other individual differences in memory.

The final conclusion is that metamemory facilitates strategy use and performance. For example, correlations between metamemory and memory performance typically range from .30 to .50, even in younger children between the ages of five and ten years. The correlation may be even stronger in adults and experts. Knowledge about the contents of one's memory as well as tasks clearly should affect performance. In addition, declarative knowledge appears to be correlated with regulatory awareness. The more one knows about memory, the better able one is to regulate one's performance.

### Metamemory and Learning

Metamemory affects learning in many ways but especially with respect to the efficient use of limited cognitive resources, strategy use, and comprehension monitoring. Children and adults often experience difficulty learning because of cognitive overload—that is, too much mental work to do and too few cognitive resources at their disposal. Research reveals that declarative and procedural knowledge enables learners to use available resources more efficiently because they are better able to plan, sequence, and monitor learning tasks.

A second way that metamemory improves learning is through the flexible use of cognitive learning strategies. Research indicates that self-regulated learners use a diverse repertoire of strategies that are controlled using conditional knowledge in metamemory. Strategy use is highly correlated with skilled problem solving. Research also suggests that strategy training increases metamemory awareness, provided that conditional knowledge about the strategies is embedded within the instruction. In 1999 Roger Bruning, Gregg Schraw, and Royce Ronning provided a step-by-step summary of cognitive strategy instruction that includes feedback and modeling from peers, tutors, and teachers. Strategy instruction is especially effective for helping students develop conditional knowledge that enables them to select the most appropriate strategy and monitor its usefulness.

A third way that metamemory improves learning is comprehension monitoring. Unfortunately, many children and adults do not monitor with a high degree of accuracy. Monitoring training helps learners monitor more successfully and also im-

proves performance. Strategy instruction also improves monitoring even when monitoring instruction is not included as part of the instruction. Thus, either strategy instruction or monitoring training improve monitoring accuracy. Combining strategy instruction and monitoring training within the same intervention helps learners construct the control and monitoring subcomponents of regulatory knowledge described above.

### Classroom Implications

Metamemory research has not had a major impact on classroom instruction. The research suggests, however, that children acquire and construct metamemory knowledge in three distinct ways. One way is hands-on experience that provides declarative knowledge about tasks as well as procedural knowledge about optimal performance. A second way is through skilled models who provide detailed feedback—especially conditional feedback—that enables the student to distinguish between effective and less-effective strategies. A third way is through self-reflection and group reflection in which students explicitly discuss the effectiveness of different strategies and ways to improve performance in the future. Thus, there are many ways to improve metamemory awareness through classroom activities.

Several learning interventions have been developed that promote metamemory development and awareness. For example, in 1984 Annemarie S. Palincsar and Ann L. Brown described a program of reciprocal teaching that promotes the self-regulation of metamemory strategies. The program involves the teacher gradually handing over control of reading processes to the student in a small-group format. The teacher first models effective strategies (e.g., finding the main idea of a passage) then provides scaffolding to the students as they attempt to do the same while receiving feedback from their peers regarding the strategies they employ.

### Summary

Metamemory is knowledge about memory. Metamemory awareness develops late and incrementally yet has an important impact on memory and cognitive performance. Metamemory is not linked strongly to other cognitive factors such as intelligence and memory capacity. Rather, it develops as a function of experience, guided modeling and feedback, and individual and group reflection.

See also: LEARNING TO LEARN AND METACOGNITION; READING, *subentry on* COMPREHENSION.

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#### MYTHS, MYSTERIES, AND REALITIES

Why is it that people remember some things and forget others? How long do people remember things? What kinds of cues are likely to help a person remember a forgotten item? These are just a few of the many questions of interest to memory researchers. This entry reviews some of the important questions in the field of memory research and describes how psychologists use experimental methods to answer these questions. It also describes some of the major findings and rebuts some of the common myths about memory. This discussion is structured around the three stages of memory: encoding, storage, and retrieval.

*Encoding* refers to the intake of information and creation of a memory trace. In a typical memory experiment, the encoding phase involves presentation of the to-be-remembered stimuli, such as nonsense syllables, words, pictures, stories, films, or staged events. In real life, encoding includes all forms of perception, from watching a movie to having a conversation. Encoding may be *intentional* in that subjects are forewarned to memorize the items or *incidental* in that subjects learn the to-be-remembered material through performance of another task such as making a category judgment. In educational settings, encoding is intentional when students deliberately study the meanings of vocabulary words, learn facts for a test, or memorize a famous speech. In everyday life, however, most things are learned incidentally. Examples in the education domain include students learning about a historical period by watching films, role-playing, and reading memoirs.

*Storage or retention* refers to the maintenance of the memory trace over time. In most laboratory experiments, the retention interval is quite short and the subject does an unrelated task during that time. In the education domain, there may be a retention interval of several weeks between learning and testing; students may continue to practice the target information during the retention interval.

*Retrieval* involves later accessing that memory trace. There are many different ways to test memory. *Explicit tests* require subjects to consciously remember events from the study phase. Most educational tests are explicit; students know they are being tested and that they should remember facts from class and textbooks. Explicit educational tests include essay, short-answer, multiple-choice, and true-false tests; these roughly correspond to the laboratory tests of free recall, cued recall, forced choice, and old-new recognition. *Implicit tests* measure the effect of previous experience on a task that does not require the subject to consciously refer back to the study phase. In education, pure implicit tests are rare although many explicit tests may tap a student's implicit knowledge (e.g., essay tests implicitly test a student's knowledge of grammar). In the laboratory, there are many different implicit tests. For example, a subject who had recently seen a list that included the word *octopus* would complete the word stem "oct\_\_\_\_" with "octopus" at a higher rate than subjects who had not seen the list.

In the following sections, some of the facts and myths associated with each of the three stages of memory are described.

## Encoding

Key questions about encoding include what kinds of things are easily memorized and what study strategies can be employed to ensure later memory.

Not all materials are remembered equally well. Pictures are remembered better than words, and in general memory is better for distinctive items. Likewise, concrete words are better remembered than abstract words. Good teachers often apply this finding by using concrete analogies to explain abstract phenomena or theories, such as when the movement of gas molecules is compared to the movement of billiard balls on a pool table.

Not all study strategies are equal. In general, elaborative encoding yields the best memory. Elaboration involves going beyond the stimulus at hand

to create a richer memory trace. For example, rather than simply repeating a to-be-memorized vocabulary word, a student might think of other words similar in sound and meaning, draw a picture that somehow represents the word and its definition, or write sentences using the word in context. In perhaps the most famous laboratory demonstration of this, Fergus I. M. Craik and Endel Tulving looked at subjects' memory for words after perceptual, phonemic, or semantic processing in a 1975 study. For example, if all subjects studied the word *EAGLE*, one group decided if the word was in uppercase letters (perceptual), the second group decided if it rhymed with *legal* (phonemic), and the third group decided if it was an animal (semantic). All of these questions would have been answered affirmatively, but memory was best following semantic processing, next best with phonemic processing, and worst after perceptual processing. This is the classic levels of processing effect. The educational implication is that incidental study can be just as effective as intentional memorization. If students are studying via a semantic or other elaborative task, the resulting memory can be just as strong even if they are not forewarned about the upcoming memory test.

Encoding is not like taking pictures with a camera; not everything is recorded. Instead, encoding is selective. The levels of processing effect is an example of this; depending on the instructions, subjects directed their attention to different features of the target word. More generally, what students encode will be a function of what they already know and how well they can understand and link the incoming information to their prior knowledge. A *schema* is the term for a person's knowledge representation of a concept or domain. Without a schema, the understanding and interpretation of incoming information is difficult. For example, in a 1977 study by D. James Dooling and Robert E. Christiaansen, subjects had poor memories for such passages as "With hocked gems financing him / our hero bravely defied all scornful laughter that tried to defy his scheme / Your eyes deceive, he said—an egg not a table correctly typifies this unexplored planet." Good memory required knowledge that the upcoming passage would be about Christopher Columbus. Schemas also serve to direct a subject's attention to particular schema-relevant details and to allow for inferences. For example, according to a 1977 study conducted by James Pichert and Richard Anderson, students who read a story about two boys playing hooky and

spending the day at home remembered different things depending on which of two perspectives had been instantiated at encoding: home buyer or burglar. Subjects who read the story with the perspective of a burglar attended to and remembered better such details as that the house's side door was unlocked, a fact unlikely to be relevant to a home buyer.

Another fact about encoding is that more is not necessarily better; massed study is not a good idea. While many students choose to cram for exams the night before, the data clearly suggest that spaced study opportunities are preferable. The same holds true for rehearsal of to-be-remembered information, which is described in the next section on activities during the retention interval.

### Storage

Encoding is a necessary but not sufficient condition for later memory. As time passes, it becomes less and less likely that a person will be able to retrieve the target event. In 1985 Herman Ebbinghaus first documented the now classic forgetting function; he taught himself series of consonant-vowel-consonant trigrams and tested his memory after varying time lags. Memory dropped off quickly at first, but eventually forgetting leveled out over time to a fairly stable level. Most laboratory studies involve fairly short retention intervals; in 1984, however, Harry P. Bahrick examined knowledge of Spanish following retention intervals of up to fifty years (participants reported very little use of Spanish during that time). Again, there was a sharp drop in knowledge by three to six years poststudy, but after that initial drop, knowledge was surprisingly stable over the next twenty-five years. Bahrick termed this long-term retention the *permastore*.

Rehearsal during the retention interval aids memory; not all forms of rehearsal, however, are equal. Simply repeating a to-be-remembered item will not necessarily lead to enhanced memory. A student who writes a fact over and over will not remember that fact as well as a student who takes a more active approach to rehearsal. One of the best strategies is that of expanding rehearsal combined with self-testing. For example, the student who wants to learn a vocabulary word should not simply stare at the word paired with its definition. Rather, she should test herself and produce the definition of the word from memory; after a short delay she should repeat the process, and so on, incrementally increas-

ing the delay until the retention interval is at the desired length.

Memories do not lie dormant during the retention interval but are affected by the new information that continues to enter the system. In one classic demonstration of *interference*, subjects saw a slide show of a traffic accident involving a car passing a stop sign. In the next phase of the experiment, subjects in the experimental condition read a narrative description of the slide show that included a misleading reference to a yield sign. Control subjects also read a narrative, but it did not contain the misinformation. All subjects were later asked whether they had seen a stop sign or a yield sign. Subjects who had been exposed to the misleading post-event information were more likely to mistakenly say they had seen a yield sign than the control group. Although the exact mechanisms underlying the misinformation effect are still under debate, in at least some circumstances the misinformation works to block or interfere with access to the original memory.

### Retrieval

No single test of memory is perfect. No one test yields an absolute measure of what is in memory; rather, one can ascertain what is accessible only under a particular set of test conditions. The failure to recall part of a list is not necessarily synonymous with forgetting those words. Rather, they may be *available* in memory but not *accessible* given the current retrieval cues. When asked to write down all the words from a studied list, a subject may not be able to recall studying the word *robin*. This allegedly forgotten word, however, may be recalled in response to the category cue "birds" or correctly labeled as "old" on a test that re-presents the word *robin* for an old-new decision. Similarly, a student who is unable to produce an answer on an essay test may recognize it on a multiple-choice test.

Conclusions about memory may vary across tests. Take, for example, the effects of word frequency on memory. Following study of a word list, words that occur with high frequency in the language (e.g., *tree*) are recalled with a higher probability than are words that occur with low frequency in the language (e.g., *ecru*). The opposite result, however, is obtained on recognition memory tests. When subjects are asked to label words as "old" or "new," they do a better job with low frequency than high frequency

words. This paradox is one that continues to interest researchers.

So, how then to get the best performance possible on a memory test? The general rule is that the test should match study as much as possible. Returning to the levels of processing effect described earlier, semantic processing leads to better memory in part because most memory tests are semantic in nature. When subjects are given a phonological test (e.g., did you study a word that rhymes with *beagle*?), performance is better when words are encoded as rhymes than when they are categorized. Effects of test expectancy are nicely explained within this framework. Performance on an open-ended (essay or free recall) test suffers if students are incorrectly led to expect a multiple-choice test. Depending on which test is expected, students study differently. Students expecting a multiple-choice test focus less on relations between items and spend less time preparing than do students expecting a more open-ended test. The way students study for multiple-choice tests does not match the demands of the recall test; hence, performance suffers when students are surprised with the unexpected version of the test. A good educator will make clear the test demands early in a course so that students will tailor their study strategies appropriately.

Memory is not like a tape that can be played back perfectly at test. Rather, memory is reconstructive. In one example of this, from the 1977 study of Dooling and Christiansen, subjects read a paragraph that began “Carol Harris was a problem child from birth. She was wild, stubborn and violent.” Right before the test phase, some of the subjects were told that Carol Harris was really Helen Keller. These informed subjects were much more likely to incorrectly identify the statement “She was deaf, dumb, and blind” as having been in the original paragraph than subjects who were not informed of Harris’s true identity. Subjects made use of their knowledge at test to reconstruct what they read during the first part of the experiment. Schemas are as active during test taking as they are during encoding, and they provide retrieval cues and allow for reconstruction.

### Conclusions

There are two very general requirements for effective memory: quality encoding and appropriate retrieval cues. These principles are exemplified in a classic study method, the SQ3R method, which Francis P. Robinson described in 1970. SQ3R stands for: sur-

vey, question, read, rehearse, and review. Students begin by surveying the textbook chapter before reading it, to become familiar with its organization. As they read the chapter, they form questions that they then answer. Finally, they rehearse and test themselves on what they have just read, and review all the material repeatedly. Each of these activities links to basic memory processes. The initial survey of the chapter leads students to set up a schema for the chapter that guides both encoding and later retrieval. The questions students create serve as retrieval cues later on. Answering these questions, repeated rehearsing, self-testing, and reviewing the material are all forms of retrieval practice that will aid memory. Studying a textbook chapter need not be a mystery to students.

*See also:* MEMORY, *subentries on* AUTOBIOGRAPHICAL MEMORY, IMPLICIT MEMORY, METAMEMORY, STRUCTURES AND FUNCTIONS.

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## STRUCTURES AND FUNCTIONS

In the study of memory there have been many metaphors adopted in the search for an explanation of the memory process. The fourth century B.C.E. Greek philosopher Aristotle compared memorizing to making impressions in wax, and the idea that memories are copies of reality that a person stores and later retrieves has been widespread. This is sometimes called the storehouse metaphor, and many of the ways in which people talk about memory (searching for memories, bringing them back from the recesses of one's mind) assume such a metaphor. The computer metaphor that has been popular with psychologists researching memory is a version of the storehouse view. It conceptualizes the stages involved in remembering in terms of encoding, storage, and retrieval in which information is entered into memory, retained, and then found again at a later time. Thinking about remembering in this way can be valuable, but it can lead to the incorrect assumption that what is remembered is a simple copy of what was originally experienced. In reality, much that is remembered captures the gist rather than the details of the original experience, and remembering is often a process of reconstruction. Examples of constructive remembering can be found in research on false memories. Elaborate and detailed false memories of events from an individual's past can be easily created. More mundanely, hearing a list of close associates to a particular word leads to recall of the word itself even though it was not presented. One alternative to the storehouse metaphor is the correspondence metaphor that emphasizes the deviation between the memory and the original experience.

### Memory Structure

Researchers who study memory use a number of terms to subdivide the enormous field. One major distinction is that between explicit and implicit memory. Explicit memory refers to the conscious recall of information. Conscious awareness of past experiences involves explicit memories. Often, however, people are influenced by experiences that are not consciously recallable. For example, the ease and speed with which a person solves the anagram *rbocoilc* depends upon how recently the person has encountered the word *broccoli*. This facilitation reflects implicit memory. Processing of new information is primed by past experiences without conscious awareness. The distinction between explicit and im-

PLICIT memory may reflect different underlying memory systems. Quite different timescales and sensitivities have been demonstrated for some explicit and implicit memory tasks. The differences may arise, however, from the processing requirements of the tasks rather than from different memory systems.

A distinction that overlaps with explicit and implicit memory is that between episodic and semantic memory. This distinction, associated with Endel Tulving, is between memory for events and memory for facts. Episodic memory is for events that people can remember happening, whereas semantic memory is for facts that people know about the world without necessarily retaining any recollection of the situation in which they learned the information. One's memory for eating breakfast on a particular morning is an episodic one, whereas one's memory that Coca-Cola is a drink is a semantic one. One area of episodic memory is autobiographical memory—memory for personal events in one's own life. Autobiographical memories from the first two years of life are very rare, while memories from the late teens and early twenties are more frequently held than the average. Certain autobiographical memories seem to be so distinct and full of the apparently irrelevant details from the original event that they have been called flashbulb memories because the nature of the memory is similar to a photograph of the moment. Archetypal examples of flashbulb memories are associated with hearing or seeing particularly dramatic events such as the assassination of a famous person or a major accident.

**Submemories.** One approach to understanding the structure of memory has been to seek separate submemories that are responsible for retaining information over differing time periods. In 1968 Richard Atkinson and Richard Shiffrin proposed a model with three types of memory: a sensory store, a short-term store, and a long-term memory. Visual information, for example, is believed to be retained for about one second in a sensory store while perceptual processing takes place. Similar sensory memories aid in the processing of acoustic and other inputs. Beyond the perceptually based sensory memories is the short-term memory, which retains information for a few seconds before selected elements of that information are transferred to a long-term memory. Atkinson and Shiffrin recognized that there were control processes in short-term memory that influence what is attended to and processed. The Atkin-

son and Shiffrin model has been elaborated into the working memory system, which has been particularly investigated by Alan Baddeley and his colleagues. Baddeley has subdivided the working memory into several subcomponents, the most heavily researched of which are the phonological loop, the visuo-spatial sketchpad, and the central executive. The phonological loop holds a couple of seconds of speech sounds and plays a role in reading. The visuo-spatial sketchpad is used in the creation of mental images and in the solution of visual and spatial problems. The central executive is a controlling attentional system that supervises and coordinates current cognitive processing.

**Formal models of memory.** A number of formal models of memory that can be run as computer simulations have been developed. Among the most influential of these are Jerome Raaijmaker's and Richard Shiffrin's 1981 SAM model, James McClelland, David Rumelhart, and Geoffrey Hinton's 1986 PDP model, and John Anderson's 1993 ACT model.

SAM (Search of Associative Memory) is a mathematical model based upon items and the strength of associations between them. It is particularly appropriate to the learning of lists of words. Each word has a memory strength as a result of it being studied, and each word has an associate strength with the other words in the studied list. The memory strength is combined with the association between the word and the context in which it was learned to produce a strength that is the basis of recognition or retrieval. The model can account for many of the memory phenomena associated with the learning of lists, but it shares with the other two formal models described here the difficulty that many of its assumptions are not based on observations and are difficult to test.

The PDP (Parallel Distributed Processing) model is a neural network model inspired by the analogy of neural circuits in the brain. The network consists of units that are connected to form a network. The strengths of the connections (weights) are adjusted as the network is trained to produce correct responses. Activation spreads through the network and the weightings direct that spread. A response is selected when it achieves a sufficient level of activation. One feature of neural network models is that memory is not located in one place but is captured by particular patterns of activation over many units and links. The neural network models are attractive in apparently simulating the structure of the brain. The choice of the particular structure of units and

their interconnections, however, turns out to be important for each simulation of human memory. A general representation that is applicable to many types of remembering has yet to be developed.

The ACT framework is a production system theory for both memory of facts and skills. Anderson has developed several versions of ACT including ACT-R (Adaptive Control of Thought-Rational). Production rules are condition-action rules of the form: *If* this is the condition, *then* execute that action. Within the system, units of information are linked by associations, with the association strength being increased through use. The ACT models were developed to account for problem solving and skill acquisition as well as memory. As with the other formal models discussed here, there are many assumptions that make a model difficult to evaluate.

### Memory Functions

What is remembered of a particular event depends upon the way in which it is processed. Elaborate processing that emphasizes meaning and associations that are familiar leads to good recall. So, for example, the word *albatross* would be remembered poorly if only the font in which it was printed was noticed and little thought was given to its meaning. It is much more likely to be remembered, however, if at the time the word is read the reader thinks about how albatrosses are white seabirds living in southern oceans. On the other hand, if what is encountered is difficult to understand, then not only will it be poorly remembered but what is remembered may be distorted by an effort to comprehend the meaning.

The processing of new information draws very heavily upon memory of past experience. Schemas have been developed for often-encountered familiar situations such as going to a supermarket or eating at a restaurant. These schemas guide understanding and memory of the new events but may also lead to memory errors by adding expected events that did not actually occur. Information that is organized on the basis of one's existing knowledge is much easier to learn and remember than is disorganized information. So, for example, a list of the names of animals is much easier to memorize if it is categorized according to type of animals (domestic, farm, wild) and if the categories are laid out in a structured way. Experts in an area memorize new information within their area of expertise much more quickly than do novices. So, soccer fans easily learn new soccer scores

and chess masters memorize real board configurations easily.

When material is restudied to strengthen the memory of it, the shorter the interval between the first and second study periods, the less the improvement in recall. This spacing effect is large, so that studying in two spaced sessions can produce twice as much recall as a single session of equal length. The rereading of factual material makes only a small contribution to the further learning of it. Testing oneself by retrieving studied material, however, is a particularly effective technique for improving memory.

What is remembered depends upon the information that is available to cue recall when it is retrieved. In 1983 Tulving summarized much research in the encoding specificity principle. This principle asserts that retrieval is successful to the extent that the cues available at retrieval match those that were processed by the learner at the study phase. The retrieval cues may be aspects of the material that was studied, but they also include environmental cues and the mood and mental state of the learner.

The learning of information that is similar creates a problem for retrieval. There is interference from similar material learned earlier (proactive interference) and from material encountered since the original learning (retroactive interference), and these reduce recall. More insidious are misinformation effects. These occur when misleading information is presented, for example, to eyewitnesses during questioning. The misleading information is then frequently recalled, and the original information becomes very difficult to retrieve.

When tested across time, forgetting follows a logarithmic curve—information loss is rapid initially but then information is lost more slowly. Nevertheless, the fate of information that has been initially very well learned is rather different. Where facts, names, or foreign-language vocabulary have been used repeatedly but are no longer regularly recalled, the pattern of their forgetting is an initial loss over a three-year period, after which recall may be equally good with delays of one or twenty-five years.

*See also:* MEMORY, *subentry on* MYTHS, MYSTERIES, AND REALITIES.

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PETER E. MORRIS

## MENTAL HEALTH SERVICES AND CHILDREN

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It is estimated that the percentage of children and adolescents in the United States who are in need of mental health services is between 15 and 20 percent. This means that more than 10 million children in the country suffer from some mental disorder. It is also estimated that 3 to 8 percent have a serious mental illness. More children suffer from psychiatric illness than from leukemia, diabetes, and AIDS combined. There are also both short-term and long-term financial and emotional costs associated with these disorders.

Determining which children need mental health services is a complex undertaking. In most cases, a youth has to receive a mental health diagnosis from a qualified clinician. The American Psychiatric Association, in their Diagnostic and Statistical Manual (DSM), has codified diagnostic categories. Researchers may use a structured clinical interview, such as the Diagnostic Interview Schedule for Children (DISC), to obtain a diagnosis, but these rigorous instruments are rarely used in clinical practice, and there is little agreement among clinicians in their use as a diagnostic tool. In addition to meeting the criteria for a diagnosis, federal regulations now require that for a child to be classified as having a *serious emotional disturbance* (SED) the child must have a functional impairment in two or more areas. These areas include home, school, and work (where relevant).

### Who Receives Mental Health Services?

Children can receive mental health services from several sources, including schools; mental health institutions such as hospitals; community mental health centers; mental health services provided through child welfare; services from juvenile justice; and primary care physicians. Estimates of use of mental health services by children range from 1.9 to 6 percent in any given year for the general population. Most children receive services from schools.

There are several factors that are related to an increase in the probability in accessing mental health services. In two studies comparing a system of care that offered a full range of services with the more typical community services, such as those provided by community mental health centers, children were more likely to receive services, and to receive more services, in a system of care. (A system of care includes a continuum of services from outpatient to hospitalization, coordination or management of these services, and, usually, the involvement of multiple child-serving agencies.) However, the provision of services in a system of care was more expensive and was not any more effective than the usual services available in the community.

### Use of Services

Patterns of service use are not well understood, but it is generally agreed that services are underutilized by youth. There are several possible reasons for this, including the stigma associated with such services and parental dissatisfaction with services. Most children do not enter services willingly, and it should be recognized that specialized children's mental health services alone will never be sufficient to meet the need for mental health services. More services will have to be provided by other systems, such as schools and the juvenile justice system.

There is a high dropout rate of children from services, although estimates vary considerably. Some studies have found that 40 to 60 percent of children who begin treatment terminate it before the therapist recommends they should terminate. It is believed that the majority of children attend outpatient treatment for only one or two sessions. It is not clear why the dropout rate is so high, but it is suspected that referral to services are often made by others, such as schools, and not the parent or adolescent.

### Where Do Children Receive Mental Health Services?

**School systems.** Schools usually identify children with mental health problems only after the problems have not been successfully dealt with by their classroom teacher or their parents. However, once identified, students are much more likely to use the services in the schools than in the community. Schools usually try informal interventions before referring a child to special education. A federal law, the Individuals with Disabilities Education Act (IDEA), requires that such children be evaluated and, if eligi-

ble, placed in a special classroom or provided with special assistance in their regular classrooms.

There is a strong relationship between SED and several measures of school performance. Students with SED have lower grades, are retained more often in grade, and fail more courses than other students with disabilities. Less than half (42%) of children with SED graduate high school, as compared to 56 percent of students with other disabilities and 71 percent of all students. The rates of identification of youth with SED vary across racial, gender, and socioeconomic lines, with Hispanics and Asian Americans receiving proportionally the least amount of services. Research also suggests that students from low socioeconomic backgrounds and males are over-represented among those identified with SED.

Schools are not good at identifying children with mental health problems. There are several reasons for this difficulty, including the avoidance of stigma, lack of training in recognizing mental health problems, and the desire of the system to avoid the costs of mental health services. There is not a substantial amount of evidence that schools are successful in treating children with mental health problems. Comprehensive support systems and training for teachers and administrators are not typically found in school systems.

Recent trends in SED lead to one of three possibilities: (1) the number of children with SED is increasing, (2) schools are recognizing more children with SED, or (3) both of these are occurring. Since 1976 there has been an increase of more than 118,000 students with SED (a 48% increase) receiving services under the Chapter 1 Handicapped program of the Elementary and Secondary Education Act (ESEA) and IDEA Part B programs. However, this program ended in 1994.

As in other service sectors, there are a significant number of children who are not receiving needed services in the schools. In addition, little is known about the quality, appropriateness, or effectiveness of the services delivered to children and adolescents in schools.

**Primary care.** Pediatricians and primary-care physicians prescribe most of the psychotropic drugs prescribed for children. They may also counsel families, but some studies indicate that families do not interpret this counseling as mental health services. For preschool children such visits may be their only contact with a health delivery system. Studies have

shown that physicians often fail to identify children with mental health problems. Moreover, parents often fail to mention that their child has a problem. There are several barriers to proper identification and the delivery of effective services—physicians are not trained to deal with mental health problems, the service may not be reimbursed at an attractive level, and the average visit to the doctor is only eleven to fifteen minutes long.

**Juvenile justice.** The magnitude of mental-health-service needs far exceeds current resources in the juvenile justice system. It also appears that children of low socioeconomic status populate the juvenile justice system, and thus are less likely to receive mental health services because they are in the juvenile justice system. Findings show that mental health placements are rarely used relative to other court outcomes (i.e., dismissal, probation, or other types of placements), and that gender and race significantly influence whether a child will receive a mental health service. Females are more likely to receive mental health services than males, and white delinquents are more likely to be placed in a mental health setting than black offenders, regardless of gender.

### The Effectiveness of Mental Health Services

Providing ineffective services to children and adolescents would clearly not be good public policy. It would simply waste resources and not result in any improvement in child outcomes. Moreover, it would provide the illusion that society is intervening in a positive manner and thus inhibit change. For this reason, determining the effectiveness of services is a key goal in this field. A distinction should be made between the *efficacy* of an intervention and its *effectiveness*. Efficacy studies examine a treatment under optimal situations. These studies are likely to take place in a university-based laboratory using well-trained and supervised clinicians and children who are selected to meet the needs of the study. For example, a study of the treatment of depression would screen out all children who had depression *and* other comorbid mental health disorders; only children with depression alone would be studied.

Standing in stark contrast to efficacy research, effectiveness studies evaluate the effects of treatment in typical conditions. Studies of effectiveness are conducted in community mental health centers and in real-world settings such as schools. In these studies the investigator does not have the same level

of influence on which types of children get into the study, how the therapists are trained and supervised, and how carefully they follow the treatment approach. The distinction between efficacy and effectiveness is important because each type of study tells a different story about how beneficial mental health services for children and adolescents are.

Although efficacy research is important in establishing the potential utility of treatments, these studies are not very informative about how the intervention will operate in the real world. While there are hundreds of efficacy studies of psychological child and adult treatments, there are only a handful of effectiveness studies. Meta-analytic studies of treatment (mostly psychotherapy) show that, on average, mental health treatment is very powerful when studied under laboratory-like conditions. However, the picture is different for effectiveness studies.

Most effectiveness research has been done on such system-level constructs as service coordination and access. There have been few studies of the child and family outcomes of mental health treatment. These studies have not found that treatment makes a difference in child and family outcomes. For example, the Fort Bragg Evaluation Project, the largest study of mental health systems of care, found that children in a system of care had increased access to services compared to children receiving treatment as usual in the comparison sites. However, both groups improved over time and the clinical and family outcomes did not differ between the two groups. Unfortunately, the system of care was much more expensive and thus could not be justified. Research in this area is in its infancy; only more research in the real world will lead to an understanding of the conditions under which mental health treatment is effective.

The contrast in findings between efficacy and effectiveness studies is dramatic. It is suspected that a major reason for the weak effects found in the community is that practitioners are not using effective treatments. To encourage the use of effective treatments, several professional groups are identifying what they describe as evidence-based treatments. These treatments typically have sufficient efficacy results to warrant their use. Some organizations, such as the American Pediatric Association and the American Academy of Adolescent and Child Psychiatry, have developed diagnosis and treatment guidelines that are less specific than evidence-based treatments

that are spelled out in treatment manuals. However, just informing practitioners about the existence of evidence-based treatments is not sufficient for practitioners to adopt those practices. It is not clear that these techniques can be transferred to the real world, or that practitioners will use them. It is also uncertain if the guidelines are specific enough to make a difference in outcomes.

There are several reasons why these efficacious treatments are not being used in clinical practice. First, there is no agency in the behavioral field similar to the Food and Drug Administration that certifies medications as safe and effective. This means that there is no central authority that approves the several hundred existing behavioral treatments. There are few advantages for the already overworked clinicians to make significant changes in their practices and to incur the costs of additional training in evidence-based treatments. New research is focusing on how to encourage service providers to use new treatments.

### **Medication**

Progress has been made in the use of medication to treat several disorders, including attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD), and childhood anxiety disorders. In addition, studies are underway to test the effectiveness of medication for major depression. Clinical trials are also being started for bipolar disorder, autism, and several other mental disorders.

A major study on ADHD found that medication was more effective than behavior therapy for symptom reduction. However, combining medication and behavior therapy was more effective for children who had co-occurring disorders such as anxiety and ADHD. Furthermore, this study found that medication was more effective when managed by the study investigators than when medication was managed by physicians in routine community care. The investigators think that the greater effectiveness under the more controlled conditions was related to the higher frequency of office visits, their longer duration, and the more carefully controlled dosage.

One of the problems in using medications for the treatment of mental disorders in children is that the Food and Drug Administration (FDA) has not specifically approved most psychotropic drugs for use with children. While it is legal and ethical to use medications tested on adults on children, this “off-

label” use means that physicians do not have research findings to guide their treatment decisions for the majority of psychiatric problems. An additional problem with medication treatment is that many severely ill children are treated with multiple drugs simultaneously. There are no systematic studies of the effects of polypharmacy, and thus the effects of combinations of medications are not known.

*See also:* HEALTH CARE AND CHILDREN; HEALTH SERVICES, *subentry on* SCHOOL.

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LEONARD BICKMAN

## MENTAL RETARDATION, EDUCATION OF INDIVIDUALS WITH

Throughout history, the definition, diagnosis, terminology, and etiology of mental retardation have changed, influencing services, policy, education, and prevalence.

### Definition and Prevalence of Mental Retardation

*Mental retardation* is a condition of substantial limitations in intellectual functioning that impacts performance in daily life. Its diagnosis includes three

criteria: concurrent, significant limitations in both intelligence and adaptive skills that begin in childhood (birth to age eighteen). The American Association on Mental Retardation’s (AAMR’s) 1992 definition specifies limitations of two or more standard deviations in intelligence (IQ of 70 to 75 or less) with coexisting deficiencies in two or more of ten adaptive skills: communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work. These individuals range broadly in functioning, depending in part on the degree of limitations but also on the services and support received. Individuals with severe and multiple disabilities are considered a small subset of this population. Most persons with mental retardation are capable of achieving self-sufficiency. A 1998 study indicates that prevalence estimates cluster around 1 percent, with a high of 2 percent.

### Brief History of Education

Prior to the 1700s, those with mental retardation suffered greatly. In the 1700s to the late 1800s, they entered an optimistic period when French educational methods spread to other Western countries. These methods derived mainly from Edward Seguin and less so from his predecessor Jean-Marc Itard in the first half of the nineteenth century. Seguin called his educational methods *physiological education*, which consisted of three components: muscular or physical education, education of the senses, and moral treatment. The goal of Seguin’s method was independence grounded in relationships with other citizens, not isolation from society. These educational methods produced uneven results and were followed by disillusionment.

In the late 1800s to the 1960s there was widespread building of institutions to house individuals with mental retardation. Intelligence tests, developed in the early 1900s, became the tools of the eugenic movement—a period when many people with low intelligence were sterilized under the assumption that the population would be improved. Starting in the 1970s the institutional population in the United States was gradually reduced, primarily because of a reduction in admissions. Many former residents were relocated to smaller community-based settings, but others remained in their natural homes with services and supports provided. Of those remaining in state institutions at the end of the twentieth century, persons over forty with profound

mental retardation and multiple disabilities dominated the population.

### Schools' Responses and Goals and Methods of Teaching

Before 1975 when the Education of All Handicapped Children Act was passed (Pub. L. 94-142) and special education was required, some students with milder mental retardation attended school until they failed or quit, but others with greater support needs attended parent-operated schools or remained at home. The number of individuals with mental retardation in institutions reached its peak in the mid-1960s, where educational services of widely varying quality sometimes existed. According to the U.S. Department of Education's statistics, at the end of the twentieth century students with labels of mental retardation who were enrolled in U.S. public schools constituted 11 percent of all students with disabilities. The number of students classified as having mental retardation declined substantially since the 1970s, in part because of the label's stigma and recognition of intelligence test inaccuracy. Minority children were overrepresented in school programs serving those with mental retardation, a fact often accounted for by inaccurate testing.

The primary goal of education for this group is to increase self-sufficiency by teaching functional academics and other skills needed in everyday life across home, community, work, and leisure domains. Depending on the student's abilities (conceptual, social, and practical), needs for support (intermittent to pervasive), and school placement, the educational focus and methods will vary. The socioeconomic level of the community influences the quality of special education and the amount of support an individual receives in school and during adult life.

### Trends, Issues, and Controversies

Although the label of mental retardation brings services, it also brings stigma and low expectations. The reduction in students labeled as mentally retarded (with a corresponding increase in those with learning disabilities) from the 1970s to the 1990s serves as evidence. Parents and educators have grappled with this issue. Some believe the label should be reserved for those with organic etiologies, assuming the smaller group would be more homogeneous. Others propose a change in the label and improved education of the public.

Current law requires education in the least restrictive environment with appropriate services and support. Students with mental retardation have a poor record for being served in general education classrooms: 46 percent of all students with disabilities are so served compared with 12 percent of those with mental retardation. Many believe that educators need to understand better how to serve these students in the mainstream and also equip them for the transition to adult life.

*See also:* COUNCIL FOR EXCEPTIONAL CHILDREN; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## MENTORING

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Schools that provide mentoring programs assign a veteran teacher to act as adviser, teacher, and coach to beginning teachers within their schools. Some have defined mentoring as “a formalized relationship between a beginning teacher and a master teacher (mentor) that provides support and assesses teaching skills” (Education Commission of the States website). Others use the terms *buddy*, *coach*, and *master teacher* to describe the person who helps the beginning teacher develop into a seasoned veteran.

Often mentoring programs are just one strategy of full induction programs designed to ease the transition of the new teacher into the profession of teaching. Within an induction program, schools develop structured activities to help orient new teachers to the system and assume the roles and responsibilities of practicing teachers. Induction programs are typically comprehensive programs that guide new teachers through their beginning years in the school. Induction programs are often seen as a process lasting from one to three years. Within the induction program, the mentorship puts the focus on the relationship between the new teacher and mentor; the mentor is charged with assisting and supporting the new teacher as he or she transitions from student teacher to teacher of students. Many believe mentoring to be an essential component of the induction program.

The roles and responsibilities undertaken by the mentor vary from program to program. In all cases, however, it is the mentor who plays an essential role in achieving the goals of the induction program. Using strategies such as consultation, demonstration, and observation, the mentor can act as the primary source of assistance for the new teachers.

A mentor is defined as simply a veteran teacher assigned to a new teacher. *Veteran* means that the teacher is not in his or her first year of teaching; however, the number of years of experience is not necessarily specified. Typically, mentors have at least three years of experience in their school district or division that allows the mentor to develop an expertise and understanding about the school system and to become skilled and comfortable within the classroom. Mentors may or may not have classroom teaching responsibilities at the same time that they act as mentors. In some cases, mentors may have been relieved of teaching assignments and act solely

as mentors. Occasionally schools entice retired teachers back into the schools to act as mentors.

Mentors assist their new teachers in a variety of ways. It is the school district’s duty to define the roles and responsibilities of mentors. One way is to assist neophyte teachers to become acquainted with their new environment. Mentors might provide a tour of the facilities, introduce the new teacher to staff and faculty, describe procedures and policies of the division, explain grading philosophies, and offer suggestions for lessons and classroom management. In the work of Sharon Feiman-Nemser and Michelle Parker, mentors who assume these duties are called local guides.

Others envision the responsibilities of the mentor as going beyond those acclimation duties. In such cases, the mentor fulfills the necessary orientation responsibilities and then moves the conversations to the next level. These mentors talk with their new teachers about instructional issues and their effect on student learning. They help the new teachers reflect on their performances and decisions so that improved student learning is the outcome. A label applied to mentors fulfilling these roles is *educational companion*.

Finally, Feiman-Nemser and Parker have identified another role that mentors can adopt: that of change agent. Mentors as change agents seek to establish a new culture within a school—one of collaboration and commitment to continual professional development. This role transcends the typical role of assisting new teachers. In this case mentors attempt to break the traditional “closed-door” culture within schools and affect change throughout a system. Regardless of the role, how mentors assist new teachers is the prerogative of the school district.

### Rationale for Mentoring

School districts are faced with a myriad of problems. Not the least of those problems is ensuring that all children are taught by competent and qualified teachers. This is a growing concern in the early twenty-first century. It is anticipated that over two million new teachers will be required to fill the classrooms of America by 2012 because of mushrooming enrollments, teacher attrition, and massive retirements among the aging population of current teachers. The job of a teacher is not an easy one. Districts and divisions are looking for ways to acknowledge the demands of the job and offer support to

those who accept the challenge. Mentor programs, a promise of support, are one benefit that school districts can offer.

Filling the demand is not the sole issue, however. Even if school districts could find the sheer numbers of teachers needed, retention of these new hires becomes a problem. It is estimated that 30 percent of new teachers do not return to the classroom after their first year. Over the first five years, 40 percent leave the profession. In many cases, those leaving are the most academically talented teachers. Furthermore, new teachers are more apt to leave schools with the greatest need, leaving children to experience a succession of new teachers. Such high-need schools include those in urban settings and the rural countryside.

Many new teachers cite the feelings of isolation and lack of support as critical determinants in their decision to leave. Teaching is one of the few professions whereby a new graduate is expected to perform as fully as a seasoned professional does. Other professions such as medicine offer supervised internships and residencies that allow the new graduate an opportunity to practice with guidance from a veteran. Education, to date, rarely provides such experiences. The educational tradition of “sink or swim” that often leaves the new teachers on their own to discover what works and what doesn’t is no longer a viable option for schools.

### **Extensiveness of Mentoring Programs**

Information about the role of mentoring programs that support new teachers during their first years is not well documented. In 1996 the National Center for Educational Statistics published data regarding the participation of new teachers in induction programs. Although specific information about mentoring programs is absent, some encouraging trends are seen. For the 1993 to 1994 school year more than half (56.4%) of all public schools teachers with three or fewer years of experience were involved in induction programs. This is an increase of 39 percent from new teachers involved in induction programs of the 1980s. The National Center for Educational statistics for 1999 to 2001 data are expected to indicate that more new teachers were involved in induction programs.

In fact, induction programs are blossoming all over the country as one strategy to support teachers in their transition from student teacher to profes-

sional teacher. Data released in 2001 indicates that thirty-three states have written beginning teacher induction statutes; twenty-two of the states mandate and fund the programs. In addition, assigning mentors to assist the new teachers is often a component of induction programs. Twenty-nine states include mentorships as part of the induction process according to data published by the American Federation of Teachers in 2001.

### **Issues and Controversies**

As mentoring programs develop to help new teachers transition from student teacher to classroom teacher, questions, issues, and debates begin to surface as well. One such issue centers on the question of purpose; a second issue focuses on effectiveness.

For many years mentoring programs were defined as vehicles to support and assist new teachers as they began their teaching careers. This assistance and support was based on the trusting relationship that developed between the mentor and new teacher. Much of the trust came from the defined role that mentors were there only to assist and support, not assess. New teachers felt comfortable exposing their concerns and problems to the mentor because the mentor was there to help. The argument was that if mentors evaluated the new teachers, then the new teachers would not come to the mentors with problems and concerns. Trust would be violated and the purpose of the mentoring programs defeated.

In the early twenty-first century some are questioning the separation of assistance and assessment. Given the intimate role mentors play in the lives of new teachers, mentors may possess critical information about the quality of the new teachers’ skills and knowledge. Such information should not be absent from a comprehensive evaluation of the new teachers. The ultimate purpose of mentoring programs is to ensure quality teachers for every child; therefore, the argument is that mentors should provide evaluative data that are used in the decision of continued employment.

The general feeling, however, is that most mentoring programs embrace the concepts of assistance and support, leaving evaluation to those outside the mentor role. A small number of programs are combining assistance and assessment, however, so the verdict is still out as to which approach works best.

A second issue being explored is the effectiveness of mentoring programs. How should mentor-

ing programs be evaluated to determine their effectiveness? During the last wave of mentoring programs in the early 1990s, the effectiveness of mentoring programs was usually framed around the perceived benefits to the participants. New teachers felt the mentors were helpful; mentors perceived their roles as effective. What is needed and being pursued are more empirical data that indicate mentoring programs are responsible for the goals they strive to achieve. Typically mentoring programs identify one or more of five common goals: (1) to improve the skills of new teachers, (2) to acclimate the new teacher to the culture of the school and community, (3) to provide emotional support, (4) to retain quality teachers, and (5) to meet state mandates and requirements for licensure. Data need to be collected that identify the ways in which mentoring programs' features and practices achieve these goals. Specific correlations between what mentoring programs do and what goals are achieved would allow schools to incorporate practices and features designed to succeed. These are the avenues for future research.

*See also:* TEACHER; TEACHING, *subentry on* LEARNING TO TEACH.

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MICHELLE HUGHES

## METACOGNITION

*See:* LEARNING TO LEARN AND METACOGNITION.

## MICROTEACHING

Microteaching is a scaled-down, simulated teaching encounter designed for the training of both preservice or in-service teachers. It has been used worldwide since its invention at Stanford University in the late 1950s by Dwight W. Allen, Robert Bush, and Kim Romney. Its purpose is to provide teachers with the opportunity for the safe practice of an enlarged cluster of teaching skills while learning how to develop simple, single-concept lessons in any teaching subject. Microteaching helps teachers improve both content and methods of teaching and develop specific teaching skills such as questioning, the use of examples and simple artifacts to make lessons more interesting, effective reinforcement techniques, and introducing and closing lessons effectively. Immedi-

ate, focused feedback and encouragement, combined with the opportunity to practice the suggested improvements in the same training session, are the foundations of the microteaching protocol.

Over the years microteaching has taken many forms. Its early configurations were very formal and complex. Real students (typically four or five) were placed in a rotation of teaching stations in a microteaching clinic. Teachers would teach an initial five to ten minute, single element lesson that was critiqued by a supervisor. The teacher would have a brief time to revise the lesson and then reteach the same lesson to a different group. In later years these sessions were videotaped. Videotaping microteaching lessons became the optimal practice because it allowed teachers to view their own performance.

Microteaching soon spread to more than half of the teacher preparation programs in the United States, and to other parts of the world. Though successful, its complexity overwhelmed its effectiveness as a training device and its use declined over the following decades.

### **The New Microteaching: Simplified**

In the late 1980s and 1990s microteaching was reinvigorated with a completely new format developed in southern Africa and later in China. Because of the lack of available technology in developing countries, microteaching's format had to be made less technology dependent in order to be useful. Early modifications were made in Malawi, but it was in Namibia and China where microteaching was completely transformed.

Twenty-first-century microteaching increases training effectiveness using an even more scaled-down teaching simulation environment. The new microteaching format was primarily shaped as a response to in-service teacher education needs in Namibia, where the vast majority of teachers were uncertified and there were few resources with which to train them. In China it became part of a national effort to modernize teaching practice. Three important new concepts were incorporated:

1. Self-study groups. Teachers rotate between the roles of teacher and student, building on earlier versions of "peer microteaching." Self-study groups of four or five teachers have become the norm.
2. The 2 + 2 evaluation protocol. In earlier versions of microteaching, rather elaborate

observation protocols had been developed to evaluate performance for each teaching skill. In the new microteaching, each new skill is introduced to trainees in varied combinations of face-to-face training sessions, multimedia presentations, and printed materials. These training materials give cued behaviors to watch for and comment on in the accompanying microteaching lesson. After a microteaching lesson is taught, each of the teachers playing a student role provides peer evaluation of the teaching episode using the 2 + 2 protocol—two compliments and two suggestions. Compliments and suggestions are focused on the specific skill being emphasized, but may relate to other aspects of the lesson as well.

3. Peer supervision. Originally the microteaching protocol required the presence of a trained supervisor during each lesson. However, with minimal training the compliments and suggestions of peers can become powerful training forces. Trainees feel empowered by the practice of encouraging them to evaluate the compliments and suggestions they receive from their peers (and supervisors, when present), allowing them the discretion to accept or reject any or all suggestions. On average, about two-thirds of the suggestions are considered worthwhile and suggestions from peers and trained supervisors are about equally valued.

The new, simplified format—widely used in the United States as well as abroad in the early twenty-first century—also makes it easier to incorporate the full, recommended protocol of teaching and reteaching each lesson for each student. The microteaching experience goes well beyond the formal, narrow training agenda. The gestalt experience of planning and executing a brief lesson that is closely monitored and scrutinized and the offering and receipt of feedback from respected peers is an integral part of the experience. In the present format students often have three or four complete microteaching cycles in a single course. More cycles tend not to be well received by students, as the training format seems to break down after about four cycles. Some in-service training programs have received enthusiastic reception from students for periodic microteaching sessions (one session each term or semester) over an extended period of time.

The flexibility of allowing each microteaching self-study group to make its own schedule, find its own location, and organize its own training and feedback procedures becomes an important part of the training experience. This leads to substantial savings of resources and allows the number of scheduled sessions to be determined by academic merit, not resource limitations.

### Variants of Microteaching

Over the years many microteaching clinics have made modifications in the basic training protocol that detract from the effectiveness of microteaching training, but are thought necessary, given the constraint of resources. Some of the most frequent of these modifications includes greatly increasing the size of the microteaching class. Sometimes an entire class of twenty to thirty-five students is used as the microteaching class. This is necessary for scheduling reasons and because of the lack of facilities and staff for multiple, simultaneous sessions. This adaptation requires students to be passive learners for large numbers of lessons as each trainee has a turn to teach. The number of students in each class means that students teach very infrequently, often only once, and usually have no opportunity to reteach.

Another adaptation is the use of longer lessons, often fifteen or twenty minutes in length, because it is difficult to fit some lesson concepts into a five-minute lesson. This difficulty results from a lack of understanding of a single lesson element. A typical lesson will combine multiple concepts within the same topic, yet teachers often are not trained to break down their lessons into individual concepts. Identifying single concepts and planning a single concept lesson is itself an important skill. Microteaching is well suited to help teachers identify single concepts and learn how to create learning modules from which longer lessons can easily be constructed. Longer lessons in microteaching greatly increase the complexity and duration of training sessions, reduce the number of sessions possible for each individual trainee (unless the length of training is increased), and tend to cause the training sessions to lose focus. Microteaching research at Stanford University repeatedly showed that a five minute lesson is sufficient for the practice of many useful teaching skills in all subject areas.

The development of elaborate microteaching facilities, sometimes with permanent installation of multiple cameras, one-way glass partitions, and even

audio capability at each student desk, has been another development. Though very well intentioned, such clinic facilities have not proven cost-effective for the widespread use of microteaching. These facilities are even more personnel intensive. Often special technicians are assigned along with a supervisor/proctor. These facilities would be more effective if the videotaping capacity was entrusted to students, thereby reducing the cost. The ideal would be for one out of every three or four sessions to be videotaped with a simple, one-camera setup with the opportunity to view the lesson immediately. When videotaping is not available and lessons are not taped, the training results have been found to be quite acceptable, though not optimal.

### Microteaching Models of Teaching Skills

Microteaching can be an effective tool for the development of teacher training materials. When training protocols are being created to demonstrate new teaching skills, microteaching sessions can be developed and taped giving instances and non-instances of the skill. Asking trainees to view these tapes together is an effective way to highlight and demonstrate the essential aspects of the skill being taught.

### Microteaching Courses

Microteaching has been developed as a course in many teacher-training institutions around the world. It readily combines theory with practice. When one considers that teacher trainees in many training programs do their practice teaching under inadequate supervision with no student feedback, the relative merits and economy of microteaching become more and more apparent. Microteaching offers the advantages of both a controlled laboratory environment and realistic practical experience. It is hardly a substitute for teaching practice, but it offers advantages such as close supervision, manageable objectives established according to individual trainee needs and progress, continuous feedback, an unprecedented opportunity for self-evaluation, immediate guidance in areas of demonstrated deficiency, and the opportunity to repeat a lesson whenever desired. When these advantages are combined with the economy of resources required to obtain them, microteaching becomes a valuable training method under many conditions throughout the world.

*See also:* ELEMENTARY EDUCATION, *subentry on* PREPARATION OF TEACHERS; SECONDARY EDUCA-

TION, *subentry on* PREPARATION OF TEACHERS; TEACHER EDUCATION, *subentry on* INTERNATIONAL PERSPECTIVE.

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DWIGHT W. ALLEN  
WEIPING WANG

## MIDDLE EAST AND NORTH AFRICA

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This entry provides an overview of the status of education in the Middle East and North Africa (MENA) region. It contains both statistically based assessments of individual countries as well as a discussion of the overall factors that are currently affecting the level of and accessibility to primary, secondary, and tertiary education. Current and future systemic challenges are also exposed, and possible solutions from similar case studies are advanced.

### Regional Background

Depending upon the scope, origin, and purpose of study, the MENA region can include the countries of Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Malta, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, the United Arab Emirates (UAE), Yemen, and West Bank-Gaza. (While the State of Israel is geographically located within this region, this article focuses on those countries that are classified as Arab through their common usage of and reliance on the Arabic language [except Iran, where Farsi is predominant].) For the purposes of this article, MENA includes all of the above, except Malta, Djibouti, Mauritania, and Sudan. Although the region is bound, to a large extent, by the prevalence of the Islamic religion and the commonality of Arabic as a language, it is diverse in ethnicity, tradition, history, and spoken Arabic. As a region it has a population of more than 295 million that reflects diversities in social stratification and economic development ranging from the high-income, oil-rich countries of Kuwait, Qatar, and UAE to the low-income countries of Egypt and Morocco.

Owing to rising oil revenues in the 1970s, oil-producing countries underwent a major economic boom that resulted in a tremendous expansion in social services, construction, and basic infrastructure.

Non-oil-producing countries such as Jordan, Morocco, and Tunisia also benefited from the influx of capital by exporting their human capital in the form of professional and lay labor. According to the World Bank, from the early 1970s to the late 1990s, MENA grew faster than any other region except East Asia.

Because of the emphasis placed on upstream and downstream oil production, revenues from these activities continue to be the dominant generator of funds throughout MENA, and the central government became both the storehouse and distributor of these funds. As such, governmental social ministries were created to disperse, invest, and manage these appropriations as it deemed fit, with little or no initial studies and a deficit of long-term planning and analysis. In part, this is due to the general receptivity of centralized planning and manpower forecasting that was dominant in the 1950s. Manpower forecasting makes the assumption that a nation can reasonably predict its human capital requirement based on its potential growth rate and its developing infrastructure. While this method may provide viable predictions for a country that has a measured growth rate from a diverse and sustainable resource base, it is less reliable for single-resource-based economies, especially those that experience tremendous revenue variations from the single main resource. Given these conditions, governments in the MENA region initiated and managed revenue streams that fed into industry, agriculture, and social services.

Because of these factors, the countries of MENA continue to experience fluctuations in economic performance (see Figure 1), resulting in a region that exhibits an overall low economic growth rate, rising populations, sporadic civil unrest, and a lack of regional transparency and cooperation in many governmental areas, not excluding education. Governments that in boom years had ingested most of its graduates in swelling public-service sectors, find themselves each year with a growing number of graduates who expect their government to offer them an encompassing position in perpetuity—not only a job, but a lifelong career. While there are movements throughout MENA to “nationalize” positions that once were held by expatriates, it is logical to predict that the public sector will eventually build to capacity and the private sector will need to alleviate this influx of human capital.

Oman, for example, employs most of its workforce in public service, but the state can no longer offer positions for the nearly 30,000 Omanis who enter the workforce annually. As a result, the state mandated that financial and banking corporations begin hiring from the national base. The swelling numbers mean that other private sectors will also need to be included. It is also important to note that if an educational system were training its workforce at submarket levels, a rapid nationalization would have a negative effect, resulting in falling productivity, output, and national income. Although some of the questions concerning nationalization of public and private enterprise are beginning to find answers, the deeper question remains: How are the state-driven educational systems going to enable the workforce to compete on national, regional, and global levels? (See Figure 2.)

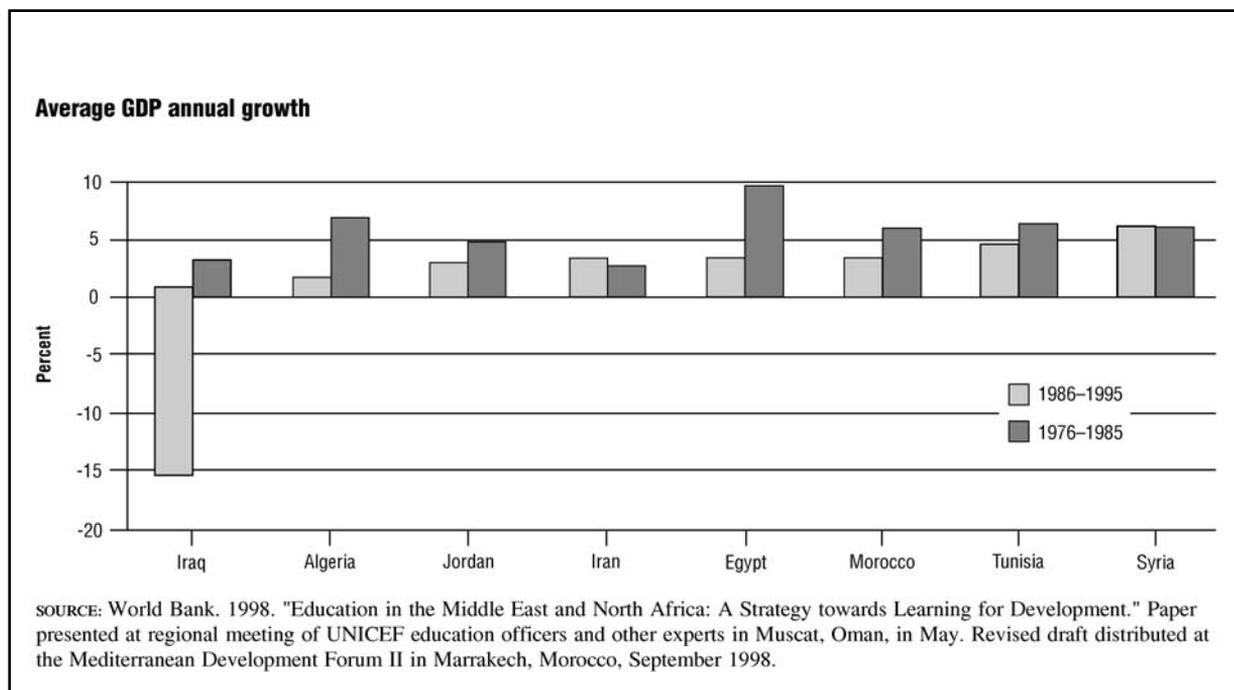
### Educational Perspective

To understand the scope of the problem, it is important to study some of the weak points in the implementing of the educational system.

**Access, literacy, and equity.** In a regional comparison, MENA accounts for only 0.1 percent of the global expenditure on research and development, which is lower than that of every other region except Sub-Saharan Africa. While there is a considerable lack of regional cooperation, there is also a weak communication network that impedes the transfer and flow of knowledge, with fewer than fifteen main telephone lines per 100 people in urban settings and fewer than five lines per 100 people in rural environments (see Figure 3). This is less than 65 percent that of the Europe and Central Asia region and less than 25 percent that of the nations of the Organisation for Economic Co-operation and Development.

Because all countries operate from a fixed budget and most countries have several ministries that serve the different levels of education, there is competition between ministries for prominence and funding (see Table 1). This leads to a number of questions, including: If funding for primary education is increased, which ministry is willing to suffer a reduced budget and by what amount? Within the continuous cycle of education, how is it feasible to diminish one level of education without compromising the remaining levels? Furthermore, with the inherent nature of the accelerating and steep learning curve of the technology in the global market, how will educational ministries be able to secure

FIGURE 1



higher funding within countries whose economies are already strapped?

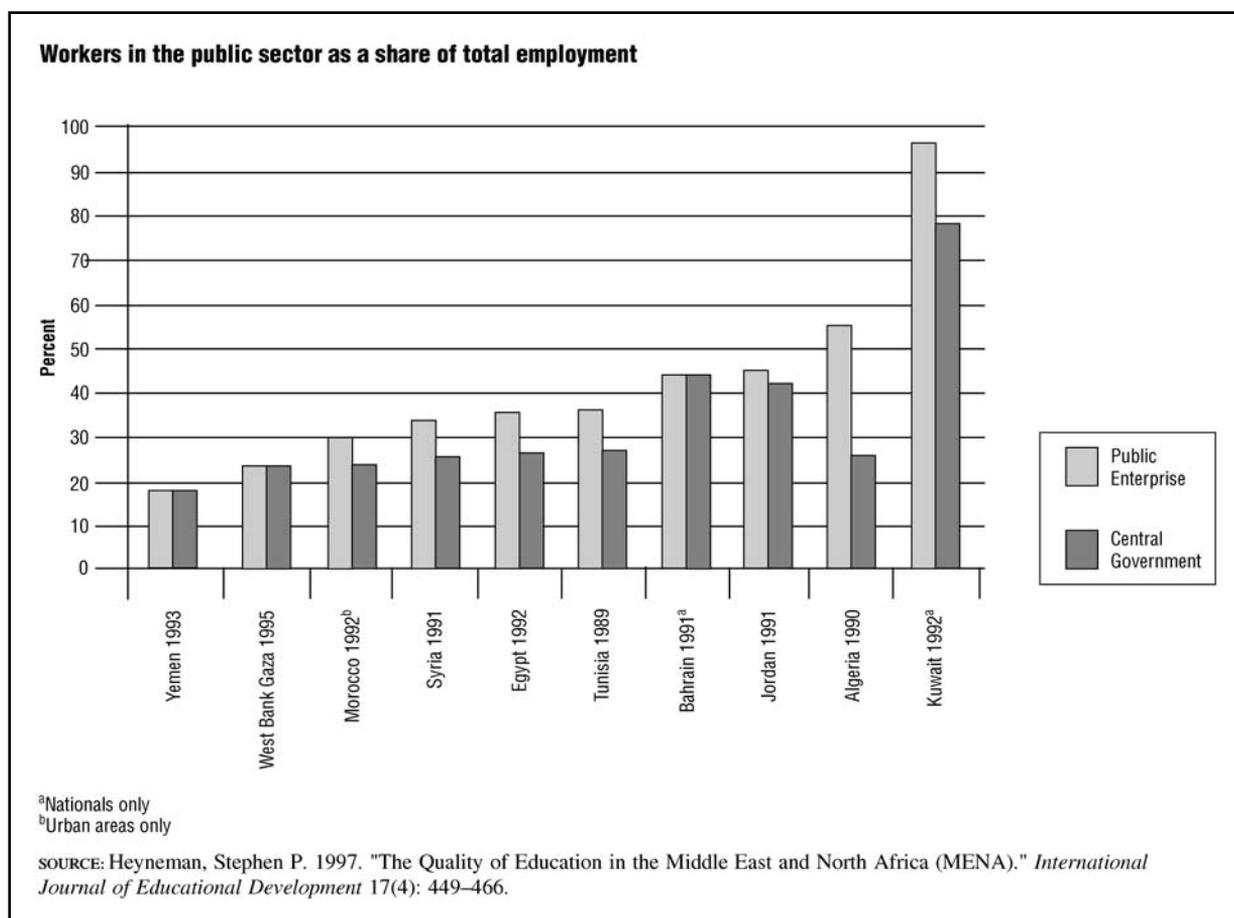
In 1960 a large percentage of the population in the MENA countries were illiterate; by 1995 literacy rates had doubled. While overall literacy increased more than in any other region, countries with a significant rural population, such as Egypt, Morocco, and Yemen, reported a lower literacy increase than those with high urban populations. Also, countries with high rural populations exhibit the lowest literacy rates among women. Women in rural Morocco and Yemen have the least educational opportunity, with literacy rates of less than 10 percent.

Equity among educational systems is not encouraging, with 5 million children aged six to ten and 4 million children aged eleven to fifteen out of a regular school program, in 1995. By 2015 it is estimated that this number will grow by 40 percent, resulting in projected figures of 7.5 million and 5.6 million, respectively (see also Figure 4). While all countries offer compulsory education, there is limited ability to track student progression, and retention rates from the early 1990s do not indicate a strong success factor. Nearly 30 percent of primary students in Tunisia fail to complete the seven-year cycle, and in Yemen female school retention falls from 31 percent in first grade to only 25 percent in sixth grade.

Although the formal language or language of instruction (especially with regard to religious education) may be Arabic, formal and written Arabic is grammatically different from the vernacular of the spoken dialect. This can constitute a disadvantage especially to those of rural backgrounds with little or no formal exposure to a grammatical understanding of Arabic. Even at the level of the dialect, there are differences that are evident enough to distinguish rural from urban students, differences that can highlight class division rather than encourage educational unity.

In addition to language obstacles, there is also an opportunity compromise mentality that exists, especially within disadvantaged communities. With the lack of child labor laws and a financially struggling economic class, what is the financial incentive for retaining a child in the educational system versus the lost wage opportunity of a working child if there is no foreseeable cost-benefit factor? While this effect may be dominant within rural cultures, it is not uncommon in urban society either because of strong perceptions that the educational systems are misguided and dysfunctional. It is not surprising that there is a generational continuance of poor retention rates in public schools in such countries as Egypt, Morocco, and Yemen.

FIGURE 2



**Quality of teaching.** It is difficult to gauge the quality of education administered throughout the region because only two middle-income countries have participated in objective international assessments: Iran (in the Third International Mathematics and Science Study of 1995) and Jordan (in the International Assessment of Educational Progress of 1991). Other countries, however, have already indicated a willingness to participate in similar future studies. Once it becomes evident that such studies not only provide a baseline of national educational strengths and weaknesses but also suggest methods and directions for systemic improvement, there will be more of an incentive for regional cooperation and participation.

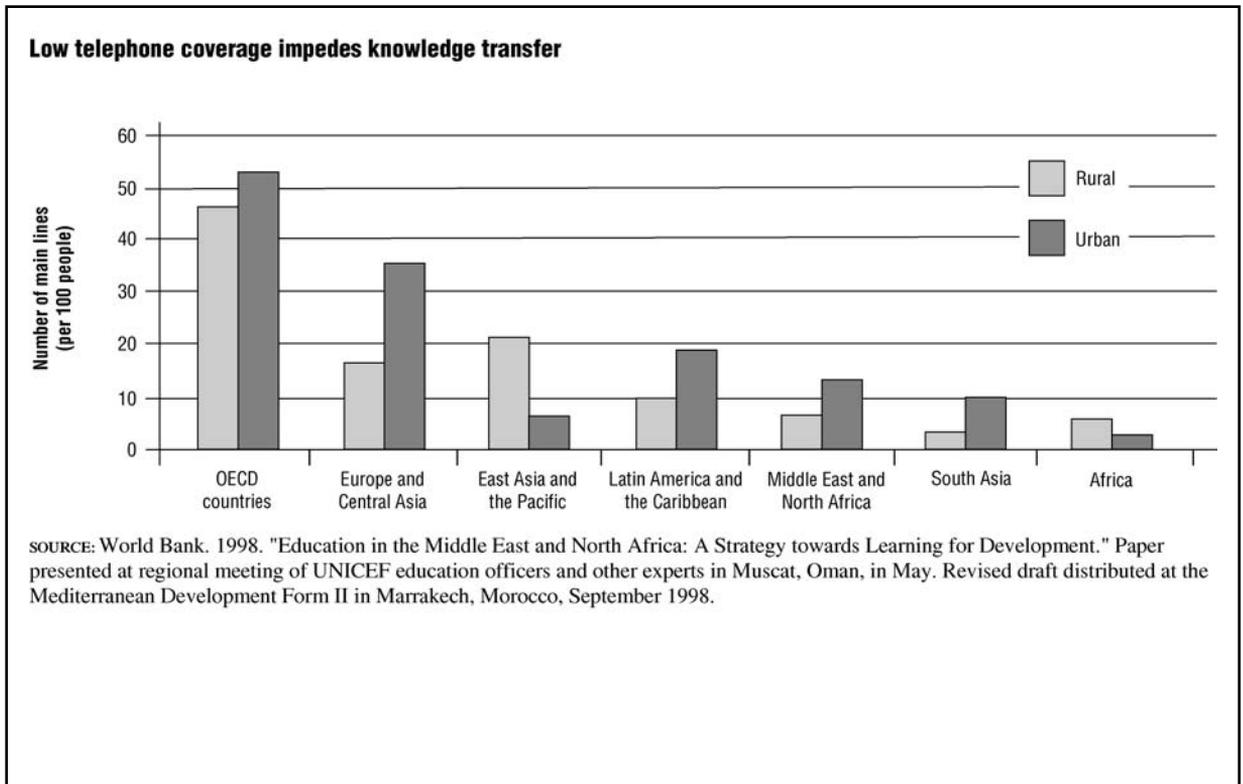
A more complex issue, however, centers around the method of teaching, the relevancy of the material, and the students' ability to manipulate and apply knowledge and data in a manner that will lead to effective problem solving, as well as theory and analysis. Data from 1995 indicate that although the

number of secondary education teachers rose, the percentage of teachers with university degrees fell from 85 percent to 77 percent, and this was accompanied by an average decline in salary expenditure. This reveals a system that is not only reticent about placing an emphasis upon creating a progressive learning environment but that also fails to recognize educational programs as less than a formulation of inputs and outputs. As a consequence of this lack of consistent commitment to faculty and staff, there exists an unbalance in teacher-student ratios.

In addition, there is regional deterioration of the infrastructure of the learning environment. There is not a correlating commitment to libraries, laboratories, and technology workshops for the influx of students, and those facilities that do exist are overburdened and in need of repair.

**Quality of educational materials.** Because the central government continues to play such a dominant role in the management of national education, the quality of educational materials tends to reflect a sys-

FIGURE 3



tem plagued by micromanagement and misapplication. Educational ministries obtain their educational materials through a centrally funded governmental appropriation that is contracted out to either a governmental printing agency or a private agency that relies heavily upon such business. All content, nature, scope, and graphics for educational materials (print and computer-based) are decided from within the hierarchy of the ministry of education, without field study analysis of the needs of the ministry's constituencies. Because this process must be one that stresses cost-effectiveness, texts are a homogenized production that are not able to reflect issues in an authoritatively complete manner, nor are they specifically targeted at different constituent populations. This process, if left unchecked, has the potential to further isolate national student populations from the global market by insulating them from both the technology and the ideas that underpin international commerce. (See Figure 5.)

**Cultural aspects of education.** In their dogmatic mode of planning and their uniform approach to sector problem solving, the central governments of the MENA region are similar to the centrally planned regimes of the former Eastern bloc coun-

tries. In contrast to the nonreligious Eastern bloc regimes, however, the MENA governments have a very strong religious component that permeates the social and political culture. With the rise of state wealth based on oil reserves came the governmental drive to create educational institutions that were governed by Islamic law—new institutions that were in addition to the public establishments. Because of the prominence afforded to Islamic thought, however, all of the educational institutions took on an aspect of Islamic doctrine that was incorporated into religious studies, the study of Arabic, or both. Being forced to respond to many masters is not a unique position in the educational field, especially with the emphasis upon creating the diverse revenue streams of institutional planning and advancement. Nevertheless, because the educational institutions of the countries of MENA are public establishments and rely upon single-source revenues, they must carefully negotiate several powerful relationships within that revenue stream. This results in institutions that are by and large politically, economically, and directionally powerless.

Accompanying the rise of the central government was the creation of the welfare state. Prior to

TABLE 1

Education indicators							
	Ministries with education authority	Years of compulsory education	Percent of children 6–10 in school, mid-1990s	Adult's mean years of schooling, 1990	Primary general enrollment ratio, 1995	Secondary general enrollment ratio, 1995	Tertiary general enrollment ratio, 1995
Algeria	4	9	95	4.0	107	62	11
Egypt*	4	8	84	4.3	100	74	18
Iran*	4	12	97	3.9	99	69	15
Iraq	2	6	79	4.0	90	44	–
Jordan	4	10	100	6.0	94	65	18
Lebanon*	3	6	96	–	109	76	29
Morocco***	3	6	54	2.5	83	39	11
Syria	3	6	91	5.1	101	44	18
Tunisia	3	–	97	3.9	116	61	13
West Bank Gaza**	2	10	–	8.0	92	66	–
Yemen	2	9	50	1.5	60	27	10

\* Egyptian tertiary general enrollment ratio and all Iranian general enrollment ratios are 1994 data; Lebanese secondary and tertiary general enrollment ratios are 1993 data.  
 \*\* West Bank Gaza years of schooling for 1992. General enrollment ratios are arithmetic averages for females and males.  
 \*\*\* In Morocco basic education starts at age seven.

SOURCE: Based on data from UNESCO 1997, Barro and Lee 1996, World Bank 1997, Palestinian Authority 1996, National Center for Human Resources Development <www.hcrd.gov.jo>, World Bank 1998, World Bank staff calculation using data from FAFO 1993 and 1996.

the oil boom, the work ethic was closely affiliated with local indigenous industries that remained largely unchanged for generations. With the rapid influx of funds, populations began to rely upon the state to provide for their basic needs, including major sectors of education, health, and employment. This has greatly enhanced the general perception of the responsibilities of the state while diminishing the need for social responsibility and achievement. It is not surprising that vocational training is unpopular, as are blue-collar jobs in comparison with white-collar positions. This attitude of a state-reliant labor force and the general popular disinclination toward bottom-to-top corporate ladder climbing puts the educational system into a distinct role: that of educating a workforce that is focused solely upon receiving prominent state-sponsored positions. In this position, the educational system is blamed both for not adequately preparing the workforce to create new jobs and for not adequately training the workers to be able to participate in the economy. Because of this, there is little curricular incentive to emphasize the importance of acquiring and honing the managerial, operational, and technical skills that are basic to the formation of a progressive, evolving, and adapting society.

Under the pressures of central control, religious persuasion, and the micromanaged process that

largely characterizes public education, the system will continue to flounder and be directionless. Such a state of affairs has the potential to further discourage the population from participation if, at some point, the system cannot demonstrate its efficacy in producing national, regional, and international leaders.

### Future Challenges and Direction

Without a doubt, the leadership of the MENA countries will have to develop an acute awareness of the strengths and weaknesses of their educational systems. Based upon this awareness, they will need to design plans and solutions that are both realistic and practical.

**Testing, benchmarking, and information exchange.** If educational systems in MENA are to succeed and effectively integrate with the global community, education must return to its primary goal: “learning should be understanding concepts and principles in order to make inferences from that knowledge and to apply it in daily life” (Heyneman 1990, p. 187). Usage of regional testing of these concepts can and needs to be employed. Creating a “national assessment” that is provided at regular intervals will enable both national progress and overall regional standing to be determined and to be tracked over time. This should not necessarily en-

courage partisanship among countries, because comprehensive regional progress will become a reality with only interregional cooperation. Although initially countries may be hesitant to divulge such previously “sensitive” information, it will become apparent that the introduction to and full participation in the global environment will necessitate such transparency.

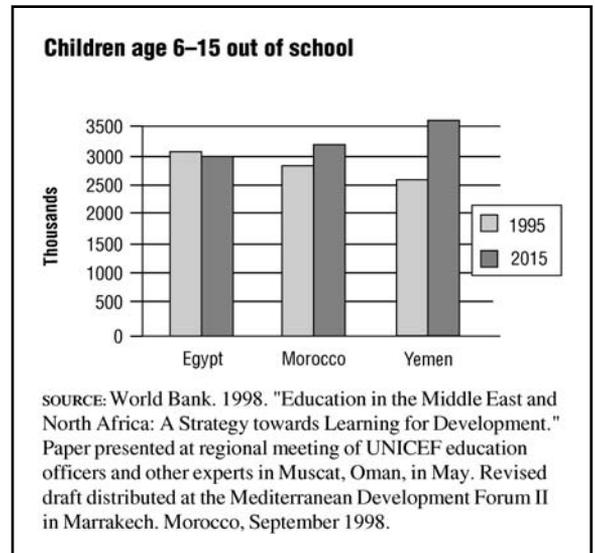
**Financing strategies.** Although the state may remain the organizational and licensing body of education, providers and consumers of education need to understand the ineffectiveness of a state-sponsored educational system. While this does not indicate a total financial withdrawal of the government from the educational arena, it does suggest a reevaluation of the government’s ability to simultaneously finance a growing population and an improvement in the educational services that are provided. It should be determined to what position the state could be expected to recede, but such a transformation should be implemented incrementally over at least one generational period.

Along similar lines, as sectors within the educational ministry are privatized, the state should encourage and initially subsidize private sources of funding. This will result in a competitive environment within the educational industries, encouraging lean costs, higher quality, product accountability, and enhanced consumer choice.

The method of government-controlled educational materials must also be privatized, with the central government operating as “quality control” in the general sense, without overt religious overtones and control. Governments will need to provide subsidy incentives to jump-start this private industry, but as in other countries this will encourage competition and a healthy environment.

**The encouragement of compulsory education.** In encouraging compulsory education, there must be an intention to provide a framework for students that will encourage both the completion of the track and the ability to choose a direction upon completion. This implies a need to abandon the rigid prerequisites during compulsory education that are commonly associated with elite institutions. Teachers will need to be held accountable for their performance in results-oriented evaluations, rather than through strict adherence to a curriculum.

**FIGURE 4**



## Conclusion

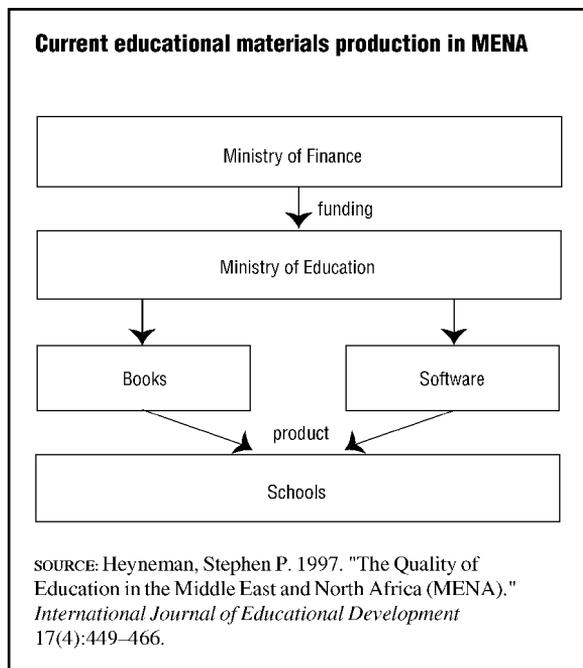
Within the countries of the MENA region, there exist systems of education that are anachronistic in character and dysfunctional with regard to adapting for the world of the future. It is imperative that if MENA is to become an active, tradable partner within the global community, it will need to ready its workforce for the market of today and the market of tomorrow. This implies the need for a self-directed, systematic, and objective look at each country from the method of governance and finance to the manner in which education is presented to the various populations. As painful, costly, and labor intensive as this may be, however, it is only the harbinger of a future in which those countries that are poised to react and adapt will prevail at the expense of countries saddled with unwilling and nonintrospective forms of government.

See also: INTERNATIONAL ASSESSMENTS; ISLAM.

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FIGURE 5



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ERIC HILGENDORF

## MIDDLE SCHOOLS

In 1888 Harvard University president Charles Eliot launched an effort to reorganize primary and secondary schooling. At that time, as state after state enacted compulsory attendance laws, eight-year elementary schools and four-year high schools were the most common types of institutions. But Eliot and his colleagues on the National Education Association's Committee of Ten on Secondary School Studies argued that young adolescents wasted time in the last years of elementary school and should be introduced to college preparatory courses such as algebra and Latin at an earlier age. The committee recommended reducing elementary schools to six grade levels (1–6) and increasing secondary grades to six grade levels (7–12). They also recommended that the new secondary schools be designed to allow talented, college-bound students to be promoted quickly so that they could complete the six years of secondary school in as few as four years.

As grades seven and eight began to be considered *junior* or *introductory* high school grades rather than elementary grades, intermediate schools (grades 7–8), junior high schools (grades 7–9), and junior-senior high schools (grades 7–12) began to appear. These new secondary schools were seen as a way of offering young adolescents a curriculum that was more substantial and more differentiated than that offered in elementary schools, while also addressing common practical problems such as the overcrowding of K–8 elementary schools and high rates of students leaving school after grade eight. In addition to giving college-bound youths earlier access to college preparatory work, educators in these schools sought to entice greater numbers of non-college-bound youths to stay in school at least through grade nine by offering them commercial, domestic, and vocational curricula. By 1920 the number of junior high schools in the United States had grown to 883. By the 1940s more than half of the nation's young adolescents attended a junior high school, and by 1960 four out of five did so.

The enduring contributions of junior high schools to middle-level education in America are

many. These schools introduced a broader range of exploratory, *tryout* courses and activities in order to assist young adolescents to discover and develop their interests and abilities. Junior high schools were also the source of other educational innovations, including homeroom and teacher-adviser programs, extracurricular activities, and core curriculum approaches emphasizing the correlation of subject areas and the integration of learning across disciplinary boundaries.

### The Emergence of Middle Schools

Despite the innovations and successes of junior high schools, these schools became the target of increasing criticism for tending to adopt the curricula, grading systems, large size, schedules, regimentation, and impersonal climate of senior high schools. Ironically, some of the key organizational changes that the early promoters of junior high schools believed would meet the special needs of young adolescents—departmentalization, teacher specialization, and tracking—had been taken to the extreme and were now being challenged as inappropriate for junior high school students. Similarly, many began to have second thoughts about having ninth-grade educational programs in the same school buildings as seventh- and eighth-grade programs. The ninth-grade program and curriculum were constrained by Carnegie unit requirements for high school graduation and college entrance. Because these requirements affected scheduling and staffing decisions, they often strongly influenced the educational programs offered to seventh and eighth graders in junior high schools as well.

Fifty years after the first junior high schools were established, educators began to call for middle schools—new schools that had a different grade organization and a more developmentally responsive program—in order to provide a more gradual and appropriate transition between the elementary and high school years. In the 1950s Alvin Howard became one of the first to advocate the creation of a 6–8 school that would remove the limitations imposed by Carnegie units, have a more stable school climate than a 7–8 school, and would recognize the earlier onset of puberty of young adolescents in the second half of the twentieth century. William Alexander and Emmett Williams, in 1965, recommended the creation of 5–8 middle schools featuring interdisciplinary teaming, small learning communities, a teacher advisory program, and special learning cen-

ters where students could catch up on needed skills or branch out into further exploration. For example, Alexander and Williams suggested the creation of *wing units* (interdisciplinary teams of teachers to jointly plan curriculum and deliver instruction to 100 students). Each wing unit would join with wing units from the other grade levels in the school to form a “school within the school.” The special learning centers would be open during the school day, after school, and on Saturday, and would include a library, a reading laboratory, a home arts center, a typing and writing laboratory, a foreign language laboratory, an arts and hobby center, a music room, and a physical education/recreation center.

In 1966 Donald Eichorn, a school district superintendent, wrote the first full book promoting the creation of 6–8 middle schools. The book attempted to apply Piaget’s theories regarding early adolescent development in designing a suitable educational program. For example, Eichorn proposed that middle schools offer frequent opportunities for active learning and interaction with peers. He suggested eliminating activities that might embarrass late maturers or place them at a competitive disadvantage (e.g., interscholastic athletics and prom queen contests) and replacing them with less competitive activities that welcome and affirm all students regardless of their current level of physical or cognitive development (intramural athletics and physical education programs and flexible self-selected projects that allow all students to pursue personal interests and develop further interests while making frequent use of a well-equipped resource center). He proposed flexible scheduling to allow for extended learning opportunities and flexible groupings of middle school students for instruction (e.g., by current cognitive functioning or interests) rather than just by chronological age or grade level. He called for a curriculum that featured frequent use of interdisciplinary thematic units that reflected the interrelated nature of different content areas and that balanced traditional academic subjects with cultural studies, physical education, fine arts, and practical arts.

By 1970 a small group of educators founded the Midwest Middle School Association, amid much debate and confrontation between advocates of 6–8 middle schools and 7–9 junior high schools. Three years later its name was changed to the National Middle School Association to acknowledge the national scope of the growing middle school movement. The writings of key educators in this

movement displayed increasingly widespread agreement on practices that they believed were especially appropriate for young adolescents, including interdisciplinary team teaching, discovery and inquiry methods, teacher-adviser plans, flexible scheduling, exploratory courses, and ungraded programs.

### **Growth and Maturation of the Middle School Movement**

In 1965 only 5 percent of middle-grades schools in the United States were 6–8 or 5–8 middle schools, and 67 percent were 7–9 junior high schools. By the year 2000 these percentages were reversed: only 5 percent of middle-grades schools were 7–9 junior highs and 69 percent were 6–8 or 5–8 middle schools. The number of middle schools grew rapidly—from 1,434 (23%) in 1971 to 4,094 (33%) in 1981; 6,168 (51%) in 1991; and 9,750 (69%) in 2000.

Although the number of middle schools grew quickly during the 1960s and 1970s, according to William Alexander, writing in 1978, most of these new schools displayed “limited progress toward the objectives of the middle school movement” (p. 19). In fact, John Lounsbury noted in 1991 that the first comparative studies of the new middle schools and the old junior high schools revealed that the schools “were surprisingly alike in actual practice” (p. 68). Changes were restricted largely to the names of schools and the grades they contained.

One reason for the lack of progress in implementing a set of distinct practices was that many middle schools were established for reasons of expediency. For example, the new grade arrangements helped some districts reduce overcrowding in elementary schools, poor utilization of buildings, or racial segregation. Through the 1970s little empirical research was conducted on the consequences of implementing or ignoring the lists of recommended practices. Thus, there was no scientific evidence to persuade educators to change their programs and practices.

By the 1980s the debates between educators about the best grade structures for young adolescents began to die out, as both middle school and junior high school advocates realized that the typical middle-grades school, regardless of grade organization, was still failing to meet the needs of its students. “Junior high and middle school proponents and practitioners began to coalesce into a single cause—the cause of improving early adolescent edu-

cation” (Lounsbury, p. 67). This new unity of purpose and vision was also fueled by the emergence of a strong and respected literature on the characteristics of early adolescents, and by research indicating that the transition to middle-grades schools was associated with declines in academic motivation and performance.

Research also indicated that students perceived their middle-grades teachers as more remote and impersonal than their elementary teachers, and that they were less certain that their middle-grades teachers cared about them or knew them well. Furthermore, student work completed in the first year of the middle grades was often less demanding than in the last year of elementary school, academic expectations in middle-grades schools were generally low, and students had few opportunities to learn important new concepts and apply them to real-world problems. This research along with case studies and empirical analyses of the effects of recommended practices on the quality of school programs and on the learning, motivation, and development of young adolescents all gave further impetus to the calls for the reform of middle-grades schools.

As practitioners, researchers, and scholars began speaking with one voice about the continuing shortcomings of middle-grades education in the United States, middle-grades reform began receiving unprecedented national attention. That is, at the end of the 1980s, states and foundations that had been focusing their educational reform initiatives on preschool and early elementary education or on high school improvement and dropout prevention, began to recognize that the middle grades might be central to helping more students succeed and stay in school. California was one of the first states to produce a task-force report calling for middle-grades reform. California’s 1987 report, *Caught in the Middle*, was followed by a long line of reports from Florida, Maryland, Louisiana, and at least fifteen other states. At about the same time, foundations such as the Lilly Endowment, the Carnegie Corporation of New York, the Edna McConnell Clark Foundation, and the W. K. Kellogg Foundation began advocating and funding middle-grades reform initiatives.

These efforts helped solidify the consensus on the kinds of supportive structures and responsive practices needed by students in the middle grades (e.g., the eight principles outlined in 1989 by the Carnegie Council on Adolescent Development in *Turning Points*). At this time, research in the middle

grades by a wide variety of researchers began to show that schools serving early adolescents, especially middle schools, were increasingly implementing educational programs that were based on these recommended practices for the middle grades. Fewer schools were middle schools only in name.

### Accomplishments of the Middle School Movement

Anthony Jackson and Gayle Davis noted in 2000 that “structural changes in middle-grades education—how students and teachers are organized for learning—have been fairly widespread and have produced good results” (p. 5). Changes in practice that ensure each student in a middle-grades school has more support from (and more meaningful relationships with) caring adults at the school have reduced the negative shifts in students’ motivational beliefs during the middle grades. Schools-within-schools, looping (assigning teachers to the same students for two or three years), semidepartmentalization (assigning a teacher to teach two subjects to three class sections rather than one subject to six class sections), and interdisciplinary teaming with a common planning period for the teachers on a team are examples of structural reforms that have been made in many middle-grades schools. Such reforms have been found to increase students’ well-being and perceptions that their teacher cares about them and their learning, and to strengthen teacher–student relationships. In turn, when middle-grades students perceive their teachers care about them and their learning, they are more likely to report that they try to do what their teachers ask them to do and give their best effort in class, and they are less likely to engage in risky behaviors.

In sum, many middle-grades schools have succeeded in changing their climates and structures to become what Joan Lipsitz and colleagues, in 1997, called “warmer, happier, and more peaceful places for students and adults” (p. 535). However, as David Hamburg noted in 2000, changes in climates and structures “are necessary but not sufficient for major improvement in academic achievement” (p. xii). That is, while modest achievement gains may result from changes in school organization—such as semidepartmentalization, team teaching, or creating smaller learning environments—major achievement gains are obtained only in schools that have implemented both changes in school organization and in curriculum, instruction, and professional develop-

ment changes that assist teachers to “transmit a core of common, substantial knowledge to all students in ways that foster curiosity, problem solving, and critical thinking” (Hamburg, p. x). For example, in a 1997 study by Robert Felner and colleagues of a group of thirty-one Illinois middle schools, those schools that had made both structural and instructional changes that were consistent with *Turning Points* recommendations achieved substantially better and displayed larger achievement gains over a two-year period than did similar schools that had implemented at least some of the key structural changes outlined in *Turning Points*, but not changes in curriculum and instruction. Another study suggesting the critical importance of going beyond just structural changes in improving achievement was conducted by Steven Mertens, Nancy Flowers, and Peter Mulhall in 1998, and involved 155 middle-grades schools in Michigan. When these researchers analyzed outcomes in schools that had one of the key structural changes in place (interdisciplinary teams that were given high levels of common planning time), they found that achievement gains were much higher among the subset of these schools that had received a grant from the Kellogg Foundation that made it possible for their teachers to engage more regularly in staff development activities focused on curriculum and instruction. In fact there is even evidence from this study that staff development may be more important than common planning time in facilitating achievement gains. Schools whose teams had inadequate common planning (but had a grant that made frequent professional development possible) showed more achievement gains than did schools without grants, even those whose teams had high levels of planning time.

Unfortunately, high-performing middle schools are still rare, because “relatively little has changed at the core of most students’ school experience: curriculum, assessment, and instruction” (Jackson and Davis, p. 5). Although structures and practices that are in keeping with the best of the middle-grades reform documents are an essential foundation for middle-grade reform, dramatic and sustained improvements in student performance occur only if teachers also provide all students with markedly better learning opportunities every day.

### Enduring Problems

One particularly vexing problem that plagued junior high schools and continues to plague middle schools

is what Samuel H. Popper termed being “a school without teachers” (p. 57). Because of the lack of teacher education programs and licensure that focus on the middle school level, the majority of young adolescents are taught by teachers who prepared for a career as an elementary or high school teacher. Fewer than one in four middle-grades teachers have received specialized training to teach at the middle level before they begin their careers. As a result, teachers who wind up teaching in middle schools, even those who discover that they enjoy teaching middle school students, find themselves woefully unprepared to work with this age group. Thomas Dickinson commented in 2001 that these instructors enter middle schools “unschooled in appropriate curriculum and instruction for young adolescents, and ignorant of the place and purpose of middle school organizational practices and the complex role of the middle school teacher” (p. 7). This is clearly one reason why curriculum and instruction in the middle grades continues to show little improvement over time.

There is a growing consensus to support specialized teacher preparation at the middle-grades level. Numerous studies show that middle-grades teachers and principals favor specialized teacher preparation of middle-grades teachers. Similarly, the National Middle School Association, The National Association for Secondary School Principals, and the National Forum to Accelerate Middle Grades Reform have all called for the specialized preparation of middle-grades teachers. Perhaps the only solution to this enduring problem is for states to establish mandatory requirements for middle-level licensure that do not overlap significantly with licensure for elementary school or high school teachers. This will serve as an incentive for colleges and universities to establish specialized programs that prepare practicing and future teachers to work effectively with middle school students, curricula, and instructional practices, and also as an incentive to teachers to pursue this specialized training.

Unfortunately, there is also a lack of middle-school principal preparation. “Preparation to lead a school based on the tenets of the middle school concept is even more rare than middle school teacher preparation programs. The same can be said for the licensure of middle school principals” (Dickinson, p. 7).

The National Forum to Accelerate Middle Grades Reform declared in 2000 that high-

performing middle schools are “academically excellent, developmentally responsive, and socially equitable” (p. K7). If such middle schools are going to become the norm rather than the exception, both middle school teachers and principals need more specialized preparation and continuing professional development to support and sustain their trajectory toward excellence.

*See also:* CURRICULUM, SCHOOL; EDUCATIONAL LEADERSHIP; LOOPING; SECONDARY EDUCATION.

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DOUGLAS MAC IVER  
ALLEN RUBY

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### MIEL, ALICE (1906–1998)

A nationally prominent social educator, Alice Miel was also a curriculum development scholar and practitioner.

## Career

Miel, born on a small farm in rural Michigan, eventually studied to become a teacher during the height of the Progressive movement in education, which emerges as the strong undercurrent in Miel's life. Her formative years as an educator were spent at the University of Michigan and at Tappan Junior High School in Ann Arbor, Michigan, where she taught social studies and Latin in the early 1930s. There her benefited from an educational environment in which local school faculty and students could practice democratic skills of deliberation and decision-making. In particular, Miel's participation in collaborative curriculum development projects reflected her growing concern about the effects of the Great Depression on society and the schools. Incorporating the ideas of John Dewey, as well as those of leading progressive educators such as Harold Rugg, Ann Shumaker, and William Heard Kilpatrick, Miel and her colleagues demonstrated their conviction that the school curriculum must be modified to emphasize the study of contemporary social problems. Another early landmark experience for Miel was a 1936 study session at Ohio State University with Laura Zirbes, a prominent figure in the field of elementary education. Miel left this meeting with a commitment to understanding children, not just content, and to providing for their individual differences.

The "child-centered" Progressive education movement of the late 1930s had become the conventional wisdom in American educational thought and practice, and Miel moved into this company in the early years of her career in education, even as the Progressive movement began to fracture because of both internal divisions and external attacks. At this time of transition, the locus of Miel's story began to shift to Teachers College, Columbia University, where it would remain for the next three decades. Miel became the doctoral student of Hollis L. Caswell, then chair of the newly organized Department of Curriculum and Teaching at Teachers College. Caswell had already enhanced the visibility of the curriculum field, developed the idea of method in curriculum making, focused attention on the process by which a variety of people interacted in order to make curriculum, tried to reduce the gap between theory and practice by defining curriculum as actual experiences undergone by learners under the direction of the school, and provided a curriculum design that helped teachers to apply concepts from organized knowledge to the solution of social problems.

Caswell helped Miel to formulate the problem of curriculum change as a social process for her dissertation, which was later published as *Changing the Curriculum: A Social Process* (1946). Miel went on to serve as a professor at Teachers College from 1944 through 1971; she chaired the Department of Curriculum and Teaching at Teachers College from 1960 through 1967.

Miel became more deeply involved in Progressive ideas, even as the movement itself began to wane. Her career at Teachers College spanned the later years of the college's preeminence as the intellectual crossroads of the Progressive education movement. Her tenure there also spanned the movement's alleged decline and disarray in the 1950s as the main target of conservatives who attacked Progressive philosophy and demanded a return to the "basics" of schooling. In the 1960s, Miel's last decade at Teachers College, the national mood shifted again as Charles Silberman and other humanist educators decried conformity and rigidity in school curricula and wanted to return the focus of education to the needs of individual learners.

Miel made substantial efforts to promote democratic leadership and decision-making among educators and to enhance the capacity of schools for change and self-renewal. Her ideas and activities in this regard are instructive for current policymakers. Miel developed a knowledge base of factors that affect schools' capacity for change, established collaborative relationships with educational institutions and associations that shared the value underlying this goal, used cooperative action research to help school systems plan and implement research-based instructional innovations, worked to influence and involve a variety of community members in decisions affecting their schools, and developed exemplary models of school change in her curriculum development research.

## Contribution

Several significant themes emerge from Miel's body of work. First, Miel advocated the development of democratic behavior as the ultimate goal of schooling. More importantly, she was one of the first curriculum scholars to apply social learning theories and democratic principles and processes to various aspects of curriculum development and school administration. She emphasized that curricular change is a complex social process that involves an array of participants in individual schools and communities.

Also, she strongly advocated that educators develop curriculum at the school level because of her belief that the teacher was the most important factor in curriculum change and that reform efforts would fail if they did not include the people who would have to carry them out. Through these ideas, Miel addressed the gap that long existed between educational theory and practice, implying that the involvement of various participants in the curriculum development process creates a relationship between theory and practice and allows that relationship to flourish.

Furthermore, Miel focused on the democratic social learning environment of children in schools. Miel believed that the school was democracy's proving ground because it had a large share of the responsibility for socializing the nation's young people into participation in democracy. Although some critics may have questioned whether democratic lessons could be gained from an institution that mandated participation, Miel viewed the school as society in microcosm, where people from many backgrounds learned about freedom and responsibility, individuality and cooperation—all with an eye toward citizenship. Furthermore, throughout her own life, Miel continued to develop a keen sense of the historical context of social problems that, for her, raised acute concerns for the future of a democratic society: postwar reconstruction, the cold war and Red Scare, the social tensions between “haves” and “have nots,” and the Watergate scandal. In particular, she was deeply affected by the state of race relations and civil rights in American society. Through these experiences, Miel sought to move beyond the outmoded notion of racial tolerance, which, for her, connoted “putting up” with people who were different, to a more active, broader notion of intercultural understanding and appreciation. In this area, one of Miel's research accomplishments during her tenure at Teachers College merits particular attention: her 1967 book with Edwin Kiester, *The Shortchanged Children of Suburbia*, an award-winning study that has been characterized as a “groundbreaker” in its emphasis on what suburban schools were failing to teach about human differences and cultural diversity. Miel also sought to refute the claims of back-to-basics school reformers of the 1970s, arguing that the “basics” also extended to the “moral-ethical-social realm,” and that they should be given a prominent place in the school curriculum. She returned to these themes in 1986 in the

context of the “educational excellence” movement, manifested in reports such as *A Nation at Risk: The Imperative for Educational Reform* (1983). For Miel, the overarching responsibility in democracy was to know how democracy worked and how to maintain it through changing conditions.

Several factors likely limited the widespread acceptance of Miel's conceptions of social learning and social studies. First, Miel believed that social learning should be taught throughout the school day and not compartmentalized into one particular academic subject area. This view may have posed problems for teachers and curriculum workers, who increasingly tended to think in terms of discrete subject areas. Second, the circulation of Miel's ideas was restricted by the publication of her book *More Than Social Studies* (1957) during the conservative, subject-centered reform movements of the late 1950s. The book's publication unfortunately coincided with increasing public criticism of the perceived academic “softness” of American schools and growing demands that mathematics and science receive priority in education. The *Sputnik*-inspired National Defense Education Act (1958), linking federal support for schools with national policy objectives, ensured that social studies would be deemphasized and that traditional academic history likely would prevail in new federal guidelines for education. Third, Miel lacked affiliation with social studies traditionalists and was not considered an “expert” or specialist in any of the social sciences. Nor did Miel become deeply involved in the “new social studies” movements of the 1960s, particularly because they often resulted in written courses of study that she eschewed—for example, *Man: A Course of Study* (MACOS), which she criticized because of its lack of emphasis on modern man and his problems.

Finally, in terms of other accomplishments, Miel was one of the early presidents of the Association for Supervision and Curriculum Development (1953–1954). In the 1970s, she became a guiding influence in the founding of the World Council on Curriculum and Instruction (WCCI). The establishment of the WCCI was a natural outgrowth of her interest in improved curricula for all children and her work with doctoral students from all over the world. One of the distinguishing features of her career was her advocacy of global understanding through cooperation in international educational activities. Through these activities, and through her

supervision of more than 140 doctoral dissertations, Miel's influence was indeed widespread.

*See also:* CURRICULUM, SCHOOL; PROGRESSIVE EDUCATION; ZIRBES, LAURA.

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ELIZABETH ANNE YEAGER

## MIGRANTS, EDUCATION OF

Anyone who has marveled at the amazing variety of fresh produce and canned and frozen foods in most U.S. supermarkets can thank a migrant farm worker for this bounty. In spite of increased mechanization of agricultural work, seasonal labor continues to be

required for the cultivation and harvest of fruits and vegetables. The dairy and fishing industries are also reliant on seasonal migrant labor.

Unfortunately the children of migrant agricultural workers are among the most educationally disadvantaged children in the United States. The conditions associated with their migratory lifestyle, such as discontinuity in education, social and cultural isolation, strenuous work outside of school, extreme poverty, and poor health, impose multiple obstacles to educational success. Limited proficiency in English may be an additional educational burden. Schools coping with temporary seasonal increases in enrollment can face significant challenges in addressing the migrant students' unique educational needs. Many schools serving migrant students are small schools located in rural areas, often with limited staff and resources.

Migrant students reside in all states, the District of Columbia, and Puerto Rico. It is difficult to know the exact number of migrant children in a state at a given point in time, since migrant farmworkers and their families often move across state and national boundaries. In 2000 the U.S. Department of Education counted approximately 800,000 migrant children in U.S. schools. Close to half of these children attend schools in California and Texas; and ten other states—Arizona, Colorado, Florida, Kentucky, Michigan, North Carolina, Oregon, Pennsylvania, Puerto Rico, and Washington—account for nearly one-third of migrant students.

### Migrant Families

The life of migrating families is in many ways distinct from mainstream America. Each year migrant families travel to remote parts of the country seeking employment in highly uncertain labor markets to work under strenuous and often hazardous conditions. Most migrant workers were born outside the United States, and many have difficulty speaking English. Due to the extreme economic conditions of migrant life, children often must take on work and family responsibilities at a young age, sometimes to the detriment of school attendance. In addition working in the fields exposes migrant students to a variety of health risks, such as accidental injury or exposure to pesticides.

About two-thirds of migrant students come from families where earnings are below the poverty level. The cost of migrating is high, and it is common

for migrants to arrive at a new destination with little or no money or food. Living conditions are cramped and substandard—camp housing units often consist of one small room for each family that serves for cooking, eating, and sleeping. Many migrant students suffer educational disadvantages stemming from poverty and poverty-related health problems that can directly affect school performance, such as malnutrition, parasitic infections, and chronic illness.

The typical migrant adult has received less than seven years of formal schooling. Most were schooled in their home country, and are unfamiliar with the American educational system. As in many homes where the adult literacy level is low, children are less likely to be exposed to books, magazines, and other print media that promote early literacy and school readiness. Nonetheless, migrant parents, like all parents, see education as a path to a better life and place a high value on their children's education.

While migrant families may consider school quality, among other factors, when moving, decisions about where and when to relocate are ultimately based on economic necessity. Migrants must weigh such factors as the length of seasons, changes in crop conditions, demand for labor, wages, and housing availability. Migrants tend to follow the crops from south to north in the spring and then back south in the fall. Since the pattern of enrollment for migrant children is generally one of late entry in the fall and early withdrawal in the spring, migrant students are often unable to complete a school term.

In terms of ethnicity, the population of agricultural workers is overwhelmingly of Hispanic origin. More than three-quarters of workers are Mexican-born. Not surprisingly, the great majority (84%) of migrant workers are native Spanish speakers; only 12 percent are native English speakers. About 80 percent of migrant children are likely to live in a home where no English is spoken, so many arrive in schools unable to comprehend the language of instruction.

### **School Programs for Migrant Students**

While the specific services available to migrant students in schools can vary widely, all programs address the identification and recruitment of migrant students, their assessment and placement, and the coordination of services.

School services for migrant students start with their identification or recruitment. *Identification* is the process by which children already enrolled in school are identified by staff as migratory, and therefore eligible for supplementary services. *Recruitment* refers to the process of bringing nonenrolled school-age migrant children into the school system. Migrant specialists hired by the school district or state usually perform student recruitment. Recruiters also act as ambassadors, welcoming students into the school system and serving as a conduit of information between migrant parents and schools.

Once a migrant student is enrolled, the school must determine if the regular school program will be sufficient, or if additional services are required. In many cases formal assessments must be administered to determine language proficiency, grade-level placement, and the need for special education services. School staff, or a migrant liaison, will communicate with the family about the child's educational and health history. If the students' prior school and medical records are available, this greatly expedites the placement process and avoids needless educational delays and interruptions. For secondary students, the consequences of delayed placement can be particularly high, as they may fail to accrue the credits needed for graduation.

In states and districts with a predictably high migrant population, schools may offer well-coordinated programs and services that target their specific needs. In other areas, service coordination and academic programs may be deficient or lacking entirely. Students migrating during the academic year might experience both environments. Quality programs for migrant students generally include a number of features to help them overcome educational disruption, cultural and language barriers, social isolation, and health-related problems. These features include:

- Enhanced reading and math instruction.
- English as a Second Language (ESL) and/or bilingual instruction.
- Tutoring.
- Classroom aides.
- Summer programs.
- Guidance and counseling.
- Parent outreach.
- Social work.
- Clothing.

- Nutrition.
- Transportation.
- Dental and medical services.
- Accommodations for enrollment, credit accrual, and transfer.

Transitional centers, sometimes called Newcomer Centers, may exist in districts with high numbers of immigrant and migrant students. Aimed at secondary students, these centers undertake a comprehensive assessment of incoming student needs and offer specialized classes designed to facilitate transition to regular classrooms. Most newcomer programs are set apart from the regular schools and focus on providing intensive English language instruction and developing basic literacy for students with limited formal schooling. The centers also help students develop study skills, and they familiarize new students and their families with the schools' expectations and protocols.

Another type of comprehensive program is known as a *schoolwide*, or *whole-school*, program. Rather than separate students out for specialized instruction, schools with schoolwide programs have reformed their entire regular educational program and incorporated a variety of health and other services to improve achievement for all students. Approximately 20 percent of migrant students are served in schoolwide programs.

When the small numbers of migrants or limited resources may prevent the implementation of a comprehensive program, many schools concentrate available resources on a few of the program features listed above. Programs may focus on supplementary and remedial instruction, generally in reading, math, or ESL, through specialized classes either during the school day or after school. Other schools may rely on bilingual aides to help students keep up in the regular classroom, or on migrant advocates/liaisons to help migrant families understand and access the services available to them. In several states most or all of the special educational services for migrant students are provided through summer educational programs.

### **In the Classroom**

Services for migrants may be provided by specialized personnel such as bilingual instructors, remedial instructors, counselors, or summer school teachers, but regular classroom teachers play a critical role in helping migrant students thrive. The literature on

migrant education repeatedly emphasizes the importance of: (1) building on the strengths and experiences migrant students bring to the classroom, (2) establishing a positive learning environment where the diversity among students is acknowledged and celebrated, and (3) allowing students to demonstrate their knowledge in a variety of ways.

It is important for teachers and aides to have an open communication with migrant students about their prior educational and life experiences so they can build on what the student already knows. For example, students who have worked in the fields will have knowledge of nature and agriculture, which can be a starting point for learning in science. If the student has been learning in his or her home language, a teacher can capitalize on that skill; either by using the native language or by locating supplementary native language materials to reinforce material presented in English.

Easing the transition of migrant students to a new school is crucial, especially when the student is a late starter. A student who feels disoriented or unwelcome will have difficulty learning. Teachers can reduce anxieties and avoid difficulties by clearly explaining the everyday routines and policies within the school. Students new to U.S. schools may be completely unfamiliar with elements of school that seem commonplace to most American school kids, such as hall passes, school bells, changing classes, gym, cafeterias and lunch lines, lockers, holidays, and disciplinary methods. Using cooperative groups or assigning classroom "buddies" for new students can help the students to adapt and begin to feel more at home. Teachers of migrant students need to be attentive to warning signs. When new students are withdrawn, aggressive, or over-talkative, these may be indicative of adjustment problems rather than general behavior problems.

Teachers may also take advantage of professional development opportunities to enhance classroom techniques for working with diverse learners. Effective schooling research suggests strategies to promote excellence for *all* students. These include maintaining high expectations, personalized contact and smaller classroom size, and providing opportunities for students to demonstrate initiative, competence, and responsibility.

### **National and State Programs**

Most programs for migrant students receive funding through the U.S. Department of Education's Mi-

grant Education Program (MEP). Federal MEP funds are allocated to states based on the number of migrant students and the state's average per-pupil expenditure. Since its inception in 1966, the MEP has supported school-based supplementary educational programs, tutoring services, school- and community-based health services, parent involvement and family literacy programs, summer enrichment programs, and professional development for teachers. The MEP also maintains a toll-free nationwide Migrant Education Hotline that families can use to reach the nearest migrant program.

Funding from several smaller federal grant programs also reaches many migrant students. Migrant Head Start (MHS) provides comprehensive preschool and daycare programs. The Migrant Education Even Start (MEES) program helps migrant families break the cycles of poverty and illiteracy through programs for early childhood education, adult basic education, and parent education. The High School Equivalency Program (HEP) provides grants to colleges, universities, and community organizations to help migrants obtain a General Educational Development Diploma (GED) and prepare them for college or the workplace. College Assistance Migrant Program (CAMP) grants help colleges and universities provide financial and academic assistance to migrant students in their first year.

In the absence of a national system to transfer migrant student records between schools, states have developed intrastate and regional interstate databases to track and transfer student records, and also to share curriculum materials. By facilitating timely identification and appropriate placement of students, these information-sharing consortia play a critical role in reducing the educational disruption experienced by migrant youth. Many states share student information, as well as teachers and textbooks, with schools in Mexico through the Binational Migrant Education Program. Multistate programs, such as the Portable Assisted Study Sequence (PASS), which is used in thirty-one states, help secondary migrant students meet graduation requirements by allowing students to complete their coursework semi-independently through correspondence study. Newer state and regional programs have adapted the PASS model to enable mobile students to complete coursework through the Internet.

## Issues and Trends

Many millions of migrant children have benefited from the work of federal agencies, states, and schools to expand educational opportunities and open the way for a better future. Still, very little is known about how well these programs and services are working. Due to the high mobility of the population, different record-keeping among the states, and the absence of a national tracking system, program administrators have limited means of determining the impact of a program or a schedule of services on a particular migrant child. Establishing a workable, efficient, secure, nationwide system of tracking migrant student records and progress remains the central challenge for the migrant education community. A centralized information system would help minimize disruptions caused by placement delays, and would also permit meaningful assessment of educational outcomes. The No Child Left Behind Act, signed into law in January 2002, calls for an expanded federal role in the development of a national system of records transfer.

Since the early 1990s, education reform has tended to focus on the setting of high education standards and the development of standards-based curricula and assessments. As more and more states are requiring that all students be included in statewide assessments, it is likely that more data on migrant student achievement will become available. Students migrating within a state may benefit from having consistent curricula and clearly defined goals and improved documentation of their progress.

While instruction by video and correspondence remain widely used distance-education tools in migrant programs, the benefits of Internet technology are also beginning to reach migrant students. Some programs allow students to complete coursework online and take advantage of Internet-based distance learning. Migrant educators are creating innovative ways of using new technologies to enhance the continuity of learning; for example, the Estrella program, based in Texas, provides students with laptop computers and modems to help them keep up with course work while away from their home district.

Helping migrant students overcome multiple barriers to success poses a tremendous challenge to teachers, migrant advocates, schools, and families. The mission for all members of the migrant education community is to ensure that students' cumulative educational experiences—in spite of obstacles, moves, and changes—lead them toward success.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; POVERTY AND EDUCATION; RURAL EDUCATION.

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## MILITARY ACADEMIES

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### U.S. AIR FORCE ACADEMY

The mission of the U.S. Air Force Academy, the nation's newest federal service academy, is to "inspire and develop outstanding young men and women to become Air Force officers with knowledge, character, and discipline; motivated to lead the world's greatest aerospace force in service to the nation." The academy is located just north of the city of Colorado Springs, Colorado. Its 18,000 acres border the eastern slopes of the Colorado Rocky Mountains. Since its establishment in 1954, the academy has graduated more than 34,000 cadets to serve in all of the U.S. military services. It is accredited by the North Central Association of Colleges and Schools, Commission on Institutions of Higher Education, and the chemistry, computer science, engineering, and management programs are accredited by their respective accrediting organizations.

The first class of 207 graduated in June 1959, while the first class to include women graduated in June 1980. Since then, the academy has had more than 2,600 women graduates. Congressional legislation limits enrollment to a maximum of 4,000 students as of the early twenty-first century. Cadets are appointed from all fifty states and from the U.S. territories, and must be between seventeen and twenty-two years of age on July 1 of the year of admission. Each must be a U.S. citizen, unmarried, and have no dependent children. They must be qualified academically, physically, and medically, and be nominated by a legal source as authorized in Title 10 of the U.S. Code. Those sources include a candidate's U.S. Representatives, U.S. Senators, the President of the United States, the Vice President of the United States, and several military-related sources for eligible individuals. To graduate, cadets must complete the entire four-year program.

The faculty comprises 560 full-time military and civilian members. Approximately 55 percent possess doctoral degrees. Fifteen percent of the faculty are women. Career Air Force officers provide most of the instruction, complemented by officers from the other services, officers from several allied nations, permanent civilian faculty, visiting professors from civilian institutions, and representatives from several federal governmental agencies. Many of the military faculty and some of the civilian faculty are academy graduates.

### Legal Status

Since its inception, the academy's overall mission, goals, and objectives have not appreciably changed. That singularity of purpose—to graduate second lieutenants who are motivated and prepared for military careers in service to their country—has been a unifying force across the institution's history and structure. Various sections under Title 10 of the U.S. Code establish the basic guidelines for the functioning of the academy to include the instruction and preparation of the cadets for military service, the four-year course of study, and civilian oversight through its Board of Visitors.

### Governance

The superintendent reports directly to the chief of staff of the U.S. Air Force. Through the chief of staff, the academy also responds to the secretary of the Air Force. The superintendent has the clear responsibility and authority to make decisions affecting the re-

sources and functional integrity of the academy. The principal internal governing body is the academy board. The superintendent, through the board, exercises institutional decision-making authority. Board members are both experienced educators and senior officers in positions to institute changes in policies or practices across the academy.

Each fall, a conference, attended by the most senior Air Force general officers and the secretary of the Air Force, is held at the academy. This conference presents a unique opportunity to formally present and advocate specific programs to Air Force leaders. It also gives these leaders an opportunity to provide guidance or recommendations to the academy on its programs or practices.

Although not a formal governing body, the presidentially and congressionally appointed Board of Visitors is the academy's primary external review group. This board, which reports directly to the president of the United States, is chartered to review policies and protect the integrity of the institution, including its resources. The inclusion of two professional educators on this board, which also contains academy graduates, ensures a well-informed basis for institutional oversight and advocacy.

### Academics

The academy offers a four-year undergraduate curriculum of academic, leadership, and military training; physical education; athletics; and aviation courses. The total academic curriculum provides cadets with a solid foundation appropriate to an Air Force career and the activities of a responsible American citizen. A core curriculum provides the common body of knowledge that prepares all cadets for the Air Force profession. The academic core consists of courses in basic sciences, engineering, humanities, and social sciences. Other core requirements include military strategic studies and physical education courses.

The academy offers thirty academic majors: aeronautical engineering, astronautical engineering, basic sciences, behavioral sciences, biology, chemistry, civil engineering, computer engineering, computer science, economics, electrical engineering, English, engineering mechanics, environmental engineering, foreign area studies, general engineering, geography, history, humanities, legal studies, management, mathematical sciences, mechanical engineering, meteorology, military strategic studies,

operations research, physics, political science, space operations, and social sciences. Minors in foreign language and philosophy are also offered. All cadets must have a major and may choose their courses from the more than 500 offered each year.

The Air Force Academy ranked second in the United States in the 2001 *U.S. News and World Report* ranking of top aeronautics and astronautics programs, behind Embry Riddle Aeronautical University. It tied for sixth place in the 2001 *U.S. News and World Report* ranking of best undergraduate engineering programs in schools without Ph.D. programs, and it was ranked the fourth-best overall academic experience for undergraduates by *Princeton Review's* 2001 "Best 331 Ranking," placing just behind Princeton, Amherst, and Harvard. The academy was also named a Truman Scholarship Honor Institution for 2001. Only four or five colleges and universities are selected for this honor each year, and only thirty have been selected in the history of the award, which is based upon academics, leadership qualities, public service, and positive influence upon the changing face of higher education.

Other honors include being named one of sixteen Leadership Institutions by the American Association of Colleges and Universities' Greater Expectations Initiative Consortium on Quality Education, and the receipt of a Pioneer Award at the Fourth Annual Conference on Ubiquitous Computing, sponsored by Educause. The Pioneer Award was presented to seven higher education institutions that made early commitments toward offering students access to technology.

### **Cadet Development**

The academy program of cadet development rests on four conceptual pillars: professional military training, academics, athletics, and character development. The military training program develops the techniques and attributes of successful leadership. The goal of this multidimensional program is to develop the knowledge, skills, values, and behavior patterns required to be an effective Air Force officer. The academic program is designed to provide cadets with a broad, high-quality education at the undergraduate level. Since the academy's origin, it has sought to produce graduates with the breadth and ability to represent the Air Force in academic settings and with the general public.

The objective of the physical development program is to develop good physical conditioning, as

well as to foster traits of teamwork, courage, aggressiveness, self-confidence, and an intense desire to win—all of which are essential to a military officer. While at the academy, every cadet takes at least six semester hours of physical education courses. In addition, cadets must participate in intramural or intercollegiate sports throughout the academic year.

While good character is important in most professions, it is vital to the military officer. Character includes ethical behavior, respect for human dignity, and a sense of honor that transcends self-interest. The character development program fosters development of these characteristics and ensures they also are reflected in the other pillars. This program focuses on the academy's core values of "Integrity First, Service Before Self, and Excellence in All We Do." The balanced emphasis on the four pillars of cadet development sets the academy apart from most of the approximately 3,800 institutions of higher education in the United States.

Upon graduation, a cadet receives a bachelor of science degree and a reserve commission as an active-duty second lieutenant. Graduates are required to serve at least five years in the Air Force or, for a very few graduates, in one of the other armed services. The excellent education graduates receive is reflected in the number of prestigious postgraduate scholarships and fellowships they have been awarded. Cadets have won more than 1,900 of these prestigious awards (as of 2001), including thirty-two Rhodes scholarships, nine Truman scholarships, and five Marshall scholarships.

To further motivate academic excellence, the academy has a graduate program that annually allows approximately twenty selected cadets to attend advanced degree programs immediately after graduation at schools around the country. This program prepares them for a possible future assignment as a faculty member. Additionally, the National Competitive Scholarship Program allows approximately twenty cadets to attend prestigious international and national graduate schools for advanced educational opportunities, and up to 3 percent of each graduating class are allowed to attend medical school, .5 percent are allowed to attend dental school, and .5 percent are allowed to attend nursing school.

*See also:* MILITARY ACADEMIES, *subentries on* U.S. COAST GUARD ACADEMY, U.S. MERCHANT MARINE ACADEMY, U.S. MILITARY ACADEMY, U.S. NAVAL

ACADEMY; MILITARY PROFESSIONAL EDUCATION SYSTEM.

#### INTERNET RESOURCE

U.S. AIR FORCE ACADEMY. 2002. <[www.usafa.af.mil](http://www.usafa.af.mil)>.

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## U.S. COAST GUARD ACADEMY

The Coast Guard's ability to effectively serve as a viable maritime, military, multimission organization hinges on its leaders' ability to think, learn, and act effectively and ethically. Thus, the Coast Guard Academy (CGA), as an institution of higher learning and the primary source of the Coast Guard's leaders, is critical in enabling the Coast Guard to perform its duties and fulfill its mission.

The mantra of developing leaders of character is firmly embedded in CGA's institutional mission: "The Coast Guard Academy is committed to strengthening the nation's future by educating, training, and developing leaders of character who are ethically, intellectually, professionally, and physically prepared to serve their country."

### History

The U.S. Coast Guard fulfills unique roles in support of the nation's military and economic security. These roles go directly back to visionary, nation-building initiatives of Alexander Hamilton, George Washington, and the first Congress. In 1790 Alexander Hamilton, the nation's first treasury secretary, developed fiscal plans and economic policies for the United States. Central to his vision for a self-sufficient and strong nation was the creation of the Revenue Cutter Service. In 1915 the Life-Saving Service and the Revenue Cutter Service were combined to create the present-day U.S. Coast Guard, which is now an agency in the Department of Transportation.

Congress chartered the Coast Guard Academy in 1876. At first it was simply a school ship—the academy's first home was the Revenue Cutter *Dobbin*. Nine cadets were selected by competitive examinations, and appointments of CGA cadets today continue on a merit basis. The early cadets learned at sea under a single professor, studying a blend of liberal arts and professional subjects. In the early

1900s the curriculum grew to three years, gaining emphasis on engineering and science. In 1910 the Academy came ashore to makeshift facilities at Fort Trumbull in New London, Connecticut, and in 1932 moved to its modern, purpose-built campus, also in New London. In 1939 the academy's general engineering program was accredited by the Engineer's Council for Professional Development (ECPD). In 1940, after also being accredited by the Association of American Universities, it was given the authority to grant the bachelor of science degree. In 1946 the USCG Barque *Eagle*, a prize of war, was commissioned into the U.S. Coast Guard and stationed at the academy for sail training.

The academy became accredited by the New England Association of Schools and Colleges (NEASC) in 1952. In 1973 electrical, marine, and ocean engineering programs were accredited by ECPD, and in 1978 the civil engineering major was accredited as well. In 1980 ECPD was renamed ABET (Accreditation Board for Engineering and Technology), and in 1996 the academy was fully accredited in mechanical engineering. The management major was admitted into candidacy in 1998 by AACSB International—The Association to Advance Collegiate Schools of Business. The CGA also offers majors in government, marine and environmental sciences, and operations research and computer analysis.

Over the years, the Coast Guard Academy matured into a learning environment that (1) fosters a high sense of honor, loyalty, and dedication to service and humanity; (2) provides a sound undergraduate education in fields of interest to the Coast Guard; and (3) trains future officers in professional and military skills required for career service. Cocurricular activities in professional development and athletics add to the ability of CGA to fulfill its mission. Commissioned graduates from the undergraduate program have served with distinction in peace and war and they make up the majority of the officer corps of the modern Coast Guard.

Other noteworthy milestones include the admission of women cadets into the Academy in 1976, with the first women graduates in 1980. In 1998 the Academy established the Leadership Development Center (LDC), a center for leadership education, training, and development that focuses on the career needs for a diverse population of Coast Guard adult learners (military and civilian members associated with the Coast Guard and a limited number of international students from other maritime countries).

## Organizational Structure

Since 1994 governance of the academy has been provided by a board of trustees, comprising Coast Guard senior managers and other distinguished individuals with strong ties to education. Their general purpose is to oversee all programs at the academy and provide guidance and advice to the superintendent of the academy, the Coast Guard chief of staff, and the commandant of the Coast Guard. It was this newly chartered board that endorsed the LDC and supported a substantive mission change, which was accepted by the NEASC in 1997. The undergraduate program and LDC complement each other, and both support the institutional mission. In 1999 the courses offered through the LDC were evaluated and granted American of Council of Education (ACE) course credit recommendations.

Other governance is provided by a congressional Board of Visitors, composed of three senators and five congressmen, which is authorized to review the academy's programs, curricula, and facilities. The superintendent is aided by the senior management team (SMT), comprising the dean, the commandant of cadets, and other senior staff members. Together they provide for the strategic management of the academy as well as the day-to-day administration.

The dean administers the academy's academic division, encompassing more than 100 full-time faculty and a number of staff. The commandant of cadets serves as a dean of students and has a central role in maintaining commissioning standards. The athletic director oversees student physical development and the National Collegiate Athletic Association Division III sports programs. Other senior leaders manage admissions and business processes. Several boards advise the superintendent. They include the Academic Council, Faculty Senate, Curriculum Committee, Credentials Committee, Resources Allocation Board, Cadet Academic Advisory Board, and others.

## Admission

The Coast Guard Academy is one of the most selective schools in the nation, enrolling about 300 young men and women, who are selected from more than 6,000 applicants. The 900 cadets who make up the corps are competitively selected from across the country, as well as twenty from foreign countries. The LDC serves about 3,000 adult learners per year

through short courses or programs. The faculty supporting the LDC and the cadets are both military and civilian.

The Coast Guard Academy is committed, as proclaimed in its vision statement, to be the "well-spring of leadership and character for the United States Coast Guard. In serving the American public, the Academy is recognized as an exemplary institution and valued national asset. To earn that recognition and inspire life-long learners, CGA excels in education and military training, and leadership development."

*See also:* MILITARY ACADEMIES, *subentries on* U.S. AIR FORCE ACADEMY, U.S. MERCHANT MARINE ACADEMY, U.S. MILITARY ACADEMY, U.S. NAVAL ACADEMY.

## INTERNET RESOURCE

U.S. COAST GUARD ACADEMY. 2002. <[www.cga.edu](http://www.cga.edu)>.

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## U.S. MERCHANT MARINE ACADEMY

The U.S. Merchant Marine Academy is one of five federal service academies. It is operated by the Maritime Administration, an agency of the U.S. Department of Transportation. The Merchant Marine Academy is located on an eighty-two-acre waterside campus in Kings Point, New York, about twenty miles from New York City on the north shore of Long Island. The academy is commonly referred to as *Kings Point*. It offers a four-year program leading to a bachelor of science degree and is accredited by the Middle States Association of Colleges and Schools. The academy includes the Global Maritime and Transportation School, which was established in 1994 to meet the continuing education and training needs of professionals from the commercial and military maritime transportation industry.

Each graduate of the academy is awarded a license as a third mate or third assistant engineer in the U.S. Merchant Marines; academy graduates are also commissioned as ensigns in the U.S. Naval Reserve. In 2001 the student body numbered about 950, with approximately 750 in residence at Kings Point and the rest in training aboard ships at sea. The academy was established to prepare young

American men, and later women, for careers as deck or engineering officers aboard ships of the U.S. Merchant Marine. One of the conditions for admission is the signing of an agreement to serve as a licensed officer in the U.S. Merchant Marine for at least five consecutive years after graduation.

The U.S. Merchant Marine consists of all commercial U.S. flag vessels and crews engaged in the foreign and domestic transport of cargo and passengers. Although the ships are owned and operated by private shipping companies, they provide logistics support to the U.S. military services in times of emergency; accordingly, the U.S. Merchant Marine is often called the “fourth arm of national defense.”

Each Kings Point graduate joins a ship as a fully qualified junior officer and immediately takes charge of a watch on the bridge or in the engine room. Deck officers are responsible for navigation, cargo handling, vessel maintenance, and shipboard safety. Engineering officers are responsible for maintaining and operating all the ship’s machinery, including propulsion, auxiliary, refrigeration, and deck equipment.

### Curriculum

The educational program of the U.S. Merchant Marine Academy consists of three years ashore at Kings Point and one year spent at sea aboard merchant ships. Each academic year is eleven months in duration, with a rigorous program of study in order that professional and degree requirements may be met within the three-year period ashore. The academy’s academic year is divided into three trimesters.

Students at the Merchant Marine Academy are called *midshipmen*, a term that applies to both men and women. Midshipmen can select one of seven major programs of study: marine transportation, marine operations and technology, logistics and intermodal transportation, marine engineering, marine engineering systems, marine engineering and shipboard management, or dual license. Each program leads to a bachelor of science degree. The challenging dual-license program, available only to top students, combines marine engineering and marine transportation studies and leads to licensing in both specialties. This program was pioneered by the academy in 1965, in anticipation of technological changes in the industry that would call for highly trained officers possessing both deck and engineering proficiency.

At the end of their fourth year of study, all midshipmen must pass a comprehensive written examination, after which they are licensed as either deck officers or engineering officers, depending on their major. In addition to the attainment of maritime professional excellence, midshipmen are provided with mathematical and scientific knowledge and a basic general education that includes the study of history, English, business, economics, and humanities. Such a broad education prepares midshipmen for executive positions when they move ashore after careers at sea.

Students majoring in marine transportation, logistics and intermodal transportation, or maritime operations and technology study a curriculum that includes such professional subjects as seamanship, communications, navigation, naval architecture, meteorology, safety of life at sea, cargo handling, gyrocompass principles, electronics, international law of the sea, and marine transportation. Students in one of the three engineering majors study such technical subjects as machine shop, engineering graphics, marine machinery repair, statics, dynamics, thermodynamics, strength of materials, hydraulics, internal combustion engines, marine refrigeration and air conditioning, electrical engineering, and marine engineering. Each curriculum also includes a certain number of hours in mathematics, physics, chemistry, English, history, foreign languages or comparative culture, business and economics, maritime law, labor relations, marine insurance, ship’s medicine, physical education, and naval science. Each curriculum is composed primarily of required courses, though a midshipman with the necessary academic standing may add one elective course each trimester.

Transfer credit may be awarded for any course completed at another college that is equivalent to a course offered at the academy. Validation credit may also be awarded in certain subjects upon passing an examination administered at the academy. A student may then substitute courses from the list of electives to complete the academic program.

Because the U.S. Merchant Marine operates with the U.S. Navy in time of war, an understanding of naval procedures by its officers is essential to successful cooperation. Candidates for admission to the Merchant Marine Academy must meet the qualifications for naval reserve midshipmen. All midshipmen take a prescribed program of naval science courses, taught by naval officers, which leads to a commis-

sion, upon graduation, as an ensign in the Merchant Marine Reserve/U.S. Naval Reserve. The graduate is then under obligation to remain in the naval reserve for eight years and to maintain his status by completing correspondence courses and undergoing training duty.

### Sea Year

After one year at the academy, during which midshipmen take introductory courses in all areas of study, they are assigned to several different types of U.S. flag merchant vessels for three nonconsecutive trimesters during their second and third year of training. Midshipmen who are interested in a naval career may also train aboard U.S. Navy ships. This is a unique work-study situation in which the ship serves as a laboratory. Midshipmen are introduced to life at sea, and they become familiar with the work done aboard ocean vessels. In addition, they are issued a sea project manual containing assignments that they must complete and forward to the academy for grading. Midshipmen also receive voluntary instruction from ships' officers while observing and performing some of the duties of a junior officer. Academy training representatives in New York, New Orleans, and San Francisco assign midshipmen to the ships and oversee their progress.

### Regimental Life

The academy is military in character, and midshipmen are organized into a regiment. The regimental program provides an opportunity to practice leadership as midshipmen officers, a system of strict discipline in which infractions of regulations incur demerits and punishment, and the standing of watches. Regimental life is considered essential to the development of leadership ability, self-discipline, a sense of responsibility, and the ability to adapt to the rigorous life at sea.

In addition to participation in the military routine of the regiment, the Kings Pointer may take part in student government and such extracurricular activities as publications, musical groups, special interest and hobby clubs, debates, and social affairs. An arts and world affairs series brings a program of cultural activities to the campus throughout the year. Participation in religious activities and attendance at services in the Merchant Marine Memorial Chapel are voluntary. In addition, there are intramural athletic programs and scheduled intercollegiate competitions. Liberty is granted as a matter of privilege.

### Admission

The academy selects 266 men and women for admission annually. Candidates for admission must be U.S. citizens between the ages of seventeen and twenty-five. Appointment to the academy begins with an application to the appropriate nominating authority, usually a U.S. senator or representative from the candidate's home state, who officially requests that the applicant's name be submitted in nomination to become a candidate for admission. A candidate must meet general and scholastic requirements, including high school graduation or its equivalent and qualifying ACT Assessment or SAT scores.

Candidates are ranked in order of merit by an objective evaluation of all credentials. They are then competitively selected to fill academy vacancies through a quota system based on each state's representation in Congress. The candidate must then pass a physical examination conducted by the U.S. Navy for appointment as a midshipman in the U.S. Naval Reserve, and must also meet security requirements. The academy also admits up to thirty students from Latin America and certain other foreign countries.

The U.S. government bears the major portion of academy costs, including tuition, quarters and subsistence, and medical and dental care. While at the academy, each midshipman receives a yearly allowance for required uniforms and textbooks. During the sea year, a monthly salary is paid by the shipping companies.

### History

The U.S. Merchant Marine Academy was developed from a program of merchant-marine officer training that began in 1891 when the federal government authorized the assignment of cadets aboard ships receiving mail. When the handling of training by shipping companies proved unsatisfactory, the federal government passed the Merchant Marine Act of 1936, which provided for the establishment in 1938 of the U.S. Merchant Marine Cadet Corps. The training program was conducted solely aboard ship at first, but temporary shore facilities were soon established. Construction of a permanent academy was begun in January 1942 at the Walter P. Chrysler estate, whose thirteen acres form the nucleus of the present campus. The academy was dedicated on September 30, 1943. In his dedicatory message, President Franklin D. Roosevelt summed up the purpose

of the academy: “This academy serves the Merchant Marine as West Point serves the Army and Annapolis serves the Navy.”

During World War II, the academy berthed at one time as many as 2,700 cadets taking an abbreviated curriculum that included training aboard ships in combat zones. The academy graduated 6,634 officers during the war. The four-year course was instituted with the class entering in September 1945, and authorization to grant a bachelor of science degree was granted by Congress in 1949. A 1956 act of Congress made the academy a permanent institution.

The academy accelerated training to supply officers during the Korean War and the Vietnam War. The academy was also involved in training officers for the country’s first nuclear-powered merchant ship, the *Savannah*. In 1974 the Merchant Marine Academy became the first federal service school to admit women. Before and during the 1991 Persian Gulf conflict, academy graduates and midshipmen aided the extensive sea-lift of troops and military supplies to the Middle East. Academy midshipmen and graduates also provided support for military actions in Somalia and Haiti during the 1990s.

*See also:* MILITARY ACADEMIES, *subentries on* U.S. AIR FORCE ACADEMY, U.S. COAST GUARD ACADEMY, U.S. MILITARY ACADEMY, U.S. NAVAL ACADEMY.

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### U.S. MILITARY ACADEMY

The U.S. Military Academy, located in West Point, New York, is a postsecondary educational institution

operated under the general direction and supervision of the U.S. Army. The academy, usually referred to as *West Point*, occupies a 2,500-acre campus, which is augmented by about 15,000 acres of adjacent government-owned land. The mission of the academy is to train selected young men and women for careers as officers in the regular army of the United States. Successful completion of the four-year course leads to a bachelor of science degree and a commission as a second lieutenant in the U.S. Army. The academy has an enrollment of about 4,000 students; approximately 15 percent of whom are women.

#### Curriculum

The West Point curriculum includes a combination of academic, military, and physical training. The core academic curriculum, which focused largely on engineering in the past, now includes a balance of arts and sciences. Although most of the curriculum is prescribed, there is some flexibility that permits cadets to pursue particular interests and aptitudes. Class size is small, usually numbering between fourteen to eighteen students.

Every cadet must complete thirty-one courses that make up the academy’s core curriculum. Cadets must also complete at least nine elective courses, chosen to support a major or a field of study. In 2001 the academy offered twenty-five fields of study and twenty-two majors, most of which were related to engineering, foreign area and foreign language studies, or modern history and political science. Cadets choose a major (which requires ten to thirteen elective courses) or field of study (which requires only nine electives) at the end of their second year.

The total curriculum is designed to develop the qualities of character, intellect, and physical competence needed by army officers, who at various stages of their careers must be prepared to lead the smallest combat unit or to advise the highest governmental official. In order to achieve this goal, the curriculum is rounded out by military and physical training, in addition to the academic stress on science and the humanities. The total program provides a sound foundation for both graduate education and professional development.

Military training at West Point is designed to provide a comprehensive knowledge of military fundamentals and doctrine, as well as proficiency in basic military skills. The student body is organized

as a *brigade* under the command of a brigadier general known as the Commandant of Cadets. The brigade is led by a professional officer and a cadet chain of command. By serving in various positions of responsibility within the corps of cadets, cadets are given opportunities to apply their knowledge and to improve their leadership abilities. This portion of a cadet's training, including both practical military training and military-science instruction, is the foundation for more specialized postgraduate training in armor, infantry, engineering, signal corps, field artillery, air defense artillery, military intelligence, or another of the various branches of military science.

Most of the academy's military training occurs during the summer months. New cadets (called *plebes*) undergo Cadet Basic Training during their first six weeks at the academy. Sophomores (*yearlings*) complete eight weeks of intensive field training at Camp Buckner, located near West Point. Juniors (*cows*) engage in specialized military training, such as airborne, air assault, northern warfare, or mountain warfare at various locations and military bases around the world. Seniors (*firsties*) learn military leadership skills by helping direct military training for plebes and yearlings.

The academy's rigorous physical training program continues throughout the entire year. Each cadet participates every season in either intramural or intercollegiate athletics. Formal instruction includes courses in coaching techniques, which provide the basis for another valuable dimension of leadership.

As part of their military and physical curriculum, cadets undergo training in ethics and morals. Such training supports the West Point Honor Code: "A cadet will not lie, cheat, steal, or tolerate those who do." Moral and ethical training is also buttressed by formal instruction in important military values, voluntary religious programs, and a guest speaker program.

### Admission and Military Obligation

All men and women who meet academic and physical requirements may apply to West Point, but admission is extremely competitive. Above-average high school records, demonstrated leadership skills, strong performance on the ACT Assessment or SAT college entrance examinations, physical aptitude tests, and medical tests are prerequisites. In addition,

an applicant must be between the ages of seventeen and twenty-two, neither married nor pregnant nor carrying the legal obligation to support a child, and a citizen of the United States. Naturalized American citizens must provide proper documentation to be considered for admission. A small number of foreign students may be nominated by formal agreement between the U.S. government and another country.

Procedures for admission to the academy differ in several respects from those of civilian educational institutions. A prospective candidate cannot apply directly to the academy for admission, but must first secure a nomination from an authorized source, usually a United States representative or senator from the candidate's home state, or the secretary of the army. By law, these officials are authorized to nominate up to ten young people to compete for vacancies at the military academy each year. After nomination, candidates receive permission to undertake the examinations for appointment, which determine their academic, medical, and physical qualifications. Classes enter the academy in July of each year. Every cadet enters as a plebe. Transfer credit is not given for college work completed prior to entry into West Point.

Upon entering the academy, a cadet takes an oath committing to a military obligation of six years, the first five on active duty. Upon graduation and appointment as a second lieutenant in the regular army, the West Point graduate serves the five-year active-service commitment. If a cadet is separated after he or she has started the first academic term of the second class year (except for physical disqualification, unfitness, or unsuitability), he or she is subject to transfer to the reserve or ordered to active duty in an enlisted status.

### Cadet Life

The daily life of a cadet, apart from academic instruction, is centered on the cadet's company in the corps of cadets. Cadets live in barracks, stand formation, and participate in intramural athletics as a member of this company. There are approximately 110 cadets in a company, with equal membership from all four classes. A cadet company commander, subordinate cadet officers, and noncommissioned officers are responsible for the military formations and many of the daily administrative matters. Every company is assigned a tactical officer who is specially selected on the basis of his or her commissioned ser-

vice in the regular army and proven leadership ability to counsel and advise cadets.

An integral part of daily life within the corps of cadets is the honor system. The system and the honor code upon which it is based are fundamental to the stress placed upon personal integrity. Every day, cadets see their work or signature accepted as final proof for authorized absences, for compliance with instructions, and as certification of accuracy.

No tuition is charged for attendance at the academy. Cadets are considered members of the regular army and receive stipends of about \$600 per month, enabling them to buy uniforms, books, and supplies. In effect, each cadet receives a full scholarship.

## History

The U.S. Military Academy is the oldest service academy in the nation. Troops were first garrisoned at West Point during the Revolutionary War, and the military academy was established there in 1802. George Washington was among the revolutionary leaders who strongly felt that a national military academy was needed to eliminate reliance on foreigners for training Americans in artillery, engineering, and other military skills. Initially, the corps of engineers operated the academy and was responsible for training officers in all branches of the service. Because provisions were made for the study of many branches of science, the U.S. Military Academy became the first national center for scientific engineering.

After the War of 1812 came a period of academic pioneering that laid the foundation for the methods and standards that still exist at West Point. Colonel Sylvanus Thayer, superintendent from 1817 to 1833, made courses in civil engineering the academic center of the curriculum. In his endeavor to produce trained leaders, Thayer strove for excellence in personal qualities that went beyond the sound practical knowledge his program of instruction imparted. The subsequent impact of the graduates he trained upon the internal communications of the fledgling nation was widely recognized. The construction of canals, railroads, and harbors under the leadership of men schooled at West Point greatly accelerated the emergence of the United States as a unified country.

Although the primary purpose of the academy was to provide professionally trained officers, its secondary role as a national school of civil engineering

continued until after the Civil War, when academy graduates served in both the Union and Confederate armies. In 1877 Henry O. Flipper, a native of Georgia, becomes the first African American to graduate from the academy. During the post-Civil War period, the proliferation of civilian engineering and technical schools created alternate means of training the engineers needed throughout the United States. In response, West Point shifted its academic emphasis from civil engineering to a pattern of courses affording a broader education. In 1889 Antonio Barrios became the first Hispanic to graduate from West Point; Barrios later served in the Guatemalan army, where he rose to the rank of general.

The emphasis on a broad, general education was maintained in subsequent revisions of the curriculum after World War I, World War II, and the Korean conflict. The expansion of the army's role in international affairs provided additional reasons for increased attention to the academic disciplines of history, geography, economics, and the social sciences. In 1964 President Lyndon Johnson signed legislation permitting the academy to accept nearly 2,000 additional cadets each year, and a major project to expand facilities ensued. During the 1970s and 1980s the curriculum was revised to permit cadets more academic options, including the choice to major in a wide range of disciplines. Women cadets were first admitted to the academy in 1976. During the 1980s and 1990s an increasing number of woman and minorities were admitted.

Notable West Point graduates include Ulysses S. Grant (1843), Jefferson Davis (1828), Robert E. Lee (1829), George Meade (1835), William Tecumseh Sherman (1840), Thomas J. "Stonewall" Jackson (1846), John J. Pershing (1886), Douglas MacArthur (1903), George S. Patton (1909), Omar Bradley (1915), Dwight D. Eisenhower (1915), Brent Scowcroft (1947), Edwin E. "Buzz" Aldrin (1951), and H. Norman Schwarzkopf (1956).

*See also:* MILITARY ACADEMIES, *subentries on* U.S. AIR FORCE ACADEMY, U.S. COAST GUARD ACADEMY, U.S. MERCHANT MARINE ACADEMY, U.S. NAVAL ACADEMY.

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## U.S. NAVAL ACADEMY

As the undergraduate college of the U.S. Naval Service, the Naval Academy prepares young men and women to become professional officers in the U.S. Navy and the U.S. Marine Corps. Naval Academy students are midshipmen on active duty in the U.S. Navy. They attend the academy for four years, graduating with bachelor of science degrees and reserve commissions as either ensigns in the Navy or second lieutenants in the Marine Corps. Naval Academy graduates serve at least five years as Navy or Marine Corps officers.

The scenic Naval Academy campus, known as the “Yard,” is located in historic Annapolis, Maryland, where the Severn River flows into the Chesapeake Bay. With its combination of early twentieth-century and modern buildings, the Naval Academy is a blend of tradition and state-of-the-art technology that exemplifies the Navy and Marine Corps in the early twenty-first century. Throughout the Yard, tree-shaded monuments commemorate the bravery and heroism that are an inherent part of the academy’s heritage. Buildings and walkways are named for Naval Academy graduates who have contributed to naval history and their nation.

The Naval Academy is also the final resting place of Revolutionary War naval hero John Paul Jones. A National Historic Site, the Naval Academy hosts more than 1 million tourists every year from the United States and around the world.

### History

Founded in 1845 by Secretary of the Navy George Bancroft, the academy started as the Naval School on ten acres of old Fort Severn in Annapolis. Since then,

the development of the Naval Academy has reflected the history of the United States. In 1850 the Naval School became the U.S. Naval Academy. A new curriculum went into effect requiring midshipmen to study at the academy for four years and to train aboard ships each summer. That format is the basis of what has evolved into a far more advanced and sophisticated curriculum at the Naval Academy. As the U.S. Navy grew over the years, the academy expanded. The campus of ten acres increased to 338. The original student body of fifty-five midshipmen grew to a brigade of 4,000, and modern granite buildings replaced the old wooden structures of Fort Severn and the Naval School.

Congress authorized the Naval Academy to begin awarding bachelor of science degrees in 1933. The academy later replaced a fixed curriculum taken by all midshipmen with a core curriculum plus eighteen major fields of study, a wide variety of elective courses, and advanced study and research opportunities.

### Mission and Program

The Naval Academy’s official mission is “to develop midshipmen morally, mentally and physically and to imbue them with the highest ideals of duty, honor and loyalty in order to provide graduates who are dedicated to a career of naval service and have potential for future development in mind and character to assume the highest responsibilities of command, citizenship and government” (U.S. Naval Academy). This gives everyone—faculty, staff, and midshipmen—the same focus. It also encourages a sense of spirit and pride found at few other schools.

The moral, mental, and physical elements of the Naval Academy program are equally important, all contributing to the qualities of an outstanding naval officer. Each midshipman’s academic program begins with a core curriculum that includes courses in engineering, science, mathematics, humanities, and the social sciences. This is designed to give a broad-based education that will qualify midshipmen for practically any career field in the Navy or Marine Corps. At the same time, the majors program provides students the opportunity to develop a particular area of academic interest. For especially capable and highly motivated students, the academy offers a challenging honors programs and an opportunity to begin a postgraduate degree while still at the academy.

After four years at the Naval Academy, the life and customs of naval service become second nature. First, a student learns to take orders from practically everyone, but before long, students acquire the responsibility for making decisions that can affect hundreds of other midshipmen. Professional classroom studies are backed by many hours of practical experience in leadership and naval operations, including assignments with Navy and Marine Corps units during the summer months.

Moral and ethical development is a fundamental element of all aspects of the Naval Academy experience. As future officers in the Navy or Marine Corps, midshipmen will someday be responsible for the lives of many men and women and multimillion-dollar equipment. From “Plebe Summer” through graduation, the Naval Academy’s Character Development Program is a four-year integrated continuum that focuses on the attributes of integrity, honor, and mutual respect. One of the goals of this program is to develop midshipmen who possess a clearer sense of their own moral beliefs and the ability to articulate them. Honor is emphasized through the Honor Concept of the Brigade of Midshipmen—a system that was originally formulated in 1951 and states: “Midshipmen are persons of integrity: they stand for that which is right.” These Naval Academy “words to live by” are based on the moral values of respect for human dignity, respect for honesty, and respect for the property of others. Brigade Honor Committees composed of elected upperclass midshipmen are responsible for education and training in the Honor Concept. Midshipmen found in violation of the Honor Concept by their peers may be separated from the Naval Academy.

The Naval Academy teaches the importance of being physically fit and prepared for stress because the duties of Navy and Marine Corps officers often require long, strenuous hours in difficult situations. The physical requirements of Plebe Summer training, four years of physical education, and year-round athletics also develop pride, teamwork, and leadership.

### Profile of Midshipmen

It takes a special kind of young man or woman to handle the Naval Academy’s demanding program, but that doesn’t mean all midshipmen are alike. Midshipmen come from all fifty states, from U.S. territories, and from several foreign countries. They have roots in cities and suburbs, farms and ranches,

small towns and military bases. Midshipmen are good students, leaders in their high schools and communities, and participants in competitive sports. The young men and women who choose the Naval Academy are looking for more than a college degree, however—they like the idea of being challenged morally, mentally, and physically.

*See also:* MILITARY ACADEMIES, *subentries on* U.S. AIR FORCE ACADEMY, U.S. COAST GUARD ACADEMY, U.S. MERCHANT MARINE ACADEMY, U.S. MILITARY ACADEMY.

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## MILITARY PROFESSIONAL EDUCATION SYSTEM

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Career military officers and noncommissioned officers (NCOs) of the Armed Forces of the United States are the beneficiaries of sequential, regularly scheduled periods of professional education. Military leaders return full-time to the “schoolhouse” every three to five years during a twenty-plus year career. Each of these in-residence educational experiences lasts from two months to a year or longer. When coupled with advanced civil schooling, self-study, and on-the-job learning, these courses provide the officer or NCO with the theoretical and practical knowledge needed for duties of increasing complexity and scope as she or he advances in rank. For the sake of brevity, the U.S. Army’s Officer Professional Military Education (OPME) and Noncommissioned Officers Education System (NCOES) will be used here as examples.

Professional military education focuses on leadership, management theory and practices, military history and operational doctrine, national defense policy, planning and decision-making, legal responsibilities, and professional ethics. Academic evaluations are primarily performance-oriented, with criteria and learning conditions prescribed for each task. Frequent informal feedback and periodic in-depth performance evaluations are provided. Emphasis is on enhancing the ability to function effec-

tively as a leader and team member, and in staff positions of combined arms and joint service organizations.

For the majority of commissioned officers, professional education begins with the precommissioning phase, which is completed at one of the service academies (U.S. Military Academy, Naval Academy, Air Force Academy, or Coast Guard Academy) or through a Reserve Officers Training Corps (ROTC) program at a participating college or university. Officer Candidate Schools provide opportunities for selected enlisted members of the various services to complete the requirements for commissioning. These educational programs prepare young men and women to assume the responsibilities of junior officers (second lieutenants in the Army, Air Force, and Marines and ensigns in the Navy and Coast Guard) in active-duty (full-time), Reserve, or National Guard units.

For enlisted members of the Armed Services, professional education begins with basic training, or boot camp, followed by advanced technical training in one of the many occupational and vocational fields required by increasingly complex and technologically advanced organizations. Members receive a Military Occupational Specialty (MOS) designation upon successful completion of this training. The military-skill training component of precommissioning programs has much in common with basic training. Following an initial tour of duty, selected Army enlisted members attend the NCOES Basic Course, which focuses on small-unit leadership.

The second phase of OPME focuses on the technical and tactical duties of junior officers specific to each branch and service. Army lieutenants attend the Officers Basic Course for their initial branch assignment, such as the Armor Officers Basic Course at Fort Knox, Kentucky. Marine Corps officers attend their infantry-oriented basic course at Quantico, Virginia, and then may attend a specialty course such as the Army's Artillery School at Fort Sill, Oklahoma. Naval ensigns selected for Surface Warfare or Submarine Service attend basic courses in their specialty. Officers selected for flight training attend flight school. Some officers attend special qualification courses such as the U.S. Army Ranger School, material maintenance programs, nuclear propulsion, or language school prior to their first unit assignments. Officers Basic Courses provide the functional equivalent of enlisted MOS certification

and the tactical leadership training provided during the Basic NCO Course.

After completing three to five years of service with troop units, Army officers attend a two-phased Captains Career Course. Phase one is a branch-specific advanced course that prepares attendees for command of companies, batteries, or troops (military units ranging in size from 60 to 200 soldiers), and for technical and staff responsibilities at battalion and brigade levels. Experiential, case-based interactive learning with extensive use of simulation devices and practical field applications predominate the instructional methodologies.

Immediately following completion of phase one, Army officers attend phase two, the six-week Staff Process Course at the Combined Arms and Services Staff School (CAS3). CAS3 employs small-group instruction techniques designed to improve an officer's ability to analyze and solve problems, communicate orally and in writing, interact effectively as a key member of a military staff, and to apply operational doctrine and procedures in the field. Each staff group is composed of twelve students from combat, combat support, combat service support, and specialty branches in order to encourage interdisciplinary thinking and combined arms doctrine. Naval officers attend similar courses to prepare them for duty as divisional officers on board ships and submarines, and for staff positions. In preparation for assuming duties as platoon sergeants, staff specialists, and first sergeants, noncommissioned officers attend the installation-based Advanced Noncommissioned Officer Course (ANCOC).

Selected Army officers receive education in non-branch-related functional areas—such as Systems Automation, Army Acquisition Corps, and Foreign Area Specialties at residential military schools—through the Advanced Civil Schooling program, which includes the Technological Enhancement Program, or through Training With Industry. Most midcareer officers complete advanced academic degrees through government-funded programs on duty time or personally financed off-duty study, while many noncommissioned officers complete associate and bachelor's degrees while off duty. Today, the American military is unique among the armies of the world in its high percentage of officers with master's degrees and Ph.D.s.

The fourth stage of OPME is the Command and General Staff College (CGSC). Attendance at resi-

dent CGSC is selective and prepares officers for command at battalion and brigade levels and for senior staff positions. Nonresident/distance learning CGSC courses are also offered for active-duty, Reserve, and National Guard officers.

Selected officers attend a *sister service* CGSC level course (i.e., Air Command and Staff College) or an allied national institution such as the British Staff College. Emphasis is placed on planning and direction of joint (multiservice) and combined (multinational) operations, in accordance with the congressionally mandated Phase I of the Joint Professional Military Education Program (DOD Reorganization Act of 1986). Selected officers attend the Joint Forces Staff College as Phase II of this program. A small group of officers is chosen to participate in a second year of intensive study at the School of Advanced Military Studies at Fort Leavenworth, Kansas, focusing on military history and the art of war, computerized war games, research, and doctrinal writing.

Army officers selected for command at battalion and higher levels attend pre-command courses in preparation for these demanding assignments. The Noncommissioned Officer Education System equivalent of CGSC and pre-command courses is the Sergeants Major Academy. This final stage of NCOES prepares highly qualified senior NCOs for service as Command Sergeants Major and as senior staff assistants.

Attendance at one of the Senior Service Colleges is the final stage of OPME. Emphasis is on strategic planning, policy, national security decision-making, and joint and combined military operations. Some officers pursue Senior Service College Fellowship studies at leading universities such as Harvard and Georgetown, at the NATO Defense College, and at interdepartmental courses such as the Advanced Operational Studies program, the Defense Systems Management College, or the Center for Strategic and International Studies.

*See also:* MILITARY ACADEMIES.

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BRUCE T. CAINE

## MILITARY TRAINING DOCTRINE, PHILOSOPHY AND PRACTICE

The training of armies as a systematic educational practice has ancient roots. While other trades, crafts, and vocations are often individual pursuits, organized warfare requires the common training of vast numbers to produce synchronized efforts and predictable responses under stress. The evolution of military training doctrine and professional education in the United States provides a model of experimentation, advances, and rediscoveries in pedagogical practices and learning theory. As in the case of research and practical applications in medicine, engineering, technology, management, and organizational leadership, military professional education and training have been a proving ground for innovations. For the sake of brevity, the training doctrine of the U.S. Army will serve here as the primary example.

Doctrinal debates abound in the history of military training. Military educators have assessed the relative efficacy of rote memory and static knowledge, as opposed to creativity and dynamic knowledge. They have struggled with the choice between a single proven solution and situational initiative; that is, between rigid routine and fixed practice and standardized yet flexible techniques. They have appraised lecture/discussion-based learning and, for many skills, found experiential and case-based learning preferable. Simulations (war games), service learning, internships, and apprenticeships are longstanding practices. And in the evolving relationship between teacher and student, military trainers have moved away from an authoritarian, directive mode to a more participative learner model of shared expertise.

## History of Military Training in the United States

Friedrich von Steuben, a Prussian volunteer serving as George Washington's inspector general during the Revolutionary War, composed the first uniquely American training doctrine. Steuben brought his organizational energy and negotiation skills to the struggling Continental army at Valley Forge during the winter of 1777–1778. His ability as a teacher and trainer were anchored in his genuine concern for individuals, his personal integrity and sense of humor, and a keen perception of the character of Americans. He earned the trust of both Washington and the common soldier.

Steuben saw the Continentals as real soldiers, but of a new type—quick learners, likely to respond favorably to participative, practical, caring, and adaptive leadership, and to the discipline of a trained team. He instituted three essential reforms. First, he put commissioned officers in charge of training, insisting that they lead their men in training as they would in battle. He also advised that officers care for their soldiers. In his drill regulations, published in 1779, Steuben wrote: “A captain can not be too careful of the company the State has committed to his charge. He must pay the greatest attention to the health of his men, their discipline, arms, accouterments, clothes and necessaries” (Moss, p. 259). This dual focus enhanced the proficiency of both leader and those being led, while reinforcing the bond between them—a view reflected in the modern principle “mission first, soldiers always.”

Second, Steuben prescribed an overhaul of army discipline, supply accountability, and manpower utilization. Soldiers scattered on various fatigue details and serving as officers' servants were returned to tactical units for training—a principle reflected in the current practice of priority training periods. He understood more clearly than Washington that European methods of discipline could not be imposed on the American army. Initiative, self-reliance, and a desire to know the *why* behind an order or a procedure were foundations of the American character. Steuben believed training for collective action had to be built on these entrepreneurial characteristics, and not designed to eliminate them.

Finally, Steuben standardized and simplified battle formations, tactics, and drills. He developed a manual of arms that reduced the steps in loading and firing muskets, taught the practical use of the bayonet, and trained the army to march in columns

of four rather than in long, rambling single file. His teaching methods were insightful. He recruited 100 men of robust constitution for a demonstration guard company. With the assistance of carefully selected sub-inspectors, Steuben personally trained one squad in the new manual of arms and movement techniques, then supervised the drilling of other squads by the sub-inspectors. Once the squads were trained, he drilled them as a company, starting each day with squad drills and ending with company exercises—the beginnings of what now is called multi-echelon, progressive, or integrated training.

Many officers and soldiers came to watch Steuben's “parades” and were impressed. Washington directed that unit commanders adopt Steuben's model and appointed training inspectors coached by Steuben to oversee training throughout the Continental army. In a sense, these inspectors became the master teachers of their day—Steuben's concepts of teaching and learning have much in common with those of the twentieth-century educational philosopher John Dewey.

Steuben's innovations ran counter to a trend all too common in military history. Rigid adherence to outdated concepts of operational doctrine, including tactics and training methods that do not reflect the changing nature of military weapons and of warfare itself, has repeatedly proven costly, both in terms of military objectives and the lives of soldiers. Experience yields valuable lessons to those willing to learn. Unfortunately, many lessons are forgotten, only to be relearned by later generations.

One excellent example is that of Emory Upton, an 1861 graduate of West Point who rose to the rank of brevet major general in the Union army. Upton solved the problem of assaulting entrenchments defended by men with rifled muskets. In contrast to massed formations of soldiers marching shoulder to shoulder in the open, Upton employed four-man assault teams that moved independently, in short rushes, while other teams engaged the enemy—a technique today called *fire and movement*.

Trained to work together, taking advantage of cover and concealment and relying more on speed, surprise, and teamwork than on firepower, Upton's four-man team was the precursor of the modern infantry squad and an early model of the self-managed learning and production teams of today. European armies ignored Upton's lesson until the last year of World War I, when, in response to lethal battlefield

conditions, both German and American assault troops devised innovative infiltration tactics employing interdependent teams.

### The Post-Vietnam Era

The post-Vietnam era was a time of deep reflection for military professionals. The persistent threat of the cold war, however, did not allow for near-total demobilization and a return to isolationism, as had repeatedly occurred in the past. In the 1970s, the challenge facing military leaders was to train a force that would be fully prepared to fight in a “come as you are” war—one without a lengthy mobilization period.

A method had to be found to institutionalize experiential learning. The practical classroom of combat repeatedly reveals the strengths and deficiencies of military training. Standardized training schedules and techniques, fixed tactical solutions, and common doctrine—efficient in teaching the “book solution” and easy to evaluate—are often not effective in preparing leaders or soldiers to deal with new missions, unique environmental conditions, and the uncertainties of combat.

To meet this challenge, operational doctrine, recruiting methods, and training techniques required major revisions. The U.S. Army’s Training and Doctrine Command (TRADOC) was established in 1973 as the single proponent for training reforms, doctrine revision, leader development, and the modernization of organizational structure, weapons, and equipment. William DePuy, the first Commanding General of TRADOC, recognized that the United States must be able to fight and win the “first battle of the next war.” The Arab-Israeli War of 1973 provided a vivid example of modern warfare’s speed and lethality, and its sudden onset allowed no time for the shallow seasoning (learning) curve of earlier wars.

DePuy’s World War II and Vietnam experiences convinced him that the root cause of first-battle failures was combat training “by the numbers,” where “learning and relevance were secondary to scheduling” (Scales, p. 11) and leadership development lacked demands for realistic combined-arms synchronization in the uncertainty of the battlefield. He initiated doctrinal changes that focused on a systems approach of “training to task, not to time” that educated leaders to optimize the advances in weapons and mobility, seeking to steepen the prewar season-

ing curve. A parallel civil education reform is the shift from accumulating Carnegie units (number of hours per subject) to block scheduling and interdisciplinary, across-the-curriculum learning.

In the mid-1970s, Army Training and Evaluation Programs (ARTEP) and soldier’s manuals replaced earlier training schedules. Each individual and unit task was analyzed, specified, and defined by measurable performance standards and the conditions under which it would be performed. Evaluations stressed actual performance under field conditions. Skills mastered at each level contributed to effectiveness at higher levels. Doctrinal innovations reflecting the realities of modern warfare were integrated into a series of *how to fight* and *training the force* manuals used to guide learning and actual operations.

Under the new doctrine, individual and unit training takes full advantage of techniques that are gaining acceptance in civilian schools and organizational settings. Internship experiences are provided to cadets and midshipmen. Initial tours of duty have a strong apprenticeship focus, while service learning (that is, learning from practical experience in an applied setting under the guidance or coaching of a trainer or teacher) is the norm. Theory and principles taught in the classroom are habitually applied and evaluated in field settings under expert supervision. Computer-assisted instruction and simulations, as well as distance learning organized under corresponding studies programs, are used extensively. Annual performance evaluations for leaders are anchored in individually prepared professional development plans. Across disciplines education is mandated by combined arms and joint operations doctrine.

The slogan “train as you will fight” gained credence with the adoption the Multiple Integrated Laser Engagement System (MILES) for tactical training. Eye-safe laser projectors were developed to match weapons from rifles to tank cannons; laser sensitive target arrays were rigged to soldiers’ field gear and to vehicles; and computers recorded hits and near misses. MILES allowed, for the first time, force-on-force exercises that realistically simulated combat.

### Evaluation of Training Methods

Inspired by the Navy’s Top Gun program, the Army began tactical unit training evaluations at Fort

Irwin's National Training Center (NTC) in the early 1980s. MILES-equipped companies and battalions, linked into a computerized Core Instrumentation System supported by video cameras, radio monitors, and experienced controllers, engaged a numerically superior opposing force (OPFOR) in a "no-holds-barred battle" that tested individual and unit tactical skills and the real-time decision-making skills of commanders and their staffs.

The learning value of the NTC and other similarly equipped centers results from the direct experience of no-nonsense combat simulations and the cumulative effects of candid and detailed After Action Reviews (AARs). During an AAR, leaders' decisions, and their consequences, are evaluated using automated records of actions, controllers' observations and, significantly, the memories of unit participants. AARs are professional, collective reflections, and can be very humbling experiences. No other army exposes commanders to such a skilled opposing force and then reveals the results of the field exercise to that commander's subordinates and peers. Each NTC experience produces lessons learned that are actively shared.

As a key tool for learning from experience, the AAR technique is also applied to computer-assisted free-play simulations called Battle Command Training Programs (BCTPs), which are used to evaluate commanding generals and their staffs. To deal with the highly sensitive issue of such public assessments of senior officers, each BCTP simulation and its AAR is supervised by three retired four-star generals.

Evaluation and professional reflection are not limited to the NTC and BCTP. Mission-essential tasks, defined in each unit's ARTEP, are evaluated against measurable standards during AARs conducted after each training event. This commitment to honest feedback has instilled an institutional obsession to train realistically for combat and to learn from the experience. As vividly demonstrated by the Persian Gulf war and operations throughout the 1990s, units realistically trained prior to actual combat suffered remarkably low losses compared to first engagements in earlier wars. Well-prepared leaders made the right choices and soldiers performed with confidence grown from their repeated exposure to evaluated training experiences. Realism in training reinforced by professional reflection and shared lessons learned saves lives.

The military forces of the early twenty-first century face complex missions and diverse challenges,

demanding training not just for combat but also for operations short of war, such as peacekeeping, humanitarian aid, counter-terrorism, and nation building. Soldiers must be prepared to shift rapidly from one operational mode to another, often with radically different rules of engagement. Current training practices emphasize this adaptability. Self-discipline and initiative, a shared understanding of the mission and the commander's vision, skillful application of technology, battlefield mobility and firepower, and a belief in both individual uniqueness and in skilled teams remain, as in Steuben's day, the foundations of organizational effectiveness. Military service is a calling and a vocation, linked throughout America's history by a remarkable faith in professional education and training.

*See also:* MILITARY PROFESSIONAL EDUCATION SYSTEM.

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## MISCONDUCT IN EDUCATION

The definition of education corruption includes both its existence and the perception of its existence. According to Transparency International, for instance, Romania ranks 69 out of 91 countries in terms of corruption perception. Uzbekistan ranks 71 and the Russian Federation ranks 79. The definition of education corruption derives from the more general set of corruption issues. As in other areas, it includes the abuse of authority for material gain. But because education is an important public good, its professional standards include more than just material goods; hence the definition of education corruption includes the abuse of authority for personal as well as material gain.

### **Why Is It Important for a Nation to Be Free of Education Corruption?**

Since the time of Plato, it has generally been understood that a key ingredient in the making of a nation-state is how it chooses its technical, commercial, and political leaders. In general it is agreed that no modern nation can long survive if leaders are chosen on the basis of ascriptive characteristics, that is, the characteristics with which they are born: race, gender, social status. On the other hand it is common for families to try to protect and otherwise advantage their own children and relatives. All parents wish for the success of their own children; every group wishes to see the success of children from their particular group. This is normal.

Schooling provides the mechanism through which these opposing influences can be carefully managed. It is a common instrument employed by nations to “refresh” the sources of its leadership. Economists have tried to estimate the sacrifice in economic growth if there is a serious bias in the selection of leaders. It has been estimated that developing nations could improve their gross national product per capita by 5 percent if they were to base their leadership upon merit rather than on gender or social status. In fact by some estimates, the economic benefit to developing countries of choosing leaders on the basis of merit would be three times more than the benefit accruing from a reduction in Organisation for Economic Co-operation and Development (OECD) trade restrictions on imports.

Success in one’s schooling is one of the few background characteristics seen as necessary for modern leadership. Although it is possible for lead-

ers to emerge through experience or just good fortune, getting ahead in schooling is seen as essential.

But what if schooling itself is not fair? What if the public comes to believe that the provision of schooling favors one social group? What if the public does not trust the teachers to judge student performance? What would happen if the process of schooling had been corrupted?

The fact is that in a democracy, the public takes a very active interest in the fairness of its education system. If the public does not trust the education system to be fair or effective, more may be sacrificed than economic growth. It might be said that current leaders, whether in commerce, science, or politics, had acquired their positions through privilege rather than achievement. If the school system cannot be trusted, it may detract from a nation’s sense of social cohesion, the principal ingredient of all successful modern societies.

### **The Characteristics of an Education System Free of Corruption**

A school system that is free of corruption is characterized by the following:

- Equality of access to educational opportunity
- Fairness in the distribution of educational curricula and materials
- Fairness and transparency in the criteria for selection to higher and more specialized training
- Fairness in accreditation in which all institutions are judged by professional standards equally applied and open to public scrutiny
- Fairness in the acquisition of educational goods and services
- Maintenance of professional standards of conduct by those who administer education institutions and who teach in them, whether public or private

### **Categories of Educational Corruption**

Some refer to corruption as though it were a unitary concept or a problem with a single dimension. It is more complex than many realize. So frequent is corruption in education that it cannot be well understood without first differentiating one type from another.

**Corruption in selection.** There is no nation in which the proportion of the age cohort attending at the end of the system is as large as it is at the begin-

ning. Educational opportunity is shaped not like a rectangle, but like a pyramid. If one defines *elite* as meaning only those who are able to enter, then all nations have education systems that have elite characteristics. Therefore, the question is not whether a system selects a few to proceed, because all nations must select. Rather, the question is how that selection is made.

Educators sometimes argue that certain kinds of selection tests and techniques are “better” than others. For instance, some might argue that essay questions or oral examinations are better than multiple-choice questions. This kind of discussion, when divorced from context, is spurious.

Three principles help determine the choice of appropriate selection techniques: (1) available resources, (2) logistical challenges, and (3) the level of public accountability. Maintaining the same standard of reliability, cost differences in grading an essay versus a multiple-choice question can be as much as 10:1. Moreover, as test-taking populations expand, the differences in costs expand as well. The cost difference between grading an oral and a multiple-choice exam may be 10:1 if the number of test takers is 1,000. But if the number of test takers is 1 million, the cost difference may be 100:1.

The appropriate system in Sweden might be to have each teacher individually design and grade selection examinations. But with about 1 percent of Sweden’s education resources, about 100 times the number of university applicants, and an extensive geographical challenge, the appropriate system in China must be more standardized and machine gradable.

A key difference among nations is not the kind of test used, but whether whatever technique is chosen can be corrupted. How selection is managed is deeply important for maintaining the equality of education opportunity. Since World War II the technology of administering examinations has changed radically in OECD countries, but in many parts of the former Soviet Union and other parts of the world, the technologies have not kept pace. Often, each faculty within each higher education institution administers examinations independently. Many examinations are delivered orally. And many can be taken only at the university where they are designed. This system of selection is unfair, inefficient, and low quality. It is *unfair* because examinations have to be taken where they are designed, meaning that those

who cannot easily travel have less opportunity. The effect of this is to limit access to higher education to students who can afford to travel. It is *inefficient* because students must take a new examination for each institution to which they apply, and given that they cannot do this at a single sitting, they must wait for a new test-taking occasion. This may delay their entry by a year or more. It is of *low quality* because questions are designed by faculty who are isolated from modern labor markets. They use skills that are out of date, and they design tests whose administration cannot be standardized. But the key issue is corruption.

Tests that are centrally scored can still be corrupted by leaks. In some parts of South Asia, questions are privately sold to high-paying candidates before the test is administered. Being more subjective and administered in private, oral examinations are even more open to corruption. As faculty salaries decline in value, and higher education institutions require alternative sources of income, bribery surrounding the admissions process can become a matter of routine. Candidates may even know how much a “pass” will cost and be expected to bring the cash ahead of time. This may be the case, for instance, in the Russian Federation.

**Consequences of a corrupt selection system.** The process of academic selection is the linchpin of any education system and of overall national cohesion. It represents the essence of the public good. If the system is corrupt or widely believed to be corrupt, little else in the education system can be successful. Inattention to corruption in selection places all other aspects of a nation’s economic and social ambitions at risk.

**How to avoid corruption in selection.** Designing selection examinations is technically complex. It requires a high degree of professionalism, modern equipment, and staff with scarce technical skills who are able to garner high salaries in the private sector. Unless they are in very wealthy countries, few government ministries are able to perform selection functions well. The alternative is to create an autonomous agency, staffed with internationally recognized experts and guided by public education standards and policies, but financed by modest examination fees.

**Corruption in accreditation.** The way in which institutions of higher education are publicly “recognized” is through a system of accreditation. When

all institutions were state owned and administered, the system was managed within the central ministries. In the 1990s two things happened that corrupted many systems of accreditation. First, because of the openness to new economic systems and new labor markets, higher education institutions responded with the introduction of a number of new degree programs. All of them need to be recognized. Second, the number of private institutions blossomed, with many of these claiming to be as high in quality as the older, more established public institutions.

Both of these tendencies are positive and should be encouraged. The problem is not that there is private education. The problem is that the system of accreditation has not sufficiently changed in response to the new programs and institutions. In many instances accreditation committees remain in the hands of rectors of public institutions who may have an interest in preventing competition.

The higher education system of accreditation is often corrupt because the connection between higher education and the system of “licensing” or “certifying” professionals has not been reformed. (A license allows a person to practice a given profession, such as medicine; certification allows a person to practice a specific specialization, such as surgery.) Whenever higher education institutions are associated with licensure and/or certification, the stakes for accreditation are high. The price for accreditation on the corrupted market is therefore high as well.

Institutions that seek recognition of new programs, or private institutions that seek institutional recognition, often have to pay a bribe. This places the nation at risk because an institution of low quality may be licensing individuals who may not be of sufficient professional standard. There are many instances of corrupted accreditation leading to poor medical schools, law schools, and programs of business and accounting. On the other hand, the correct response should not be to confine a nation to only old programs and traditional institutions. All nations need innovation in higher education in response to social and labor market challenges.

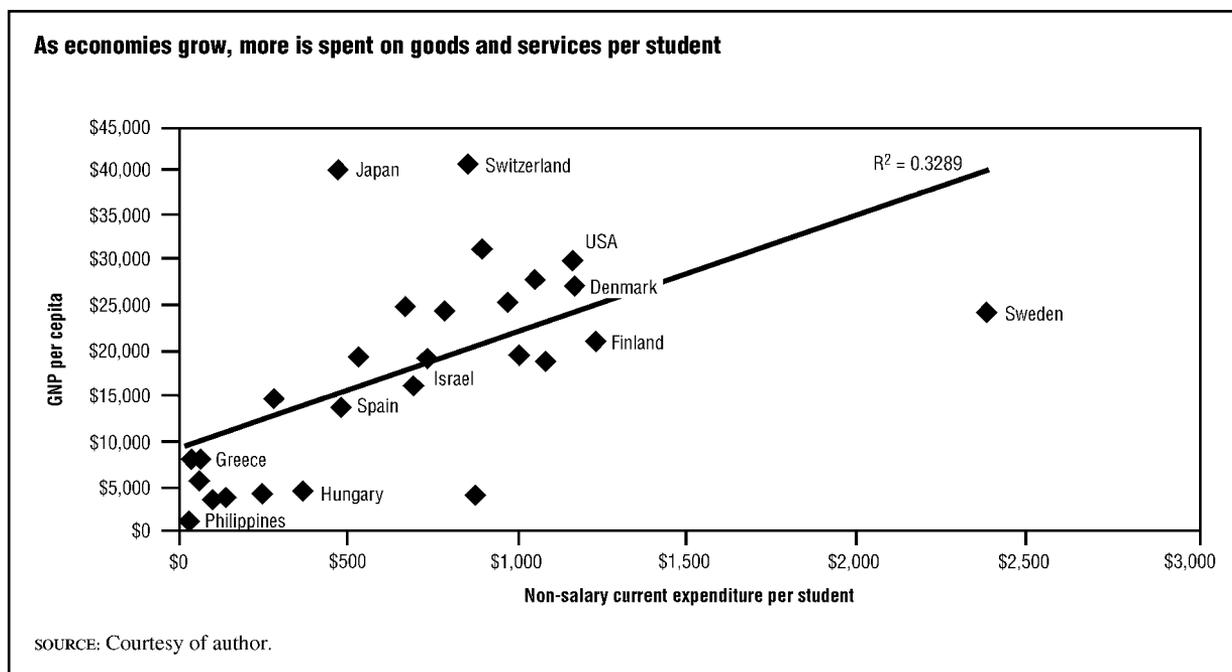
***How to avoid corruption in accreditation.*** How can a nation encourage educational innovation and, at the same time, protect itself from poor quality higher education programs? The answer is twofold. First, the process of accreditation must be liberalized. It should be simple and inexpensive for a new

program and for new institutions to operate. Control over quality should not be made at the stage of accreditation. In nations that have a wide variety among accredited institutions, the function of accrediting changes. Instead of creating institutions of identical quality, it creates institutions with identical transparency in public accounting of their purposes, staffing, and results. The public is then free to choose a wide range of educational quality at different prices.

Second, the process by which individuals leave higher education and apply to practice or be certified in their professions should be separated from the higher education institutions themselves. No matter how excellent, no university should provide a license to practice medicine. In many parts of the world, such as the United States, where significant portions of higher education is in private hands, the process of licensing and certification is separate from universities. A law degree from the University of Chicago or Yale will not permit someone to practice law. For that they, and all others, must sit for the external examination. It is the law examination that weeds out potentially low quality lawyers, not the law schools. This lowers the risk of bribery in the process of accreditation. The license to practice medicine should be governed by a board of medical examiners that manages a system of testing to which all medical applicants must pass. Similar systems must be established for law, accounting, and other fields. Key to this new system is to allow many new higher education institutions to compete with one another. This will allow both low- and high-quality institutions to operate freely and at different prices. Having a variety of quality allows some low-quality institutions to attract new students, to innovate, and to improve. Open competition may allow some institutions of high quality to slip in status and competitiveness. At the same time as this variation in quality occurs, the public is protected from malpractice by the rigor of the licensing and certification examinations. And because accreditation is no longer associated with a license to practice, the process of accreditation can be more liberal. Furthermore, having a more open system of accreditation takes the pressure off it. The effect of this will be to eliminate graft and corruption in the process of accreditation.

***Corruption in supplies.*** It is rarely recognized that, in fact, education is a big “business.” In North America, the education and training sector accounts for 10 percent of gross domestic product. Education

FIGURE 1



and training is the economy's largest sector after health care, and the fastest in growth. In considering only compulsory education for a moment, expenditures can be divided first into capital and recurrent categories, then into salary and nonsalary categories. In terms of nonsalary expenditures there is wide variation from one country to another, with Sweden spending about U.S. \$2,394 per pupil and India spending less than U.S. \$1.00 per pupil. Nevertheless, as countries develop economically, more resources are allocated to support educational quality (see Figure 1).

This process of development raises the size of the education markets around the world, particularly in countries with healthy rates of economic growth. Across the world, public education expenditures doubled between 1980 and 1994. In North America they grew by 103 percent; in Western Europe by 135 percent. But in East Asia and the Pacific, they grew by more than 200 percent during the same period (see Table 1).

First it might be noted that corruption in school supplies can be found in countries at all levels of economic development, from Kenya and Uganda to the United States and other more well-endowed nations. To understand the problem of corruption in educational supplies, one must divide the supply process into three distinct parts: (1) design (such as with

pedagogical materials and textbooks), (2) manufacturing (printing), and (3) distribution. The source of problem may be different with each category.

The corruption of the design process usually occurs when a public agency, such as a ministry of education, contracts for designs (such as the writing of textbooks) among a short list of privileged authors or providers. Sometimes these authors or companies provide educational officials with a gift or bribe for the privilege of designing educational materials. If an author receives a proportion of the sales, the level of illegal earnings can be significant. In terms of book sales in North America, for instance, two-thirds of publishing profits come from educational publishing. Hence, the receipt of contracts for textbook design can bring an automatic benefit to the authors.

In the manufacturing process, the hazard of corruption is similar. Benefits will accrue to the firms that are given contracts for printing or making the materials, and because of the guaranteed nature of educational sales, the profits are often high.

Most corruption in school supplies stems from the use of "protection." Protection is a well-known notion in other fields, such as the manufacturing of automobiles, furniture, glass, and steel. If a country sets up trade barriers targeting imports, these barriers have an economic cost. Governments may be-

TABLE 1

Continents, major areas, and groups of countries	Public expenditures on education per inhabitant (in dollars)				Percent change 1980–1994
	1980	1985	1990	1994	
World total	126	124	202	252	100
Africa (North and Sub-Saharan Africa)	48	40	41	41	-15
America	307	375	521	623	103
Asia	37	39	66	93	151
Europe	418	340	741	982	135
Oceania	467	439	715	878	88
Industrializing countries	31	28	40	48	55
Sub-Saharan Africa	41	26	29	32	-22
Arab States	109	122	110	110	1
Latin America and the Caribbean	93	70	102	153	65
East Asia and the Pacific	12	14	20	36	200
South Asia	13	14	30	14	1
Poorest countries	9	7	9	9	0
Industrialized countries	487	520	914	1,211	149

SOURCE: Based on data from *UNESCO Statistical Yearbook*, 1998.

lieve that the costs are worth it and that protection is justified on the basis of five common arguments:

- National interest, image, and pride. To appear strong, some believe it necessary to “protect oneself” from foreign products. This argument is very common in education. All nations believe they have the right to educate their citizens in the way they choose. What may not be well understood is that to do this well, curriculum, supplies, and materials need not be a public sector monopoly.
- Safeguard of local jobs. This is rarely made in education by comparison, say, to textiles, but it can be used when other arguments appear weak.
- Grace period for “infant industries.” This refers to the argument that a new business is likely to be more vulnerable to competition than a more mature business. Sometimes those responsible for a new business may argue for tariff protection against foreign competition on grounds that they are inexperienced and that the protection is needed for a “short period of time,” until they are more prepared for the competition. This interim period is known as the grace period and the new industry is referred to as an “infant industry.” This is commonly heard with respect to local textbook publishers and providers of tests and standardized examinations.
- Saving foreign exchange. This is an argument typical of very low-income countries with artificial restrictions on foreign exchange. The prob-

lem with this argument is that the cost in local exchange may be considerably higher than an imported product.

- Unavailable supply from nongovernment sources. In education this is the most common argument heard, particularly with respect to textbooks. This argument is common in countries where the language of instruction is local. It is argued that because no local suppliers exist, the government must therefore manufacture the nation’s textbooks. The argument rests on the assumption that the “supply response” would be near zero if open competitive bidding were allowed—that, in essence, there would be market failure. In many instances this assumption rests on the experience of there being no fair or open competition in the past. It also must be remembered that, given market principles, international suppliers—such as Oxford University Press, Microsoft, and World Book Encyclopedia—are usually quite happy to produce the products in whatever language is required and are also quite prepared to lease copyrighted materials to local publishers and manufacturers.

**How to avoid corruption in supplies.** Corruption risk can be minimized by following three distinct steps. First is to treat the educational procurement process in the same way as the procurement of all other goods and services. Educational supplies should not be singled out as distinct in any way. This first step will bring the procurement

process in education in line with the procurement process in other areas, such as pharmaceuticals for the health care system, office supplies, and vehicles. Second is to establish bidding procedures in which there are no hidden “wires.” Specifications should not be written that would in any way benefit a single group of manufacturers. Third is to open up the bidding process in parallel with the new guidelines on education services circulated by the World Trade Organization.

Strong resistance to open and competitive bidding often emerges from the education community. It might be noted that protection in educational manufacturing—whether software or computer hardware, furniture, textbooks, or even testing items—has the same cost as protection of any industrial product. It raises the real price, it constrains the quality, and it lowers the effectiveness. Most industrialized nations have come to realize that the natural public responsibility for education is to establish the curriculum principles and objectives of education. It is then a public responsibility to establish professional specification for the delivery of products and services to meet important national goals. The rest should be in the hands of private entities, competing against one another. The more limited the role of the government in the manufacturing process, the lower the chance for corruption in the process of educational supply.

**Professional misconduct.** Because education is a public good, education corruption must include an element broader than illicit material gain for personal use; it must include an element of professional misconduct. Misconduct can be found in other professions—the law, architecture, accounting, engineering, and so on. But when misconduct affects children and youth—citizens who are not adults or who are young adults—the implications are more serious and the safeguards must be more stringent.

Elements of professional misconduct in education include:

- Accepting material gifts or rewards in exchange for positive grades or assessments or for selection to specialized programs
- Assigning grades or assessments that are biased by a student’s race, culture, social class, ethnicity, or other ascriptive attributes
- Insisting on a student’s adoption of the instructor’s personal values and philosophy
- Disclosing confidential information regarding a student

- Exploiting, harassing, or discriminating against particular students
- Adopting an inadequate textbook or inferior educational materials because of a manufacturer’s gifts or incentives
- Forcing students to purchase materials that are copyrighted by the instructor
- Ignoring the inadequate teaching of colleagues, the unequal treatment of students, or the misconduct of fellow professionals
- Using school property for private commercial purposes

Definitions of faculty misconduct may differ from one country to another. For example, if a faculty member were to assign reading only from his own book, this would be interpreted as misconduct in higher education institutions in the United States but not in all parts of the world. Nevertheless, no nation can long ignore the existence of significant misconduct. In some countries it is common for teachers to accept payment for allowing students to proceed to the next grade. In some countries it is common for teachers to offer after-school tutoring for a price and to suggest that students might fail if they do not pay for after-school tutoring. In some countries, faculty may operate a “private” school in the after-school hours, hence using public property for private gain. In other instances, a school administrator or university rector may rent school property or use it for manufacturing or agricultural commerce and not report the income.

In some instances, the misconduct constitutes a criminal offense. Theft or misuse of public property for personal gain is a crime. With the installation of new tuition and fees, it is common for them to be used for private profit rather than for the benefit of the school or university. In these instances, misconduct needs to be judged by the criminal court system. In other instances, such as a teacher’s bias against a certain category of student, the misconduct may be limited to professional ethics. In these cases, strong professional boards with the authority to fine and dismiss should be encouraged. The public needs to feel protected from faculty misconduct, and the effectiveness of the professional review boards may be an essential ingredient in their protection.

**Corruption in educational property and taxes.** Educational facilities often occupy prime locations in urban areas. These can be rented or leased for both educational and other purposes. Almost all higher

education institutions, and also many institutions in compulsory education, must supplement public with other resources. But how should educational property be considered: as a private or public income? And how should alternative sources of income be taxed, or should they be taxed at all? And if there is reason not to tax educational institutions, or to tax them at a different rate than commercial businesses, should one treat all educational institutions the same? Should income to public education institutions from nontraditional sources be taxed the same as nontraditional income in private educational institutions? Should equity-owned private educational institutions (which share profits among the owners) be treated the same as a nonprofit institution, which reinvests all profits back into the institution?

One reason why corruption is so common in education is because the answers to these questions have never been adequately sorted out. From the time that government ministries “owned” all property in the Soviet Union to the present, it has never been quite clear which portion of government had ownership of educational property. Take the illustration of a local vocational school: Would it be owned by the enterprise on whose land it might sit? By the local municipality? By the region? By the national sector ministry? Take a technical university, previously under the ministry of industry: Does the land still belong to that ministry? Does land at all higher education institutions now belong to the ministry of education? Does it belong to the local municipality? Does it belong to the rectors council? Or would different authorities “own” different elements? Would the state-owned enterprise own the equipment, the ministry of education own the building, and the local municipality own the land?

#### ***How to avoid corruption in property and taxes.***

In the area of educational property and taxes, the single most important factor in reducing the risk of corruption is to clarify the situation of the land and the tax obligations. Recommendations include the following:

- Higher education land should belong to the board of trust of the higher education institutions themselves. This board of trust may be government appointed and would guide the long-term institutional interests.
- Profit-making educational institutions that are equity-owned should pay the same taxes as all commercial businesses.

- As long as they are not commercial (i.e., equity owned), neither public nor private educational institutions should pay tax on income.
- Information about gifts from individuals and from corporations should be made public, and such tax should be tax deductible.

#### **What Can Be Done about Educational Corruption?**

In some respect, solving the problem of educational corruption is not significantly different from solving the problem of corruption in other sectors. Such behaviors as misappropriation of public property or bribery in conjunction with public procurement—whether in education, housing, or some other area—are governed by similar rules and regulations. If the rules and regulations fail to deter the corruption in these other sectors, they will be similarly ineffective in education.

On the other hand, there are certain preventive measures specific to education corruption. These fall into four categories: (1) structural reforms necessary to reduce the opportunity for corruption, (2) improvements in adjudication and management to help anticipate questions of definition and interpretation, (3) measures necessary to actually prevent corruption practice, and (4) sanctions required to demote or punish when infractions do occur (see Table 2).

#### **Summary**

It has not been common to focus attention on corruption in education. There were many other pressing problems in business, banking, the judicial and legal system, manufacturing, and agriculture. In the early twenty-first century, however, such a focus may be necessary. Collapsing public expenditures have driven all institutions to generate their own resources, for which there is no precedent, and no regulatory structure is in place to give them guidance. One thing is abundantly clear: Whenever rules and regulations are confusing, one must expect a high level of corruption.

The burgeoning profit-making and not-for-profit enterprises within private education, and the entrance of public institutions into private education, have blurred the lines between what is public and what is private. Few within the public may understand what is in the private interest and should be taxed, or what is in the public interest and should

TABLE 2

<b>Deterring education corruption</b>			
<b>Structure Reform</b>	<b>Adjudication and Management</b>	<b>Prevention</b>	<b>Sanction</b>
Autonomous examination agency	Professional boards	Blue-ribbon committee evaluations	Clear penalties for economic and professional corruption
Autonomous accreditation agency	Boards of trustees for each higher education institution	Annual reports on educational corruption	
Licensing and certification process separated from higher education	School boards		
Land ownership by educational institution			
Tax differentiation between profit-making and noncommercial education institutions			
Income generated by nonprofit educational institutions not subject to taxation			

SOURCE: Courtesy of author.

not be taxed. Confusion reigns over issues of educational property. Who actually owns these institutions? And without clear ownership of its land, no higher education institution can successfully approach the private capital markets for a development loan. In essence, no higher education institution can invest in its future until the principles of land ownership are sorted out.

Because of the lack of modern methods and technologies, the systems for selecting entrants into higher education are riddled with bribery. Because the structures are outdated, corruption is common in the accreditation process, the licensing process, and the certification process. Textbooks and supplies often remain under monopolies of the state; foreign suppliers are often prohibited from participating in the bidding process; and designers are chosen on the basis of unprofessional specification and through personal connections. Because of these corruptions and distortions, the education received by young people suffers in quality and in efficiency.

Lastly, because of the inadequate instruments of management and sanctions, professional misconduct is common. It is common for teachers to misuse their professional positions, to accept favors for normal services, and to accept bribes for looking

with favor on certain students. And it is common for tuition and fees to be used for private profit.

These practices would be serious no matter what sector they occurred in. But the fact that they occur with frequency in education poses a particular problem. This is because education is the linchpin of a nation's social cohesion, and once the public comes to believe that the education system is corrupt, they will also believe that the future of their nation has been unfairly determined against them and their interests. If this occurs, a nation will not be able to establish a partnership with other democracies.

*See also:* ETHICS; HIGHER EDUCATION, INTERNATIONAL ISSUES; INTERNATIONAL EDUCATION; INTERNATIONAL TRADE IN EDUCATION PROGRAMS, GOODS, AND SERVICES.

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**MISSISSIPPI FREEDOM SCHOOLS**

The Mississippi freedom schools were an important project of the Student Nonviolent Coordinating Committee (SNCC) designed to promote freedom, self-determination, and participatory activism aimed at African-American youth in the improvement of local communities and state organizations.

**Project Planning**

In November 1963 the Council of Federated Organizations (COFO) and the SNCC conceived a major civil rights incursion into Mississippi during the summer of 1964. This incursion, spearheaded largely by SNCC and officially known as the Mississippi Summer Project, would promote African-American equality and basic democratic rights through a number of social action projects. One of those projects was the creation of a summer school program aimed at high school–age African-American students, providing them with a richer school experience than they were able to have in their own schools and, it was hoped, committing these students to become a force for social change in Mississippi. This educational endeavor became known as the Mississippi freedom schools.

Charles Cobb, field secretary for SNCC, proposed the idea of freedom schools as a war against academic poverty. He claimed the Mississippi school system and the African-American schools were meant to “squash intellectual curiosity.” Cobb wanted young African-American students to have an education related directly to the everyday experiences and problems of these students. Freedom schools would “offer young black Mississippians an education that public schools would not supply, one that both provided intellectual stimulation and linked learning to participation in the movement to transform the South’s segregated society” (Chilcoat and Ligon 1994, p. 132).

**Implementation**

To effect the idea of freedom schools, a curriculum conference was held in New York in March 1964.

Approximately fifty people with varied backgrounds in education and civil rights work attended the conference. The major focus of the conference and the core of the freedom school curriculum was the formulating of a civic curriculum. The civic curriculum was to be composed of: (1) fourteen problem-solving case studies dealing with the political, economic, and social forces relating to the direct experiences of the students; (2) a *Citizenship Curriculum* facilitating student discussion as a means of achieving a new society; (3) a *Guide to Negro History* providing a comprehensive survey of African-American history; and (4) an emphasis on teachers extrapolating directly from students those personal experiences in which they lived each day in a hostile, repressive, dominantly white society. Also because of the lack of other academic opportunities offered to African-American students in their public schools, the conference included in the freedom schools a reading and writing remediation curriculum, a humanities curriculum emphasizing English, foreign languages, art, and creative writing, and a general science and mathematics curriculum. Coupled with the curriculum, the conference recommended a variety of progressive democratic teaching techniques emphasizing self-discovery and self-expression that were to stimulate the act of questioning.

In June 1964 two one-week orientation meetings were held on the campus of Western College for Women at Oxford, Ohio, for most of the freedom school summer volunteers. The second-week orientation involved the freedom school teachers. The orientation workshops were training courses in pedagogical techniques and in the use of the core civic curriculum developed at the curriculum conference. Upon completing the orientation, the volunteers traveled to their freedom school locations in Mississippi to begin their six-week stay. The original expectation was the creation of twenty schools with a desired student population of 1,000. However, freedom schools became a far greater success than the project had planned, with forty-one schools in twenty communities and 2,165 students.

As the Summer Project ended, it was hoped that freedom schools would continue. Although some of the schools did continue to operate, few could sustain either learning or activism. The schools were never projected as permanent institutions but rather, according to most of the original planners, as a tactic for immediate change. However, for many students and teachers, the freedom schools in those

short six weeks had a substantial impact on their lives.

The Freedom Schools showed that there can be a situation where learning is not forced upon youth. This was a type of education which gave individuals a personal interest in social relationships, a personal interest that made learning something to be sought after. . . . The Freedom Schools met the challenge of changing the social order through the educative process. They showed that this is not an additional burden that must be met through education, but a necessity if we are to have truth, justice, and equality in society. (Chilcoat and Ligon 1995, p. 6)

*See also:* COMMUNITY-BASED ORGANIZATIONS, AGENCIES, AND GROUPS; MULTICULTURAL EDUCATION.

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## MNEMONIC STRATEGIES AND TECHNIQUES

Mnemonic ("nee-moh-nick") techniques, also referred to as mnemonic strategies, mnemonic de-

vices, or simply mnemonics, are systematic procedures designed to improve one's memory. The word *mnemonic* derives from the Greek goddess of memory, Mnemosyne, and means "memory enhancing." The most comprehensive treatise on the historical development of mnemonic techniques may be found in Robert Alan Hrees's 1986 doctoral dissertation, in which it is noted that in preliterate cultures "history is preserved orally and the poets, like Homer, tell that history in their rich poetry, 'recited by heart.' [The ancient] Greeks prefaced such performances with a call to Mnemosyne, requesting her aid for a flowing and accurate recitation" (p. 1).

Since the mid-1970s, mnemonic techniques have been the subject of extensive research attention by psychological scientists. This attention has been directed at both analyzing the presumed components of mnemonic techniques and evaluating their effectiveness in numerous applied and academic contexts. As will be seen, mnemonic techniques come in different varieties and combinations. Moreover, the "accurate recitation" goal of the ancient Greeks notwithstanding, mnemonic techniques have been shown to serve a wide range of memory-related functions.

### Components of Mnemonic Techniques

Mnemonic techniques work because they provide meaningful connections between informational items that are typically novel or unfamiliar and, therefore, are difficult to remember. Suppose, for example, that an eleventh-grade student has just encountered the word *philatelist* for the first time and wants to remember the textbook definition that accompanies it ("a person who collects stamps"). Applying Joel Levin's (1983) "three R's" of associative mnemonic techniques—recoding, relating, and retrieving—the student would first engage in recoding the unfamiliar word *philatelist* into a familiar proxy, or "keyword"—a salient part of the unfamiliar word's sound or spelling that, ideally, is picturable. Thus, for *philatelist*, a reasonable keyword might be *Philistine* (represented by, say, the Biblical giant, Goliath), *Philadelphia*, *pilot*, *plate*, or *flat*. For present purposes, *Philistine* will be used.

The second "R" component of the mnemonic process involves relating the keyword to the to-be-remembered definition in the context of some integrated scene or episode. Here, for example, the student might imagine Goliath, the Philistine, being smitten by an object from little David's sling. In this

constructed scene, however, the object is not a stone, but rather a colorful postage stamp that has been left (“collected”?) on Goliath’s forehead.

Thus, with the unfamiliar word effectively recoded and related, the third “R” represents the systematic path that has been constructed for retrieving the definition from memory when the unfamiliar word is re-encountered. Here, when the student attempts to remember the meaning of the word *philatelist*, the keyword *Philistine* should come to mind, which in turn should re- evoke the picture of Goliath with the colorful postage stamp collected on his forehead, which in turn should elicit the “person who collects stamps” definition.

**Comments on the mnemonic process.** Four related comments are in order. First, authors of many popular books in which mnemonic techniques are promoted assert that the focal information in the integrated scene (i.e., the keyword related to the associated information) needs to be greatly exaggerated or be in some way “bizarre.” Yet, scientific research on mnemonic techniques has indicated that such an assertion is without empirical foundation. Rather than exaggeration or bizarreness, what seem to be critical for mnemonic techniques to work are: (1) the effort and attention devoted by the learner to the task at hand, namely the selection/use of an effective keyword; and (2) the formation of a vivid (clear) image of the integrated keyword-information scene. Thus, for the *philatelist* example, a bizarre or exaggerated postage stamp is not a necessity, but selecting an effective keyword cue (one that resembles a salient part of *philatelist*, such as *Philistine*) and creating a vivid image of Goliath with a postage stamp on his forehead are likely to be.

Second, and also based on considerable scientific research, mnemonic techniques work whether their two principal ingredients (recoded keywords and relating scenes) are produced either *by* or *for* a learner. For individuals with adequate cognitive skills (e.g., older students and adults) and with to-be-learned information that is relatively straightforward to identify, recode, and relate, creating one’s own keywords and integrated scenes can be expected to yield memory benefits. On the other hand, for less cognitively capable individuals (e.g., young children or handicapped learners) and with less straightforward to-be-learned information, providing already-constructed keywords and integrated scenes is typically more effective.

Third, such keywords and scenes can be represented either pictorially (in the form of actual illustrations or visual images) or verbally (in the form of sentences or phrases, such as “Somehow, the forehead of Goliath the Philistine had collected a colorful postage stamp on it.”). Fourth and finally, through the introduction of conventional concrete symbols, mnemonic techniques are easily adapted to associating “abstract” (not easily pictured) items. For example, “justice” can be pictorially represented by the scales of justice, “democracy” by a voting booth, “technology” by an electronic computer, “wealth” by a stack of dollar bills, and so on.

### Varieties and Uses of Mnemonic Techniques

The keyword method (which goes under many other names by writers of popular memory-improvement books) is designed to strengthen associations between two or more items. Such items frequently consist of one or more pieces of information that a learner has not previously integrated as a unit (e.g., the definitions of unfamiliar words, the contributions of various famous people, the natural habitats of unfamiliar animals, the capitals of the fifty U.S. states). In each of these cases, less familiar, less meaningful terms (vocabulary words and the names of famous people, animals, or capitals/states) are recoded into something more familiar and picturable (i.e., keywords) and then related to the to-be-associated information (for vocabulary words, to their definitions; for famous people, to their associated contributions; for animals, to their associated habitats; for state and capital names, to each other). It should be noted that the state-capital example is actually a dual-keyword variation of the original keyword method, in that both of the to-be-associated items are recoded as picturable keywords (e.g., *Kansas* as *cans* and its capital, *Topeka*, as a *top*) and then related to one another in an integrated scene (e.g., a spinning top knocking over a bunch of tin cans).

**Verbal-pictorial associations.** In each of the examples in the previous paragraph, the initial form of the two pieces of information to be associated is verbal in nature (i.e., verbal terms and associated verbal information). A variation of the keyword method, for which an item that is pictorial in nature (e.g., a person’s face, an animal’s appearance, an artist’s painting) is to be associated with verbal information (e.g., an unfamiliar name), is known as the face-name mnemonic technique. With this method, the “key-

worded” unfamiliar name is related to a prominent feature of the physical or pictorial representation. For example, when being introduced to a new person with the unfamiliar surname *Lectka*, one could recode the name as the more familiar word *lecture*. Carefully examining the appearance of the person, one might notice the mouth as a prominent characteristic. Then, focusing on that mouth, one could imagine the person delivering a highly technical lecture. When subsequently encountering the person (either at the same gathering or in the future), and with one’s attention drawn to the prominent mouth, it is hoped that the lecture emanating from it would come to mind, which in turn would be helpful in retrieving the surname *Lectka*.

**Ordered associations.** In contrast to the function of the keyword method and its variations (namely, associating unfamiliar, or arbitrary, paired items), the major function of the earliest mnemonic techniques—as applied by Mnemosyne’s protégés—was to remember a list or group of numerically or chronologically ordered information (i.e., to associate each item of a list with a specific number, or to remember the items in a specific order). Chief among such mnemonic techniques was the method of loci, through which ordered items in a list (including the order of topics or points to be covered in a lengthy oration) were associated with a familiar sequence of objects, such as specific landmarks along a well-traveled route—or as has been developed in recent research investigations, familiar holidays to symbolize the numerically coded calendar months.

Two other common mnemonic techniques for remembering ordered information are the first-letter mnemonic and the link method (also known as the chain or story method). With the first-letter mnemonic, the first letter of each to-be-remembered list item is successively linked, either as an acronym (e.g., HOMES to represent the five Great Lakes: Huron, Ontario, Michigan, Erie, and Superior) or as a constructed phrase or sentence consisting of words beginning with those letters, to cue the list items themselves. For example, to remember the increasing distances of the first five planets from the sun (Mercury, Venus, Earth, Mars, Jupiter) using the first-letter mnemonic, one could focus on the letter sequence MVEMJ and construct a little “story” such as: “Murray’s Very Elderly Mother Jumped.” (Murray was intentionally selected here to resemble Mercury in order to help distinguish it from another planet starting with the same letter, Mars.) With the

link method, an association is connected between each successive item in a to-be-remembered list through a sequentially constructed “house that Jack built”-type story or imagined episode. Associated links (e.g., between successive planet names) can be similarly constructed through the introduction of rhyme and meter.

Two mnemonic techniques that are suitable for remembering either ordered or numerically identified information are the pegword method and the digit-symbol method (also known as the digit-consonant method). With the simpler-to-master pegword method, the numbers from 1 to 10 (or 1 to 20) are recoded as familiar rhyming pegwords (for example, 1 = *bun*, 2 = *shoe*, 3 = *tree*, 4 = *door*, 5 = *hive*, etc.). Then, each numbered item in a list is related to the pegword in an integrated scene. For example, if the fifth item in a 20-item list had something to do with sailboats, then one could construct a scene in which bees from a *hive* (for 5) were swarming all over the skipper of a *sailboat*. To later remember the fifth item of the list, one systematically retrieves *sailboat* from the *hive* pegword for 5. To reconstruct the complete list or to order the items in the list, one would need to retrieve the information associated with each of the 20 ordered pegwords.

With the more-complex-to-master digit-symbol method, each digit from 1 through 9 (plus 0) is first recoded as a previously established consonant sound (for example, in one standard system, 1 becomes a *t* or *d* sound, 2 an *n* sound, 3 an *m* sound, 4 an *r* sound, 5 an *l* sound, . . . , 0 an *s* or *z* sound). Either single recoded letters (for up to 10 items) or combined recoded letters (for more than 10 items) are additionally recoded as words that include just those consonant sounds (vowels and silent consonants are ignored in this system). For example, the number 5, recoded as an *l* sound, would additionally be recoded as the words *lie*, *lye*, *oil*, *aisle*, and so on. In contrast, the number 15, recoded as a *t* or *d* sound plus an *l* sound, would additionally be recoded as the words *tail*, *tile*, *doll*, *dial*, *deli*, and so on. Returning to the sailboat example: If *sailboat* were the fifth item in a list, it would be associated with a recoded 5, such as *oil*, and then related to *sailboat* as, say, an imagined scene in which the skipper is oiling the sailboat’s steering mechanism. On the other hand, if *sailboat* were the fifteenth item in a list, it would be associated with a recoded 15, such as *tile*, and related to *sailboat* as, say, an imagined scene in which the

skipper is covering the main deck of his sailboat with tile. The digit-symbol method is also commonly applied to remembering numbers per se, as, for example, telephone numbers, zip codes, and institution-assigned security numbers. For example, to remember a bank-assigned ATM machine personal identification number of 5131, one could apply the digit-symbol method as follows:  $l(5) + d(1) + m(3) + d(1) = \textit{old maid}$ . When approaching the ATM machine, one would simply think of the process as starting to play the card game called Old Maid.

### Educational Applications of Mnemonic Techniques

Joel R. Levin, in his contribution to the 1996 book *The Enlightened Educator: Research Adventures in the Schools*, documented numerous successful educational applications of mnemonic techniques, based on both individual and combined adaptations. Such mnemonic adaptations, several of which have been alluded to throughout this discussion, have been shown to improve students' memory for such educational content as: the meanings of unfamiliar vocabulary words (including foreign-language vocabulary); mathematics facts, concepts, and operations; the states and their capitals; the U.S. presidents; artists and their paintings; people and dates associated with various inventions; and scientific facts, relationships, and processes. In addition, mnemonic techniques have helped students organize and remember both narrative and expository information presented in text passages, with benefits observed on both tests of simple factual recall and those requiring higher-order thinking (e.g., essay production, inferential thinking, and problem solving). From an educational standpoint, mnemonic techniques may not be ideally suited for *all* students in *all* instructional contexts. Such techniques nonetheless provide widespread versatility in their potential for enabling students to grasp basic information efficiently and confidently, thereby freeing them to move on to more cognitively demanding tasks. Continuing mnemonic research is helping teachers and students realize the limits of that educational potential.

See also: MEMORY, *subentry on* METAMEMORY.

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JOEL R. LEVIN

## MODERN LANGUAGE ASSOCIATION OF AMERICA

Founded in 1883, the Modern Language Association (MLA) of America is the largest society of humanists in the United States. Its mission is to promote study, criticism, and research in the modern languages and their literatures and to further the common interests of teachers of these subjects.

### Programs and Publications

The MLA's programs are designed to serve the scholarly and professional interests of its members.

The association publishes two journals: *PMLA*, a distinguished scholarly journal, appears six times per year; *Profession* is an annual that carries committee reports, association surveys, and articles on a range of professional topics. Established in 1922, the *MLA International Bibliography* provides an annual classified listing and subject index of more than 50,000 books and articles about film, folklore, language, linguistics, and literature that are published worldwide. It is available in print and electronic formats. The reference work began to cover publications about rhetoric and composition and the teaching of language and literature with the 2000 edition. The MLA's book publication program meets the needs of students, teachers, and scholars through several series: *Approaches to Teaching World Literature*, *Texts and Translations*, *Introductions to Older Languages*, *Options for Teaching*, and *Teaching Languages, Literatures, and Cultures*. Well-known to students are the *MLA Handbook for Writers of Research Papers*, *A Research Guide for Undergraduate Students*, and the *Literary Research Guide*. The *Job Information List*, which is available in print and electronic formats, offers up-to-date descriptions of employment opportunities in postsecondary English and foreign language departments.

The MLA convention, which takes place each year from December 27 through 30 and attracts between 8,000 and 9,000 participants, gives members opportunities for scholarly exchange on a wide range of topics. The association is also committed to collecting statistical information about the field. Recent studies examine enrollment trends in foreign languages, the use of part-time faculty members in English and foreign language departments, employment opportunities for new Ph.D.s, and the characteristics of successful college and university foreign language programs.

The MLA houses the Association of Departments of English (ADE) and the Association of Departments of Foreign Languages (ADFL). These organizations arrange summer seminars for chairs of English and foreign language departments, develop standards for the field, and publish the *ADE Bulletin* and *ADFL Bulletin*, which serve departmental administrators.

In 1997 the MLA introduced *What's the Word?*, a 29-minute weekly radio series that was available by 2001 on 125 National Public Radio stations and through Armed Forces Radio. The series showcases scholars in the field. Its purpose is to demonstrate

how the study of languages and literature enriches people's lives. Sample topics include "Literature of the Sea," "Shakespeare Then and Now," "Film Couples," "Post-Apartheid South African Literature," "The Blues as Literature," and "Sermon Traditions."

### Organizational Structure

Seventeen MLA members are elected to serve on the executive council, which has fiduciary responsibility for the association and selects the executive director, approves the annual budget, and appoints committees. A larger elected body, the delegate assembly, meets at the annual convention and considers a range of issues affecting the profession and the association. The assembly recommends actions to the executive council. MLA committees and staff members develop and implement the association's programs.

The MLA is a constituent society of the American Council of Learned Societies and an associate member of the American Council on Education. The MLA maintains membership in two advocacy coalitions—the National Humanities Alliance and the Joint National Committee for Languages. It is also a member of the *Fédération Internationale des Langues et Littératures Modernes*.

### Membership and Financial Support

Membership in the MLA is open to any individual interested in advancing the goals of the association. The association has 30,000 members and supports its programs through publication revenue, library subscriptions, annual dues, and registration fees for the annual meeting. An endowment fund is valued at \$1.1 million.

### History and Development

The MLA was established in 1883 by forty college teachers who wished to encourage the study of the modern languages in U.S. colleges and universities at a time when the role of the classical languages was beginning to decline. Initially, MLA members established a journal for the publication of research in the field and organized an annual meeting to discuss scholarly and pedagogical issues. As the study of the modern languages grew increasingly important in both higher education and the schools, the MLA also grew.

## INTERNET RESOURCE

MODERN LANGUAGE ASSOCIATION. 2002. <[www.mla.org](http://www.mla.org)>.

PHYLLIS FRANKLIN

## MODERN RED SCHOOLHOUSE

The Modern Red Schoolhouse (MRSh) is part of a larger effort in the United States to design schools for the twenty-first century—schools where all students can achieve world-class academic standards. In the early 1990s, during its design and pilot phase, MRSh was housed at the Hudson Institute, a public policy research organization in Indianapolis, Indiana. The institute was awarded a competitive five-year contract from the New American Schools Development Corporation to develop the design, pilot it, and provide training and support to schools that chose to adopt it.

The Modern Red Schoolhouse design for twenty-first-century schools evolved around a central premise: All students can master high academic standards, but they vary in the ways that they learn best and in the time that they need to learn. While simple in concept, this premise constitutes a stark contrast to the ways in which public schooling evolved during the twentieth century in the United States—when expectations for learning varied by the presumed ability and interest of a given student, yet the pedagogy and time to learn was the same for all students. The MRSh premise is built from research in sociology and psychology showing that: (a) intelligence is heavily influenced by a learner's effort and opportunity to learn, rather than simply inherited, and (b) instructional methods that make effective links to students' prior experiences and learning are essential to learning.

The MRSh design seeks to structure a school environment that allows students to vary their level of effort to meet academic standards and enables teachers to use a variety of pedagogies and adapt instructional strategies to meet the needs of students. High academic standards are the same for all students. The MRSh design assumes that schools are accountable for student outcomes, but proposes giving schools considerable freedom in selecting strategies to achieve student outcomes in terms of staffing, instructional design, and the use of time. Community

and parent involvement focuses on activities that support student learning—whether it be assisting teachers in establishing links between disciplinary knowledge and concrete problems in industry and communities, or by providing students with additional opportunities to advance their understanding or mastery of standards outside the regular school day.

This design views assessment as an ongoing activity embedded in the instructional process. Remedial courses should not be necessary; rather, extra time or varying approaches are available as needed in any given week. Formal assessments in the original design include *capstone units* that, taken collectively, address all academic standards through interdisciplinary performance assessments. Capstone units are interdisciplinary units that have a cumulating performance assessment intended to allow students to demonstrate mastery of a number of academic standards. As part of a larger assessment system, they provide teachers with data regarding a student's readiness to take one or more subject exams to confirm their mastery. A more traditional set of subject exams, common to all schools, verifies that students have met the necessary level of mastery required of all MRSh students. Extending the services already available to students with special needs, the design expects teachers to work with students and their parents to develop an Individual Education Compact, which is an ongoing plan for student learning that specifies the responsibility of each party (student, parent, and teacher). As students mature, they take increasing responsibility for proposing the compact, constrained only by the standards they are ultimately required to master. Technology is not only used for instructional activities, but is an essential tool for communication within the school community and for management of classroom instruction.

In developing training to support wider adoption of the design among existing schools, MRSh sought to enable schools to complete substantial portions of implementation within a three-year period with twenty to thirty days of technical assistance a year. The structure and content of the assistance assumes that schools are at different starting points along a continuum of implementation—thus the need to customize the time and methods of implementation at each school. Similarly, the MRSh design calls for developing the actual plan of instruction at each school to reflect the state or dis-

trict academic standards and the prior cultural and academic experiences of the students attending the school.

In 1998 federal funding became available that allowed schools with economically disadvantaged students to adopt a Comprehensive School Reform Design, which would enable them to effect substantial improvements in student achievement over a three-year period. In this massive scale-up, MRSh Institute—which had been established as an independent organization in 1997—adapted the original model to serve these schools. In general, the formal assessment system in the original design was replaced by that of the relevant state or district, and the technology acquisition was adapted to meet the various exigencies of urban school districts. The MRSh Institute’s essential contribution to school reform has been to operationalize the notion of a standards-driven school and classroom and, as such, many districts rely upon its services to assist schools in re-framing their work to match district or state standards. From 1993 to 2002 the Modern Red Schoolhouse Institute had served 130 schools in fifty-six districts and provided district-wide services in five metropolitan areas.

*See also:* ACCELERATED SCHOOLS; ALTERNATIVE SCHOOLING; GRADING SYSTEMS.

#### INTERNET RESOURCE

MODERN RED SCHOOLHOUSE INSTITUTE. 2002.  
<[www.mrsh.org](http://www.mrsh.org)>.

SALLY B. KILGORE

## MONTESSORI, MARIA (1870–1952)

Physician Maria Montessori is recognized as one of the pioneers in the development of early childhood education. She is also credited with promoting a substantial number of important educational reforms that have worked their way over the course of the twentieth century into the mainstream of education. These include the recognition of multiple pathways to learning, the importance of concrete or hands-on learning, the stages of cognitive development in children, and the link between children’s emotional development and their ability to learn at

an optimal rate. Her ideas about the importance of the first six years of life and the boundless potential of children—regardless of race, gender, or social class—made a significant contribution to human rights as societies around the world began to redefining the rights and roles of women and children.

### Biography

Montessori was born in 1870 to an educated middle-class family in Ancona, Italy. Growing up in a country that was, at the time, very conservative in its attitude toward and treatment of women, Montessori pursued a medical and scientific education. In 1896, despite many years of opposition from her father, teachers, and male fellow students, she graduated with highest honors from the Medical School of the University of Rome, becoming the first woman physician in Italy.

### Work with Disabled Children

As a physician, Montessori specialized in pediatrics and the newly evolving field of psychiatry. Her approach was that of a well-trained scientist, rather than the familiar philosophical exploration and intuitive approach followed by many of the educational innovators who came before and after. Montessori found it ironic that she became best known for her contributions in education, a field that she had been unwilling to enter as it was one of the three traditional roles open to women at the time: working with children, homemaking, or the convent.

Montessori taught at the medical school of the University of Rome, and through its free clinics she came into frequent contact with the children of the working class and poor. Her experience with the children of poverty convinced Montessori that intelligence is not rare, although it seemed to present itself in many forms other than those recognized by traditional schools.

In 1900 Montessori was appointed director of the new Orthophrenic School attached to the University of Rome, formerly a municipal asylum for the “deficient and insane” children of the city, most of whom would be diagnosed in the twenty-first century as autistic or mentally disabled. She and her colleagues initiated a wave of reform in an institution that formerly had merely confined these mentally challenged youngsters in barren settings. Recognizing her young patients’ need for stimulation, purposeful activity, and self-esteem, Montessori dismissed the caretakers who treated the inmates

with contempt. Facing a desperate lack of staff to care for so many children in a residential setting, she set out to teach as many as possible of the less-disturbed children to care for themselves and their fellow inmates.

### **Links to Itard and Séguin**

From 1900 to 1901, Montessori combed the medical libraries of western Europe seeking successful work previously done with the education of children with disabilities. Her studies led Montessori to the work of two almost forgotten French physicians of the eighteenth and nineteenth centuries: Jean-Marc-Gaspard Itard and Édouard Séguin. Itard is well known in the twenty-first century for his work with the “Wild Boy of Aveyron,” a youth who had been found wandering naked in the forest, presumably abandoned as a very young child and thus spending many years living alone. The boy could not speak and lacked almost all of the skills of everyday life. Here apparently was a “natural” man, a human being who had grown up outside of human society without the influence of interaction with his own kind. Itard hoped from this study to shed some light on the age-old debate about what proportion of human intelligence and personality is hereditary and what proportion stems from learned behavior.

This experiment was a limited success, although it captured the attention and imagination of many of his contemporaries. Itard found his wild boy uncooperative and unwilling or unable to learn most things. This led him to postulate the existence of developmental periods in normal human growth. He formed the hypothesis that, during these “sensitive periods,” a child must experience stimulation to develop normally, or grow up, forever lacking the skills and intellectual concepts not developed at the stage when nature expects them to be readily absorbed.

Although Itard’s efforts to teach the wild boy were barely successful, he followed a methodical approach in designing the process, arguing that all education would benefit from the use of careful observation and experimentation. This idea had tremendous appeal to the scientifically trained Montessori, and later became the cornerstone of her method.

From the work of Édouard Séguin, a French psychologist who studied with Itard and carried on his research, Montessori drew further confirmation of Itard’s ideas, along with a far more specific and

organized system for applying it to the everyday education of children with disabilities. Working primarily with the blind, Séguin developed a methodical approach to breaking skills down into small steps, and was highly successful with a carefully developed collection of hands-on educational materials. In the early twenty-first century, Séguin is recognized as the founder of the modern approach to special education.

### **The Orthophrenic School**

From these two predecessors, Montessori took the idea of a scientific approach to education, based on observation and experimentation. She belongs to the child study school of thought and pursued her work with the careful training and objectivity of the biologist studying the natural behavior of an animal in the forest. Montessori studied her mentally disabled patients, listening and carefully noting their response to her attempts to implement Séguin’s educational methods, as well as their progress in becoming increasingly independent and verbal.

Slowly the children learned to perform most of the everyday tasks involved in preparing the meals and maintaining the environment of the residential school. Her success with these mentally disabled children received international attention when, after two years, many of Montessori’s such adolescents were able to pass the standard exams given by the Italian public schools.

Acclaimed for this miracle, Montessori responded by suggesting that newborn human beings normally enter the world with an intellectual potential that was barely being developed by schools in the early years of the twentieth century. She challenged that if she could attain such results with children who were disabled, schools should be able to get dramatically better results with normal children.

Montessori’s work reinforced her humanistic ideals, and she actively supported various social reform movements. She was a highly regarded guest speaker throughout Europe on behalf of children’s rights, the women’s movement, peace education, and the importance of a league of nations. Montessori became well known and highly regarded throughout Europe, which contributed to the publicity that surrounded her schools.

### **The Children’s House**

Unfortunately, the Italian Ministry of Education did not welcome Montessori’s ideas, and she was denied

access to school-aged children. Frustrated in her efforts to conduct the experiment with public school students, in 1907 she welcomed the opportunity to serve as the medical director for a day-care center that was being organized for working-class children who were too young to attend public school.

This first Casa dei Bambini (Children's House) was located in the worst slum district of Rome, and the conditions Montessori faced were appalling. Her first class consisted of fifty children, from two through five years of age, taught by one untrained caregiver. The children remained at the center from dawn to dusk while their parents worked, and had to be fed two meals per day, bathed regularly, and given a program of medical care. The children themselves were typical of extreme inner-city poverty conditions. They entered the Children's House on the first day crying and pushing, exhibiting generally aggressive and impatient behavior. Montessori, not knowing whether her experiment would work under such conditions, began by teaching the older children how to help out with the everyday tasks that needed to be done. She also introduced the manipulative perceptual discrimination and puzzles and eye-hand manipulative exercises that she had used with mentally disabled children.

The results surprised her, for unlike her mentally disabled children who had to be prodded to use her apparatus, these very small children were drawn to the work she introduced. Children who had wandered aimlessly the week before began to settle down to long periods of constructive activity. They were fascinated with the puzzles and perceptual training devices.

To Montessori's amazement, children three and four years old took the greatest delight in learning practical everyday living skills that reinforced their independence and self-respect. Each day they begged her to show them more, even applauding with delight when Montessori taught them the correct use of a handkerchief to blow one's own nose. Soon the older children were taking care of the school, assisting their teacher with the preparation and serving of meals and the maintenance of a spotless environment. Their behavior as a group changed dramatically from that of street urchins running wild to models of grace and courtesy. It was little wonder that the press found such a human-interest story appealing and promptly broadcast it to the world.

Montessori education is sometimes criticized for being too structured and academically demand-

ing of young children. Montessori would have laughed at this suggestion. She often said, "I followed these children, studying them, studied them closely, and they taught me how to teach them."

Montessori made a practice of paying close attention to the children's spontaneous behavior, arguing that only in this way could a teacher know how to teach. Traditionally schools at this time paid little attention to children as individuals, other than to demand that they adapt to external standards. Montessori argued that the educator's job is to serve the child, determining what each student needs to make the greatest progress. To her, a child who fails in school should not be blamed, any more than a doctor should blame a patient who does not get well fast enough. Just as it is the job of the physician to help people find the way to cure themselves, it is the educator's job to facilitate the natural process of learning.

Montessori's children exploded into academics. Too young to go to public school, they begged to be taught how to read and write. They learned to do so quickly and enthusiastically, using special manipulative materials that Montessori designed for maximum appeal and effectiveness. The children were fascinated by numbers. To respond to their interest, the mathematically inclined doctor developed a series of concrete math learning materials that still fascinates many mathematicians and educators to this day. Soon her four- and five-year-olds were adding and subtracting four-digit numbers, soon progressing on to multiplication, division, skip counting, and increasingly advanced and abstract concepts.

Their interests blossomed in other areas as well, compelling the overworked physician to spend night after night designing new materials to keep pace with the children in geometry, geography, history, and natural science. Further proof of the children's academic interests came shortly after her first school opened, when a group of well-intentioned women gave the children a collection of lovely and expensive toys. The new gifts held the children's attention for a few days, but they soon returned to the more interesting learning materials. To Montessori's surprise, she found that children who had experienced both generally preferred work over play, at least during the school day. Of the early twenty-first century classroom, Montessori would probably add: "Children read and do advanced mathematics in Montessori schools not because we push them, but because this is what they do when given the correct setting

and opportunity. To deny them the right to learn because we, as adults, think that they should not is illogical and typical of the way schools have been run before.”

Montessori evolved her method through trial and error, making educated guesses about the underlying meaning of the children’s actions. She was quick to pick up on their cues, and constantly experimented with the class. For example, Montessori tells of the morning when the teacher arrived late, only to find that the children had crawled through a window and gone right to work. At the beginning, the learning materials, having cost so much to make, were locked away in a tall cabinet. Only the teacher had a key and would open it and hand the materials to the children upon request. In this instance the teacher had neglected to lock the cabinet the night before. Finding it open, the children had selected one material piece and were working quietly. As Montessori arrived the teacher was scolding the children for taking them out without permission. She recognized that the children’s behavior showed that they were capable of selecting their own work, and removed the cabinet and replaced it with low open shelves on which the activities were always available to the children. This may sound like a minor change, but it contradicted all educational practice and theory of that period.

### **The Discovery of the Child**

One discovery followed another, giving Montessori an increasingly clear view of the inner mind of the child. She found that little children were capable of long periods of quiet concentration, even though they rarely show signs of it in everyday settings. Although they are often careless and sloppy, they respond positively to an atmosphere of calm and order.

Montessori noticed that the logical extension of the young child’s love for a consistent and often repeated routine is an environment in which everything has a place. Her children took tremendous delight in carefully carrying their work to and from the shelves, taking great pains not to bump into anything or spill the smallest piece. They walked carefully through the rooms, instead of running wildly as they did on the streets.

Montessori discovered that the environment itself was all-important in obtaining the results that she had observed. Not wanting to use heavy school

desks, she had carpenters build child-sized tables and chairs. She was the first to do so, recognizing the frustration that a little child experiences in an adult-sized world. Eventually she learned to design entire schools around the size of the children. She had miniature pitchers and bowls prepared and found knives that fit a child’s tiny hand. The tables were lightweight, allowing two children to move them alone. The children learned to control their movements, disliking the way the calm atmosphere was disturbed when they knocked into the furniture. Montessori studied the traffic pattern of the rooms, arranging the furnishings and the activity area to minimize congestion and tripping. The children loved to sit on the floor, so she bought little rugs to define their work areas and the children quickly learned to walk around work that other children had laid out on their rugs.

Montessori carried this environmental engineering throughout the entire school building and outside environment, designing child-sized toilets and low sinks, windows low to the ground, low shelves, and miniature hand and garden tools of all sorts. Many of these ideas were eventually adapted by the larger educational community, particularly at the nursery and kindergarten levels. Many of the puzzles and educational devices in use at the preschool and elementary levels in the early twenty-first century are direct copies of Montessori’s original ideas. However, there is far more of her work that never entered the mainstream, and twenty-first-century educators who are searching for new, more effective answers are finding the accumulated experience of the Montessori community to be of great interest.

### **Worldwide Response**

Maria Montessori’s first Children’s House received overnight attention, and thousands of visitors came away amazed and enthusiastic. Worldwide interest surged as she duplicated her first school in other settings with the same results. Montessori captured the interest and imagination of leaders and scientists around the world. In America, leading figures such as Woodrow Wilson, Alexander Graham Bell, Thomas Edison, and Henry Ford enthusiastically supported her. Through books and countless articles written about and by Montessori, she also became a well-known authority to parents and teachers.

As an internationally respected scientist, Montessori had a rare credibility in a field where many

others had promoted opinions, philosophies, and models that have not been readily duplicated. The Montessori method offers a systematic approach that translates very well to new settings. In the first thirty years of the twentieth century, the Montessori method seemed to offer something for everyone. Conservatives appreciated the calm, responsible behavior of the little children, along with their love for work. Liberals applauded the freedom and spontaneity. Many political leaders saw it as a practical way to reform the outmoded school systems of Europe, North America, and Asia, as well as an approach that they hoped would lead to a more productive and law-abiding populace. Scientists of all disciplines heralded its empirical foundation, along with the accelerated achievement of the little children. Montessori rode a wave of enthusiastic support that many felt should have changed the face of education far more dramatically than it did.

### **The Decline and Resurgence of Interest in Montessori Education in America**

By 1925 there were more than 1,000 Montessori schools in the United States and many tens of thousands more around the world. But by 1940 the movement had virtually disappeared from the American scene. Only a handful of schools remained that openly advertised that they followed the Montessori approach, although many continued to operate without using the name. Education textbooks failed to mention her at all except as an obscure footnote, and her work was virtually forgotten until it was “rediscovered” and brought back to North America in the 1960s by Dr. Nancy McCormick Rambush and the newly formed and rapidly expanding American Montessori Society. During this period, Montessori schools continued to expand in most of the rest of the world.

The question is often asked about what led to the decline of Montessori education in the United States. Several reasons can be reasonably postulated, including the disruption in trans-Atlantic travel during and after World War I and World War II. Many would agree that a highly influential book published in 1922 by Professor William Kilpatrick of Columbia University, *Montessori Reexamined*, may have led many American educators to dismiss Montessori unfairly as being an intellectual holdover from the outdated and no longer accepted theories of faculty psychology. Kilpatrick pronounced that Montessori was rigid, outdated, and mistaken in her attempt to

educate the senses, suggesting that she was under the misapprehension that the brain and senses could be strengthened, like a muscle, by exercises in sensory training and memorization. Unfortunately, this and many other criticisms were unfounded, primarily based on a lack of accurate information and understanding, along with perhaps some bias against Montessori’s popularity as she was a doctor and not a trained educator. Others have suggested that her being a highly articulate and outspoken woman who was openly critical of the schools of her day may have also played a substantial role.

In the early twenty-first century there are almost six thousand Montessori schools in the United States, and their number continues to expand in virtually every country around the world. In America, most Montessori schools are nonpublic and primarily serve early childhood students between the age of two and six. However, the number of public school districts implementing the Montessori approach has grown substantially since the 1980s, with more than 300 districts running more than 500 magnet Montessori schools. As charter schools have developed, Montessori schools are among the most popular and successful models.

Also since the 1980s, Montessori schools have tended to expand in both enrollment and the age levels served, with the majority of schools offering elementary programs as well as early childhood. Secondary Montessori programs are less common, but are beginning to appear in substantial numbers, initially as middle school programs and gradually as high school programs as well.

The largest professional society in the United States is the American Montessori Society in New York City. It accredits Montessori schools and more than fifty university-sponsored and independent Montessori teacher education centers around the United States. Several dozen smaller professional Montessori associations can also be found in the United States. They include the Association Montessori Internationale (AMI), the society founded by Montessori herself in 1929, which has its headquarters in the Netherlands and a national office in Rochester, New York; and the more recently founded umbrella organization for Montessori schools, the International Montessori Council (IMC), which has its American offices in Rockville, Maryland, and Sarasota, Florida. The Montessori Accreditation Council for Teacher Education (MACTE) also accredits Montessori teacher education programs and is rec-

ognized by the United States Department of Education.

Montessori's prime productive period lasted from the opening of the first Children's House in 1907 until the 1930s. During this time, she continued her study of children, and developed a vastly expanded curriculum and methodology for the elementary level as well. Montessori schools were set up throughout Europe and North America, and Montessori gave up her medical practice to devote all of her energies to advocating the rights and intellectual potential of all children.

During her lifetime, Montessori was acknowledged as one of the world's leading educators. As with all innovators, the educational community moved on beyond Montessori, adapting many elements of her work that fit into existing theories and methods. It can be fairly suggested that every classroom in America reflects Montessori's ideas to a fairly substantial degree. Certainly the contemporary attitudes about multiple intelligences, the importance of mental health and emotional literacy, the attractiveness of the modern classroom, the use of manipulative materials in instruction, cooperative learning, authentic assessment, and multiage classrooms as a desirable model for classroom groupings are just a few examples of ideas generally attributed to Maria Montessori.

Ironically, schools are beginning to recognize that the Montessori approach has much more to offer, primarily because to obtain the results that Montessori made world famous, schools must implement her model as a complete restructuring of the school and the teacher's role, rather than as a series of piecemeal reforms.

As understanding of child development has grown, many contemporary American educators and those who would reform education have rediscovered how clear and sensible her insight was. In the early twenty-first century, there is a growing consensus among many psychologists and developmental educators that her ideas and educational model were decades ahead of their time. As the movement gains support and continues to spread into the American public school sector, one can readily say that Montessori, begun at the dawn of the twentieth century, is a remarkably modern approach.

*See also:* EARLY CHILDHOOD EDUCATION; INSTRUCTIONAL STRATEGIES.

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TIMOTHY DAVID SELDIN

## MORAL DEVELOPMENT

The Swiss psychologist Jean Piaget, author of the 1932 book *The Moral Judgment of the Child*, is among the first psychologists whose work remains directly relevant to contemporary theories of moral development and education. From his observations and interviews of children, Piaget concluded that children begin in a "heteronomous" stage of moral reasoning, characterized by a strict adherence to rules and duties and obedience to authority. This heteronomy results from two factors. The first factor is the young child's cognitive structure. According to Piaget, the thinking of young children is characterized by egocentrism. Young children are unable to simultaneously take into account their own view of things with the perspective of someone else. This egocentrism leads children to project their own thoughts and wishes onto others. It is also associated with the unidirectional view of rules and power associated with heteronomous moral thought and with various forms of "moral realism." Moral realism is associated with "objective responsibility," which is valuing the letter of the law above the purpose of the law. This is why young children are more concerned about the outcomes of actions rather than the intentions of the person doing the act. Moral realism is also associated with the young child's belief in "immanent justice." This is the expectation that punishments automatically follow acts of wrongdoing.

The second major contributor to young children's heteronomous moral thinking is their relative

social relationship with adults. In the natural authority relationship between adults and children, power is handed down from above. The relative powerlessness of young children, coupled with childhood egocentrism, feeds into a heteronomous moral orientation. Nevertheless, through interactions with other children in which the group seeks to play together in a way all find fair, children find this strict heteronomous adherence to rules sometimes problematic. As children consider these situations, they develop towards an “autonomous” stage of moral reasoning, characterized by the ability to consider rules critically and to selectively apply these rules based on a goal of mutual respect and cooperation. The ability to act from a sense of reciprocity and mutual respect is associated with a shift in the child’s cognitive structure from egocentrism to perspective taking. Coordinating one’s own perspective with that of others means that what is right needs to be based on solutions that meet the requirements of fair reciprocity.

Piaget concluded from this work that schools should emphasize cooperative decision-making and problem solving, nurturing moral development by requiring students to work out common rules based on fairness. He believed individuals define morality individually through their struggles to arrive at fair solutions. Given this view, Piaget suggested that classroom teachers should provide students with opportunities for personal discovery through problem solving, rather than indoctrinating students with norms.

### **Lawrence Kohlberg’s Theory of Moral Development and Education**

The American psychologist Lawrence Kohlberg modified and elaborated Piaget’s work and determined that the process of attaining moral maturity took longer and was more gradual than Piaget had proposed. On the basis of his research, Kohlberg identified six stages of moral reasoning grouped into three major levels. At the first, *preconventional* level, a person’s moral judgments are characterized by a concrete, individual perspective. Within this level, a Stage 1 heteronomous orientation focuses on avoiding breaking rules that are backed by punishment, obedience for its own sake, and avoiding the physical consequences of an action. At Stage 2 a moral orientation emerges that focuses on the instrumental, pragmatic values of actions. Reciprocity is of the form: “you scratch my back and I’ll scratch yours.”

Individuals at the second, *conventional*, level reason about moral situations with an understanding that norms and conventions are necessary to uphold society. Within this level, individuals at Stage 3 define what is right in terms of what is expected by people close to them and in terms of the stereotypical roles that define being good—for example, a good brother, mother, teacher. Stage 4 marks the shift from defining what is right in terms of local norms and role expectations to defining right in terms of the laws and norms established by the larger social system. This is the “member of society” perspective in which one is moral by fulfilling the actual duties defining one’s social responsibilities.

Finally, the *postconventional* level is characterized by reasoning based on principles, using a “prior to society” perspective. These individuals reason on the basis of principles that underlie rules and norms. While two stages have been presented within the theory, only one, Stage 5, has received substantial empirical support. Stage 6 remains a theoretical endpoint that rationally follows from the preceding five stages. In essence this last level of moral judgment entails reasoning rooted in the ethical fairness principles from which moral laws would be devised. Laws are evaluated in terms of their coherence with basic principles of fairness rather than upheld simply on the basis of their place within an existing social order.

Kohlberg used findings from his research to reject traditional character education practices that are premised in the idea that virtues and vices are the basis to moral behavior, or that moral character is comprised of a “bag of virtues,” such as honesty, kindness, patience, and strength. Kohlberg believed a better approach to affecting moral behavior would focus on stages of moral development. Initial educational efforts employing Kohlberg’s theory sought to engage students in classroom discussions of moral dilemmas that would lead to an awareness of contradictions inherent in students’ present level of moral reasoning and to shifts toward the next stage of moral judgment. Kohlberg and his colleagues eventually developed the “just community” schools approach toward promoting moral development, described in the 1989 book *Lawrence Kohlberg’s Approach to Moral Education*. These schools seek to enhance moral development by offering students the chance to participate in community discussions to arrive at consensual resolutions of the actual moral

problems and issues students face as members of the school community.

### **Domain Theory: Distinguishing Morality and Convention**

In the early 1970s, longitudinal studies conducted by the Kohlberg research group began to reveal anomalies in the stage sequence. One of the most productive lines of research to come out of that period has been the domain theory advanced by Elliot Turiel and his colleagues. Within domain theory a distinction is drawn between the child's developing concepts of morality and other domains of social knowledge, such as social convention. According to domain theory, the child's concepts of morality and social convention emerge out of the child's attempts to account for qualitatively differing forms of social experience associated with these two classes of social events. Actions within the moral domain, such as unprovoked hitting of someone, have intrinsic effects (i.e., the harm that is caused) on the welfare of another person. Such intrinsic effects occur regardless of the nature of social rules that may or may not be in place regarding the action. Because of this, the core features of moral cognition are centered around considerations of the effects that actions have upon the well-being of persons. Morality is structured by concepts of harm, welfare, and fairness. In contrast, actions that are matters of social convention have no intrinsic interpersonal consequences. For example, there is nothing intrinsic to forms of address that makes calling a college teacher "professor" better or worse than calling the person Ms. or simply using her given name. What makes one form of address better than another is the existence of socially agreed-upon rules. These conventions, while arbitrary, are nonetheless important to the smooth functioning of any social group. Conventions provide a way for members of the group to coordinate their social exchanges through a set of agreed-upon and predictable modes of conduct. Concepts of convention, then, are structured by the child's understandings of social organization. These hypothesized distinctions have been sustained through studies since the mid-1970s that have included interviews with children, adolescents, and adults; observations of child-child and adult-child social interactions; cross-cultural studies; and longitudinal studies examining the changes in children's thinking as they grow older.

Educational research from within domain theory has resulted in a set of recommendations for what

is termed "domain appropriate" values education. This approach entails the teacher's analysis and identification of the moral or conventional nature of social values issues to be employed in lessons. Such an analysis contributes to the likelihood that the issues discussed are concordant with the domain of the values dimension they are intended to affect. Teachers are also better enabled to lead students through consideration of more complex issues that contain elements from more than one domain.

### **Carol Gilligan and the Morality of Care**

Carol Gilligan, in a 1982 book titled *In a Different Voice: Psychological Theory and Women's Development*, suggested that a morality of care can serve in the place of the morality of justice and rights espoused by Kohlberg. A way to look at how these differ is to view these two moralities as providing two distinct injunctions—the injunction not to treat others unfairly (justice) and the injunction not to turn away from someone in need (care). She presents these moralities as distinct, although potentially connected. In her initial work, Gilligan emphasized the gender differences thought to be associated with these two orientations. Further research has suggested, however, that moral reasoning does not follow the distinct gender lines that Gilligan originally reported. The preponderance of evidence is that both males and females reason based on justice and care. While this gender debate is unsettled, Gilligan's work has contributed to an increased awareness that care is an integral component of moral reasoning. Educational approaches based on Gilligan's work have emphasized efforts to foster empathy and care responses in students.

### **Persisting Controversies**

Three primary controversies persist in the field of moral development research. First, there is disagreement over whether morality has universal elements or is cross-cultural. Second, there is disagreement over whether morality develops in stages or levels. Finally, there are unresolved issues regarding the connections between moral judgments and action. The latter is of greatest concern to educators because one of the primary goals of education is to produce citizens who will lead moral lives. The most promising line of work attempting to deal with this issue is exploring the development of what is referred to as the "moral self." This approach assumes that people act on the basis of their moral judgments if being

moral is a central part of their sense of personal identity.

*See also:* CHARACTER DEVELOPMENT; KOHLBERG, LAWRENCE; MORAL EDUCATION; PIAGET, JEAN.

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LARRY NUCCI

## MORAL EDUCATION

Only a handful of educational theorists hold the view that if only the adult world would get out of the way, children would ripen into fully realized people. Most thinkers, educational practitioners, and parents acknowledge that children are born helpless and need the care and guidance of adults into their teens and often beyond. More specifically, children need

to learn how to live harmoniously in society. Historically, the mission of schools has been to develop in the young both the intellectual and the moral virtues. Concern for the moral virtues, such as honesty, responsibility, and respect for others, is the domain of moral education.

Moral education, then, refers to helping children acquire those virtues or moral habits that will help them individually live good lives and at the same time become productive, contributing members of their communities. In this view, moral education should contribute not only to the students as individuals, but also to the social cohesion of a community. The word *moral* comes from a Latin root (*mos, moris*) and means the code or customs of a people, the social glue that defines how individuals should live together.

### A Brief History of Moral Education

Every enduring community has a moral code and it is the responsibility and the concern of its adults to instill this code in the hearts and minds of its young. Since the advent of schooling, adults have expected the schools to contribute positively to the moral education of children. When the first common schools were founded in the New World, moral education was the prime concern. New England Puritans believed the moral code resided in the Bible. Therefore, it was imperative that children be taught to read, thus having access to its grounding wisdom. As early as 1642 the colony of Massachusetts passed a law requiring parents to educate their children. In 1647 the famous Old Deluder Satan Act strengthened the law. Without the ability to read the Scriptures, children would be prey to the snares of Satan.

**The colonial period.** As common school spread throughout the colonies, the moral education of children was taken for granted. Formal education had a distinctly moral and religion emphasis. Harvard College was founded to prepare clergy for their work. Those men who carved out the United States from the British crown risked their fortunes, their families, and their very lives with their seditious rebellion. Most of them were classically educated in philosophy, theology, and political science, so they had learned that history's great thinkers held democracy in low regard. They knew that democracy contained within itself the seeds of its own destruction and could degenerate into mobocracy with the many preying on the few and with political leaders pandering to the citizenry's hunger for bread and circuses.

The founders' writings, particularly those of Thomas Jefferson, James Madison, John and Abigail Adams, and Benjamin Franklin, are filled with admonitions that their new country make education a high priority. While the early leaders saw economic reasons for more and longer schooling, they were convinced that the form of government they were adopting was, at heart, a moral compact among people.

**Nineteenth century.** As the young republic took shape, schooling was promoted for both secular and moral reasons. In 1832, a time when some of the Founding Fathers were still alive, Abraham Lincoln wrote, in his first political announcement (March 9, 1832), "I desire to see a time when education, and by its means, morality, sobriety, enterprise and industry, shall become much more general than at present." Horace Mann, the nineteenth-century champion of the common schools, strongly advocated for moral education. He and his followers were worried by the widespread drunkenness, crime, and poverty during the Jacksonian period in which they lived. Of concern, too, were the waves of immigrants flooding into cities, unprepared for urban life and particularly unprepared to participate in democratic civic life. Mann and his supporters saw free public schools as the ethical leaven of society. In 1849, in his twelfth and final report to the Massachusetts Board of Education, he wrote that if children age four to sixteen could experience "the elevating influences of good schools, the dark host of private vices and public crimes, which now embitter domestic peace and stain the civilization of the age, might, in 99 cases in every 100, be banished from the world" (p. 96).

In the nineteenth century, teachers were hired and trained with the clear expectation that they would advance the moral mission of the school and attend to character formation. Literature, biography, and history were taught with the explicit intention of infusing children with high moral standards and good examples to guide their lives. Students' copy-book headings offered morally uplifting thoughts: "Quarrelsome persons are always dangerous companions" and "Praise follows exertion." The most successful textbooks during the nineteenth and early twentieth centuries were the famed McGuffey readers, which were filled with moral stories, urgings, and lessons. During this period of our evolution as a nation, moral education was deep in the very fabric of our schools.

There was, however, something else in the fabric of moral education that caused it to become problematic: religion. In the United States, as a group of colonies and later as a new nation, the overwhelming dominant religion was Protestantism. While not as prominent as during the Puritan era, the King James Bible was, nevertheless, a staple of U.S. public schools. The root of the moral code was seen as residing there. However, as waves of immigrants from Ireland, Germany, and Italy came to the country from the mid-nineteenth century forward, the pan-Protestant tone and orthodoxy of the schools came under scrutiny and a reaction set in. Concerned that their children would be weaned from their faith, Catholics developed their own school system. Later in the twentieth century, other religious groups, such as Jews, Muslims, and even various Protestant denominations, formed their own schools. Each group desired, and continues to desire, that its moral education be rooted in its respective faith or code.

**Twentieth century.** During this same late-nineteenth-century and twentieth-century period, there was also a growing reaction against organized religion and the belief in a spiritual dimension of human existence. Intellectual leaders and writers were deeply influenced by the ideas of the English naturalist Charles Darwin, the German political philosopher Karl Marx, the Austrian neurologist and founder of psychoanalysis Sigmund Freud, and the German philosopher and poet Friedrich Nietzsche, and by a growing strict interpretation of the separation of church and state doctrine. This trend increased after World War II and was further intensified by what appeared to be the large cracks in the nation's moral consensus in the late 1960s. Since for so many Americans the strongest roots of moral truths reside in their religious beliefs, educators and others became wary of using the schools for moral education. More and more this was seen to be the province of the family and the church. Some educators became proponents of "value-free" schooling, ignoring the fact that it is impossible to create a school devoid of ethical issues, lessons, and controversies.

During the last quarter of the twentieth century, as many schools attempted to ignore the moral dimension of schooling, three things happened: Achievement scores began to decline, discipline and behavior problems increased, and voices were raised accusing the schools of teaching secular humanism. As the same time, educators were encouraged to

address the moral concerns of students using two approaches: values clarification and cognitive developmental moral education.

The first, *values clarification*, rests on little theory other than the assumption that students need practice choosing among moral alternatives and that teachers should be facilitators of the clarification process rather than indoctrinators of particular moral ideas or value choices. This approach, although widely practiced, came under strong criticism for, among other things, promoting moral relativism among students. While currently few educators confidently advocate values clarification, its residue of teacher neutrality and hesitance to actively address ethical issues and the moral domain persists.

The second approach, *cognitive developmental moral education*, sprang from the work of the Swiss psychologist Jean Piaget and was further developed by Lawrence Kohlberg. In contrast to values clarification, cognitive moral development is heavy on theory and light on classroom applications. In its most popular form, Kohlberg posited six sequential stages of moral development, which potentially individuals could achieve. Each stage represents a distinctive way an individual thinks about a moral situation or problem. Teachers are encouraged to engage students from an early age and throughout their schooling in discussion of moral issues and dilemmas. In the later years of his life, Kohlberg was urging educators to transform their schools into “just communities,” environments within which students’ moral stage development would accelerate.

### The Return of Character Education

In the early 1980s, amid the widespread concern over students’ poor academic achievements and behavior, educators rediscovered the word *character*. Moral education had a religious tinge, which made many uneasy. Character with its emphasis on forming good habits and eliminating poor habits struck a popular and traditional chord. The word *character* has a Greek root, coming from the verb “to engrave.” Thus character speaks to the active process of making marks or signs (i.e., good habits) on one’s person. The early formation of good habits is widely acknowledged to be in the best interests of both the individual and society.

In addition, character formation is recognized as something that parents begin early, but the work is hardly completed when a child goes to school. Im-

PLICIT in the concept of character is the recognition that adults begin the engraving process of habituation to consideration of others, self-control, and responsibility, then teachers and others contribute to the work, but eventually the young person takes over the engraving or formation of his own character. Clearly, though, with their learning demands and taxing events, children’s school years are a prime opportunity for positive and negative (i.e., virtues and vices) character formation.

The impetus and energy behind the return of character education to American schools did not come from within the educational community. It has been fueled, first, by parental desire for orderly schools where standards of behavior and good habits are stressed, and, second, by state and national politicians who responded to these anxious concerns of parents. During his presidency, William Clinton hosted five conferences on character education. President George W. Bush expanded on the programs of the previous administration and made character education a major focus of his educational reform agenda. One of the politically appealing aspects of character education, as opposed to moral education with its religious overtones, is that character education speaks more to the formation of a good citizen. A widely repeated definition (i.e., character education is helping a child to know the good, to desire the good, and to do the good) straddles this issue. For some people the internal focus of character education comfortably can be both religious and civic and for others the focus can be strictly civic, dealing exclusively on the formation of the good citizen.

### Current Approaches to Moral Education

The overwhelming percentage of efforts within public education to address the moral domain currently march under the flag of character education. Further, since these conscious efforts at addressing issues of character formation are relatively recent, they are often called *character education programs*. The term *program* suggests, however, discrete initiatives that replace an activity or that are added to the school’s curriculum (e.g., a new reading program or mathematics program). And, although there are character education programs available, commercially and otherwise, most advocates urge the public schools to take an infusion approach to educating for character.

**The infusion approach.** In general, an *infusion approach* to character education aims to restore the formation of students' characters to a central place in schooling. Rather than simply adding on character formation to the other responsibilities of schools, such as numeracy, literacy, career education, health education, and other goals, a focus on good character permeates the entire school experience. In essence, character education joins intellectual development as the overarching goals of the school. Further, character education is seen, not in competition with or ancillary to knowledge- and skill-acquisition goals, but as an important contributor to these goals. To create a healthy learning environment, students need to develop the virtues of responsibility and respect for others. They must eliminate habits of laziness and sloppiness and acquire habits of self-control and diligence. The infusion approach is based on the view that the good habits that contribute to the formation of character in turn contribute directly to the academic goals of schooling.

A mainstay of the infusion approach is the recovery, recasting, or creating of a school's mission statement, one that reflects the priority placed on the development of good character. Such a statement legitimizes the attention of adults and students alike to this educational goal. It tells administrators that teachers and staff should be hired with good character as a criterion; it tells teachers that not only should character be stressed to students but also their own characters are on display; it tells coaches that athletics should be seen through the lens of sportsmanship rather than winning and losing; and it tells students that their efforts and difficulties, their successes and disappointments are all part of a larger process, the formation of their characters.

Critical to the infusion approach is using the curriculum as a source of character education. This is particularly true of the language arts, social studies, and history curricula. The primary focus of these subjects is the study of human beings, real and fictitious. Our great narrative tales carry moral lessons. They convey to the young vivid images of the kinds of people our culture admires and wants them to emulate. These subjects also show them how lives can be wasted, or worse, how people can betray themselves and their communities. Learning about the heroism of former slave Sojourner Truth, who became an evangelist and reformer, and the treachery of Benedict Arnold, the American army officer

who betrayed his country to the British, is more than picking up historical information. Encountering these lives fires the student's moral imagination and deepens his understanding of what constitutes a life of character. Other subjects, such as mathematics and science, can teach students the necessity of intellectual honesty. The curricula of our schools not only contain the core knowledge of our culture but also our moral heritage.

In addition to the formal or overt curriculum, schools and classrooms also have a hidden or covert curriculum. A school's rituals, traditions, rules, and procedures have an impact on students' sense of what is right and wrong and what is desired and undesired behavior. So, too, does the school's student culture. What goes on in the lunchroom, the bathrooms, the locker rooms, and on the bus conveys powerful messages to students. This ethos or moral climate of a school is difficult to observe and neatly categorize. Nevertheless, it is the focus of serious attention by educators committed to an infusion approach.

An important element of the infusion approach is the language with which a school community addresses issues of character and the moral domain. Teachers and administrators committed to an infusion approach use the language of virtues and speak of good and poor behavior and of right and wrong. Words such as responsibility, respect, honesty, and perseverance are part of the working vocabulary of adults and students alike.

**Other approaches.** One of the most popular approaches to character education is service learning. Sometimes called community service, this approach is a conscious effort to give students opportunities, guidance, and practice at being moral actors. Based on the Greek philosopher Aristotle's concept of character formation (e.g., a man becomes virtuous by performing virtuous deeds; brave by doing brave deeds), many schools and school districts have comprehensive programs of service learning. Starting in kindergarten, children are given small chores such as feeding the classroom's gerbil or straightening the desks and chairs. They later move on to tutoring younger students and eventually work up to more demanding service activities in the final years of high school. Typically, these high-school level service-learning activities are off-campus at a home for the blind, a hospital, or a day-care center. Besides placement, the school provides training, guidance, and

problem-solving support to students as they encounter problems and difficulties.

In recent years, schools across the country have adopted the virtue (or value) of the month approach, where the entire school community gives particular attention to a quality such as cooperation or kindness. Consideration of the virtue for that particular month is reflected in the curriculum, in special assemblies, in hallway and classroom displays, and in school-home newsletters. Related to this are schoolwide programs, such as no put-downs projects, where attention is focused on the destructive and hurtful effects of sarcasm and insulting language and students are taught to replace put-downs with civil forms of communication.

There are several skill-development and classroom strategies that are often related to character formation. Among the more widespread are teaching mediation and conflict-resolution skills, where students are given direct teaching in how to deal with disagreements and potential fights among fellow students. Many advocates of cooperative learning assert that instructing students using this instructional process has the added benefit of teaching students habits of helping others and forming friendships among students with whom they otherwise would not mix.

### Issues and Controversies

The moral education of children is a matter of deep concern to everyone from parents to civic and religious leaders. It is no accident, then, that this subject has been a matter of apprehension and controversy throughout the history of American schools. Issues of morality touch an individual's most fundamental beliefs. Since Americans are by international standards both quite religiously observant and quite religiously diverse, it is not surprising that moral and character education controversies often have a religious source. Particularly after a period when moral education was not on the agenda of most public schools, its return is unsettling to some citizens. Many who are hostile to religion see this renewed interest in moral education as bringing religious perspectives back into the school "through the back door." On the other hand, many religious people are suspicious of its return because they perceive it to be an attempt to undermine their family's religious-based training with a state-sponsored secular humanism. As of the beginning of the twenty-first cen-

ture, however, the renewed attention to this area has been relatively free of controversy.

Contributing to the positive climate is the use of the term *character* rather than *moral*. While *moral* carries religious overtones for many, the word *character* speaks to good habits and the civic virtues, which hold a community together and allow us to live together in harmony.

A second issue relates to the level of schools and the age of students. The revival of character education in our schools has been evident to a much greater degree in elementary schools. Here schools can concentrate on the moral basics for which there is wide public consensus. The same is true, but to a somewhat lesser degree, for middle and junior high schools. And although there are many positive examples of secondary schools that have implemented broad and effective character education programs, secondary school faculties are hesitant to embrace character education. Part of it is the departmental structures and the time demands of the curriculum; part of it is the age and sophistication of their students; and part of it is that few secondary school teachers believe they have a clear mandate to deal with issues of morality and character.

A third issue relates to the education of teachers. Whereas once teachers in training took philosophy and history of education—courses that introduced them to the American school's traditional involvement with moral and character education—now few states require these courses. At the beginning of the twenty-first century, the American schools are seeing the large-scale retirement of career teachers and their replacement with large numbers of new teachers. These young teachers tend to be products of elementary and secondary schools where teachers gave little or no direct attention to moral and character education. In addition, a 1999 study by the Character Education Partnership of half of the nation's teacher education institutions showed that although over 90 percent of the leaders of these programs thought character education ought to be a priority in the preparation of teachers, only 13 percent were satisfied with their institution's efforts.

### Evaluation of Moral and Character Education

There are a few character education programs with encouraging evaluation results. The Character Development Project (CDP) has more than 18 years of involvement in several K–6 schools, and in those

schools where teachers received staff development and on-site support over 52 percent of the student outcome variables showed significant differences. The Boy Scouts of America developed the Learning For Life Curriculum in the early 1990s for elementary schools. This commercially available, stand-alone curriculum teaches core moral values, such as honesty and responsibility. In a large-scale controlled experiment involving fifty-nine schools, students exposed to the Learning For Life materials showed significant gains on their understanding of the curriculum's core values, but they were also judged by their teachers to have gained greater self-discipline and ability to stay on a task.

Still, evaluation and assessment in character and moral education is best described as a work in progress. The field is held back by the lack of an accepted battery of reliable instruments, a lack of wide agreement on individual or schoolwide outcomes, and by the short-term nature of most of the existent studies. Complicating these limitations is a larger one: the lack of theoretical agreement of what character is. Human character is one of those overarching entities that is the subject of disciples from philosophy to theology, from psychology to sociology. Further, even within these disciplines there are competing and conflicting theories and understandings of the nature of human character. But although the evaluation challenges are daunting, they are dwarfed by the magnitude of the adult community's desire to see that our children possess a moral compass and the good habits basic to sound character.

*See also:* CHARACTER DEVELOPMENT; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; ETHICS, *subentry on* SCHOOL TEACHING; SCHOOL REFORM; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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KEVIN RYAN

#### MORRISON, HENRY C. (1871–1945)

New Hampshire state superintendent of public instruction, superintendent of the Laboratory Schools

of the University of Chicago, professor, and author, Henry Clinton Morrison developed an approach to learning in which material is organized into units students must master in order to progress to the next level. His five-step general pattern for the instructional process became well known as the Morrison Plan (also called the Morrison Method). Morrison's conception of mastery learning served as precursor to the "individualized instruction" and "mastery learning" educational movements of the 1970s and 1980s.

Morrison was born the son of John and Mary Louise (Ham) Morrison in Oldtown, Maine, a rugged fishing and lumber town in the middle of the Penobscot River. He worked in the lumber camps, but his own and his parents' earnings from the general merchandise store they ran could not finance his college education. Because Morrison had distinguished himself in his preparatory work for college, a local banker and the selectmen of the town raised money to finance his education at Dartmouth College. Morrison chose the college's classical course, with a concentration in philosophy. Robert Frost was a classmate. Morrison was graduated from Dartmouth with a Bachelor of Arts degree in 1895, one of two students to graduate magna cum laude.

Morrison served as a teaching principal at the consolidated high school in Milford, New Hampshire, from 1895 through 1899. Although he taught mathematics, history, Latin, and the sciences, he quickly became known for his abilities to organize and manage unruly students. The reputation Morrison built for Milford as a well-disciplined school earned him, at age twenty-eight, an appointment as superintendent of schools for Portsmouth, New Hampshire. He served in this position from 1899 to 1904. In 1902 he married Marion Locke; the couple had three sons.

In 1904 Morrison was appointed commissioner of public instruction for the state of New Hampshire. He served in this role as state superintendent until 1917 and during this time Morrison examined and approved all schools within the state, served on the state medical board, conducted teachers' examinations, and supervised attendance and child labor laws. In addition, during the summer of 1905, Morrison lectured on school administration at Dartmouth. In 1908 he was elected president of the American Institute of Instruction. In 1912 Morrison was invited by Charles Hubbard Judd, dean of the School of Education at the University of Chicago, to

be guest lecturer for the summer session at Chicago; Morrison thus strengthened initial ties with Judd, whom he had first met in 1911, that were to be most important later in his educational career. Morrison concluded his service as state superintendent of New Hampshire abruptly in 1917. From 1917 to 1919 Morrison lived in Connecticut and served as the assistant secretary of the State Board of Education.

In 1919 the position of superintendent of the Laboratory Schools of the University of Chicago became vacant. By then, Judd was well acquainted with Morrison's educational accomplishments and administrative expertise. On July 1, 1919, Morrison became professor of School Administration and superintendent of the Laboratory Schools, a position that he held until 1928.

In Morrison's educational career up to 1919, he had "insider" knowledge, as both teacher and administrator, of problems that plagued public education in the United States. From 1919 through 1928, he conceptualized theories for approaching these problems, tested tentative solutions within laboratory school contexts, and conducted a vast amount of empirical observation.

From Morrison's studies, he posited that genuine learning consisted of the student adapting or responding to a situation. Rejecting the notion that learning referred only to the acquisition of subject matter, Morrison instead concentrated on actual change in the behavior of the learner, what he called an adaptation. The unit was the procedure used for the teaching of an adaptation based on a stimulus-response psychology. This concept stems, in part, from Morrison's categorization of learning into a cycle of three phases: stimulus, assimilation, and reaction.

Morrison configured the secondary school curriculum into units of five types: science, appreciation, practical arts, language arts, and pure-practice. Acknowledging that instruction would vary among the different types of units, Morrison nonetheless identified a five-step instructional pattern. Morrison's general pattern for the instructional process (his plan or method) involves the following sequential steps: (1) pretest, (2) teaching, (3) testing the result of instruction, (4) changing the instruction procedure, and (5) teaching and testing again until the unit has been completely mastered by the student. In developing his concept of mastery learning, Morrison distinguished between learning and per-

formance. Mastery, according to Morrison, is when students focus on learning a skill and acquire a fundamental grasp of subject matter. Once students have achieved a certain level of learning, they attempt to apply the skill; this application is called performance. The next step achieved is adaptation, the stage at which students become able to apply their learning to any situation.

Morrison's landmark publication, *The Practice of Teaching in the Secondary Schools* (1926), was the synthesis of his teaching, administrative, and research experiences. His book is widely regarded as one of the best known and most widely used systems of teaching from the late 1920s through the early 1940s. In this book, Morrison also drew a distinction between curriculum and instruction, thus marking the beginning of a major conceptual distinction between these two areas in the field of education.

Although Morrison's historical significance stems primarily from *The Practice of Teaching in the Secondary Schools*, he also brought important empirical analyses to the areas of school finance and organization, and administration of schools. Toward the end of school term in 1928, Morrison requested that he be transferred to the Department of Education and relieved of his position as superintendent of the Laboratory Schools. On July 1, 1937, Morrison retired from the University of Chicago; on March 19, 1945, he suffered a heart attack in the garden of his Hyde Park residence and died.

**See also:** CURRICULUM, SCHOOL; INSTRUCTIONAL STRATEGIES; SECONDARY EDUCATION, *subentry on* HISTORY OF; UNIVERSITY OF CHICAGO.

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JANET L. MILLER

## MOTIVATION

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### OVERVIEW

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## OVERVIEW

Motivation is the study of why people think and behave as they do. In an achievement setting, someone would be concerned with motivation if he were to ask, for example, why some students persist to task completion despite enormous difficulty, while others give up at the slightest provocation; or why some students set such unrealistically high goals for themselves that failure is bound to occur.

Motivation is also the study of what pushes or pulls an individual to start, direct, sustain, and finally end an activity. Consider, for example, an achievement activity such as studying for an exam. Motivation researchers would want to examine what the person is doing: the choice of behavior; how long it takes that person to get started. Or they wish to see the latency of behavior: how hard the individual actually works at the activity (the intensity of behavior); how long that individual is willing to remain at the activity (the persistence of behavior); and what the person is thinking or feeling while engaged in the activity, or the cognitions and emotional reactions that accompany behavior. Note that this focus on the "why" of achievement is quite different from the

study of achievement itself. Educators sometimes confuse the topics of researchers who study motivation with the topics of researchers who study achievement and learning.

### Early Theories

The scientific study of motivation as a discipline separate from learning began in the 1930s. Early motivation researchers were primarily interested in the factors that aroused behavior, or that got it started in the first place. It was widely believed at the time that the optimal state of an organism, both animal and human, was one of balance and equilibrium, where all needs were satisfied. The process of keeping the organism at this optimal level is known as homeostasis. Homeostatic balance was also thought to be satisfying, which was compatible with the belief that organisms were primarily motivated by hedonism, or the desire to maximize pleasure and minimize pain. Theories of motivation that emerged in the 1930s were based on the ideas of homeostasis and hedonism as fundamental principles.

**Drive theory.** The best known of these early conceptions was Clark Hull's drive theory. According to Hull, behavior is a function of drive and habit. Drives in the Hullian framework are unsatisfied needs, such as the need for food (hunger) or the need for water (thirst). The drive to satisfy one's needs is what arouses or energizes behavior. Habits, in turn, provide a direction for behavior. Habits are stimulus response bonds that are built up over time as a result of prior learning. For example, if someone's need to achieve has been satisfied in the past by studying hard for exams, then deficits in that need (arousal) should be satisfied by renewed study behavior. Thus behavior can be explained by both a motivation component (the drive that energizes behavior) and a learning component (the habit that provides direction or indicates what particular behavior will be initiated).

Simple yet elegant, drive theory generated a vast amount of motivation research from the 1930s through the 1950s. Of most relevance to education were studies on anxiety and learning conducted by Kenneth Spence, who was a student of Hull's. According to Spence, anxiety is a drive and it therefore arouses behavior, in this case the speed with which one learns simple versus complex tasks. On simple tasks where there is already a strong habit strength, anxiety will facilitate the speed of learning. With complex tasks, on the other hand, where there are

weak stimulus-response bonds, high anxiety should interfere with learning, because high anxiety activates incorrect stimulus-response bonds (habits) that compete with correct responses. In support of this analysis, many studies reveal that high anxiety is neither uniformly adaptive or maladaptive across all learning contexts.

**Expectancy-value theory.** Drive theory was very mechanistic. There was no role for complex cognitive processes such as how a person interprets an arousal cue or whether their expectations for success might energize behavior. With the cognitive revolution of the 1960s, motivation researchers became much more interested in how thoughts as well as unsatisfied needs and habits influenced behavior. The impact of drives as an organizing construct therefore waned. Furthermore, it became accepted that organisms are always active and the field of motivation shifted from the study of what turns organisms "on" and "off" to an interest in the direction of behavior, including choice and persistence.

The interest in cognition resulted in what is known as expectancy-value theory in motivation. The basic assumptions of expectancy-value theory are in accord with commonsense thinking about motivated behavior. Behavioral choice is determined by the perceived likelihood that the behavior will lead to a goal and how much that goal is desired or wanted. In the 1950s and 1960s, John Atkinson developed a theory of achievement motivation that perhaps best illustrates an expectancy-value framework. In its simplest form, Atkinson's theory states that the tendency to approach as achievement activity ( $T_s$ ) is a function of three factors: the motive for success ( $M_s$ ), the probability that one will be successful at the activity ( $P_s$ ), and the incentive value of success ( $I_s$ ). The factors are related multiplicatively, such that:  $T_s = M_s \times P_s \times I_s$ .

In this equation,  $M_s$  is the achievement motive, a relatively enduring personality trait presumed to be learned early in life.  $P_s$ , or the probability of success, takes on a numerical value from 0 to 1, with high numbers (e.g.,  $P_s = 0.8$ ) indicating greater likelihood of success, that is, an easy task. Finally, incentive value ( $I_s$ ) represents an affective state, labeled pride in accomplishment, and it was assumed to be inversely related to expectancy ( $1 - P_s$ ). That relationship captured the notion that easier tasks, where the probability of success was high, would elicit less pride and would therefore be less motivating.

Atkinson's theory was very popular from 1960 to 1980 and it generated many intriguing hypotheses about motivation. The theory predicted that high achievement oriented people prefer tasks of intermediate difficulty ( $P_s = 0.5$ ) because such tasks elicited the most pride following success. People who were low in the achievement motive would be more motivated when tasks were very easy or very difficult. Atkinson was among the first theorists to point out that adaptive motivation was not necessarily associated with persisting at the hardest tasks where the probability of success is low. Indeed, the hallmark of a high achievement-oriented person is that they are able to gauge their efforts in response to their perceived expectancy, always striving toward intermediate difficulty.

### Contemporary Theories of Motivation

Atkinson's theory gradually declined in the 1980s as motivation researchers turned their attention to a broader array of cognitions and to motivational traits other than the achievement motive. In general, contemporary motivation theories are dominated by three separate but interrelated constructs: expectancy, value, and achievement goals. As defined in the early twenty-first century, expectancy has to do with beliefs about ability (Can I do it?). Values are concerned with preferences and desires (Do I want it?). And goals capture purpose or the reasons for engaging in achievement activities (Why am I doing this?).

**Beliefs about ability: Attribution theory.** Three theories have addressed beliefs about ability. The first is attribution theory as developed by Bernard Weiner. Attributions are inferences about the causes of success and failure. (e.g., "Why did I get a poor grade on the exam?" or "Why did I get the highest grade?") Among the most prevalent inferred causes of success and failure are ability (aptitude), effort, task difficulty or ease, luck, mood, and help or hindrance from others. According to Weiner, these causes have certain underlying characteristics, which are known as causal dimensions. Causes differ in locus, or whether the cause is internal or external to the person; stability, which designates as cause as constant or varying over time; and in controllability, or the extent to which a cause is subject to volitional alteration. For example, low aptitude as a cause for failure is considered to be internal to the actor, stable over time, and uncontrollable, whereas lack of effort is judged as internal, but variable over time and subject to volitional control.

Each of these causal dimensions is linked to particular consequences that have motivational significance. For example, the stability dimension is related to expectancy for future success. When failure is attributed to a stable cause such as low ability, one is more likely to expect the same outcome to occur again than when the cause of failure is due to an unstable factor such as lack of effort. Thus the failing student who believes that he or she did not try hard enough can be bolstered by the expectation that failure need not recur again. Guided by these known linkages between causal stability and expectancy, attribution retraining programs have been developed that teach students to attribute failure to lack of effort rather than lack of ability. Many successful programs have been reported in which retrained students show greater persistence when they encounter challenging tasks, more confidence, and more positive attitudes toward school work.

The controllability dimension is related to a number of interpersonal affects, such as pity and anger. Pity and sympathy are experienced toward others whose failures are caused by uncontrollable factors (think of the teacher's reactions to the retarded child who continually experiences academic difficulty). In contrast, anger is elicited when others' failures are due to causes within their control (imagine that same teacher's affect toward the gifted student who never completes assignments). These emotional reactions also can serve as indirect attributional cues (i.e., they provide information about the cause of achievement). If a teacher expresses pity and sympathy following student failure, that student tends to make a low ability attribution. Hence, pity from others can undermine beliefs about ability.

**Beliefs about ability: Self-efficacy theory.** Popularized by Albert Bandura, self-efficacy refers to individuals' beliefs about their capabilities to perform well. When confronted with a challenging task, a person would be enlisting an efficacy belief if they asked themselves: "Do I have the requisite skills to master this task?" Unlike causal beliefs in attribution theory, which are explanations for past events, efficacy percepts are future oriented. They resemble expectations for personal mastery of subsequent achievement tasks. Also unlike attribution theory, which focuses on the perceived stability of causes as a determinant of expectancy, efficacy theorists have articulated a much more extensive set of antecedents, including prior accomplishments, modeling, persuasion, and emotional arousal. For example,

physiological symptoms signaling anxiety, such as rapid heart beat or sweaty palms, might function as cues to the individual that he or she lacks the requisite skills to successfully complete a task.

According to Bandura, perceived efficacy determines how much effort a person is willing to put into an activity as well as how long they will persevere in the face of obstacles. Many studies have documented the adaptive consequences of high self-efficacy. For example, it is known that high self-efficacy and improved performance result when students: (1) adopt short-term over long-term goals, inasmuch as progress is easier to judge in the former case; (2) are taught to use specific learning strategies, such as outlining and summarizing, both of which increase attention to the task; and (3) receive performance-contingent rewards as opposed to reinforcement for just engaging in a task, because only in the former case does reward signal task mastery. All these instructional manipulations are assumed to increase the belief that “I can do it,” which then increases both effort and achievement. Efficacy beliefs have been related to the acquisition of new skills and to the performance of previously learned skills at a level of specificity not found in any other contemporary theory of motivation.

#### **Beliefs about ability: Learned helplessness theory.**

Whereas self-efficacy captures lay understanding of “I can,” helplessness beliefs symbolize shared understanding about the meaning of “I cannot.” According to this theory, a state of helplessness exists when failures are perceived as insurmountable, or more technically, when noncontingent reinforcement results in the belief that events are uncontrollable. That belief often is accompanied by passivity, loss of motivation, depressed affect, and performance deterioration. Martin Seligman, a main proponent of the theory, has argued that helplessness becomes a learned phenomenon when individuals inappropriately generalize from an experience with noncontingency in one situation to subsequent situations where control is possible. A prototypical example is the successful student who unexpectedly fails despite high effort and then becomes virtually incapable of completing work that was easily mastered prior to failure.

Helplessness theory has a decidedly attributional focus in that Seligman and others maintain that when individuals encounter failure, they ask, “Why?” How people characteristically answer this question is known as explanatory style. Some people

typically explain bad events by pointing to factors that are internal, stable, and global. (e.g., “I’m always a failure no matter what I do”). These individuals are believed to have a pessimistic explanatory style. Other people interpret bad events by evoking momentary and specific causes (e.g., “I just happened to be in the wrong place at the wrong time”). Such individuals are characterized as having an optimistic explanatory style. A pessimistic explanatory style in the achievement domain has been related to poor school grades, reluctance to seek help, diminished aspirations, and ineffective use of learning strategies.

The research of Carol Dweck has focused particularly on individual differences the motivational patterns of children who may be vulnerable to helplessness beliefs. In response to challenging tasks where failure is possible, some children have a mastery-oriented motivational system: they believe that ability is incremental (e.g., “smartness is something you can increase as much as you want”), they focus on the task rather than their abilities, they enjoy challenge, and they can generate solution-oriented strategies that lead to performance enhancement. At the other end of the continuum are children who display a helpless motivational pattern: they believe that ability is fixed (e.g., “how smart you are pretty much stays the same”); they focus on personal inadequacies; express negative affect, including boredom and anxiety; and they show marked deterioration in actual performance. In other words, they display the classic symptoms associated with learned helplessness.

In summary, the dominant theme in contemporary motivation research revolves around beliefs about ability as represented by attribution theory, self-efficacy theory, and learned helplessness theory. Attribution theory has its origins in social psychology and is therefore especially concerned with the situational determinants of motivation and with both self-perception and the perception of others. Self-efficacy theory has emerged from a social learning perspective and therefore has close ties with behavioral change. Learned helplessness theory reflects the influence of clinical and personality psychology with its focus on coping with failure and individual differences in a presumed motivational trait.

**Achievement values.** There is a much smaller literature on achievement values, the other broad construct in expectancy-value approaches to motivation. Unlike expectancy, which focuses on beliefs about ability, values are more directly

concerned with the perceived importance, attractiveness, or usefulness of achievement activities. Values also are rooted in the moral constructs of “ought” and “should,” as illustrated by the belief that one should try hard in school regardless of his or her perceived abilities.

The most extensive research on achievement values has been conducted by Jacques Eccles and Allan Wigfield. These researchers define achievement tasks in terms of their attainment value (the perceived importance of doing well), intrinsic value (how much enjoyment the individual derives from engaging in the task), utility value (how the task relates to future goals), and costs (the undesirable consequences of engaging in the task). Most of the research guided by this conception has selected specific subject matter domains to examine whether task value predicts different consequences, such as course grades and enrollment decisions, or the extent to which value and expectancy are positively or negatively related (according to Atkinson’s theory, these two constructs,  $I_s$  and  $P_s$ , should be inversely related). The findings of Eccles and Wigfield reveal that how much students value a particular domain influences choice behavior (i.e., their intention to enroll in particular courses and their actual enrollment). Task values, however, have little direct impact on actual course grades. Value and expectancy also appear to be positively correlated: individuals judge the tasks that they perceive themselves to be good at as more important, enjoyable, and useful. An unanswered question in this research is the issue of causal sequence. It is unclear whether individuals come to value what they are good at (expectancy  $\rightarrow$  value), or whether individuals develop more confidence over time in the tasks that are most important (value  $\rightarrow$  expectancy).

**Achievement goals.** Achievement goals capture the reasons why a person engages in achievement behavior, and two broad types have been identified. Students who pursue mastery goals are oriented toward acquiring new skills or improving their level of competence. In contrast, students who adopt performance goals are motivated by the intent to demonstrate that they have adequate ability and avoid displaying signs that they have low ability. According to this analysis, individuals can therefore decide to engage in achievement activities for two very different reasons: They may strive to develop competence by learning as much as they can, or they may

strive to publicly display their competence by trying to outperform others.

A vast number of studies suggest that mastery goals increase motivation more than do performance goals. The general thinking is that mastery oriented individuals seek out challenge and escalate their efforts when tasks become difficult, whereas performance-oriented individuals see their ability as threatened in challenging situations, which they tend to avoid. More recent research, however, suggests that adopting performance goals in some situations may enhance motivation. At times the two goal orientations may go hand in hand (people can strive to attain mastery and outperform others) or the pursuit of performance goals (i.e., comparing one’s self to others) can provide cues that the person is competent and will therefore enhance motivation. It also appears that when performance goals are differentiated by approach (demonstrating ability) and avoidance (concealing low ability) tendencies, it is mainly the avoidance component that compromises sustained achievement strivings.

A related body of research, labeled self-determination theory by Edward Deci and Richard Ryan, conceptualizes achievement goal pursuits in terms of whether they fulfill the individual’s basic needs for competence, autonomy, and relatedness to other people. Goals that satisfy these needs enhance intrinsic motivation. The pioneering research of Deci and Ryan has alerted many educators to the fact that extrinsic rewards, such as grades, gold stars, or even money, can undermine intrinsic motivation if they jeopardize people’s sense of competence and feelings of personal control.

### Future Challenges

Motivation is a rich and changing field that has enjoyed much progress in its relatively brief history. In more than six decades following Hull’s insights, there have been major upheavals in the field (the shift from behaviorism to cognition); new theories and concepts have been introduced, and novel research directions have been pursued (such as the finding that reward can decrease motivation). Principles of motivation have been described that can become the basis for intervention. Quite a bit is known, for example, about the positive motivational consequences of attributing failure to lack of effort rather than low ability, of selecting tasks of intermediate difficulty, and of focusing on mastery rather than outperforming others. All these principles have

good theoretical and empirical grounding. The challenge for the future will be to study motivation in context. Examining achievement expectancy, values, and goals and how they get expressed in the broader context of social and cultural influences might provide important clues for understanding the academic challenges faced by many ethnic minority youth. Addressing such issues will be a useful step toward promoting the field of motivation in education research and assuring its continued vitality.

*See also:* MOTIVATION, *subentries on* INSTRUCTION, SELF-REGULATED LEARNING.

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## INSTRUCTION

The study of motivation has its roots in reinforcement theory, which focuses on the ways behaviors can be shaped by their consequences. In this model, the probability of a given response being repeated in the future is strengthened when it is followed by reward and weakened when it is not—a phenomenon the American psychologist Edward L. Thorndike, author of the 1911 book *Animal Intelligence*, termed the "law of effect." Reinforcement theory, as elaborated by American psychologist B. F. Skinner, exam-

ined the ways in which arbitrary responses could be elicited or eliminated through the use of systematic reinforcement and punishment. Rewards and punishments were thought to affect behavior automatically, without complex cognitive processes. Indeed, most early research was conducted with rats and pigeons, although the underlying principles and processes were thought to operate similarly in people.

### Extrinsic Reformers

Until the 1960s, educators interested in enhancing student motivation were primarily instructed in the use of extrinsic reinforcers to control behavior. Such behavior modification programs, which remain in widespread use in the early twenty-first century, make desired consequences (e.g., rewards, praise, good grades, teacher attention) contingent upon performing specified behaviors (e.g., completing homework, paying attention, remaining quiet). One popular behavior modification technique is the token economy—a system in which students receive tokens each time they exhibit specified behaviors and in which these tokens can be subsequently exchanged for desired goods. Token economies can be extremely effective in producing immediate behavioral changes, and continue to be important techniques for classroom management. At the same time, these techniques have been less effective in producing persistence and generalization of desired behaviors when tangible rewards are no longer available. Thus, despite the obvious benefits of tangible extrinsic reinforcers, several weaknesses of this approach—especially as applied to education—became apparent.

First, although extrinsic contingencies often enhance classroom motivation, this approach ignores the mediating cognitive processes, such as the person's expectations, knowledge, and beliefs, that are essential for understanding when such changes will persist or generalize. Second, *extrinsic* constraints may sometimes conflict directly with children's *intrinsic* motivation to learn, subsequently causing as much harm as good. Third, this approach neglects other significant motivational variables, such as interests, values, and social relationships. Since the 1960s, these limitations of reinforcement theory have served as the impetus for the three broad classes of research reviewed below.

### Mediating Cognitive Processes

Beginning in the 1960s, motivational researchers adopted a more cognitive approach. Rather than

studying only the direct effects of rewards and punishments, researchers became concerned with people's subjective interpretations of these external consequences. Do they expect to be rewarded? Do they expect to succeed? Do they believe their actions will make a difference? Modern researchers believe that people, unlike rats and pigeons, consider whether they are capable of achieving a given goal before they attempt it.

One of the earliest approaches that included these mediating factors was the expectancy-value theory of motivation. This model, which viewed motivation as the multiplicative product of a person's expected probability of success and the expected value of success to that person, proved a significant turning point. Indeed, contemporary theories of motivation consider competence beliefs central to achievement motivation. Researchers have also examined more domain-specific expectancies, such as self-efficacy beliefs—in other words, beliefs that one can achieve specific goals in particular situations—which can promote effort expenditure, persistence in the face of setbacks, and academic performance. People's general theories about the mutability (capacity for change) of intelligence are also important. Compared to theories that intelligence is fixed, theories that intelligence is malleable produce more adaptive behaviors in academic contexts, such as persistence following setbacks and a focus on learning rather than performance.

Expectations for success also depend on attributions regarding past successes and failures. According to attribution theory, individuals characterize causes for success and failure along three dimensions: internal versus external locus (which affects feelings of self-esteem), stability over time (which affects expectations for success in the future), and controllability (which affects emotions such as guilt and shame). These causal attributions are particularly significant when individuals experience failure, and research suggests that attributions of failure to internal, unstable, and controllable causes—such as low effort or a poor strategy—are the most adaptive. Conversely, individuals who attribute failures to stable and uncontrollable causes, such as a lack of aptitude, tend to become helpless and give up, even when they could later easily succeed. Regardless of the presence of rewards, individuals are not motivated to engage in a behavior if they believe they cannot succeed.

Students' beliefs about their abilities and their expectations for success in school can be significantly influenced by teachers' instructional practices. Studies have shown that self-efficacy can be enhanced through direct success experiences, observed successes of a model, and verbal persuasion. One particularly effective procedure is to train students to set proximal (near-term) rather than distal (far-term) goals, which produces both self-efficacy and achievement gains. Teacher expectations can also influence student learning, even when these expectations have no basis in reality, suggesting that teachers convey subtle cues to students that have important consequences for motivation and achievement. Even seemingly innocuous behaviors, such as high praise for easy tasks or unsolicited help giving, can signify that teachers have low expectations and may adversely affect students' beliefs about their own abilities. Students can also be explicitly taught to focus on controllable and unstable causes for failure, such as a lack of effort or a poor strategy. Thus, effective instructional practices should communicate high but realistic expectations for success to students.

### **Intrinsic versus Extrinsic Motives**

Also in the 1960s, researchers began to contrast extrinsic motivation with intrinsic motivation—the desire to engage in activities because they are inherently pleasurable, regardless of external contingencies. Given this contrast, it soon became apparent that extrinsic motivators have the potential to decrease students' subsequent intrinsic motivation when rewards are no longer available. That is, individuals must feel that their behavior is self-determined in order to experience motivation in the absence of extrinsic constraints. Studies have demonstrated that individuals who feel more in control of their own behavior also show more active learning, greater perceived competence, and higher academic achievement.

Conversely, the use of unnecessarily powerful extrinsic rewards can lead individuals to discount their intrinsic motivation. In many studies, students promised and given tangible rewards for engaging in initially intrinsically interesting activities showed less subsequent desire to perform those activities than students given no reward or the same reward unexpectedly. Thus, contracting to perform an activity in order to receive an extrinsic reward may undermine students' intrinsic motivation. Rewards do not al-

ways negatively impact intrinsic motivation, though, and much research has been devoted to understanding when rewards have beneficial versus detrimental effects. For example, rewards tend to enhance motivation when they are unexpected, intangible, and competence enhancing, and when there is little initial interest in an activity. Some controversy remains, however, regarding the specific conditions under which rewards negatively impact motivation.

The overuse of extrinsic incentives may also induce a performance orientation, as opposed to mastery orientation. Individuals with performance goals focus on appearing competent, even at the expense of further learning, whereas individuals with mastery goals focus on learning and understanding, even if their performance temporarily suffers. Research has shown that mastery goals are often associated with many positive achievement behaviors, such as persistence, effort, and effective strategy use. Nonetheless, performance goals may also sometimes be adaptive, and they may even correlate positively with mastery goals. As with intrinsic versus extrinsic motivation, sharp distinctions may be unwarranted.

Teachers can promote intrinsic motivation and foster mastery orientations. When students are encouraged to plan ahead, take personal responsibility, and set individual learning goals, they experience a greater sense of control and show gains in motivation and achievement. Personalizing learning activities or providing individuals with explicit choices can also boost motivation and enhance learning. The judicious use of extrinsic rewards and punishments, just sufficient to elicit compliance, will similarly have particularly positive effects on later intrinsic motivation. A classroom climate that supports mastery orientations—by minimizing public evaluation and normative comparisons, providing opportunities for improvement, and recognizing student effort—should also be beneficial. Instructional practices, therefore, should promote autonomy and minimize unnecessary extrinsic constraints, to foster intrinsic motivation and lifelong learning.

### **Additional Important Factors**

Classic reinforcement theory also neglects other important factors, such as values, interests, and relationships. Values have more recently been viewed as having several components: attainment value (i.e., importance of doing well), interest value (i.e., task enjoyment), utility value (i.e., future usefulness), and cost (i.e., effort). Studies have shown that per-

sonal value of an academic domain can influence course enrollment, effort, persistence, and critical thinking. Closely related to value is interest, which has long been considered an important source of intrinsic motivation. The study of interest has recently received renewed attention, as researchers have sought to understand its relationship to self-regulation and to determine how different forms of interest are related to achievement outcomes.

Relationships are also not addressed by the extrinsic approach, although, much like competence and autonomy, they may be central to intrinsic motivation. Indeed, positive and secure relationships between students and teachers lead to greater classroom engagement, better emotional adjustment to school, and higher valuing of academic activities. It is not only beliefs, but also the more emotional factors of values, interests, and relationships, that can determine students' motivation.

Teachers can support values, interests, and relationships through a variety of instructional practices. Placing curriculum activities in interesting, perhaps even imaginary, contexts (e.g., learning math equations through a computerized space adventure) can produce gains in motivation and learning—provided that the context supports rather than distracts from the curriculum. Another strategy is to select or develop tasks centered on students' existing interests and concerns. This concept has been successfully implemented, both in small cooperative learning groups and in programs designed to create classroom “communities of learners” invested in working together to achieve common goals. Finally, research suggests that positive relationships are fostered when teachers provide appropriate structure and autonomy for their students and show them affection and respect.

### **Individual Differences**

Many of these motivational variables may interact with individual differences, such as need for achievement, locus of control, explanatory styles, and self-theories. For example, stable individual beliefs about whether events are caused by internal versus external factors affect a host of achievement cognitions and behaviors, and different instructional practices may be more appropriate for internals versus externals. Researchers have also examined individual differences in general self-schemas or conceptual frameworks. For example, the extent to which individuals have a theory of intelligence as a malleable quality

versus a fixed entity is thought to account for differences in achievement beliefs, goals, behaviors, and emotions. While it is unrealistic to assume that classroom practices can be perfectly matched to the needs of every individual student, at least given the current structure of most schools, differences in individuals' beliefs and behaviors must be considered, whenever possible.

Finally, motivational theories must include a developmental perspective, particularly when complex cognitive processes are involved. Studies suggest that there are developmental changes in children's beliefs about the relationship between ability and effort and the role that natural ability plays in achievement. Additionally, striking developmental decreases in children's intrinsic motivation and personal valuation of academic activities have been repeatedly documented. Clearly, these findings suggest that current practices have not been fully successful at promoting students' motivation as they progress through school.

*See also:* MOTIVATION, *subentries on* OVERVIEW, SELF-REGULATED LEARNING.

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## SELF-REGULATED LEARNING

Self-regulated learning refers to the processes by which individual learners attempt to monitor and control their own learning. There are many different models of self-regulated learning that propose different constructs and processes, but they do share some basic assumptions about learning and regulation.

### Assumptions

One common assumption might be called the active, constructive assumption that follows from a general cognitive perspective. That is, all the models view learners as active constructive participants in the learning process. A second, but related, assumption is the potential for control assumption. All the models assume that learners can potentially monitor, control, and regulate certain aspects of their own cognition, motivation, and behavior as well as some features of their environments. This assumption does not mean that individuals will or can monitor and control their cognition, motivation, or behavior at all times or in all contexts, rather just that some monitoring, control, and regulation is possible. All of the models recognize that there are biological, developmental, contextual, and individual difference constraints that can impede or interfere with individual efforts at regulation.

A third general assumption that is made in these models of self-regulated learning is the goal, criterion, or standard assumption. All models of regulation assume that there is some type of criterion or standard (also called goals) against which comparisons are made in order to assess whether the process should continue as is or if some type of change is necessary. The commonsense example is the thermostat operation for the heating and cooling of a house. Once a desired temperature is set (the goal, criterion, or standard), the thermostat monitors the temperature of the house (monitoring process) and then turns on or off the heating or air conditioning units (control and regulation processes) in order to reach and maintain the standard. In a parallel manner, the general example for learning assumes that individuals can set standards or goals to strive for in their learning, monitor their progress toward these goals, and then adapt and regulate their cognition, motivation, and behavior in order to reach their goals.

A fourth general assumption of most of the models of self-regulated learning is that self-regulatory activities are mediators between personal and contextual characteristics and actual achievement or performance. That is, it is not just individuals' cultural, demographic, or personality characteristics that influence achievement and learning directly, nor just the contextual characteristics of the classroom environment that shape achievement, but the individuals' self-regulation processes that mediate the relations between the person, context, and eventual achievement. Most models of self-regulation assume that self-regulatory activities are directly linked to outcomes such as achievement and performance, although much of the research examines self-regulatory processes as outcomes in their own right.

### **Domains of Self-Regulation**

Given these assumptions, a general working definition of self-regulated learning is that it is an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment. Following this general definition, research on models of self-regulated learning have delineated four general domains that learners can try to self-regulate: (1) cognition, (2) motivation, (3) behavior, and (4) the environment.

The cognitive domain includes the various cognitive strategies that learners can use to help them remember, understand, reason, and problem solve. Much of the work in this domain has focused on the learning strategies that students can use in academic contexts to comprehend text, to learn from lectures, to take notes, to solve math problems, to write papers, (e.g., testing their comprehension as they read a text). In addition, research has focused on metacognitive strategies that learners can use to plan, monitor, and control their own cognition. In many ways, metacognition is now seen as one part of the more general construct of self-regulated learning. In general, good self-regulating learners use a number of different strategies to control their cognition in ways that help them reach their goals.

The motivation and affective domain includes the various strategies that individuals can use to try to control and regulate their own motivation and emotions. This can include strategies for boosting their self-confidence or self-efficacy such as positive self-talk ("I know I can do this task") as well as strategies to try to control their interest (e.g., making the task more interesting by making a game out of it). Other strategies can be aimed at controlling negative emotions such as anxiety that can interfere with learning. In some research, these motivational and emotional control strategies are called volitional control strategies, but they can also be seen as part of the larger construct of self-regulated learning. As with cognition, good self-regulating learners do attempt to control their motivation and emotions in order to facilitate attainment of their goals.

The third domain includes actual attempts to control overt behavior, not just internal cognitions or motivational beliefs and emotions. This could involve increasing or decreasing effort on a task, as well as persisting on a task or giving up. Help-seeking behavior is another important self-regulatory behavior. Good self-regulators would adjust their effort levels to the task and their goals; they know when to persist, when to ask for help, and when to stop doing the task.

Finally, self-regulated learners can attempt to monitor and control the environment. Of course, they will not have as much control over the general classroom context or academic tasks as they do over their own cognition, motivation, and behavior, but there are some aspects of the context that can be controlled. For example, good self-regulated learners will try to control distractions by asking others to be

quiet or by moving to another location. Good self-regulators also try to understand the task demands and the classroom norms and then try to adjust their learning to fit these demands. In other words, they are sensitive to the contextual demands and constraints that are operating in the classroom and attempt to cope with them in an adaptive manner.

### The Development of Self-Regulation

There are a host of factors that can influence the development of self-regulation; three are noted here: cognitive development, motivation, and classroom contexts. Given the complexity of self-regulated learning, it is a phenomenon that emerges later in a child's life. There are clear developmental and maturational constraints on self-regulated learning. Although there are obviously aspects of self-regulation in place by the time a young child reaches school, the development of self-regulation for academic tasks takes place over the course of K–12 education. There is not as much research on the development of self-regulated learning as there is on how it operates, but it is probably not until the middle to late elementary school grades (third grade to sixth grade) that students begin to develop some of the important self-regulation strategies. In fact, it is likely that much of the development of self-regulated learning takes place in adolescence, given general cognitive developmental changes as well as the changes in the classroom context in middle schools and high schools. At the same time, there are many students who do not develop self-regulated strategies at all, even some of those more successful ones who go on to college. Accordingly, there is a need to develop explicit instructional strategies and programs to help students learn about self-regulation and develop expertise in regulating their learning.

Self-regulated learning is also time-consuming and quite difficult for some students, even when provided with explicit instruction in self-regulation. Accordingly, it is important that students are motivated to be self-regulating. Research of Paul R. Pintrich (1999) on the role of motivation in self-regulated learning has suggested three important generalizations about the relations between motivation and self-regulated learning. First, students must feel self-efficacious or confident that they can do the tasks. If they feel they can accomplish the academic tasks, then they are much more likely to use various self-regulation strategies. Second, students must be interested in and value the classroom tasks. Students

who are bored or do not find the tasks useful or worthwhile are much less likely to be self-regulating than those who are interested and find the tasks important. Finally, students who are focused on goals of learning, understanding, and self-improvement are much more likely to be self-regulating than students who are pursuing other goals such as trying to look smarter than others, or trying not to look stupid. These generalizations have been found in a large number of studies and seem to be fairly robust, but of course there is a need for more research on the role of motivation in self-regulated learning.

Finally, besides developmental and motivational factors, there are contextual factors that play a role in the development of self-regulation. One of the most important is that individuals actually have the opportunity to try to take control of their own learning and are given the chance to try tasks on their own. Of course, it is important that tasks are not too challenging or too easy, but in the students' range of competence. In addition, the modeling and demonstration of various self-regulatory strategies by parents, teachers, and peers can help students learn these strategies. Students also need the opportunity to have guided practice with the use of these strategies, with support and guidance from knowledgeable others, whether they be parents, teachers, or peers. Finally, there should be incentives in the context for the use of these strategies, such that students who are successful in using the strategies are rewarded in terms of praise or more tangible rewards such as better learning and achievement.

### Importance of Self-Regulated Learning

In summary, self-regulated learning is an important aspect of learning and achievement in academic contexts. Students who are self-regulating are much more likely to be successful in school, to learn more, and to achieve at higher levels. Accordingly, it is important for schools and classrooms to attempt to foster the development of expertise in self-regulated learning. Of course, there are developmental, motivational, and contextual factors that can facilitate or constrain self-regulated learning, but there are implicit and explicit ways to help foster self-regulated learning. In the twenty-first century and as the explosion of information and multiple ways of learning increase, it will become even more important that individuals know how to self-regulate their learning and that fostering self-regulated learning becomes an important goal for all educational systems.

See also: LEARNING TO LEARN AND METACOGNITION; MOTIVATION, *subentries on* OVERVIEW, INSTRUCTION.

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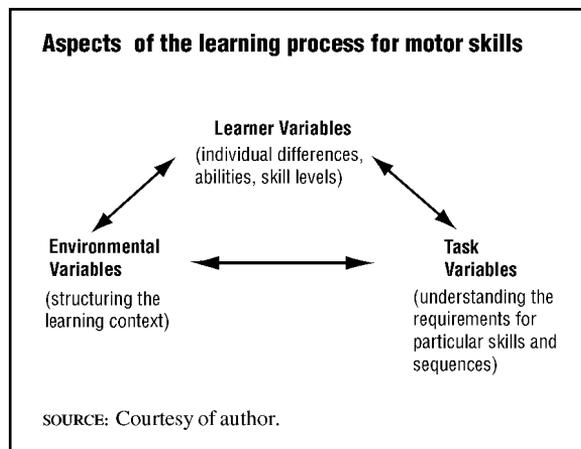
PAUL R. PINTRICH

## MOTOR LEARNING

Human beings use movement to learn about their world, to function in the world as they grow and mature, and to maintain healthy bodies. Individuals must learn to move and at the same time move to learn. Children explore their worlds through movement and make fundamental links between action and reality through movement.

The scientific study and principles that undergird motor learning provide the guidance and an un-

FIGURE 1



derlying framework for (1) curricula of physical education programs within schools; (2) the co-curricular sport programs; (3) the pedagogical principles applied by physical education teachers and coaches; and (4) the clinical interventions of occupational and physical therapists for individuals of all ages. Professionals who understand how children and youth acquire motor skills, whether building with blocks, learning to write or draw, effectively moving through space, or developing skills for sport or leisure activities, enhance their capacity to provide optimal learning experiences.

Understanding how individuals learn motor skills (motor learning) requires an appreciation for the following factors.

- Motor Development: how the capacity of children to produce motor skills naturally matures
- Motor Control: how the human neurological system controls movement
- Sport Psychology: how to motivate individuals to want to learn motor skills and participate in sport and exercise
- Pedagogy for Physical Education: how the learning environment can be organized to optimize the acquisition of motor skills

Motor learning focuses on the most effective ways to facilitate the acquisition of skills by understanding or manipulating three aspects of the learning process for motor skills, as illustrated in Figure 1.

Motor learning research has held a predominant place in both physical education and psychology for more than 100 years. The early work of Robert Woodworth (1899) examined the conditions that af-

fect movement accuracy and began a long history of research in this area. In the early twenty-first century, two fundamental approaches (models) describe the acquisition of motor skills and the challenges that face the learner. The information-processing focus is grounded by the work of such researchers as James Adams (1971), Steven Keele (1968) and Richard Schmidt (1975). An alternative explanation of motor skill acquisition comes from a dynamical systems approach followed by Karl Newell (1991) and Walter, Lee, and Sternad (1998). This approach emphasizes self-organization as a function of specific control parameters and environmental conditions as a way to understanding motor behavior.

### Motor Learning Research Informs Professional Practice

Research from motor learning focuses on understanding how individuals acquire and perform motor skills, and serves as the basis for informed practice in such professional fields as physical education, occupation therapy, sports medicine, and physical therapy. In order to illustrate the contributions of motor learning to professional practice, three examples have been selected.

**Providing effective models/demonstrations.** Historically it was believed that providing ideal models was the best way to transmit information to learners. This assumption suggested that teachers or professional models should provide demonstrations to facilitate the acquisition of motor skills. By the early twenty-first century, research had shown that providing “learning models” who are similar to the peer learners, and who are shown modifying their skills, are more effective than the traditional perfect model. In practice, this suggests that models who are individuals, similar to the learner, should be shown trying to learn a motor skill, receiving feedback, and improving as a result of this feedback. Teachers should therefore focus on selecting classmate children to model, and to provide feedback that allows the models to improve during the process of providing the demonstration.

**Practice variability (contextual interference).** Learning environments that provide reinforcement for the immediate performance of desired skills has often been the focus of physical education programs. The short-term benefits of practice that result do not take into account the need to consider the long-term benefits of various practice strategies.

For example, if students are to learn three tennis skills (forehand, backhand, and serve), they typically practice in a blocked fashion, focusing exclusively on each skill until it is learned (often to the 80 percent proficiency level). In contrast, early-twenty-first-century motor learning research has shown that practicing such skills in an interleaved or random fashion produces better long-term retention. This principle is referred to as *contextual interference* since practicing each of the three skills together produces some short-term interference (degradation of performance) compared to blocked practice, though eventually learners will be able to retain each skill at a level higher than those individuals who practice in a blocked schedule.

**Brain gym.** The provision of physical education in K-12 schools, and work in allied health professions (physical therapy, sports medicine, etc.) has relied on the scientific bases from a variety of disciplines (e.g., kinesiology, neurology, physical education, physical therapy, and psychology). By the twenty-first century, a resurgence of interest occurred in the neurological foundations of motor performance and in how the neurological system integrates cognitive and motor skills. One predominant influence has been the neuro-physiological bases of motor skill acquisition, and a curricular interpretation referred to as *brain gym*. The work of Paul Dennison and Gail Dennison (1994) has focused on the importance of inter-hemispheric activation, systematic challenges, and the use of cognitive resources in the production of motor skills.

In summary, the field of motor learning provides the understanding of the psychological and physiological features that enhance motor skill acquisition. It informs professional practice for both classroom and physical education teachers, and for allied health professionals, and impacts the quality of life for all individuals (birth through death).

*See also:* BRAIN-BASED EDUCATION; PHYSICAL EDUCATION; SPORTS, SCHOOL.

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## MULTICULTURAL EDUCATION

Multicultural education is an idea, an approach to school reform, and a movement for equity, social

justice, and democracy. Specialists within multicultural education emphasize different components and cultural groups. However, a significant degree of consensus exists within the field regarding its major principles, concepts, and goals. A major goal of multicultural education is to restructure schools so that all students acquire the knowledge, attitudes, and skills needed to function in an ethnically and racially diverse nation and world. Multicultural education seeks to ensure educational equity for members of diverse racial, ethnic, cultural, and socioeconomic groups, and to facilitate their participation as critical and reflective citizens in an inclusive national civic culture.

Multicultural education tries to provide students with educational experiences that enable them to maintain commitments to their community cultures as well as acquire the knowledge, skills, and cultural capital needed to function in the national civic culture and community. Multicultural theorists view academic knowledge and skills as necessary but not sufficient for functioning in a diverse nation and world. They regard skills in democratic living and the ability to function effectively within and across diverse groups as essential goals of schooling.

Multicultural education is highly consistent with the ideals embodied in the U.S. Constitution, the Declaration of Independence, and the Bill of Rights. It seeks to extend the rights and privileges granted to the nation's founding elites—the ideals of freedom, equality, justice, and democracy—to all social, cultural and language groups. Multicultural education addresses deep and persistent social divisions across various groups, and seeks to create an inclusive and transformed mainstream society. Multicultural educators view cultural difference as a national strength and resource rather than as a problem to be overcome through assimilation.

### History

Multicultural education emerged during the civil rights movement of the 1960s and 1970s. It grew out of the demands of ethnic groups for inclusion in the curricula of schools, colleges, and universities. Although multicultural education is an outgrowth of the ethnic studies movement of the 1960s, it has deep historical roots in the African-American ethnic studies movement that emerged in the late nineteenth and early twentieth centuries.

Initiated by scholars such as George Washington Williams, Carter G. Woodson, W. E. B. DuBois,

and Charles H. Wesley, the primary goal of the early ethnic studies movement was to challenge the negative images and stereotypes of African Americans prevalent in mainstream scholarship by creating accurate descriptions of the life, history, and contributions of African Americans. These scholars had a personal, professional, and enduring commitment to the uplift of African Americans. They believed that creating positive self-images of African Americans was essential to their collective identity and liberation. They also believed that stereotypes and negative beliefs about African Americans could be effectively challenged by objective historical research that was also capable of transforming mainstream academic knowledge.

Carter G. Woodson—one of the leading scholars of the early ethnic studies movement—helped found the Association for the Study of Negro (now Afro-American) Life and History in 1915. The association played a key role in the production and dissemination of African-American historical scholarship. In addition to writing numerous scholarly works and editing the association's publications, Woodson initiated Negro History Week (now Black History Month) to focus attention in the nation's schools on the life and history of African Americans.

In 1922 Woodson published a college textbook, *The Negro in Our History*, which was used in many African-American schools and colleges. In response to public demand for classroom materials, he wrote an elementary textbook, *Negro Makers of History*, followed by *The Story of the Negro Retold* for senior high schools. Woodson also wrote, edited, and published African-American children's literature. In 1937 he began publication of *The Negro History Bulletin*, a monthly magazine for teachers and students featuring stories about exemplary teachers and curriculum projects, historical narratives, and biographical sketches.

When the ethnic studies movement was revived in the 1960s, African Americans and other marginalized ethnic groups refused assimilationist demands to renounce their cultural identity and heritage. They insisted that their lives and histories be included in the curriculum of schools, colleges, and universities. In challenging the dominant paradigms and concepts taught in the schools and colleges, multicultural educators sought to transform the Eurocentric perspective and incorporate multiple perspectives into the curriculum.

By the late 1980s multicultural theorists recognized that ethnic studies was insufficient to bring about school reforms capable of responding to the academic needs of students of color. They consequently shifted their focus from the mere inclusion of ethnic content to deep structural changes in schools. During these years, multicultural educators also expanded from a primary focus on ethnic groups of color to other group categories, such as social class, language and gender. Although conceptually distinct, the key social categories of multicultural education—race, class, gender, and culture—are interrelated. Multicultural theorists are concerned with how these social variables interact in identity formation, and about the consequences of multiple and contextual identities for teaching and learning.

During the 1970s a number of professional organizations—such as the National Council for Social Studies, the National Council of Teachers of English, and the American Association of Colleges for Teacher Education—issued policy statements and publications that encouraged the integration of ethnic content into the school and teacher education curriculum. In 1973 the title of the forty-third yearbook of the National Council for the Social Studies (NCSS) was *Teaching Ethnic Studies: Concepts and Strategies*. NCSS published *Curriculum Guidelines for Multiethnic Education* in 1976, which was revised and reissued in 1992 as *Curriculum Guidelines for Multicultural Education*. A turning point in the development of multicultural education occurred in 1977 when the National Council for the Accreditation of Teacher Education (NCATE) issued standards for the accreditation of teacher education. The standards required all NCATE member institutions (about 80% of the teacher education programs in the United States) to implement components, courses, and programs in multicultural education.

Over the past two decades more ethnic content has appeared in the textbooks used in elementary and secondary schools in the United States. An increasing number of teachers are using anthologies in literature programs that include selections written by women and authors of color. In addition, the market for books dealing with multicultural education has grown substantially, and some of the nation's leading colleges and universities, including the University of California at Berkeley and the University of Minnesota, have either revised their core curriculum to include ethnic content or have established ethnic studies course requirements.

## The Dimensions of Multicultural Education

James A. Banks's *Dimensions of Multicultural Education* is used widely by school districts to conceptualize and develop courses, programs, and projects in multicultural education. The five dimensions are: (1) content integration; (2) the knowledge construction process; (3) prejudice reduction; (4) an equity pedagogy; and (5) an empowering school culture and social structure. Although each dimension is conceptually distinct, in practice they overlap and are interrelated.

**Content integration.** Content integration deals with the extent to which teachers use examples and content from a variety of cultures and groups to illustrate key concepts, principles, generalizations, and theories in their subject area or discipline. The infusion of ethnic and cultural content into a subject area is logical and not contrived when this dimension is implemented properly.

More opportunities exist for the integration of ethnic and cultural content in some subject areas than in others. There are frequent and ample opportunities for teachers to use ethnic and cultural content to illustrate concepts, themes, and principles in the social studies, the language arts, and in music. Opportunities also exist to integrate multicultural content into math and science. However, they are less ample than they are in social studies and the language arts. Content integration is frequently mistaken by school practitioners as comprising the whole of multicultural education, and is thus viewed as irrelevant to instruction in disciplines such as math and science.

**The knowledge construction process.** The knowledge construction process describes teaching activities that help students to understand, investigate, and determine how the implicit cultural assumptions, frames of references, perspectives, and biases of researchers and textbook writers influence the ways in which knowledge is constructed.

Multicultural teaching involves not only infusing ethnic content into the school curriculum, but changing the structure and organization of school knowledge. It also includes changing the ways in which teachers and students view and interact with knowledge, helping them to become knowledge producers, not merely the consumers of knowledge produced by others.

The knowledge construction process helps teachers and students to understand why the cultural

identities and social positions of researchers need to be taken into account when assessing the validity of knowledge claims. Multicultural theories assert that the values, personal histories, attitudes, and beliefs of researchers cannot be separated from the knowledge they create. They consequently reject positivist claims of disinterested and distancing knowledge production. They also reject the possibility of creating knowledge that is not influenced by the cultural assumptions and social position of the knowledge producer.

In multicultural teaching and learning, paradigms, themes, and concepts that exclude or distort the life experiences, histories, and contributions of marginalized groups are challenged. Multicultural pedagogy seeks to reconceptualize and expand the Western canon, to make it more representative and inclusive of the nation's diversity, and to reshape the frames of references, perspectives, and concepts that make up school knowledge.

**Prejudice reduction.** The prejudice reduction dimension of multicultural education seeks to help students develop positive and democratic racial attitudes. It also helps students to understand how ethnic identity is influenced by the context of schooling and the attitudes and beliefs of dominant social groups. The theory developed by Gordon Allport (1954) has significantly influenced research and theory in intergroup relations. He hypothesized that prejudice can be reduced by interracial contact if the contact situations have these characteristics: (1) they are cooperative rather than competitive; (2) the individuals experience equal status; and (3) the contact is sanctioned by authorities such as parents, principals and teachers.

**An equity pedagogy.** An equity pedagogy exists when teachers modify their teaching in ways that will facilitate the academic achievement of students from diverse racial, cultural, socioeconomic, and language groups. This includes using a variety of teaching styles and approaches that are consistent with the range of learning styles within various cultural and ethnic groups, such as being demanding but highly personalized when working with American Indian and Native Alaskan students. It also includes using cooperative learning techniques in math and science instruction to enhance the academic achievement of students of color.

An equity pedagogy rejects the cultural deprivation paradigm that was developed in the early 1960s.

This paradigm posited that the socialization experiences in the home and community of low-income students prevented them from attaining the knowledge, skills, and attitudes needed for academic success. Because the cultural practices of low-income students were viewed as inadequate and inferior, cultural deprivation theorists focused on changing student behavior so that it aligned more closely with mainstream school culture. An equity pedagogy assumes that students from diverse cultures and groups come to school with many strengths.

Multicultural theorists describe how cultural identity, communicative styles, and the social expectations of students from marginalized ethnic and racial groups often conflict with the values, beliefs, and cultural assumptions of teachers. The middle-class mainstream culture of the schools creates a cultural dissonance and disconnect that privileges students who have internalized the school's cultural codes and communication styles.

Teachers practice culturally responsive teaching when an equity pedagogy is implemented. They use instructional materials and practices that incorporate important aspects of the family and community culture of their students. Culturally responsive teachers also use the “cultural knowledge, prior experiences, frames of reference, and performance styles of ethnically diverse students to make learning encounters more relevant to and effective for them” (Gay, p. 29).

**An empowering school culture.** This dimension involves restructuring the culture and organization of the school so that students from diverse racial, ethnic, socioeconomic, and language groups experience equality. Members of the school staff examine and change the culture and social structure of the school. Grouping and labeling practices, sports participation, gaps in achievement among groups, different rates of enrollment in gifted and special education programs among groups, and the interaction of the staff and students across ethnic and racial lines are important variables that are examined and reformed.

An empowering school structure requires the creation of qualitatively different relationships among various groups within schools. Relationships are based on mutual and reciprocal respect for cultural differences that are reflected in school-wide goals, norms, and cultural practices. An empowering school structure facilitates the practice of multicul-

tural education by providing teachers with opportunities for collective planning and instruction, and by creating democratic structures that give teachers, parents, and school staff shared responsibility for school governance.

### **Evidence of the Effectiveness of Multicultural Education**

*The Handbook of Research of Multicultural Education* comprehensively reviews the research on multicultural education and the effectiveness of various kinds of multicultural curricular interventions. At least three categories of research that describe the effectiveness of multicultural education can be identified: (1) research that describes the effectiveness of multicultural curriculum interventions such as Banks's 2001 research review; (2) research on the effects of cooperative learning and interracial contact, such as Robert Slavin's 2001 research review; and (3) research on how culturally responsive teaching influences student learning, such as Carol Lee's 1993 study and Gloria Ladson-Billings's 2001 work. An extended discussion of studies in the first genre is presented in this entry. Research reviews of the other two genres are found in the *Handbook of Research on Multicultural Education*.

Slavin's 2001 research review and Cohen and Lotan's 1995 research on cooperative learning and interracial contact activities indicate that these interventions—if they are consistent with Allport's theory of intergroup contact—help students to develop more positive racial attitudes, to make more cross-racial friendships, and have positive effects on the academic achievement of Latino and African-American students. Lee's 1993 research on culturally responsive teaching indicates that when teachers use the cultural characteristics of students in their teaching the academic achievement of students from diverse groups can be enhanced.

**Research on curriculum materials and interventions.** Research indicates that the use of multicultural textbooks, other teaching materials, television, and simulations can help students from different racial and ethnic groups to develop more democratic racial attitudes and perceptions of other groups. Since the 1940s a number of curriculum interventions studies have been conducted to determine the effects of teaching units and lessons, multicultural textbooks and materials, role playing, and simulation on the racial attitudes and perceptions of students.

These studies provide guidelines that can help teachers to improve intergroup relations in their classrooms and schools. One of the earliest curriculum studies was conducted by Helen Trager and Marion Yarrow (1952). They found that a democratic, multicultural curriculum had positive effects on the racial attitudes of teachers and on those of first- and second-grade students. John Litcher and David Johnson (1969) found that white, second-grade children developed more positive racial attitudes after using multiethnic readers. Gerry Bogatz and Samuel Ball (1971) found that *Sesame Street*, PBS's multicultural television program, had a positive effect on the racial attitudes of children who watched it for long periods. In a study by Michael Weiner and Frances Wright (1973), children who themselves experienced discrimination in a simulation developed less prejudiced beliefs and attitudes toward others. Multicultural social studies materials and related experiences had a positive effect on the racial attitudes of African-American four-year-old children in a study conducted by Thomas Yawkey and Jacqueline Blackwell (1974).

Research indicates that curriculum interventions such as plays, folk dances, music, role playing, and simulations can have positive effects on the racial attitudes of students. A curriculum intervention that consisted of folk dances, music, crafts, and role playing positively influenced the racial attitudes of elementary students in a study conducted by M. Ahmed Ijaz and I. Helene Ijaz (1981). Four plays about African Americans, Chinese Americans, Jews, and Puerto Ricans increased racial acceptance and cultural knowledge among fourth-, fifth-, and sixth-grade students in a study conducted by Beverly Gimestad and Edith DeChiara (1982).

Josette McGregor (1993) used meta-analysis to integrate findings and to examine the effects of role playing and antiracist teaching on reducing prejudice in students. Twenty-six studies were located and examined. McGregor concluded that role playing and antiracist teaching "significantly reduce racial prejudice, and do not differ from each other in their effectiveness" (p. 215).

### Demographic Trends and Issues

The ethnic, cultural, and language diversity within the United States and its schools is increasing. The U.S. Bureau of the Census projects that 47 percent of the U.S. population will consist of ethnic groups of color by 2050. Between 1991 and 1998, 7.6 million

immigrants entered the United States, mostly from nations in Asia and Latin America. The U.S. Census estimates that more than one million immigrants will enter the United States every year for the foreseeable future. Thirty-five percent of students enrolled in U.S. schools in 1995 were students of color. If current demographic trends continue, students of color will comprise approximately 46 percent of the student population in 2020. The increasing ethnic and cultural diversity of the U.S. student population stands in sharp contrast to a teaching force that was 90.7 percent white, middle-class, and three-fourths female in 1996. Many of the students entering U.S. schools speak a first language other than English. The 1990 census indicated that 14 percent of the nation's school-age youth lived in homes where the primary language was not English.

In addition to increasing ethnic, language, and cultural diversity, a significant and growing percentage of children in the United States, especially children of color, are being raised in poverty. The number of children living in poverty rose from 16.2 percent in 1979 to 18.7 percent in 1998. According to the U.S. Census Bureau, of the 12.7 percent of the United States population living in poverty in 1997, 8.6 percent were non-Hispanic whites, 26.0 percent African Americans, and 27.1 percent Hispanics.

Multicultural education theorists believe that the nation's schools should respond to its increasing racial, ethnic, and language diversity. However, they have different views about how to define the field's boundaries and about which social groups should be included under its umbrella. Some theorists are concerned that as the field expands to include an increasing number of cultural groups, its initial focus on institutionalized racism and the achievement of students of color might wane. The discussions and debates within multicultural education reflect the vitality and growth of an emerging discipline.

An increasingly low-income and linguistically and culturally diverse student population requires a transformation of the deep structure of schooling in order to experience educational equity and cultural empowerment in the nation's schools. Multicultural education is a process of comprehensive school reform that challenges racism and prejudice by transforming the curriculum and instructional practices of schools, and by changing the relationships among teachers, students, and parents.

A major goal of multicultural education is to help students from diverse cultures learn how to

transcend cultural borders and to engage in dialog and civic action in a diverse, democratic society. Multicultural education tries to actualize cultural democracy, and to include the dreams, hopes, and experiences of diverse groups in school knowledge and in a reconstructed and inclusive national identity. The future of democracy in the United States depends on the willingness and ability of citizens to function within and across cultures. The schools can play a major role in helping students to develop the knowledge and skills needed to cross cultural borders and to perpetuate a democratic and just society.

*See also:* AFRICAN-AMERICAN STUDIES; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; RACE, ETHNICITY, AND CULTURE; SCHOOL REFORM; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SOCIAL STUDIES EDUCATION; WOODSON, CARTER GODWIN.

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## MULTICULTURALISM IN HIGHER EDUCATION

There have always been debates about what knowledge should be included in the general education

curriculum (often referred to as the *core curriculum*). However, since the mid-1960s the debate has focused largely on the inclusion of racial, ethnic, women, gay, and lesbian voices in the curriculum. At the beginning of the twenty-first century, the debate is not whether to do it, but how. Although many terms over the years have been used, such as *multiculturalism*, *multicultural education*, and *ethnic studies*, the term *diversity* will be used here. A more encompassing term, *diversity* is meant to represent all perspectives from groups that have traditionally been excluded from or insufficiently examined in the curriculum. The term also takes into account the external forces that influence how academic institutions meet their educational objectives. The legal struggle over affirmative action in admissions, for example, no longer rests on moral grounds of remedy for past discrimination, but on the compelling interest of the state in the educational value of having a diverse student body.

### Demographics and Debates About Inclusion

Since the end of World War II, U. S. colleges and universities have become increasingly more diverse (by social class, race, gender, ethnicity, age, sexual orientation, and people with disabilities), even though some of these changes have often been fiercely resisted. Some demographic changes occurred not simply because of federal troops but also because of federal legislation. In the 1940s the G. I. Bill made college affordable for vast numbers of working-class men. The Civil Rights Act of 1964 opened the door of academia to African Americans and other people of color, while the Immigration Act of 1965 opened U.S. borders to new sections of the globe. Title IX radically altered how women fared on campuses, just as the Americans with Disabilities Act of 1990 removed barriers that previously barred many aspiring students. Other demographic shifts were fueled by policy changes or new programs, such as the establishment of community college systems, the creation of programs of continuing education for women, and the creation of the Equal Opportunities Commission. By the end of the twentieth century higher education had actually come close to fulfilling democracy's highest goal of an educated citizenry. In 2000 nearly 75 percent of high school graduates went on to some college experience within two years of graduating. The student profile in the late 1990s was 55 percent female and 28 percent students of color. Forty-three percent of stu-

dents were over 25 years old, and nearly that same percentage were first generation college students.

Paralleling the shifting demographics of the students was the persistent call for inclusion of diverse perspectives in the curriculum. These calls have come not only from the groups that were previously excluded, but also from faculty, students, business leaders, and the general public. In a public poll of registered voters in 1998, the ordinary citizen was overwhelmingly in favor of diversifying students, faculty, and the courses taught. While 58 percent were concerned that the United States was splitting apart over differences, 71 percent believed that higher education could, and should, help people find a way to bring people together. Although Americans might differ in their rationales for broader inclusion, there is consensus overall about the intellectual, individual, economic, and societal benefits for doing so.

Calls for inclusion stem from the argument that a singular, Eurocentric perspective has had negative consequences for individual students and for the larger society. Proponents of diversity in higher education argue that excluding diverse perspectives in the curriculum has truncated students' learning, leaving them ill-prepared to function in an increasingly diverse democracy. The very purpose of higher education—to deepen students' understanding of what is known, how it has come to be known, and how to build on previous knowledge to create new knowledge—is thus undermined by eliminating the voices of those whose experiences differ from those traditionally represented. Such exclusions reveal an inconsistency between the rhetoric and the practice of democracy. Correcting this inconsistency eventually became the cornerstone of the civil rights, women's rights, and other movements that have pushed the higher education community to offer a more inclusive curriculum.

Conversely, opponents of diversity in the curriculum argue against including African American, Latina/Latino, Chicano, Asian American, women's, and gay and lesbian studies in the higher education curriculum, claiming that these issues are more appropriately discussed and debated in the political arena rather than in academia. They contend that institutions of higher education should be reserved for the pursuit of objective knowledge and truth through rigorous disciplinary study. Critics of diversity education claim that the focus on differences, which is often a characteristic of general-education

diversity requirements, weakens national unity and has only a limited (if any) role in institutions of higher learning. They contend that the curriculum of higher education should be the basis for inquiry, discovery, and dissemination of knowledge, open to students capable of contributing to its development, and devoid of social politics.

As the debate about inclusion grew louder, the research on, and practice of, diversity education has accelerated greatly over the years. Initially, diversity in the 1960s and 1970s was located primarily in newly established special departments and programs, usually organized around a single group, such as Asian-American studies, women's studies, or African-American studies. By the 1980s these specialized areas of knowledge eventually spawned hundreds of programs at colleges and universities in what came to be called *mainstreaming*, *integrating*, or *transforming* the curriculum. Such programs sought to incorporate new knowledge into existing courses, some of which were within a major course of study, others of which were in general education courses.

Eventually, the research on multicultural education began to lay out a compelling case that being attentive to diverse voices provides lenses through which richer conceptions of social, political, economic, and natural phenomenon could be revealed, underscoring that there are many ways of knowing. During the 1980s and 1990s in particular, colleges and universities moved from infusing diversity across the curriculum to also creating diversity requirements within their core curriculum. While a general education requirement alone is insufficient in and of itself to prepare students for the complexity of the diverse societies they will work and live in, it is a solid and significant start.

Before examining the emerging contours of twenty-first-century diversity requirements, it is important to recognize their context within general education as a whole. Some institutions, such as Wesleyan University in Connecticut, Bloomfield College in New Jersey, and Brookdale Community College in New Jersey, have invested significant institutional funds over many years in what they argue is a more pervasive strategy of infusion across the curriculum, rather than relying on a single required diversity course in general education. Nonetheless, because students take a prescribed number of general education courses, lodging diversity within core requirements is one visible indicator of an institution's commitment to diversity. While it is not the

only measure, or even a sufficient measure, embedding diversity within general education makes a clear statement that knowledge about diversity is viewed as an essential component of a college education.

### **An Aerial View of National Diversity Requirements**

The first formal adoption of a diversity requirement in the general education core occurred at Denison University in Ohio in 1979. By 1992, however, a survey conducted by researchers Richard Light and Jeanette Cureton reported that 34 percent of colleges and universities had multicultural general education requirements, 12 percent of which were on domestic diversity; 29 percent on global diversity; and 57 percent addressing both. Of those colleges queried, one-third offered course work in ethnic and women's studies, while a far greater number—54 percent—had introduced multiculturalism into their departmental course offerings. It is not surprising that there is more activity at departmental levels than at general education levels, since, in most cases, general education needs majority support from the faculty to secure approval. But departmental activity is unevenly dispersed and some departments and divisions have almost no multicultural courses or requirements.

Light and Cureton also found that four-year colleges are more active than two-year colleges in integrating multiculturalism into the curriculum, despite the greater diversity of the student body in community colleges. While demographics clearly drive the push for diversity requirements and courses, they are, it seems, not the only factor. Public institutions exceed private colleges in the number of multicultural indicators, just as research universities have more comprehensive multicultural efforts than either comprehensives or liberal arts colleges. Not surprisingly, geographical regions varied significantly in the amount of multicultural programming, with the Mid-Atlantic states and the West outpacing New England and the South.

In a 2000 national survey about diversity requirements, the Association of American Colleges and Universities (AAC&U) found striking progress among the percentage of colleges and universities polled—the number of institutions with diversity requirements had almost doubled from Light and Cureton's figures in 1992. Sixty-three percent of colleges and universities reported either having a diversity requirement in place or being in the process of

developing one. Fifty-four percent of survey respondents had diversity requirements in place; another 8 percent were in the process of establishing them. Of institutions with requirements, 25 percent had been in place for more than ten years, 45 percent had put them in place during the previous five to ten years, and 30 percent had requirements in place for less than five years. All indications are, therefore, that the number of colleges with diversity requirements is likely to continue to expand.

Regional distinctions were also found in AAC&U's survey. For example, 78 percent of colleges responding from the West had diversity requirements, while 68 percent of those in the Middle States (Mid-Atlantic) region and 60 percent in the North Central region had such requirements. By contrast, only 45 percent of the institutions in the New England region had diversity requirements in 2000, followed by 36 percent of those in the South and 35 percent in the Northwest.

### **Incorporating Diversity into General Education Designs**

But what do diversity requirements look like? A majority (58 percent) of institutions with such requirements demand that students take one course; while 42 percent require two or more courses. Not surprisingly, the most common model, surfacing at 68 percent of the AAC&U survey respondents, asks students to take one diversity course among many offerings. Typically these courses examine attitudes and cultures that are different from the dominant culture. At the University of Arizona, students can take a class that focuses on gender, race, class, or ethnicity, while the requirement at the University of Maryland focuses on all those plus non-Western culture as well.

Some institutions include several courses, but more restrictively define their purpose. At the University of Michigan, for instance, while there are many different courses to choose from, each course needs to pay attention to (1) race, racism, and ethnicity; (2) intolerance and resulting inequality; and (3) comparisons across race, religion, ethnicity, religion, social class, or gender. Similarly, Denison University in Ohio, whose requirement dates back to 1979, requires a course on women and/or minorities in twentieth century America that examines the effects of discrimination in the American context. Haverford College in Pennsylvania, whose original 1983 diversity requirement asked that students be

introduced either to cultures they did not know or to systems of inequality and discrimination, revised its requirement after ten years to a social justice requirement focused on analyzing systems of inequality and discrimination.

The advantage of a more flexible diversity requirement is that it creates fewer turf battles between departments, is more easily approved by curriculum committees, and often needs less faculty development because the people who already have the expertise in a given area submit their existing courses as possible choices for the diversity requirement. These broad diversity requirements typically involve people across disciplines. When paired with faculty development opportunities, as it is at the University of Maryland, they can be a significant source for change in the curriculum overall, since newly acquired faculty expertise and perspectives will extend beyond the approved general-education diversity courses. The disadvantage of this approach is that without more tightly defined learning goals for the students, it is not always clear exactly what knowledge the institutions want students to acquire from taking such wide-ranging diversity courses. Students taking a course in twelfth-century Chinese art, for example, will learn very different things than those taking a course on the U.S. civil rights movement.

By contrast, only 17 percent of respondents in AAC&U's survey require all students to take a single diversity course that is part of a more tightly defined core curriculum. The great advantage of required cores is that every student is introduced to diversity issues, regardless of their major. Implementing a core curriculum, especially a newly designed one, typically calls for offering faculty development opportunities, which will, as a by-product, result in widespread influence on the content and pedagogy of many other courses outside the core.

Having a required core curriculum seems to work more easily and effectively at smaller institutions, for obvious staffing reason, but there are examples of large research universities implementing core curricula as well. The State University of New York at Buffalo, with approximately 16,000 undergraduate students, has such a core curriculum. After careful piloting and faculty development workshops, it instituted a well-thought-out required core course called "American Pluralism and the Search for Equality." While a variety of different courses meet the curriculum requirement, all such approved courses are united by their commitment to a com-

mon set of learning goals for students. Buffalo's 1992 American Pluralism Subcommittee included specifically defined learning goals for students, such as: (1) to develop within students a sense of informed, active citizenship by focusing on contemporary and historical issues of race, ethnicity, gender, social class, and religious sectarianism in American life; (2) to provide students with an intellectual awareness of the causes and effects of structured inequality and prejudicial exclusion in American society; (3) to provide students with increased self-awareness of what it means in our culture to be a person of their own gender, race, class, ethnicity, and religion as well as an understanding of how these categories affect those who are different from themselves; (4) to expand students' ability to think critically, and with an open mind, about controversial contemporary issues; and (5) to provide students with an intellectual awareness of diverse visions of the future as well as processes leading to a more equitable society.

A much smaller institution, St. Edward's University in Texas (approximately 3,300 undergraduates), adopted a fifty-seven-hour core that includes two first-year courses, "The American Experience" and "American Dilemmas." They have also adopted a vertical core that extends from freshman through senior year, thus allowing students opportunities to develop advanced analytical skills and revisit issues over time. By their senior year, students are asked to use insights acquired through their major to solve a pressing social problem as part of their senior culminating education requirement.

Yet another example of an interesting approach to a core diversity requirement is the regionally focused one adopted by the University of Memphis, where the general-education core requirement, "Cultural Confrontations," focuses on the relationships among the three major populations in the mid-South: European Americans, African Americans, and Native Americans. Parallel comparative courses that analyze power and justice can be found in the expanding number of general education courses focused on world cultures.

A newly developing approach to diversity that is located both in general-education diversity courses and in electives and majors focuses on what is called *service learning*, or, less frequently, *community-based learning*. Such credit-bearing courses teach students new intellectual knowledge about diversity, while also providing hands-on experiences that help them become more informed and skilled

in creating more just societies. At Rutgers University in New Jersey, the Civic Education and Community Service Program combines community service with academic investigations about how to work alongside people with diverse backgrounds, while also teaching students more about what is needed to sustain an egalitarian, pluralist democracy. Hobart and William Smith Colleges in Connecticut created more than seventeen courses within two years' time that integrated service learning into academic courses that sought to expand students' capacities to be nation builders through a commitment to justice. Wagner College, located on Staten Island in New York, adopted a new curriculum in 1998 that integrates service learning as a thread woven through all four years as part of the general education requirement.

Whatever model is chosen for diversity requirements, courses across all these designs are more frequently organized through a comparative approach between groups, rather than by focusing on a single group alone. Conceptually, more courses also use an integrative analysis by helping students learn how to analyze multiple kinds of intersecting differences, either within a single group (studying gender or ethnic differences within Latinos/Latinas) or across several groups (studying class and religious differences across European Americans, African Americans, and Asian Americans). Diversity courses within general education also more typically explore moral and ethical questions, and are more likely to analyze systems of injustice, intolerance, inequality, and discrimination—as exemplified in Oregon State University's general education course, “Diversity, Power, and Discrimination.”

Another emerging characteristic of diversity courses in general education is their interdisciplinary approach and the reliance on collaborative, student-centered pedagogies where intergroup dialogue and engagement are deliberately cultivated. In addition, there are also growing examples of innovative couplings between curricular and cocurricular activities, often but not exclusively incorporating living/learning residential dimensions to enrich classroom experiences. In an effort to escape the too prevalent option of choosing either a course on U.S. diversity or a course on world cultures, there is some evidence that more institutions are seeking ways to explore the interconnections between global and domestic diversity, sometimes by teaching U.S. diversity within a global context.

AAC&U's president, Carol Geary Schneider, argues that diversity requirements are, as she puts it, “filling the curricular ‘civic’ space once assigned to ‘Western Civ.’ That is, diversity requirements signal the academy's conviction that in the early twenty-first century citizens need to acquire significant knowledge both of cultures other than their own and of disparate cultures' struggles for recognition and equity” in order to be adequately prepared for the contentious, complex world they face (p. 2). But Schneider asserts more progress needs to be made in developing general education courses that examine diversity in the context of democratic values, histories, and aspirations. Students have too few opportunities to systematically debate the premises and meanings of democracy itself.

### Conclusion

Despite the remarkable transformation and innovation in general education courses and models since 1980, the job is not done—and rightly so. In the best tradition of academic practices, most institutions would admit they don't always get it right the first time and need to submit their established general education designs to regular critique and assessment. While there has been increasing local and national attention paid to evaluating the impact of diversity courses, assessment needs to be more systematically embedded in the institutional life of the college and its faculty. Moreover, in the distinctively fluid, ever-changing environment of higher education, re-examining the effectiveness of the curriculum is a necessity, especially in light of what has become a common fact that students might attend two or three different institutions before acquiring their college degree.

Getting it right also matters because so much is at stake, both educationally and civically. Research examining the impact of curriculum transformation efforts reveals some significant findings. Several studies, for instance, confirm that serious engagement of diversity in the curriculum and the classroom has a positive impact on attitudes toward racial issues, on opportunities to interact in deeper ways with those who are different, on cognitive development, and on overall satisfaction with institutions. Longitudinal research on the effects of the focused use of intergroup dialogues confirm measurable progress in identity development, more comfort with conflict as a normal part of social life, more positive intergroup interactions, and long-

term effects on participation in activities with members of other racial and ethnic groups among dialogue participants.

For all the notably proud progress of U.S. democracy, the United States is a stratified society that continues to be segregated racially in its residential patterns, whether within inner cities or in surrounding suburbia. Higher education is therefore precious mediating public space where, unlike most of American society, different groups live, study, and think side by side. As such, it offers the genuinely authentic daily experience of a multicultural, pluralist, democratic environment. If higher education can seize the rich educational and societal benefits inherent in such a mix, it promises to have far-reaching consequences on the quality of the nation's, and the world's, communal life.

Research has conclusively shown that a racially and ethnically diverse student body has far-ranging and significant benefits for all students. Students learn better in such an environment and are better prepared to become active participants in a pluralistic, democratic society once they leave school. Patterns of racial segregation can be broken by diversity experiences in institutions of higher education.

So it matters that general education courses incorporate diversity in ways that capitalize on the presence of diverse students and the potential for deep and lasting knowledge that affects actions during and after graduation. As Bobby Fong, the president of Butler University, said so eloquently at his inauguration, "The ideal of the academy is to be able to represent fairly the viewpoint of those with whom one most disagrees. But dialogue, however necessary, is not sufficient. The unending conversation is what we must, at all costs, preserve in the academy, but our students need to be equipped for living, in most cases, beyond the academy, in a world where moral decisions, in all their contingency and uncertainty, must be made."

Of course, general education courses cannot carry the intellectual and moral weight of accomplishing all this in one required course, or even in a sequenced series of courses. Each institution needs to take a holistic look at the entire curriculum, the interrelationship between general education and the major, the cumulative kinds of developmental experiences a student might have in progressing towards a degree, and the increasingly complex and demanding questions students are able to pose and answer

as they are challenged to use their new knowledge and civic, intercultural capacities to address real-world problems. If students graduate with the ability to think critically, act responsibly, and negotiate borders that might otherwise divide, then higher education will come closer to meeting its historic mission of not only advancing knowledge, but contributing to stable, more equitable democratic societies.

*See also:* AFRICAN-AMERICAN STUDIES; GAY AND LESBIAN STUDIES; GENERAL EDUCATION IN HIGHER EDUCATION; MULTICULTURAL EDUCATION; RACE, ETHNICITY, AND CULTURE; SERVICE LEARNING; WOMEN'S STUDIES.

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ALMA R. CLAYTON-PEDERSEN  
CARYN MCTIGHE MUSIL

## MUSEUM AS AN EDUCATIONAL INSTITUTION, THE

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In ancient Greece the museum was for pure study and contemplation. Culture came first, learning second. In American museums, the earliest examples of the term *education* in museum mission statements were directed toward promoting democracy. In this way education in American museums was tied to the very identity of the nation.

### The Birth of Public Museums

In the late eighteenth century, America saw the development of the public museum. As industrialization progressed, more people moved into cities. The nation's policymakers were taking on more responsibility for social services and the welfare of the nation. Government-funded schooling in industrialized areas was developing. This was a time of great public interest in science, in which citizens were embracing the Founding Fathers' zeal for natural history while finding that technology and industry were

affecting daily life. Amateur collectors formed membership societies for the preservation and study of specimens, which were displayed in what came to be called *cabinets of curiosities*. Leisure activities, such as public lectures on the arts and sciences, had intellectual value.

During the late 1700s and early 1800s education in American museums can be simplified as a time of conflict between scholarship and popularization. Arguably, many of the early American public museums were little more than sideshows of curiosities. The infamous American showman P. T. Barnum exploited public interest in natural history by exhibiting the supposed skeleton of a mermaid and entertaining crowds in institutions that were theatrical venues as much as museums. Two exceptions were the Peale museums in Baltimore, Maryland, and Philadelphia, Pennsylvania. They were created as institutions to help people better their lives. The Peale Museum in Philadelphia used its exhibition space for public health campaigns and demonstrations of the latest technological wonders. For example, its exhibition of piped gas lighting was an entertaining, but convincing, display of how gas lighting could transform Philadelphia. This was the beginning of the public museum where the display of objects was for the enlightenment and entertainment of the public.

### Museums after the Civil War

Education in American museums developed further after the Civil War. In the late 1800s theories of learning proposed that new knowledge was revealed not just through books but also through objects. Consequently, museums, not universities, were places for the production of knowledge. At that time universities were seen as inactive as they were not institutions that created new knowledge. Instead, universities taught knowledge that was already known. The most prestigious universities of the mid- to late nineteenth century tended to be theological institutions that focused on the interpretation of texts, not object-based research.

Producing new knowledge required object-based research. Consider natural history museums, full of objects used in the daily research of scientists. These institutions were central to the pursuit of science. But education existed alongside research. In museums, as new information was discovered, it was made public through exhibitions. This was a striking contrast to universities, where any new knowledge produced was available only to the select audience

there. Museums were seen as democratic institutions, more accessible to the public than universities.

The late 1800s were a boom time for American museums. Great institutions, such as the Metropolitan Museum of Art and the American Museum of Natural History, both in the New York City, and the Art Institute of Chicago opened during these years. Amateur-scientist societies were opening the doors to their cabinets of curiosities for the betterment of the public. American librarian John Cotton Dana was writing about the museum as an instrument for popular culture. He wanted museums to be founded out of the highest ideals for citizens. Yet this period marked a shift in public education institutions, and by the first quarter of the twentieth century, universities had become the primary institutions for public education.

### A Shift in Education

One theory of how public education shifted from museums to universities in the early 1900s points to differences in assessment. As schooling became more common, a large system of assessment grew along with it. Museums did not embrace assessment in their educational activities. Assessment in schools provided the leverage necessary for additional public and government support. Another theory was that the educational activities of museums relied too much on the inherent ability of objects to speak for themselves. It was thought that anyone who studied the object carefully enough, even untrained observers, would understand the object's meaning. Public interest waned when faced with multitudes of objects and little interpretation. In addition, museums faced increasing competition from world fairs, which offered more entertainment than the usually serious museums.

By the 1930s there was already a need to argue that museums could provide a role in public education, even as an assistant to the education that took place in schools. A new generation of curators in museums was focused on collections, not education. Education in museums was no longer built on the production of new knowledge, and instead focused on entertaining and educating the public about information (that was not necessarily up to date). Museums began to turn increasingly to educating schoolchildren.

There was also an increasing diversity and professionalization of methods used to educate the

public. Museums began to appoint instructors to their staff and early scientific studies of museum visitors' activities were carried out. By 1932, 15 percent of all museums offered educational programs. Lectures, tours, demonstrations, and labels became features of many museums. Public outreach was offered through tours for schoolchildren and through printed educational materials along with the loan of objects for classroom use. The presentation of objects in museums changed. Exhibits now included combinations of related objects, dioramas, period rooms, and more realistic taxidermy.

By the 1940s labels, brochures, and lectures were regular features of museums, but they tended to be strictly information based. Education programming now included teacher-training courses, junior museums for children, branch museums at local libraries, and programs for the unemployed. Museums loaned materials to schools, but also shops, hospitals, and community groups. Museum exhibitions and programs were even used to promote patriotism during World War II.

### The National Education Infrastructure

The 1970s saw the development of new educational interpretation methods. Exhibitions of objects began to include film, audio, and even the first computers. There was also a growing awareness of a new type of exhibit, best described as a hands-on display, used to demonstrate scientific phenomena in the earliest science centers, including COSI in Columbus, Ohio, and the Exploratorium in San Francisco, California, which opened in 1964 and 1969 respectively. Perhaps most important, in 1973 the American Association of Museums created a standing professional committee on education. The education committee's purposes include promoting high professional standards for museum educators, advocating for the support of the educational purpose of museums, and promoting excellence in museum learning. This committee signaled a national recognition of the professionalization of education in museums.

In the 1980s education was placed squarely in the center of American museums and their role in the impending new century with the 1984 report of the American Association of Museums, *Museums for a New Century*. This report, and the later *Excellence and Equity*, published in 1992, spotlight education as the central focus of museums' public service. Notably, the reports describe education in broad, pluralistic terms, encouraging museums to provide

educational experiences “by fostering the ability to live productively in a pluralistic society and to contribute to the resolution of the challenges we face as global citizens” (American Association of Museums 1992, p. 6). Museums were once again positioned to make a major contribution to public education.

In the 1990s research showed that museums not only provided rich education experiences for families but also provided direct support for schools. Museums played a role in the national infrastructure that supported public education. Some argued that museums played a unique role by offering benefits not found in schools: Museums were nonthreatening environments that appealed to a wide range of audiences; they offered an interdisciplinary approach; they had more flexibility than schools; and they had the capacity to bring students, teachers, and the public together in new ways. Museum education at the end of the twentieth century was much more than school group tours and classes for adults.

### New Directions

As museums positioned themselves in the educational infrastructure at the beginning of the twenty-first century, there was increasing pressure to address public issues, including failing school systems, community building, and diversifying audiences. Museums responded to this pressure by expanding the range of their educational activities. Education came to encompass the development and interpretation of exhibitions, events, workshops, and even the study of visitors’ experiences and educational outcomes. Museum staff has been involved at a national level in establishing standards for education. Educational training for teachers has been offered through pre-service classes and professional development. Education for children and adults has reached diversified audiences through new programs in new locations, including access programs for visitors with physical or mental impairments, and after-school clubs and activities in museums, churches, and public housing. Education in American museums, as Stephen E. Weil summarized it, has shifted from being about something to being for somebody.

*See also:* NATIONAL ART EDUCATION ASSOCIATION; NATIONAL ENDOWMENT FOR THE ARTS.

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KIRSTEN M. ELLENBOGEN

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## MUSIC EDUCATION

### OVERVIEW

Richard Colwell

### PREPARATION OF TEACHERS

Carlos Xavier Rodriguez

## OVERVIEW

An observation of music classes in the public schools reveals that little changed in the last half of the twentieth century, including the education of music teachers. The value and role of music education in American schools has been affected, however, by the education reform movement and changes in the organization and delivery of instruction. One major change is that music often is not regarded as a stand-alone subject but is incorporated into an arts education.

Almost all K–6 schools offer some type of required instruction in music. At the middle school level, changes in the instructional format and the addition of electives in other arts courses have reduced the importance of music. The secondary school music program consists largely of performance ensembles, which comprise bands (wind ensembles), choirs, and string or full orchestras. These ensembles are elective although an increasing number of states (about half in 2001) mandate a unit of fine arts at the secondary level. To enable the nonperformer to meet this graduation requirement, courses are offered that may include advanced placement (AP) music theory (usually taken by students who are already enrolled in a music class), beginning guitar and keyboard classes, or an extension of the general music class similar to that offered in the elementary school. The prevalence of the new requirement for an arts course at the secondary level is somewhat misleading as some states define grades seven through twelve as secondary education. There is also a broad interpretation of what constitutes an arts course; some states include literature, foreign language, and photography, as well as music, visual arts, theatre, and dance, while others include the arts as a choice among required electives. The most identifiable change in the music curriculum, found primarily in general music, is a greater emphasis on composition, the instruction of which has been facilitated by computers and the use of multicultural music.

It is difficult to generalize the percentage of students participating in music at the secondary level. Percentage of participation varies greatly depending upon the size of the school, ranging from 5 percent in large schools to as much as half the student body in small or magnet schools. About 35 percent of the student body are enrolled in music for one semester, a percentage that would be about 20 percent at any

one time. Well over 90 percent of the secondary schools offer band and nearly 85 percent offer choral music. String programs are found in approximately 20 percent of high schools, although this dearth is compensated by the all-city/region youth orchestras that provide stunning musical experiences, often rivaling the quality of the local symphony orchestra. String students commonly study music privately outside of school and often began instruction at an early age through a Suzuki-type program.

An important variable in secondary music is the establishment of numerous magnet arts high schools. Students enrolled in these programs do very well academically, as shown through past experience with arts magnet schools like the Interlochen Arts Academy and the North Carolina School for the Arts. James Catterall's research on students enrolled in music for four years reveals that they score appreciably better than average on SAT and ACT tests. This relationship between academic success and the arts is frequently used to promote the concept of "learning through the arts." In 2001 the U.S. Department of Education provided a \$2.5 million grant to the Berkeley County School District in South Carolina to initiate an integrated arts/academic magnet school curriculum.

### Elementary School Music

The required general music program in grades K–6 is less vibrant than it was at the midpoint of the twentieth century. The reduction in curriculum time occurred gradually during the 1970s and 1980s, making it difficult to pinpoint any single cause. Budget reductions are most often cited as the cause, perhaps due to the publicity given to budget caps passed by the legislatures in California and Massachusetts. Whether the caps were causal is a matter of debate but the reduction in curriculum time for music was more likely the result of changes in priorities and not fiscal change. During the 1970s and 1980s fewer discretionary funds were available to school districts due to steep increases in shared costs for special education. Second, greater emphasis was placed on test scores in language arts and mathematics. In addition, elementary classroom teachers were relieved of responsibility for teaching or helping to teach music, due to an extensive campaign by the Music Educators National Conference in behalf of certified music teachers. Fourth, colleges of education reduced the coursework in music required of classroom teachers, making music the area in which these teachers felt

least competent to model and to teach. Also during this period instructional time was reduced from daily classes of 20–30 minutes to a weekly offering of the same length. However, expectations of student competency in music were not lowered and in fact new objectives were added. No public reaction to this change occurred, as school administrators and the public never had a clear idea of the important competencies in music that all students should possess upon completion of a K–6 curriculum. Thus, inadequate time became the norm. Instructional time in the secondary schools was not reduced; thus there was no change in the more visible components of the secondary school's music program.

Music appreciation as an objective in the elementary curriculum lost any cachet it once had (the AP course in music listening was dropped at the secondary level for lack of interest) despite a warning by the National School Board Association in 1988 that performance had replaced appreciation. Singing as an objective became a lower priority. Texts for general music for K–6, consisting of songs with related listening materials for all students, were replaced by specialized programs based on the method and materials of the founder. These programs, primarily Orff, Kodaly, and Dalcroze, became ascendant, along with teacher-constructed offerings consisting of popular and ethnic music, music games, videos, and activities tangentially related to music. When the specialist teacher came in contact with students only once per week and met as many as 500 students during that week, the idea of a sequential curriculum became infeasible, as did the possibility of assisting the student who fell behind. In all states except Louisiana specialists are the primary deliverers of instruction.

The reform movement promotion of basic or core subjects mobilized those interested in elementary music education to demand that music be included as a core subject, returning it to its century-long importance. Music was joined by visual arts, theatre, and dance to create a requirement in arts education. Arts Content Standards were quickly formulated in each of the four arts and in 1994 these standards were the first core addition to be accepted (after the long-standing mathematics standards) by the Secretary of Education. Performance and Opportunity to Learn Standards were also constructed and distributed to members of the four arts professions but these two standards have received scant attention, especially the Opportunity to Learn Standards that

are necessary for students to attain at least a proficient performance level in nine content areas. The Music Educators National Conference (now named MENC: The National Association for Music Education) has vigorously promoted the content standards since their adoption. (The suggestion has been made that if the standards in all of the subjects were adopted that it would add five years to the K–12 curriculum). Two of the content standards in each art form emphasized the importance of relating the four art forms to one another and relating the arts to other subjects in the curriculum. Although it is difficult to imagine how social studies or most other subjects could be taught without consideration of the arts, this content standard shifted the perception of responsibility so that the arts teacher is seen as an aide to the subject matter teacher when the reverse should be true, logically and educationally. The arts standards will not be taken seriously where the classroom teacher is given the responsibility but not the competency to teach in the arts area.

### **Middle School**

With the recommendations of the Carnegie Foundation for the middle school, new curriculum emphasis was placed on student development of a positive outlook toward educational success that would contribute to improved self-confidence and self-esteem. To accomplish this, the middle school curriculum was to be taught by teacher teams in the more basic subjects that, in turn, were to be supplemented by a rich offering of exploratory courses. The arts became part of these elective exploratory courses, frequently competing with chess club and Tae Kwon-Do for available curricular time. (The arts are often a required exploratory for six to nine weeks at one or more of the grade levels of middle school, an arrangement that interferes with any sequential music curriculum during middle school and lacks any connection to elementary school music objectives or to the offerings in the secondary school.)

The involvement of the arts community in supporting the inclusion of the arts as a basic school subject has raised many substantive issues. First, could a national or community artist supplement or replace the certified teacher at a lower cost and provide more authentic instruction? The massive Annenberg grant to the public schools established partnerships between the schools and cultural organizations, a provision that brought performers and composers who had no teacher training into the

schools much like the Ford Foundation's Young Composers Project did in the late 1950s and 1960s and programs of the National Endowment of the Arts, state arts councils, and Young Audiences do in the early twenty-first century. Second, arts organizations raise or find money to support their own curricular vision of a music program or music experience. These organizations provide musical instruments, music scores, and instruction, as well as field experiences such as attendance at concerts and operas. Third, arts organizations have found it easier to work with classroom teachers and their objectives rather than with the heavily scheduled music teacher. The Lincoln Center Institute has operated such a program for twenty-five years, bringing classroom teachers and professional musicians together to facilitate the classroom teacher's objective of an enriched classroom and to aid teachers in attaining goals in their extant curriculums. Fourth, other arts and nonarts organizations have taken a broad approach to education (as opposed to schooling) and initiated after-school programs in music to accomplish several purposes: to provide a balance to remedial programs in the more basic subjects that are offered after school; to provide a safe environment for that time period between the end of the school day and when parents are at home; and to free up the basic curriculum by avoiding the interruption for music class. Fifth, community music centers have a presence in many cities, offering not only private lessons but often ensemble experiences and short-term educational instructional units in the public schools (with their own staff); these offerings consist of content that fits a particular school's monthly or yearly focus. Sixth, all major and community orchestras have initiated educational programs that include youth concerts and preparation for attendance at these concerts. These multiple offers of assistance from the local community are difficult to reject; they cost the schools nothing, are designed for all students in K–6, and administrative-count as part, or all, of the music program.

To describe the music education of Americans one must take into account the value of private music lessons (especially piano and guitar); the impact of radio, television, and compact discs and the listening experiences they provide; and the many informal performing experiences such as garage bands. Should a student's competency in music be the issue, many students could test out of classroom music. However, the opportunity to learn to play an instru-

ment is provided in most schools around fourth grade—the decision of when to offer instrumental music instruction is based more upon the budget than the student's likelihood of success. Also, music educators in K–6 general music have adopted a role in supporting multicultural education. It is interesting to identify music from other cultures and to compare and contrast these types of music. Learning to perform on ethnic instruments is fun and listening exercises are more concrete as much ethnic music has a practical value in its relationship to social studies and other core courses. Western music, written for the concert hall, often does not contain many cultural or historical references; its meaning and importance are based on its formal and aesthetic qualities. Thus, it is no longer possible to definitively describe the K–6 music program in American schools, as the content is not only diverse but also affected greatly by the political currents of the educational reform movement.

### **Early Childhood Music**

Early childhood education frequently includes rich music experiences whether in the private early childhood programs such as Waldorf and Montessori (which extend beyond early childhood) or in public school programs for disadvantaged children. Research, including the Perry Early Childhood Program (HighScope) that has impressive longitudinal data on a sample of students for some twenty years, indicates that music competencies achieved from birth to age five assist students in later school experience. Other research, whose findings are often mislabeled the "Mozart effect," indicates that music listening experiences with very young children play a role in how the brain is wired. This research is focused on temporal-spatial ability and how it relates to the abstract thinking required in mathematics and science. Keyboard experience also may provide a spatial-temporal advantage. These research results also support programs labeled "learning through music" where music is taught not for its musical benefits but for other reasons. The interest in justifying music instruction on the basis of what is learned about other subjects is a contemporary worry, although the powerful instrumental music programs in the secondary schools have long been valued for their role in accomplishing general, nonarts objectives. Students do learn character, responsibility, cooperative learning, how to budget their time, and much more as part of being a contributing member

to an ensemble that has high standards. Students participate because their peers participate and they are attracted by the chance to do things well with their friends. The power of these side objectives does not necessitate the sacrifice of unique musical objectives; however, the perception of school administrators and board members is important for long-term goals.

Music continues to play an important role in special education programs, in music therapy, and with English as a Second Language students. The nonverbal nature of music allows students with special needs to participate in many music experiences and to obtain educational benefits as well as enjoyment.

### Secondary Schools

The instrumental performance program (grades 9–12) is edging toward becoming a semi-independent part of the school day in that it is not fully supported by school funds. Participating students do receive academic credit but that credit is not always computed in a student's overall grade average and many colleges exclude such grades and credit in making admission decisions. *The Instrumentalist* magazine reported in 2001 that more than half of the budget required to support secondary instrumental music programs was raised by students, businesses, and parents through fund-raising or assessments. This percentage likely represents the more advanced band programs. The quality of band programs is steadily increasing with graduates often able to matriculate into college applied music curricula. A study completed by Educational Research Service indicates that slightly more than 20 percent of the funds required to support secondary music programs, including general music, music theory, choral performance, and other academic classes, is raised from outside sources. No longer automatically providing instruments for students, schools have gradually come to expect students to own or rent their own instruments and to pay for expenses associated with contests, festivals, and travel. There are also expenses involved with choral music but these are more limited, restricted to appropriate concert dress and travel funds. Secondary music is, therefore, not affordable for everyone unless support exists for special students.

In other aspects, music education in the secondary schools has not changed significantly. Secondary music teachers have not been affected by the educa-

tional reform movement (except for block scheduling and the addition of more required courses) and are generally unconcerned about the voluntary national standards as some do not relate to ensembles and others are too rudimentary to cause much trouble.

### Philosophy

A single philosophy of music education for K–12 is inappropriate except when speaking of music in the broadest of terms. The need for more than one philosophy is not surprising with a subject as broad and diverse as music, one that provides so many beneficial outcomes. Two distinct philosophies exist in K–12 education, one based on the importance of music education for all students and one based upon the benefits of performance, including aesthetics and opportunities for excellence, for those with interest and talent. Teachers usually adhere to one philosophy or the other based on whether they have interests in elective music or in providing music to all students, regardless of ability. There are somewhat more than 45,000 public secondary school music teachers involved with performance; this represents slightly less than half the music teaching force. MENC reports an estimated 105,000 public school music teachers with an additional 15,000 teaching in private schools (2000a). The complexity of music (Western music has been increasing in complexity for centuries) means that not everyone can adequately perform the music that is important to them. Those who have the ability and time to develop high level performance skills can derive enormous satisfaction, enjoyment, and understanding from performing alone and with others.

External financial support is also important in supporting national arts (music) programs. The Getty Center has taken a special interest in visual arts education, supporting activities and publications to promote Discipline-Based Arts Education, a movement that has had some influence in music as well. Without Getty support, adoption of the voluntary national standards would have been delayed or lost, as would have been the arts assessment in 1997 of the National Association of Educational Progress and the development of the arts teacher component of the National Board of Professional Teaching Standards.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; MONTES-

SORI, MARIA; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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RICHARD COLWELL

#### PREPARATION OF TEACHERS

Prior to the 1960s the preparation of music teachers in the United States included study in music history, theory, and literature, performance experience in vocal and/or instrumental music, and initial teaching experience in a music classroom. The social and educational upheavals of the 1960s brought about significant changes in this curriculum to include new emphases on contemporary music, world music, contributions of related fields such as psychology and philosophy, and competency-based teacher preparation programs. By the 1970s, the aesthetic education movement, first introduced in widely read texts by Charles Leonhard and Robert W. House, dominated music education. Perhaps the most influential writing on this topic was Bennett Reimer's 1971 explication of the relationship between aesthetic principles and music education. His subsequent monograph (1972, revised in 1989) broadly influenced music teachers to legitimize music instruction that was based on more deeply felt beliefs regarding the nature and importance of musical experience. During the 1990s music teacher education was influenced by the publication of national standards for music instruction formulated by the Music Educators National Conference (1994), which also sparked renewed interest in competency-based programs.

#### Dominant Themes in Music Teacher Education

During the last two decades of the twentieth century, much of the research concerning undergraduate music education programs focused on the student, the instructor, and the program content. Studies emphasizing student roles included the essential characteristics of the effective teacher; teaching styles; musical, intellectual, and personal development; teaching time management skills; formation

of classroom and rehearsal strategies; behavior management skills; leadership skills; and attrition variables. Studies involving faculty included supervisory roles, use of modeling techniques, motivational skills, and professional responsibilities. Studies involving program content included the following:

- descriptive research by regions or type (instrumental/choral)
- use of innovations
- course sequencing
- feedback systems
- use of computers and technology
- use of simulation techniques
- evaluation
- observation
- the content and structure of methods courses
- multicultural components
- interdisciplinary studies
- field-based experiences and student teaching
- the importance of developing a philosophy of music education

Additional studies included historical accounts of music education programs, suggestions for improving evaluation systems, and reports of various educational task forces, which recommend guidelines for curriculum reform.

### Problems in Music Teacher Education

Two competing perspectives have dominated writings and discussions in music teacher education. On the one hand, there is a search for new ways to teach more effectively what has long been regarded as standard curriculum content. On the other hand, there have been attempts to study the role of higher institutions in preparing educators, the systems through which a program's effectiveness is measured, and new emphases in educational psychology that require amendments to program philosophy and procedures. Some writers have expressed continuing concern for the conflict between the conservatory, liberal arts, and educational/professional imperatives present in the modern music education undergraduate program. Adequate coverage of these diverse components is typically not manageable within the context of a four-year program, so many institutions have added a fifth year of study.

Advocates of improved evaluation procedures in undergraduate music education programs cite the

need for evaluation of learning as well as teaching. It has also been recommended that evaluation be presented as a distinct subject within the curriculum as well as used by faculty members to assess student learning. The term *assessment as instruction* is used to describe evaluative measures that are built into the learning process, and pre-service teachers in music performance and general music are encountering more course activities that include such measures.

The role of student teaching in the curriculum continues to be problematic. College faculty are hard-pressed to intensify their roles as supervisors and provide more time within the curriculum for field experiences. Provisions, however, have been identified by in-service teachers as the most important critical to an effective and relevant pre-service education.

Perhaps the most critical problem facing music teacher educators is the need for an increased effort to bridge the gap between educational theory and instructional practice. Few, if any, critics attribute this problem to insufficient study of either. Rather, it is traced to the segregation of these subjects in coursework and a lack of modeling by music education faculty in their own teaching. The success of such an effort requires increased focus and ingenuity on the part of faculty and increased emphasis on the development of problem-solving and independent thinking skills.

### Future Issues

The results of research in musical preference need greater prominence in the undergraduate teaching program. There continues to be a cultural dividing line between "school music" and the world of music beyond the classroom, namely, popular music. The Housewright Declaration, a statement on the future of music education drafted by a subcommittee of the Music Educators National Conference (2000), espouses the increased presence of popular music in American music classrooms, and warns that music teacher training must proceed accordingly by becoming more flexible in its purview of teaching competencies. The implication for pre-service music educators is that they should begin preparing now by learning to teach composition and improvisation, broadening their music vocabularies to encompass pop genres and all types of progressive music, exploring alternative notational systems, designing in-

terdisciplinary projects, and otherwise developing their creative reasoning skills.

There appears to be increasing emphasis on the development of interpersonal skills. As mentioned above, the personal characteristics of effective teachers are well known, but those most highly valued are the ability to detect and accommodate individual learning styles in the classroom, to demonstrate superior communication skills, and to balance efficiently the use of criticism and praise. Although it has not been established how undergraduate programs might best meet this challenge, college faculty will need to utilize measures that increase the individualization of degree programs through assessment of students' interpersonal strengths and weaknesses.

Technological advancements have given rise to more affordable, portable, powerful, and user-friendly systems whose educational worth is difficult to ignore. A required course in computer proficiency for music teaching is common across the nation. Many areas of music learning have been revolutionized by the computer—most profoundly, music composition. Although it is common for instructional curricula to be designed in accordance with available software, the inverse is decidedly optimal for teachers and teaching. Computers should serve to enhance a broad understanding of music and the related arts. The issue of humanism versus technology must be mediated by music education faculty, who can demonstrate proper computer applications to the teaching and learning of music.

A view of musicianship as a world phenomenon has been recommended since the Tanglewood Symposium of 1967. Its importance in a program appears to be largely a matter of faculty expertise and/or interest, as there are no federal, state, or task force mandates for a multicultural component. It should be noted here that the National Association of Schools of Music (NASM) has requirements in this area (and others) to qualify for accreditation, but such accreditation is voluntary. Multicultural music advocates cite the abundance of accessible information, the need for exposure to the many sources of influence in popular music, and the increasingly pluralistic profile of the average American classroom as reasons for a global perspective on music-making. Critics are primarily concerned with the more practical issues of additional time allotments in an already overflowing course load, the selection of

certain musics over others for study, the extent of such studies, and issues of authenticity.

Many of the reforms prescribed for undergraduate music education programs continue to involve a rethinking of balances between the musical, professional and academic components. These translate into decisions regarding classwork versus field experience, musicianship versus teacher training, and whether to emphasize educational theory over instructional practice. A common theme that appears to underlie virtually all teacher education programs is the need for pre-service teachers to develop the cognitive skills necessary to analyze and evaluate effective teaching.

Finally, contemporary conceptions of intelligence have significantly extended the forms of understanding believed to be necessary for teaching. David Elliott posits four types of knowledge—formal, informal, impressionistic, and supervisory—each distinct in its origin and usage in the teaching process. Postmodern philosophy and thinking, regarded by academic professionals as a confounding yet indispensable guiding principle, reminds those entering the teaching profession they must address the difficult questions of what constitutes quality, integrity, and relevancy in instruction as they enter a new millennium of music teacher education.

*See also:* ART EDUCATION.

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CARLOS XAVIER RODRIGUEZ

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## NATIONAL ACADEMY OF SCIENCES

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The National Academy of Sciences (NAS) is one of three honorific societies which, with the National Research Council, are grouped together under the umbrella organization called the National Academies. The other organizations include the National Academy of Engineering (established in 1964) and the Institute of Medicine (1970). Together, the National Academies institutions marshal the talent, expertise, and public spiritedness of roughly 10,000 volunteers and 1,000 staff who work together in more than 500 committees and issue about one report every working day (230 in 2001).

### National Academy of Sciences History

The National Academy of Sciences (NAS) was established in 1863 by an act of Congress that was signed into law by President Abraham Lincoln. This act of incorporation, or charter, created an academy of fifty specified members, with the authority to fill membership vacancies and to create its own laws and organization. Most important, in the words of its charter, the new organization would, “whenever called upon by any department of the government, investigate, examine, experiment, and report upon any subject of science or art, the actual expense of such investigations, examinations, experiments, and reports to be paid from appropriations which may be made for the purpose, but the academy shall receive no compensation whatever for any services to the government of the United States.”

The academy had several historical and national antecedents. In Europe, honorific scientific organizations such as Great Britain’s Royal Society and the

French Academy of Sciences had been founded as far back as the 1660s. In America, the academy’s fore-runners included the American Philosophical Society, formed in 1743 by Benjamin Franklin; the American Academy of Arts and Sciences, established by the Massachusetts legislature in 1780; the Columbian Institution for the Promotion of Arts and Sciences, formed in 1816; and the American Association for the Advancement of Science, founded in 1848. But with the founding of the NAS a new type of organization was created, one that combined an American equivalent to the venerable academies of sciences of Europe with a mission of providing scientific and technological advice to the government. The high honor of election to the academy was thus accompanied by an expectation of public service.

By 1916 the demand for scientific and technical advice exceeded the capacity of the small academy as the United States would soon find itself embroiled in a war and as it faced both domestic and world issues that warranted careful attention to empirical evidence, scientific knowledge, and technological know-how. President Woodrow Wilson therefore called upon the NAS to establish the National Research Council (NRC). Through this body the institution could broaden the participation of scientists, engineers, and other experts who were not elected members of the Academy; perhaps most important, it could engage the expertise of scientists and engineers in industry as well as in academic institutions, again with the principal ethos of voluntary public service.

President Wilson recognized the value of the NRC’s wartime service by asking the NAS to continue the NRC as part of its peacetime organization. Accordingly, it was made permanent by Wilson’s

Executive Order No. 2859 of May 11, 1918, which cited the NRC's capacity for larger service. This larger service was reflected in the NRC's postwar organizational structure, which encompassed fields outside of the traditional physical and natural sciences. Although important work in psychology had been accomplished by the NRC during World War I, this work was placed under other divisions, such as Medical Sciences, or was classified as Special Projects. By contrast, the peacetime organization provided for a Division of Anthropology and Psychology, as well as a Division of Educational Relations. The role of the latter division was to maintain relationships with university and college research activities, "and to study the conditions attending the progress of research in these institutions."

### Behavioral and Social Sciences

From its creation in 1863 the academy provided a place for the behavioral and social sciences in its section of Ethnology and Philology; later its reorganization provided for a standing committee of anthropology in 1899, later renamed Anthropology and Psychology. Members included William James and John Dewey.

Among the early forays of the NRC into the behavioral and social sciences was its involvement in the famous Army Alpha testing program, during World War I, which ultimately led to the application of intelligence tests to thousands of new recruits to the armed services. Other efforts included studies of human biological and sexual function; a study of the feasibility of developing an international auxiliary language (such as Esperanto) in 1919; and studies on human migration from 1922 to 1927. As part of the work of the Committee on Industrial Lighting (1926–1936), the famous Hawthorne experiments on productivity and motivation were initially designed and carried out, as described by Rexmond C. Cochrane in *The National Academy of Sciences: The First Hundred Years 1863–1963* (1978).

In the early twenty-first century the NRC's Division of Behavioral and Social Sciences and Education produces approximately forty reports per year, in the diverse fields of economics, population, child health and development, law and justice, statistics, cognitive sciences, human factors, testing, and education.

### Education

Educational issues were embedded in the Alpha testing program and work studies of the 1920s and

1930s. Other early attention to education in the academy and NRC was focused on problems of education in science—mainly at the postsecondary, graduate, and postdoctoral level. Following the founding of the NRC, the academy's concern in this area had two principal aspects: advanced training in science through a wide variety of fellowship programs, and the maintenance and publication of comprehensive data on the production of Ph.D.'s in the United States.

More recently, however, attention to education has broadened from science education to a concern for the science of education. Amid the cacophony of data and proposed innovations for the nation's educational system, the general public as well as policy makers at all levels of government thirst for the disciplined, honest, and dispassionate rationality of science. The federal government's major elementary and secondary education bill, known as the No Child Left Behind Act of 2001, uses the phrase "scientifically based research" more than 100 times. Growing public concern with the quality of the entire American educational enterprise, in particular with the apparent weaknesses in the elementary and secondary systems—coupled with persistent faith in Lincoln's notion of decision-making informed by rational empirical inquiry—has vastly increased the demand for science-based evidence generally, as well as for the specific consensus-seeking processes of the NRC.

The NRC's current portfolio in education—more than 150 reports since 1993 alone—has been shaped by the confluence of several powerful forces: the advent of the standards-based education movement, which involves focused attention by the science, mathematics, and other academic communities on the content appropriate and necessary for K–12 schooling; significant findings from cognitive, behavioral, and organizational research on how people learn; and increased pressure to find solutions to real-world education problems that are grounded in scientific evidence. As part of a broad reorganization undertaken in 2000, the NRC consolidated most of its education activities in the Center for Education, a unit of the Division of Behavioral and Social Sciences and Education.

Although the gap between research and practice is still formidable, there is no question that the twin goals of improved education research quality and improved use of the results of that research are prominent in the education policy agenda of the

early twenty-first century. This theme—making scientific research accessible by and useful to educators at all levels—pervades much of the academies' current portfolio.

### Notable Studies

Notable education studies conducted by NRC committees and boards in the decade 1992–2001 include the following, organized by major topic area.

**Standards-based reform.** *National Science Education Standards*, published in 1996, offers a coherent vision of what it means to be scientifically literate and describes what all students must understand and be able to do as a result of their cumulative learning experiences. The document integrates content, teaching, assessment, program, and system standards that are key to improving science education.

*Inquiry and the National Science Education Standards: A Guide for Teaching and Learning* (2000) is a practical guide to teaching inquiry and teaching through inquiry, as recommended in the *National Science Education Standards* (the *Standards*) by explaining and illustrating how inquiry helps students to learn science content; mastering how to do science; understanding the nature of science; exploring the dimensions of teaching; and learning science as inquiry for K–12 students across a range of science topics. This volume also examines ways that educators can offer students the opportunities to develop not only an understanding of scientific concepts, but also the ability to solve science problems through experiential learning.

**Science and mathematics education.** *Classroom Assessment and the National Science Education Standards* (2001) focuses on a key kind of assessment: the evaluation that occurs regularly in the classroom by the teacher and his or her students as interacting participants. Focusing on the teacher as the primary player in assessment, the book offers assessment guidelines and explores how they can be adapted to the individual classroom. It features examples, definitions, illustrative vignettes, and practical suggestions to help teachers obtain the greatest benefit from this daily evaluation and tailoring process. The volume discusses how classroom assessment differs from conventional testing and grading—and how it fits into the larger, comprehensive assessment system.

*Adding It Up: Helping Children Learn Mathematics* (2001) examines mathematics education in

the United States from pre-kindergarten through eighth grade, discusses the ways that children learn mathematics, and characterizes effective instruction. The report also recommends ways to improve teaching, learning, and teacher education in the subject.

**Teacher professional development.** As a framework for addressing this task, *Educating Teachers of Science, Mathematics, and Technology: New Practices for a New Millennium*, published in 2001, advocates partnerships among school districts, colleges, and universities, with contributions from scientists, mathematicians, teacher educators, and teachers. It then looks carefully at the status of the education reform movement and explores the motives for raising the bar for how well teachers teach and how well students learn. Also examined are important issues in teacher professionalism: what teachers should be taught about their subjects, the utility of in-service education, the challenge of program funding, and the merits of credentialing. Professional Development Schools are reviewed and vignettes presented that describe exemplary teacher development practices.

The 1997 *Science Teacher Preparation in an Era of Standards-Based Reform* is a report that offers a vision of what science teacher preparation will look like in a standards-based program, and then recommends ways in which the National Science Foundation can mobilize the postsecondary education community to achieve these goals.

**Reading.** Large numbers of American schoolchildren have difficulty learning to read well enough to meet the growing demands of a technological society. Failure to read adequately is especially acute among poor children, minorities, and those whose native language is not English. *Preventing Reading Difficulties in Young Children* is a 1998 report that examines effective methods used to teach young children to read. It reviews relevant research on preventing reading difficulties, highlighting ways to build a learning environment that is conducive to good instruction, to proper diagnosis of problems, and to effective interventions for children at risk. The report recommends key research findings that should be integrated into reading programs for children in preschool and early elementary school, and discusses the policy implications raised by these findings.

*Starting Out Right: A Guide to Promoting Children's Reading Success* (1999), a guidebook for par-

ents, teachers, and child-care providers, builds on recommendations from the 1998 report, *Preventing Reading Difficulties in Young Children*. The guide offers the key elements all children need in order to become good readers; activities that parents and others can do with children so they are prepared for reading instruction by the time they reach school; concepts about language and literacy that should be included in beginning reading instruction; and ways to prevent reading difficulties in early childhood and the early grades.

**Early childhood education.** *Eager to Learn: Educating Our Preschoolers* is a book about the education of children age two to five, focusing on programs outside the home, such as preschool, Head Start, and child-care centers. This report from 2000 argues that promoting young children's growth calls for early childhood settings that support the development of the full range of capacities that will serve as a foundation for school learning.

**Testing and assessment.** *High Stakes: Testing for Tracking, Promotion, and Graduation* (1999) reviews the legal, educational, and psychometric foundations of testing, and recommends policies and practices to promote appropriate use of tests. This book sorts out the controversies that emerge when a test score can open or close gates on a student's educational pathway. The expert panel proposes how to judge the appropriateness of a test; explores how to make tests reliable, valid, and fair; puts forward strategies and practices to promote proper test use; and recommends how decision makers in education should—and should not—use test results. The book discusses common misuses of testing, their political and social context, what happens when test issues are taken to court, special student populations, social promotion, and more.

The movement to improve schools by setting high standards for all students poses new challenges for students with disabilities, whose education is rooted in individual goals and instruction. *Educating One and All: Students with Disabilities and Standards-Based Reform* (1997) is a congressionally requested report that examines how the seemingly contradictory goals of special education and standards-based reform can be reconciled.

**Education research.** The 2001 report *Scientific Inquiry in Education* examines the nature of scientific research and considers the implications for a federal education research agency.

Education in the United States does not rest on a strong research base. The 1999 report *Improving Student Learning: A Strategic Plan for Education Research and Its Utilization* proposes a long-term, highly focused program of research that involves the collaboration of researchers, educators, and policy experts. The plan is designed to increase the usefulness of research to educational practice.

**International studies.** Video technology can help education researchers examine teaching strategies in countries around the world and create a record of classroom practices for future studies. *The Power of Video Technology in International Comparative Research in Education* (2001) discusses how such technology can best be used.

U.S. students' mathematics and science achievement often lags behind that of their peers in other developed nations, but root causes of the disparity are not always clear. Based on a comprehensive analysis of results from the Third International Mathematics and Science Study (TIMSS), the 1999 report *Global Perspectives for Local Action: Using TIMSS to Improve U.S. Mathematics and Science Education* points out how the achievement gap between U.S. students and those in several other industrialized countries can be traced to differences in teaching methods, curriculum content, and school-support systems. The report also contains practical information that American schools can use to improve local programs and student learning. In addition, a supplementary professional development guide offers materials and strategies to help educators lead workshops and planning sessions aimed at enhancing mathematics and science education in the nation's classrooms.

The Third International Mathematics and Science Study (TIMSS) has provided a remarkable volume of intriguing data about the educational performance of students around the world. However, there is a great deal of important follow-up analysis still to be done. The report, *Next Steps for TIMSS: Directions for Secondary Analysis* (1999), based in part on a workshop, summarizes recommendations regarding research strategies that could yield the understanding of student learning that TIMSS was intended to make possible.

**See also:** INTERNATIONAL ASSESSMENTS, *subentry on* IEA THIRD INTERNATIONAL MATHEMATICS AND SCIENCE STUDY; MATHEMATICS LEARNING; SCIENCE EDUCATION; SCIENCE LEARNING.

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## NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

The National Archives and Records Administration (NARA) was established by an act of the U.S. Congress in 1934 for the purpose of housing, protecting, and displaying the documents and records of United States history. The functions of NARA include responsibility for record retention throughout the government. NARA also provides guidance to regional records centers and depositories.

### Organization

NARA includes the offices of Administrative Services, Federal Register, Washington Records Ser-

vices, Regional Records Services, Presidential Libraries, and National Historical Publications and Records Commission, as well as the offices of Contractor Services, Human Resources and Information Services, Information Security, and Inspector General. The administration is headed by the Archivist of the United States, who is supported by the Deputy Archivist and Chief of Staff, and a large permanent staff working at NARA facilities around the country.

NARA operates thirty-three facilities nationwide, including the main National Archive Building on Pennsylvania Avenue in Washington, D.C., the National Archives at College Park in Maryland, and the Washington National Records Center in Suitland, Maryland. Other NARA facilities include sixteen Regional Records Services Centers, ten presidential libraries, and the National Personnel Records Center in Saint Louis, Missouri.

NARA is responsible for managing all documents generated by the executive, legislative, and judicial branches of the federal government. NARA archivists estimate that less than three percent of documents from these sources have enough historical value to warrant retention. Determining which records should be preserved is one of the administration's major responsibilities. At the beginning of the twenty-first century, the National Archives possessed over 21 million cubic feet of textual materials. The vast NARA collection also included some 300,000 reels of film, 5 million maps and charts, about 200,000 sound and video recordings, 9 million aerial photographs, and 14 million still pictures and posters.

The central National Archives Building in Washington, D.C., was constructed in the mid-1930s. The building, which is open to the public, contains a theater, a central exhibit hall that houses the Formation of the Union exhibit, and a semicircular gallery for the States of the Union exhibit.

**Office of Administrative Services.** In addition to administrative functions, the Office of Administrative Services directs the educational programs of the National Archives. Among these are the publication of reports, bulletins, information papers, and guides to records. In 1969 the office began publication of *Prologue*, a scholarly journal that appears four times a year. The office also manages the various exhibits and produces and sells copies of documents and photographs contained in the archives. Documents of major historical importance, such as the three

great charters—the Declaration of Independence, the Constitution of the United States, and the Bill of Rights—are available in facsimile.

**Office of the Federal Register.** The Office of the Federal Register is responsible for publishing *The Federal Register*, a daily newspaper that contains presidential proclamations, executive orders, and administrative regulations, orders, and notices. Once published in *The Federal Register*, an order or regulation is official and binding until later amended or rescinded. *The Federal Register* also contains descriptions of the practices and procedures of federal agencies and departments.

The Office of the Federal Register codifies and publishes all regulatory documents in the *Code of Federal Regulations*. The organization and function of government agencies and departments are described in the *United States Government Organization Manual*, published annually. White House press releases and most of the public messages and statements of the president appear in the *Weekly Compilation of Presidential Documents* and semiannual volumes of *Public Papers of the Presidents*.

**Office of Records Services.** The Office of Records Services is responsible for preserving government records of permanent value and for providing access to them through published guides; microfilm, facsimile, and digital reproduction; research services; and use of the National Archives library and research rooms.

The office maintains a research staff that responds to thousands of inquiries every year. Among these inquiries are many from individuals seeking genealogical, citizenship, or military records. The following collections of records provide extraordinary sources of information: census schedules, naturalization records, homestead applications, immigration passenger lists for ships arriving at various Atlantic and Gulf of Mexico ports, passport applications and related papers, seamen's protection certificates, and bounty-land warrant application files. The Office of Records Services also directs the records retention program of the federal government. It assists federal agencies and department in managing their records and evaluates their records maintenance and disposition programs.

**Regional Records Services centers.** The regional records services facilities were established to deal with the overwhelming volume of records originating in federal offices outside of Washington, D.C., which

were far too numerous to be held within the National Archives Building. A nationwide survey of federal records in the late 1930s found collections of important papers originating in the lower federal courts, in customs offices, in offices of the Immigration and Naturalization Service, and in offices of Indian Affairs and the Bureau of Public Land Management. Many of these papers are on deposit at the regional records services sites.

**Office of Presidential Libraries.** The presidential library system was established in 1939 when Franklin D. Roosevelt donated his personal and presidential papers and part of his estate in Hyde Park, New York, to the federal government. Harry S. Truman did the same in 1950, and in 1955 Congress passed the Presidential Libraries Act, which gave presidents the opportunity to present their personal papers to the American public and to have them administered professionally as part of the archival resources of the United States. Libraries for the collections of presidents Herbert Hoover, Franklin D. Roosevelt, Harry S. Truman, Dwight D. Eisenhower, John F. Kennedy, Lyndon B. Johnson, Jimmy Carter, George Bush, and Ronald Reagan were subsequently established. The William Jefferson Clinton Library was scheduled to open in 2006.

Presidential libraries function as repositories for preserving the papers, records, photographs, films, and other historical materials of U.S. presidents. Each library also includes a museum with exhibits about the life and times of the president. Most of the libraries offer tours, a series of public programs, and resources to aid researchers. The presidential libraries contain not only official materials, but also personal correspondence, diaries, and other records of the president's appointees and associates. These collections, along with related audiovisual materials, are identified by the name of the donor and are arranged, described, and preserved by archivists. The Presidential Libraries Act recognized the right of a donor to place restrictions on the use of his papers, for example, withholding for a period of years information relating to national security or personal family matters.

**National Historical Publications and Records Commission.** The National Historical Publications and Records Commission (NHPRC) was established by Congress in 1934; it is affiliated with the National Archives and Records Administration and chaired by the Archivist of the United States. The mission of the NHPRC is to encourage and fund programs to

preserve, publish, and use archival materials relating to U.S. history. The NHPRC makes grants to state archives, local archives, colleges and universities, libraries, museums, historical societies, and other nonprofit organizations to help identify, preserve, and provide public access to important historical materials. Through grants, fellowships, publications, training programs, and special projects the commission offers assistance and funding to individuals and groups committed to preserving America's documentary resources.

### National Archives Exhibits

The main exhibit hall of the National Archives Building houses the three great charters of American freedom—the Declaration of Independence, the Constitution of the United States, and the Bill of Rights. Until 1952, when the Constitution and the Bill of Rights were transferred to the National Archives, they were moved from place to place, chiefly in the charge of the State Department. Despite these moves, they are still in good condition. The Declaration of Independence was moved more often and treated with less care; consequently, its condition has been impaired. All three documents are now protected from further deterioration. The Formation of the Union exhibit consists of the three great charters and approximately 50 other important historical documents, all on permanent display. The States of the Union exhibit displays federal documents pertaining to the histories of the fifty states.

A fireproof, bombproof vault with a protective lid fifteen inches thick lies twenty feet below the floor of the exhibition hall. The three great charters can be lowered into the vault and the lid closed by an electrically powered mechanism. When the documents are not on display, they are housed in this vault, and in an emergency they can be lowered to safety there in less than a minute.

The exhibit hall and galleries of the National Archives Building in Washington, D.C., were closed for renovation in the early 2000s. While closed, some of the documents usually displayed there were sent to museums and libraries across the country as part of a traveling exhibit called *American Originals*.

### Electronic Access Project

In the mid 1990s NARA launched the Electronic Access Project, which enables anyone with a computer and an Internet connection to access the holdings of the National Archives. NARA's Archival Informa-

tion Locator (NAIL) is a searchable database containing information about thousands of archival holdings, as well as digital copies of approximately 125,000 of the archive's most popular and historically significant documents, photographs, and sound recordings. By 2001 NAIL offered access to only a small portion of NARA's vast holdings, but the project was ongoing and more records were being added to the live database daily.

NARA also produced an Online Exhibit Hall, which features digital copies of the documents displayed in the actual exhibit hall at Washington's National Archives Building. The Online Exhibit Hall also presents special educational exhibits featuring documents and still photographs from the NARA collection. Online exhibits have included *Powers of Persuasion: Posters From World War II*; *Portraits of Black Chicago*; *When Nixon Met Elvis*; and *Tokens and Treasure: Gifts Given to the Presidents*.

NARA's Digital Classroom features reproducible copies of primary documents from the holdings of the National Archives, as well as suggestions and activities for using these materials in the classroom. The NARA publication *Teaching With Documents* was designed to help teachers and students use primary documents effectively in their instruction and research.

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## NATIONAL ART EDUCATION ASSOCIATION

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The National Art Education Association (NAEA) is a nonprofit professional association of art teachers and other people dedicated to the advancement of art in education and national life. The mission of the association is to promote the study of art at all levels of education; to encourage research and experimentation in art; to convince local, state, and federal government officials of the importance of art education; and to improve the status, working conditions, and skill levels of art teachers. The association seeks especially to improve the quality of art education in elementary and secondary schools and in college-level teacher education programs. The NAEA espouses the view that education through art is the means by which individuals realize their creative powers and that the promotion of aesthetic growth is the principal means by which quality art instruction is realized.

#### Program

The NAEA's goal of promoting the knowledge and skill level of art teachers is accomplished through the association's publications program and through its annual national convention, which feature hundreds of workshops, panels, research presentations, addresses, and exhibits. The NAEA's regional groups conduct biennial conferences, where members can engage in direct discussion of problems and exchange ideas and research in the field of art education. In addition, the NAEA sponsors periodic national and international conferences on specific concerns in art education, such as curriculum and instructional development and the uses of new media and technologies.

The NAEA maintains contact with other education groups, such as American Association of School Administrators and the Association for Childhood Education International, in order to communicate

the values and beliefs of art educators to those responsible for the administration and supervision of school art programs. The NAEA also engages in consultative activities and works closely with many organizations in the development of art publications for broad dissemination in the field.

In order to effect a favorable climate of opinion toward art in the community-at-large, the NAEA maintains liaison with organizations concerned with the broad promotion of the arts in society. In past years, the NAEA has contributed testimony on federal art legislation before committees of the U.S. Congress. The NAEA also engages in cooperative projects with state arts councils, state teachers associations, and other private organizations and governmental agencies with an interest in the arts.

The NAEA publishes two major periodicals: *Art Education* and *Studies in Art Education*. The bi-monthly *Art Education* features articles exploring current views on theory and practice in art education, as well as curriculum and teaching strategies for studio arts, art criticism, or art history courses. Each issue includes four full-color art reproductions, with accompanying commentary and lesson suggestions, to be used in elementary and high school art classes. The quarterly *Studies in Art Education* covers issues and research in art education and is directed toward advanced researchers and scholars. *NAEA News*, published six times per year in alternating months with *Art Education*, details the activities of the association at both the national and regional level, and offers book reviews and information about grants and federal initiatives in art education and arts funding.

The NAEA also publishes monographs, books, and pamphlets on topics related to art curricula, instructional media, professional goals, and research. Many NAEA pamphlets are designed to communicate the value of art education to parents, school administrators, government officials, and others outside the field of art education. Other publications promulgate NAEA-devised guidelines for the safe use of art supplies and materials in the classroom and NAEA standards for art education programs. The association also publishes selected bibliographies and information on careers in art.

The NAEA gives out numerous national and regional awards during the year, most at its annual convention. Major annual NAEA awards include the Manual Barkan Memorial Award, the Lowenfield

Award, the Marion Quin Dix Leadership Award, and the J. Eugene Grigsby Jr. Award. Each year the NAEA awards the Charles M. Robertson Memorial Scholarship to a high school student who has excelled in the arts. This four-year scholarship allows the student to attend the Pratt School of Art and Design in New York. Further grants available to NAEA members are awarded by the association's sister organization, the National Art Education Foundation.

In 1978 the NAEA established the National Art Honor Society to inspire and recognize outstanding art students in grades ten through twelve. The NAEA expanded this program in 1989 to include students in grades seven through nine in the hope of generating an early interest in art in younger students.

### **Organizational Structure**

The NAEA is composed of six divisions representing particular areas of interest: elementary education, middle school education, secondary education, higher education, museum education, and supervision and administration. The national organization is also divided into four regional divisions: Eastern, Pacific, Southeastern, and Western.

The NAEA is governed by a board of directors that includes an executive committee lead by a president, a past president, and a president-elect. The board is advised by the officers of the four regional and six area divisions, and by three student chapter officers. The leadership of the regional divisions include a president, past president, president-elect, and one delegate from each state within the boundaries set for the region.

### **Membership and Financial Support**

NAEA members come from each of the fifty states, the District of Columbia, most Canadian provinces, Guam, Puerto Rico, U.S. military bases around the world, and some foreign countries. All individuals who are directly or indirectly involved in art education are eligible for membership. The association maintains seven categories of membership: active, associate, student, institutional, life, patron, and honorary.

In 2001 NAEA had approximately 17,000 members representing every level of education from early preschool art programs to university degree programs, although most members teach in elementary and secondary schools. Not all NAEA members are art teachers, however; some work for publishers of

art books and magazines, art supply manufacturers, museums, and other types of art-related organizations. Many members are students currently enrolled in art teacher education programs in U.S. universities. The NAEA is financed through membership dues, sales of publications, exhibit services, and grants from public, private, and corporate donors.

### History and Development

Historic antecedents to the present NAEA are the art department of the National Education Association and four regional art associations—the Western Arts Association, the Pacific Arts Association, the South-eastern Arts Association, and the Eastern Arts Association. The first National Education Association department of art education was established in 1890 but was short-lived. In 1947 the four regional art associations merged under a single constitution to form the NAEA, which then became officially the Art Education Department of the National Education Association.

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## NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

See: ASSESSMENT, *subentry on* NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS.

## NATIONAL ASSOCIATION FOR THE EDUCATION OF YOUNG CHILDREN

The National Association for the Education of Young Children (NAEYC) is a nonprofit organiza-

tion of early childhood professionals and others who are dedicated to improving the quality of early childhood education. More than 100,000 members strong, the association comprises a network of more than 400 affiliated local, state, and regional organizations, which share the belief that children's high-quality experiences at home and in child care, schools, and after-school programs lay the foundation for school readiness, academic success, and adult achievement.

Since its founding in 1926, NAEYC has promoted a vision of excellence in early childhood education that focuses on supporting the rights and needs of children. The association works with parents, teachers, business leaders, and policymakers to bring high-quality early education and care to all young children, from birth through age eight. NAEYC is best known for raising the quality of child care and other early learning programs. The association's voluntary national accreditation system helps improve early childhood education and recognizes high-quality programs so that parents and other decision makers can make informed choices. Its position statements, which are informed by research and practice, have addressed a wide range of topics: for example, developmentally appropriate teaching practices; the teaching of reading, writing, and mathematics in the early years; program licensing to ensure health and safety in child care settings; the role of early childhood professionals in preventing child abuse and neglect; and the support of diverse families.

NAEYC focuses on professional preparation, resources, and training for individuals who educate children birth through age eight. Working with higher education institutions to set standards for preparing teachers, NAEYC provides guidelines for appropriate teaching strategies, curriculum, and assessments for children in preschool through third grade. NAEYC promotes comprehensive training opportunities, high professional standards, and equitable compensation and working conditions so that qualified early childhood educators will stay and grow in the early childhood profession. The NAEYC annual conference is one of the largest educational meetings in the nation, bringing together 25,000 people each year for more than 1,000 seminars, workshops and other professional development opportunities.

NAEYC is a leading publisher and distributor of a wide range of books, videos, and other professional

resources to help early childhood teachers and other professionals improve their knowledge and skills. NAEYC also publishes *Young Children*, an award-winning journal that combines the latest in early childhood research, theory and practice, with a readership of more than 250,000. The association also publishes the highly respected *Early Childhood Research Quarterly*.

To increase understanding and support for high-quality early childhood education. NAEYC works among policymakers and the public through its education, advocacy, and public awareness activities. NAEYC also sponsors the Week of the Young Child each spring to focus public attention on the rights and needs of young children.

A board of directors elected by the membership governs the association, and the executive director, responsible for the association's administration and management, sits on the board as an ex officio member. NAEYC is a private membership organization, supported primarily through fees for products and services. The association also accepts philanthropic support for projects that are aligned with its mission and goals and that further its strategic objectives.

In 1926 Patty Smith Hill and Lois Meek Stolz founded the NAEYC's precursor, National Association for Nursery Education, out of their concern about the proliferation of educational programs for preschool children staffed by individuals without adequate knowledge about child development and effective strategies for teaching young children. NANE was maintained primarily through the efforts of stalwart volunteers, who believed deeply in the association's mission. In the early 1960s a headquarters office was established in Washington, D.C., when the association was reorganized as the National Association for the Education of Young Children. The naming of a full-time executive director in the mid-1960s coincided with the creation of the federal Head Start program, designed to provide educational and social enrichment to preschool children living in poverty. Head Start not only focused public attention on the importance of early education, but also nurtured the early childhood profession by providing numerous opportunities for careers in teaching, program administration, and professional preparation and development.

NAEYC continued to grow in size and scope in the 1970s and 1980s, reaching a membership of 45,000 by 1985. That year, the Association created

the National Academy of Early Childhood Programs to accredit child-care centers, preschools, kindergartens, and before-school and after-school programs, again responding to the tremendous growth in the number of children attending preschool and child-care programs. Between 1985 and 2001, the association's membership climbed to more than 100,000, as more than 8,000 early childhood programs achieved accreditation and thousands more enrolled in the process.

By 2001, NAEYC completed major restructuring efforts to revitalize its membership and affiliate structure and to reinvent its accreditation process to meet the challenges of successful growth. In the early twenty-first century, NAEYC is poised for continued growth and success in promoting excellence in early childhood education for all young children and their families.

*See also:* EARLY CHILDHOOD EDUCATION.

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BARBARA WILLER

## NATIONAL ASSOCIATION OF BIOLOGY TEACHERS

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The National Association of Biology Teachers (NABT) is the only national association specifically organized to help educators at all levels improve the teaching of biology and life sciences. The purposes of the NABT are exclusively scientific, educational, literary, and charitable. Constitutionally, its objectives are to plan and administer projects for the advancement and utilization of knowledge in biology education; to make available to teachers information concerning the selection, organization, and presentation of biological materials in the classroom; to encourage research in biology education; and to

promote understanding of the interrelationships between biology and society, ethics, and the other sciences.

### Program

Since its formation in 1938 the NABT has concerned itself with an evolving series of issues facing educators of biology and life sciences. Early in its history the association recognized the need for improved conservation education in secondary schools. Later, the NABT promulgated strong positions on the ethical use of animals in the biology classroom. During the 1990s and early 2000s the NABT emphasized the importance of teaching evolutionary theory, the role of biology education in the prevention of HIV/AIDS, and the need to address the impact of global climate change, population growth, and genetic technology. The NABT encourages biology teachers to study such issues, and offers teachers resources for presenting these topics clearly and accurately in the classroom.

The association has also focused its attention on the plight of teachers who are concerned about the social implications of certain subjects pursued in their classrooms. Teachers react differently to controversial issues, depending on their own personalities and backgrounds, the mores of the local community, and the relative authoritarian nature of their school administrators. The NABT believes that biological concepts and discoveries have important implications for society, and the organization fights for the right of teachers to introduce students to these implications.

In 1962 the NABT initiated the nationwide Outstanding Biology Teacher Award program, which recognizes exceptional teachers working with seventh- through twelfth-grade students; one teacher is chosen from each of the fifty states, the District of Columbia, Puerto Rico, and Guam. This award represents the NABT's attempt to recognize and call attention to outstanding performance in the classroom. The Outstanding New Biology Teacher Achievement Award recognizes an educator who has been teaching for fewer than three years. The NABT also presents an annual Evolution Education Award to honor an educator who has made an outstanding effort to promote the accurate understanding of evolution in the community and the classroom. Other annual NABT awards include the Award for Excellence in Encouraging Equity, the Biotechnology

Teaching Award, and the Distinguished Service Award.

The *American Biology Teacher*, published nine times per year, is the official journal of the NABT. It features ideas for biology projects, classroom demonstrations, and science experiments; editorials and book reviews; and articles discussing advances in the life sciences and the social and ethical issues of modern biology. *NABT News and Views*, published four times a year, is the newsletter of the association. It features articles of interest to active members and carries information about NABT programs and events, as well as teaching resources, professional opportunities, and activities of the organization's board, committees, and sections. The NABT also publishes numerous books about issues in biology education, and produces useful online resources for the teacher. The website *Biotechnology on a Shoestring* helps biology teachers in high schools and two-year colleges provide to high quality instruction on a limited budget. The NABT joined forces with the American Society for Microbiology to produce the *Microbial Literacy Collaborative*, a program to foster awareness of the world of microbiology through radio programs, books, and websites.

The NABT holds a national convention each year and also sponsors one or more regional conferences. Thousands of educators attended the 2001 NABT convention, which featured 350 presentations and 140 exhibits. NABT also sponsors frequent seminars and workshops to improve and update biology teachers' knowledge of content and techniques.

### Organizational Structure

The NABT is divided into six sections: elementary/middle school, two-year college, four-year college, multicultural affairs, the role and status of women in biology education, and retired members. Each section is responsible for developing programs in its area. The NABT is governed by a 25-member board of directors. An executive committee transacts business of the association between meetings of the board. A full-time headquarters staff manages the daily administration of the association and implements the policies set by the board of directors.

### Membership and Financial Support

Membership in NABT is available to anyone expressing an interest in biological education. There are eight classes of membership: active, student, comprehensive, foreign, spouse, organizational, sus-

taining, and life. The dues differ with membership class. In 2001 the NABT's total membership exceeded 9,000. Dues and subscriptions accounted for most of the association's annual income. Private and institutional donations, advertising in the journal, and convention fees provided the rest.

#### INTERNET RESOURCE

NATIONAL ASSOCIATION OF BIOLOGY TEACHERS.  
2002. <[www.nabt.org](http://www.nabt.org)>.

JERRY P. LIGHTNER  
*Revised by*  
JUDITH J. CULLIGAN

## NATIONAL ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS

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The National Association of Elementary School Principals (NAESP) is a professional association dedicated to the professional development of principals serving grades kindergarten through eight. In addition, it seeks to provide a unified voice for its members in local, state, and national policy debates on issues affecting education and school administration. Finally, it seeks to make available resources and other forms of professional support to its members, with the aim of developing high standards of conduct and preparation within the profession.

### Program

The association carries out its mission in three general spheres of activity. First among these is a series of newsletters. The official newsletter for the organization is the *Principal*, a magazine published bi-monthly throughout the school year. Every issue is usually dedicated to a particular theme of interest to members of the profession. Recent issues have been devoted to such topics as the debate on establishing national curriculum standards, career development for veteran teachers, and children's health and safety in the schools. In addition to the magazine, the organization also publishes a number of newsletters devoted to special topics, including *Commentator*, which reports on policies and association news and events. Another newsletter, *Here's How*, offers practical solutions to common problems faced by elementary school administrators. Other special-

interest publications include *Streamlined Seminar* and *Research Roundup*, both of which present the results of recent research in school administration topics; *Middle Matters*, aimed specifically at principals serving in the nation's middle schools; and *Student News Today*, which focuses on working with student councils and other student organizations.

The national organization is also committed to working closely with local and regional associations, and the primary means of accomplishing this is through its field services program. Association members are available as speakers and consultants who can advise interested groups about school administration issues and about projects and programs that show promise in helping to strengthen schools. In addition, the NAESP provides a number of direct-to-members services, such as legal assistance for job-related concerns, both in the area of professional liability and for job-protection suits. It also offers access to a wide variety of educational resources at reduced cost.

The most important event on the NAESP annual calendar is the professional conference hosted by the association each year. In addition to seminars, panel discussions, and workshops, the annual conference provides members with an opportunity to raise their particular professional concerns with the governing board, to network with their peers, and to seek new employment opportunities. The association also sponsors smaller summer conferences in cooperation with other national educational organizations.

### Organization

The NAESP is an autonomous organization with strong ties to the National Education Association (NEA). Its basic governing body is the delegate assembly, whose members are chosen by the individual state associations. This assembly meets annually during the convention and is responsible for establishing policy and responding to the concerns raised by the general membership. A smaller, fifteen-member board of directors is selected by the assembly and consists of three officers, nine regional representatives, a member representing ethnic minorities, a representative of middle school principals, and an executive director. The board appoints the various committees that help in carrying out NAESP business, including a nominating committee charged with selecting the next year's candidates for office and a publications committee, which works

closely with the NAESP's full-time editorial staff. The executive director, supported by a professional staff, oversees the day-to-day operation of the association at the national headquarters.

### Membership and Financial Support

The NAESP has several different categories of membership. At the heart of the organization are the active members who are all professionally engaged in the administration of elementary schools. Associate membership is available to faculty at universities and colleges who share the NAESP's interests but who are not themselves principals or vice principals. A growing membership category is the international associates, made up of principals, headmasters, and other elementary school administrators from outside the United States. The NAESP has in the late twentieth and early twenty-first century become increasingly interested in exploring strategies and policies that have worked well in school programs outside of the United States, with the hope that some may provide useful new insights in addressing local needs and problems. A final membership category comprises aspiring principals: teachers, students, and others who hope to become administrators in elementary and middle schools. Institutional and library memberships are also available.

The NAESP gains much of its operating revenues through its membership dues and through the sale of publications, resource kits, and other services. These funds are supplemented by support from a number of corporate and private donors, who contribute funds toward NAESP-sponsored awards programs. In addition, the association has forged a number of partnerships with corporations that offer services and resources, such as retirement plans or educational and administrative resources.

### History

While taking a summer school course in school administration offered by the University of Chicago, a group of principals got together to discuss the possible usefulness of organizing a formal association that would directly address their special interests. At the end of the course, each of these principals returned to their home districts and began raising support for the plan, so that by the convocation of the 1921 annual convention of the NEA, there were fifty-one willing recruits. They drafted a mission statement, bylaws, and a constitution, thus forming the National Association of Elementary School Principals, and

were duly recognized by the NEA as an independent department of that organization.

The publication division of the NAESP was quickly launched, beginning with a bulletin that laid out the organization's goals and principles, followed by the publication of a yearbook, which contained articles on professional responsibility and leadership. The close association of the NAESP with the NEA continued over the next several decades.

By 1931 the NAESP had grown so much that it was granted permanent headquarters within the NEA offices in Washington, D.C. With this improvement in facilities, the publications division enjoyed a period of expansion as well, and the *National Elementary Principal* was launched. This publication, initially a newsletter, would eventually become the *Principal* magazine. The NAESP also began to move beyond its early focus on defining the administrator's role and status to include a consideration of related issues, such as community relations, controversies in educational standards and approaches, and other topics. Toward the end of the 1930s the organization began to offer additional services, notably a two-week summer workshop dedicated to enhancing professional skills.

In the 1950s the NAESP had grown substantially, and it was finally able to assert its independence from the NEA. Although it has always maintained a close professional cooperation with that organization, independence was important for it allowed the organization to devote all of its time exclusively to furthering the interests of its members. The organization continued to press for professional recognition, to advocate improvements in salary and working conditions, and to provide resources and support services to its members. In the 1980s and 1990s the NAESP focused on outreach to corporate, public, and private organizations to further the association's goals. The national organization remained housed within the NEA headquarters, however, until the 1990s, when it finally established its own independent offices.

*See also:* PRINCIPAL, SCHOOL.

**INTERNET RESOURCE**

NATIONAL ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS. 2002. <[www.naesp.org](http://www.naesp.org)>.

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## **NATIONAL ASSOCIATION OF INDEPENDENT COLLEGES AND UNIVERSITIES**

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The National Association of Independent Colleges and Universities (NAICU) is a Washington, D.C.-based umbrella association comprising more than 900 private nonprofit colleges, universities, and associations. The association's purpose is to further the cause of its membership by representing the accomplishments and interests of independent higher education. To accomplish its aims, the NAICU staff represents private higher education to government officials, follows campus trends, conducts research, publishes newsletters and research results, issues papers, and coordinates a variety of nonprofit association activities at the national and state levels.

### **Activities and Membership**

The association's major policy thrusts relate to student aid, taxation, and government regulation. Among the organization's projects has been leadership in the organization of the Student Aid Alliance, a grassroots effort aimed at substantially increasing funding for student aid programs in the federal budget. NAICU has led the effort during congressional election years to encourage member institutions to conduct on-campus nonpartisan voter registration drives through its National Campus Voter Registration project. NAICU is a participating member of the Big Six, an informal group of chief executive officers of the major higher education associations in Washington, who meet regularly to discuss common interests and develop collaborative approaches to lobby the federal government. The organization is represented in the deliberations of the six major Washington higher education associations' federal relations officers meetings, and it participates in the Secretariat, a body of forty associations representing postsecondary institutions that meets monthly to discuss events, activities, and mutual interests.

The NAICU's diverse membership includes liberal arts colleges, research universities, church-related institutions, historically black colleges and universities, women's colleges, performing and visual arts institutions, community colleges, and professional schools such as medicine and engineering.

The NAICU's activities include leadership of a secretariat whose membership is composed of the chief executive officers of national, regional, and other special purpose associations of independent colleges and universities, such as Associated Colleges of the South, Accrediting Association of Bible Colleges, and Association of Independent Colleges of Art and Design. In addition, NAICU collaborates with the Foundation for Independent Higher Education (FIHE) and the Council of Independent Colleges (CIC) to further the aims of independent higher education.

### **History**

The National Association of Independent Colleges and Universities began as the Association of American Colleges (AAC) in 1916, an organization of denominational and independent colleges. AAC's founders were determined to counter charges that there was an oversupply of liberal arts colleges and to help withstand the threatening competition of state institutions.

AAC members had a long history of opposing government interference and, as late as 1963, were opposed to any federal aid to institutions of higher education. AAC suffered from a deep internal division. On the one hand AAC was the chief association advocate for the liberal arts, which meant that the organization included in its membership public institutions and large universities with liberal arts interests as well as small independent colleges, and the small independent colleges felt that they were not adequately represented. To remedy this the Federation of State Associations of Independent Colleges and Universities (FSAICU) was organized within AAC in the late 1960s as a coordinating agency for independent institutions. In a move to expand policy activity, FSAICU was reorganized in 1971 to become the National Council of Independent Colleges and Universities (NCICU), complete with a board independent of AAC and a full-time director of public affairs. The liberal arts versus independent college perspectives continued to divide AAC, and in 1975 an AAC study recommended that a completely separate organization be created to represent the inter-

ests of independent colleges and universities. In 1976 NCICU was disbanded and the National Association of Independent Colleges and Universities was formed, leaving the AAC free to pursue its continuing interest in liberal education. Later the AAC evolved to become the Association of American Colleges and Universities (AAC&U).

Because of its diverse membership, the problem of balance was particularly acute for NAICU. Thus, in the beginning, some NAICU members thought that there was an overrepresentation of presidents of large universities, such as Johns Hopkins and Stanford, on the board, when the membership was composed primarily of institutions with less than 2,500 students. However, NAICU worked at providing fair and equitable representation on its boards and became the peak organization for the large and diverse population of private colleges and universities in the United States, combining an active involvement in lobbying with the provision of a wide range of services to its membership, to government, and to the public.

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#### INTERNET RESOURCE

- NATIONAL ASSOCIATION OF INDEPENDENT COLLEGES AND UNIVERSITIES. 2002. <[www.naicu.edu](http://www.naicu.edu)>.

HARLAND G. BLOLAND

## NATIONAL ASSOCIATION OF INDEPENDENT SCHOOLS

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The National Association of Independent Schools (NAIS) is an organization of independent elementary, middle, and secondary schools, as well as regional and local associations representing such schools. Sometimes called private schools, independent

schools are nonprofit; supported by nonpublic funds such as tuition, charitable contributions, and endowments rather than tax or church funds; and governed by boards of trustees. Although independent schools must conform to state compulsory attendance laws, they have considerable freedom in setting standards, in developing curriculum, in admitting students, and in hiring teachers.

#### Program

The main responsibility of the NAIS is to represent member schools to the media, the general public, the U.S. Department of Education, and state and federal agencies and congressional committees that monitor and regulate education in the United States. The attitude of the state and federal governments toward independent schools and laws affecting them are of major concern to the association, which follows federal legislation closely and interprets relevant legislative action to its members.

The NAIS is also concerned with improving the quality of instruction in member schools. To this end, the association sponsors two annual conferences and periodic workshops and seminars, which provide a forum for teachers and administrators to share experiences and exchange ideas. The annual NAIS general conference draws some 4,000 administrators and teachers every year. The association's annual People of Color conference addresses issues of equity in schools and helps members learn how to build school communities that serve all students regardless of ethnicity, economic background, religious affiliation, physical disability, or sexual orientation. Many NAIS programs emphasize the importance of in-service training, refresher courses, and summer travel as part of the necessary, continuing development of teachers. The association also holds seminars on financial planning and advises member schools on fund-raising and business management.

NAIS committees, composed of faculty from member schools, have developed resources for mathematics, science, languages, social studies, art, and music curricula, as well as for the use of new media and computer technologies. The association's publications include the *Independent School Bulletin*, published three times per year, and various books, reports, and newsletters addressing topics of interest to the faculty and administration of independent schools. NAIS also releases publications aimed at in-

dependent school students and parents whose children attend independent schools.

One of the association's main concerns is the affordability of independent schools. To this end, the NAIS publishes numerous guides that describe financial aid opportunities and other ways by which parents can finance their child's education in an independent school. The NAIS also owns and operates the School and Student Service for Financial Aid, which processes financial aid applications for member schools.

### Organizational Structure

The association's governing body is its twenty-six-member board of directors. Half of the board members are selected by national vote at the annual meeting, and half are appointed to represent geographic regions in the United States. Board members serve four-year terms. The board appoints the NAIS president, who oversees association business with the aid of a small staff. The president and board are also responsible for preparing and promulgating official public policy statements regarding legislation, regulations, and other issues.

### Membership and Financial Support

More than 1,100 day schools and boarding schools held membership in NAIS in 2001, representing a total of 472,967 students and 48,385 teachers and school staff. Approximately 9 percent of member institutions were girls' schools; 8 percent were boys' schools. The remaining member schools were coeducational. Member schools ranged in size from several dozen students to several thousand and were located across the United States, Canada, Europe, and Asia in cities, small communities, and rural areas. All schools accepted for membership to NAIS must be nondiscriminatory in admission and employment, and they must demonstrate responsible management and sound fiscal practices.

There are three types of NAIS membership: active, affiliate, and new school. To qualify for active membership, a school must be located in the United States, be at least five years old, and have been recently accredited by a regional association of colleges and secondary schools or by a state department of education. Independent schools located outside the United States may qualify for affiliate membership if they have been in operation at least five years. Newly established schools may apply for new school membership with their status changing to affiliate or

active after five years of operation and accreditation. Local, state, or regional associations of independent schools may also join the NAIS as nonvoting members.

Most of the association's income is from membership dues, sale of publications, and advertisements in the *Independent School Bulletin*. Some income is received from private donors and from foundation grants for special projects.

### History

The NAIS was organized in 1962, the result of the merger of the Independent Schools Education Board and the National Council of Independent Schools. The Independent Schools Education Board was started in 1924 to establish uniform entrance requirements for boys' boarding schools; it gradually added service functions, including publication of the bulletin. The National Council of Independent Schools was formed in 1940 to provide liaison between the government and independent schools. Since the merger, the number of NAIS members has grown, and the association is recognized as the national spokesperson for independent schools.

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### INTERNET RESOURCE

NATIONAL ASSOCIATION OF INDEPENDENT SCHOOLS. 2002. <[www.nais.org](http://www.nais.org)>.

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Revised by  
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## NATIONAL ASSOCIATION OF SCHOOLS OF ART AND DESIGN

The National Association of Schools of Art (NASAD) is composed of schools, organizations, and individuals, representing the highest traditions and aims in the education of the artists and designers. NASAD is a voluntary, nonprofit agency with every major center of art education activity em-

bodied in its membership. NASAD gives equal concern to each of the various visual arts. The association is recognized by the U.S. Department of Education and the Council for Higher Education Accreditation as the accrediting agency for college-level programs in art and design.

The aims and objectives of the association are to do the following:

1. Evaluate, through the processes of accreditation, schools of art and programs of studio art instruction—particularly those schools preparing students for careers in art—in terms of the quality of their instruction and the results achieved, as judged by experienced examiners.
2. Establish a national forum to stimulate the understanding and acceptance of the educational disciplines inherent in the creative arts in U.S. higher education.
3. Establish reasonable standards where quantitative measurements have validity, as in matters of budget, faculty qualifications, faculty–student ratios, and library and physical facilities.
4. Encourage varied and experimental approaches to the teaching of art and design, in the knowledge that creativity implies nonconformity and that values in art can be identified only in an appropriate context.
5. Assure students and parents that accredited art programs provide competent teachers, adequate facilities and equipment, and sound curricula and that these programs are capable of attaining their stated objectives.
6. Counsel and assist schools in developing instruction of the highest quality and to encourage self-evaluation and continuing improvement.
7. Invite and encourage the cooperation of professional art and design groups in the formulation of appropriate curricula and standards for the respective professions.

### Program

The major responsibility of NASAD is the accreditation of U.S. higher educational programs in art and design. NASAD also sets guidelines and standards for graduate and undergraduate degrees in art and design, as well as certificate and credentialing pro-

grams for professional artists and designers. In addition, NASAD maintains a list of artists, designers, art teachers, and arts executives and professionals who are willing to serve as consultants. NASAD consultants help institutions with such issues as applications for new accreditation and re-accreditation, curriculum and institutional development, facility and equipment review, and state reviews. Many NASAD consultants are also available for speaking engagements on topics of concern to the art and design community.

NASAD also publishes books, reports, and pamphlets that outline accreditation requirements and procedures, describe research in art and design, record and evaluate statistics, and discuss issues and policies of concern to art students and art educators. The organization's major publications include the *NASAD Directory* and the *NASAD Handbook*, both published annually.

Representatives of member schools assemble annually for a conference on problems of mutual concern regarding the education of the artist and designer, and for an exchange of ideas concerning improvements in education processes. Prominent scholars and creative artists are regularly invited to participate in the program, and meetings are also open to individuals from nonmember institutions and allied fields.

NASAD participates in the Higher Education Arts Data Services (HEADS) Project along with the National Association of Schools of Music, the National Association of Schools of Theatre, and the National Association of Schools of Dance. Begun in 1982, the HEADS Project collects, compiles, evaluates, and publishes statistics from member and nonmember institutions with the goal of providing comprehensive management data on the arts in higher education. All NASAD member institutions must participate in the HEADS Project.

### Organizational Structure

NASAD had 236 institutional members in 2001. The board of directors, elected by the membership, meets regularly during the year and is responsible for the proper conduct of association business. In addition to a commission on accreditation, standing committees of the board are maintained for membership, rules, program, research and development, public relations, nominations, and fellows and citations. Appointed representatives serve as liaison

members with regional accrediting associations. There are no regional, state, or local units of the association.

### Membership and Financial Support

The association offers both individual membership and accredited institution membership. Individual membership is available to artists, designers, and educators. Institutional membership is available to colleges, universities, and independent schools of art and design with NASAD accredited programs. These programs consist of professional schools and professionally oriented college and university art departments with programs leading to the bachelor of fine arts, bachelor of science in design, and similar professional degrees; liberal arts colleges with programs leading to the bachelor of arts degree with a major in art; and junior and community colleges and other schools offering programs of art instruction at the college level that do not lead to a bachelor's degree. Membership is also extended to appropriate professional organizations, societies, agencies, and institutions that are not functioning as schools.

To be eligible for membership, schools must be organized on a nonprofit basis, with appropriate physical facilities and resources, competent faculty and staff, and evidence of permanence and financial stability. Schools seeking fully accredited member status must be visited by an association evaluation team. All member schools and individuals are assessed annual membership dues, which constitute the main source of financial support for the association.

### History and Development

In 1944 representatives of a number of art schools met at the Metropolitan Museum of Art in New York City to focus attention on schools that had or could develop education programs in the new field of industrial design. The meetings continued on a conference basis until 1948. Participants then decided to establish a firm organizational structure and to use the meetings as opportunities to visit schools as well as to exchange ideas and consider issues and problems facing art and design education. The organization thus formed was called the National Association of Schools of Design. In 1960, to more accurately reflect the broad interests of an expanding organization, the name was changed to National Association of Schools of Art, and later to the National Association of Schools of Art and Design.

### INTERNET RESOURCE

NATIONAL ASSOCIATION OF SCHOOLS OF ART AND DESIGN. 2002. <[www.arts-accredit.org/nasad/default.htm](http://www.arts-accredit.org/nasad/default.htm)>.

FRANCIS A. RUZICKA

*Revised by*

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## NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS

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The National Association of Secondary School Principals (NASSP) is a national voice for middle level and high school principals, assistant principals, and aspiring school leaders, providing its members the professional resources to serve as visionary leaders. The association was formed in 1916 by a group of seventy-eight high school principals from seven Midwestern states who met in Chicago, Illinois, to establish a professional organization. Headquartered in Reston, Virginia, the NASSP promotes the intellectual growth, academic achievement, character development, leadership development, and physical well-being of young people through its programs and student leadership services.

With nearly 37,000 members in the United States, Canada, and around the world, the NASSP is the largest organization serving middle level and high school administrators. Although most members are principals and assistant principals at public, private, and parochial secondary schools, the association's membership also includes aspiring principals, teachers, professors of secondary education, and retired educators.

### A National Voice

Providing a national voice for principals across the United States is a key objective of the NASSP. As such, the association represents its members before the U.S. Congress and executive agencies of the federal government, monitors federal legislation directly affecting education, writes and delivers testimony before congressional committees, and assists members in advocating for state and federal policies to improve secondary education.

The NASSP supports federal policy initiatives that provide for secondary school programs under

the Elementary and Secondary Education Act of 1965 (ESEA), that require mandatory funding for the federal government's share of the Individuals with Disabilities Act (IDEA), that provide efforts to lessen the impact of the principal shortage, and that guarantee that federal funding is available for the professional development of principals. Specifically, secondary school programs under the ESEA should include school safety initiatives, dropout prevention programs, enhanced curriculum, technology in schools, and developmental reading and writing programs in middle level and high schools.

### Information and Resources

The NASSP provides a variety of publications, resources, and programs designed to assist school leaders in their school improvement process and to enhance student achievement. The NASSP *Bulletin*, a peer-refereed quarterly research journal, is aimed at secondary school administrators and is widely used in graduate-level principal preparation courses. Each issue of the *Bulletin* contains research and scholarly articles that develop a particular theme, such as instructional leadership, funding and equity, teacher recruitment and retention, standards and assessment, and alternative scheduling. Additional essays on other educational issues are also usually included. In September 2000, the NASSP launched the middle school and high school editions of *Principal Leadership* magazine. *Principal Leadership*, published monthly from September through May, offers practical, hands-on strategies for school leaders. Articles appearing in *Principal Leadership* are submitted by practitioners and offer personal insight into a host of educational issues.

Monographs, special reports, and in-depth studies supplement the regular NASSP publications. In 1996, in partnership with the Carnegie Foundation for the Advancement of Teaching, the NASSP released the groundbreaking report *Breaking Ranks: Changing an American Institution*. This report presents recommendations for restructuring high schools in ways that contribute to academic success. Unlike other reports, *Breaking Ranks* embodies a vision developed primarily by high school principals. It draws strength and authority from the fact that it arises from the inside.

*Turning Points 2000*, by Anthony W. Jackson and Gayle A. Davis, is a Carnegie Corporation project published by Teachers College Press and copublished and distributed by the NASSP and the National

Middle School Association. Affirming and extending the original 1989 *Turning Points* model, which is considered the definitive work on reform at the middle school level, *Turning Points 2000* places greater emphasis on teaching and learning, and on the principal's role in ensuring that the focus of reform efforts is directed toward improving curriculum, assessment, and instruction. Together, *Turning Points 2000* and *Breaking Ranks* are the centerpieces for school improvement programs in the nation's middle level and high schools.

### Programs

In 2001 the NASSP announced the formation of three national task forces—Middle School Principalship, High School Principalship, and Principal Preparation. Comprising principals, assistant principals, and professors, these task forces identify best practices in school leadership and in the preparation and development of school leaders; assist in disseminating these practices; advise the NASSP on the development and implementation of standards impacting principal preparation and practice; identify pertinent research topics; and contribute articles for NASSP publications.

To further support its legislative priorities, and in response to members' needs, the NASSP added two Resident Practitioners to the national staff in 2000—one with expertise in creating safe and orderly schools and one with expertise in special education. These practitioners are available to answer members' questions and conduct presentations to large groups of educational leaders.

Cities and states nationwide report principal vacancies and a lack of qualified candidates willing to fill the positions. *The Principal, Keystone of a High-Achieving School: Attracting and Keeping the Leaders We Need*, prepared in 2000 by the Educational Research Service for the NASSP and the National Association of Elementary School Principals, estimates that more than 40 percent of public school principals will retire by 2010. This report identifies the characteristics of effective principals, discusses factors contributing to the shortage, and suggests steps toward breaking down the barriers to attracting and retaining quality school leaders. With more than twenty years experience in assessment and development of instructional leaders, the NASSP, through its leadership development and assessment programs, assists school districts with the identification and development of potential school leaders. These

highly personalized programs measure leadership potential by diagnosing individual strengths and development needs essential to effective leaders.

The association holds an annual convention that attracts more than 5,000 school leaders. The convention offers general sessions featuring speakers of national and international reputation; more than 200 concurrent sessions with distinct middle level and high school strands; exhibits featuring the latest in school technology, curriculum materials, and school supplies; school visits to explore exemplary programs; and informal networking opportunities.

Association programs and services, while most directly focused on the needs of secondary school leaders, also directly touch the lives of students. The NASSP sponsors the National Honor Society (NHS), National Junior Honor Society (NJHS), and National Association of Student Councils (NASC). In 2000 more than 18,000 local NHS/NJHS chapters recognized students for scholarship, character, service, and leadership. In addition, more than 18,000 schools affiliated with the NASC. *Leadership for Student Activities* magazine, published monthly from September through May, provides NHS, NJHS, and NASC advisers and their student leaders with timely articles on leadership topics and ideas for student-centered projects. Three standing committees, the Executive Board of the National Association of Student Councils, the NHS/NJHS Council, and the National Committee on Contests and Activities, ensure that the NASSP maintains its prominent position in the area of student leadership development.

The Trust to Reach Education Excellence (TREE) foundation was created to make grants available to educators and students who would ordinarily not have access to outstanding education opportunities. TREE makes grants to tax-exempt accredited school districts, individual public and private schools, and students. In addition, the TREE 5K, held at the annual convention, raises money for the foundation grants program.

### Organizational Structure

The NASSP is a nonprofit 501(c)(3) organization. The association's twenty-four-member board of directors works with the executive director and staff to set the NASSP goals, priorities, and policies. The board includes two members from each of eight geographic regions; four members who speak for under-represented groups; and two members elected at

large (a middle level principal and an assistant principal). The association's president and president-elect also serve on the board of directors. A steering committee, composed of the president, president-elect, and a board member chosen by the board, oversees association operations between board meetings, which are held four times each year. The NASSP also works cooperatively with fifty-four affiliated state and regional principals' organizations throughout the United States. Individuals who hold membership in both national and state organizations enjoy a range of complementary services.

### Membership

Several categories of membership are offered by the NASSP, each providing a wide range of benefits and services. Individual membership is open to persons engaged in the practice or supervision of middle level or high school administration. Individual membership is not transferable. Institutional membership is also open to persons engaged in the practice or supervision of middle level or high school administration. Institutional members receive all the benefits of individual membership. An institutional membership is in the name of an individual, but is owned by the school. Consequently, an institutional membership is transferable. Educator membership is open to graduate students enrolled in programs in educational administration, professors, parents, and teachers not engaged in administration. NASSP also offers a membership to retired school administrators.

### INTERNET RESOURCE

NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS. 2002. <[www.nassp.org](http://www.nassp.org)>.

TIMOTHY J. McMANUS

## NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION

The National Association of State Boards of Education (NASBE) was established in Denver, Colorado, in 1959. Prior to the establishment of NASBE, individuals who served on state boards of education had limited opportunities to meet to discuss issues related to the development of state education policy. State board members, like many individuals in-

volved in public education in the early fifties, were actually members of the National Education Association (NEA).

At its inception, the National Education Association was an umbrella organization for education professionals and policymakers, including members of state boards of education. The expansion of collective bargaining was incompatible with the concept of a single organization for education interests and resulted in the creation of targeted associations that represented the various components of public education. State and local boards of education initially banded together to form one organization. Several of the members of state boards of education, however, felt their unique interests and needs could not be met in the combined group because of the disproportionate number of local board members in the organization. Consequently, NASBE was created and continues to address the distinct needs of state school boards and their members.

In the early years of the organization, it was the usual custom for individuals to serve on state boards of education for several years. The services and activities of the organization focused on bringing members together and reflected a culture of long-term, extended ministrations. During the late 1980s and into the 1990s, however, the average term of state board service diminished to four years, hence transforming the work of the association to one of assisting boards and members with the rapid pace of policy development. The primary focus of the association turned from one of simply a convener of state board members, to an organization that concentrated on the professional development of board members, training in policy development, and information dissemination.

The length of time individuals serve on state boards of education was not the only change that confronted the organization. With the standards-based reform movement, the nature and focus of policy development of state education changed dramatically. NASBE services in the early twenty-first century reflect the more complex work of state boards, the considerable diversity of views among the membership, and the external influence of legislatures and governors on the policymaking process. Recognizing the expansion of interest in state education policy development outside of the state boards of education, the association opened its doors to other educational leaders, still maintaining its core services to boards. Membership categories within

the association have been developed for others who are interested in education policy development from a state perspective. Although the primary unit of membership is based on a state board of education, a person who does not currently sit on a state board of education may still join as an individual.

The association is a 501(c)3 nonprofit organization, which is governed by a board of directors that includes the offices of president, vice president, immediate past president, and eight area or regional directors. The officers are elected nationwide from four geographic regions, each of which has two representatives on the board of directors. A secretary-treasurer is elected from among the area directors, and there are ex-officio members representing the Council of Chief State School Officers, the National Council of State Education Attorneys, and the National Council of State Board of Education Executives. The board meets quarterly and holds an annual business meeting each October at the Annual Conference of the association. The organization has a Resolutions Committee that annually reviews the standing positions of the organization and each member state may cast a vote to change, affirm, or add resolutions to the association's governing document.

To guide its work between annual business meetings, the board of directors relies on a set of adopted beliefs that assert the following:

- Public education is essential.
- Public education must address the needs of all students.
- Public education is the most fundamental obligation of state government.
- Citizen governance is essential in making public education an enterprise that fulfills its purpose.
- Citizens who serve in position of governance over public education must do so without conflict of interest.
- Every state board member has national level roles and responsibilities.
- Differences among and between states should be recognized and considered when addressing education policy.

To promote those beliefs the association and its management relies on a mission statement that affirms the following:

ANASBE shall be the principal organization for policymakers involved in the field of ed-

ucation. It shall develop and provide information that anticipates critical issues formulated with active participation of state board members. NASBE shall promote policy frameworks that are clearly recognizable as scholarly, student-focused, nonpartisan and adaptable to state by state implementation.

NASBE is financed through a combination of state dues, associate memberships, publication sales, and grants and contracts for services and research projects. The range of issues addressed include, but are not limited to, the examination of policies that affect standards, assessments, accountability, certification, accreditation, special education, diversity, educational technology, and health education.

The organization provides a panoply of services to its members, including in-state technical assistance, annual and legislative conferences, an annual training institute for newly elected or appointed board members, chairs-leadership conference annual study groups, monthly policy and legislative updates, issue-specific publications, and a quarterly journal, the *State Education Standard*. The organization maintains a website, and is involved in numerous collaborative initiatives that augment its influence beyond the confines of state boards of Education. The association has been known for its scholarly approach to issues and consequently commands attention and influence beyond its basic membership.

The association is managed by an executive director, who is hired and evaluated by the board of directors, and who oversees a staff of nineteen professionals.

*See also:* STATES AND EDUCATION, *subentry on* STATE BOARDS OF EDUCATION.

#### INTERNET RESOURCE

NATIONAL ASSOCIATION OF STATE BOARDS OF EDUCATION. 2002. <[www.nasbe.org](http://www.nasbe.org)>.

BRENDA LILIENTHAL WELBURN

## NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES

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The National Association of State Universities and Land-Grant Colleges (NASULGC) is an organization of more than 200 public universities, land-grant colleges, and state university systems. Within this constituency, seventy-five are land-grant colleges, including seventeen historically black public colleges and universities, and twenty-eight are public higher education systems. Thirty tribal colleges are represented through the American Indian Higher Education Consortium (AIHEC).

### Purpose and History of Association

The NASULGC has major interests in graduate education, research, and international education. The members' composition of mostly public institutions generates the association's policy interests in agriculture, economic development, and technology transfer. The NASULGC institutions annually grant one-third of the bachelor's and master's degrees and award 60 percent of the doctoral degrees in the United States. Seventy percent of U.S. engineering degrees are from NASULGC institutions.

Founded in 1887 as the Association of American Agricultural Colleges and Experiment Stations (AAACES), NASULGC is the oldest national association of institutions of higher education. The AAACES went through several name changes: the Association of Land-Grant Colleges (ALGC) in 1919; then the Association of Land-Grant Colleges and Universities (ALGCU) in 1926; before merging with National Association of State Universities (NASU), started in 1896, and the State Universities Association (SUA), founded in 1930, to form the National Association of State Universities and Land-Grant Colleges in 1963. The three organizations had overlapping memberships and similar interests but were competitive with each other for many years before a merger was effected.

The Association of Land-Grant Colleges and Universities (ALGCU) created a Washington, D.C., office in 1945, with Russell Thackrey as the full-time executive secretary, a position he held through the merger to 1969. After sharing headquarters on Massachusetts Avenue and One Dupont Circle with a number of other higher education associations since 1952, NASULGC moved to New York Avenue in

1998 to occupy a building it had purchased with three other higher education associations. The president of the association presides over a staff of forty.

The NASULGC shares with the American Association of State Colleges and Universities (AASCU) not only a public institution base but also mutual interests in promoting low tuition policies and equal educational opportunities for everyone who can benefit from a college education. Together, NASULGC and AASCU supported a bill favoring direct lending in the 1990s, and NASULGC was alone among the major Washington, D.C., associations in lobbying for national service legislation. A change in the association's bylaws in 1992 allowed most members of AASCU to become members of NASULGC. The two organizations had a history of working together over many decades. The land-grant association shares with the Association of American Universities (AAU) a longtime interest in graduate education and research, and the two organizations often cooperate in lobbying Congress on matters of mutual interest. The NASULGC is a member of the American Council on Education (ACE) and a member of the Big Six, an informal group of Washington, D.C.-based higher education associations whose members reflect the interests of most American higher education institutions.

The NASULGC has a special commitment, through its Office for the Advancement of Public Black Colleges, to promote historically black land-grant institutions and to aid urban universities in building their capacity to deal with urban interests and issues. In 1994 land-grant status was given to 30 tribal colleges, institutions now represented in NASULGC through their membership in the AIHEC.

### Governance and Membership

The NASULGC's basic governing body is its Board of Directors, which consists of representatives from the organization's councils and commissions, six president/chancellor representatives, and three elected officers.

Although NASULGC is primarily a president's association, the organization's ten councils offer the opportunity for provosts, vice presidents, deans, presidents/chancellors, and presidents' spouses to interact with persons in similar roles in other institutions and to participate in the governance and other activities of the association. The six commissions of the organization deal with broad policy issues relat-

ed to the environment, social change, information technology, international affairs, technology transfer, and urban affairs.

Like other associations, NASULGC maintains an extensive information network to keep its members informed and involved in the activities and issues that concern public higher education at the national, state, and local levels. Its Office of Public Affairs deals with media relations, produces and distributes NASULGC publications, including *Newslines*, a newsletter published ten times per year, which keeps members informed on legislation, NASULGC programs, and other items of interest.

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### INTERNET RESOURCE

- NATIONAL ASSOCIATION OF STATE UNIVERSITIES AND LAND-GRANT COLLEGES. 2002. <[www.nasulgc.org](http://www.nasulgc.org)>.

HARLAND G. BLOLAND

## NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS

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The National Board for Professional Teaching Standards (NBPTS) was formed in 1987 as a response to *A Nation at Risk: The Imperative for Educational Reform* (1983), published by the National Commission on Excellence in Education, and its challenges to improve the quality of teaching and learning in U.S. schools. NBPTS has a three-part mission: (1) to establish high and rigorous standards for what accomplished teachers should know and be able to do; (2) to develop and operate a national voluntary system to assess and certify teachers who meet these standards; and (3) to advance related education reforms for the purpose of improving student learning in schools in the United States.

## Validity

With standards and assessments in place to reach 95 percent of the nation's teachers, research has focused on the validity and the effects of National Board Certification processes. In 2000 Lloyd Bond, Tracy Smith, Wanda Baker, and John Hattie examined the consequential validity of the NBPTS standards and assessments. They sought to locate demonstrable differences between National Board Certified Teachers (NBCTs) and non-National Board Certified Teachers (non-NBCTs). These researchers created a sample of sixty-five teachers who completed all parts of the assessments and who received their scores on these assessments. These teachers were divided into two naturally formed groups, 31 NBCTs and 34 non-NBCTs.

For the next school year, these teachers were observed teaching in their classrooms and interviewed about their teaching. The researchers collected samples of the teachers' lessons, samples of their students' work, and of a variety of other writing assignments given to the students. The researchers interviewed three students in each teacher's classroom and conducted surveys of all children in each classroom. The researchers found that on the thirteen attributes of teaching effectiveness they had identified, NBCTs outscored non-NBCTs. The scores of the NBCTs were significantly higher, statistically, than the scores of the comparison group on eleven of the thirteen attributes. These findings offer firm foundation for the claim that NBPTS assessments actually measure highly accomplished teaching. It should be noted that all teachers scored rather high on all thirteen attributes, suggesting that just completing the entire assessment process enhances a teacher's skills as a practicing professional.

## Candidate Support

Candidate support programs are offered by school districts, teachers organizations, and education schools to guide teachers through the National Board Certification process. In 2001 M. Cramer and J. Cramer conducted focus group interviews of 81 National Board candidates who participated in a support program. The researchers identified three major attributes of successful support programs. First, effective support programs require a knowledgeable and dedicated facilitator. Second, because of the unique demands placed on candidates, the support program must include a structured and sequenced curriculum. Third, creating a learning com-

munity with an ethos of egalitarianism in a high-stakes assessment environment seems to advance teacher growth and development.

In 1999 Iris Rotberg, Mary Futrell, and Anne Holmes surveyed candidates who had completed a local support program and found unequal access to information concerning National Board Certification. According to their report, the materials available from the National Board could be more explicit in their expectations. They also called for more venues for providing such information.

For a 2000 doctoral dissertation, D. B. Bohlen compared the perceptions of candidates who participated in a cohort support program with those who did not. Both the cohort and noncohort candidates found the NBPTS certification process a powerful professional development experience that transformed their views on teaching. Both groups believed that completing the NBPTS processes in a structured and collegial environment enhanced their professional development. Bohlen concludes that teachers seem to welcome the opportunity to study their teaching and the teaching of others in such group settings where deep inquiry and reflection are valued and encouraged.

## Master's Degree Programs

Monographs by Peggy Blackwell and Mary Diez (1998) and Diez and Blackwell (1999) outline in clear and direct language the opportunities to use the NBPTS standards to re-design master's degree programs for teachers who want to remain in the classroom. The program designs they offer include these notions of inquiry, reflection, and using the classroom as a laboratory for learning.

In 1999 Karen Dawkins and John Penick surveyed 300 teachers in North Carolina to assess their beliefs and attitudes about a proposed master's degree program that was aligned with the NBPTS core propositions. The respondents expressed support for content and processes that directly target the capacity to improve teaching and daily interactions with children. The respondents did not dismiss the philosophical dimensions found in most graduate programs for teachers; however, they wanted them focused on professional development and improving teaching skills.

## Candidate Performance

Data collected from the administration of NBPTS assessments indicate that the percentage of candi-

dates achieving National Board Certification increases annually. In the 1999–2000 cycle, 52 percent of all first-time candidates achieved National Board Certification. However, within these data are differential achievement rates among racial and ethnic groups. In a series of studies, Bond and his colleagues inquired into the sources of adverse impacts on achievement rates in an effort to establish a set of conditions that would reduce their effects. These studies have included an external panel review of the standards and assessments, which found no bias inherent in either, and a study of the interaction of assessors and candidates, focusing on the factor race plays in these interactions. This study also yielded no evidence of systematic bias. In studying minority candidates who did not achieve National Board Certification but who retook exercises and who achieved National Board Certification on the next attempt, Bond and colleagues found that these candidates felt underprepared for the amount of reflective thinking required in the assessments, suggesting the need for better teacher preparation.

In 1998 Laura Onafowora studied six African-American candidates who did not initially gain National Board Certification and found that these candidates might not write well extemporaneously. She found the entries of these African-American candidates tended to focus on philosophical themes, such as instilling “survival imperatives” in their students, rather than on their teaching.

### Assessing Accomplished Teaching

Results of studies on the reliable and valid measurement of accomplished teaching, as reported in separate 1998 articles by Bond and Richard Jaeger, offer insights into the process of scoring multidimensional representations of teaching. They highlight the need for new calculations of validity and needed research on measuring performance. In 1997 Drew Gitomer reviewed five major challenges faced in the design, development, and implementation of the NBPTS assessment process. These challenges were: (1) defining scoring; (2) handling a broad range of disciplines and contexts; (3) resolving bias issues; (4) interpreting unfamiliar representations of content; and (5) identifying the cut-score.

### Changing the Profession and Advancing Reform

In a commissioned study of National Board Certified Teachers, Yankelovich and associates surveyed all NBCTs concerning the effects National Board

Certification has had on their ability to change the profession. NBCTs reported, in significant numbers, that they are undertaking new roles and responsibilities in their schools and communities since gaining National Board Certification, including mentoring other teachers, coaching National Board Certification candidates, and serving as clinical faculty in teacher education programs.

The National Board is pursuing its mission to set the benchmark for accomplished teaching. It has overcome political, professional, and psychometric obstacles, and it has spawned a national inquiry into teacher quality. However, it is still a long way from having the kind of research evidence that solidifies its base. By creating the broad categories used to review the current literature, it is hoped further research will occur.

*See also:* SUPERVISION OF INSTRUCTION; TEACHER EVALUATION.

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## NATIONAL BUSINESS EDUCATION ASSOCIATION

The National Business Education Association (NBEA) is a private organization devoted to the use

of education to advance ethical standards, professional conduct, diversity, and fairness in the field of business. It is the largest professional organization of its kind in the United States, and its influence is enhanced by the close ties it maintains to other business-related organizations both within the United States and in the international community. Its primary constituency comprises business educators and the administrators of programs of business instruction.

### Program

The NBEA takes as its primary goal the improvement of business education and enhancing the status of the profession. Among the activities it conducts to achieve these ends are a publications program, through which the NBEA disseminates information on the latest innovations in teaching techniques; a strong leadership program designed to improve professionalism within the field of business education; and a lobbying arm, the Legislative Advocacy Committee, which works with lawmakers at the local, state, and federal level to improve the quality of business education. It also sponsors two student organizations, the Future Business Leaders of America (for high school students) and the college honor society Phi Beta Lambda, in the conviction that early education is key to developing business skills and a commitment to civic leadership.

The NBEA has an active publications division, which offers materials on topics of interest to business educators. Its official journal is the *Business Education Forum*, and it also publishes a newsletter, *Keying In*. In addition it publishes the *Business Education Standards*, which establishes standards of competency that should be attained by children from kindergarten to age fourteen in eleven areas of business-related education. Among the areas addressed are accounting principles, business law, marketing, computation, economics, and management. The NBEA also publishes an annual *Yearbook*, each issue of which is devoted to a single topic of importance to business educators. It maintains a website with links to a wide range of business organizations in the United States and abroad.

### Organization

The NBEA has four divisions, each representing a distinct area of professional interest: International; Research; Teacher Education; and Teaching, Supervision, and Administration. The organization is bro-

ken into five regional associations: Eastern, Southern, North-Central, Mountain-Plains, and Western. Overseeing the organization's activities is an executive board, which consists of the presidents of each of the divisions and associations as well as elected representatives of the five regional associations. Conferences and workshops are sponsored at the divisional and regional levels.

The NBEA also has a representative assembly, composed of business and business education leaders from each state and from affiliated business organizations. This assembly provides recommendations on policy, planning, and future activities of the national organization. Through this structure, the NBEA is able to carry out its mission to serve as an information conduit, conveying information among affiliated business organizations for the betterment of all members.

### Membership and Support

The NBEA welcomes all individuals who share its interest in improving business education and advancing the goals of fairness, diversity, and professionalism in the field. Interested parties may choose from five different categories of membership: professional, student, associate, lifetime, and honorary. Only professional and lifetime members are eligible to vote on NBEA issues, serve on the assembly, or be elected to the executive committee. Funding for the NBEA comes from membership dues, the sale of NBEA literature, and fees charged for workshops and seminars.

### History

The NBEA got its start in 1878 when a group of educators from several private schools got together to form the Business Education Association (BEA). The group was chiefly concerned with the dissemination of information of interest to business teachers and published a series of monographs. In 1892 the BEA became a formal division of the National Education Association (NEA) and was renamed the Department of Business Education.

Groups of other independent organizations devoted to principles of sound business education were founded over the next several years, including the National Commercial Teachers Association (1895), the Eastern Commercial Teachers Association (1897), the Southern Commercial Teachers Association (1922), and the National Association of Commercial Teacher-Training Institutions. These and

other like-minded groups joined together to form the National Council for Business Education (NCBE) in 1933, with the goal of establishing national standards in the field of business education.

In 1946 the NCBE merged with the NEA's Department of Business Education to form the United Business Education Association, and headquarters were established at the NEA Center in Washington, D.C. Regional divisions were formed over the next several years, leading to the organizational structure that now characterizes the NBEA. The organization took its present name in 1962.

*See also:* BUSINESS EDUCATION.

### INTERNET RESOURCE

NATIONAL BUSINESS EDUCATION ASSOCIATION.  
2002. <[www.nbea.org](http://www.nbea.org)>.

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*Revised by*

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## NATIONAL CATHOLIC EDUCATIONAL ASSOCIATION

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The National Catholic Educational Association (NCEA) is the largest professional organization for Catholic educators in the United States. The association's principal objectives are to promote the welfare of Catholic education; to provide Catholic educational institutions with national and regional representation; to enable Catholic educators to work together for professional growth; to foster cooperation between Catholic schools and other professional agencies in the field of education; to facilitate the interchange of ideas; to conduct educational research; and to increase public understanding and proclaim the uniqueness of Catholic education.

### Program

The services provided by the NCEA include a broad spectrum of activities designed to aid Catholic educators. The association sponsors meetings, issues publications, and conducts informational programs. The annual convention and exposition, which attracts over 15,000 participants, is the most important annual forum for the exchange of ideas and information among Catholic educators. The NCEA

sponsors an annual meeting for diocesan school superintendents, regional meetings related to the special needs of particular areas of the United States, and frequent professional workshops dealing with new educational and administrative methods for teachers and administrators.

The NCEA publishes books, monographs, journals, and directories. NCEA newsletters include *News for Catholic School Parent Leaders*, *National Catholic Educators Accent*, and *Pastor Education Digest*. The association's official journal is the quarterly *Momentum*, which includes articles and columns discussing educational theory and methodology, catechetical programs, and important educational issues. The association also makes available to members the services of consultants in guidance and counseling, religious education, accreditation, international education, and other areas of interest.

Other NCEA programs focus on leadership development and training for teachers and administrators at all levels of Catholic education. A retreat program called *Shepherding the Shepherd* is designed to foster the spirituality of teachers and administrators and help them integrate it into their educational efforts. *Sharing the Faith* is a faith development program that provides in-service training for Catholic educators and teaches them ways to balance personal reflection with community building. The *Frontiers of Justice* program, cosponsored by Catholic Relief Services, sends Catholic educators to developing countries to help local Catholic groups develop school systems.

Each year the NCEA, in association with the United States Catholic Conference, sponsors Catholic Schools Week to promote the value of Catholic education, to call attention to the role Catholic Schools play in their communities, and to raise money for school programs and scholarships. Since 1990 the Wednesday of Catholic Schools Week has been celebrated as National Appreciation Day for Catholic Schools.

The association also makes several annual awards, including the Elizabeth Ann Seton Awards to honor people who have made exceptional contributions to Catholic education, and the Leonard F. DeFiore Parental Choice Advocate Award to honor a person who has shown leadership in promoting educational choice.

## Organizational Structure

The NCEA is made up of five departments: the religious education department, the seminary department, the secondary school department, the elementary school department, and the department of chief administrators of Catholic schools. The NCEA also includes a Commission for the National Association of Boards of Education and is an affiliate member of the Association of Catholic Colleges and Universities. Each NCEA department elects its own officers and designates two representatives who sit as voting members on the association's general executive board. The association also includes several sections dealing with special concerns, such as the special projects and public policy section; the leadership development section; and the communications, public relations, and production section. The executive board, headed by a president, oversees the work of the association.

## Membership and Financial Support

Membership in the association is voluntary and open to anyone desiring to further its objectives. Most membership is on an institutional basis. In 2001 the NCEA had more than 200,000 members. The NCEA's chief financial support comes from institutional membership dues, which vary with the size and type of institution, and corporate and private donors. Individuals may join as sustaining members, adult education commission members, or regular members.

## History and Development

The NCEA's founding convention was held in St. Louis, Missouri, in July 1904 when several Catholic education groups joined forces to form the Catholic Education Association. In 1927 the word *national* was added to the name. The growth of the NCEA in size and services parallels the growth of Catholic education in the United States. When the association was started, Catholic schools in the United States enrolled about 850,000 students; in 2001 there were Catholic schools in all fifty states and a nationwide enrollment of more than 7.5 million.

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#### INTERNET RESOURCE

NATIONAL CATHOLIC EDUCATIONAL ASSOCIATION. 2002. <[www.ncea.org](http://www.ncea.org)>.

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## NATIONAL CENTER FOR EDUCATION STATISTICS

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The National Center for Education Statistics (NCES) is a federal agency responsible for collecting, analyzing, and disseminating statistical information related to the U.S. educational system. The principle goals of the NCES are to collect data concerning the condition and progress of American education and to make that data available to federal and state public policy makers, professional educators, the public, and the media. The NCES also reviews and reports on education in other countries.

### Programs

The various programs of the NCES supply information and statistical data on such education-related matters as, for example, student enrollment, graduation rates, teacher staffing levels and teacher shortages, student skill and knowledge levels, and state and local educational expenditures. To obtain this information, the NCES conducts numerous surveys on the American educational system. Among the most important are the Schools and Staffing Survey, which monitors teacher supply and demand, as well as the composition of the educational work force in public and private schools across the country. Another survey, the National Assessment of Education Progress, evaluates the knowledge and skills of American fourth, eighth, and twelfth graders in reading, writing, science, mathematics, history, geography, and other subject areas. This survey also evaluates high school transcripts and provides state-by-state comparisons of its findings. The NCES National Study of Postsecondary Faculty reports on faculty and staff characteristics at the nation's col-

leges and universities. The National Adult Literacy Survey measures the reading and writing skills of the American adult population. In addition, the NCES conducts various longitudinal studies that follow different classes of students over a long period of time to assess such factors as academic growth, changes in attitude and motivation, and the ability to transition from one educational level to the next and from school into the labor market.

Federal, state, and local officials use data supplied by NCES to help them plan educational programs. The media use NCES data to inform the public about significant conditions and trends in American schools, such as school dropout and college enrollment rates, the relationship of educational achievement to class size, and the relative success of private and public schools. Members of the general public may examine NCES statistics to become more informed voters and to make knowledgeable decisions about their own and their children's education. Ultimately, wide access to the information collected and reported by the NCES can promote and accelerate the reform and improvement of education in the United States.

The NCES administers numerous programs to collect, process, and report educational data. The NCES Annual Reports Program conducts research on current and emerging topics in education and disseminates annual reports in support of other NCES programs. The Data on Vocational Education (DOVE) Program, established in 1998, collects and collates data from students and faculty involved in vocational education in secondary and postsecondary schools. DOVE also collects information about adults pursuing continuing education and work-related training. The NCES Education Financial Statistics Center conducts research related to the financing of public and private elementary, secondary, and post-secondary education. The Statistical Standards Program provides technical support and develops standards and procedures to ensure the quality and accuracy of NCES statistical surveys, analyses, and reports. The NCES established the National Forum on Education Statistics to improve methods for collecting, processing, and reporting elementary and secondary education statistics. The Forum also provides technical assistance to state and local data collection systems. Since 1994, a branch of the NCES called the Advisory Council on Education Statistics has deliberated

problems facing the NCES and recommended solutions to the NCES Commissioner.

The NCES provides access to its statistical information through the online NCES Electronic Catalog, the National Education Data Resource Center, the National Library of Education, the Resource Sharing and Cooperation Division, and various web posting, CD-ROM releases, and nearly one hundred annual print publications. The major print publications of the NCES include the annual *Digest of Education Statistics*, a compilation of wide-ranging statistical data covering American educational institutions from preschool through graduate school. The *Digest* also compares American schools with schools in other countries. The *Projections of Education Statistics*, a periodic report first published in 1964, provides ten to fourteen year projections on enrollment, graduation rates, teacher levels, and expenditures in America elementary schools, high schools, colleges, and universities. Other periodical publications include the NCES *Education Statistics Quarterly*, which provides a comprehensive overview of work accomplished throughout the NCES over a three-month period.

The NCES also maintains a series of databases on a wide variety of topics addressing elementary, secondary, and postsecondary education at the local, state, and national level. These include *Common Core of Data*, which is the primary database for statistical information about public and private elementary and secondary schools. Another NCES database, the *School District Database*, provides demographic information derived from the most recent census about school districts around the country. The *K-12 Practitioners' Circle* is a website that provides links, resources, and other information for teachers and support staff, administrators, policymakers, librarians, and parents. The online *NCES Students' Classroom* offers children and parents information about schools and libraries, a kid's magazine called *Crunch*, and general educational data, as well as games and quizzes on history, mathematics, science, geography, and the arts.

### Organizational Structure

The NCES is a division of the U.S. Department of Education's Office of Educational Research and Improvement. The NCES is headed by a commissioner and deputy commissioner, who set policy and oversee the operation of the center. There are four main divisions comprising the NCES: the Early Childhood

and International and Crosscutting Studies Division, the Elementary/Secondary and Libraries Studies Division, the Postsecondary Studies Division, and the Assessment Division.

*See also:* INTERNATIONAL EDUCATION STATISTICS; U.S. DEPARTMENT OF EDUCATION.

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## NATIONAL COMMITTEE FOR CHILDREN AND YOUTH

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The National Committee for Children and Youth (NCCY) is a private association that was established in 1960 as a part of President Eisenhower's White House Conference on Children and Youth. It was thus part of a larger initiative intended to improve the federal, state, and local services provided to the nation's children.

The committee's original mandate was fivefold. It was to implement the findings of the White House conference, to achieve greater coordination among the various programs and associations that sought to serve the needs of children and youth, to improve

and speed the flow of useful information among interested organizations and agencies, to provide guidance in the planning of activities aimed toward improving children's services, and to identify new problems and issues as they arose in the provision of services to children.

### **Program**

Eisenhower's White House conference established the Council of National Organizations for Children and Youth, a national coordinating council serving some 400 individual youth and children's service providers, and state-based Committees for Children and Youth. The NCCY, as a committee within the national council, functions as an information clearinghouse and consultation service for these member organizations, acting as a liaison between federal agencies and local, regional, and state-based child-service providers. In addition, it plays an important role in reaching out to the community at large and educating the public about child-service goals and issues.

The NCCY fulfills its mission through its publications division. It produces a quarterly newsletter, distributed to service providers and individuals, which recounts the accomplishments and ongoing projects of the various service agencies at all levels of government. It also sponsors conferences that bring together professionals in the field of child services. It has also produced reports, books, and research articles, which are used to train educators, social workers, and other professional child-service providers.

### **Programs**

A central concern of the NCCY since its inception has been to improve literacy among the nation's youth. One important project, aimed at young people in their teens, has been the establishment of remedial reading programs, which seek to improve reading skills in children who have been passed along through the school system without acquiring the ability to read at a basic level of competency. This type of project is typical of the work of the NCCY, involving as it does a collaboration between a number of independent agencies and individuals, such as the U.S. Department of Labor's Manpower Administration, local schools, and social workers. However, the NCCY does not maintain long-term control over such projects. As an initiative proves itself to be successful, the NCCY finds an appropriate agency to

take over the service, thus freeing itself to explore new programs and initiatives.

### **Organizational Structure**

The NCCY is a division within the Council of National Organizations for Children and Youth, and as such it serves the larger agenda of its parent agency. It also works closely with the National Council of State Committees for Children and Youth, each of which elects five of its members to three-year terms of service on the NCCY. The bylaws of the committee provide that at least two members must be under the age of twenty-five, to make certain that the concerns of the committee's target population are understood and adequately addressed.

### **History**

The NCCY was born out of President Eisenhower's 1960 educational initiative, the 1960 Golden Anniversary White House Conference on Children and Youth. The original conference was part of a long tradition in which, at the start of each decade since 1909, the sitting president would call together a wide range of professionals, from educators to physicians, who served the needs of the nation's children and youth. The 1960 conference attracted more than 7,000 participants, drawn from every state and territory in the United States. During the course of the conference, it was determined that a permanent committee should be established to provide continuity, collaboration, and focus for the widely disparate individuals, organizations, and government agencies that shared an interest in child services.

At the 1970 White House Conference, it was decided that each state should establish its own Committee on Children and Youth, and the NCCY's role changed from direct involvement in developing projects to a more advisory and facilitative function. It assumed the responsibility of providing national leadership and serving as an informational clearinghouse through which the local initiatives could be communicated to interested parties, agencies, and committees elsewhere in the country.

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## NATIONAL COMMUNICATION ASSOCIATION

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The National Communication Association (NCA) is the oldest and largest nonprofit, scholarly society dedicated to the field of communication, with a special emphasis on public speaking and other forms of speech communication. Its mission is to promote excellence in the research, teaching, and application of the “artistic, humanistic, and scientific principles of communication.” It has a membership of more than 7,100, representing all fifty states and twenty foreign countries.

### Program

The NCA serves as an informational center and network for individuals working in the broadly defined field of communication. Its primary goal is to organize and disseminate information of relevance to its membership, and it accomplishes this goal through a variety of venues. Each year an annual convention is held, attracting some 4,000 attendees who participate in workshops, seminars, and panel discussions. Also offered are films and presentations on advances in the field of speech communication, employment placement services, and other special-interest activities. The annual convention is also the occasion for the NCA’s various business and planning committees to meet. In addition to the annual convention, the NCA sponsors smaller conferences throughout the year.

In addition to meetings, the NCA disseminates information through a wide range of publications. The first NCA journal, founded in 1915 as the *Quarterly Journal of Public Speaking*, is now published as the *Quarterly Journal of Speech*. Since the inaugural issue of this journal, the NCA has added six others, each with a special focus (education, criticism, text, performance, and so on). The NCA also produces two annuals and an online index, as well as numerous books, monographs, brochures, and pamphlets. The monthly newsletter, *Spectra*, has an electronic counterpart available on the organization’s website.

To encourage excellence in the field of communication, the NCA also sponsors numerous awards, conferred annually at the NCA convention. These awards, many of which carry significant cash grants, recognize achievement in a variety of communication applications, from teaching to “best dissertation.” In addition, the organization sponsors exchange programs, which bring international de-

bate and public speaking teams together for competitions. The official NCA collegiate honor societies are Lambda Pi Eta (for four-year institutions) and Sigma Pi Eta (for community colleges), in addition to which the organization encourages the formation of student clubs on university campuses throughout the country.

The NCA is also actively involved in outreach programs with public and private agencies. Through these programs, the NCA promotes its positions on such issues as communication education, freedom of speech, and presidential debates. The NCA also prepares position papers on legislation relevant to its areas of interest and makes these available to lawmakers at the federal and state level when appropriate.

### Organization and Funding

The NCA is governed by a sixty-member legislative council, which meets annually at the NCA convention, and a ten-member administrative committee, which meets periodically throughout the year. Policy positions are determined by the legislative council, then disseminated throughout the organization in the form of resolutions. When deemed necessary, the legislative council may call for the formation of special committees to do research on special-interest topics, with the purpose of publishing the results of the research. Past examples of such projects include a brochure on careers in the field of speech communication and a book on the rhetoric of the antislavery movement. More recently, the NCA has published brochures on finding grant support for individual research and a volume on Mexican-American rhetoric and the activism of Cesar Chavez.

The NCA is an independent, not-for-profit organization, relying primarily on membership dues, conference and convention fees, and revenues from the sale of its publications to support the majority of its programs. Individual members and special projects receive support from private sponsors as well as from federal granting agencies. Although many of the NCA annual awards are supported by organization funds, it also solicits endowed awards, and as of 2002 there are ten such awards granted through the organization. In addition to individual memberships, the NCA recruits memberships from institutions and libraries. Undergraduate students receive a reduced membership rate.

## History

The National Communication Association was founded on November 28, 1914, in Chicago, Illinois. The impetus for its founding arose from a dispute within the ranks of the National Council of Teachers of English, in which seventeen members broke away from the parent organization to form the National Association of Academic Teachers of Public Speaking. Within a year, the new organization had inaugurated its first publication, *The Quarterly Journal of Public Speaking*. Interest in the new organization was lively, and by 1916 it boasted 160 members.

Within ten years, membership grew to 910, and the organization underwent its first name change, to the National Association of Teachers of Speech (NATS). New services were added to the organizational profile, including job-placement service. In 1934 the organization began publication of *Speech Monographs* (now titled *Communication Monographs*), and membership had topped 2,000. In 1945 the group changed its name, once again, to the Speech Association of America (SAA), under which, five years later, the organization was officially incorporated. In 1953 the association launched its third quarterly publication, *Speech Teacher* (now *Communication Educator*). In 1963 the SAA established its headquarters in New York City and for the first time created full-time administrative positions to facilitate the running of the organization. In 1970 the organization adopted a new constitution and bylaws and once again chose a new name: the Speech Communication Association (SCA).

With professional offices and a national headquarters, the SCA grew rapidly over the next two decades, and its services expanded markedly. New publications were founded to address changes in the field, including *Journal of Applied Communication* (founded 1973), *Critical Studies in Media Communications* (1984), and *Text and Performance Quarterly* (1989). The conference and awards programs were expanded as well. In 1997 the organization underwent yet another name change to become the National Communication Association, and in 2001 the association launched its most recent publication, *Review of Communication*. In the 1990s the NCA outgrew its Manhattan-based headquarters and relocated to Washington, D.C.

*See also:* SPEECH AND THEATER EDUCATION.

## INTERNET RESOURCE

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## NATIONAL CONFERENCE OF STATE LEGISLATURES

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The National Conference of State Legislatures (NCSL) was founded in 1975 with the conviction that legislative service is one of democracy's worthiest pursuits. Representing the citizens of a district and the people of a state is the very essence of free government.

NCSL is recognized as the preeminent bipartisan organization dedicated to serving the lawmakers and staffs of the nation's fifty states, its commonwealths, and its territories. It is known nationally for its leadership. All the nation's legislators and legislative staff are members of NCSL. A sixty-member executive committee, elected yearly and composed of legislators and staff, governs NCSL under the leadership of seven officers.

With a focus on service, NCSL is a source for research, publications, consulting assistance, meetings, and seminars. It is the only organization that provides an open, bipartisan, national forum for lawmakers to communicate with one another and share ideas. NCSL is an effective and respected voice for the states in Washington, D.C., representing their interests before the U.S. Congress, the presidential administration, and federal agencies.

The issues legislatures confront are increasingly complex. Each year NCSL answers more than 16,000 questions from legislators and staff. The researchers at NCSL provide lawmakers and their staffs with expert information on a variety of issues, including welfare reform, education, criminal justice, energy, environment, transportation, health care, children and families, the legislative institution, economic development, state finances, uninsured children, automobile insurance, workers' compensation, nuclear waste, clean air and water, gaming, education funding, immigrants, managed care, ethics, and many others.

Each year, NCSL produces some 160 books, newsletters, briefs, and other publications, including

*State Legislatures* magazine, on topics of interest to the states. Its Internet site provides thousands of documents from states as well as those published by NCSL. The site includes numerous databases, features listservs through which lawmakers and staff can communicate, and provides users the ability to perform comprehensive research using multistate searches of legislation, statutes, audits, and other legislative documents.

NCSL assists lawmakers in crafting legislation and in seeking expert witnesses to testify before committees. NCSL also conducts special workshops on specific issues and training programs for legislators and staff. NCSL specialists work with legislative leaders on direct consultation projects on legislative organization and management, rules and procedures, committee operations, personnel policies, strategic planning, and related institutional issues. Nearly half of the sixty-member NCSL executive committee is composed of state legislators.

Legislators and legislative staff have numerous opportunities to attend NCSL meetings on a variety of issues and topics throughout the year. The annual meeting provides more than 160 informative sessions and presents nationally renowned speakers on important concerns. Like legislatures, NCSL is structured to allow free and open debate in committees. The Assembly on Federal Issues is comprised of lawmakers who are interested in federal issues and how they relate to the states. The assembly helps guide NCSL's lobbying efforts in Washington, D.C., through the work of nine committees, and its members are appointed by the presiding leaders in the states. The leader-to-leader meeting, held in Washington, D.C., each year, is the premier gathering for state legislative leaders to discuss pressing federal issues with congressional leaders, cabinet officers, key members of the administration, and often the president. Both legislators and staff can be appointed to the Assembly on State Issues. Through its eight standing committees, members address a set of topics from cultural and economic development and fiscal matters to science and technology.

Legislatures cannot run effectively without professional, high-quality staff. NCSL offers a wealth of learning and professional development opportunities for staff. Among them are an annual seminar to help staff sharpen their skills in research, program evaluation, fiscal analysis, bill drafting, and legislative procedures. Specialized meetings cover presen-

tation skills, media relations, legal research, and skills development in other areas.

NCSL has ten professional staff organizations for researchers, fiscal officers, leadership staff, legal services staff, legislative clerks, secretaries, computer staff, research librarians, program evaluators, and security personnel. With the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota, NCSL also cosponsors the Legislative Staff Management Institute, an intensive, two-week executive management seminar for senior legislative staff.

NCSL's Leaders' Center assists legislative leaders in meeting the challenges of managing the institution, crafting the best possible public policy, creating consensus out of dissension, communicating with Congress and key administration officials, and protecting and promoting the legislative institution. The Leaders' Center offers specialized services including publications, timely policy information, and ideas for innovative management, and sponsors the annual Leadership Institute for emerging leaders. NCSL offers leaders opportunities to enhance skills, communicate with colleagues in other states, and meet with members of Congress and the administration.

NCSL created the foundation for state legislatures in 1982 to support the innovative research, seminars, and publications for NCSL and the work of two major programs: the Acclaimed Trust for Representative Democracy and the Center for Ethics in Government. The foundation is committed to the important work of strengthening America's legislatures, counteracting cynicism and distrust of the legislative process, and helping lawmakers confront and solve the critical issues of the time.

NCSL's Center for Ethics in Government was created to address a most critical, fundamental and far-reaching problem facing the United States: the loss of public trust and confidence in representative democracy. The center is founded on the principles of belief in representative democracy and the legislative process and that all who work in the public sector have a particular responsibility to operate with high ethical standards. By facilitating ethics sessions for legislators, staff, and state government affairs professionals and through its research arm, the center is a leading force in promoting responsible behavior in legislatures and educating the public on the importance of the legislative process.

NCSL is an extension of the legislature. Its mission is to improve the quality and effectiveness of

state legislatures, to serve as the forum for exchanging information and ideas among legislatures, and to ensure that legislatures have a strong, cohesive voice in the federal system.

#### INTERNET RESOURCE

NATIONAL CONFERENCE OF STATE LEGISLATURES. 2002. <[www.ncsl.org](http://www.ncsl.org)>.

GINGER SAMPSON

## NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION

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The National Council for Accreditation of Teacher Education (NCATE) is the accrediting body for colleges and universities that prepare teachers and other professional specialists for work in elementary and secondary schools. The NCATE accreditation process aims to ensure that accredited institutions produce competent, caring, and qualified teachers and other professional school personnel who can help all students learn.

NCATE is a nonprofit, 501 (c)(3), nongovernmental coalition of more than thirty national associations representing the education profession at large. The associations appoint representatives to NCATE's policy boards. The boards develop NCATE standards, policies, and procedures. Membership on policy boards includes representatives from organizations of (1) teacher educators, (2) teachers, (3) state and local policymakers, and (4) professional specialists. See Table 1 for a list of NCATE member organizations.

#### Mission

Accountability and improvement are central to NCATE's mission. The NCATE accreditation process determines whether schools, colleges, and departments of education meet demanding standards for the preparation of teachers and other school specialists. Through this process, NCATE seeks to provide assurance to the public that graduates of accredited institutions have acquired the knowledge, skills, and dispositions necessary to help all students learn.

Providing leadership for reform in teacher preparation is also central to NCATE's mission. Through

standards that focus on systematic assessment and performance-based learning, NCATE encourages accredited institutions to engage in continuous improvement based on accurate and consistent data. In this way, NCATE ensures that accredited institutions remain current, relevant, and productive, and that graduates of these institutions are able to have a positive impact on P-12 students.

#### Number of Accredited Institutions

As of 2002, more than six hundred institutions were a part of the NCATE system; 539 of these institutions are accredited, and another 80 to 108 are candidates for accreditation. NCATE institutions produce approximately two-thirds of new teacher graduates in the United States each year.

#### Process

Those institutions interested in attaining national professional accreditation complete an intent-to-seek accreditation form. A mutually convenient date for an on-site visit is set, usually two years in advance of the visit. The institution prepares a self-study, which explains how it believes it meets the NCATE standards. The self-study is sent to examining team members two months prior to the visit. Team members review the self-study and other documents, if available on the institution's website, before the visit. A five- or six-person team visits the institution, arriving on Saturday and leaving the following Wednesday. The weekend is spent examining documents of the institution (student evaluations, copies of curricula, student work, minutes of faculty meetings, etc.). Monday and Tuesday are devoted to interviewing faculty, students, staff, and teachers/principals at clinical sites. The team works in the evening to determine how well the institution is addressing the NCATE expectations. Wednesday at mid-day, an exit interview is held with the head of the education unit, explaining the team's recommendations.

The team finalizes its report in thirty days and returns it to NCATE's office. NCATE sends the report to the institution. The institution may wish to issue a rejoinder if it believes the team missed important information. All of the documents are sent to NCATE's Unit Accreditation Board, which makes a final accreditation decision.

#### History

NCATE was founded in 1954. Five groups were instrumental in the creation of NCATE: the American

Association of Colleges for Teacher Education, the National Association of State Directors of Teacher Education and Certification, the National Education Association, the Council of Chief State School Officers, and the National School Boards Association. When NCATE was founded as an independent accrediting body, it replaced the American Association of Colleges for Teacher Education as the agency responsible for accreditation in teacher education.

**Influence**

The NCATE of the new millennium is implementing a performance-based system of accreditation developed during the 1990s. This system is enhancing both accountability and improvement in educator preparation, as it requires compelling evidence of effective candidate performance for institutions to become accredited. Institutions must show that candidates know the subjects they plan to teach and that they can teach effectively so that students learn.

NCATE standards are increasingly the norm in teacher preparation, and NCATE serves as a resource to the states. Twenty-eight states have adopted or adapted NCATE standards as the state standards for teacher preparation, and seventeen states expect NCATE accreditation of all public colleges with teacher preparation units. In addition, NCATE works in partnership with forty-six states to conduct joint reviews of colleges of education, designed to streamline the quality assurance process and to mesh state and professional standards.

NCATE is part of a continuum of teacher preparation and development that begins with pre-service preparation, and continues with stages of teacher licensure and advanced professional development. Standards in each phase of teacher development are aligned for the first time, providing new coherence to teacher preparation and development.

*See also:* ACCREDITATION IN THE UNITED STATES, *subentry on* HIGHER EDUCATION; HIGHER EDUCATION, *subentry on* SYSTEM.

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**TABLE 1**

**List of constituent member organizations of NCATE**

**Teacher educator organizations**

- American Association of Colleges for Teacher Education (AACTE)
- Association of Teacher Educators (ATE)

**Teacher organizations**

- American Federation of Teachers (AFT)
- National Education Association (NEA)

**Policymaker organizations**

- Council of Chief State School Officers (CCSSO)
- National Association of State Boards of Education (NASBE)
- National School Boards Association (NSBA)

**Subject-specific organizations**

- American Council on the Teaching of Foreign Languages (ACTFL)
- American Alliance for Health, Physical Education, Recreation, and Dance (AAHPERD)\*
- International Reading Association (IRA)\*
- International Technology Education Association (ITEA)\*
- National Council for the Social Studies (NCSS)\*
- National Council of Teachers of English (NCTE)\*
- National Council of Teachers of Mathematics (NCTM)\*
- National Science Teachers Association (NSTA)\*
- Teachers of English To Speakers of Other Languages (TESOL)

**Child-centered organizations**

- Association for Childhood Education International (ACEI)\*
- Council for Exceptional Children (CEC)\*
- National Association for the Education of Young Children (NAEYC)\*
- National Middle School Association (NMSA)\*

**Technology organizations**

- Association for Education Communications and Technology (AECT)\*
- International Society for Technology in Education (ISTE)\*

**Specialist organizations**

- American Educational Research Association (AERA)
- American Library Association (ALA)\*
- Council for Social Foundations of Education (CSFE)
- National Association of School Psychologists (NASP)\*

**Administrative organizations**

- American Association of School Administrators (AASA)\*\*
- Association for Supervision and Curriculum Development (ASCD)\*\*
- National Association of Black School Educators (NABSE)
- National Association of Elementary School Principals (NAESP)\*\*
- National Association of Secondary School Principals (NAASSP)\*\*

**Other**

- National Board for Professional Teaching Standards (NBPTS)
- Public representatives*
- Student representatives*

\*These organizations have submitted program standards that have been approved by NCATE for use in program review.

\*\*The Educational Leadership Constituent Council (ELCC), composed of four members associations—AASA, ASCD, NAESP, and NAASSP—reviews educational leadership programs.

SOURCE: Courtesy of author.

**INTERNET RESOURCE**

NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION. 2002. <[www.ncate.org](http://www.ncate.org)>.

## NATIONAL COUNCIL FOR THE SOCIAL STUDIES

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The National Council for the Social Studies (NCSS) is a private, nonprofit organization that, in the words of its mission statement, aims to “provide leadership, service, and support for social studies educators.” It is inspired by the belief that all citizens in a participatory democracy must develop the content knowledge, intellectual skills, and civic values that a solid education in the social studies can impart.

### Program

The central mission of the NCSS is to improve the integrated teaching of the social studies at all levels of education, from elementary school to college and graduate school. To further this end it produced its core publication, a study entitled *Expectations of Excellence: Curriculum Standards for Social Studies*, first published in 1994. In this report, the NCSS lays out a ten-theme, integrated approach to the teaching of history, geography, economics, political science, sociology, psychology, anthropology, and law-related subjects. However, the NCSS is also active in supporting research, encouraging experimentation, fostering dialog among educators and between educators and policymakers, and making available research data that may assist in all these endeavors.

Chief among the NCSS’s services is the dissemination of information, which will help educators to improve their ability to communicate with their students. The NCSS flagship publication *Social Education* seeks to do this by publishing articles on curriculum development, teaching methods, the use of audio and visual aids, classroom projects, and relevant research results. The journal is published monthly throughout the academic year. The NCSS also publishes *Social Studies and the Young Learner*, a journal devoted to exploring the special educational needs of elementary school students, and *The Social Studies Professional*, the council’s newsletter. Both of these are published bimonthly during the academic year.

In addition, the NCSS issues a number of bulletins on specific topics or specific subfields within the larger discipline of social studies. Bulletins appear twice each year in book form. Tightly defined “how-to” tips and techniques are featured in a series of six-to eight-page leaflets. At irregular intervals the NCSS

also publishes books and monographs on topics of interest to its membership.

As the NCSS has long dedicated its energies toward developing standards in the teaching of social studies, it would seem that the trend favoring “standards-based education” would be highly compatible with NCSS philosophy. However, the organization has always taken a holistic approach, which brings together the various disciplines found in the social sciences, behavioral sciences, and humanities. This approach does not always fit comfortably within a curriculum that is strongly driven by objective testing. Thus publications in the early twenty-first century and other NCSS initiatives have begun to explore ways in which educators can remain faithful to NCSS standards while still helping their students pass the externally imposed regimen of objective testing found in many school districts across the nation.

### Organizational Structure

The officers and board of directors are elected to office through the votes of the general membership. The board of directors is responsible for setting council policy, approving projects, and other such high-level decision-making. The board is assisted in its duties by the advice of delegates representing local, regional, and state councils. The board meets officially twice each year; when decisions must be made during the interim between board meetings, an executive council consisting of the president, vice president, president-elect, and two board-appointed members will convene to address the issues. The day-to-day affairs of the council are handled by an executive secretary who is assisted by a professional staff.

### Membership

The NCSS has more than 20,000 members drawn from all fifty states and the District of Columbia, as well as affiliates in sixty-nine countries around the world. Its members include teachers at all educational levels, from first grade to graduate school, as well as nonteaching professionals, such as principals, curriculum designers, and educational specialists in local, state, and national governments. In addition, students who are completing a course of study geared to a career in education are eligible to join.

Direct membership is not the only way to become involved in the NCSS. The council has long been an active promoter of independent councils

and offers such groups the opportunity to become affiliates if they share the general aims and philosophy of the national council.

### History

The NCSS was founded in 1921, shortly after the close of World War I. This was a time when the public school system was undergoing rapid expansion and access to college was being extended well beyond the traditional elite few. Educators in all disciplines were finding that received standards and philosophies of teaching were inadequate to cope with a burgeoning student body, which represented a widely divergent set of skills and prior training.

In response to these pressures, colleges and public school districts across the country were all attempting to come up with workable solutions. Given the extremely independent nature of the public school organization, which was always locally controlled, the result of these efforts was an uncoordinated patchwork of programs, plans, and approaches, and the education received by students could vary wildly in quality and in content. To address this problem, a group of college professors and public school professionals met in Atlantic City, New Jersey. When this group drew up a constitution, elected officers, and agreed to continue to meet, the NCSS was born.

The NCSS set itself the task of finding a way to coordinate the efforts of educators and educational professionals across the country. It soon found some degree of success simply by making all the various groups aware of what their colleagues were doing elsewhere in the country. Thus, even at the outset, communication through publications was recognized to be a highly effective strategy for the NCSS in achieving its goals. Its journal, then titled *The Historical Outlook*, became influential throughout the national educational system. It was renamed *Social Education* in 1937, two years after the NCSS held its first annual conference independent of the National Education Association, on which it was initially dependent.

Over the years the NCSS has grown dramatically in size and influence, not just within the educational community but also with local, state, and federal policymakers. For all its growth and influence, however, it remains committed to the goals that inspired its founding: to serve and support the nation's teachers of the social studies, in the interest of educating new generations of informed, responsible citizens.

*See also:* SOCIAL STUDIES EDUCATION.

### INTERNET RESOURCE

NATIONAL COUNCIL FOR THE SOCIAL STUDIES. 2002.  
<[www.ncss.org](http://www.ncss.org)>.

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## NATIONAL COUNCIL OF TEACHERS OF ENGLISH

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The National Council of Teachers of English (NCTE) is, according to their literature, "a professional organization of educators in English studies, literacy, and language arts." This private, nonprofit organization is dedicated to promoting English language education at all levels, from kindergarten through graduate studies.

### Program

The NCTE hosts four annual conferences, at which members have the opportunity to attend panel discussions, seminars, and workshops to improve their professional skills. In addition, it maintains a presence at the conferences and conventions of affiliated organizations, such as the Modern Language Association of America (MLA), the International Reading Association (IRA), and the Speech Association of America (SAA).

In addition to the national conferences, the NCTE produces several publications aimed at disseminating information it considers important to its general membership. The official newsletter is *The Council Chronicle*, in which are published articles on the issues, trends, and concerns facing teachers of English. Another publication of general interest is the *English Language Quarterly*. Other periodicals serve specific subgroups in the larger membership: *College English*, *Primary Voices K-6*, and *Teaching English in the Two-Year College*, for example, have clearly defined constituencies. All told, the NCTE supports the publication of twelve journals.

Each year the NCTE also produces twenty to twenty-five books, most of which are specifically intended as teacher's guides or texts. Among recent titles are *Teaching Poetry in High School*, *Lesson Plans*

for *Substitute Teachers*, and *Evaluating Writing*. This continues a long tradition; the first full-length publication produced by the NCTE was *Current English Usage*, produced in 1935 and long a staple in high school classrooms.

The NCTE also sponsors a number of annual awards. Two are granted to individual students in every state and are meant to recognize outstanding achievement in writing. Candidates are nominated by their high-school English teacher and must submit three writing samples. A third award, also granted on a state-by-state basis, honors the best student publication of the year. Finally, there is the David H. Russell Award for Distinguished Research in the Teaching of English, awarded in recognition of scholarly achievement by a member of the NCTE.

Because professional development is an important aspect of the NCTE mission, the council is committed to supporting its membership in advancing their skills as well as their knowledge of the changing nature of American education, particularly as it affects the teaching of English. For this reason it maintains the NCTE Research Foundation, which makes available grants to support scholarly research.

A final aspect of the NCTE mandate is advocacy. The council is actively involved in providing guidance to policymakers at the local, state, and national level on all issues relevant to the teaching of English. For instance, the NCTE has been very active in the fight against censorship of reading materials in schools, and has been equally involved in advising policymakers on ways to expand and improve literacy among the nation's children.

### Organization

As of 2002 the NCTE had 77,000 active members in the United States and Canada. The council recognizes the wide range of interests and specializations represented within its membership, which is therefore broken out into three separate divisions: elementary (K–6 grades), secondary (middle school and high school), and collegiate. In addition, there are several special-interest departments called *conferences*. These are the Conference on College Composition and Communication (CCCC), the Conference on English Education (CEE), the Conference for English Leadership (CEL), the Two-Year College English Association (TYCA), and the Whole Language Umbrella conference (WLU). Each division is run by a section committee and an independent governing board.

The publications arm of the NCTE is separately administered. In addition to the books and periodicals produced by the organization, there are bulletins, public information updates, and special reports issued to members as well as to the broader public.

The national council is overseen by a board of directors, made up of representatives from all the divisions as well as from affiliated, nonmember groups such as the MLA. A slate of nominees is developed by a nominating committee, then voted on by the current board. The board meets annually to discuss NCTE business. A smaller executive committee is responsible for the day-to-day activities of the council and includes a president, vice president, executive secretary, treasurer, and representatives from each of the council divisions, as well as the immediate past president. This group meets with greater frequency, three times a year on average, and reports its activities to the board of directors.

Affiliate organizations, from local English associations to national organizations with a strong interest in the promotion of English language use and literacy, are an independent but highly valued constituency within the NCTE. Their participation in national conferences is actively encouraged. In addition, such groups are frequently enlisted in the pursuit of NCTE-sponsored special projects, such as literacy campaigns, curriculum development, and teacher education.

### Membership and Financial Support

The NCTE prides itself on keeping its membership open to all teachers of English and others in related professions. The council supports its programs by membership dues, paid annually, and through the sale of its books and other published materials. In addition, it receives government support in the form of grants.

### History

The NCTE was founded in 1911 by a group of educators in Chicago, Illinois, known as the English Round Table of the National Education Association. This group wanted to create a professional response to changing needs and values regarding education, particularly English language education. The impetus for this early effort was a concern that school curriculums were becoming too narrow and were incapable of addressing the needs of an increasingly diverse student population. A special committee was formed to address these issues.

These concerned educators at first set themselves a limited task: to explore the problems arising from a rigid, narrowly defined approach to English language instruction. Soon, however, it became apparent that more was needed, and that only a national professional organization would have the ability to affect policy decisions. By 1919 the original investigatory committee had grown large enough to become such an organization. Because of its open-door policy regarding membership, the NCTE from the first maintained a divisional structure, with separate groups representing elementary, secondary, and postsecondary educators.

Over the next several decades the organization continued to grow. By 1948 it was clear that the simple divisions based on grade level were inadequate, and the CCCC was formed to address the special needs of communication and composition teachers at the college level. This reliance on committee organization proved to be extremely useful, for it permitted interested groups to concentrate their focus on particular issues or trends. Membership grew dramatically in the second half of the twentieth century, and over the years new committees were formed, leading to the five-conference structure in place at the beginning of the twenty-first century.

*See also:* LANGUAGE ARTS, TEACHING OF; SPEECH AND THEATER EDUCATION; WRITING, TEACHING OF.

#### INTERNET RESOURCE

NATIONAL COUNCIL OF TEACHERS OF ENGLISH. 2002. <[www.ncte.org](http://www.ncte.org)>.

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## NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS

Since its inception in 1920, the National Council of Teachers of Mathematics (NCTM) has been dedicated to improving the teaching and learning of mathematics. NCTM has positioned itself as a leader in efforts to ensure an excellent mathematics education for every student and to provide sustained professional development opportunities for every mathe-

matics teacher to grow professionally. The mission of the National Council of Teachers of Mathematics is to provide the vision and leadership necessary to ensure a mathematics education of the highest quality for all students.

With more than 100,000 members and more than 250 affiliates in the United States and Canada, NCTM is the world's largest organization dedicated to improving mathematics education in grades pre-kindergarten through twelve. NCTM offers vision, leadership, and avenues of communication for mathematics educators at the elementary school, middle school, high school, and college and university levels.

In representing the interests of its members in the debate of public issues, NCTM's government relations activities are dedicated to ongoing dialogue and constructive discussion with all stakeholders about what is best for students.

#### Principles and Standards

In April 2000 NCTM released its *Principles and Standards for School Mathematics*, which are guidelines for excellence in pre-K–12 mathematics education and a call for all students to engage in more challenging mathematics. The *Principles and Standards* provide a vision for mathematics education in the future, one with higher standards for both teachers and students.

*Principles and Standards for School Mathematics* has four major components. First, the principles reflect basic perspectives on which educators should base decisions that affect school mathematics. These principles establish a foundation for school mathematics programs by considering the broad issues of equity, curriculum, teaching, learning, assessment, and technology.

The NCTM standards describe an ambitious and comprehensive set of goals for mathematics instruction. The first five standards present goals in the mathematical content areas of number and operations, algebra, geometry, measurement, and data analysis and probability. The second five describe goals for the processes of problem solving, reasoning and proof, connections, communication, and representation. Together, these standards describe the basic skills and understanding that students will need to function effectively in the twenty-first century.

## Resources

NCTM develops and publishes a wide array of resources for teachers. A series of thirty *Navigations* volumes is being published to assist teachers in bringing the *Principles and Standards for School Mathematics* into the classroom. The content of *Principles and Standards* is extended online at NCTM's website through *E-Standards* and *Illuminations*. The *Illuminations* website was developed to further illustrate the NCTM standards and provide teachers with lesson plans and learning activities for students to put the standards into practice. It provides standards-based Internet content for K–12 teachers and classrooms.

## Professional Development

NCTM provides a range of professional development opportunities through annual, regional, and leadership conferences, and through the publication of professional journals and other publications. The association coordinates several regional conferences and one annual meeting each year, with a combined attendance of more than 30,000. Its Academy for Professional Development, founded in 2000, provides two- and five-day training institutes for mathematics teachers.

*Reflections* is another element of NCTM's professional development for teachers. The *Reflections* website offers online video examples of mathematics instruction to help teachers apply in-depth analysis and discussion to improve their own skills. Included are online discussions with lesson-study critiques, video of students' work during class and on their assignments, and a professional analysis with teachers' discussions.

NCTM publishes four professional journals: *Teaching Children Mathematics*; *Mathematics Teaching in the Middle School*; the *Mathematics Teacher*; and the *Journal for Research in Mathematics Education*. Other publications include the monthly member newsletter, the *NCTM News Bulletin*, and more than 200 educational books, videos, and other materials. Each year in April, the council sponsors the World's Largest Math Event and publishes a colorful activity booklet with related activities that teachers can use across the grades.

The National Council of Teachers of Mathematics also works closely with the National Council for Accreditation of Teacher Education (NCATE), which delegates to NCTM the review of its institu-

tions' mathematics teacher preparation programs. NCATE accredits 519 institutions, which produce two-thirds of the nation's new teacher graduates each year. Through its review of these schools' mathematics programs, NCTM helps to ensure that future teachers will be prepared for the classroom.

In 1976 NCTM founded the Mathematics Education Trust (MET) to provide funds directly to teachers to enhance the teaching and learning of mathematics. MET offers twelve grant and scholarship award programs for teachers. In addition to grants to individual teachers, MET honors mathematics educators with its annual Lifetime Achievement Award for Distinguished Service to Mathematics Education.

## Governance and Membership

The National Council of Teachers of Mathematics is a nonprofit organization governed by a fifteen-member board of directors consisting of the president, past president or president-elect, and twelve elected members who serve three-year terms. The executive director is an ex officio member of the board. The president serves a four-year term on the board, consisting of one year as president-elect, two years as president, and one year as past president.

As a professional association, NCTM derives its strength from its members. Membership is composed primarily of K–12 classroom teachers, university educators specializing in mathematics education, and educational institutions (such as college libraries and schools). Members participate in the work of approximately seventy national committees and task forces and contribute to all aspects of the council's work. Through its executive, conference services, finance and administration, human resources, information technology, member services and marketing, and publications divisions, the council's 110 employees manage an annual budget of \$16 million.

*See also:* MATHEMATICS EDUCATION, TEACHER PREPARATION.

### INTERNET RESOURCE

NATIONAL COUNCIL OF TEACHERS OF MATHEMATICS. 2002. <[www.nctm.org](http://www.nctm.org)>.

## NATIONAL EDUCATION ASSOCIATION

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The National Education Association (NEA) is America's oldest and largest professional employee organization committed to the cause of public education (as well as to the well-being of its members). Founded in 1857 in Philadelphia, and now headquartered in Washington, D.C., in 2001 the NEA membership includes more than 2.6 million elementary and secondary school teachers, college faculty, education support professionals, school administrators, retired educators, and students preparing to become teachers. The NEA has affiliates in every state as well as in over 13,000 local communities across the United States.

### Membership

Anyone who works for a public school district, a college or university, or any other public institution devoted primarily to education is eligible to join the NEA. The organization also has special membership categories for retired educators and college students studying to become teachers. More specific membership information can vary among state and local affiliates. Members pay dues to be part of the NEA, and in return are provided with a wide range of services from the organization. The NEA has long been active in trying to improve the economic status of teachers and education professionals by assisting in the negotiating of employment contracts with local school boards.

Issues the NEA includes in negotiations are salary schedules, grievance procedures, instruction methods, transfer policies, discipline, preparation periods, class size, extracurricular activities, sick leave, and school safety. The NEA assists local affiliates in negotiations through consultation by field representatives and through the production of resource materials. In defining the role of its members, the NEA developed the *Code of Ethics for the Educational Profession*. In 1975 NEA members adopted the code, which “indicates the aspiration of all educators and provides standards by which to judge conduct.”

### Governance

The NEA is a democratic organization, and the structure and policy of the NEA are outlined in the organization's constitution and bylaws. NEA members nationwide set association policy and change the bylaws and the constitution of the organiza-

tion—most notably through the annual Representative Assembly (RA), which is held every July. The Representative Assembly is the primary legislative and policymaking body of the NEA. It derives its powers from, and is responsible to, the membership. NEA members at the state and local level elect the more than nine thousand RA delegates, who in turn elect NEA's top officers, debate issues, and set NEA policy at the Representative Assembly.

Between Representative Assemblies, NEA's top decision-making bodies throughout the year are the board of directors and the executive committee. The board of directors consists of at least one director from each association affiliated with the NEA, as well as an additional director for each twenty thousand active NEA members in each state, six directors for the retired members of the NEA, and three directors for the student members. The board meets four times a year, plus one meeting in conjunction with the Representative Assembly.

The executive committee consists of nine members: the three executive officers of president, vice president, and secretary treasurer, and six members elected at-large by delegates to the Representative Assembly. The executive committee meets approximately seven times a year.

### Staff and Administration

NEA is a volunteer-based organization supported by a network of staff at the local, state, and national level. At the local and state level, NEA affiliates are active in a wide array of activities, ranging from conducting professional workshops on discipline and other issues that affect faculty and school support staff to bargaining contracts for school district employees. At the national level, more than five hundred employees work for the NEA at its headquarters in Washington, D.C. The NEA staffing structure is designed to help realize the NEA's strategic priorities.

### Policies

During the 1998–2000 budget years, it was decided by the membership that the association's priority work would concentrate on three areas of concern: student achievement, teacher quality, and school system capacity to support student success. The organization's staff departments were assembled with these three core priorities in mind.

**Student achievement.** Increasing student achievement is NEA's first strategic priority. Making sure

that all students have the skills and knowledge to function successfully in school so that they may also succeed as adults is critical to the Association's strategic focus on rebuilding public confidence in public education. This department is dedicated to helping local affiliates address issues such as high-stakes testing and implementing standards-based education. It also helps affiliates advocate for and influence instructional policy and practice at the local level and implement the NEA's annual Read Across America child literacy event, which is held every March 1 in honor of the birthday of Dr. Seuss (Theodor Geisel).

**Teacher quality.** The single most important factor in enhancing student achievement is teacher quality. The NEA stands by the belief that without a qualified teacher in every classroom, student learning is limited and access to quality education is compromised. NEA's Teacher Quality Department is designed to help all teachers achieve high standards for practice. Through this department, the NEA promotes rigorous standards for access to, and graduation from, teacher preparation programs; advocates that all teacher education institutions meet the high standards set by the National Council for Accreditation of Teacher Education (NCATE); and insists on comprehensive teacher induction programs, which include mentoring support systems for new teachers that enhance professional practice and teacher retention. The department also seeks to ensure that all personnel hired to teach are fully licensed; promotes the strategic recruitment and retention of licensed teachers in shortage areas; advocates standards-driven professional development and teacher evaluation systems that work to enhance performance; and advances strategies to increase the number of teachers, particularly minority teachers, who become National Board Certified.

**School system capacity.** The NEA is working to enhance school system capacity to assure that America's schools have the staff, structures, and resources needed to improve student achievement. Toward this end, work in this department establishes systems that support quality teaching and high levels of learning. The NEA is also seeking to increase financial support for public education, stimulate the recruiting and maintaining of quality school staffs, improve the physical learning environment, ensure safe and orderly schools, promote equity and excellence among school districts, and help educators, parents, and other interested citizens develop more

effective school management and decision-making processes.

### Activities

At the state level, NEA activities are wide-ranging. NEA state affiliates, for instance, regularly lobby legislators for the resources schools need, campaign for higher professional standards for the teaching profession, and file legal actions to protect academic freedom.

At the national level, NEA's work ranges from coordinating innovative projects to restructuring how learning takes place and fighting congressional attempts to privatize public education. At the international level, NEA is linking educators around the world in an ongoing dialogue dedicated to making schools as effective as they can be. On an individual level, NEA members organize themselves into voluntary groups called *caucuses*.

NEA affiliates around the country celebrate three major events: Read Across America Day; American Education Week (the week before Thanksgiving); and National Teacher Day (the Tuesday that falls in the first full week of May, which is Teacher Appreciation Week).

**Lobbying and elections.** One of the most prominent education lobbying group in the nation, the NEA is influential in politics—ranging from school board elections to the presidential election. With 2.6 million members in America's schools, one in one hundred Americans is an NEA member. This makes NEA a loud voice in America's public-education policy debate.

NEA's lobbying efforts are based on the initiatives passed by the Representative Assembly, and usually involve school funding issues, student testing requirements, and federal funding for needy schools. The NEA has a political action committee (PAC) named the Fund for Children and Public Education, which is used to contribute funds to candidates running for office who uphold the principles of the NEA and its affiliates. Members donate to the PAC, but it is not funded through dues assessments like many other labor union PACs.

**Communications.** The NEA is often called upon to serve as a voice for teachers and public education in national media outlets. Usually the organization's president serves in this role, though oftentimes NEA staff are also asked to be spokespeople for the association. Additionally, the NEA produces and disseminates

nates several publications. The most widely read is the *NEA Today* monthly magazine, which is sent to all NEA members. There are also publications put out by the NEA for its different constituencies, including retired members, student members, and members in higher education institutions.

**Research.** As a way of serving its members, the NEA has a research department that looks into issues concerning teachers and public education. The most widely used research document produced by the NEA is the yearly *Rankings and Estimates*, which ranks state school statistics such as teacher salaries, per-pupil expenditures, and student enrollment. Every five years, the NEA research department produces *Status of the American Public School Teacher*, which is an intensive look at the attitudes of members about their workloads and toward the profession and compensation.

### History

The NEA was founded in 1857 as the National Teachers Association, “to elevate the character and advance the interests of the profession of teaching, and to promote the cause of popular education in the United States.” In 1870 the NTA united with the National Association of School Superintendents and the American Normal School Association to form the National Educational Association. The organization was incorporated in 1886 in the District of Columbia as the National Education Association, and in 1906 it was chartered by an act of Congress. The charter was officially adopted at the association’s annual meeting of 1907, with the name officially set down as the National Education Association of the United States. The original statement of purpose of the National Teachers Association remains unchanged in the present NEA charter.

In 1917 the association moved to Washington, D.C., where it acquired a permanent headquarters in 1920. In the same year the association, grown too large for the efficient transaction of business by the total membership, reorganized on a representative basis, with delegates drawn from NEA-affiliated state and local education associations. With this new arrangement the NEA increased efforts to organize professional associations of teachers at the state and local school district level. The emerging goal for the association became a united teaching profession with every teacher participating at three levels of association work—local, state, and national. Throughout the 1920s and 1930s, the association also

expanded through the development or addition of departments devoted to subject matter and positional specialties.

The 1960s saw the merger of separate associations of white and African-American educators, a situation that had arisen as a result of dual school systems in the South. Although NEA membership had always been open to all qualified educators regardless of race, an independent national organization of African-American educators, the American Teachers Association, was in existence until 1966, when its 32,000 members merged with the NEA. Merger of state associations followed, and by 1969 had been completed in almost all states.

In the late 1990s the NEA was talking merger again. At that time, the NEA was close to merging with another sister union, the American Federation of Teachers (AFT), which is affiliated with the AFL-CIO labor union. In 1998, the Representative Assembly voted down a proposal to unite the two organizations. However, a partnership agreement was approved at the 2001 Representative Assembly. The partnership agreement allows the two organizations to work together and prevents the two unions from “raiding” each other’s members.

*See also:* TEACHER UNIONS.

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DENISE CARDINAL

## NATIONAL ENDOWMENT FOR THE ARTS

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The National Endowment for the Arts (NEA) is an independent federal agency that supports and funds the arts in the United States. The endowment was established by the Arts and Humanities Act of 1965, which defines the arts to include music, dance, drama, folk art, graphic art, creative writing, architecture, painting, sculpture, photography, crafts, in-

dustrial design, costume and fashion design, motion pictures, television, radio, and sound recordings. The NEA is the country's largest single source of funding for nonprofit arts.

The endowment was established on the principle that the arts are as vital to the spirit, stability, and success of a democratic country as science and technology. Accordingly, the government and citizens of the United States must preserve the country's artistic heritage and cultivate new artistic expression. Through the NEA, the federal government fosters the preservation and development of the arts by financing new and classic artistic works and their presentation, making the arts accessible to people in all parts of the country, promoting art education at all levels, preserving the country's artistic heritage, and recognizing and honoring the country's national leaders in the arts.

### **Program**

The NEA supports the arts through leadership initiatives; through partnerships with other federal agencies and with local, state, and regional arts organizations; and, primarily, through the making of grants to nonprofit arts organizations and, in some cases, to individual artists. It is not the intention of the federal government to fully subsidize the arts in the United States; rather the NEA aims at alleviating the financial stress prevalent in the arts by providing "seed" money to stimulate the private sector to provide support for the cultural growth of the country.

The NEA funds the work of individual artists through Literature Fellowships, American Jazz Masters Fellowships, and National Heritage Fellowships. Literature Fellowships of \$20,000 are awarded to writers of poetry, fiction, and drama; fellowships of \$10,000 to \$20,000 are awarded for translation projects. Since the establishment of the Literature Fellowship in 1967, many National Book Awards, National Book Critics Circle Awards, and Pulitzer Prizes in poetry and fiction have been awarded for works funded in part by the NEA. American Jazz Masters Fellowships of \$20,000 are awarded to distinguished jazz musicians. National Heritage Fellowships of \$10,000 are annually awarded to up to thirteen master folk and traditional artists who hope to teach their skills and techniques to another generation of artists. All recipients of NEA fellowships must be citizens or permanent residents of the United States.

Grants that are awarded to nonprofit organizations support a variety of projects, such as developing new works, bringing the arts to new audiences, developing new and stronger arts organizations, and preserving America's cultural heritage. The NEA's heritage and preservation grants support such projects as the restoration of historic buildings and artworks, the preservation of historic sound recordings, the documentation of dance projects, and the publication of anthologies of American literature. In 2000 the NEA formed a partnership with Heritage Preservation to sponsor Save Outdoor Sculpture!, a program to repair and maintain damaged outdoor sculptures in the United States. Another NEA program, Save America's Treasures, offers grants in cooperation with the Department of the Interior and the National Park Service for the preservation and conservation of historically or culturally significant buildings, sites, artifacts, collections, and monuments.

The NEA's grants for arts education aim to strengthen the role of the arts in America's public educational system and encourage lifelong learning in the arts. The NEA recognizes that stimulation of young audiences is essential to its goal of developing a broad base of public appreciation and support for the arts. In partnership with state arts agencies and regional arts organizations, the NEA has provided millions of dollars to support K–12 arts education projects in communities across the country. In a program conducted in cooperation with local school boards and the U.S. Department of Education, professional theater companies have received financial assistance to give free performances for student audiences. Similarly, the endowment provided support for a program aimed at sending poets into secondary schools to read and discuss their works. Other grants in support of art education have funded master classes, artist-in-residence programs, and training for elementary and high school art teachers.

To further achieve the expansion of audiences the NEA has initiated programs that bring the performing and visual arts to small towns, rural areas, and other regions of the United States where the arts would otherwise be unavailable. In 1996 the NEA helped finance the New England Foundation for the Arts, which sends contemporary dance companies on tours that include cities where few dance companies reside. The endowment has also provided funds for an experimental rural arts program to explore methods of increasing public receptivity to cultural

programs. In many states, grants have been made to develop new audiences for opera by providing funds for additional performances for neighborhood and community organizations, labor groups, and students.

The endowment has provided new opportunities for arts programming on television through grants to public television stations for the production of arts programs and their free distribution to other public television stations throughout the country. The NEA helped fund the popular series *Live from Lincoln Center*, *American Masters*, and *Great Performances*, which are broadcast around the country and seen by millions of people each year. These grants have served as an incentive to the further development of educational programming on the arts and have helped many smaller stations get access to local cultural resources.

The American Film Institute was established with funding from the NEA in order to focus national attention on motion pictures as a contemporary art. One of the institute's central responsibilities is that of promoting and guiding the burgeoning interest in this art in secondary schools and higher education. The institute is providing assistance to the entire academic community.

### Organizational Structure

The endowment's advisory body is the National Council on the Arts, which includes fourteen private citizens appointed by the president of the United States for six-year terms and six members of Congress who are appointed by congressional leaders and serve in a nonvoting capacity for two-year terms. The private members of the council are persons who have distinguished themselves through their training, experience, and interest in the arts. Past council members have included singer Marian Anderson, composer Leonard Bernstein, dancer and choreographer Agnes de Mille, artist Richard Diebenkorn, composer Duke Ellington, author Harper Lee, actor Gregory Peck, actor Sidney Poitier, author John Steinbeck, and violinist Isaac Stern. The council, which meets three times each year, advises the chairman on NEA policies, programs, and procedures and makes recommendations on applications for financial assistance.

### History and Development

The National Council on the Arts was created by the National Arts and Cultural Development Act of

1964 (Pub. L. 88-579). The National Endowment for the Arts began its work in 1965, when President Lyndon B. Johnson signed legislation (Pub. L. 89-209) creating the National Foundation on the Arts and the Humanities, consisting of both the NEA and its sister agency the National Endowment for the Humanities. The 1965 act transferred the functions of the council from the executive office of the president of the United States to the NEA.

The NEA came under attack during the 1980s and 1990s as some citizens and public officials questioned the value, quality, and appropriateness of certain NEA-supported projects. President Ronald Reagan established a Presidential Task Force on the Arts and Humanities in 1981 to develop "ideas to stimulate increased private giving for cultural activities." The task force, however, recommended that the NEA continue public funding of humanities and art projects. Between 1965 and 2000 the NEA awarded more than 115,000 grants to artists and art organizations in all fifty states, Puerto Rico, and Guam. In the 2001 fiscal year the endowment's budget was approximately \$105 million.

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## NATIONAL ENDOWMENT FOR THE HUMANITIES

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On September 29, 1965 U.S. President Lyndon B. Johnson signed legislation enacted by the eighty-ninth Congress creating the National Foundation on the Arts and the Humanities, an independent federal agency consisting of two separate but cooperating organizations, the National Endowment for the Arts (NEA) and the National Endowment for the Humanities (NEH). Through this legislation tangible expression was given to the concept that support of the arts and the humanities is in the national interest. The formation of the NEH lent credence to the belief that the humanities stimulate reflection on the values that Americans hold as a nation and as individuals, and that they offer, through their common historical orientation, interpretations of the process by which cultures and societies have reached their present complex form.

The National Endowment for the Humanities is a public body whose purpose is to bring the substance of the humanities to bear on the mainstream of American thinking and life. It attempts to do so by increasing knowledge, improving the competence of scholars and teachers, and improving public understanding of the humanities through education. The humanities include a broad list of fields, including literature, history, languages and linguistics, archaeology, comparative religion, philosophy, jurisprudence, journalism, and art history and criticism.

### Program

The NEH accomplishes its mission primarily by making grants and fellowships dedicated to supporting research, education, preservation, and public programs in the humanities. Most NEH grants are awarded to cultural institutions such as museums, historical societies, libraries, universities, and public television and radio stations. Many grants and fellowships are also made to individuals to support such activities as the writing of a book or the production of a film. The NEH does not fund creative or performing arts; the National Endowment for the Arts supports these activities.

Any citizen of the United States or a permanent resident who has lived in the United States for more than three years can apply for an NEH grant, although most grants are given to institutions. NEH grants are awarded on a competitive basis. Each ap-

plication is assessed by panels of experts outside the endowment. The National Council on the Humanities meets three times a year to review the applications and outside assessments. The council makes recommendations to the NEH chairperson, who makes the final decisions.

The NEH runs numerous grant programs. Some grants are awarded annually or on a running basis, some are awarded only once. Some grants are only available to institutions; others only to individuals. Representative NEH grant programs include the Preservation Assistance Grant of up to \$5,000 to help libraries, museums, and historical societies increase their capacity to preserve their humanities collections; Schools for a New Millennium grants of up to \$100,000 for educational institutions wishing to improve elementary, middle, and high school teaching of humanities; Institutional Grants of up to \$25,000 for historically black, Hispanic-serving, and tribal colleges and universities that wish to improve the teaching of humanities; and the Lewis and Clark Bicentennial Initiative Grant for a project relating to the history and accomplishments of this expedition.

The NEH has funded hundreds of important educational and preservation projects, as well as books, films, and exhibitions since its founding. In 1969 an NEH grant to the University of Virginia supported a project to produce the first comprehensive edition of *The Papers of George Washington*. In 1971 the NEH began funding the compilation of the groundbreaking *Dictionary of American Regional English*. In 1976 the NEH funded the preparation and publication of *The States and the Nation*, a multivolume series of state histories published in honor of the American bicentennial. In 1980 the NEH awarded a grant to the Ancient Biblical Manuscript Center in Claremont, California, to make archival photographs of the Dead Sea scrolls. In 1988 *Voices and Visions*, a thirteen-part television series on American poetry, aired on public television stations with NEH support.

Throughout its history the NEH has helped historians, literary critics, and other scholars research, write, and publish books. Many NEH supported books have gone on to win Pulitzer Prizes and other major awards. The NEH helped fund the Pulitzer Prize-winning *Gotham: A History of New York City to 1898* (1998) by Edwin G. Burrows and Mike Wallace. The NEH also helped fund David M. Kennedy's Pulitzer Prize-winning *Freedom from Fear: The American People in Depression and War, 1929–45*

(1999). In addition, the NEH funds the production, distribution, and broadcast of numerous documentary films. Filmmaker Ken Burns's documentaries *The Brooklyn Bridge* (1982), *The Life and Times of Huey Long* (1986), *The Civil War* (1990), and *Baseball* (1994) were all made and broadcast with NEH support. The NEH also supported the Academy Award nominated *Scottsboro: An American Tragedy* (2001), a documentary film written and directed by Barak Goodman.

NEH-funded projects that were underway in the early 2000s included the United States Newspaper Program, a major effort to locate, catalog, and preserve newspapers published in the United States since the eighteenth century; and the Papers Projects, which funded a number of projects to collect and publish the papers of American presidents and other historical and literary figures. The NEH was also actively funding numerous online humanities projects, including the Mystic Seaport's *Exploring Amistad* website; the Academy of American Poets' *Online Poetry Classroom*, and Indiana University's *Prehistoric Puzzles* website. Descriptions of NEH-funded projects, and other NEH news and information, are published in the bimonthly magazine *Humanities*.

Since 1997, the NEH has presented annual National Humanities Medals to individuals or groups who have helped deepen people's understanding of the humanities. Notable past winners of the National Humanities Medal have included Quincy Jones, Garrison Keillor, Jim Lehrer, August Wilson, Henry Louis Gates Jr., Garry Wills, Maxine Hong Kingston, and Doris Kearns Goodwin. Since 1972 the NEH has also selected an outstanding individual to give the prestigious Jefferson Lecture in the Humanities, delivered every spring in Washington, D.C. The Jefferson Lecture, which includes a \$10,000 honorarium, is awarded to an important American scholar who has demonstrated the ability to communicate about the humanities in a accessible and appealing way. Notable Jefferson lecturers have included poet Robert Penn Warren (1974), novelist Saul Bellow (1977), novelist Toni Morrison (1996), and playwright Arthur Miller (2001).

### Organizational Structure

The NEH is composed of four divisions and three offices. Divisions include the Preservation and Access Division, the Public Programs Division, the Research Division, and the Education Division. Offices

include the Challenge Grants Office, the Office of Federal-State Partnership, and the Enterprise Office. The Office of Federal-State Partnership links NEH with fifty-six regional humanities councils located across the United States and in Puerto Rico, American Samoa, Guam, the U.S. Virgin Islands, and the Northern Mariana Islands. Each regional council funds humanities programs in its area. The responsibility of the Enterprise Office is to raise funds for Endowment projects and initiatives, to forge relationships with other federal and state agencies and with private organizations, and to implement special programs.

The NEH is directed by a chairperson who is appointed by the president of the United States for a four-year term. The chairperson is advised by the National Council on the Humanities, a group of twenty-six private citizens who are appointed by the president and approved by the United States Senate. The NEH chairperson and council coordinate and advise the endowments for the arts and the humanities.

### Financial Support

In order to utilize as much private money as possible in its activities, the endowment is authorized by Congress to receive gifts from private sources for unrestricted purposes. These funds are then matched equally with funds conditionally appropriated by Congress for this purpose. This provision was amended in 1968 to also permit the matching of restricted gifts for purposes recommended by the council and approved by the chairperson.

### History and Development

Before the creation of the National Foundation on the Arts and the Humanities, the effort to secure federal support for the arts had gone on for about a century, and minor support for the arts did exist in many departments of the government. The most conspicuous success prior to 1965 was the establishment in 1964 of an arts council—without funds. In contrast, government support for the sciences grew rapidly after World War II, first through research support, particularly from the military, and then through the establishment and funding of the National Science Foundation. The results created an imbalance in the universities and colleges—despite the evident benefits for education in general. Federal funds were relatively abundant for the sciences, but they were entirely lacking for the humanities and the

arts. In an attempt to rectify this situation, several members of Congress introduced legislation calling for increased support of the humanities, but none was successful.

In 1963 the American Council of Learned Societies, the Council of Graduate Schools in the United States, and the United Chapters of Phi Beta Kappa Society sponsored the Commission on the Humanities to study the needs of the humanities. The members of this group included university professors and presidents, business and professional men, and school administrators. It accepted in principle the inseparability of the humanities and the arts, but concentrated on the humanities in their educational context. This commission's report, issued in the spring of 1964, received wide distribution and had considerable effect.

In Congress, Senator Claiborne Pell of Rhode Island and Representative Frank Thompson Jr., of New Jersey, who had led the effort to secure meaningful support for the arts, took the opportunity offered by this increased attention to the humanities and introduced new bills to include the arts and the humanities in a single organization. The joining of congressional and public support for both the humanities and the arts resulted in the passage of the bill and the establishment of the foundation.

The NEH, along with the National Endowment for the Arts, came under attack beginning in the 1980s as some citizens and public officials questioned the quality and appropriateness of projects funded by the endowments. President Ronald Reagan established a Presidential Task Force on the Arts and the Humanities in 1981 to develop "ideas to stimulate increased private giving for cultural activities." The Task Force, however, recommended that the NEH and NEA continue public funding of humanities and art projects. From 1965 through 1998 the NEH awarded more than \$3 billion in fellowships and grants.

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## NATIONAL GOVERNORS ASSOCIATION

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The National Governors Association (NGA) is powerful, bipartisan public policy and lobbying organization made up of the chief executives of America's fifty states, American Samoa, Guam, Virgin Islands, Northern Mariana Islands, and Puerto Rico. The NGA serves as the collective voice of the nation's state governments and provides a forum by which governors and their staffs can examine policy, share problems, and development solutions to issues of concern to the states. The NGA also represents state interests before the federal government, and provides advice and technical assistance to governors and their staffs.

#### Organizational Structure

The NGA is headed by a nine-member bipartisan executive committee, from which body the members annually elect a chairperson and vice chairperson from different parties. Former governors Bill Clinton, John Ashcroft, and Tommy Thompson have all served as NGA chairs. The NGA maintains three standing committees: economic development and commerce, human resources, and natural resources. In addition, the association forms task forces and special committees made up of at least two governors to address high-priority issues of immediate importance.

One of the association's principle bodies is the NGA Center for Best Practices. The center helps governors and their public policy staffs study problems and challenges facing their states and develop innovative approaches and solutions. The center examines practices in various states, then disseminates information on which states have the "best practices" in dealing with education, health care, the environment, social services, trade, workforce development, crime, and terrorism, so that other states can shape and reform their own policies using these practices as models.

## Education Initiatives

The NGA takes great interest in education policy and practice because the U.S. Constitution grants to state governments the primary responsibility for public education. Governors recognize their leadership role in education policymaking, and during the 2001–2002 session the NGA included task forces on both postsecondary and K–12 education.

The Center for Best Practices includes the Education Policy Studies Division, which is staffed by policy analysts with expertise in education. During the late twentieth and early twenty-first centuries, the Education Policy Studies Division focused its work on early childhood education, school health, extra learning opportunities for elementary and high school children, standards-based education reform and performance-based accountability, teacher quality and teacher preparation, and the use of technology in education.

In 1999 the NGA and Center for Best Practices launched an initiative in cooperation with seven states (Georgia, Illinois, Maryland, New Hampshire, Ohio, Washington, and Wisconsin) to build public and political support for improving access to affordable health care and education for infants and toddlers by offering, among other things, incentives such as tax credits and family leave. In October 2001 the center launched the Interdisciplinary Network on School-Health Partnerships, a two-year initiative involving Mississippi, Missouri, Utah, Vermont, and Wyoming. This initiative was designed to increase the role of the governors in school health issues, examine the relationship between health care and student performance, develop strategies for states that need to improve student health programs, and help states build partnerships that promote the health of school children.

During the late 1990s and early 2000s the center's policy analysts were also examining state practices to expand extra learning opportunities (ELOs) for children ages five to eighteen. ELOs include activities such as organized sports, dance, tutoring, and community service, which take place outside of the regular school day and supplement a child's classroom education.

In 2001 the NGA, in cooperation with the National Conference of State Legislatures, launched a two-year project to improve teacher preparation and ensure quality teaching at all levels of education. The *Colleges and Classrooms: State Strategies for Rede-*

*signing Teacher Preparation Policies* project involved five states: California, Georgia, Idaho, Ohio, and Vermont. The project brought together officials and legislators in these states with members of the higher education community and Center for Best Practices staff to address key issues related to teacher preparation. The goal of the project was to help states design legislation and regulations that would improve teacher preparation, leading to better teaching and learning in the state's schools.

## Meeting and Funding

The members of the NGA meet twice each year for three-day sessions. In the winter the governors meet in Washington, D.C.; the summer meeting is hosted by one of the states. The work of the NGA and the Center for Best Practices is funded by dues from individual states, federal grants and contracts, private foundation grants, and dues from Corporate Fellows who pay \$12,000 per year.

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## NATIONAL HONOR SOCIETY

The National Honor Society of Secondary Schools (NHS) was established in 1921 by the National Association of Secondary School Principals (NASSP) to recognize and encourage scholastically outstanding high school students. Its founders wanted to form a society modeled after Phi Beta Kappa, the undergraduate collegiate honor society. The National Junior Honor Society of Secondary Schools (NJHS) was established in 1929 to honor younger, middle-level students for similar reasons.

The founding committee viewed education as a total experience and the new honor society as more than just an honor roll—they emphasized the promotion of scholarship, along with leadership, service, and character, in the original constitution. As stated in the 1997 revised constitution, the purposes of the National Honor Society are to create an enthusiasm for scholarship, to stimulate a desire to render service, to promote leadership, and to develop character in the students of secondary schools.

The constitution of NJHS is similar to that of the high school honor society, except for the addition of citizenship as a fifth criterion for membership.

### Formation and Growth

The National Honor Society is one of the most widely recognized cocurricular student activities in American high schools. The student activity program of the secondary school, essentially a development of the twentieth century, has been accepted as a vital and integral part of education. This status of student activities was re-emphasized by NASSP in its 1996 report, *Breaking Ranks: Changing an American Institution*: “The high school will promote cocurricular activities as integral to an education, providing opportunities for all students that support and extend academic learning. The concept of ‘extracurricular’ serves no useful purpose. . . . We propose to scrap this outmoded term and instead call these activities ‘cocurricular,’ emphasizing that they are integral to the educational program” (p. 18).

However, during the first part of the twentieth century, leading educators expressed considerable concern over the great amount of attention given to social and athletic achievements, and over the lack of emphasis placed on scholarship. In response to this concern, a number of educators organized local and regional societies to recognize academic excellence. Among the first was Phi Beta Sigma, founded in 1903 at South Side Academy in Chicago, Illinois. In 1906 the Cum Laude Society was organized at Tome School in Port Deposit, Maryland. By 1919 other honor societies had been established in New York City, Los Angeles, western Massachusetts, and Fargo, North Dakota. The organization of the National Honor Society in 1921 was a logical outgrowth of this developing interest.

Efforts to form a national organization were initiated at the 1919 annual convention of the National Association of Secondary School Principals in Chicago. The first chapter of the new society was chartered in 1921 at the Fifth Avenue High School in Pittsburgh, Pennsylvania, the school at which Edward Rynearson, considered the father and founder of NHS, was principal. The first official charter for the NJHS was awarded in 1929 to Webster Groves High School in Missouri.

Immediate acceptance led to continuous growth in the number of chapters and the size of the membership. Fourteen chapters were chartered during

1922; by 1930 there were 962 chapters of NHS and 128 chapters of NJHS. In 2001, the national office recognized 13,553 chapters of NHS and 5,316 chapters of NJHS. It is estimated that active membership in the two societies exceeds 1 million students per year. Chapters exist in all fifty states, the District of Columbia, all U.S. territories and possessions, and in American schools in more than forty foreign countries. Throughout the history of NHS and NJHS, membership has reflected a gender breakdown of two females to one male.

In 1921 an official emblem for the society was created in the form of a keystone and flaming torch. Widely recognized, the keystone bears at its base the letters C, S, L, and S, which stand for the four fundamental virtues of character, scholarship, leadership, and service. The torch symbolized the search for truth and is also the emblem of the National Junior Honor Society. The colors of NHS are blue and gold; navy blue and white are the colors for NJHS. The official flower for NHS is the yellow rose; for NJHS, the white rose.

### Chapter Formation and Membership

Any public or approved or accredited private secondary school in the United States may apply for a chapter by submitting an application and agreeing to operate under the society’s constitutional guidelines. Each chapter remains on the active list with the national office as long as it submits the annual affiliation payment. No individual fees are required of students, although local chapters can establish chapter dues, not to exceed ten dollars per member per year.

One or more faculty members (the chapter advisers) are appointed by the principal to administer each chapter. To assist in the selection, discipline, and dismissal of members, the principal also appoints a five-member faculty council. Specific guidelines are provided in the national handbook for the faculty councils to assist them in their duties. According to the society’s constitution, the principal reserves authority over all actions of the chapter.

To be eligible for active membership in a chapter, students must have a cumulative grade point average of 3.0 (on a 4.0 scale), 85, B, or a cumulative average that is an equivalent standard of excellence. Local chapters may raise this average to meet local standards of excellence as long as such standards are applied fairly and consistently. National guidelines

indicate that students may be considered as candidates in their sophomore, junior, or senior year; however, chapters are given the flexibility to limit candidacy to one or more of these years. Candidates must be enrolled at the school for a minimum of one semester, although exceptions can be made for transfer students.

Once this scholastic eligibility has been determined, candidates are then considered for membership on the basis of their leadership, service, and character. To ascertain how each candidate compares to the chapter standards in these three areas, the selection process recommended in the *National Honor Society Handbook* (1997) indicates that all candidates submit an information sheet detailing their relevant experiences. The local chapter may add additional qualifications or steps in the selection process. Once sufficient information has been gathered and reviewed, the faculty council votes on each candidate. Candidates become members at an induction ceremony. For the National Junior Honor Society, the selection process is the same, although membership is limited to second-semester sixth, seventh, eighth, and ninth grades, and includes citizenship as the fifth criterion needed for selection.

All local chapters are required to publish the local selection process, including the standards for the membership criteria, for all students, parents, and faculty. The national office provides information concerning these procedures on its website and offers the national handbooks for sale to the public.

### Chapter Activities

The most important ceremony in the life of any chapter of the National Honor Society is the induction ceremony at which new members of the chapter are publicly recognized. Traditionally this ceremony has included a candle-lighting component, during which the flame from the central candle (the lamp of knowledge) is used to light four candles, one for each of the four core values of the society.

At the induction ceremony, new members are often given symbols of their new membership that can include a membership pin, card, or certificate, and are asked to sign the official roll of members. A suggested format for this ceremony is provided to all chapters, but the national office mandates no single format or script, preferring to encourage chapters to compose a ceremony that has local meaning and significance.

For other activities, the rules and regulations of NHS permit considerable latitude for local chapter initiative. Though no schedule of meetings is mandated by the national guidelines, all chapter meetings must be open and under the direction of one or more professional staff members of the school.

All chapters are required to undertake an annual service project. With the growth of a new volunteer service ethic among students and educators in America during the 1990s, NHS and NJHS members have been leading contributors, in service hours, to the improvement of their schools and communities. According to the society's annual reports for 1999–2000, the average chapter commits more than twenty-five hours per member of service to the school and community through an average of more than four projects per year. The total of service contributions by NHS and NJHS members exceeds 500,000 hours per year. This high degree of involvement indicates that chapters are living up to the society's motto, *Noblesse Oblige*, or, loosely translated, "to whom much is given, much is expected."

Typical service projects include tutoring programs for underclassmen, reading development for elementary students, fundraising for local or national charities, blood drives, serving meals at local food banks and soup kitchens, and servicing the needs of the elderly in the community. Regardless of the nature of the activity, all service projects and other activities of the chapter, including fundraising activities, meet the following criteria: they fulfill a need within the school or community; they have the support and sanction of the administration and the faculty; they are appropriate and educationally defensible; and they are well planned, organized, and executed.

In order to undertake these responsibilities efficiently, most chapters elect officers to lead the chapter and assist the adviser during the year. An important responsibility for chapter officers is ensuring that all chapter members maintain their membership obligations and live up to the standards of the chapter by being positive role models on campus and in the community.

### National Control and Services

The board of directors of NASSP is also the governing board of the National Honor Society. General operational control is vested in the NHS/NJHS National Council, composed of ten principals and ad-

visers. The executive director of NASSP is an ex officio member of the national council, and the NASSP director of student activities serves ex officio as secretary to the council. National activities of NHS are coordinated by the national office staff, located at the headquarters of NASSP in Reston, Virginia.

In 2001, twenty-two organizations existed at the state level supporting NHS and NJHS activities. These organizations are all affiliated with the national office, but operate independently. Whereas on the national level, chapters are required to maintain an active affiliation with the national office, participation in state activities is voluntary.

### Conferences

In 1993 the first national conference of the NHS was held in the city that hosted the first chapter of NHS, Pittsburgh, Pennsylvania. The annual meeting is open to student members and advisers of NHS and NJHS, providing motivation and leadership training for students and professional development services for advisers.

In addition, in 2000, the national office expanded its regional student council leadership conferences (the National Association of Student Councils is also sponsored by NASSP) to include NHS and NJHS members and advisers. State conferences for NHS are held annually in those states maintaining a state association.

### Scholarship Programs

NHS scholarships are awarded each year to outstanding graduating senior members of local chapters. NASSP organized this program in 1945, and since then more than \$10 million has been dispensed. Two hundred scholarships of \$1,000 each were distributed to the membership in 2001. In addition to the NHS Scholarship, the national office administers the following scholarship and award programs: the Principal's Leadership Award, sponsored by Herff Jones, Inc.; the Prudential Spirit of Community Awards; and the Wendy's High School Heisman Awards.

In the early twenty-first century, because it is the oldest, largest, and most prestigious school-based student recognition program in the country, the National Honor Society is considered the highest honor that can be bestowed upon students in secondary schools.

*See also:* HONOR SOCIETIES.

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## NATIONAL MERIT SCHOLARSHIPS

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Established in 1955, the National Merit Scholarship Corporation (NMSC) is an independent, not-for-profit organization that conducts the National Merit Scholarship Program. NMSC was initially funded by a \$20 million Ford Foundation grant and a \$500,000 grant from the Carnegie Corporation of New York. The National Merit Scholarship Program's purpose is to recognize academic achievement and grant undergraduate college scholarships to able high school students, based on their performance on the Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT). Students take the PSAT/NMSQT for guidance purposes, to practice for the SAT, and to enter the competition for National Merit Scholarships. Though some sophomore students take the exam, typically only students in their third year of high school are eligible for the National Merit Scholarship competition. Additional eligibility requirements for the competition include full-time enrollment as a high school student with plans to enter college no later than the fall following completion of high school and one of the following: U.S. cit-

izenship, permanent U.S. resident status, or current involvement in the U.S. citizenship-qualification process.

### **Recognition and Awards Program**

NMSC recognizes students who earn high scores on the PSAT/NMSQT through press releases to the news media and by sharing their information with colleges and universities to assist with recruiting academically able students. Students who meet rigorous scholarship criteria are also recognized by receiving monetary scholarships. The National Merit Scholarship program offers several different types and levels of recognition and scholarships, including commended students, semifinalists, finalists, and Merit scholars. In addition, students compete for corporate- and university-sponsored Special Scholarships and the National Achievement Scholarship program.

Because there is a lengthy screening process throughout the scholarship competition (approximately eighteen months), high school juniors who took the PSAT/NMSQT in October 2000 would not receive scholarships until spring 2002, the student's senior year. Of the 2.9 million students who took the test in 2000 (an estimated 45% of the projected 2002 high school graduates), 1.2 million were eligible to enter the competition for scholarships. From this smaller group, approximately 50,000 of the highest-scoring students qualified for merit-program recognition. Of the 50,000 highest scorers, approximately 34,000 students received letters of commendation to recognize their academic potential. Though they were no longer eligible for the Merit Scholarship, some students in this group were eligible for Special or National Achievement Scholarships.

The remaining 16,000 students were notified that they qualified as semifinalists, which allowed them to remain eligible to be Merit scholars. The National Merit Scholarship Corporation then sent scholarship applications to the semifinalists to compete for finalist standing. About 90 percent of semifinalists who met academic and all other requirements then progressed to finalist standing. As finalists, students were then eligible for approximately 7,900 Merit Scholarships, which include the following three types of awards: National Merit Scholarships (one-time \$2,500 awards), corporate-sponsored Merit Scholarships, and college-sponsored Merit Scholarships. Corporate- and college-sponsored scholarship awards vary in amount and duration, depending on the sponsors.

In addition to granting 7,900 National Merit Scholarships, the National Merit Scholarship Program awards approximately 1,700 Special Scholarships to high-scoring applicants who did not qualify to be Merit scholars but met specific criteria designated by scholarship sponsors, such as businesses or corporations. For example, a company might fund a fixed number of scholarships for its employees' children who achieved a high score on the PSAT/NMSQT. The NMSC reviews the eligible students' applications and selects the recipients.

The third type of scholarship program coordinated by NMSC is the National Achievement Scholarship program. Established in the early 1960s as the National Achievement Scholarship Program for Outstanding Negro Students, the Achievement Scholarship competition seeks to honor outstanding African-American students and improve their opportunities for higher education. Thus far, awards worth about \$70 million have been offered to student participants. Though it is run simultaneously with the National Merit Scholarship program, and the two programs appear parallel in design, the National Achievement Scholarship is operated and funded independently. The participation requirements for the Achievement Scholarship are the same as those for the National Merit Scholarship awards, with one addition: African-American students must request entry into the Achievement Scholarship program when they fill out the PSAT/NMSQT answer sheet.

Approximately 110,000 students enter the National Achievement Scholarship program each year, and about 1,500 of the top-scoring students (represented regionally) are designated as semifinalists. Semifinalists complete an Achievement Scholarship application, and more than 1,200 then advance to finalist standing. From this group, Achievement Scholarship recipients are selected.

NMSC, professional organizations, corporations, and college sponsors fund more than 700 Achievement Scholarships each year. The three types of Achievement Scholarship awards are: National Achievement Scholarship (\$2,500), corporate-sponsored Achievement Scholarships, and college-sponsored Achievement Scholarships. Students can compete in the competitions for both the National Merit Scholarships and the National Achievement Scholarships in the same year, but they can only receive one monetary reward.

## The Test

Cosponsored by NMSC and the College Board, the PSAT/NMSQT comprises five sections: two verbal, two mathematical, and one writing-skills section. The verbal sections include sentence completions, analogies, and critical-reading questions. The mathematical sections include multiple choice questions, quantitative comparisons, and student-produced responses. Finally, the writing portion includes identifying sentence errors, improving sentences, and improving paragraph items.

The PSAT/NMSQT is administered in October, and the score reports are usually sent to high school principals by Thanksgiving. The range of scores for each section of the PSAT/NMSQT is 20 to 80. The scores for the PSAT/NMSQT can be compared to an estimated SAT score by multiplying the PSAT/NMSQT score by 10. For example, if a student's combined score for the verbal section was 48, the corresponding SAT score would be 480. Based on the PSAT/NMSQT results, the individual's test report provides estimates for SAT scores.

In 1999 the average PSAT/NMSQT results for juniors were 48.3 (verbal), 49.2 (mathematics), and 49.2 (writing skills), for a Selection Index of about 147 (the sum of the verbal, mathematics, and writing scores). The Selection Index ranges from 60 to 240, and those students with the highest Selection Index scores are eligible for recognition and scholarships coordinated by the National Merit Scholarship Corporation.

*See also:* ADVANCED PLACEMENT COURSES/EXAMS; COLLEGE ADMISSIONS; COLLEGE ADMISSIONS TESTS; COLLEGE FINANCIAL AID; COLLEGE SEARCH AND SELECTION.

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AMY HIRSCHY

## NATIONAL PTA

National PTA is the oldest and largest volunteer child advocacy organization in the United States. Founded in 1897, National PTA is a not-for-profit organization of parents, educators, students, and other citizens who are active in their schools and communities. Membership in National PTA is open to anyone who is concerned with the education, health, and welfare of children and youth.

National PTA's 6.5 million members work in 26,000 local chapters in all 50 states, the District of Columbia, the U.S. Virgin Islands, and in Department of Defense schools in Europe and the Pacific. The association's bylaws govern its affairs; a twenty-eight-member board of directors, including National PTA officers, other PTA leaders, and members at-large, oversees National PTA's business. Professional staff at the association's headquarters in Chicago, Illinois, and its office in Washington, D.C., carries out National PTA's day-to-day operations and lobbying efforts.

### History

From its founding in 1897 in Washington, D.C., as the National Congress of Mothers by Alice McLellan Birney and Phoebe Apperson Hearst, National PTA has spoken out in support of children and their families. Among its earliest efforts, the Congress called for the establishment of a public health bureau to stem the tide of child mortality caused by childhood illnesses such as measles, whooping cough, and diphtheria; encouraged juvenile justice reforms; and began serving hot lunches to children in schools across the country in 1912. These efforts were rewarded at the state and federal levels with the establishment of the U.S. Public Health Service in 1913, emerging state laws establishing juvenile courts and probation systems in the first decade of the twentieth century, and the passage of the National School Lunch Act in 1946.

Throughout the remainder of the twentieth century, National PTA continued to champion children's rights. In the 1950s, the PTA promoted participation in the field testing of the Salk polio vaccine, initiated a nationwide campaign to prevent youth smoking in cooperation with the U.S. Department of Health, Education, and Welfare in the 1960s, sponsored a project to combat violence on television in the mid-1970s, launched an HIV/AIDS education project in cooperation with the Centers

for Disease Control and Prevention in Atlanta in the 1980s, and made sure the parent voice was represented in major education reforms put forth by the U.S. government in the 1990s. As the PTA moved into the twenty-first century, it focused its efforts in three broad areas as identified by its 1999 strategic plan. These areas include promoting parent involvement, advocating for safe and nurturing environments for children and youth, and continuing support of public education.

### Parent Involvement

At the root of all PTA work is its commitment to parent involvement in education; one of the association's founding objectives was to bring the home and school into closer relationship. National PTA worked with Congress to initiate the Parent Act, which sought to strengthen the parent participation policies in the Elementary and Secondary Education Act (ESEA). In January 2002 the ESEA was signed into law as the No Child Left Behind Act, authorizing more than 40 programs that provide federal funds to nearly every school district in the nation. This law includes many of the parent involvement provisions of the Parent Act and, for the first time, defines the term *parent involvement* based on National PTA's standards for parent/family involvement programs. These standards, developed and published in 1997 and based on research from Johns Hopkins University that affirmed that parent and family involvement increases student success, guide the development of quality parent involvement programs in schools and to help evaluate their effectiveness.

In 2000 National PTA published a comprehensive work, *Building Successful Partnerships: A Guide for Developing Parent and Family Involvement Programs*, which incorporates the six standards and field-tested strategies for building effective parent involvement programs. The PTA created a nationwide training program based on the book, as well as a complementary parent education program *How to Help Your Child Succeed*, which focuses on ten practical strategies for helping children succeed in school and in life.

National PTA has long supported arts education as an essential element in the education of children and has encouraged parents to nurture their children's artistic expressions. As a result, for more than thirty-two years National PTA has sponsored a nationwide arts recognition initiative, Reflections Pro-

gram, which encourages young artists in grades pre-K–12 to express themselves through literature, musical composition, photography, or the visual arts. In 2000 almost 700,000 young people participated in the program through their local PTA chapters.

### Safe and Nurturing Environments

In response to the issue of intolerance purported to be at the heart of such violence as the September 11, 2001, tragedy and the rash of U.S. school shootings in 1998 and 1999, the PTA published the *Respecting Differences Resource Guide* in 2001. The guide is intended for use by PTAs and schools to promote diversity and inclusiveness in their communities in the hopes of eliminating episodes of intolerance, discrimination, and violence. It reflects the PTA's long-standing commitment to the individual worth of all people as articulated by founder Alice Birney, "The National Congress of Mothers, irrespective of creed, color, or condition, stands for all parenthood, childhood, homehood."

An early example of this commitment was seen in the PTA's support of parent teacher associations in African-American schools in the segregated south during the first quarter of the twentieth century. This support evolved into the creation of the National Congress of Colored Parents and Teachers (NCCPT) in 1926, headed by Selena Sloan Butler.

The PTA responded to the television industry's increasing promotion of violence, sex, and stereotyping in programming by launching its *Take Charge of Your TV* project in 1995. Developed in cooperation with the National Cable and Telecommunications Association and Cable in the Classroom—cable TV's educational arm—the project is a workshop that teaches parents to become more discriminating viewers of television so that they, in turn, can educate their children.

In collaboration with the International Truck and Engine Corporation (a manufacturer of school bus chassis), the PTA created a school bus safety program, *Be Cool. Follow the Rules* in 1993. The program uses a host of resources that convey multiple messages promoting school bus safety to multiple audiences including parents, schoolchildren, school administrators, and school bus drivers.

### Support of Public Education

Throughout its history, National PTA has advocated for a strong public education system. Its efforts have

focused on adequate federal funding of public schools, education equity, ongoing teacher training, and support of comprehensive education reforms among other issues. The PTA consistently has fought against voucher and tax credit programs that would divert federal money away from public schools. Currently, National PTA supports federal education policies that expand parent involvement, promote equity, and help states and schools build the capacity they need to provide high quality educational services for all children.

### Child Advocacy

As identified in National PTA's strategic plan, a primary objective of the PTA is to train all 6.5 million members to be effective advocates for children and youth by the year 2020. Part of that objective will be accomplished through National PTA's programming and training efforts, and through its advocacy and legislative work in Washington, D.C. With a network of 6.5 million advocates, the PTA will be an even more powerful voice to express its concerns regarding children in classrooms, in communities, in state legislatures, and on Capitol Hill.

### Other Resources

Through its many resources, National PTA keeps members and the public apprised of the issues affecting children and youth, and provides the means to help parents, teachers, and others work effectively for children. Some of these resources include *Our Children*, National PTA's magazine for members and others concerned about the health, education, and welfare of children; *Building Successful Partnerships: A Guide for Developing Parent and Family Involvement Programs*; and the *National Standards for Parent/Family Involvement Programs*.

National PTA's online presence, [www.pta.org](http://www.pta.org), includes parent involvement information and tips, resources regarding children's health and safety, and updates on legislation affecting families. There is also a password-protected members' area filled with materials exclusively for PTAs, including several electronic newsletters providing timely information on a range of child- and member-related topics.

Each June, National PTA holds a convention, enabling PTA members and nonmembers from across the country to attend workshops and other education sessions on a range of subjects focusing on National PTA's three-fold mission of child advocacy, parent education, and parent involvement. National

PTA also hosts a biannual legislative conference in Washington, D.C., where participants hone their advocacy skills and legislative knowledge.

### Raising Awareness of the PTA

To better identify itself as the national association, in the summer of 2001 National PTA launched a nationwide media campaign to raise public awareness of its identity as the oldest and largest volunteer child advocacy association in the United States.

*See also:* FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; PARENTAL INVOLVEMENT.

### INTERNET RESOURCES

NATIONAL PTA. 2002. <[www.pta.org](http://www.pta.org)>.

PAMELA J. GROTZ

## NATIONAL SCHOOL BOARDS ASSOCIATION

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The National School Boards Association (NSBA) is the nationwide organization representing public school governance. NSBA's mission is to foster excellence and equity in public elementary and secondary education through school board leadership. NSBA achieves its mission by representing the school board perspective before federal government agencies and national organizations that affect education and by providing vital information and services to state associations of school boards and local school boards throughout the nation.

Founded in 1940, NSBA is a not-for-profit federation of state associations of school boards across the United States and its territories. NSBA represents the nation's 95,000 school board members who govern nearly 15,000 local school districts serving the nation's more than 47 million public school students. Nearly all school board members are elected; the rest are appointed by elected officials.

A 150-member delegate assembly of local school board members determines NSBA policy. The board of directors, which comprises twenty-five members, translates this policy into action. The NSBA executive director and staff administer programs and services.

NSBA advocates local school boards as the ultimate expression of grassroots democracy. The orga-

nization supports the capacity of each school board—working with the people of its community—to envision the future of education, to establish a structure and environment that allows all students to reach their maximum potential, to provide accountability for the people of its community on performance in the schools, and to serve as a community advocate for children and youth and their public schools.

### History and Development

The advantages of forming an association of school boards were recognized as early as 1895. Pennsylvania became the first state to organize a state association in 1895; New York followed in 1896. Although some states organized associations in the years immediately following, it was not until 1913 that numerous other associations emerged. After 1913 the school board association movement showed steady growth. In the 1950s fifteen associations were organized, making this decade the time of greatest development.

The idea of establishing a national organization of school boards took shape during the 1938 convention of the National Education Association. The first name given to this group was the National Association of Public School Boards. However, the NSBA was formally organized in St. Louis, Missouri, on February 28, 1940, as the National Council of State School Boards Association. The name was later changed to the National School Boards Association.

### Program

NSBA's major services include:

- The National Affiliate Program, which enables school boards to work with their state association and NSBA to identify and influence federal and national trends and issues affecting public school governance.
- The Council of Urban Boards of Education (CUBE), which serves the governance needs of urban school boards. CUBE publishes *Urban Advocate*, a quarterly newsletter that addresses the programmatic, fiscal, and governance challenges of urban public schools on behalf of its members and the 7.5 million students they serve.
- The Federal Relations Network, which helps school board members from each congressional district actively participate in NSBA's federal and national advocacy efforts.

- ITTE: Education Technology Programs and Technology Leadership Network, which helps advance public education through best uses of technology in the classroom and school district operation. Formerly known as the Institute for the Transfer of Technology to Education (ITTE) the organization publishes *Technology Leadership News* nine times per year. NSBA's technology publication *Electronic School* is produced in cooperation with ITTE.
- The Council of School Attorneys (COSA), which focuses on school law issues and services to school board attorneys. COSA publishes *Inquiry and Analysis (I&A)*. Published ten times per year, *I&A* keeps members up-to-date on the latest developments in the field of school law.
- The National Education Policy Network, which provides the latest policy information nationwide and a framework for public school governance through written policies.
- *School Board News (SBN)*, NSBA's member newspaper, which began publication in 1981. *SBN* covers trends in public education and has won many awards for its content.
- *American School Board Journal (ASBJ)*, which is an award-winning, editorially independent education magazine housed at NSBA's offices. *ASBJ* began publication in 1891 and in the early twenty-first century had a circulation of more than 35,000 paid subscribers.
- NSBA's Annual Conference and Exposition, which is the nation's largest policy and training conference for local education officials on national and federal issues affecting the public schools in the United States.
- NSBA's Technology + Learning (T+L) Conference, which brings together school district leaders, technology specialists, and the leading vendors in education technology.

### Organizational Structure

The NSBA is a federation of state school boards associations, which includes the school boards of the fifty states, the District of Columbia, and the U.S. Virgin Islands.

Local school boards are eligible for membership in their own state school boards association and are not district members of the NSBA. However, the NSBA maintains contact with local school boards and their members through the National Affiliate program.

The National Affiliate program is a partnership that includes NSBA, its federation of state school boards associations, and local school districts across the country, which is dedicated to ensuring education excellence and improved student achievement through effective school board leadership. Official association publications supplement state association publications in helping to supply school board members with vital educational information. The National Affiliate program began in 1980 and now boasts more than 2,500 member districts.

The major policymaking body of the association is the delegate assembly, which meets during the annual conference. Two voting delegates, who are chosen at the state level, represent each member association. The delegate assembly determines official NSBA policies and resolutions. Policy decisions require a two-thirds vote and resolutions a majority vote.

### Goals

NSBA and its federation members are dedicated to educating every child to his or her fullest potential and are committed to leadership for student achievement. This commitment has coalesced into a strategic vision for the NSBA as a powerful, united, energetic federation; as an influential force for achieving equity and excellence in public education; and as a catalyst for aligning the power of the community on behalf of education.

Underlying this shared vision are certain fundamental convictions:

- belief that effective local school boards can enable all children to reach their potential
- conviction that local governance of public education is a cornerstone of democracy
- belief in the power of local school boards to convene the community around education issues
- conviction that together, local school boards can influence education policy and governance at the state and national levels
- commitment to the principle that through collaboration comes impact
- belief that the strength of local school board leadership arises from the board's capacity to represent the diversity of students and communities

Central to NSBA's vision is the "Key Work of School Boards" initiative. The "Key Work of School

Boards" is NSBA's framework for raising student achievement through community engagement. It is designed to give school boards the concrete action tools to be even more effective in the role of school board member and community leader and is based on the premise that excellence in the classroom begins with excellence in the boardroom.

The "Key Work" initiative is framed around eight key areas: vision, standards, assessment, accountability, alignment, climate, collaborative relationships, and continuous improvement. It means engaging the community, identifying priorities, and setting standards for student performance. It requires establishing assessment and accountability measures, demanding student data to drive decision-making, and aligning district resources to support priorities. All of this involves setting the right climate for learning, forming collaborative relationships, and always continually improving performance.

Through these goals and its longstanding commitment to excellence and equity in public education through school board leadership, the NSBA is a powerful force in education policy.

*See also:* SCHOOL BOARD RELATIONS; SCHOOL BOARDS.

### INTERNET RESOURCE

NATIONAL SCHOOL BOARDS ASSOCIATION. 2002. <[www.nsba.org](http://www.nsba.org)>.

ANNE L. BRYANT

## NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION

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The National School Public Relations Association (NSPRA) defines itself in its mission statement as "a professional organization dedicated to building support for education through responsible public relations that leads to success for all students." Founded in 1935, NSPRA is the professional association for school communications specialists, superintendents, and others who are responsible for improving communication within school districts and between districts and the citizens they serve.

The association's Articles of Incorporation state that its primary purposes are to serve the citizenry

of the nation by promoting a better understanding of the objectives, accomplishments, and needs of public education. It seeks to accomplish those purposes by: (1) developing materials that will assist educational leaders in building both an increased public understanding of the role of education and increased awareness, knowledge, and understanding of current management practices and educational development; (2) placing before the public facts and viewpoints that will lead to a better understanding, appreciation, and support of public education; and (3) encouraging the use of sound public relations procedures by all those at work in education.

### Programs and Activities

NSPRA had approximately 1,800 members in 2001, comprising both individual and organizational memberships. Members are eligible for discounted prices on association publications and seminars. In addition, the association has approximately thirty-five state chapters throughout the United States, which enable national members and chapter members to create local networks and programs for professional development.

A four-day NSPRA annual seminar is held each July, attracting more than 600 participants to different locations each year. NSPRA offers other professional development opportunities, including two print newsletters, several electronic newsletters, and workshops. In 2000 the association initiated hour-long conference calls featuring experts in various areas of communication who make brief presentations and discuss participants' questions. One of the association's print newsletters, *Network*, is designed primarily for school public relations practitioners and superintendents, while the other, *PRincipal Communicator*, is designed for elementary and middle school principals.

NSPRA initiated an accreditation program for school public relations professionals in 1976. More than 150 members achieved accredited status before the program was combined with that of the Universal Accreditation Board's Accredited in Public Relations (APR) program. The association continues to urge its members to become accredited. In 2001 NSPRA was also developing standards of good practices that educational organizations could strive for in improving their communication efforts.

The association has been a publisher of documents to help improve educational public relations

since its founding. *School Public Relations: Building Confidence in Education*, published in 1999, gives education leaders a comprehensive overview of what school public relations is and what it can do for schools and communities. Other association publications include *Dream Big: Creating and Growing Your School Foundation*, *Principals in the Public: Engaging Community Support*, *The Complete Crisis Communication Management Manual for Schools*, *Win at the Polls*, and many others. In addition to its own publications, the association's catalog lists public relations and communications products created by other organizations.

In 1985 the association created the Flag of Learning and Liberty and coordinated an introductory campaign that saw the flag raised over all fifty state capitols on the Fourth of July that year. The flag is a visible reminder that education is critical to continuing a healthy, democratic society.

Another important service that NSPRA provides to local and intermediate school districts is a communication audit. For a modest fee, the district collects samples of its communication efforts and sends them to NSPRA for inspection by experienced public relations professionals. One or two of these professionals then conduct fifteen to twenty focus group sessions in a site visit to the district. Based on the review of district communication efforts and comments from the focus groups, the association provides an audit report with recommendations that will help improve the district's communication efforts.

### Organizational Structure

NSPRA is an incorporated, not-for-profit organization. It has a twelve-member board of directors, consisting of a president, president-elect, and ten vice presidents, eight of whom are elected by association members. Of these elected vice presidents, who serve three-year terms, seven represent geographic regions of the United States and Canada, while one represents ethnic and racial minorities. Two vice presidents, representing specific constituencies, are appointed by the board to two-year terms. The first two of these vice presidents' constituencies were urban school districts and superintendents of schools.

The board, which meets three times annually, hires an executive director to carry on the business and program of the association. It develops and ap-

proves association policies, conveys ideas and interests from the membership, and approves an annual association budget. In addition to the executive director, the association has a staff of eight.

### History

Initially, NSPRA was part of the National Education Association's (NEA's) Division of Press and Radio, created to help teachers and schools improve their communication efforts. It became an NEA department in 1950 and retained that status until the early 1970s, when it became independent.

#### INTERNET RESOURCE

NATIONAL SCHOOL PUBLIC RELATIONS ASSOCIATION. 2002. <[www.nspr.org](http://www.nspr.org)>.

RICHARD D. BAGIN  
KENNETH K. MUIR

## NATIONAL SCIENCE FOUNDATION

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The National Science Foundation (NSF) is an independent agency of the federal government, created by the National Science Foundation Act of 1950, as amended (Pub. L. 81-597). The agency is responsible for promoting the progress of science and advancing the nation's health, prosperity, welfare, and security by supporting research and education in all fields of science and engineering. It is also responsible for monitoring the status of the U.S. science and engineering enterprise and for collecting and analyzing data that support the formulation of national policy.

By statute, NSF consists of the National Science Board and the director. These twenty-five eminent scientists, engineers, and administrators are appointed by the president and confirmed by the U.S. Senate. The board is responsible for establishing NSF's policies and is mandated to advise the president and the U.S. Congress on policy matters related to science and engineering research and education. The director, who is a member of the board *ex officio*, is responsible for directing the programs of the agency.

Unique among federal agencies, NSF is devoted to strengthening the overall health of the science and engineering enterprise. Other federal agencies sup-

port research and education related to their specific missions, such as energy or defense. NSF's mission is to support scientific inquiry in all fields, encourage emerging areas of research, and help ensure an adequate supply of scientists, engineers, and science and engineering educators. In any year, more than 200,000 people receive support through NSF programs and activities nationwide, and millions more benefit from NSF investments in education and other areas.

With a budget of \$4.7 billion for fiscal year 2002, NSF accounts for 4 percent of the total annual federal expenditure on research and development and 23 percent of federal support for all basic research performed at academic institutions. NSF provides more than a third of all federal funding in the physical sciences and about 50 percent in environmental sciences and engineering. In some fields, NSF provides the preponderant support: approximately two-thirds in mathematics and computer science research and nearly 100 percent in anthropology.

### Scope of Programs

NSF investments act as a catalyst to expand new knowledge. NSF supports cutting-edge research and education in the core disciplines, ranging from mathematics, the physical and life sciences, and engineering to the social, behavioral, and economic sciences. Its investments support three goals: to provide the nation with the necessary

- people—developing a diverse, internationally competitive, and globally engaged work force of scientists, engineers, and well-prepared citizens;
- ideas—enabling discovery across the frontiers of science and engineering, connected to learning, innovation, and service to society; and
- tools—providing broadly accessible research and education tools.

NSF is organized into directorates and offices, which support research and education in the various fields and administer grants to lead researchers and institutions. The directorates include biological sciences; computer and information science and engineering; education and human resources; engineering; geosciences; mathematical and physical sciences; and social, behavioral, and economic sciences.

In addition to support for core fields, NSF funds interdisciplinary research teams and centers, such as its science and technology centers, which encourage the integration of research and education. NSF also

provides grants to small businesses through its Small Business Innovation Research Program to encourage them to focus on important science, engineering, and education problems and opportunities with potential for commercial and public benefit.

Partnerships among academic institutions, industry, and government entities are integral to the way NSF implements its mission. Partnerships foster the use of new knowledge to stimulate innovation that will create new wealth and benefit the public. Some major programs are the Engineering Research Centers, Partnerships for Advanced Computational Infrastructure, and the U.S. Global Change Research Program.

Since its beginning, NSF has recognized that the conduct of science is intrinsically global, and the agency has encouraged international cooperation. NSF supports cooperative international activities, such as research collaborations, data sharing, and international partnerships in large-scale research facilities.

Although NSF itself operates no laboratories or research facilities, it provides funding for large, multiuser, state-of-the-art facilities, such as the Laser Interferometer Gravity Wave Observatory, the National Superconducting Cyclotron Laboratory, the International Gemini Observatory, and the Terascale Computing Facility. NSF also is the designated federal manager of the U.S. Antarctic Program.

Within NSF's broad portfolio, a few opportunities emerge that are so revolutionary that they promise to reshape science and engineering and ultimately change the way people think and live. Typically, these opportunities cross disciplinary boundaries, encompass the full range of NSF programs, and require coordination with other federal agencies. NSF investments that evolved into high-performance computing exemplify this type of emerging opportunity.

Priority areas that NSF has selected for increased attention during the early years of the twenty-first century are:

- information technology research: support for the people who will create new knowledge, and an upgrade of computational infrastructures;
- nanoscale science and engineering: research and technology at the confluence of the smallest human-made devices and the largest molecules of living systems;

- biocomplexity in the environment: the dynamic web of often-surprising interrelationships that arise when components of the global ecosystem interact; and
- learning for the twenty-first century: building and sustaining a competent, diverse work force and integrating research and education to produce that work force.

### **Involvement with the External Scientific Community**

Researchers and educators in all fifty states and the U.S. territories receive NSF support through competitively awarded grants and cooperative agreements. More than 2,000 colleges, universities, academic consortia, pre-kindergarten through grade twelve (pre-K–12) school systems, small businesses, nonprofit institutions, informal science organizations, and other research institutions receive such support.

Funding decisions are made through the process of competitive merit review, in which expert evaluation by external peer reviewers contributes to recommendations by NSF program managers. Each year, NSF receives approximately 30,000 proposals, solicits reviews from approximately 50,000 scientists and engineers, and funds approximately 10,000 proposals. Reviewers evaluate proposals according to two criteria:

- the intellectual merit of the proposed activity: the importance of the proposed activity to advancing knowledge and understanding within its own field or across different fields; the extent to which the proposed activity explores creative, original concepts; and
- the broader impacts of the proposed activity: how well the activity promotes teaching, training, and learning; how well it broadens the participation of underrepresented groups; and the extent of benefits to U.S. society.

In addition to the use of external reviewers, NSF recruits outstanding scientists, engineers, and mathematicians to serve on advisory committees or to join the NSF staff for short periods through the Intergovernmental Personnel Act and the Visiting Scientists, Engineers and Educators programs. Through these mechanisms, NSF involves thousands of working scientists in evaluating emerging opportunities for new knowledge and ensures its access to cutting-edge ideas in all fields of science and engineering.

## Support for Education

NSF's support for research is highly integrated with its investment in science and engineering education. Thousands of students at the undergraduate, graduate, and postdoctoral levels contribute to research activities at their education institutions and benefit from involvement with them. In addition, each year NSF provides graduate research fellowships to approximately 900 outstanding graduate students in science, mathematics, and engineering. To provide teaching experience for graduate students and strengthen pre-K–12 education, NSF provides graduate teaching fellowships to graduate students who assist teachers with the content of their mathematics and science classes. NSF's Integrative Graduate Education and Research Traineeships help prepare doctoral candidates for a broad spectrum of career opportunities in education. Through its Experimental Program to Stimulate Competitive Research, NSF provides funding to educational institutions to increase the research and development competitiveness of twenty-one states and the Commonwealth of Puerto Rico.

Although the integration of research and education is most obvious at the graduate and postdoctoral levels, NSF also funds pre-K–12 science and mathematics education in state, urban, and rural school systems and invests in comprehensive reform of undergraduate science, technology, engineering, and mathematics (STEM) education. NSF supports the development of high-quality instructional materials, teacher enhancement, and the use of learning technologies in the classroom. Its funding encourages educational systems to prepare all students—not just STEM majors—for the demands of a highly technological society.

NSF's systemic initiatives in education have catalyzed change in the teaching of mathematics and science by cultivating partnerships between local school systems and other organizations involved in education. Each partnership addresses curriculum, professional development, assessment, policies, resources, stakeholder support, evaluation, and improved student performance as the ultimate goal of any reform effort. As of 2001 NSF had encouraged experiments in comprehensive reform in twenty-six states, fifty-eight urban school districts, and twenty-eight rural initiatives in regions usually composed of more than one state. In the 1999/2000 school year, NSF systemic initiatives affected 227,000 teachers in

11,900 schools with approximately 4.6 million students.

In fiscal year 2002 NSF began implementing the Math and Science Partnerships program, which provides funds for states and local school districts to join with institutions of higher education in strengthening mathematics and science education. The goals are to improve mathematics and science standards, provide teachers with mathematics and science training, and create innovative ways to reach underserved schools and students.

*See also:* SCIENCE EDUCATION; SCIENCE LEARNING.

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## INTERNET RESOURCE

- NATIONAL SCIENCE FOUNDATION. 2002. <[www.nsf.gov](http://www.nsf.gov)>.

## NATIONAL SCIENCE TEACHERS ASSOCIATION

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The National Science Teachers Association (NSTA) promotes excellence and innovation in science teaching and learning for all. Its guiding principles are to model excellence; to embrace and model diversity through equity, respect, and opportunity for all; to provide and expand professional development to support standards-based science education; to serve as a voice for excellence and innovation in science teaching and learning, curriculum and instruction, and assessment; to promote interest in and support for science education collaboratively and proactively throughout society; and to exemplify a dynamic professional organization that values and practices self-renewal. NSTA was founded in 1944 and is headquartered in Arlington, Virginia. Its 2001 membership of more than 53,000 included science teachers, science supervisors, administrators, scientists, business and industry representatives, and others involved in science education.

The association publishes professional journals, a newspaper, and many publications for teachers, and it conducts world-class conventions that attract more than 30,000 attendees annually. NSTA offers many services for science educators, including the NSTA Institute, which provides online and site-based professional development programs; teacher recognition and grant programs; and competitions for students. NSTA also maintains a website that provides grade-specific resources for teachers, the latest news and information affecting science education, and opportunities for educators to connect with one another. NSTA participates in cooperative working arrangements with numerous educational organizations, government agencies, and private industries on a variety of projects.

### History

NSTA originated in Pittsburgh, Pennsylvania, on July 4, 1944. It was created by a merger of the American Council of Science Teachers and the American Science Teachers Association, both of which ceased to exist after the merger. At the time, the organizations had approximately 2,000 members combined. Years later, NSTA became an affiliate organization of the National Education Association (NEA) and was housed with NEA and its affiliates in downtown Washington, DC. Eventually becoming an independent organization, NSTA purchased and moved into

its own headquarters on Connecticut Avenue in 1974. In 1994 NSTA moved its headquarters to Arlington, Virginia.

### Legal Status and Governance

The National Science Teachers Association is a 501(c)(3) organization, incorporated under the laws of the District of Columbia by Articles of Incorporation filed on July 1, 1960. The association filed a Statement of Election to Accept Title 29, Chapter 10 of the District of Columbia Code, and a Certificate of Acceptance was issued on January 30, 1974. NSTA is governed by bylaws, which are amended from time to time.

The organization is governed by a board of directors with two advisory bodies: the NSTA Council and NSTA Congress. The board of directors consists of elected officers, including a president (chair), president-elect, and retiring president, as well as ten division directors. The council serves as the advisory body to the board of directors and consists of eighteen elected district directors and presidents from each of NSTA's seven affiliates. The council receives reports from NSTA committees and the congress and makes recommendations to the board. The congress is composed of a large body of science education leaders who gather to discuss and bring forth recommendations of interest to NSTA. Members include delegates from each NSTA state chapter and each NSTA-associated group.

### Membership

NSTA offers both individual teacher memberships and institutional memberships for schools and libraries. Special discount memberships are also given to students and retired educators. Members receive their choice of one of four award-winning journals, a newspaper, discounts on more than 300 books and publications, and reduced prices at NSTA regional and national conventions.

### Publications

NSTA publishes four award-winning, peer-reviewed journals geared to the specific needs of science educators at every level. They include *Science and Children* for elementary teachers, *Science Scope* for those at the middle and junior high level, *The Science Teacher* for high school science educators, and the *Journal of College Science Teaching* for educators at the college level. Considered a popular benefit of NSTA membership, these journals help teachers

learn about the latest teaching strategies and identify new activities to use in the classroom.

NSTA's news publication, *NSTA Reports!*, has been a timely source of news and information about science education. The newspaper is published six times a year as a free member service. It includes national news on science education and education in general; information on teaching materials; announcements of programs for teachers; and advance notice about all NSTA programs, conventions, and publications.

NSTA is also a major publisher of quality science materials for teachers. In 2000 the association revamped its publishing division, calling it *NSTA Press* to reflect its efforts to deepen its involvement in the science publishing arena. NSTA Press produces a wide variety of books, websites, CD-ROMs, and posters on popular science topics, including astronomy, biology, chemistry, earth science, environmental science, and physical science. Resources also focus on the diverse curriculum needs of teachers, such as teaching in alignment with the National Science Education Standards, mentoring, and assessment, as well as on creative teaching strategies, such as organizing science fairs and addressing questions about evolution.

### **Influence and Significance**

With more than 53,000 members worldwide, NSTA is a major voice of science teachers and strong supporter of quality science education. It is the largest member organization in the world committed to quality science teaching and learning for all and is a key player in setting the nation's science education agenda. In the mid-1990s, the organization was instrumental in the development of the National Science Education Standards, which guide the science education community in improving science teaching and learning. The association is an ardent advocate for long-term, sustained professional development for all teachers of science.

NSTA has a presence on Capitol Hill. The organization works closely with key members of the U.S. Congress and their staff, and is asked to present testimony to Congress and provide input to legislators on key issues. NSTA reaches more than 40,000 educators with its electronic *Legislative Update*, which reports the latest news of legislative and regulatory activities affecting science education. Through the *Legislative Update*, the association encourages its

members to contact members of Congress to voice their support for legislation bolstering quality science education. As a result of these efforts, NSTA has helped to maintain a high level of federal funding for science teaching and learning.

The association keeps its members and the general public informed on national issues and trends in science education. NSTA conducts and disseminates national surveys on science teaching. Many of these surveys, along with other NSTA opinions, have been featured in major news media outlets. In addition, NSTA has position statements on issues, such as teacher preparation, evolution, and laboratory safety that help guide policies and practices in education institutions around the country.

NSTA also has an impact on science education through its resources and programs. One successful program is *Building a Presence for Science*. Sponsored by the Exxon Education Foundation, this national education program seeks to strengthen the quality of science teaching and learning by creating a network of science advocates in public and private schools nationwide. It promotes standards-based science teaching instruction and hands-on, inquiry-based learning. A key component of the program is its dynamic national electronic network that enables information sharing among teachers and serves as a viable two-way communications conduit that is used by state and federal agencies and other organizations to share information with science teachers. As of 2001 the program had been implemented in twenty-four states and the District of Columbia.

### **INTERNET RESOURCE**

NATIONAL SCIENCE TEACHERS ASSOCIATION. 2002.  
<[www.nsta.org](http://www.nsta.org)>.

HAROLD PRATT

## **NATION AT RISK, A**

*See:* EDUCATION REFORM; SCHOOL REFORM.

## **NEGLIGENCE AND SCHOOL PERSONNEL**

*See:* LIABILITY OF SCHOOL DISTRICTS AND SCHOOL PERSONNEL FOR NEGLIGENCE.

## NEIGHBORHOODS

The *neighborhood* has long been an icon of school quality, local responsiveness, and home/parent centeredness in U.S. education. The mythology of the neighborhood has been heavily reinforced by the deep popularity of the long-running children's television show *Mr. Rogers' Neighborhood*. A romantic image of the neighborhood has also often been at the heart of opposition to busing, school closings, redefined attendance areas, or reallocations of personnel. Nostalgia connects the neighborhood school to the *old-time schoolhouse*—a facility remembered as being at the very center of the community, with its potluck suppers, spelling bees, family softball games, and Fourth of July picnics.

Reality, of course, has been a different story. Desegregation policies, population growth, magnet schooling, diversity goals, *pairings* of schools, and an increasing array of other choice options have reduced significantly the percentage of schools that have an identifiable neighborhood flavor. Nevertheless, at the start of the twenty-first century the significance of the neighborhood is returning to discussions of and inquiry into matters of school improvement.

Among the forces spurring this rediscovery of the neighborhood are: (1) a new appreciation of out-of-school (alongside in-school) learning and development; (2) a return in many communities to neighborhood assignment patterns under renegotiated desegregation agreements; (3) a renewed interest in cultural elements, and matters of cultural diversity, in varied patterns of development among children; and (4) a realization that school-centered learning (typically academic) and neighborhood-based learning (heavily social and emotional) can be, but are not necessarily, effectively linked.

### A New Linkages Lexicon

The renewed fascination with the neighborhood has been accompanied by a re-explored lexicon of linkages terminology and neighborhoods-centered theorizing. The most commonly employed term is *social capital*, which captures the notion that the strengths of families and their surrounding neighborhoods can provide a social foundation of norms, networks, and relationships upon which the schools can build. In pushing the concept of social capital, James Coleman has suggested that, in neighborhoods lacking or weak in social capital, it should be the job of the local

school to reach out to families with sets of capital-creating activities.

Other terms gaining an increased frequency of use are: *social cohesion*, *agency*, and a *sense-of-place*. Social cohesion proceeds beyond matters of capital toward an interest in the connective tissues of neighborhoods, as well as between neighborhoods and schools. Connective “webs,” collaborative endeavors, and ecological systems are key elements—as are such administrative acts as networking and a building of civic capacity.

Social cohesiveness exists when members of a school community adhere to the understood cultural norms of that community, and when members display tolerance in interactions across social groups. Stephen Heyneman suggests schools perform five essential functions in fostering social cohesion: (1) teach the “rules of the game” (i.e., principles underpinning good citizenship and consequences for not adhering to these principles) through curriculum content; (2) support school and classroom cultures; (3) decrease the distance between individuals of different origins, thus building social capital; (4) provide an equality of opportunity for all students, thus creating the public perception that the available opportunities for education are distributed fairly; and (5) adjudicate disagreements across social groups.

The concept of *agency* reflects a closer attention to the centeredness of a school within its neighborhood, reflecting a deep cultural embeddedness between school and community, as well as the agency work of the school in both preserving and passing on the values of the community. In like manner, the idea of a *sense-of-place* includes notions of social and cultural embeddedness, but adds a territorial, or *boundary*, dimension to the discussion—just what is a central part of each neighborhood, and what is not?

### A New Set of Neighborhood Models

To the extent that the neighborhood was “modeled” in past years, the central image was that of an entity of importance in the immediate environment around the school, but not *of* the school. Important were studies of neighborhood and community structures (e.g., community type, socioeconomic status); distributions of power and specialized interests; the array of concerns and issues in the community; and varying sources of support in the surrounding community (e.g., financial, public opinion). The neigh-

borhood, with its structures, issues, and supports, was regarded as an important context around the work of the school, but it was still external and “outside.”

More recent modeling (as with the above lexicon) has emphasized a more interactive set of neighborhood theories. Among these are: (a) an activism, or *alliances*, approach, (b) community-development modeling, (c) *regime* theorizing, and (d) a family-preferences, or *choice*, model. Alliance schools have been under experimentation for some time in the state of Texas. The central concept in the alliance approach has been an in-reach from neighborhood-to-school, rather than the other way around. A mobilization of the resources and strengths of the neighborhood and its institutions (including religious organizations) has been employed in the program to reach into the schools and assist the schools to reach back out to the community.

An initiation of alliances, but starting with the school, is also central to community-development modeling. Neighborhood revitalization has become a front-burner endeavor in many communities across the United States. Lizbeth Schorr, among others, would place the neighborhood school at the heart of the development effort. Indeed, Schorr advises that an improvement of learning opportunities in low-income neighborhoods requires nothing less than a key place for the school “at the table where community reform is being organized” (p. 291). In like fashion, William Boyd, Robert Crowson, and Aaron Gresson have suggested an extended role for the local school as an *enterprise school*, in which it joins an array of other community institutions in the regeneration of the neighborhood environment.

A third model takes the political science term *regime* as its central idea. From a regime perspective, the essential strengths, and indeed the power, of a neighborhood are to be found in a deeply structural embodiment of the neighborhood’s own culture and overall ecology (e.g., its essential lifeways, social institutions, local history, values, norms, expectations, and market forces). While activism and redevelopment are at the heart of the earlier two models, regime theorizing looks more closely at the neighborhood and its various institutions (including the schools) as participants in a *sustaining habitat*—a notion not unlike the centeredness celebrated in agency theorizing or the collective memories built into a sense-of-place. A key role for persons exercising leadership, from this perspective, may be action

as a cultural broker who bridges between the lifeways of a community and the institutions that serve it.

Finally, a neighborhood model that is extremely problematic but must be addressed is the *effects* model, which is based heavily upon the steadily increasing opportunities for choice found in modern-day schooling. An argument in favor of choice of schooling (e.g., through magnets, charters, transfer options, or vouchers) is that families are no longer locked in to underperforming neighborhood schools in poverty-stricken settings. A counterargument is that it is usually the families in a neighborhood with the most social capital and greatest intellectual resources and expectations who will avail themselves of choice—leaving the rest of a neighborhood even less empowered and enabled than before. A caveat is that at least these families stay in the neighborhood physically, if not educationally.

Interestingly, there have been comparative analyses of the effects upon neighborhoods when there are large disparities in the availability of community and social service resources (e.g., playgrounds, libraries). There have not yet been comparable studies of the neighborhood effects of differences in the availability of human capital resources at a family-to-family level.

### Neighborhoods and the Development of Children

There are still some neighborhoods to be found that can elicit memories of an old-fashioned bonding, familiarity, stoop-sitting, watching-one-another’s-children, stopping-to-chat-awhile community. More common in the early twenty-first century, however, are neighborhoods where the streets are considered danger zones rather than playgrounds, where social interaction is minimal, and where there seems to be little sense of communal responsibility for children. Under these altered and less-cohesive conditions of life, it becomes difficult to conceptualize, and more difficult to study, a set of neighborhood effects upon the development of children and their success in school.

Nevertheless, the recognition is that if a new lexicon of linkages and new models of alliances, regimes, and the like are to bear fruit, then attention must be paid to what have been called “connection impacts.” There is evidence, for example, that there are connections of significance to be found in the re-

cent and rapid expansion of out-of-school connections, or when-school-is-out programming that provides activities for children outside of regular school hours. After-school options (e.g., tutoring, recreation, art and music education) are on the rise nationally—with public libraries, Boys and Girls Clubs, YMCAs and YWCAs, youth groups, faith-based organizations, and some private businesses leading the charge. While there is some disagreement regarding the effectiveness of many after-school programs, interest and experimentation has continued to build.

Halpern has observed that it is a lack of old-fashioned connectiveness in neighborhoods that is reflected in the expansion of after-school activities, including a belief that such public spaces as streets and playgrounds are no longer safe, and that it is “stressful and unproductive for children to be left on their own after school” (p. 81). A growing literature on out-of-school connections has identified as key developmental effects progress in identity-building for youngsters, in emotional support and guidance, in helping to bridge and broker cultural challenges for immigrant youth, in overcoming loneliness, and in providing protection against negative neighborhood influences.

A second major category of connections pays attention to the in-school effects of the neighborhood. A 1999 review by Wynn, Meyer, and Richards-Schuster, for example, has explored the steadily growing case-study literature on the in-school developmental effects of partnerships, service relationships, parental involvement, and community volunteerism. Among the specific benefits can be a sense of *the village*, meaning a broadened arena of support and caring; improved relationships between home and school; enhanced access to such learning-related services as counseling or medical care; increased school attendance; and improved student perceptions of the community’s interest in school. In one of the few empirical studies of neighborhood influences, Lee Shumow, Deborah Vandell, and Jill Posner discovered that a broad exposure to positive adult role models throughout a neighborhood can contribute to better academic performance for children in school.

### Summary

Public schools have often been *in* but not *of* their neighborhoods. The late twentieth century saw a re-discovery of the importance of neighborhood—both

as a potentially vital complement to the work of the school and as an important educator in its own right. Linkages between the many components of neighborhoods and between neighborhoods and their schools are receiving new emphasis, including establishing a linkages terminology ranging from concepts of social capital to social cohesion, agency, and sense-of-place. Models of neighborhood involvement are also surfacing anew, including community activism and special alliances, the effects of community revitalization, the idea of *regime*, and a better understanding of the effects of individual family preferences. Although the notion of neighborhood effects upon the development of children is still an emerging arena for research interest, there are indications that neighborhood connections (both out-of-school and in-school) represent a productive line of inquiry.

*See also:* FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; PARENTING, *subentry on* HIGH-RISK NEIGHBORHOODS; SOCIAL CAPITAL AND EDUCATION; VIOLENCE, CHILDREN’S EXPOSURE TO, *subentry on* COMMUNITY VIOLENCE.

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### NEILL, A. S. (1883–1973)

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Alexander Sutherland Neill flouted educational convention with utopian faith in individuals' ability to direct their own learning. His romantic Progressive beliefs concerning students' rights and freedoms, his refusal to conform to popular moral and intellectual standards, and his emphasis on social and character

development led him to found his own school, Summerhill, in 1921. Neill's radically humanistic, Freudian-based work later joined with Jean-Jacques Rousseau's natural philosophy to greatly influence the free/alternative schools movement of the 1960s and 1970s.

### Early Life and Career

A. S. Neill was born in Forfar, Scotland. Working as a pupil teacher in his father's school, Neill's experiences as a young educator were colored by traditional educational expectations: strict discipline, teacher-centered learning practices, and excessive control. At the age of twenty-five, Neill enrolled in Edinburgh University, where he studied English and later became a journalist. In 1915, while working as headmaster, or *dominie*, at a small school in Scotland he wrote the first book in his *Dominie* series, *A Dominie's Log*. This five-book series, which also included *A Dominie Dismissed* (1917), *A Dominie in Doubt* (1921), *A Dominie Abroad* (1923), and *A Dominie's Five* (1924) represented Neill's informal diary interspersed with stories and observations of people, places, and adventures. Most importantly, Neill used the series to explore his thoughts concerning freedom and children—chronicling dramatic transformation in his own ideology from his early teaching experiences.

Although Neill's vocabulary in *A Dominie's Log* connected to traditional psychoanalysis, it was not until he visited "Little Commonwealth," educator Homer Lane's community for delinquent adolescents, that he became familiar with the work of Austrian psychoanalyst Sigmund Freud. There, Lane introduced Neill to Freud's New Psychology, to the notion that children possessed innate goodness, and to the pedagogical practice of student self-government. Neill's emerging understanding of education seemed to be heavily influenced by other psychologists of his time as well, including Wilhem Stekel and Wilhem Reich.

Dissatisfied with traditional schooling—with its lack of freedom, democracy, and self-determination—Neill began searching for a place to establish his own school and to experiment with his developing ideas. In 1921 Neill became involved as co-director of the Dalcroze School in Hellerau, a suburb of Dresden, Germany. Part of an international school called *Neue Schule*, the Dalcroze supported the study of Eurythmics. Yet despite the school's bohemian atmosphere, Neill soon began to

feel that the staff was more interested in education than children, and that the conflict between freedom and rigor was untenable. Additionally, the political climate after World War I caused financial difficulties for many of his students' families and contributed to feelings of anti-Semitism. When parents began removing their children from the school Neill decided it was time to leave Germany.

Once again, Neill was off in search of a site for his experimental educational venture. Neill, together with Lillian Neustatter (who later became Neill's first wife), opened a school in a scenic Austrian mountaintop town called Sonntagsberg. However, conflicts with townspeople over the teaching of religion combined with financial difficulties caused Neill to dismantle the school and renew his search for a suitable location.

### Significance to Education

By 1923 Neill had returned to England, to the town of Lyme Regis in the south, to a house called Summerhill. There, he re-established his experimental school and enrolled a variety of so-called problem children in Summerhill. In 1926 Neill departed from his *Dominie* series and wrote *The Problem Child*. In this book, Neill clarified his ideology of freedom as a protest of his experiences both as a child and as a pupil teacher. As a result of this publication, Summerhill garnered greater attention and more students.

The school moved in 1927 to Leiston in the county of Suffolk, which would continue to be its location into the twenty-first century. Despite the move, Neill's ideals and aims remained firm: allowing children freedom to grow emotionally; offering children power over their own lives; giving children the time to develop naturally; and creating a happier childhood by removing fear of and coercion by adults. Summerhill offered numerous activities to help students work toward the above aims. In particular, students took part in private lessons or therapy sessions with Neill. Moreover, students participated in *Schulgemeinde*, or weekly community meetings designed to help them define limits and establish community rules. Following the lead of Homer Lane, Neill viewed these meetings as a way for children to transfer their emotions onto the community. Because freedom and self-determination were of utmost priority, the learning of lessons became a necessary concession at Summerhill. As such, Neill was less concerned with hiring teachers with strong ped-

agogical skills than he was with hiring teachers who cared about children and who followed the aims and vision of Summerhill.

Neill's first wife, Lillian, died in April 1944. Soon after her death, Neill married Ena Wood, and together they oversaw Summerhill until Neill's death in 1973. Upon his second wife's retirement in 1985, Zoe Readhead, the daughter of A. S. Neill and Ena Neill, took over as headmistress of Summerhill.

Critics argue that A. S. Neill interpreted education in an overly romantic and apolitical fashion, suggesting that offering a stimulating environment with minimum direction was not a proper way to run a school. Also under review are Neill's beliefs about his Freudian-based pedagogy as well as those concerning the innate goodness of children. Despite his critics, Neill's book *Summerhill* (1962) gained him a worldwide audience.

*See also:* ALTERNATIVE SCHOOLING; EDUCATIONAL REFORM; PROGRESSIVE EDUCATION; ROUSSEAU, JEAN-JACQUES.

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## NEW AMERICAN SCHOOLS

New American Schools (NAS) is a business-led non-profit organization whose mission is to significantly

increase student achievement through comprehensive school improvement. Comprehensive school improvement is an effort to support high student achievement at the school, district, and state levels through the coherent alignment of five essential components: (1) leadership, management, and governance; (2) resource allocation; (3) professional development; (4) evaluation and accountability; and (5) educator, family, and community engagement.

### History

In 1991 NAS began investing in specific approaches, later known as "designs," to help turn around low-performing schools. The idea behind this concept was to launch comprehensive approaches to improve student performance by applying the best research available on what works in classrooms in as many schools as possible throughout the country. Through a national competition, NAS selected the best research-based ideas in the country. With private and public partners, NAS then invested more than \$130 million in these efforts and others. By the beginning of the twenty-first century, these designs had been implemented in almost 4,000 schools and collectively were in every state in the United States.

In 1997 in response to NAS's initial successes and the long-term potential for comprehensive school improvement, the U.S. Congress passed the Comprehensive School Reform Demonstration (CSRSD) program. Since its passage, almost \$900 million has been appropriated to help schools and districts start comprehensive school improvement efforts. As a result, hundreds of organizations have begun to offer systems-based school reform services and products. In its 2001 reauthorization of the Elementary and Secondary School Education Act, Congress identified comprehensive school reform as a key strategy in turning around low-performing schools. Congress also authorized new funding streams and provided greater flexibility of education dollars for comprehensive school reform efforts.

In 1999 NAS convened a highly respected panel of educational and business leaders to develop a set of national guidelines of quality to assist consumers. NAS provides the resulting guidelines to educators, parents, and others in an effort to help stakeholders make decisions about an array of educational programs.

In 2001 NAS built on the work of the panel by helping to form the Education Quality Institute. The

aim of this independent organization is to help consumers of education products and services select programs that meet locally defined needs and adhere to quality guidelines, are research based, and have been proven to work. Importantly, that same year, NAS shaped a decade's worth of classroom experience, extensive research, and independent evaluations into a coherent set of consulting and operational services, products, and tools, offered through two new divisions within New American Schools—the Education Performance Network and the Center for Evidence-Based Education Development Network—and through the organization's funding arm, the Education Entrepreneurs Fund, which launched a School Funding Services unit.

### **Education Entrepreneurs Fund**

The Education Entrepreneurs Fund operates as a financial intermediary for social investment in education. It seeks grants from corporations, foundations, and government; leverages these funds with social capital loans and program-related investment; and uses the funds to make loans to and investments in education organizations. The fund invests in organizations that contribute to raising student achievement and that have the potential to achieve sustained quality at scale. The fund also provides technical consultation to education entrepreneurs. Additionally, the fund assists educators in identifying and accessing the billions of federal, state, and private dollars available for education improvement programs through its School Funding Services unit launched in 2002.

### **Education Performance Network (EPN)**

The mission of the Education Performances Network is to align education policies and practices to foster strong organizational performance and high student achievement. EPN assists clients in the following areas: accountability and evaluation, charter and contract schools, special education, and community engagement.

### **Center for Evidence-Based Education**

The Center for Evidence-Based Education conducts applied research on the use of school improvement strategies in schools and at the state and district levels. It also supports the development of successful leaders for quality reform and promotes the use of evidence-based approaches to school improvement nationally.

### **Legal Status and Governance**

New American Schools is a nonprofit 501 (c)(3) organization. It is guided by a fourteen-member board of directors.

### **Membership**

New American Schools does not have members but is affiliated with independently operating design teams. Schools and school districts contract with design teams to provide comprehensive school improvement services on a fee basis. In 2002 nine design teams were affiliated with New American Schools: Accelerated Schools Project, ATLAS Communities, Co-nect Schools, Different Ways of Knowing, Expeditionary Learning Outward Bound, the Bernstein Center for Learning, Modern Red Schoolhouse, Turning Points, and Urban Learning Centers.

### **Publications**

New American Schools offers several publications to assist in the implementation of comprehensive school improvement. NAS offers a “how-to” series that provides current research about comprehensive school improvement. This series includes the following papers: *Design-Based Assistance as Cornerstone of a School Improvement Strategy*; *How to Create and Manage a Decentralized Education System*; *How to Rethink School Budgets to Support School Transformation*; *Strategies for Improving Professional Development: A Guide for School Districts*; *How to Make the Link between Standards, Assessment, and Real Student Achievement*; *How to Create Incentives for Design-Based Schools*; *How to Build Local Support for Comprehensive School Reform*; *How to Evaluate Comprehensive School Reform Models*; and *Revising School Schedules to Create Common Planning Time and Literacy Blocks*. NAS also offers several publications helpful in design selection, including *Guidelines for Ensuring the Quality of National Design-Based Assistance Providers*; *Design Teams Portfolio*; and *Working toward Excellence: Examining the Effectiveness of New American Schools Designs*.

### **Influence**

By the most meaningful objective criteria, “comprehensive school reform” has become the dominant school reform effort in the nation's public school classrooms. By the early twenty-first century, public schools were investing some \$1 billion every year in the staff working with comprehensive school reform designs. Almost 6 percent—more than 5,400—of the

nation's 92,000 public schools have used the federal CSRD program to finance design implementation. Thousands more schools have paid for work with comprehensive school reform models from other funding sources, including Title I. Comprehensive school reform is even part of the charter school movement. From 1999 to 2001 the design teams alone entered into partnerships with sixty-five charter schools. Comprehensive school improvement is considered one of the best hopes for the U.S. public school system to make significant progress on a national scale in the near term.

#### INTERNET RESOURCE

NEW AMERICAN SCHOOLS. 2002. <[www.naschools.org](http://www.naschools.org)>.

LOUISE KENNELLY

### NEWLON, JESSE (1882–1941)

Superintendent of Denver, Colorado, schools, director of the Lincoln Experimental School of Teachers College, Columbia University, and president of the National Education Association, Jesse Homer Newlon was one of the most well known progressive educational administrators of the early twentieth century.

Born in Salem, Indiana, Newlon graduated from Indiana University in 1907. He earned a master's degree in 1914 from Columbia University, and began a series of educational appointments as teacher, principal, and superintendent of schools in Indiana, Illinois, and Nebraska. In 1920, he accepted the position for which he is best known—superintendent of schools in Denver, Colorado. In this role, Newlon had the opportunity to further develop his ideas of progressive education and administration. Whereas many academics explored the implications of progressive educational thought at a conceptual level, Newlon, more than any other educator of his generation, proved that an educational administrator could adhere to progressive ideals and, at the same time, involve himself in the community while overseeing the operation of a large school complex.

During the early 1920s in the United States, the ideals of progressive education, espoused by John Dewey and others, were inspiring curriculum reform efforts in a number of public schools. In 1922

Newlon persuaded the Denver school board to support such a project with the argument that he could make the curriculum of the Denver schools more efficient. What set Newlon's plan apart from any other curriculum reform effort of the time was his inclusion of teachers into the curriculum revision process. He believed that teachers, not school boards, should be involved in curriculum development, and he appointed teacher committees to revise curricula and courses of study. Teachers, not administrators, chaired these committees, and Newlon scheduled time during the school week for teachers to work on these revision processes with administrative and supervisory personnel. Newlon thus orchestrated official acknowledgment of the significance of teachers' collaborative participation in curriculum development.

The Denver Plan attracted considerable attention from teachers and administrators as well as community members across the country. Teachers especially applauded Newlon's insistence that the Denver school board provide support and structure for the teachers' labor outside the classroom. For example, Newlon proposed that teachers who served as members or chairs of curriculum revision committees be provided relief from regular classroom work, with a few days to a few months release time. He also insisted on the formation of a clerical staff to support all committee work, thus freeing teachers from those clerical responsibilities.

Throughout the duration of the Denver Curriculum Project, committees worked to reconstruct courses of study in subject areas at each of the three instructional levels: elementary, junior high, and high school. Newlon also secured funds to print the courses of study completed by the committees. By 1923, a professional library was completed and was staffed by a full-time librarian. According to Newlon and his committees of teachers, administrators, and supervisory staff, curriculum revision needed to be a continuous process and therefore needed also to draw on the latest educational research and theories.

Further, Newlon posited that development and enactment of the curriculum were simultaneous: curriculum was shaped not only by committees outside the classroom but also by the interactions of teachers and students who used—and therefore reshaped according to their particular situations and needs—those courses of study.

At the same time, Newlon concluded that teachers' and students' participation in curriculum devel-

opment and revision did not obviate the need for curriculum specialists. During his tenure as Denver superintendent, Newlon appointed the first district-wide curriculum administrator in the nation. Some argue that because that district-wide curriculum administrator was educated in a department of educational administration (at Teachers College, Columbia University), the ensuing first generation of curriculum specialists established the bureaucratic and administrative character of the curriculum development paradigm. That administrative character finally was challenged in the 1970s by a group of curriculum theorists intent on the reconceptualization of the field.

Nonetheless, Newlon's conceptions of curriculum development and school administration attracted national attention, not only through his support of teachers and students as curriculum creators, but also through his establishment of an equal salary schedule, development of an exceptional school library system, and organization of a permanent curriculum department. These accomplishments all took place during his overseeing of the construction of fifteen schools in the Denver area.

By 1933 the Denver Plan and the materials generated by teachers, administrators, supervisors, and students were widely known, circulated, and used nationally. As a result, the Denver high schools were selected to be participants in the Progressive Education Association's Eight-Year Study (1934–1942). Although Newlon had resigned as Denver superintendent of schools in 1927 to become professor of education at Teachers College, Columbia University, most viewed his foundational work as the major reason the Denver schools were selected as one of the six most experimental and successful schools in the study.

From 1927 to 1941 Newlon served as professor of education at Teachers College, Columbia University, and from 1927 to 1934 as director of the Lincoln Experimental School at Columbia. The Lincoln School, under his directorship, also participated in the Eight-Year Study. During his tenure at Teachers College, Newlon served as director of the Division of Instruction (1934–1938), and of the Division of Foundations of Education (1938–1941). He participated in the Teachers College discussion group "The Social Frontier," the Committee for Academic Freedom of the American Civil Liberties Union, and the American Historical Association's Commission on Social Studies.

Newlon visited the Soviet Union in 1937, and as a result of that visit, became increasingly fearful of rising totalitarianism abroad. Upon his return, he devoted himself further to spreading the ideals of Progressive education by speaking frequently about the values of democracy and the school's role in the preservation of freedom. Some note that Newlon became so distraught over the loyalty oaths and authoritarian conditions he witnessed in the schools that his health seemed to be adversely and permanently affected. He died on September 1, 1941.

*See also:* EDUCATION REFORM; EIGHT-YEAR STUDY; PROGRESSIVE EDUCATION.

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JANET L. MILLER

## NGOS AND FOUNDATIONS

*See:* NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS.

## NO CHILD LEFT BEHIND ACT OF 2001

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On January 8, 2002, President George W. Bush signed into law the No Child Left Behind Act. This act was a congressional reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA) and is also known technically as Public Law 107-87.

In April 1965, almost thirty-seven years prior to the enactment of Public Law 107-87, the 89th Congress and President Lyndon Baines Johnson had overseen enactment of the original ESEA (Pub. L.

89-10). This federal government statute proved enormously important for American education. It also proved enormously difficult to implement and manage. The nature and complexity of the No Child Left Behind Act suggests that it too will be both equally important and equally challenging to those charged with overseeing its operation.

### The Original ESEA

The significance of the original ESEA resided in its emphasis on the schooling of students from low-income households. The ESEA, through a remarkably creative financing formula, distributed federal funds to states, and thence to counties and school districts, proportionate to the number of enrolled students from low-income households. By the turn of the twenty-first century, this act was responsible for distributing more than \$13 billion each school year to public and, through a few minimal provisions, private and religious K–12 schools. The act also supplied substantial financial subsidies for the operation of state education departments.

Prior to 1965, not only did the federal government have only the most minimal presence in education, education also had only a minimal presence in the lives of low-income students. These were children who had legal access to public schooling. But public schooling had few mechanisms, other than the dedication of certain teachers and principals, for educating them. Low-income students were permitted to stay in school, often being promoted from one grade to the next. Prior to the ESEA, however, there were few expectations that schools would expend on their behalf the added resources that might be necessary to compensate for the poverty-impacted nature of their neighborhoods and households. The ESEA was, if nothing else, a powerful symbolic message that even poor children were to be schooled.

Administration of the ESEA proved challenging. School districts frequently did not realize that the added federal funding was intended for low-income children. They accepted the money as “general financial aid,” suitable for whatever purpose they chose to spend it. Congressional amendments in 1968 made the statute’s purposes more clear. Nevertheless, these new regulations were so strict that it became equally clear that the federally funded poverty programs, however much needed, were intruding deeply into the operation of schools. The narrowly focused instructional programs they financed were

at best wasteful and possibly counterproductive to the education of children.

By the mid-1990s, Congress undertook another midcourse correction and began to permit schools to deploy the ESEA funds with greater local discretion. Still, by 1998, a General Accounting Office report suggested that only fifteen states were adequately implementing the ESEA. This was more than three decades after its enactment.

### The New Act

The No Child Left Behind Act promises to be as important as the original ESEA not only because of the added federal funding it authorizes for education but also because of the pathbreaking measures required of states accepting the money.

The new ESEA is also symbolic of a major shift in American education. Until the latter part of the twentieth century, it was generally sufficient simply to offer schooling and to ensure that all children had equal access to it. By the turn of the twenty-first century, however, global economic changes had so altered that societal landscape that Americans were expecting far more of their education systems. Now, simple access was no longer sufficient. Learning was coming to be expected—and not simply learning for the slender elite that for more than a century had graduated from privileged public and private schools and attended the nation’s highest-ranking universities. Now learning was expected of all children, and performance was expected of all schools. The No Child Left Behind Act is filled with accountability provisions to ensure that states and participating schools understand the new expectations.

The No Child Left Behind Act is symbolic of the transition in American education from a period where the main concern was that the inputs of schooling be present to a period where it is the outcomes of schooling that matter. To accomplish this new purpose—to render schools effective—the reauthorized ESEA provides added funding to school districts, through states. In addition, it requires that states have learning standards and testing programs capable of assessing each child’s performance in achieving those standards. The accountability mechanisms in the statute provide for negative sanctions to schools and districts that persistently fail to elevate student achievement.

However important practically, financially, or symbolically, the No Child Left Behind Act will

doubtless prove difficult to implement. The statutory language offers only the most rudimentary solutions to a number of issues and questions, such as the comparability of testing forms across states, or whether improvement in student achievement is sufficient or must a school attain absolute standards of achievement to be approved.

In that the original ESEA was not fully understood nor faultlessly managed even three decades after its enactment, it is unlikely that the 2002-enacted version, which if anything is even more complicated, will achieve success at a faster pace.

#### INTERNET RESOURCE

U.S. DEPARTMENT OF EDUCATION. 2002. *No Child Left Behind*. <[www.nochildleftbehind.gov](http://www.nochildleftbehind.gov)>.

JAMES W. GUTHRIE

## NONGOVERNMENTAL ORGANIZATIONS AND FOUNDATIONS

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Nongovernmental organizations (NGOs) are entities, usually international nonprofits, which work in an independent fashion yet complement the work of governments for the benefit of constituencies in civil society. The nature of NGOs runs the gamut from lobbying and advocacy to operations and project-oriented organizations. Their mandates often but not always include working to complement the efforts of state and local governments. Since becoming players in the international economic development world in the early 1980s, NGOs have proliferated in both developed and developing countries.

Foundations are institutions through which private wealth is contributed and distributed for public purposes. They are institutions financed by charitable contributions or endowments and can either be for-profit or nonprofit entities depending on the manner in which their money is invested and managed. Foundations generally grant funds to certain causes in keeping with their mandate and mission. In the case of education, foundations often supplement the public provision of financing for education, many times specifically channeling funds to needy or underserved populations. The board of a given foundation establishes the grant-making poli-

cies from which the programming agenda is then derived. Foundations provide grant money to a variety of types of organizations, including nonprofits and NGOs, as well as to universities and schools. The programming agenda is periodically revised to keep abreast of changes in society. For example, following the 2000 U.S. presidential election controversy, the Carnegie Foundation changed its programming agenda to include strengthening U.S. democracy as one of its four main programmatic areas.

Although the work of foundations may be regarded collectively, several people have written scholarly pieces on the work of specific foundations (Robert F. Arnove on the Carnegie, Ford, and Rockefeller foundations; Jeffrey Puryear on the impact of the Ford Foundation's programs in Chile; and James S. Coleman and David Court on the Rockefeller Foundation's impact in Africa). The debate about foundations includes the position that foundations promote the causes that the elite and powerful determine worthwhile (Arnove) versus the argument that they facilitate institution building (Puryear, Coleman, and Court). Although these two positions may seem diametrically opposed, they both start with the premise that social change and development—as a result of the planning, research, expertise, and leadership of people interested in particular social causes—becomes more viable with funding from private charitable contributions. It is frequently NGOs that are conduits or tangential beneficiaries of the programming decisions or internal policies of these very foundations. Without trying to resolve the debate, it is imperative to recognize the role in international development that both foundations and NGOs play, together with the multilateral development banks, bilateral aid agencies, and governments. The descriptions that follow provide details on the individual organizations, their mandates, objectives, programming agendas, and target populations.

### Nongovernmental Organizations

**CARE.** The Cooperative for Assistance and Relief Everywhere (CARE) is a nonprofit, nonsectarian federation of agencies and NGOs devoted to channeling relief and self-help materials to needy people in foreign countries. Originally organized in the United States in 1945 to help war-ravaged Europe, CARE soon expanded its program to include developing nations in Asia, Africa, and Latin America. Famous for its "CARE packages" of food and other

necessities, CARE in now also involved in population, health care, land management, and small economic activity. It is an international organization with ten member countries and headquarters in Brussels, Belgium.

CARE's goal is to build self-sufficiency by helping families meet three basic needs: income, education, and health and population services. Its work in education includes promoting literacy, numeracy, and school attendance, particularly among girls who are often denied schooling. Programs improve education for all children, with an emphasis on keeping girls in school. Groups are created so parents and teachers can discuss traditional educational barriers, such as housework or baby-sitting, which keep girls from attending school. CARE also provides economic incentives to help parents cover the cost of keeping their daughters in school.

CARE first began its education program in 1994 with pilot projects in Peru, Guatemala, India, and Togo. Within four years of its inception, it expanded this number to twenty-nine projects in eighteen countries.

**Education International.** Located in Brussels, Belgium, Education International (EI) has become an important organization for many NGOs, such as teachers unions, in their advocacy work at the national and international level. As an international association of teacher unions, with local teacher associations or unions as members, EI's mission is based on a growing conviction that basic education is a key factor in the eradication of poverty and a cornerstone of freedom, democracy, and sustainable human development. Education also plays a role in eliminating the worst forms of child labor.

Through the Global Campaign for Education (GCE), this NGO brings together organizations working in 180 countries and seeks to hold governments accountable for the fact that 125 million children are denied an education. Education International, Action Aid, Oxfam International, and Global March Against Child Labor jointly launched this program. In terms of teacher evaluation, EI advocates a type of evaluation that is perceived by teachers as being affirmative and supportive as well as balanced and fair and that can contribute to promoting quality in education.

**Education Trust.** Located in Washington, D.C., the Education Trust is an independent, nonpartisan, nonprofit organization. Established in 1990 by the

American Association for Higher Education as a special project to encourage colleges and universities to support K–12 reform efforts, in the early twenty-first century it strives to promote high academic achievement for students at all levels from kindergarten through college (K–16). The organization functions on the premise that in order to achieve significant change in K–12 it must simultaneously change the way that postsecondary education does business. Similarly, the Education Trust maintains that postsecondary education needs as much improvement as the K–12 level.

The Education Trust works for the high academic achievement of all students. It abides by the tenet that all children taught at high levels will learn at high levels. The students and institutions most often left behind in plans to improve education are its focus, in particular those institutions serving low-income Hispanic, African-American, and Native American youth. Education Trust strives to close the achievement gaps that separate poor and minority students from their more advantaged peers. Efforts to improve elementary and secondary education must be undertaken in conjunction with postsecondary education. The organization places emphasis on high standards, rigorous curriculum, good teaching, and accountability for results. Participating in education debates at the national and state policy level, the Education Trust works alongside policymakers, parents, education professionals, and community and business leaders in communities across the United States to transform schools and colleges into institutions that genuinely serve all students.

**Oxfam International.** Oxfam International is an international confederation of eleven autonomous NGOs committed to working together to fight poverty and injustice around the world. Each shares the commitment to end waste and the injustice of poverty, in long-term development work and during times of urgent humanitarian need. The common mandate for all of the Oxfams is to address the structural causes of poverty and related injustices and create lasting solutions to hunger, poverty, and social injustice through long-term partnerships with poor communities around the world. The organization has an advocacy office in Washington, D.C., which lobbies the World Bank, the International Monetary Fund, and the United Nations on issues agreed upon by the eleven member organizations. As a privately funded organization, it strives to speak “with conviction and integrity to challenge the

structural barriers that foster conflict and human suffering and limit people from gaining the skills, resources, and power to become self-sufficient.”

Oxfam invests privately raised funds and technical expertise in local organizations around the world that hold promise in their efforts to help poor people move out of poverty. These projects are characterized by partnerships with local organizations, a unique and highly successful approach that ensures lasting change. Through the local partnerships, Oxfam listens to the local needs and works jointly toward solutions that enable communities to prosper and organize for economic stability and democratic opportunity. Oxfam is committed to these long-term relationships in search of lasting solutions to hunger, poverty, and social inequities. As part of this commitment, Oxfam is dedicated to educating the public worldwide on the realities of poverty and the universal obligation to establish a future that is equitable, environmentally sustainable, and respectful of the rights of all peoples.

In education, Oxfam plays an active role in ensuring that aid resources are channeled to education, which plays a vital role in poverty reduction, economic growth, and democracy. The organization plays an advocacy role, regularly issuing policy and position papers that react to the policies of G8 countries, large donor organizations, and international summits.

**Save the Children.** Save the Children is an international nonprofit child-assistance organization (or NGO) based in Westport, Connecticut, which works in forty-six countries worldwide, including the United States. Its mission is to make lasting, positive change in the lives of children in need. Save the Children is a member of the International Save the Children Alliance, a worldwide network of twenty-six independent Save the Children organizations working in more than 100 countries to ensure the well-being of children everywhere.

Nearly seventy years of experience working alongside families and communities in the United States, Latin America, the Caribbean, the Middle East, Eurasia, Africa, and Asia has convinced Save the Children that poverty “need not be a life sentence.” To help children get the best possible start in life, Save the Children promotes locally appropriate programs in education, health care, environmentally sound agriculture, and economic productivity.

In a world where the majority of illiterate adults are women, improving access to education for girls

is urgent. At the outset of the twenty-first century, nearly two-thirds of the 125 million children not attending primary school are girls. The cycle of illiteracy traps millions of girls and women throughout the developing world. But with education, this cycle can be broken. Studies show that an educated mother is more likely to provide her children with adequate nutrition, seek needed health care, and send her girls, as well as boys, to school. Save the Children focuses on education as a critical means of improving the quality of life for both mothers and their families.

In an effort to address the lack of access to quality education experienced by more than one billion people, Save the Children’s programs support communities in the development of quality education programs. Working with communities, the organization explores initial concepts to bring Strong Beginnings programs to the area. The programs include research and project development in each community, which leads to the implementation of active intergenerational-learning programs for all ages, early childhood development, primary education, and youth and adult nonformal education.

Save the Children’s education programs have produced many dramatic results in the lives of women and girls around the world. In Afghanistan, where prior to 2002 girls were kept in seclusion and not allowed to attend formal school, the program has established home-based classrooms to provide basic education that would otherwise be denied. More than 20,000 girls in remote villages of Mali, where schools were once rare, are learning to read and count. And women participating in literacy programs in Guatemala are learning to manage their lives and take on leadership roles in their communities.

**World Vision.** Based in the United Kingdom, World Vision is an international Christian relief and development NGO, which works to promote the well-being of all people, especially children. World Vision strives to enable families and communities to transform their conditions and gain self-reliance in a sustainable manner. It achieves this by working with the poor in their communities; it helps them gain access to clean water, better agricultural production, improved health care, and primary education.

World Vision’s advocacy initiatives draw on the expertise and experience of staff throughout the world who work in countries and communities that

are afflicted by poverty. World Vision works to raise their concerns in the United Kingdom, with ministers and members of Parliament, through meetings, briefing papers, a discussion paper series, and special reports. World Vision has policy staff working on the areas of child rights, conflict, peace building, and also global economic issues. Each of these advocacy themes has the potential to bring real benefits to ordinary communities in developing countries.

Although World Vision is a Christian organization, the organization has child-focused projects that are offered freely, regardless of belief, ethnic background, or gender. The organization's literature claims that "faith fuels our work and supplies our staff with wisdom and ability, our donors with the resources they share, and enables our recipients to work toward the fulfillment of their dreams."

## Foundations

**The Broad Foundation.** Located in Los Angeles, California, and established in 1999, the Broad Foundation supports innovative efforts to strengthen local, state, regional, and national initiatives to improve governance, management, and labor relations in large urban school systems. The foundation is dedicated to building K–12 educational leadership capacity, strengthening union-management relations, and supporting aggressive, systemwide strategies to increase student achievement. It aims to infuse a new kind of school system leadership in order to strengthen the state of public education.

The Broad Foundation's investments are targeted toward the following five program areas: (1) support for entrepreneurial and nontraditional leaders; (2) leadership training; (3) recruitment and selection strategies; (4) visibility for high performers; and (5) venture philanthropy.

The area of support for entrepreneurial and nontraditional leaders provides funding to current innovators, such as superintendents, school boards, union presidents, and other leaders in the K–12 public education system, through rewards for high performance, grants for specific district and union projects, and funding for ongoing networking and assistance. A leadership training area provides grants for the support and development of training for aspiring and current innovators. The area of recruitment and selection strategies provides assistance to districts and to business and community organizations interested in securing the next generation of

entrepreneurial educational leaders and managerial talent. Visibility for high performers is an area that permits the foundation to engage in public visibility campaigns that showcase the results of systemwide improvements in urban districts. The foundation also supports research and dissemination projects that actively communicate the results of high-potential endeavors. Finally, the venture philanthropy area funds entrepreneurial ideas from inside and outside the current system that offer high-leverage opportunities to improve K–12 education.

**Carnegie Corporation of New York.** Founded in 1911 by Andrew Carnegie for the "advancement and diffusion of knowledge and understanding among people of the United States," the Carnegie Corporation is a general-purpose, grant-making foundation. Charter amendments made subsequent to its founding permit the corporation to channel close to 7.5 percent of its income for the same purpose in countries that are currently or have been members of the British Commonwealth. Most such grants are in British Commonwealth Africa. As a grant-making foundation, the corporation seeks to carry out Carnegie's vision of philanthropy, which he said should aim "to do real and permanent good in this world."

The focus of the corporation's work has evolved over time, adapting its program areas to changing circumstances as Andrew Carnegie wished. Although current program directions have been designed to correspond with the corporation's historic mission and legacy and to maintain the continuity of its work, they are also intended to serve as catalysts for change. A current challenge facing the Carnegie Corporation is how to support the development of a global community in an age when both isolationism and nationalism seem to be fostering a fractured view of the world. This raises the question of how to use the current glut of information to foster a sense of community, rather than letting it disintegrate community.

After a review of the foundation's management structure and grant programs under the leadership of Vartan Gregorian, the corporation refined its programmatic focus, which in the early twenty-first century includes education, international peace and security, international development, and strengthening U.S. democracy. In addition, a new program, Carnegie Corporation Scholars Program, strives to support fundamental research by young scholars with outstanding promise and also by established ex-

perts who stand to contribute significantly to the corporation's mission.

In education, the Carnegie Corporation dedicates a large majority of its funds to education reform ranging from early childhood education to higher education. The education program focuses on three key areas: early childhood education, urban school reform, and higher education. Within these areas, the corporation's goals are to promote the creation of high-quality early learning opportunities on a large scale; accelerate urban school reform; strengthen the education of teachers; and stimulate an examination and strengthening of liberal arts education. In education, the corporation has traditionally had a significant impact on public policy for children, teachers, and other stakeholders in the educational process. Through its focus on education, Carnegie has successfully convened special bodies of experts and opinion leaders to study related issues and publish several key reports.

**Carnegie Foundation for the Advancement of Teaching.** The Carnegie Foundation for the Advancement of Teaching is a national and international center for research and policy studies about teaching and is an ancillary philanthropy of the Carnegie Foundation. With a focus on the scholarship of teaching, the foundation seeks to generate discussion and promulgate sustainable, long-term changes in educational research, policy, and practice. Foundation programs are designed to foster deep, significant, lasting learning for all students and to improve the ability of education to develop students' understanding, skills, and integrity.

**The Ford Foundation.** Established in 1936 by Henry Ford, the founder of Ford Motor Company, and his son Edsel, the Ford Foundation is one of the most important and prominent foundations in the field of education. From 1936 to 1950 the foundation made grants mostly to organizations in its home state of Michigan. In 1951 the foundation moved to New York City and began its focus on national and international giving.

The Ford Foundation is a private philanthropic institution, which seeks to improve the well-being of people around the world by funding "experimental, demonstration, and developmental efforts that give promise of producing significant advances in various fields."

The foundation is governed by a board of trustees and administered by a professional staff. The

board of trustees includes CEOs, senior officials in higher education, and people involved in Native American interests. The trustees determine general policies and budgets. The staff evaluates grant applications, identifies institutions to administer programs, and makes recommendations for grants.

The foundation has identified certain program areas in which it is interested in funding projects. It generally does not make grants for normal operating costs of an organization, construction of buildings, or for strictly religious activities.

The foundation has identified six broad categories of programs in which it is interested: urban poverty, rural poverty and resources, human rights and social justice, governance and public policy, education and culture, and international affairs.

The type of work the foundation funds is equally diverse. The foundation funds projects, which involve direct assistance to the needy, and grants to organizations, which seek to influence public policy. Over the years the foundation has provided grants to establish new organizations, found new academic departments at universities, fund demonstration projects, and assist other philanthropies. The foundation has organized coalitions with other philanthropies, government, and nonprofit organizations to work on projects. It also administers its own projects.

In some cases the foundation has funded programs on an ongoing basis, which over time become established institutions, such as community development corporations (CDCs). Since the late 1960s it has made grants of nearly \$200 million to CDCs in depressed urban areas, which initiate economic development projects; raise additional funds; offer job training, day care, and credit; and advocate for improved government services.

The Ford Foundation has sixteen offices overseas. Approximately 35 percent of the annual budget is allocated for overseas projects. Programs include agricultural development in Latin America, Africa, and Asia; a training program for judges in China; international studies in Chile; and philanthropy in Egypt.

**The Bill and Melinda Gates Foundation.** The William H. Gates Foundation (founded in 1994 with a focus on health issues in developing countries) and the Gates Learning Foundation (founded in 1997 but renamed the Gates Library Foundation) merged in August 1999 to become the Bill and Melinda

Gates Foundation, which encompasses those two foundations and the Gates Center for Technology Access. The Gates Foundation ranks as one of the wealthiest private foundations in the world. Established by the Microsoft cofounder and chief executive officer, the Seattle, Washington-based foundation is led by Bill Gates's father, William Gates Sr., and supports initiatives in education, technology, global health, and community giving in the Pacific Northwest.

Although many benefit from the linking of the globe in a digital web of communications and information flow, the foundation strives to pay attention to those who have not shared in the promise of the digital age. The Bill and Melinda Gates Foundation is dedicated to sharing the promise of new technologies with all citizens. The foundation is focusing its efforts in three critical areas: (1) U.S. education; (2) libraries; and (3) public access to information.

In its work on education, the foundation perceives the education system as an immensely important strategic front for forging a future in which all children can participate in the opportunities of the digital age. In March 2000 the foundation announced a \$350 million, three-year investment in a series of education grants designed to help all students achieve at high levels by improving teaching and learning and enhancing access to technology.

In 1999 Bill and Melinda Gates made a defining gift of \$1 billion to establish the Gates Millennium Scholars program, which will provide scholarships for academically talented minority students (African-Americans, Asian-Americans, Hispanics, and Native Americans) who would otherwise not have the financial resources to attend college. Additional scholarships are available for minority scholars pursuing graduate degrees in science, mathematics, engineering, education, or library science.

**The Charles Stewart Mott Foundation.** Based in Flint, Michigan, the Charles Stewart Mott Foundation was the brainchild of the sailor, automotive engineer, industrial pioneer, banker, educational innovator, and community leader by the same name. In addition to these attributes, Mott was also a philanthropist.

The grant-making activities of the foundation focus on four main areas: civil society; the environment; development in Flint, Michigan; and pathways out of poverty. In addition, the Exploratory and Special Projects program permits the founda-

tion to explore new opportunities. About 20 percent of the foundations grants are international in scope.

Of particular interest to educators are the program for civil society and the efforts to decrease poverty. The mission of the civil society program is to "strengthen citizen and nonprofit-sector engagement in support of free and pluralistic democratic societies," with primary geographic focus on the United States, central and eastern Europe, Russia, South Africa, and at the global level. In the United States the efforts focus on strengthening the fabric of civil society in the face of public apathy and cynicism, extremist forces, and an economically and racially divided society.

Within the program area of Pathways Out of Poverty, efforts include improving community education, expanding economic opportunity, building organized communities, and special initiatives. The mission for the programmatic area of improving community education is to "ensure that community education serves as a pathway out of poverty for children in low-income communities by building a continuum of quality learning opportunities that stretches from the preschool years through preparation for higher education and the work force." This includes promoting school readiness, success in school, and learning that spans beyond the classroom.

**Lilly Endowment.** Founded in 1937 by pharmaceutical manufacturer Josiah K. Lilly, this foundation, based in Indianapolis, Indiana, grants funds for religious, educational, and charitable purposes. Of special interest to the foundation are programs designed to foster the growth and development of Christian character.

Its endeavors in education include aid to Protestant theological seminaries, other colleges, and elementary and secondary education. Most of the foundation's work in education focuses on raising the educational-attainment level of citizens of the state of Indiana. The endowment also provides grants to private, historically black colleges and universities (HBCUs) throughout the United States. In addition, the endowment focuses on positive development of youth by providing support to direct-service organizations, building the capacity of intermediary organizations, and providing professional development for staff members in such organizations.

**The Pew Charitable Trusts.** Based in Philadelphia, Pennsylvania, the Pew Charitable Trusts support

nonprofit activities in the areas of culture, education, the environment, health and human services, public policy, and religion. The trusts consist of seven individual charitable funds established between 1948 and 1979 by two sons and two daughters of Sun Oil Company founder Joseph N. Pew and his wife, Mary Anderson Pew. Though the trusts are separate legal entities, their grant-making activities are managed collectively and guided by a single set of program priorities. The trusts make strategic investments that encourage and support citizen participation in addressing critical issues and effecting social change.

The work of this foundation in education seeks to raise the performance of students at all levels of education, especially the capabilities of students to learn for understanding and to acquire the types of literacy necessary for productive employment and effective citizenship in an increasingly complex society. The foundation's broad efforts in education include an interest in publicly funded preschool education programs, standards-based reform in K-12 education, other K-12 reform efforts, and support to higher education. In higher education, the foundation is interested in issues of access to higher education, the quality of higher education, and the means for keeping the United States competitive in the emerging global and technology-intensive economy.

**Rockefeller Foundation.** Based in New York City, the Rockefeller Foundation is a knowledge-based, global foundation with a commitment to enrich and sustain the lives and livelihoods of poor and excluded people throughout the world. The foundation seeks to identify, and address at their source, the causes of human suffering and need. The foundation's approach to current global challenges focuses on poor people's daily existence, and how the process of globalization can be turned to their advantage. Program funding is focused on grant-making areas that reflect the interconnections between people's health, food, work, creative expression, and the impact of globalization on the poor. The Rockefeller Foundation's central goal is to "give full expression to the creative impulses of individuals and communities in order to enhance the well-being of societies and better equip them to interact in a globalized world."

Within the unit that encompasses education, knowledge, and religion, the foundation seeks to enhance educational opportunity, especially for low-

income and chronically disadvantaged groups, and to address the challenges of pluralism and diversity using interdisciplinary and collaborative approaches. Through education reform, the foundation seeks to enhance the capacity of schools and higher education institutions to broaden access and increase levels of student achievement, particularly for historically unserved populations. In higher education and scholarship, the foundation seeks to build fields of knowledge that deepen scholarship and public understanding of pluralism and identity. The foundation emphasizes the importance of social science training as a means to educate a new generation of leaders and scholars who can be more effective in their civic roles.

**Smith Richardson Foundation.** H. Smith Richardson, son of the founder of Vicks Family Remedies, and his wife, Grace Jones Richardson, created the Smith Richardson Foundation in 1935. Located in Westport, Connecticut, the Smith Richardson Foundation seeks to "help ensure the vitality of our social, economic, and governmental institutions," and "assist with the development of effective policies to compete internationally and advance U.S. interests and values abroad." This mission is embodied in its international and domestic grant programs.

The foundation has two grant programs: the International Security and Foreign Policy Program, which supports research and policy projects on issues central to the strategic interests of the United States; and the Domestic Public Policy Program, which supports research, writing, and analysis on public policy issues and strives to help inform policymakers and the public on domestic issues. Education policy and school reform are two of the foundation's most important areas of grant making. Such grants support research at universities, think tanks, and research organizations on important education policy issues, such as charter schools, school choice, teacher training and pay, class size, and educational standards. This grant making is focused on policy debates in the United States. Although the grant-making efforts do not include a particular focus on certain levels of education, research on higher education is not supported.

**Soros Foundation.** American stock trader and philanthropist George Soros has used his wealth to create a network of foundations, most of which are intended to aid former Communist countries in creating an "open society." Other Soros foundations

fund health initiatives and aid immigrants in the United States.

In the parlance of the Soros foundations network, the term *national foundation* refers to an autonomous nonprofit organization founded by George Soros in a particular country to promote the development of open society in that country. National foundations are located primarily in the countries of central and eastern Europe and the former Soviet Union, although there are some in other parts of the world. A local board of directors comprising distinguished citizens from different ethnic, geographic, political, and professional backgrounds determines the specific priorities and activities of each foundation. Given the diversity of social, political, and economic conditions in the countries of the network, programs vary greatly in nature and urgency from one foundation to another. Yet all of the foundations' activities share an overarching common mission: to support the development of an open society. The local nature of the decision-making process at the foundations is one of the distinctive features of George Soros's approach to philanthropy.

In promoting an open society, education plays a role in the work of most of the foundations; however, the focus varies from country to country. For example, the Soros Foundation provided education to 300,000 Burmese refugees in Thailand, India, and Bangladesh, serving otherwise underserved populations. In Armenia the Internet and National Education programs, redesigned in 1999, increased school outreach and community involvement in education. A network of schools and organizations provided the training and support required to develop the idea of community schools. The aim is not only to strengthen community participation but also to improve the quality of the education system by introducing modern methodology and criteria for curriculum development.

In other countries such as Latvia, the Soros Foundation emphasizes the importance of raising critically thinking, tolerant, and creative young people. In such countries the foundations provide continued support to primary and secondary education while simultaneously devoting efforts to the strengthening of higher education, especially in terms of the study of law and pedagogy.

**Stuart Foundation.** Based in San Francisco, California, the Stuart Foundation's overarching purpose is to help the children and youth of California and

Washington states become responsible citizens. The foundation's approach is to help strengthen the public systems and community supports that contribute to children's development. Three grant program areas exist: (1) strengthening the public school system; (2) strengthening the child welfare system; and (3) strengthening communities to support families.

The Stuart Foundation employs a systemic approach to change. The following themes characterize the foundation's approach to strengthening public systems and communities in all three grant-making programs: (1) making public policies more effective by supporting efforts to improve statewide or local policies so that public systems and communities can support the development of children and youth more effectively; (2) policy analysis and policy development by supporting projects that examine the effectiveness of policies for children and youth; that improve the quality of information available to policymakers, stakeholders, and the public; and that provide a nonpartisan forum for discussion and dialogue to build understanding and consensus for improvements; (3) standards or accountability through support to the development of standards and systems for measuring results that promote greater accountability and program improvements, and that can gain the support of policymakers, practitioners, communities, and business leaders; and (4) making connections and building understanding to solve social problems by uniting people and organizations with different perspectives (e.g., educators, parents, policymakers, business people, and service providers) to build a shared understanding and reach agreement on what needs to be done.

The foundation seeks to foster stronger connections among policymakers, practitioners, and researchers to foster information exchange, fresh thinking, and creative solutions. It promotes collaboration across agencies and disciplines in which closely related programs integrate their work to achieve greater benefits for children and youth. It strives to build public understanding of key issues in education, child welfare, and community well-being, and to secure a more supportive environment for effective policies and practices. It seeks to improve practice through the development and dissemination of more effective practices, through the promotion and dissemination of successful innovations, and through effective methods to promote widespread improvements in practice.

**Spencer Foundation.** Located in Chicago, Illinois, the Spencer Foundation was established by Lyle M. Spencer, founder of the educational publishing firm Science Research Associates. The foundation investigates “ways in which education, broadly conceived, can be improved around the world.” A basic research foundation with both international and domestic interests, the foundation supports high quality investigation of education through its research programs by promoting scholarship through various grant programs for research, postdoctoral fellowships, predissertation research, conferences, and training. Such grants are open to people from an array of backgrounds—researchers, practitioners, and young professionals.

The foundation’s programs are organized within three divisions: Research, Fellowships, and Training. In addition, a handful of programs are also operated out of the office of the vice president. Programs in the research division support work that shows promise of contributing new knowledge, understanding, and improvement of educational thought and practice. Programs in the fellowship division support educational researchers at different stages of their professional careers, providing resources to both beginning and senior researchers to pursue concentrated intellectual activity. Programs in the training division are aimed at improving the work and performance of agencies and institutions, mainly universities and graduate schools of education at universities, which hold a mission of training and apprenticing educational researchers. Funding programs within the vice president’s office are experimental or developmental, spanning and augmenting the other divisions’ programmatic objectives. The majority of the programs administered within the training division and the office of the vice president are invitational.

*See also:* INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION.

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## NONGRADED SCHOOLS

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This entry will seek to identify and clarify the opposite of graded schools, for which the term *nongraded schools* is used. Although there are secondary schools that also seek to develop nongraded structures, the primary beneficiaries of the arrangement are children at the elementary school level.

### Brief Definition

Briefly, nongradedness is defined in terms of respect for, and optimism about, individual differences. It calls for the provision of a pleasurable, challenging, and rewarding learning atmosphere where there are maximum opportunities for productive interaction between the learners. Within a nongraded setting the curriculum is both integrated and flexible. Similarly the timetable for the academic progress of each unique child is flexible. The learning of facts, although important, is recognized as subordinate to the mastery of concepts and methods of inquiry. The assessment of students is holistic and individualized, and evaluation is continuous, comprehensive, and diagnostic. The entire program within the nongraded setting, especially if there is a team of teachers involved, is more under the control of the teacher(s) than is the case in grade-structured situations. Research and experience generally support the conclusion that pupils in nongraded settings work harder, albeit more comfortably, and achieve more and better results than graded students do. There is also rather strong research evidence that children in nongraded settings enjoy better physical and emotional health.

### Development of Graded Education

Graded education was introduced and developed during the years 1848 to 1870, beginning with the Quincy Grammar School in Boston. The Quincy school came into being largely to provide a manageable school organization at a time when schooling in expanding cities became a much larger enterprise than had existed in the familiar one-room school serving pupils of multiple ages. It also grew out of assumptions that undergirded and made possible efforts toward universal education. Because little was known or believed in those years about stages of human development and the unevenness of readiness within age groups, the assumption was made that students may logically be grouped together by age, or actually within a twelve-month span, and

taught a specific and common body of skills and subject matter.

Well into the twentieth century, the patterns of fairly rigid gradedness, with attendant nonpromotion/promotion practices, launched at the Quincy school became, in effect, universal. All the same, at that point in social history the system was in fact a significant and creative advance, appropriate to the assumptions and perceptions involved. The teachers were usually quite uneducated and insufficiently trained, and therefore there evolved the system of requiring them to master only a one-year segment of the educational program. In this way, a form of primitive specialization occurred. There was also a pattern of very strict supervision by the employers.

### Search for Other Models

Before long, the disadvantages of the graded system's rigidity had become apparent, and by the end of the nineteenth century there were various efforts to create different schooling models and achieve greater flexibility. These efforts continued well into the twentieth century, handicapped to some extent by the publishing industry's success in producing age-graded textbook series that made it easier for teachers to manage their work. In the same period, so-called normal schools and later, colleges, produced teachers whose preparation assumed that each would work alone in a self-contained classroom and, except for those in smaller multigraded schools, with materials deemed suitable for one age-group of children.

Along with the search for more appropriate, flexible, and child-oriented arrangements to replace the entrenched gradedness, several influential and helpful developments occurred. Progressive education was very likely the most dramatic example. Also influential were some well-known examples of nongradedness in Europe, which in the 1920s caused many venturesome American teachers, especially from cities in Wisconsin and New York, to visit pilot programs that were located in Jena, Germany, and in several cities in Holland. Some of these programs continue to flourish in the early twenty-first century.

Over the years the label "nongraded" proved to be slightly confusing and insufficiently informative, and scholars and administrators found that labels such as "continuous progress" were more descriptive. Beginning with milestone research and related articles by Walter Rehwoldt and Warren W. Hamil-

ton in 1956 and 1957, the discussion of nongradedness increasingly involved reference to interage or intergrade grouping, for which the term *multiage* was soon frequently substituted. Also in the 1950s, the nation's first experience with formally organized team teaching, and with a related notion, the use of teacher aides/helpers, redefined the organizational framework within which, it was increasingly argued with the support of research evidence, a demonstrably preferable setting could be provided not only for the pupils but also for the collaborating adults who worked with them.

Some elementary schools chose to organize classes in a pattern similar to departmentalization, with each teacher responsible for one content area, such as math or social studies; but it was not until 1957 when there was a sudden burst of interest, nurtured by seventeen universities being funded by Ford Foundation grants to support teacher-teaming and related arrangements, that the virtues of self-containment came to be seriously questioned. Some of the funded model projects, which soon sparked nationwide interest, called for aggregating multiage pupil groups (e.g., children six to seven and eight years of age) to be taught by teams of four to eight collaborating teachers. This development led to a kind of architectural revolution, because standard-size classrooms could no longer accommodate various-sized pupil aggregations. It is of interest to note that, as of the beginning of the twenty-first century, it seems probable that a great many elementary schools continue to provide at least some space flexibility to accommodate teaming arrangements.

### Research Findings

The 1993 book *Nongradedness: Helping It to Happen* presents what is probably the most comprehensive analysis/summary of research about nongradedness. It provides a conservative yet positive story about the "substantial and generally favorable body of research on nongradedness." Not surprisingly, several of the studies show that benefits increase over time: that is, the longer that pupils are in such programs, the greater the improvement in achievement scores. Another conclusion of interest is that boys, African Americans, underachievers, and lower-socioeconomic pupils perform better and feel more positive toward themselves and their schools in a nongraded environment. Mental health and school attitudes also benefit.

In summary, then, both logical analysis and examination of the sparse but convincing research now available support the organizational arrangement that calls for (1) multiage pupil grouping to permit numerous learning opportunities, (2) teacher teaming to enable both specialization of functions and continuous professional partnerships and exchanges, (3) flexible architecture to permit a great variety of instructional groupings, and (4) the absence of grade-related nomenclature and the psychological pressure it presents. It is to be noted and appreciated that the classroom procedures and the flexible structure of a multiple-year curriculum enhance the atmosphere and, as research indicates, stimulate both good learning and what can accurately be described as the mental health of all participants.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; SCHOOL REFORM; SOCIAL ORGANIZATION OF SCHOOLS.

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## NONTRADITIONAL STUDENTS IN HIGHER EDUCATION

The term *traditional students* describes the characteristics of most students attending colleges and universities before 1970. These included: age between the late teens and early twenties; immediate entry to higher education following high school; full-time attendance and completion of a four year degree in four to five years; residence at the college or in its vicinity; and primary financial dependence on family sources. Traditional students also generally were neither married nor responsible for other family members.

In North America, beginning about 1970, higher education institutions began to see an influx of significantly different students, to whom the term *nontraditional students* was applied. The most prominent differences were that these students were older and had interrupted formal education either before or after finishing secondary school. Postsecondary schools in other developed countries, for instance Organisation for Economic Co-operation and Development (OECD) members, also experienced increases in older students. In the early twenty-first century, some believe nontraditional students have become the new majority, and traditional students the exception.

Direct comparisons of nontraditional students across countries are difficult because of varying frameworks of data collection. Examples can be seen from the United States, United Kingdom, and selected OECD countries such as Canada, Germany, and Japan. Initially, the simple age criterion of twenty-five years of age or older was used to define nontraditional students. According to the National Center for Education Statistics (NCES), by the mid-1990s the proportion of these students in institutions of higher education had grown to more than 40 percent. A later mid-1990s NCES study of beginning undergraduates broadened the factors to seven characteristics, including later than usual initial enrollment, financial independence, full-time employment, part-time attendance, responsibility for dependents other than a spouse, being a single parent, and high school equivalency by means other than a diploma. It also classified nontraditionals as minimally (one factor), moderately (two or three factors), or highly (four or more factors) nontraditional. The study described nearly three-quarters of beginning undergraduates as at least minimally non-

traditional. A Canadian-American association concerned with nontraditionals even proposed a new classification, *New Trads*, to include younger students attending part-time but lacking extensive adult life experience.

Elsewhere, other factors applied. A 1997 United Kingdom study described nontraditional students as having later age on entry, but also included ethnic, disability, and socioeconomic level factors. Germany explicitly counted senior students and part-timers, but its university system is difficult for part-time students to access. Ireland and Japan increased access for nontraditional students only in the 1990s, so their rates of increase are smaller than other countries. Clearly, nontraditional students are somewhat older and have alternative qualifications for admission than do traditional students, and, depending on country, perhaps other adult-like or situational factors.

### Types of Nontraditional Students in the United States

In 1997, using only the age criterion of twenty-five or older, nontraditional enrollments numbered 6,149,000, or nearly 43 percent of all students in higher education. Such a broad group probably includes some representation of all aspects of the total population, but in important considerations, such as gender, ethnicity, socioeconomic status, and regionalism, nontraditional learners do not mirror American society precisely. Some salient characteristics of the group have implications for how providers plan, design, and conduct programs for nontraditional learners, and the supporting services they should provide.

Even including younger people with adult characteristics of autonomy and financial independence, nontraditional learners generally are older than traditional students at the same level. This accounts for why so much of the discussion of nontraditional learners takes place in the context of adult learning, although counselors should be sensitive to the varying circumstances of younger students. Adults are likely to have maturity and experience that can benefit their study, but they may also have formed fixed convictions that restrict their openness. Nontraditional learners often lead complex lives with many responsibilities that compete with their educational goals. They tend to be employed full-time or for extensive part-time periods. Similarly, many are married with demanding family responsibilities and

community involvements. Demands on their time often limit them to part-time enrollment and longer times to complete degree and certificate sequences.

Adult women have entered at a higher rate than men, and are helping to outnumber the greater proportion of male enrollment that prevailed before 1970. Women are more likely than men to be responsible for younger or older dependents and a larger portion of them attend part-time.

Other situational factors affect participation. Nontraditional learners are more likely to reside in urban or suburban areas, rather than rural areas. This may be related to the proximity of educational institutions and could be relieved by the growth of distance learning systems. Proportionally, more nontraditional students come from the western or Rocky Mountain states than the rest of the United States, and fewer come from the New England and the mid-Atlantic states. In addition, the ethnicity of nontraditional students does not parallel that of the national population. Asian and non-Hispanic white students enroll at a higher rate than their proportion of the general population, while African Americans and Hispanics participate at a lower rate. In their thirties, however, the proportion of African Americans enrolled in higher education is higher than that of the general population, which suggests that gap may be closing for them. The same is not true of Hispanics, whose numbers may be affected by the immigration of less educated persons. Immigrants make up an increasing number of nontraditional participants in higher education, with needs ranging from English as a second language to revalidation of high-level professional qualifications for certification or licensure in the United States.

Surveys over several decades confirm that the primary motivation for nontraditional enrollment has been career improvement. For younger participants, obtaining credentials necessary to enter desired employment has been critical. People between thirty-five and fifty years of age often seek to improve their career prospects with expanded qualifications. This marks an important shift in motivation toward growing one's capabilities to keep up with changing knowledge demands or to assume greater responsibility. People in their later years, on the other hand, are more likely to pursue personal enrichment goals, and even to seek degree credentials for their own sake. A great many nontraditional learners come to higher education with credit earned in earlier enrollments and are eligible for assessment

of informal learning for credit. Nontraditional learners are likely to take longer to complete their degrees than traditional students and to have higher attrition in their first year. Those who continue to the second year have persistence rates closer to traditional students.

### **Support for Nontraditional Learners**

The greater maturity of most nontraditional learners, and the complexity of their daily lives, means that they have different expectations for their learning experiences and different needs for services responsive to their circumstances. Many institutions have made adjustments to assist nontraditional learners, and that practical experience can be an invaluable resource to others who wish to follow their example.

Innovations have involved three major shifts in perspective. These changes have their roots in an emphasis on fulfilling human potential and realizing individual autonomy. Leading exponents have been Malcolm Knowles, Jerold Apps, and Stephen Brookfield.

First, there has been an effort to remove barriers, both situational and dispositional, to nontraditional learner participation. The most daunting of these has been a rigidity in attendance requirements that are incompatible with the other responsibilities of these students. New time and place options have brought much greater choice and flexibility. The growth of asynchronous distance-learning offerings through electronic technology could eliminate this barrier entirely. More flexible access to other important services has become more common as well. Clearer information on institutions and the specific programs needed for career or other learning goals is available. Access and guidance to financial aid has improved. Programs for nontraditional learners provide reentry or orientation workshops to reacquaint applicants with college level study or to reduce anxiety about reentry after an interruption. Some of these are linked to resources to refresh college study skills.

The second major change has been to reorient the learning transaction to focus on learners. Instructors assume roles as facilitators or mentors to work with learners to design individualized curricula. Often working in groups, they establish a climate of mutual respect, trust, and feedback. These groups take account of the contribution that previous exper-

rience can offer, but try to foster a spirit of critical reflection and openness to new ideas and information. According to Brookfield, “the aim of facilitation is the nurturing of self-directed, empowered adults” (p. 11).

Finally, nontraditional institutions increasingly provide continuing academic and personal support to sometimes-vulnerable nontraditional learners. On the academic side, there is greater recognition of the value of ongoing counseling and developmental monitoring, in addition to close attention at entry. The support can include preparation for leaving the program, such as career counseling and exit seminars to deal with the anxiety of a new transition.

Learners also may need a variety of nonacademic services throughout the program. These include food or refreshment services and lounge spaces at late afternoon or evening times, convenient parking and campus security, child care for young children, and perhaps personal counseling to assist with stress or unanticipated emergencies.

The recognition of, and the adaptation to, nontraditional learners since the 1970s has been impressive. Any institution that pretends to serve society must take responsibility for nontraditional learners in the knowledge age. The National Association of State Universities and Land-Grant Colleges (NASULGC) recognized this in their 1999 report *Returning to Our Roots: A Learning Society*. Yet there is much more many higher education institutions can do to serve nontraditional learners with full commitment.

**See also:** COMMUTER STUDENTS; ENROLLMENT MANAGEMENT IN HIGHER EDUCATION; LIFE EXPERIENCE FOR COLLEGE CREDIT.

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#### NORTH AFRICA

**See:** MIDDLE EAST AND NORTH AFRICA.

## NTL INSTITUTE FOR APPLIED BEHAVIORAL SCIENCE

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The NTL Institute for Applied Behavioral Science originated in the 1940s as an experiment in group relations called the National Training Laboratory. Directed toward the adult learner, NTL, which is a not-for-profit membership corporation, designs and delivers programs to reeducate adults to help them become better leaders at the group and systems level and to become sensitive to interpersonal dynamics.

NTL's original mission was to train and develop *change agents*, as they came to be called. NTL's T-Group methodology, along with other innovations—such as experiential learning (“learning by doing”), sensitivity training, and the feedback method—have influenced social institutions, industry, and organizations of every variety worldwide. The NTL Institute also developed methods and programs to link teacher training and classroom teaching.

Four scholars are directly associated with NTL's beginnings. Kurt Lewin, considered by many as the father of NTL, began a project in 1946 in which forty-one community leaders examined interracial and intergroup conflict in their home settings—and learned skills to deal with those conflicts. This workshop led to the discovery of the T-Group and eventually to the founding of NTL; however, Lewin died before the first workshop was held in Bethel, Maine, in 1947. Other founders were educational psychologist Leland P. Bradford, who was director of the Division of Adult Service of the NEA before cofounding NTL; Kenneth Benne, who had an interest in teaching techniques as a faculty member in the College of Education at the University of Iowa; and Ronald Lippitt, who is recognized for his early work in group leadership and analyzing group processes and who became a research assistant to Kurt Lewin at Iowa.

Lewin's research and work played a key role in NTL's *reeducation of the adult learner*, a process where people alter, replace, or transcend their usual patterns of thinking. It is a process more complex than learning anew. Lewin's field theory, “human behavior is the function of both the person and the environment, expressed in symbolic terms,  $B=f(P, E)$ ” led to development of actual field research on human behavior and was incorporated into all NTL training.

NTL developed and perfected the Work Conference model during the 1940s and 1950s. This model

continues to influence conference and meeting design. NTL helped transform the field of applied behavioral science and made seminal contributions to the field of organizational development, including *The Journal of Applied Behavioral Science*, which was founded in 1965 to advance the field of applied behavioral science and to foster NTL's core values.

From NTL's most widely recognized innovation, the T-Group method—the basic method of laboratory learning about self, groups, and interpersonal relations—emerged the concept of sensitivity training, which psychologist Carl Rogers, who revolutionized the course of therapy, regarded as “perhaps the most significant social invention of the century . . . it is one of the most rapidly growing social phenomena in the United States. It has permeated industry and education and is reaching families and professionals in the helping fields and many others.” Sensitivity training is a technique that uses intense small-group discussion and interaction to increase individual awareness of self and others.

Besides NTL's wide array of training and education programs in personal and professional development, NTL offers certificate programs in advanced technology for senior organization-development practitioners; change management and diversity leadership; experience-based learning and training; and organization development. In addition, through partnerships with American University and Cleveland State University, NTL provides a graduate program that culminates in a master's degree in organization development or diversity management. NTL works internationally as well, offering programs and training in Asia and other areas.

NTL straddles many contradictions. It began as an organization of academics who wanted to extend their praxis beyond the academy and who were intrigued with the possibility of bridging the divide between social science and social action. Thus, NTL occupied a unique place between the behavioral and social sciences. Through NTL, researchers, scholars, educators, and activists are brought together to solve social problems, to create programs of human change, and to integrate action, education, and research.

NTL has grown since its inception and, like other educational entities, is reexamining its market to discover the provocative possibilities of human interaction across time and space; to answer the questions raised by the dynamics of human interac-

tion in an electronic environment; to continue to meet the challenge of unraveling the possibility of work-life balance; to manage rapid change, rather than react to it; and to continue a focus on managing and valuing diversity and various societal problems, while at the same time strengthening the design and delivery of its training to meet a changing environment.

*See also:* CONTINUING PROFESSIONAL EDUCATION.

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## NURSING EDUCATION

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To place nursing education into perspective, it is helpful to reflect on the health care environment and the role of the nurse in that environment. The health care landscape in the United States has been changing at an unprecedented rate. Nursing education also has undergone changes to keep pace and to prepare leaders who are highly educated and technically sharp decision-makers and clinicians. What is most noteworthy, however, is not that change has occurred but rather that the rate of change since 1980 has been greater than during similar periods. Factors driving the transformations include new medical and technological advances, new health care delivery systems, and expanded roles for nurses.

Nurses are the largest single group of health care professionals but they do not practice in isolation. Rather they are an integral part of health care teams, institutions, and systems. As health care continues to move outside the hospital, the demand for nurses who can function across systems and direct a continuum of care is rising. The changing health care environment has not only changed the role of the nurse, it has also affected the supply–demand ratio. Hospitalized patients have multiple health problems, are more acutely ill, and are discharged sooner. This has

increased the demand for nurses in acute care institutions at the same time that more nurses are needed in home and community settings. Given trends that emphasize health promotion and disease prevention, the need for acute and chronic care is skyrocketing.

The Federal Division of Nursing predicts that by 2010, the growing demand for nurses with bachelor of science in nursing (B.S.N.) and master of science in nursing (M.S.N.) degrees will outstrip the supply and that by 2020, the demand for B.S.N. and M.S.N. graduates will grow nearly twice as fast as the expected increase in the workforce. The predicted need for nurses is sobering, yet it is important to acknowledge that the impending crisis is not solely numbers based. The question is not only how many nurses will be available, but more importantly, will their educational preparation be appropriate to meet future health care needs. Based on the Federal Nursing Division's data, the answer is to increase the number of bachelor's, master's, and doctorate-level nurses.

### Bachelor of Science in Nursing Degree

In 1996 the American Association of Colleges of Nursing affirmed nursing's place in American higher education by stating that the minimum educational requirement for professional nursing is the bachelor of science in nursing (B.S.N.) degree. B.S.N. programs are offered by four-year colleges and universities. Most generic B.S.N. programs are four academic years, although some students who have other responsibilities may choose to extend their programs. The term *generic* refers to a program designed for students studying nursing for the first time. By comparison, some B.S.N. programs have degree completion tracks for registered nurses (RNs) and licensed practical nurses (LPNs) who have completed basic nursing programs in hospitals or community colleges. Some programs also offer tracks for individuals with bachelor's degrees in other majors. B.S.N. programs must be approved by the state board of nursing.

A B.S.N. degree enables graduates to not only launch a successful career in nursing, but also to appreciate a more meaningful life. Therefore, the curriculum includes courses in nursing as well as the arts and sciences. Because the B.S.N. graduate is prepared as a generalist, nursing courses include both theory and clinical experiences and in most specialty areas, such as adult, community, maternal-child, pediatric, psychiatric, and critical care nursing. In

some B.S.N. programs, students enroll in nursing courses at the freshman or sophomore level with courses in the major along with arts and sciences integrated throughout the program. In other programs, nursing courses are concentrated at the junior and senior levels. The number of credit hours required for a B.S.N. degree usually ranges from 120 to 130. Upon completing the degree, graduates are eligible to take the National Council Licensing Examination (NCLEX) to become licensed as a registered nurse. By law, nurses must be licensed to practice in the state where they work.

A strong background in science, mathematics, and verbal skills is needed to succeed in nursing. The admission process varies among institutions but typical criteria include: official transcripts with a minimum grade point average (GPA) of 2.0; SAT or ACT Assessment score, and TOEFL (Test of English as a Foreign Language) for foreign students; essay; and letters of recommendation. Some B.S.N. programs admit students directly into the major. Others admit students initially to the institution and require students to apply for admission to the major after completing prerequisite courses including the sciences.

### Master of Science in Nursing Degree

Whereas bachelor's degree graduates are generalists, master's degree graduates are specialists. The master of science in nursing (M.S.N.) degree program prepares graduates to be advanced practice nurses (APNs) with in-depth theory and practice in a clinical specialty. Some M.S.N. programs combine both clinical and functional roles (e.g. education, administration, case management). However, the American Association of Colleges of Nursing (1996) concluded that the clinical role should be the primary focus for all master's programs.

Most master's students select one of four tracks or primary roles: clinical nurse specialist (CNS), nurse practitioner (NP), certified registered nurse anesthetist (CRNA), or certified nurse midwife (CNM). The CNS is an APN with expertise in theory and research-based clinical nursing practice. In addition to clinical practice, major roles of the CNS include teaching, research, consulting, and management, all within an area of specialization, such as acute care, adult health, community health, critical care, gerontology, maternal-child, mental health, neonatology, oncology, pediatrics, or women's health. The NP is an APN who is a primary care provider to individuals and families in multiple settings.

Originally developed to function as a physician extender, the NP role has evolved to incorporate a more holistic nursing approach to illness prevention and health promotion. NPs assess, diagnose, treat, prescribe, monitor, and refer patients as appropriate. The CRNA works closely with a physician and administers anesthesia in hospitals and outpatient settings. The CNM manages routine obstetrical cases. APNs have a collaborative agreement with a physician.

Although M.S.N. programs offer a wide choice of clinical specialties, most curricula include core courses such as statistics, research, professional role, concepts and theories, health policy, ethics, and economics. Other required courses include advanced study in physiology and pathology, pharmacology, and health assessment. The number of clinical hours is program specific but ranges between 500 and 750 are common. M.S.N. programs may require a thesis or other culminating project, and a comprehensive examination. The number of credit hours required for the M.S.N. degree typically ranges from 36 to 48. Although the master of science in nursing (M.S.N.) is the degree awarded most frequently, some institutions award a master of nursing (M.N.), a master of science (M.S.), or a master of arts (M.A.) degree. The difference is more a function of institutional organization, not the graduate nursing curriculum.

The admission process is institution specific but typical admission criteria include the following: official transcript verifying a B.S.N. degree from an accredited program with a minimum GPA of 3.0; undergraduate courses or demonstrated competency in health assessment, statistics, and informatics; practice in nursing; Graduate Record Exam (GRE), Miller Analogy Test (MAT), or TOEFL for foreign students; letters of recommendation; résumé; and an essay. The above discussion assumes that a M.S.N. applicant has a B.S.N. degree, but it is possible for nurses with no bachelor's degree or a non-nursing bachelor's degree, and for individuals with no background in nursing to be admitted into some graduate nursing degree programs.

After completing a master's degree or post-master's certificate, CNSs and NPs may take national certifying examinations such as those offered by the American Nurses Credentialing Center (ANCC) providing their programs included the requisite content and hours in a clinical specialty. This credentialing system further demonstrates nursing's ever-increasing standards and commitment to excellence.

## Doctoral Degrees in Nursing

The quality of nursing education has increased further as evidenced by the fact that doctoral degree programs in nursing, and even postdoctoral programs, have become an integral part of American higher education. Prior to 1960 there were no doctoral programs in nursing. During the 1960s nursing was added as a minor to other Ph.D. degree programs. It was not until 1970 that Ph.D. programs in nursing emerged, but the number of programs has increased significantly. At the beginning of the twenty-first century, there are more than seventy-five doctoral programs in nursing leading to a Doctor of Philosophy (Ph.D.) or a Doctor of Science in Nursing (D.N.S., D.S.N., or D.N.Sc.) degree.

Both the Ph.D. and D.N.S. degree programs focus on research and “prepare students to pursue intellectual inquiry and conduct independent research for the purpose of extending knowledge” (American Association of Colleges of Nursing, 2001b, p. 2). Stated differently, doctoral programs in nursing enhance the scientific foundation for nursing theory and practice. A research-focused doctoral degree prepares graduates for a variety of positions within higher education, health care, government, and the private sector, such as educator, researcher, administrator, and advanced practice. Career options for nurses prepared at the doctoral level are virtually limitless.

Directed toward preparing graduates for a wide range of scholarly pursuits, most doctoral programs require courses in history, philosophy, and theory of nursing; informatics; research; and in related issues from health care ethics to economics. However, curricula do vary depending upon philosophy, faculty expertise, and other resources. Other requirements include a dissertation, oral defense, and comprehensive examination. The number of credit hours required for the doctoral degree is institution specific.

Criteria for admission to a doctoral program are similar to those for a master’s program. Typical criteria include an official transcript verifying a M.S.N. degree with a minimum GPA of 3.0; a strong foundation in statistics; GRE score; practice in nursing; curriculum vitae; letters of recommendation; essay; and interview by a faculty committee.

Higher education is a lifelong investment. Undergraduate and graduate students should investigate several programs to determine which one correlates best with their academic and clinical inter-

ests and career goals. Students also should carefully assess multiple institution and program characteristics, especially accreditation status. Colleges and universities are accredited by nationally recognized, regional accrediting associations. Undergraduate and graduate nursing programs may apply for specialty accreditation by the Commission on Collegiate Nursing Education (CCNE) or the National League for Nursing Accrediting Commission (NLNAC). Although accreditation is voluntary, it demonstrates an institution’s and program’s commitment to continuous improvement and quality education.

*See also:* MEDICAL EDUCATION.

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CAROLE F. CASHION

## NUTRITION AND CHILDREN'S PHYSICAL HEALTH

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Proper nutrition is crucial for the appropriate growth and development of children. Undernourished children are at risk for illness, cognitive delay, and poor social skills. Overnourished children are at risk for obesity, diabetes, heart disease, and a shortened life span.

Proper nutrition implies adequate caloric intake for optimal growth and development. At birth, a child's metabolic rate per unit weight is at its peak. This period is coincidental with the highest rate of brain growth and development. Therefore, it is imperative that newborns be adequately nourished. Human breast milk is the ideal food for newborns, and remains the gold standard by which all formulas are measured. Breast-fed infants are healthier, have better cognitive development, and are provided with a more secure mother–infant bond. Research has shown that breast-fed infants are less prone to infection and food allergies, and have IQ scores three to five points higher than their non-breast-fed counterparts. The American Academy of Pediatrics recommends breast-feeding for the first twelve months of life. Solid foods should be introduced around age six months, and supplemented with breast milk. It is recognized, however, that most of the immunologic and cognitive benefits of breast-feeding decrease after the first six months. Thus, the first six months of life provide the greatest return on breast-feeding.

In the newborn period, babies require approximately 100 kilocalories per kilogram of body mass each day. This requirement decreases approximately

10 kilocalories per kilogram every three years, until reaching adult needs of approximately 40 kilocalories per kilogram of lean body mass. It is important to ensure that in addition to adequate energy intake each child has a well-balanced diet to provide appropriate vitamins and minerals as well. The U.S. Department of Agriculture has provided a "food pyramid" as a guide to healthy eating for adults and older children. It suggests that a daily regimen consist of six to eleven servings of bread, rice, cereal, or pasta; two to four servings of fruit; three to five servings of vegetables; two to three servings of dairy products; two to three servings of meat, beans, eggs, or nuts. Sweets and fats are to be consumed sparingly.

Research in the decade 1989–1998 has shown that undernutrition, even in a mild form, can have detrimental effects during childhood, and the younger the child, the more at risk he or she is for undernutrition. It is clear that the greater degree of malnutrition, the worse the outcomes. Inadequate nutrition ranges from the starvation states seen during famines, to the more familiar mild undernutrition common among children of poor socioeconomic standing. The body, when in a starvation state, preserves vital functions first. Thus, energy is shunted to basic metabolic tasks, leaving little energy for cognitive development and social activity. Two distinct types of starvation are recognized: marasmus, or general caloric insufficiency, and kwashiorkor, or protein deficiency. Marasmus results from inadequate caloric intake. Physically, children with marasmus have a wasted appearance throughout the body. Generally, in the face of inadequate calories, weight is first lost, then vertical growth becomes stunted, and the last growth parameter affected is the head circumference. Although correction of this condition with adequate calories can be achieved, cognitive abilities and height may remain stunted. Kwashiorkor results from inadequate protein intake. The appearance of kwashiorkor is a skinny child with a protuberant belly. This appearance is due to the fatty infiltrate of the liver and water retention of the surrounding tissues. The treatment of this condition is to provide adequate protein. As with marasmus, the damage done while in this state is often not reversible.

Mild to moderate undernutrition is a threat to a child's achieving his or her potential cognitive abilities. Undernourished children are typically easily distracted and fatigued. A 1998 study demonstrated

that children who skip breakfast perform worse on tasks of memory and concentration than when they eat breakfast. Other studies have suggested that children with inadequate amounts of protein in the diet had lower achievement scores than their counterparts with adequate protein intake.

Iron deficiency is the most common nutritional deficiency in the United States. Anemia, or decreased red blood cell mass, results from a lack of adequate iron in the body. This lack of iron causes an irreversible decrease in IQ. One of the most common reasons for anemia in toddlers is a crowding out of iron-rich foods by excessive milk intake. In older children, iron deficiency likely results from dietary inadequacies as well as from menstruation in females. Lower socioeconomic classes are at particular risk for iron deficiency.

During the 1990s overnutrition became a concern in industrialized nations. In the United States obesity is the most common preventable health problem affecting both children and adults. Fourteen percent of children and adolescents in the United States were obese in 1999. This represents an increase of 50 percent from the previous decade. Obesity is usually a result of chronic mild overeating, as opposed to repeated binge eating. Consuming five hundred kilocalories more than needed each day will result in a weight gain of approximately one pound per week. Obesity has not only negative psychological effects on the individual, but also negative health effects. People who are obese have shorter life spans, higher than average blood pressure, higher cholesterol levels, increased incidence of diabetes, and more difficulties with the hip and knee joints. Obesity is most effectively treated when interventions are at an early age. Only 25 percent of children who are obese at age six years will go on to be obese adults.

However, 75 percent of obese teenagers will go on to be obese adults. Treatment includes increased exercise, decreased food intake, and family counseling about good food choices. As of the year 2002 there are no safe and effective drug therapies for obese children. Despite millions of dollars spent every year in the weight loss industry, it still appears that the best way to combat obesity is to prevent it.

*See also:* HEALTH AND EDUCATION; HEALTH SERVICES, *subentry on* SCHOOL; SCHOOL FOOD PROGRAMS.

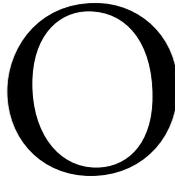
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PAUL D. HAIN



## **OPEN CLASSROOM SCHOOLS**

Open education is a philosophy which values the natural development and experience of the child as the primary determinants for the appropriate curriculum and methods. During the 1960s the world witnessed a remarkable amount of social change and the emergence of new philosophies in various aspects of society. Groups seeking reform challenged many institutional practices. Criticism from these groups often reflected their lack of trust in decision-making structures. Educators were prompted to examine issues of control within their traditional philosophy, notions of curricula, and protocols of teaching and learning. Educators began a search for an institutional model of child-centered pedagogy.

In the mid-1960s Americans visited the English infant schools, which promoted self-determination. These elementary schools advocated “informal” or “open” education and the “integrated day.” The “integrated day” refers to an interdisciplinary approach in which content from various subjects is woven and presented in a hands-on, problem-solving context. Educators from several continents adapted and applied these concepts in new open space or open plan facilities.

The open classroom school generally had an architectural configuration of large pods containing six to twelve classrooms, each with an outside access and no interior walls. Children were not assigned individual desks; they sat in cooperative small groups at tables. Teachers usually defined their workspace by their arrangements of bookshelves and cabinets. The lack of hallways meant more space was available for instructional use. The outside accesses and lack of walls allowed for greater accessibility. These de-

sign changes also resulted in a more efficient use of energy at a time when energy was becoming more costly.

The changes in the internal structure of the pod accommodated changes in the philosophical approach taken by educators. Without traditional rooms, teachers could redefine the nature of their role. The teacher shifted from the dispenser of knowledge to the facilitator of learning. Teachers were no longer isolated from each other. They were better able to confer and plan. Learning became an activity that was child centered rather than teacher-oriented. Standard grade-level skill checklists were set aside and the differences in individual needs provided the rationale for the curricula. Students’ progress was not based on rankings, which define success in a competitive context; instead, evaluation of progress was reported in terms of the individual’s achievement in relation to growth from previous levels and the individual’s initiative and responsibility as demonstrated in academic and related arts areas.

As the role of the teacher changed, methods of instructional delivery were necessarily challenged. Traditional instruction involved discrete subject areas with generalized class expectations for performance. The open space philosophy altered the format of instruction. Classes were replaced with interest centers, which offered topical activities. Center choices promoted the discovery method, a precedent to constructivism. Learners were prompted to explore and develop their own connections in order to promote concept development and the scientific method. Students moved among the centers largely by choice and often without specific schedules.

Class composition was reminiscent of the one-room schoolhouse. Teachers arranged flexible multi-age grouping within the interest centers. Mindful of individual needs, teachers were challenged to maintain fluid group membership. In this manner, they could naturally develop a disposition towards diversity and citizenship. In some open classroom schools, homerooms or “family groups” were not configured by grade level. A class may have contained five students at each level, kindergarten through fourth grade. Each year, five would enter, and five would graduate. The stability of relationships over a number of years allowed a different social dynamic. The homeroom was designed to reflect the cooperative nature of learning. Over time the teacher could develop a richer knowledge of each student and serve as a long-term counselor and mentor.

The construction of open classroom schools declined by the mid-1970s. Concerns about noise and distraction encouraged educators to return to a traditional approach. Although the open classroom movement lost popularity, certain aspects of its philosophy and methods were reshaped and used. Many open-space facilities have been remodeled with the addition of inside walls, or become magnet programs, which have located technology labs and computer stations conveniently in the open spaces. Schools with open space classrooms varied to the degree in which the philosophies were operationalized. This variability limits the degree to which one evaluates the concept’s effectiveness. Research has indicated that the open classroom approach may not have significantly improved learning, but it certainly did not impede achievement. Additional research suggested that children in open classroom programs did score higher than traditional classroom students in self-concept, attitudes towards school, and creativity.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; INFANT SCHOOLS IN ENGLAND; INSTRUCTIONAL DESIGN; NEILL, A. S.; OPEN EDUCATION; PROGRESSIVE EDUCATION.

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STEVEN R. BAUM

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## OPEN EDUCATION

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Open education refers to a philosophy, a set of practices, and a reform movement in early childhood and elementary education that flourished in the late 1960s and early 1970s in the United States. It received support from similar work that had been developing for many years in England, where it was simply termed *modern* education. Its development in both countries relied upon the long tradition of Progressive education.

Known for its spirited, child-centered classrooms, open education was viewed by proponents as a humane, liberating alternative to the more formal classrooms of its day. To detractors, its informalities represented an abdication by teachers of their duty to instruct, an indulgence that failed to hold students or teachers accountable. Where adherents saw independent, individualized learning, critics saw chaos. At the height of its popularity, the ideas of open education influenced at most 20 percent of infant (ages 5–7) or junior (ages 8–11) schools in England and perhaps half that number of comparable schools in the United States.

### The Classroom

The open classroom, at its best, is a busy laboratory, richly provisioned with materials for learning. Alone or in small groups, children move from one work area to another, using balance beams, colored beads, blocks, and other hands-on material in the mathematics corner; working on art projects in paint, clay, or construction scraps; reading quietly or aloud to others from books or from their own illustrated reports. The room itself is arranged into several separate learning centers, a functional organization that invites choice of participation in a variety of activities. The school day is flexibly scheduled, allowing students to determine for themselves when an activity merits more time and when it is completed. Class meetings often start and end each day, providing time to give announcements and news, negotiate assignments, and share projects. The teacher rarely calls the entire class together for group instruction. Classes are composed of mixed ages, a vertical group

setting in which children encounter points of view and abilities other than their own. This “family grouping” also encourages cooperative learning and social responsibility, with older students helping younger ones. Within the classroom, the teacher circulates among students, extending their learning by commenting and responding to their work, asking leading questions, and suggesting further directions for them to explore. The curriculum is necessarily flexible, responsive, and organic.

### Philosophical Underpinnings

Open education believes in the following tenets:

- Children’s fundamental desire and capacity to conduct their own inquiries and to learn in their own way from direct experience
- The right of children to take significant responsibility for their own education
- A “whole child” approach that includes the emotional and social aspects of learning
- A reciprocal relationship between school and community
- School as an environment for personal choice and fulfillment, not as mere training ground for pre-selected social roles
- The curriculum as better learned through direct experience than from textbook formulation
- Teachers functioning as observers, guides, and providers of resources, materials, and experiences suited to the needs and interests of students

A general optimism prevails, both about children’s capacity to respond positively to freedom and independence, and about school as a miniature democracy preparing a self-motivated, responsible citizenry.

These ideas are grounded in the Progressive philosophy of American educator John Dewey (1859–1952), and in the developmental psychology of Swiss clinician and theoretician Jean Piaget (1896–1980). Dewey believed that learning results from the real-life experiences of a growing mind; it is the “process of learning to think through the solution of real problems” (Dworkin, p. 20) by means of active inquiry and experience, not by memorization and recitation. The school is a microcosm of society, not to be separated from the child’s familiar context of family, community, social norms, daily life—all areas that children need to confront and comprehend. Education is a process of living in the here and

now, not a preparation for future life. If each child is brought into “membership within a little community, saturating him with the spirit of service, and providing him with the instruments of effective self-direction, we shall have the deepest and best guarantee of a larger society which is worthy, lovely, and harmonious,” Dewey wrote (Dworkin, p. 49). Throughout, he emphasized the value and importance of childhood and the influence of social environment upon individual development. All this reflects a long-standing American faith in the civilizing power of education via the common school.

As a “genetic psychologist,” Piaget studied the quality, sequence, and development of mental concepts in children. Through exploration and interaction with things around them, children build structures that explain the world and how it works. New experience and deeper understanding force modification of earlier formulations, as the child’s inner framework is reshaped and restructured to accommodate new realities. This process commences in very concrete ways when the child is small; later, at ages seven or eight, the mind begins to develop more structured thought, and in early adolescence moves on to abstract conceptualization. Every child goes through this process: the sequence is invariable, though the speed, style, and quality of growth vary. According to Piaget, children are the architects of their own individual intellectual growth, and this concept provides the link to Dewey and Progressive education: children are born with the natural ability to do their own learning, a capability that in part defines the evolutionary heritage of the human race.

### English Beginnings

In England, the formative period of open education was protracted. Before 1900, some teachers had begun to work in less formal ways, often in isolated, one-room village schools, and with little official or administrative support. By 1931 the Consultative Committee on the Primary School proclaimed in the Hadow Report, “The curriculum is to be thought of in terms of activity and experience rather than of knowledge to be acquired and facts to be stored” (p. 1). World War II was also an influential factor, as children and their teachers were taken out of the cities into the countryside where they were left to improvise. But it was with the release of *Children and Their Primary Schools* (the Plowden Report) in 1967 that these “modern methods” received their most authoritative support. “At the heart of the educa-

tional process lies the child,” began the Central Advisory for Education, “Children need to be themselves . . . . The child is the agent in his own learning” (paragraphs 2.6 and 2.7). Educators such as Sir Alec Clegg in the West Riding of Yorkshire, Edith Moorhouse and John Coe in Oxfordshire, and Stewart Mason in Leicestershire asserted strong personal leadership. In-service teacher centers, Her Majesty’s Inspectorate, and key teacher training colleges, especially the Froebel Institute with its demonstration school and influential publications, and Goldsmiths’ College at the University of London, provided institutional support.

### The American Experience

By the mid-1960s many Americans were considering basic educational change. Motivated by the launching of *Sputnik* by the Soviet Union in 1957 and cold war competition, business leaders called for the revitalization of mathematics and science curricula. Meanwhile, rebellious youths challenged many social institutions for their fairness and “relevance.” Schools were portrayed as racist, sexist, and oppressive. Teachers hoped to rekindle their sense of creativity and love of teaching by turning to less formal methods and materials. Parents responded both to the high quality of student work and to their children’s obvious enthusiasm for school.

On learning that informal, child-centered classrooms were already established in Britain, Americans flocked to see for themselves. Some, like Joseph Featherstone, wrote about their experiences; others, such as Lillian Weber and Edward Yeomans, set about to educate or reeducate teachers. Soon open education took its place alongside schools without walls, schools within schools, storefront academies, community schools, and other alternative practices. Some new converts understood the underlying philosophy and recognized the enormous demands open education placed on the classroom teacher; others copied carelessly.

### Questions, Controversies, and Criticisms

Criticism of open education was of two sorts. Some disagreed with its basic aims, finding the goals of self-actualization, independence, and social responsibility to be seriously misguided. This was a philosophical, ideological opposition that was part of a longstanding debate about the aims of education. Others questioned its effectiveness, especially in public schools. They challenged its appropriateness

for all students; they queried whether its open structure produced discipline problems; they worried that school transfer would be complicated by the absence of a structured curriculum; they wondered whether students would really learn the “basics.” They also perceived inefficiency, unclear objectives, and what seemed a lack of accountability.

In England, such questions had begun in the late 1960s; and, by 1971, a collection of “Black Papers” was published by a group of Oxford and Cambridge intellectuals. They were especially critical of Progressive assumptions about children’s learning and about the absence of any agreed-upon common body of knowledge that all educated people should possess. Evaluation was the focus of intense debate. To adherents, proof of success was to be found in the children’s enjoyment of school and the high quality of their work. To critics, however, neither this raw data, nor the potential of portfolio assessment, nor positive testimonials from school administrators sufficed: they required objective, quantifiable evidence.

In fact, for many reasons, open education defied empirical evaluation, as it favored:

- Collaborative learning, where it is difficult to determine individual achievement
- Student participation in planning and in setting goals
- An evolving curriculum rather than the set scope-and-sequence chart of a more traditional school
- Standardized testing to be used only as a diagnostic tool
- Process over product, long-term goals over short, and affective as well as academic ends.

Because open education included a variety of similar but not identical classrooms, no standard measure of “openness” was ever established. For researchers, it proved impossible to establish clear experimental and control groups, a basic necessity for conventional studies.

Thus on the one hand, there was considerable misunderstanding of open education; on the other, there were some very real methodological problems in evaluating its effectiveness. Both left the movement vulnerable to attack. In the end, several factors account for the failure of open education to thrive:

- Miscalculation of the demands of teaching in this manner

- Failure to understand the centrality of teacher support services in the effort to reform schools
- Institutional inertia.

The movement failed to develop sufficient political strength to override its critics' concerns, and the times simply changed, as the mid-1970s saw a general shift toward more conservative social policies, and, in education, a call for increased structure and formal accountability. Nonetheless, the influence of open education remains in American schools, the lasting legacy of a promising effort at Progressive educational reform.

*See also:* ALTERNATIVE SCHOOLING; DEWEY, JOHN; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; INDIVIDUALIZED INSTRUCTION; PHILOSOPHY OF EDUCATION; PIAGET, JEAN; PROGRESSIVE EDUCATION; SCHOOL REFORM.

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## OUTCOME BASED EDUCATION

Few educational concepts have sparked as much interest, enthusiasm, misunderstanding, and controversy during the 1990s as Outcome Based Education (OBE). In one form or another, and sometimes against their political wills, educators the world over are increasingly focusing their efforts on what are variously being called outcomes, results, performances, competencies, or standards.

Whether proposed by national governments, as in Scotland, South Africa, or the United Kingdom; by state or provincial policy bodies, as in Australia, Canada, and the United States; or by local jurisdictions and institutions, as is happening on virtually every continent, how these changes are being applied to traditional forms of education vary as much as the terms themselves.

### The Dilemma of Defining Outcome Based Education

One can begin to bring some clarity to this melange of meanings and models, however, by looking systematically at the term *outcome based education* itself. At face value, the concept is quite simple and straightforward: Start by developing a clear picture of what learners should ultimately be able to do successfully at the end of a significant educational experience (i.e., the outcome). Then base (i.e., develop) the curriculum, instruction, assessment, and reporting (i.e., education) directly on that clear picture. This is a simple matter of clearly defining what one

wants learners to be able to do (the end) before the beginning, teaching them how to accomplish that end, and then assessing and documenting the end they were to achieve in the first place. Notice the fundamental cause-and-effect logic of this model: Education (the means) is based on the outcome (the end), not the other way around.

When are learners successful in such a system? When or whenever they can demonstrate the intended learning outcome. How many chances are they given to succeed? Usually there is more than one and sometimes there are several chances.

**Real world examples.** If these basic ends/means elements of OBE sound simple and straightforward, they are, and there are many examples from the “real world” to illustrate them. They include skill and technical training of all kinds (that sometimes reaches back hundreds of years to the craft guilds of the Middle Ages in Europe); ski schools; Boy Scouts’ merit and honor badges; pilot and transportation licenses of all kinds; first-aid training; almost all military and athletic training; and virtually all licensure programs in the practical arts.

What is the essence of each of these examples? In some cases successful performance is a matter of life and death, but in all cases two factors stand out: (1) A clear criterion of success or standard of performance (the intended end) guides both instructors and learners; and (2) there is variability in the time and number of opportunities (critical means) that learners might take to achieve the standard. Having learners successfully demonstrate the outcome is what counts the most in these models. In OBE language, successful learning or performance (the end) is the constant, and the time required to attain it is flexible.

**The education system reversal.** But in virtually all formal educational systems across the globe, just the opposite configuration of these two defining conditions prevails. There, time is the constant, and learning or performance is the variable. Consequently, defining exactly what is and is not OBE on the education scene is extremely problematic in formal education because the two factors that most fundamentally define OBE are not only not present, they are actually reversed.

As William Spady described it in both 1994 and 1998, the world’s education systems are time based: that is, they are defined by, organized around, focused on, and managed according to the calendar

and clock, not outcomes. Virtually everything that happens within them is forced to exist within fixed, predefined blocks of time, no matter how much actually needs to be accomplished by either instructors or learners. When an official time block ends, so does the learner’s opportunity to pursue the outcomes and improve performance on them.

From this perspective, introducing outcomes into a time-based system is like trying to force soft, large, round pegs into rigid, small, square holes. To date, the holes have emerged the overwhelming winners. Across the globe time has remained the given and the constant, even though outcomes have increasingly been emphasized as the reason the time blocks exist.

The other set of rigid square means—holes into which outcomes are being forced—is the curriculum, and it too has prevailed as a dominant force in this implementation dynamic. Although some countries and states have adopted frameworks of outcomes that reach across or go beyond existing curriculum areas—frameworks that contain complex kinds of performance abilities, which link to eventual career and life performances—the overwhelming approach to OBE across the globe has been one of developing outcome frameworks for the major subject areas in the existing curriculum. The latter are variously called program outcomes, specific outcomes, learning area outcomes, curricular outcomes, and standards. In this approach, the curriculum’s content structures are the givens, and outcomes are derived from them, resulting in a “tail-wags-dog” approach. As a result the system’s means are used to determine its ends, even though the term outcome-based implies just the opposite.

**Better to call it “CBO”?** Given the fundamental discrepancy between what the term OBE implies and how it has been so overwhelmingly applied, it is wise to distinguish between its conceptual meaning and its implementation realities. Those interested in upholding the inherent meaning of the OBE concept and its reform ideals view the broad sweep of imitation implementation practices in a skeptical light, often referring to them as “CBO” rather than OBE. Among other things, CBO stands for curriculum-based outcomes, calendar-based organizations, content-bound objectives, convention-bound orientations, and convenience-based operations.

### Objective Based Education as a Reform Ideal

Those who generated the OBE movement in the United States during the 1970s through the 1990s were deeply influenced by the research and concepts of two key individuals: John Carroll (1963) and Benjamin Bloom (1968). Carroll's revolutionary ideas about *aptitude* as rate of learning rather than fixed ability opened the door to an expanded view of learner potential, which Bloom promoted and tested over the next twenty years. The resulting reform initiative was both a philosophy of expanded learning success for all learners and a classroom instructional strategy called *mastery learning*.

Based on the documented successes of a variety of mastery learning initiatives in the 1970s, a coalition of researchers, practitioners, and reformers founded an organization called the Network for Outcome Based Schools (NOBS) in 1980. The NOBS and its members generated major interest in both mastery learning and the expanded notion of OBE throughout North America during the 1980s and early 1990s, hosting many national and regional conferences featuring practitioners who had achieved major improvements in student learning through the systematic application of the network's key operating premises and principles. Several of the most notable of these local successes are documented in Spady's 1994 book.

#### Objective based education's four power principles.

The spirit and intent of the NOBS operational philosophy was to convince educators that they could dramatically improve student learning success and their professional effectiveness by consistently, creatively, and simultaneously applying four key operating principles in their schools and classrooms. These power principles are:

1. clarity of focus on culminating outcomes of significance,
2. expanding opportunity and support for success,
3. high expectations for all to succeed,
4. designing down from ultimate outcomes.

Over time the network's members became convinced that if any form of OBE was to exist, it needed to consistently embody these four principles because without them educators would lose the leverage these principles gave them in expanding what NOBS called the *conditions of success*—the basic ground rules around which learning and learning opportunities are fundamentally structured.

Do all learners have a clear picture of what they are ultimately expected to demonstrate before a learning experience begins? Is every learner given more than one routine chance or block of time in which to reach or exceed the expected standard? Are positive and challenging expectations for learning success applied equally to all learners, with no bell curves or success quotas applied? Has the curriculum been systematically designed back from the end point that learners are expected to reach, so that there is a clear path for getting there? If the answer to any of these four questions is no, then constraining conditions of success are deemed to exist and, as such, the model in question falls short of the substance, integrity, and spirit of the four power principles. For more than a decade, models of OBE were held to this exacting standard.

#### Outcomes as Competence

By the mid-1980s the leaders of the rapidly growing OBE movement had come to understand that outcomes were culminating demonstrations of learning, which required learners to do things of significance with what they knew and understood. As such outcomes required both complex mental processing and the ability to carry out visible and accessible processes—processes that were specified by the verbs used in defining the outcome (e.g., describe, explain, design, negotiate, organize, produce, disseminate), this demonstration component brought skill, competence, and performance to center stage in outcome-based models and sent implementation efforts down three quite distinctive paths, depending on the designer's conception of a learning demonstration.

**The disciplinary path.** The disciplinary path focused on student mastery of quite specific skills, often the skills and tasks imbedded in daily lessons and multiweek units of instruction. Usually these were skills inherent in the curriculum content itself. This approach was quite consistent with the original mastery learning model, was subject-focused and disciplinary in nature, and invited minimal change in curriculum structures and instructional delivery patterns. The application of the power principles took on a distinctive "micro" focus, usually within self-contained classrooms.

Because of its focus on specific content and skills, the disciplinary path eventually led to the development of standards in the subject areas and to the standardized testing efforts being employed by education systems worldwide in the late 1990s and

early 2000s. Its proponents, however, see in the latter efforts virtually no attempt to systematically address OBE's four power principles and would in no way regard these initiatives as real OBE.

**The interdisciplinary path.** A second path took a much more interdisciplinary and change-oriented tack, prompted by its proponents' conviction that learning performance could and should take more complex forms than content-focused skills. In the main these were educators who saw what many called higher-order skills as having no exclusive disciplinary home—abilities such as communication, critical thinking, planning, and problem solving. Nor did these abilities fall into age-specific categories. These higher-order competencies, they argued, were fundamentally developmental, increasing in complexity as learners matured, and needed to be taught that way. Consequently they needed to be addressed and fostered in all subject areas and grade levels for all learners.

By connecting the concepts of higher-order, interdisciplinary abilities with outcomes, these reformers intended to take both OBE and educational change to a new level. That level involved an elevated, more complex notion of learning and competence; a developmental approach to curriculum design and instruction; an authentic approach to assessment and reporting; a dramatic expansion of what was meant by instructional time and opportunity; a frontal challenge to traditional tracking, streaming, and promotion systems; and an intensive connection and collaboration among all players within the education system in addressing student learning and success. It forced both thinking and practice out of the traditional square holes, and it gave the four power principles a whole new meaning and expanded scope of application.

Much of this approach is embodied in the cross-disciplinary outcomes of the national system in South Africa, several of the states or provinces in Australia and Canada, as well as numerous local districts in North America. Because of its developmental, interdisciplinary nature, however, it is fundamentally inconsistent with national and state policy emphases on content standards and time-based standardized testing.

**The future-focused path.** The third path represents an even more dramatic break from the small, square holes of time-based, curriculum-bound traditional educational practice. The future-focused path

emerged in the late 1980s as some leaders of the OBE movement took the notion of culminating demonstrations of learning to its logical limit, recognizing that real outcomes matter and occur after students have finished their formal educational experiences. In other words, authentic outcomes are only known after all of the instructional preparation is complete, and for graduates that means they will be played out in the future they face, not simply in the schooling they have had.

This transformational departure from the norm further elevated the notion of competence beyond education itself to the life and role performances in which individuals engage in their career, family, and community lives. Life, not school, is the real measure of an education's significance and impact, argued these future-focused proponents, and the design of outcomes and learning systems must begin precisely there: with the challenges and conditions that the constantly evolving future inevitably offers.

This future-focused approach to OBE both invited and challenged educators to look far beyond the curriculum and system structures in which they were currently immersed, to examine the kinds of performance abilities required of successful adults in this world, and to design and model their efforts on this dynamic and expansive template. Only then could they ensure that the education their students were getting was actually aligned with the realities and challenges they faced in a world of continuous discovery and constant change. In so doing, they would add a third critical dimension to the OBE learning model: content, competence, and context—the actual settings and conditions in which performance abilities are ultimately tested.

Without question this third role-performance conception of competence represents a radical departure from the standards-based models of reform that have taken such a powerful hold of education in the 2000s. It further expands the meaning, applications, and implications of OBE's four power principles, and it openly challenges the very paradigm on which the education systems of the past century are based.

### **The Future of OBE**

The enormous inertia that surrounds and pervades traditional education systems leaves the widespread implementation of authentic Outcome Based Education very much in doubt. Because they are under

enormous public pressure to show results, public systems will continue to advocate outcomes, but almost inevitably in a CBO format. Externally imposed accountability reforms will keep things constrained in small, rigid means holes, with educators compelled to find ways to engage and empower a very diverse population of learners within those inflexible constraints.

Consequently, in the early twenty-first century, trends suggest that true OBE may only survive in alternative settings—schools that are given the flexibility to meet the needs of nontraditional learners in ways that transcend the constraints and inflexibilities of traditional education as we have known it. Outcome Based Education is fundamentally about system change, but the forces of system inertia are prevailing in the accountability-driven world of the 2000s.

*See also:* CURRICULUM, SCHOOL; LEARNING; SCHOOL REFORM.

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## OUTDOOR AND ENVIRONMENTAL EDUCATION

Outdoor education and environmental education are separate but closely related areas of study within the field of education. They share some common content and processes, although they are distinctive in other important ways. Various interpretations have appeared in the literature, but their original purposes have changed very little since their inception. This article will define the terms and show their relation to each other and to other related educational movements, describe their objectives and purposes, outline their commonly used instructional methods, briefly trace their historical development in the United States and abroad, discuss their status in American school curricula, and suggest several key issues, controversies, and trends.

### Defining Terms

The term *outdoor education* emerged in the early 1940s to describe the instructional use of natural and built areas to meet student learning objectives in a variety of subject-matter disciplines through direct experiences. This type of contextual learning involving the local surroundings has also been referred to as taking field trips, excursions, journeys, or doing field studies. During the late nineteenth century in the United States, some educators realized that taking students out of the classroom to teach appropriate concepts, skills, attitudes, and values could improve education. Some of the early outdoor educators used camp settings during the regular school year to meet academic objectives and to improve students' social development and leisure skills. Because outdoor education activities were usually tied closely to the school curriculum, the field has adapted to early-twenty-first century reforms affecting the broader educational field.

The term *environmental education* arose in the late 1960s in the United States as a result of a national social phenomenon called the environmental movement. The classic definition, developed by William B. Stapp and his graduate students, appeared originally in the 1969 issue of the *Journal of Environmental Education*: "Environmental education is aimed at producing a citizenry that is knowledgeable concerning the biophysical environment and its associated problems, aware of how to help solve these problems, and motivated to work toward their solution" (Hungerford et al., p. 34).

Although public concern for improving and preserving quality environments existed earlier when national parks were set aside, and windblown soil created the dust bowl of the 1930s, resource use or conservation education increased in the 1970s. Some historians point to Rachel Carson's book *Silent Spring*, published in 1962, as one event that helped to spawn the first Earth Day in April 1970. Spurred by federal legislation during the next several decades, environmental education expanded in public and private schools across the nation. Some critics accused educators of simply changing the names of their outdoor science, nature study, or outdoor education programs to environmental education but continuing the same programs as in the past. This practice of changing the names of these closely related fields in order to modernize the program content, methodology, or focus continues today.

Some of the practices in outdoor and environmental education programs do overlap. Although both fields are interdisciplinary, one difference is that outdoor education can be applied to any discipline that can be effectively taught and learned outside. For example, outdoor education could mean teaching the concept of an acre by measuring a playing field (mathematics); or visiting a park to write poetry or draw pictures inspired by the setting (language arts and art); or recording the information found in a cemetery to learn about past events (history); or testing the pH to determine if a nearby stream is acid or alkaline (science); or climbing a hill to calculate student heart rates (physical education). It could also mean visiting zoos, parks, museums, fire stations, factories, water treatment plants, or any other built environment to create more effective learning opportunities. Environmental education can take place outside as well as inside classrooms and take local as well as global perspectives, but the focus is usually on studying an issue such as water, air, and soil pollution; solid waste and toxic disposal; urban sprawl and population; deforestation; endangered plants and animals; or drought and flooding, especially at upper grade levels. The line separating the two fields is blurred when teachers take students outside to study nature awareness and culture's impact on ecosystems. It makes little sense to argue over which label to apply to these kinds of outdoor lessons when their purposes blend.

### Objectives and Purposes

The definitions of these fields reveal several similarities and differences. Simply stated, outdoor educa-

tion programs are designed to help make the learning of certain knowledge more effective through firsthand experiences outside the school. According to Lloyd B. Sharp (1895–1963), outdoor education pioneer, a key principle is “that which ought and can best be taught inside the schoolrooms should there be taught, and that which can best be learned through experience dealing directly with native materials and life situations outside the school should there be learned” (Knapp 1996, p. 77). Most environmental education programs are designed to prepare students to investigate environmental problems. The question of whether or not students should try to resolve these problems is controversial. Gregory A. Smith (2001) and others critique this debate in detail. Although both fields advocate the use of broad subject-matter content, environmental education is generally taught within the social studies and/or sciences at the upper grades. At elementary levels activities usually span more of the academic curriculum and also incorporate social and recreational objectives leading to teamwork, cooperative and service learning, citizenship skills, and lifelong outdoor pastimes. Nature awareness activities can be justified at all levels as integral aspects of both fields. One indication that these are distinct fields of study can be found in the organizational structure of the U.S. Department of Education's Educational Resources Information Center (ERIC) system. Across the country there are sixteen information clearinghouses covering the field of education. Outdoor education informational services are offered through the Clearinghouse for Rural Education and Small Schools (CRESS), and environmental education informational services are offered through the Clearinghouse for Science, Mathematics, and Environmental Education (CSMEE). Each clearinghouse is responsible for collecting and disseminating a wide variety of educational resources in their assigned areas, although some overlap does occur. The CRESS center also has assumed the responsibility for collecting information from adventure or experiential education, another similar but distinctive field.

### Instructional Methods

Although both outdoor education and environmental education are offered mainly through schools, nature centers, and outdoor residential facilities, the instructional methodologies are selected from the general field of education. Environmental and outdoor educators primarily advocate experiential

(hands-on) learning strategies. Although both fields draw from conventional instructional technologies, such as textbooks, periodicals, computers, videos, and overhead transparencies, these educators stress the importance of contextual, direct, and unmediated experiences used in problem-based learning situations. They want their students to use a variety of senses in exploring the content to maximize active learning.

### **History and Status in the United States and Abroad**

Both fields are considered as innovative, educational reforms designed to accomplish specific objectives that are not being met effectively by traditional practices. Although the idea of using direct experiences existed for hundreds of years in Europe (e.g., the Czech theologian and educator Johann Comenius [1592–1670], the French philosopher and author Jean-Jacques Rousseau [1712–1778], and the Swiss educational reformer Johann Pestalozzi [1746–1827]), little was written in the professional literature. Beginning in the early 1900s the American nature study and camping movements gained momentum. Their purposes were to expand the students' cognitive and affective connections with basic processes, such as obtaining food, shelter, recreation, spiritual inspiration, and other life needs. These nature contacts countered the negative effects of increased urbanization and more complex technologies. Attempts were made to make learning conditions more active and less passive, more closely linked with community activities and less abstract, and more focused on practical knowledge for immediate social use rather than only for the future. These and other goals were incorporated into the Progressive education movement, which was introduced in some U.S. schools during the first half of the twentieth century. The American philosopher, psychologist, and educator John Dewey's Laboratory School, operating in Chicago from 1896 to 1904, exemplified this Progressive philosophy. As Progressivism began to wane in the public schools in the 1940s and 1950s, outdoor education gained in importance. American outdoor education reformers looked to Germany, Britain, Australia, South Africa, British Honduras, and Scandinavia for program models. Because many outdoor educators saw the value of immersion-type programs, camp settings were used in the beginning. Lloyd B. Sharp, who earned his doctorate at Columbia University in 1930, was instrumental in estab-

lishing leadership programs for many future outdoor educators in 1940. As residential outdoor education programs grew throughout the nation (mainly in Texas, Indiana, Illinois, California, Washington, Michigan, Ohio, Georgia, New York, and New Jersey), the field flourished. During the late 1940s and early 1950s selected colleges and universities established camping and outdoor education courses to prepare teachers. Another key leadership development occurred in Michigan when the W. K. Kellogg Foundation pioneered community school camps in 1940 and supported further experimentation over the next few decades. Julian Smith (1901–1975), a Michigan administrator, was also influential as a pioneer outdoor educator. Additional support for outdoor education was given through state departments of conservation and education, as well as national educational agencies, professional teacher organizations, and other nongovernmental groups.

By the late 1960s conservation education was also contributing to the outdoor experiences and knowledge of many American and Canadian youth through federal, state, and provincial conservation agencies, although it maintained its largely rural focus. In the U.S. the funding of the Elementary and Secondary Education Act in 1965 led to many innovative outdoor-related programs. The stage was now set for the emergence of environmental education. The U.S. Department of Health Education and Welfare established an office of environmental education in 1968. In 1971 the National Association for Environmental Education (later the North American Association for Environmental Education) was formed to serve as one of the leading professional organizations. From then on, environmental education received federal, state, and local support to promote education about the many complex interrelations between culture and ecosystems. Because of the politics of environmental decision making, the field has faced numerous controversies. Some debates have centered on questions such as: What is the correct definition and purpose of environmental education? Should the curriculum include environmental values and ethics as well as ecological and economic concepts and skills? What is the role of student action projects in remedying environmental problems? What is the proper role for teachers in conducting lessons about the environment? At what ages should students be introduced to environmental problems? What types of educational experiences should urban, suburban, and rural youth receive?

What kinds of technologies can slow ecological destruction?

### Issues and Trends

Some of the issues facing outdoor and environmental educators have already been suggested. Because of the politics inherent in many educational and environmental decisions, the field of outdoor and environmental education has never been static. Educators continually devise better ways to define and refine their philosophies and practices. One way to accomplish this has been to change the names of the fields and redesign their theories and practices. Some early-twenty-first century terms include earth education, bioregional education, Expeditionary Learning Outward Bound, use of the environment as an integrating context for learning, ecological education, nature awareness, locally focused teaching, and place-based education. The more than sixty labels for educational movements related to the outdoors and the environment demonstrate the importance and vitality of the fields. One promising development has been the identification of an eighth category of human multiple intelligences by Harvard professor Howard Gardner—the *naturalist intelligence*. This way of demonstrating expertise in recognizing and classifying the flora, fauna, and other physical and cultural artifacts is important because it provides another justification for integrating outdoor and environmental education into curriculum and instruction.

### Summary

Outdoor education has served as a significant educational reform since the early 1940s by promoting the use of outdoor learning settings. When environmental education emerged in the 1970s, it focused more directly on knowledge leading to quality local and global environments. Their forerunners—camping, nature study, conservation, and adventure education—paved the way for early school and community leaders to develop experiential programs aimed at living well on earth though understanding how it works.

*See also:* ALTERNATIVE SCHOOLING; CURRICULUM, SCHOOL; EXPERIENTIAL EDUCATION; PROGRESSIVE EDUCATION; SCHOOL REFORM.

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## OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS

From birth to age eighteen, children spend just a fraction of their lives in school. Thus it is not surprising that many factors outside the school environment can significantly influence students' prospects for academic success in school. These factors are in play both during the years before children begin formal schooling and while they are actually enrolled in elementary and secondary school.

A diverse array of issues, including (but not limited to) parents' beliefs and expectations about education; the availability and quality of child care; family economic status; the persistence, or absence, of violence in a child's life; access to social services; physical and mental health issues; opportunities for constructive, healthy activities outside of school; and the nature and strength of school-community connections, can make a difference in a child's opportunities to do well in school.

### Background

Much of the work concerning out-of-school influences on students' prospects for academic success

stems from James Coleman's 1966 study of racial and ethnic segregation, student and family characteristics, and student achievement. In *Equality of Educational Opportunity* (1966), prepared for the United States Department of Education, Coleman found that family factors such as household composition, socioeconomic status, and parents' level of education were stronger predictors of students' educational attainment than were direct school-related factors.

The Coleman study gave rise to decades of research and writing, particularly in the 1970s and 1980s, on so-called family effects on students' academic achievement. These studies generally concluded that the factors Coleman identified do exert enormous influence on students' achievement, though they are not necessarily deterministic of it. Students who come from backgrounds that would seem to doom them to school failure often find a way to beat the odds and achieve at high academic levels. And some students who hail from seemingly ideal life situations never thrive academically.

During the 1990s, as the United States education system was focused intensely on raising academic achievement across the board under the banner "All Students Can Learn," many educators, researchers, and policymakers began to adopt the *no excuses* philosophy. Regardless of a child's life circumstances, they asserted, an effective education environment can overcome other challenges and enable all children to achieve at high levels.

As is the case with most complicated issues, both points of view have considerable merit. All (or nearly all) students can learn. But the circumstances of a child's life, the social indicators that paint a cumulative picture of a child's total environment, are important signposts pinpointing conditions that either make learning possible or present challenges that must be overcome to pave the way for learning.

### Parental Influence

A commonly used phrase, but one that has the ring of substantial truth, is that parents are their children's first teachers. The home environment shapes a child's initial views of learning. Parents' beliefs, expectations, and attitudes about education and their children's achievement have a profound early impact on students' conceptions of the place of education in their lives. What parents think about the importance (or unimportance) of doing well in

school is often mirrored in student results. A study by the Metropolitan Life Insurance Company found that nearly all students (97%) who earned mostly A's and B's on their report cards reported that their parents encouraged them to do well in school. Among students who earned mostly C's, nearly half (49%) said they received little parental encouragement.

Some families clearly have more resources to devote to their children and can more easily find time to spend nurturing and encouraging them. When both parents work (an increasingly common phenomenon) or when a child is being raised by a single parent, finding time to read to the child, to encourage the completion of homework, or to participate in school functions—all known to have a salutary effect on student success in school—become more difficult. The problem is often compounded for parents who speak limited or no English.

However, regardless of family composition or circumstance, the research is clear. Children whose families provide supervision and support, and who have aspirations for their children, tend to multiply those children's chances of being successful students.

### **Family Economic Status**

Many children grow up in homes with an abundance of fiscal and material resources. But not all do. As of 1998, 13 million children in the United States (19% of children age eighteen or younger) lived below the federally established poverty line. Children eighteen and under make up just 26 percent of the total U.S. population, but they represent 40 percent of the population living in poverty. Stated more starkly, the United States, the richest nation in the world, ranks highest in childhood poverty among all the industrialized nations of the world.

Poverty takes a toll on students' school performance. Poor children are twice as likely as their more affluent counterparts to repeat a grade; to be suspended, expelled, or drop out of high school; and to be placed in special education classes.

Family composition and economic circumstance are often intertwined. More than half of the poor families in the United States are headed by an unmarried mother who must balance employment issues (these women are often trapped in low-wage jobs) with child care and parenting responsibilities. In sum, children from more economically affluent home circumstances have a leg up in many areas of life, including education.

### **Preparing for School**

Children begin learning from the time they are born. Where children spend their time before they enter kindergarten has an effect on both their readiness for school and their chances for good long-term achievement results.

Six in ten children in the United States, or nearly 12 million children younger than age five, spend part of their waking hours being cared for by someone other than their parents. There are a variety of care circumstances. Sometimes young children are looked after by a relative, such as a grandmother or an aunt. Some young children spend part of their day in the care of a licensed provider who may watch over several children at the same time. Some preschoolers attend organized preschool or early childhood education programs.

Studies show that early childhood care and education make a difference. The quality of care young children receive establishes the foundation for their future academic success. Young children who are exposed to high-quality care settings, geared to their social, emotional, and intellectual development, exhibit better language and mathematics skills, better cognitive and social skills, and better relationships with classmates than do children in low-quality care.

The nature of quality of early care has been shown to have lasting impacts. Children in high-quality care environments are less likely than children in low-quality care circumstances to repeat a grade, require special education services, drop out of school, or find themselves in future trouble with the law.

For many families, the child-care issue revolves around two central concerns: cost and access. Even if quality care is available, many families cannot afford to pay for it. And for many families, quality care is simply not available.

### **Physical and Mental Health**

Overall, children's health improved substantially during the last decades of the twentieth century. Infant mortality rates went down, and many childhood diseases once thought incurable attained high cure rates or became preventable altogether.

Health—both physical and mental well-being—has obvious links to students' prospects for doing well in school. Children who are physically ill fail to attend school regularly, and when they do attend they are often unable to focus on their schoolwork.

Children with untreated mental health problems experience a range of school-related difficulties, from acting-out behavior in the classroom to an inability to make friends and develop collegial attachments.

Research shows that attention to children's health is important even before a child is born. Low-birthweight babies, often born to mothers who smoke, drink, or eat unhealthy diets during pregnancy, are at greater risk of becoming children with a host of developmental difficulties.

Despite the compelling importance of robust physical and mental health to students' prospects for academic success, large numbers of American children have inadequate access to appropriate health care services. Not surprisingly, access to quality services is often a function of family income. The less financially stable the child's family, the less likely the child is to have regular medical care.

Children covered by health insurance are more likely to have better access to health care than are children not covered by such insurance. As of 1999, 10 million children in the United States (14% of the child population) were uninsured.

Other significant risk factors, particularly for adolescents, are drugs and alcohol. Drinking, smoking cigarettes, and using harder drugs, from marijuana to cocaine, can cause substantial long-term physical and mental health problems. In the short-term, use of many of these substances can cause reduced school attendance and general inattention to school studies.

### **The Impact of Violence**

Violence in children's lives can come in many forms. Sometimes it is violence children witness, such as violence between their parents or caregivers, or violence in the communities in which they live. Sometimes children themselves are the victims of violence, whether it be abuse by a parent or relative, or physical (or verbal) attacks in their neighborhoods. These kinds of violence have long-term impacts on children, affecting their expectations about life and their views of the world.

Violence outside of school can shape students' attitudes about school. A child surrounded by a violent environment who does not expect to live to adulthood may see little purpose in completing an education. Violence in the home increases the likelihood that a student will spend at least part of childhood and/or adolescence in the child protective

services system, perhaps in foster care. For children who live with violence, the situation is quite often just one of a constellation of challenging circumstances. Violence is often a partner to poverty and an unstable home life.

One of the most prevalent contemporary milieus for youth violence is gangs. Gang activity exists in all fifty states. Membership in gangs—often seen by adolescents as a kind of badge of honor or admission to a privileged club—increases the likelihood of involvement in criminal activities. Effective anti-gang programs have been shown to include intervention by police and officers of the juvenile justice system, family and youth education programs, and providing alternative outlets for youths' time and energy.

An important research finding is that gang activity, or at least attraction to it, begins early. As early as the third or fourth grade, students (particularly boys) can be lured into believing that becoming a member of a gang is an important social goal. Thus, programs to prevent students from joining gangs need to begin in elementary school.

### **Out-of-School Activities: Recreation and Employment**

How students spend their time when they are not in school can have a significant impact on their opportunity to succeed in school.

**Youth organizations.** Research suggests that participation in various kinds of youth organizations contributes to better behavior in school, improved social skills, more self-confidence, and higher academic expectations. Organizations such as the YMCA and YWCA, Boys and Girls Clubs, 4-H, and Boy Scouts and Girl Scouts often provide academic support as a complement to activities designed to foster social and emotional development. Athletic programs, such as Little League and those organized by local recreation and parks departments, offer healthy outlets for children's and adolescents' energy, while also building skills such as personal responsibility and teamwork.

Mentoring relationships can ensure that a caring adult is part of a child's life, and they have been shown to offer important benefits. Research has shown that programs such as the Big Brothers and Big Sisters of America contribute to lower rates of drug and alcohol use, reduced violence, and better school attendance, performance, and attitudes.

**Youth employment.** As many as 76 percent of youth in the United States are working, or have worked, in paid employment by age sixteen. Researchers differ regarding the impact of work on adolescents' academic achievement. Some studies conclude that work provides students with useful skills and attributes, among them instilling a sense of responsibility and heightening students' sense of self-efficacy, and that these have a positive spillover effect in school. However, other research concludes that work is just a distraction for most students, in that it competes with school for students' time and attention.

Of course, students work for different reasons. Some students are significant breadwinners for their families. Their earnings represent an important part of the families' income. Some students work specifically to save money for college. Most studies, however, show that the vast majority of students who work do so to earn spending money for things they want to buy.

Research has shown that the amount of time a student works is a factor in determining employment's impact on educational performance. For students working twenty or fewer hours per week, few problems seem to arise. But for students working more than twenty hours per week, work can present education-related problems where the job takes precedence over school.

### Connecting Schools, Families, and Neighborhoods

For most students, school creates an important community setting—a safe place where time is structured (which children and teens do crave, even if they do not always appreciate it) and friends are present. Families and neighborhoods complete a student's community, and consciously connecting schools, families, and neighborhoods offers significant advantages for students, particularly those at academic risk.

Students who are struggling in school are often plagued by a host of problems outside of school. Offering students the best opportunity to succeed in school may require helping not just the student, but also treating the student's entire family.

Among the systems devised for this purpose are school-linked and school-based programs of social services. The goal of these programs is to directly connect family support services—such as health care, income support, English language acquisition,

and job training—with schools as a way of increasing families' access to these services. Located either on school grounds (school-based) or nearby in the surrounding neighborhood (school-linked), these efforts foster partnerships between schools and social services agencies, ideally giving each a chance to do what it does best.

Despite the promise of such programs, they have not been problem-free. Difficulties arise around allocation of resources, turf (who is in charge of what?), and misunderstandings about the roles and responsibilities of various involved professionals. Research has shown that for school-based or school-linked programs to produce the desired results, social services need not just to be linked to schools, but must be integrated into schools' activities and functions, creating new pressures for schools regarding what they are expected to do and under what circumstances. Whatever kind of program is employed, what is important is for services to reach students and their families so that education can be a student's primary responsibility.

### Conclusion

Schools do not exist in a vacuum. A host of factors contribute to students' prospects for academic success. Some students come to school with all they need: stable and supportive families, adequate financial resources, and good health. For students who do not enjoy these advantages, making provision to help them meet outside-of-school challenges can provide just the boost they need to succeed in school.

*See also:* COLEMAN, JAMES S.; FAMILY COMPOSITION AND CIRCUMSTANCE; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; HEALTH AND EDUCATION; PARENTING; VIOLENCE, CHILDREN'S EXPOSURE TO.

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JULIA E. KOPPICH

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## PACIFIC REGION

*See:* EAST ASIA AND THE PACIFIC.

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## PAIDEIA PROGRAM

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In 1982 a group of scholars and educators headed by philosopher Mortimer Adler published *The Paideia Proposal*, and it is difficult to name a leading educational reform program since that has not been directly or indirectly influenced by Paideia principles. *Paideia* is the Greek word for the nurturing of children, and the Paideia Group was dedicated to providing a powerful public education for all. In the years immediately following the proposal, Adler and the original Paideia Group published two more books—*Paideia Problems and Possibilities* (1983) and *The Paideia Program* (1984)—intended in part to answer practical questions about program implementation. The National Paideia Center was established at the University of North Carolina in 1988, and in 1992 began working in close, classroom-based partnership with schools. By the year 2000 the center was working with well over a hundred schools in over a dozen states, and the list was growing continually. Paideia has grown steadily since the early 1990s for several reasons.

The first reason is that the original Paideia principles have appealed to many as a powerful condensation of the best thinking about public education. Adler focused on the profound connection between school reform and the United States as a functional democracy. The Paideia philosophy stated a litany of principles that in 1982 seemed radical but by 1995 had become accepted wisdom. Such principles as “all

children can learn” and “therefore they deserve the same quality, not just quantity, of education,” anticipated many of the later American reform movements, and documented Paideia’s origin in a philosophy of human development.

The second reason why interest in Paideia has continued to grow rapidly is that the program marries a fundamentally conservative idea, the beneficial rigors of a classical education, and a fundamentally liberal one, inclusive teaching and learning practices. These seemingly contradictory ideas—intellectual rigor and equal access to a quality education—are the bedrock upon which successful Paideia schools have been built.

Perhaps the most important reason for Paideia’s steady growth is that the program includes all subjects and embraces important curriculum from diverse cultures. Increasingly, the National Paideia Center has provided schools with curricular information on how to use Paideia instructional techniques in mathematics, science, music, literature, writing, and physical education—all the subjects in a strong core curriculum. In addition, the center has broadened the use of the term *classical* to include the study of texts by African Americans, Hispanics, Asians, and representatives of other cultures.

### Implementing the Paideia Program

The recent work of the National Paideia Center is based on a mix of teaching strategies called the “three columns” of teaching. They are made up of the didactic instruction of curricular information, intellectual coaching of the skills necessary to manipulate and apply information, and seminar discussion of the ideas and values inherent to that information. Paideia does not require a specific cur-

riculum, but rather provides a system for fostering student engagement with the standard curriculum of a state or district. In contrast to the heavy use of teacher-centered, didactic instruction characterizing traditional American schools, the Paideia program focuses on limiting didactic instruction to less than 15 percent of classroom time and devoting the remaining 85 to 90 percent to increased student learning activity.

Typically, in the first year of partnership with the center, a school focuses on implementing the Paideia seminar schoolwide. The Paideia seminar is a formal discussion of a text in which the leader of the seminar (the teacher) simply asks open-ended questions, leaving it up to the students to generate a dialogue about the ideas and values inherent to the text. (The text may be a map or historical document, a chart or skeleton, a math problem or a poem, a photograph or painting.) In this way, students are brought into active engagement with the conceptual framework behind the curriculum.

In the second year of implementation, Paideia schools focus on implementing the Paideia-coached project, revising traditional units of study in each classroom to make them much more product-oriented, resulting both in more authentic assessment and active student learning. "Product-oriented" means that most or all student work is produced for an authentic audience (parents or other community members) and will be assessed by that audience. Typically, this phase of Paideia implementation takes several years as teachers move from teaching a few units each year as coached projects to developing an entire curriculum based on the production of real work for authentic audiences. In the third year of partnership with the center, most Paideia schools implement more student-centered assessment practices in the classroom, and the entire school community develops a cyclical plan for continuous improvement.

Detailed program evaluations, notably one comprehensive study by the Center for Research and Evaluation at the University of North Carolina at Greensboro, have shown that Paideia schools consistently produce a greater increase in standardized test scores for all students than do non-Paideia schools. In addition, Paideia schools consistently show an improved school climate, including a more inviting environment for minority students.

The eventual goal of the Paideia program is schools that offer every student access to a rigorous

education. To accomplish this goal, the Paideia program prescribes schools that are themselves communities of thought, where adults and students alike focus on the skills and attitudes of lifelong learning and continuous improvement.

*See also:* ALTERNATIVE SCHOOLING; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; SCHOOL REFORM; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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TERRY ROBERTS

#### PALMER, ALICE FREEMAN (1855–1902)

The first female college president and the first president of Wellesley College, Alice Freeman Palmer was the founding dean of women at the University of Chicago.

Born on a farm in mid-state New York, Palmer grew up with the rural expectation that women would work hard to help support their families. At age fifteen she surprised her parents by announcing that she intended to go to college. She was already engaged to the only college graduate she had ever met, a teacher at the local academy where she was a star student, and when he discouraged her plans she broke the engagement. A college education, she insisted to all opponents, would best prepare her to serve others and to earn money by teaching. Palmer matriculated at the University of Michigan in 1872,

two years after the university was first forced to admit women. During and after college she took a variety of teaching positions, and a year after graduation she became her family's primary support when her father went bankrupt.

In 1879 Palmer accepted a position as professor of history at Wellesley College, which had opened four years earlier with an all-female faculty. Wellesley's founder, Henry Durant, was greatly impressed by Palmer's intellectual abilities, charismatic leadership, and persistent yet charming personality. She became his protégé, and when he died in 1882 the trustees appointed her president even though, at age twenty-seven, she was the youngest member of the faculty.

Palmer soon gained a national reputation as a promoter of women's higher education. She strengthened Wellesley's faculty, student body, and financial status, established a network of secondary schools to prepare girls for college work, and insisted that Wellesley pursue high intellectual standards. College education, she argued at every opportunity, prepares women for civic leadership as well as self-knowledge and self-respect. She expected many of her students to support themselves, as she had. The rest she expected to lead libraries and museums, serve on school boards and town governments, and pursue other forms of civic service.

In 1887 Palmer shocked her colleagues by marrying George Herbert Palmer, a professor of philosophy at Harvard University, and resigning from Wellesley's presidency. She spent the next year recovering from her active tuberculosis, and then renewed her career as a public speaker. For the next four years she toured the country to preach the importance of women's higher education to university audiences, women's clubs, religious societies, and anyone else who would pay her. A powerful and passionate speaker, she presented herself as a model of an educated woman: intellectual yet emotional, dedicated to serving others yet happy in her personal life, willing to work hard for causes she believed in, yet retaining the feminine graces of beauty, wit, and attentiveness to others. Many people still believed that education de-sexed women, and Palmer intended to prove them wrong.

Palmer also joined the Massachusetts State Board of Education, eventually becoming its most senior member, and gained a reputation as a formidable lobbyist on Beacon Hill. She served as a trustee

for several educational institutions, including Wellesley College, was active in several education-oriented voluntary associations, including the forerunner of the American Association of University Women, and was one of five people chosen to represent Massachusetts at the 1893 World's Fair. With her husband, George Palmer, she tried to persuade Harvard to admit women on equal terms with men. After she led a campaign to create a \$250,000 endowment for female students, Harvard reneged on its agreement to admit women if the money were raised.

In 1892, when the University of Chicago was preparing to open, Palmer was the most prominent woman in the field of higher education. Chicago was then a rough western city, and the university's president, William Rainey Harper, feared that parents would refuse to send their daughters to a new university in a city best known for its stockyards. If Palmer were dean of women, Harper believed, her reputation would help give the young university the stamp of approval it desperately needed. He hoped to hire both Palmers—George as well as Alice—but when George decided to remain at Harvard, Harper continued to court Alice persistently. Finally she agreed to his suggestion that she commute from Cambridge to Chicago and be in residence only twelve weeks a year.

Palmer was one of the few Chicago founders with solid administrative experience, so she quickly became involved in every aspect of the new university. Harper repeatedly claimed that he would not have survived the university's first year without her. Palmer gave special attention, however, to making the university an appealing intellectual and social environment for women. She succeeded. When Chicago opened, women were 24 percent of its student body. The next year they were 33 percent, and the percentage climbed each year until 1898, when 43 percent of the students were women. Many male students, faculty, administrators, trustees, and donors—including Harper—were alarmed by this trend, which they interpreted as the "feminization" of the university, and university policies quickly shifted to attract men and discourage women. Palmer, not surprisingly, was marginalized and her policy suggestions ignored. After three years she decided to resign.

Palmer never again held a paid, professional position. Instead, she gave all of her time to the Massachusetts Board of Education, the numerous insti-

tutions of which she was trustee, and other cultural and political activities. She always, even during her Wellesley years, preferred coeducation to single-sex education. Men and women, she believed, belonged beside each other, working and learning together as peers. After her experiences at Harvard and Chicago, however, she lost her early optimism that men needed only a few years of adjustment and then would be happy to treat women as equals. For the rest of her life, she nurtured institutions—schools, colleges, and scholarships for advanced graduate work—that would enable other women to pursue education and professional work.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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LORI KENSCHAFT

## PARENTAL INVOLVEMENT IN EDUCATION

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Although widespread support for parental involvement is reflected in current educational policies and practices, what this means is not always clear. Parental involvement includes a wide range of behaviors but generally refers to parents' and family members' use and investment of resources in their children's schooling. These investments can take place in or outside of school, with the intention of improving

children's learning. Parental involvement at home can include activities such as discussions about school, helping with homework, and reading with children. Involvement at school may include parents volunteering in the classroom, attending workshops, or attending school plays and sporting events.

### Research on Parental Involvement

Research on the effects of parental involvement has shown a consistent, positive relationship between parents' engagement in their children's education and student outcomes. Studies have also shown that parental involvement is associated with student outcomes such as lower dropout and truancy rates. Whether or not parental involvement can improve student outcomes is no longer in question.

Researchers have begun to focus on how parental involvement affects students, why parents do and do not get involved in their children's education, and what role schools and teachers can play in creating parental involvement. Three frameworks for exploring the precursors to and effects of parental involvement have been the foundation of a majority of the research on parental involvement. Each approach highlights a different aspect of the dynamics that exist in school-home-community relationships.

Wendy S. Grolnick and her colleagues, in articles published in 1994 and 1997, conceptualized three dimensions of parental involvement based on how parent-child interactions affect students' schooling and motivation. Behavioral involvement refers to parents' public actions representing their interest in their child's education, such as attending an open house or volunteering at the school. Personal involvement includes parent-child interactions that communicate positive attitudes about school and the importance of education to the child. Cognitive/intellectual involvement refers to behaviors that promote children's skill development and knowledge, such as reading books and going to museums. Parental involvement, according to this theory, affects student achievement because these interactions affect students' motivation, their sense of competence, and the belief that they have control over their success in school.

Kathleen V. Hoover-Dempsey and Howard M. Sandler, in articles published in 1995 and 1997, defined parental involvement broadly to include home-based activities (e.g., helping with homework, discussing school events or courses) and school-

based activities (e.g., volunteering at school, coming to school events). They argued that parental involvement is a function of a parent's beliefs about parental roles and responsibilities, a parent's sense that she can help her children succeed in school, and the opportunities for involvement provided by the school or teacher. In this theory, when parents get involved, children's schooling is affected through their acquisition of knowledge, skills, and an increased sense of confidence that they can succeed in school.

Joyce L. Epstein, in a 1995 article and a 2001 book titled *School, Family, and Community Partnerships*, argued that school, family, and community are important "spheres of influence" on children's development and that a child's educational development is enhanced when these three environments work collaboratively toward shared goals. Epstein encouraged schools to create greater "overlap" between the school, home, and community through the implementation of activities across six types of involvement: parenting, communication, volunteering, learning at home, decision-making, and collaboration with the community. By implementing activities across all six types of involvement, educators can help improve student achievement and experiences in school.

### Effects on Parental Involvement

Research has shown that student and family characteristics affect levels of parental involvement. Working-class families and families in which mothers work full-time tend to be less involved in their children's education. Also, parents of elementary school students tend to be more involved in their children's education than parents of older students. Other factors, however, have been shown to be more important predictors of parental involvement than family income or structure.

Schools play a significant role in getting parents and family members involved in students' education. In their study published in the 1993 book *Families and Schools in a Pluralistic Society*, Susan L. Dauber and Joyce L. Epstein found that school and teacher practices were the strongest predictors of parental involvement. Specific practices that have been shown to predict parental involvement include: assigning homework designed to increase student-parent interactions, holding workshops for families, and communicating to parents about their children's education.

Parental beliefs and perceptions have also been shown to be a strong predictor of parental involvement. Parents' educational aspirations and level of comfort with the school and staff have been shown to predict levels of involvement. In addition, parents' beliefs about their responsibilities as a parent, their ability to affect their children's education, and their perceptions of their children's interests in school subjects have been shown to predict their involvement at home and at school.

### Obstacles to Parental Involvement

Important obstacles that constrain parents' ability to become actively involved in their children's education include teachers' attitudes and family resources. These obstacles, however, can be overcome by schools and through teacher training. Each is discussed below.

Teacher attitudes may be one obstacle to parental involvement. For example, teacher beliefs about the impact of their efforts to involve parents in students' learning predict their efforts to encourage family involvement. In a study published in 1991, Epstein and Dauber found that, compared to middle school teachers, elementary school teachers more strongly believed that parental involvement is important for students and provide more opportunities and help for parents to be involved in their children's education. Low levels of parental involvement at some schools may be the result of the staff's perceptions of parents or the degree to which they feel parental involvement is important for their students.

Although all families want their children to succeed in school, not all families have the same resources or opportunities to be involved in their children's education. Families in which all caregivers work full-time, where there are multiple children, or where English is not spoken or read well face significant barriers to participation in their children's education. It is important for schools to understand the demands that exist on the families of their students and to work to overcome them. In her 1995 article Epstein argued that schools need to overcome these challenges by providing opportunities for school-to-home and home-to-school communications with families; providing communications to families in a language and at a reading level all families can understand; ensuring adequate representation of the entire community of parents on school advisory committees; and distributing information provided at workshops to the families who could not attend.

Schools that work to meet these challenges and try to make involvement easier and more convenient for all families will gain support from parents and improve student achievement.

One approach to overcoming these obstacles to parental involvement is to increase the degree to which teacher training covers the topic of parental involvement. Teacher-training programs spend very little time helping students understand the impact of parents in student learning and how teachers can help parents become involved in their children's education. Without this training, teachers may not understand the importance of parental involvement or how to facilitate it. As a result, working with parents can become one of the greatest challenges faced by new teachers.

### Controversies

In spite of the evidence to suggest parental involvement can help improve student achievement and educational attainment, many are skeptical of parent-involvement programs. Michelle Fine, in a 1993 article, and Annette Lareau, in her 1989 book *Home Advantage*, raise concerns about the widespread implementation of parent-involvement policy and practices. Their concern about the effect of parent involvement programs stems from their observations that many schools and teachers use a "one-size-fits-all" approach. The result is that schools reinforce white, upper- and middle-class values and disadvantage students from other backgrounds.

Research has shown differences in parental involvement, parental beliefs, and the home-school relationship across socioeconomic, ethnic, and racial groups. The existence of different beliefs between parents and teachers can lead to misperceptions and the development of negative home-school relationships. Whether and how parent-involvement programs can be sensitive and equitable to families from all backgrounds remains an issue of discussion.

### Current Issues

An area of research on parental involvement emerging in the late 1990s and early twenty-first century is the systematic examination of the role of community. Mavis G. Sanders, in an article published in 2001, reported that schools have a wide range of community resources available but use only a small percentage of these in their efforts to educate students. Also, Sophia Catsambis and Andrew Beveridge, in a 2001 article, showed that neighborhood

conditions can dilute the effect of parental involvement and argued that this has an indirect effect on student achievement. The full role of community, and its impact on schools and families, is still unclear.

Understanding parental involvement as a developmental phenomenon is also emerging as an important issue. Research is needed to understand the most appropriate forms of involvement given students' age and maturation. Although parental involvement is an important influence on students throughout their schooling, effective elementary school parent-involvement activities may not be appropriate with high school students. Related to this issue, schools need to understand how parent-involvement activities can help students and families successfully transition from one level of schooling to another. Understanding the influences and effects of parental involvement and different forms of involvement as students move through school remains an understudied process.

The importance of having parents and family members support students' efforts in school is well known and well documented. Research shows a positive connection between parental involvement and student achievement. Furthermore, when schools and teachers work to involve parents, studies show that they can increase student achievement. Concern that schools may not be reaching out to all families and that they may not be aware of how families from different cultures perceive schools and school staff have raised questions about the effects of parental involvement for some students. Nevertheless, it appears that when schools reach out, understand the needs of all families, and create parental involvement, children are more likely to experience success in school.

*See also:* FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS.

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STEVEN B. SHELDON

## PARENTING

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### OVERVIEW

Laurence Steinberg

### HIGH-RISK NEIGHBORHOODS

Claire Smrekar

### INFLUENCE OF PARENTS' LEVEL OF EDUCATION

Joan M. T. Walker

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### INFLUENCE ON CHILD'S EDUCATIONAL ASPIRATIONS AND ATTAINMENT

Joan M. T. Walker

Claire Smrekar

## OVERVIEW

The study of parenting and its impact on children and adolescents has long been a central concern to scholars interested in child development and education. Although some contemporary commentators have suggested that social scientists have overestimated the influence of parents on their children's development and have underemphasized the importance of genetic factors and forces outside the family, most experts continue to believe that children's emotional, cognitive, and behavioral development is profoundly affected by the ways in which their parents have raised them.

This confidence in parental influence notwithstanding, it is important to note that much research on parenting and child development, which tends to be correlational in nature, leaves open the question of causal direction. The observation that children with certain characteristics are more likely than not to come from parents who engage in certain ways of parenting can be accounted for with a variety of explanations, of which parental influence is just one. Consider, for example, the commonly observed correlation between parental harshness and childhood aggression. Although it is reasonable to suggest that this observation reflects the fact that parental hostility creates aggressive children, it is also reasonable to suppose that parents are influenced by their children (i.e., that aggressive children elicit harsh parenting), that other environmental or genetic factors influence both parents and children in certain directions (e.g., that poverty makes parents harsh and children aggressive, or that harsh parents and aggressive children share a genetic predisposition for violence).

Researchers interested in disentangling these different accounts have generally followed one of three approaches. First, through the use of longitudinal designs, researchers have studied the links be-

tween parenting and child adjustment over time, examining whether certain types of parenting precede, rather than simply accompany or follow from, the emergence of certain child characteristics. Second, in studies of animals, researchers have been able to randomly assign infants and juveniles to rearing environments in which adults vary in their parenting practices, and by doing so, scientists have been able to examine the impact of variations in parenting on adjustment through experimentation. Finally, a number of investigators have studied the impact of parent-focused interventions on child adjustment. In these studies, parents' behavior is changed through some sort of psychoeducational treatment, and any resultant change in child adjustment is examined in relation to the parenting intervention. All three designs (longitudinal, experimental, and interventional) have buttressed the findings from correlational work.

Parenting, of course, encompasses many different phenomena. Nancy Darling and Laurence Steinberg (1993) have suggested that researchers distinguish between parenting style and parenting practices. They define *parenting style* as a constellation of attitudes toward the child communicated to the child by the parent, that taken together create an emotional climate in which the parent's behaviors are expressed. These behaviors include both the specific, goal-directed behaviors through which parents perform their parental duties (what Darling and Steinberg refer to as *parenting practices*) as well as non-goal-directed parental behaviors, such as gestures, changes in tone of voice, or the spontaneous expression of emotion. The focus of the current entry is on parenting style. Information on specific parenting practices, especially those related to parenting practices designed to influence educational achievement, may be found in other entries.

### Dimensional Approaches to Research on Parenting

Whether through correlational, longitudinal, or experimental designs, research on parenting style and its impact has traditionally followed one of two approaches. In the *dimensional* approach, researchers isolate critical dimensions of parenting along which parents differ and examine the relations between variability on one or more of these dimensions and variability in one or more child outcomes. The most frequently studied dimensions of parenting have been warmth (sometimes referred to as acceptance

or responsiveness), firmness (sometimes referred to as demandingness or behavioral control), and restrictiveness (sometimes referred to as intrusiveness or psychological control). Four broad sets of child adjustment indicators have been examined in relation to each of these dimensions of parenting: psychosocial development (including social competence, self-conceptions, and self-reliance); school achievement (including school performance, school engagement, and academic motivation); internalized distress (including depression, anxiety, and psychosomatic problems); and problem behavior (including delinquency, aggression, and drug and alcohol use).

Generally speaking, research shows that children and adolescents fare better when their parents are warm, firm, and nonrestrictive. Although variability in parental warmth has been associated with variability in all four areas of child adjustment listed in the preceding paragraph, it appears that variations in parents' firmness and restrictiveness contribute relatively more to some aspects of children's development than to others. In general, variations in firmness are linked most strongly to variations in problem behavior (with children whose parents are low in firmness exhibiting more problem behavior than their more vigilantly reared peers), whereas variations in restrictiveness are linked most strongly to variations in internalized distress (with children whose parents are high in restrictiveness scoring higher on measures of depression, anxiety, and the like). Thus the distinction between behavioral and psychological control is important not only because each is related to different outcomes but also because optimal child development is associated with high levels of one type of control (behavioral) but low levels of the other (psychological).

### Configurational Approaches to Research on Parenting

The dimensional approach attempts to separate various aspects of parenting from one another, to isolate their independent relations to child outcomes. In contrast, the *configurational* approach to parenting attempts to identify particular types or styles of parenting that are defined by certain constellations of parenting characteristics (e.g., a group of parents who are high on warmth, low on behavioral control, and low on psychological control; a group who are high on warmth, high on behavioral control, and low on psychological control, etc.). This has been

done by using configurations that are defined a priori on the basis of theory as well as by identifying naturally occurring clusters of parents whose parenting has been assessed on several of the key dimensions identified earlier. The advantage of the a priori approach is that all possible constellations of parents are identified, even those that are relatively rare. The advantage of identifying naturally occurring clusters of parents is that the end result is a categorization system that accurately reflects the type of parenting found within the particular ecological niche studied. This can be an important consideration for researchers who are interested in cultural groups whose parenting may not be easily classified using preexisting configurational models. Some critics, for example, contend that the most commonly used configurational models of parenting have greater applicability within white, middle-class, American samples than within samples of parents from other backgrounds.

The most widely used configurational model of parenting is one that derives from the work of Diana Baumrind (1971), whose theory of parenting style has been enormously influential. Although Baumrind's initial conceptualization of parenting styles was not explicitly based on the dimensions of parental warmth, behavioral control, and psychological control, more contemporary models of parenting, such as those of Darling and Steinberg, have attempted to bridge Baumrind's configurational approach with research on these three dimensions of parenting. Within this parenting-style framework, parents are classified as authoritative (high in warmth, high in firmness, and low in restrictiveness), authoritarian (low in warmth, high in firmness, and high in restrictiveness), or indulgent (high in warmth, low in firmness, and low in restrictiveness). Contemporary variations of this framework have also included a fourth group, indifferent parents, who are characteristically low in warmth, low in firmness, and low in restrictiveness. Although it is theoretically possible to derive additional configurations of parents based on other combinations of warmth, firmness, and restrictiveness, most empirical research suggests that, at least in contemporary Western cultures, the authoritative, authoritarian, permissive, and indifferent styles account for the vast majority of parents.

**Authoritative parents.** These four general styles of parenting can be distinguished in many respects beyond their scores on measures of parental warmth, firmness, or restrictiveness. For example, in addition

to being both warm and firm, authoritative parents set standards for the child's conduct but form expectations that are consistent with the child's developing needs and capabilities. They place a high value on the development of autonomy and self-direction but assume the ultimate responsibility for their child's behavior. Authoritative parents deal with their child in a rational, issue-oriented manner, frequently engaging in discussion and explanation with their children over matters of discipline.

**Authoritarian parents.** In contrast, authoritarian parents place a high value on obedience and conformity, favoring more punitive, absolute, and forceful disciplinary measures. Verbal give-and-take is not common in authoritarian households, because the underlying belief of authoritarian parents is that the child should accept without question the rules and standards established by the parents. They tend not to encourage independent behavior and, instead, place a good deal of importance on restricting the child's autonomy.

**Indulgent parents.** Indulgent parents behave in an accepting, benign, and somewhat more passive way in matters of discipline. They place relatively few demands on the child's behavior, giving the child a high degree of freedom to act as he or she wishes. Indulgent parents are more likely to believe that control is an infringement on the child's freedom that may interfere with the child's healthy development. Instead of actively shaping their child's behavior, indulgent parents are more likely to view themselves as resources that the child may or may not use.

**Indifferent parents.** Finally, indifferent parents try to do whatever is necessary to minimize the time and energy that they must devote to interacting with their child. In extreme cases, indifferent parents may be neglectful. They know little about their child's activities and whereabouts, show little interest in their child's experiences at school or with friends, rarely converse with their child, and rarely consider their child's opinion when making decisions. Rather than raising their child according to a set of beliefs about what is good for the child's development (as do the other three parent types), indifferent parents are "parent centered"—they structure their home life primarily around their own needs and interests.

In light of research findings linking positive child adjustment to the presence of parental warmth and firmness, and to a lack of parental restrictiveness, it is not surprising to find that child adjustment

varies as a function of parenting style, with children from authoritative households exhibiting relatively healthier adjustment than their peers and children from neglectful homes exhibiting poorer functioning on virtually all measured indicators. More specifically, children and adolescents from authoritative homes score better than their peers on measures of psychosocial development, school achievement, internalized distress, and problem behavior, whereas those from neglectful homes score worse across all four sets of outcomes. Youngsters raised in authoritarian or permissive homes score somewhere between the two extremes, with authoritarian parenting associated with special problems in self-reliance, social competence, and internalized distress, and permissive parenting associated with somewhat lower school achievement and elevated rates of problem behavior.

Although occasional exceptions to these general patterns have been noted from time to time, the evidence linking authoritative parenting and healthy child and adolescent development is remarkably strong, and it has been found in studies of a wide range of ethnicities, cultures, regions, social classes, and family structures. At the other extreme, parenting that is indifferent, neglectful, or abusive has been shown consistently to have harmful effects on the adolescent's mental health and development, leading to depression and a variety of behavior problems, including, in cases of physical abuse, aggression toward others.

### **The Power of Authoritative Parenting**

Why is authoritative parenting so consistently associated with healthy child and adolescent development? First, authoritative parents provide an appropriate balance between restrictiveness and autonomy, giving the child opportunities to develop self-reliance but providing the sorts of standards, limits, and guidelines that developing individuals need. Authoritative parents, for instance, are more likely to give children more independence gradually as they get older, which helps children develop self-reliance and self-assurance. Because of this, authoritative parenting promotes the development of and enhances their ability to withstand a variety of potentially negative influences, including life stress and exposure to antisocial peers.

Second, because authoritative parents are more likely to engage their children in verbal give-and-take, they are likely to promote the sort of intellec-

tual development that provides an important foundation for the development of psychosocial competence. Family discussions in which decisions, rules, and expectations are explained help the child to understand social systems and social relationships. This understanding plays an important part in the development of reasoning abilities, role taking, moral judgment, and empathy.

Finally, because authoritative parenting is based on a warm parent-child relationship, adolescents are more likely to identify with, admire, and form strong attachments to their parents, which leaves them more open to their parents' influence. Adolescents who have had warm and close relationships with their parents are more likely, for example, to have similar attitudes and values. Adolescents who are raised by indifferent parents, in contrast, often end up having friends their parents disapprove of, including those involved in antisocial activity.

### **Cultural Differences in Parenting**

A number of researchers have asked whether parents from different ethnic groups vary in their child rearing and whether the relation between parenting and child and adolescent outcomes is the same across different ethnic groups. These, of course, are two different questions: The first concerns average differences between groups in their approaches to parenting (e.g., whether ethnic minority parents are firmer than white parents), whereas the second concerns the correlation between parenting practices and child adjustment in different groups (e.g., whether the effect of firmness is the same in ethnic minority families as it is in white families).

In general, researchers find that authoritative parenting is less prevalent among African-American, Asian-American, or Hispanic families than among European-American families, no doubt reflecting the fact that parenting practices are often linked to cultural values and beliefs. Nevertheless, even though authoritative parenting is less common in ethnic minority families, its *effects* on adolescent adjustment are beneficial in all ethnic groups. In other words, ethnic minority youngsters for the most part benefit just as much from parenting that is responsive and demanding as do their nonminority peers.

Research has also indicated that authoritarian parenting is more prevalent among ethnic minority than among white families, even after taking ethnic differences in socioeconomic status into account. As

opposed to research on authoritative parenting, however, which suggests comparable effects across ethnic groups, research on authoritarian parenting indicates that the adverse effects of this style of parenting may be greater among white youngsters than among their ethnic minority counterparts. Several explanations have been offered for this finding.

First, some writers have suggested that because ethnic minority families are more likely to live in dangerous communities, authoritarian parenting, with its emphasis on control, may not be as harmful and may even carry some benefits. Second, as several researchers (Ruth Chao, 1994; Nancy Gonzales, Ana Mari Cauce, and Craig Mason, 1996) have pointed out, the distinction between “authoritative” versus “authoritarian” parenting may not always make sense when applied to parents from other cultures. For example, nonwhite parents frequently combine a very high degree of restrictiveness (like white authoritarian parents) with warmth (like white authoritative parents). If they focus too much on parents’ strictness when observing family relationships, European-American researchers may mislabel other ethnic groups’ approaches to child rearing (which appear very controlling, but which are neither aloof nor hostile) as authoritarian.

In the last years of the twentieth century, new models of parenting began to emerge, which attempted to move beyond the traditional, often stale, debates between those who believe that parents are relatively impotent in the face of genetic and non-familial influence on child development and those who believe that parents’ influence is limitless. These new models emphasize the importance of studying parenting as a bidirectional process, in which parents both influence and are influenced by their child, and as an embedded process, in which a range of forces in the proximal and distal environment influence the parent-child relationship. New research on parenting examines such questions as whether and in what ways the child’s temperament moderates the impact of certain types of parenting on child adjustment; whether and how the impact of parenting varies across neighborhood and community contexts; and whether and through what processes the influence of parents on their children is itself affected by the other settings in which the child spends time, such as the peer group, day-care center, or classroom.

*See also:* ADOLESCENT PEER CULTURE, *subentry on* PARENTS’ ROLE; PARENTAL INVOLVEMENT IN EDU-

CATION; PARENTING, *subentries on* HIGH-RISK NEIGHBORHOODS, INFLUENCE OF PARENTS’ LEVEL OF EDUCATION, INFLUENCE ON CHILD’S EDUCATIONAL ASPIRATIONS AND ATTAINMENT.

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LAURENCE STEINBERG

#### HIGH-RISK NEIGHBORHOODS

Avenues of inquiry regarding successful parenting in high-risk neighborhoods, particularly as it relates to students’ ability to succeed in school, include the following: How do researchers define “high-risk,” and how does the concept differ from “disadvantaged”? What is known about the socio-demographic conditions associated with individuals and neighborhoods characterized by “risk”?

To answer these questions, three intersecting lenses of analysis are examined: (1) individual: parenting and resilience; (2) community: social capital and capacity; and (3) interinstitutional: ecology of schooling. The discussion focuses upon the elements associated with educational management functions among families in high-risk neighborhoods.

### Definition of “At-Risk”

The concept of a high-risk neighborhood is derived from the set of social and economic conditions that place individuals “at-risk” of failure, or of encountering significant problems related to employment, education, self-sufficiency, or a healthy lifestyle. At-risk conditions include both environmental or community characteristics, such as crime and limited employment opportunities, and individual qualities, such as poverty and low educational attainment. The problems or failures encountered by those labeled at-risk are oriented toward the future but linked to current conditions.

The understanding that interactions between particular environmental and individual characteristics may lead to a heightened risk of negative outcomes is rooted in the health and medical literature, and is widely examined in studies of social stratification, educational inequality, and social policy. Common arguments, such as those of sociologists Karl Alexander and Doris Entwisle, among others, suggest that individuals “disadvantaged” by low socioeconomic status are more susceptible to adverse environmental or community conditions, such as unsafe housing and poor quality schooling. Decades of social science research provide compelling evidence that the extent and concentration of neighborhood poverty and the presence (or absence) of affluent neighbors are associated with an array of outcomes, including rates of teenage pregnancy and school dropout. But policymakers and social scientists also underscore the finding that in socially depleted neighborhoods, residents are often constrained in their efforts to transmit positive values and productive norms because of a lack of community structure and effective social controls.

### High-Risk Neighborhoods

Historically, neighborhoods have functioned as the social, political, and cultural webbing for families and children. This context links families and individuals to a set of norms, routines, and traditions. The social scripts embedded in the geography and

culture of the neighborhood, if well known and well defined, become institutionalized practices for children and adults. Social actions flow from perceptions of safety and opportunity, expectations regarding appropriate parenting styles and child behavior, norms regarding home maintenance and respect for property. The neighborhood environment defines the formation of particular social networks among families and the levels of trust, familiarity, and face-to-face engagement among members.

Clusters of interlocking and corrosive conditions are persistent in high-risk neighborhoods, and are evidenced by the dense and dilapidated housing, a real and constant threat of violent crime, inadequate and inaccessible health care, a lack of employment opportunities that pay a living wage, and unreliable and limited public transportation. These concrete indicators of poverty and social isolation give rise to an insidious and entrenched culture of fear, disconnection, and distrust in high-risk neighborhoods. Families may be paralyzed by fear of gangs and guns. Omnipresent drug traffic and a constant threat of victimization minimize opportunities for interdependence and delimit social interaction among neighbors within the community. High transience rates in these neighborhoods lead to blocks of unstable and abandoned housing.

How does this social fabric influence children’s well-being, particularly their success in schooling, when the population is so heavily marked by concentrated poverty, unemployment, low levels of education, and large numbers of struggling, single parents? How is a parent’s pattern of involvement in home- and school-based learning activities affected by these neighborhood-level conditions—beyond individual characteristics (income, education, family structure)? These community-level conditions frame the challenging conditions for parents engaged in managing their children’s educational experiences at home and at the school site. Researchers agree that these out-of-school environments constitute vital components that are deeply connected but external to students’ experiences in formal school settings.

### Resiliency and Community Capacity

Although it is clear that certain family conditions are associated with higher rates of poverty—low parent education, young parental age, and single parent status—it is less well understood how parenting practices in circumstances of poverty may overcome or mediate these “high-risk” conditions to produce

successful educational outcomes for children. Emerging research findings point to the important role of resiliency in guiding the actions of individuals. Resiliency research refers to a long tradition of studies aimed at understanding how individuals or groups overcome high-risk conditions, such as poverty, or succeed despite severely adverse family situations, such as an alcoholic or abusive parent.

Certain elements present in the individual or community, known as “protective factors” function to assist people in high-risk environments to overcome the adverse conditions. Internal protective factors include social competence (ability to form positive and productive relationships with others); problem solving (the ability to identify problems and apply appropriate resources to solving them); autonomy (an ability to act independently and with control over their environment); and sense of purpose (the disposition to set goals, persist in achieving them, and maintain a focus). These internal elements function in partnership with external protective factors to produce resiliency and positive outcomes. Thus, schools and neighborhoods that offer resiliency to individuals include the following properties: a sense of caring and heightened familiarity for individual members or students; high expectations coupled with appropriate resources to reach these goals; opportunities for meaningful participation and demands for personal responsibility.

The research literature on community capacity extends and elaborates upon the important influence that neighborhood conditions exert in shaping social action in positive ways that lead to productive outcomes among members. Robert Chaskin has identified four central elements that are often weak or tenuous in high-risk neighborhoods.

1. A sense of community or degree of connectedness among neighbors—their sense of being similarly situated socially, economically, and geographically
2. Level of commitment among neighbors who view themselves as stakeholders and assume responsibility for collective outcomes
3. A mechanism for problem identification, planning and priority-setting, and problem solving
4. Access to financial, political, and human resources

Community capacity focuses upon the significance of social interaction across individuals, organiza-

tions, and networks of organizations. A central asset required for community capacity is human capital—the skills, knowledge, and dispositions among individual members of a community that are profitable for both individuals and the neighborhood in optimizing the processes outlined in the community-building literature. As James Coleman and Thomas Hoffer note, residents in high-risk neighborhoods who fit the traditional definition of “disadvantaged,” that is, are marked by low levels of education and low income, have little human capital and face challenging obstacles in their efforts to build community capacity.

Social capital bridges human capital theory, which underscores the economic value of individuals for collective purposes, and social organization theory. The capacity of neighborhoods to provide constructive assets for parents engaged in managing their children’s educational success can be examined through the concepts embedded in social capital.

### Social Capital

The concept of social capital emphasizes the role of organizational (e.g., school) relationships in establishing social ties between members who share similar attitudes, norms, and values instrumental in promoting a strong sense of obligation, shared expectations, and trust. These critical elements of social capital help promote trust, facilitate open and fluid communication, and produce purposeful and meaningful activities that benefit students and adults alike. Social capital is sustained when there is “a sense of community” or a set of organizational and institutional affiliations (e.g., civic, religious, professional) that bind families in stable, predictable, and enduring social ties.

The economic and social environments in high-risk neighborhoods may militate against the development and sustainability of social capital. These neighborhoods often reflect their social and economic context: scarce economic resources, unstable social networks, limited social trust, and a perceived lack of consensus on parenting. There are few after-school programs, church-related youth groups, or recreation/civic programs for children, youth, and families. Research studies of parenting practices in high-risk neighborhoods—community contexts bereft of social capital assets—describe parenting as a highly private, protected, and isolated set of activities. Under manifestly dangerous conditions, parents in high-risk neighborhoods manage risk and oppor-

tunity by adopting stringent child monitoring and youth control, or “lock-down” strategies. These individual patterns of confinement and insularity in childrearing and parenting reflect the larger, collective neighborhood dynamics. As more and more parents adopt these defensive tactics, increasing numbers of neighbors are disconnected and social networks of support dissolve.

Thus, the capacity of parents in high-risk neighborhoods to manage and promote educational success and healthy outcomes for their children is powerfully influenced by the nature of, and the ability to activate, social capital assets and community capacity-building in the neighborhood. Successful parents, that is, parents whose children are thriving socially and academically despite the distracting and disabling conditions in their neighborhood environments, demonstrate resiliency and an ability to activate internal protective factors. These parents manage to capture “scarce opportunities” in ways that suggest “super motivation” and “unusual diligence,” according to Frank Furstenberg and his colleagues, who have studied urban neighborhoods and youth development for decades in Baltimore.

What role do schools play in promoting enduring social ties between families and educators in high-risk neighborhoods? Against this backdrop of distracting and disabling social contexts, how does a school community bind families in networks of support that enhance parents’ abilities to promote positive educational outcomes for their children?

### **School Community**

Research suggests that the type and strength of community in schools differentially affects the critical social connections that bond families and schools in the joint enterprise of education. This concept of community refers to two types: functional and value. Functional communities are characterized by structural consistency between generations in which social norms and sanctions arise out of the social structure itself, and both reinforce and perpetuate that structure. Functional communities exhibit a high degree of uniformity and cohesion within geographical, social, economic, and ideological boundaries. Value communities describe a collection of people who share similar values about education and childrearing but who are not a functional community; they are strangers from various neighborhoods, backgrounds, and occupations united around an educational organization—their children’s school. Re-

search findings indicate that Catholic schools often reflect the elements of functional communities; magnet schools sometimes suggest the elements of a value community.

The families of students in high-risk neighborhoods, however, may possess few if any of the constitutive elements of either a functional or value community. Although public neighborhood schools a century ago served residential areas that were functional communities, social, economic, and technological changes have transformed many of these communities from enclaves of shared values and daily face-to-face talk, to somewhat disparate sets of interests and weak affiliations.

### **Parent Involvement**

Substantial research evidence indicates the positive effects of both home- and school-based parent involvement programs for all parents, teachers, and students. Findings, such as those of Carole Ames in 1993, indicate that parent involvement enhances parents’ attitudes about themselves, school, school personnel, and the role each plays in the development of the child. This increased understanding promotes greater cooperation, commitment, and trust between parents and teachers. Finally, evidence, such as that of James Comer in 1980 suggests that students’ achievement and cognitive development increases when effective parent involvement practices are in place.

Most significant in the generally positive and optimistic reports on parent involvement may be the evidence that patterns of parental participation are related to differences in socioeconomic status: Higher income and more educated parents participate at higher rates than lower class parents, both in terms of school-based activities and home learning exercises. Studies have identified educative enrichment activities that are crucial for children’s cognitive development and school success (reading to children, taking children to the library, attending school-based events) that middle-class parents engage in more frequently than lower class parents. Beyond the benefit of home-based activities (reading, math games, inquisitive conversation) on children’s learning, there are strong indications of the connection between teachers’ expectations for student performance and the actions and attitudes of parents. Decisions regarding retention/promotion and ability grouping may well hinge on teachers’ perceptions of parental interest and commitment.

Research by Deborah Vandell and colleagues in 1999 suggests that parents' patterns of participation (as reported by teachers) may be an important factor in mediating the negative impact of neighborhood risk on academic performance of elementary school students. The types of involvement reported by teachers to benefit children in high-risk neighborhoods include visiting the school for discussions with teachers, supervising homework, and providing children with enrichment activities at home. Vandell and colleagues point to resilience factors evidenced among parents to explain these families' active and purposeful participation in a range of home and school-based activities that benefit their children's academic performance.

### School-Linked Social Services

The critical interaction between social structure and school organization in high-risk neighborhoods is amplified by the school-linked social services movement launched more than 100 years ago and rekindled with new programmatic priorities in the late 1980s. The school-linked social services movement has triggered a shift from a model of education based upon separate spheres between home and school to an ecological perspective of family life that considers the human context of need and locates the school as the nexus for expanded social and economic services.

Rebuilding community-based groups and youth development organizations, such as neighborhood centers, recreation programs, youth groups, and after-school art and educational enrichment programs, is critical to improved family functioning in high-risk neighborhoods. The research on family functioning, poverty, and neighborhoods is clear: A multipronged community-capacity building effort is necessary to enhance the ability of parents who are embedded in a context of economic survival and social isolation. Only then can parents overcome the daunting array of formidable obstacles to manage successfully their children's educational experiences in the neighborhood and inside the classroom.

*See also:* ADOLESCENT PEER CULTURE, *subentry on* PARENTS' ROLE; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; PARENTAL INVOLVEMENT IN EDUCATION; PARENTING, *subentry on* INFLUENCE ON CHILD'S EDUCATIONAL ASPIRATIONS AND ATTAINMENT.

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## INFLUENCE OF PARENTS' LEVEL OF EDUCATION

Traditionally, family status variables such as parents' level of education have been regarded as predictors of children's academic achievement. Increasingly, research has suggested that, rather than having a di-

rect association with children's academic achievement, parents' level of education is part of a larger constellation of psychological and sociological variables influencing children's school outcomes.

Attendant on higher levels of education may be access to resources, such as income, time, energy, and community contacts, that allow for greater parental involvement in a child's education. Thus, the influence of parents' level of education on student outcomes might best be represented as a relationship mediated by interactions among status and process variables.

The literature also suggests that level of education influences parents' knowledge, beliefs, values, and goals about childrearing, so that a variety of parental behaviors are indirectly related to children's school performance. For example, higher levels of education may enhance parents' facility at becoming involved in their children's education, and also enable parents to acquire and model social skills and problem-solving strategies conducive to children's school success. Thus, students whose parents have higher levels of education may have an enhanced regard for learning, more positive ability beliefs, a stronger work orientation, and they may use more effective learning strategies than children of parents with lower levels of education.

While many theorists and researchers argue that student attributes conducive to achievement are deeply rooted in processes of socialization, such as learning through observation of parental modeling, others contend that through their personal qualities, children actively shape the parenting they receive: Parents socialize their children, but children also influence their parents. Supporting both theoretical perspectives is research indicating that the combination of learning behavior and intelligence exceeds the contributions of any single source in predicting children's scholastic achievement.

Parents with higher levels of education are also more likely to believe strongly in their abilities to help their children learn. A recent study exploring the relationships between level of parent education, parent self-efficacy, children's academic abilities, and participation in a Head Start program found that level of parent education and program participation was significantly related to parental self-efficacy. In turn, parental self-efficacy beliefs significantly predicted children's academic abilities.

However, examinations across varied cultural and ethnic groups within the United States suggest

that level of education does not appear to determine the value parents place on education, their interest in their children's schooling or their aspirations for their children's academic success. For example, in a 1997 study comparing the relative value of varied predictors of parental involvement, Thomas Watkins found that parents' efficacy for involvement and educational goals for their children were stronger predictors of school success than parental level of education and ethnicity. Additionally, this study found that teacher communications to parents predicted parental involvement, suggesting that, regardless of education level, parents need encouragement from educators to become involved in their children's education.

In sum, it appears that process variables, or factors susceptible to the influence of parents, their children, and school personnel (e.g., educational expectations, level of involvement, child attributes conducive to achievement, and teacher invitations for parental involvement) are more predictive of children's school success than status variables such as parental level of education. This is an important conclusion, for while educators and researchers cannot influence the status of students' families, they may improve students' educational outcomes by influencing selected mediating process variables.

*See also:* PARENTING, *subentries on* HIGH-RISK NEIGHBORHOODS, INFLUENCE ON CHILD'S EDUCATIONAL ASPIRATIONS AND ATTAINMENT, OVERVIEW.

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## INFLUENCE ON CHILD'S EDUCATIONAL ASPIRATIONS AND ATTAINMENT

A considerable body of research conducted within the United States and across countries has overwhelmingly demonstrated the profound influence of parents' beliefs and behaviors on children's educational aspirations and academic achievement. What remains unclear is how parental belief systems are

transmitted to and manifested in children, and how belief systems function among families of varied socioeconomic and ethnic backgrounds.

### Effects of Socialization

Many theorists and researchers regard the development of student beliefs and behaviors conducive to achievement (e.g., belief in one's ability, effective learning strategy use, motivation for academic tasks, strong work orientation) as the product of socialization processes. In a 1996 study, Manuel Martinez-Pons tested a theoretical model indicating that parental belief and behavior systems induce their children's educational aspirations—through parental modeling of attitudes and strategies, encouragement and facilitation of academically related goals and activities, and reinforcement or rewarding of student achievement.

Examples of specific parental behaviors that may influence children's educational aspirations can be found in recent reviews of parental involvement in homework. This literature suggests that parents use a wide array of cognitive and social strategies to facilitate their children's learning. These strategies range from simple efforts such as creating a physical space for completing homework and providing general oversight and encouragement of the homework process to interacting with the child's school or teacher about homework and engaging in homework tasks with the child. Parents also appear to use more sophisticated strategies that are designed to create a "fit" between a particular task and the child's abilities (e.g., breaking tasks into discrete, manageable parts), support children's understanding of specific homework tasks (e.g., helping the child organize personal thinking about the assignment), and support their understanding of strategies conducive to achievement (e.g., developing problem-solving skills).

### Parenting Styles

In addition to their involvement in specific aspects of their children's education, styles of parenting also affect children's attitudes toward academic achievement. For example, adolescents who described their parents as "warm, democratic, and firm" (i.e., a parenting style characterized as *authoritative parenting*) were more likely than their peers to develop positive attitudes toward and beliefs about their achievement. These results, however, were true for a predominantly white middle-class to upper-middle-

class population. Investigation of links between parenting practices and academic achievement among varied ethnic groups have suggested that the relationship between parenting style and achievement is more complex.

Students' educational aspirations appear to be influenced not only by parents, but also by peers. For example, Laurence Steinberg, Sanford Dornbusch, and B. Bradford Brown (1992) found that high-achieving white students benefited from the combination of authoritative parenting and peer support for achievement, while lower-achieving Hispanic students suffered from a combination of *authoritarian* parenting (characterized by high demands and low warmth) and low peer support. For African-American students, the benefits of authoritative parenting appeared to be offset by low peer support for achievement, while the negative consequences on Asian-American students of authoritarian parenting were tempered by peer support.

### Theories of Influence

The combined influence of parents and peers supports theorists who argue that parents' educational aspirations for their children, and children's own aspirations, stem from socially constructed roles. *Role theory* suggests that beliefs are derived from expectations held by groups for the behavior of its individual members (e.g., a family's expectations for a child's academic achievement). Roles are also sets of behaviors characteristic of specific kinds of group members (e.g., minority elementary-school students). As such, role construction involves three interactive processes: (1) structural demands (i.e., What do others expect of me?), (2) personal role conceptions (i.e., What do I expect of myself?), and (3) role behavior (i.e., What do I/should I do?). Put simply, *role* can be characterized by two components: beliefs individuals hold and actions that individuals take.

Because it accounts for interactions among varied psychological and sociological factors experienced by members of different races, social classes, and ethnicities, role theory is a valuable tool for explaining the conflicting evidence surrounding parents' influence on children's educational aspirations. Further, some researchers speculate that understanding how parental roles are constructed may enhance educators' abilities to effectively involve parents in their children's education, and thus enhance student outcomes.

Another useful theoretical tool for disentangling differential patterns of parental belief and behavior systems is John U. Ogbu's *cultural ecological theory*. From this perspective, within minority groups, students' choice of strategies for succeeding in school are believed to stem from their desire to take the path of least resistance to the dominant social group, and to improve their status within their own peer group. Further, Ogbu characterizes minority groups' status as voluntary (i.e., immigrant families) and involuntary (i.e., native-born families), and he contends that voluntary minorities have more social pressure to do well in school than involuntary minorities. His argument is supported by a collection of ethnographies and other qualitative studies describing the combined influence of self, peer, and parental expectations and valuing of education among immigrant students and their native-born peers.

Specifically, these studies have noted that while many immigrant students invest personal time and energy in studying and seeking extra help, what appears to drive these self-regulatory efforts is a constellation of self, peer, and parental values that place great importance on the role of education. Moreover, when voluntary and involuntary minority families are compared, the children of immigrant families appear to have higher educational aspirations and academic achievement than their native-born peers.

Compounding the difficulty in understanding how parental aspirations influence children's ability beliefs and learning behaviors is the fact that children receive and require differing levels of support and guidance from parents and peers according to their cognitive, social, and emotional development. In general, educational psychologists view the development of beliefs and behaviors conducive to achievement as a movement from largely socially regulated experiences in the early grades to more self-regulated learning experiences in middle and high school. Thus, the quality and quantity of parental influence on students' positive aspirations for achievement differ as children move from elementary to high school.

*See also:* PARENTAL INVOLVEMENT IN EDUCATION; PARENTING, *subentries on* HIGH-RISK NEIGHBORHOODS, INFLUENCE OF PARENTS' LEVEL OF EDUCATION, OVERVIEW.

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## PEACE EDUCATION

Peace education encompasses the key concepts of education and peace. While it is possible to define education as a process of systematic institutionalized transmission of knowledge and skills, as well as of basic values and norms that are accepted in a certain society, the concept of peace is less clearly defined. Many writers make an important distinction between positive and negative peace. Negative peace is defined as the absence of large-scale physical violence—the absence of the condition of war. Positive peace involves the development of a society in which, except for the absence of direct violence, there is no structural violence or social injustice. Accordingly, peace education could be defined as an interdisciplinary area of education whose goal is institutionalized and noninstitutionalized teaching about peace and for peace. Peace education aims to help students acquire skills for nonviolent conflict resolution and to reinforce these skills for active and responsible action in the society for the promotion of the values of peace. Therefore, unlike the concept of conflict resolution, which can be considered to be retroactive—trying to solve a conflict after it has already occurred—peace education has a more proactive approach. Its aim is to prevent a conflict in advance or rather to educate individuals and a society for a peaceful existence on the basis of nonviolence, tolerance, equality, respect for differences, and social justice.

### The Development of Peace Education and Its Basic Principles

The understanding of the concept of peace has changed throughout history, and so has its role and importance in the educational system from the very beginnings of the institutionalized socialization of children. When discussing the evolution of peace education, however, there have been a few important points in history that defined its aims and actions. The end of World War I (1914–1918) brought powerful support for the need for international cooperation and understanding and helped instill a desire to include these ideas in educational systems. The League of Nations and a number of nongovernmental organizations worked together on these ideas, especially through the International Institute of Intellectual Cooperation, an organization that was the predecessor of the United Nations Educational, Scientific and Cultural Organization (UNESCO).

World War II (1939–1945) ended with millions of victims and the frightening use of atomic weapons against Japan, at Hiroshima and Nagasaki. In 1946 UNESCO was founded as an umbrella institution of the United Nations, and it was charged with planning, developing, and implementing general changes in education according to the international politics of peace and security. The statute of this organization reinforced the principle of the role of education in the development of peace, and a framework was created for including and applying the principles of peace in the general world education systems. The cold war division of the world after World War II and the strategy of the balance of fear between the so-called West and East blocs redirected the peace efforts. The peace movement began concentrating on stopping the threat of nuclear war, halting the arms race, and encouraging disarmament. Somewhat parallel to this, the issues of environmental protection and development found their place in peace education programs. The contemporary sociopolitical environment (particularly the events in eastern Europe since the early 1990s, the fear of terrorism, and the increasing gap between developed and undeveloped countries) has created new challenges for the understanding of peace and for the development of the underlying principles of responsibility and security.

A 1996 book by Robin Burns and Robert Aspeglagh showed that the field and the themes that are included in peace education are diverse. The diversity is evident in theoretical approaches, underlying philosophies, basic methodology, and goals. Within the field of peace education, therefore, one can find a variety of issues, ranging from violence in schools to international security and cooperation, from the conflict between the developed world and the undeveloped world to peace as the ideal for the future, from the question of human rights to the teaching of sustainable development and environmental protection. A critic could say that the field is too wide and that peace education is full of people with good intentions but without a unique theoretical framework, firm methodology, and an evaluation of the outcomes of the practical efforts and programs of peace education. Some within the field would generally agree with this criticism. Nevertheless, the importance of accepting the specific situations in which programs for peace are being implemented and held should be emphasized. Owing to these specifics, difficulties emerge when one tries to define the unique

approach, methodology, and evaluation of the efficiency of applied programs. The complex systems of society, the circumstances, and the context make the peace education field very active and diverse.

### **Peace Education Discrepancies: Individual, Group Conflict**

In the active process of achieving positive peace, peace education is faced with a few basic discrepancies: discrepancy between the individual and the group, discrepancy between groups within one society or from different societies, and the discrepancy of conflict as an imbalance of different interests that need to be resolved without violence.

**Discrepancies between individual and group.** The modern liberal theory puts the individual's equality, values, and rights in the center of a successfully functioning society. This basic thesis is the beginning of the philosophy and practical protection of human rights. From the individual psychological point of view one thinks in terms of educating a complete person. In the educational system this does not mean transmitting only the facts, but it includes the complete social, emotional, and moral development of an individual; the development of a positive self-concept and positive self-esteem; and the acquisition of knowledge and skills to accept responsibility for one's own benefit as well as for the benefit of society. The development of a positive self-concept is the foundation for the development of sympathy for others and building trust, as well as the foundation for developing awareness of interconnectedness with others. In that sense a *social individual* is a starting point and a final target of peace education efforts.

**Discrepancies between groups.** People are by nature social beings, fulfilling their needs within society. Many social psychologists believe that there is a basic tendency in people to evaluate groups they belong to as more valuable than groups they do not belong to. This ingroup bias is the foundation of stereotypes, negative feelings toward outgroups, prejudices, and, finally, discrimination. In the psychological sense, the feeling of an individual that his or her group is discriminated against, or that he or she as an individual is discriminated against just for belonging to a particular group, leads to a sense of deep injustice and a desire to rectify the situation. Injustice and discrimination do not shape only the psychological world of an individual but also shape the collective world of the group that is discriminated against—shaping the group memory that is trans-

mitted from generation to generation and that greatly influences the collective identity. Belonging to a minority group that is discriminated against could have a series of negative consequences on the psychological and social functioning of its members, for example, leading to lower academic achievement or negatively influencing the self-concept and self-esteem. Therefore, peace education is dealing with key elements of individual and group identity formed by historical and cultural heritage, balancing the values of both of these, and trying to teach people how to enjoy their own rights without endangering the rights of others, and especially how to advocate for the rights of others when such rights are threatened. This motivating element of defense and advocating for the rights of others is the foundation of shared responsibility for the process of building peace.

**Conflict and its role in peace education.** Conflict is a part of life, and its nature is neither good nor bad. On the interpersonal and intergroup level, conflict describes an imbalance or an existence of difference between the needs and interests of two sides. It becomes negative only when the answer to a conflict is aggression. It is possible, however, to resolve the difference positively, by recognizing the problem and recognizing one's own needs and interests and also acknowledging the needs of the opposing sides. In this way, constructive nonviolent conflict resolutions are possible. An important aspect of conflict is that it includes potential for change, and it is in this context that peace education addresses the issues of conflict and conflict resolution by teaching students how to take creative approaches to the conflict and how to find different possibilities for the conflict resolution. Thus students gain knowledge and skills that encourage personal growth and development, contribute to self-esteem and respect of others, and develop competence for a nonviolent approach to future conflict situations.

### **Peace Education in Schools**

From the very beginnings of the development of systematic peace education, there has been discussion about whether it should be added as a separate program in the schools, or if the principles of peace education should be applied through the regular school subjects. The variety of approaches and attitudes on what peace education actually is leads to the introduction of a series of titles, such as multicultural training, education for democracy and human

rights, and education for development. Many in the field, however, believe that the implementation of *principles* of peace education into the institutionalized educational system is a better approach, especially within the subjects encompassing the cultural heritage of the dominant society and the ethnic groups belonging to it. Consistent with this view, Aspeslagh in 1996 wrote about the need to internationalize national curriculum. For example, including within the curriculum the contributions of minority groups to literature, history, art, the general cultural heritage, and the development of the particular nation-state may significantly contribute to intercultural closeness and understanding.

### **The Principles and Theoretical Foundations of Peace Education Programs**

Since the psychologist Gordon Allport formulated his well-known contact hypothesis in 1954, this theoretical framework became the most applicable principle for programs whose main goal is to change the relationships between groups in conflict. According to Allport's theory, for the intergroup contact to be successful and accomplish positive changes in attitudes and behavior, it must fulfill four basic conditions: the contact groups must be of equal status, the contact must be personal and manifold, the groups must depend on each other working for a superordinate goal, and there must be institutional support for the equality norm. The numerous research projects that tried to verify the predictions of the contact hypothesis provided contradictory results, raising serious doubts about the major cognitive, affective, and behavioral shifts that occur as a result of organized meetings between representatives of conflicting groups. Almost every new study added new conditions that must be fulfilled in order for the contact to be successful.

Even if there is a positive change in the attitude toward members of the outgroup in direct contact, there is a question of the generalization of the newly formed attitude to the other members of the outgroup. The key problem of peace education is not the interpersonal conflict but the collective conflict between groups, races, nations, or states. Therefore, the issue of transferring the positive attitudes toward members of other groups—attitudes achieved in safe environments such as classrooms, schools, workshops, and the like—to all members of the outgroup and all other outgroups remains the pivotal issue of peace education. Children learn about peace and the

need for peace in safe protected environments and then return to a wider society where there is still injustice, asymmetry of power, a hierarchical structure, discrimination, and xenophobia. Therefore, each program for peace education must not only strengthen the capacity of an individual for critical thinking but also strengthen the individual's ability to resist the majority, if the majority is one that discriminates. As stated by Ervin Staub in 1999, for change to happen and spread there is a need for a *minimum mass of people* who share attitudes, a culture in which they can express those attitudes, and a society that accepts the attitudes.

Based on the contact hypothesis, a very successful technique was developed for improving the relations among groups, highly applicable as a general teaching and learning method. It is the *cooperative learning technique* in which a smaller group of students study in face-to-face interaction, cooperating to complete a common task. This technique was very successful both in lower and higher grades of elementary school, not only as a teaching method but also for creating a positive atmosphere in the classroom, reinforcing students relationships, and creating intergroup friendships.

On the other hand, based on the idea that adopting knowledge and developing skills is the basis for gaining positive attitudes and behavior, *intercultural training programs* were also developed. These basically involve a group of techniques that accept the primary notion that differences between cultures are what lead to misunderstandings and conflicts between groups. Such programs assume that information about the values, customs, and practices of the members of a different culture contributes to better understanding of others, thereby reducing prejudices, negative stereotypes, and tensions between people who belong to different cultures. Research has shown that ignorance about others plays a significant role in the development and perpetuation of prejudices. Educating students about both cultural similarities and differences is a significant factor in reducing prejudice.

### Conclusion

Peace education is a diverse field that includes the theoretical, research, and practical activities of experts from many disciplines assembled in a number of professional and research associations. The best known among these is the International Peace Research Association, which was founded in 1964.

The programs of peace education exist within the academic discipline of peace studies on many universities, especially in the United States. The dissemination of research results and theoretical approaches is ensured by the existence of a number of periodicals, for example *Peace and Conflict: Journal of Peace Psychology*; *Journal of Peace Research*; and *Peace and Change*. The measure of the success of these efforts will be seen in the ending of conflicts between countries and nations, in a more just distribution of goods, and in reducing the differences in economic development and life standards between the countries of the underdeveloped and developed worlds. For the culture of peace to become established, it is necessary to accept the principles of uniqueness in diversity and to establish the social norms of respect, dignity, and the rights of every individual.

*See also:* INDIVIDUAL DIFFERENCES.

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DINKA CORKALO

## PEER GROUPS

See: ADOLESCENT PEER CULTURE; PEER RELATIONS AND LEARNING.

## PEER RELATIONS AND LEARNING

Influences on student learning in an academic environment can be numerous and contradictory. Determining the accuracy and relevance of information from teachers, friends, and classroom materials can be overwhelming. Which classroom features an individual student attends to depends, in part, on what that student values and prioritizes.

The interactions among peers in the classroom are a normal and essential part of the learning process that influence the lifelong learning habits of students. The potential effects of peer relationships are

reciprocal: Some students are more receptive than others. On one extreme, for example, is the student who values and seeks peer input on every decision; on the other is the social isolate who avoids interaction in and out of the classroom. This entry examines selected variables that can influence learners, including developmental differences, motivational and learning considerations, and the function of the classroom contexts.

### Peer Relationships

In a 1953 book, Henry Stack Sullivan outlined a developmental theory describing the changes in interpersonal needs as an individual matures. He observed that elementary school students tend to work with larger peer groups, which are usually the whole class with whom the young student spends their academic days. Classroom peer groups give way to same-sex "chums" in early adolescence. These same-sex chums fit the best friend/confidant role. Late-elementary and middle school students usually confine their social activities to include these one or two friends. High school and early adulthood individuals seek out and spend time with love interests who satisfy emotional and physical intimacy needs.

With entrance into education, the influence of the family plateaus, if not decreases, as the importance of peers increases. Adolescence marks the peak of peer influence. The demands and opinions of friends can overwhelm the needs of family and, at times, can overwhelm the individuals themselves. As the individual matures biologically and cognitively, the culture of education also changes, moving the student through a system marked by a single class in early elementary school to a system of hour-long classes in middle and high school. Student peer preferences also change during these years. Friendships of two to three students give way to larger group networks.

It comes as no surprise, then, that the relative consistency of peers allows them to take precedence over academics and educators in later education. In addition to school structure, factors such as biology, home life, and increased personal responsibilities have also been explanations for students' decreased academic motivation and increased receptivity to peer influence. Whatever the causes, the subculture of the peer group can be very telling in determining students' motivation to succeed in academics.

In short, the relative influence of peers or peer groups typically increases with the age and development of the student. So, too, do the multiple functions of peers increase. A younger student may be able to find the motivation and desire to learn apart from classmates and friends, looking instead to values from home and teacher. Older students are more apt to seek out those who have similar interests and values.

### **Motivation, Learning, and Relationships**

Age of the student is one consideration in weighing the importance and application of motivation to learn. Human relationships have varying degrees of importance in motivational and learning theories. Most approaches tend to agree, however, that students who surround themselves with peers and influences who value learning and the educational process will also value their own learning and strive to enhance their education.

Abraham H. Maslow viewed the need for love and belongingness as a step toward achievement in his hierarchy of motivation model, which he described in 1954. In this view, the deprivation of more basic needs hinders progress along the path to achievement. In Maslow's model, people must have love and belongingness issues satisfied in order to address needs of achievement. For example, a student with deprived relationship concerns will be less able to participate in classroom learning opportunities. The ability to learn is built on a foundation of comfortable relationships with others, including peers and family, and classroom learning is all about learning with and in the presence of others.

"Expectancy by value" theories define motivation as the product of the amount of success on a task that an individual expects to earn times the amount of value the individual places on the task. Thus, a task that the individual values and expects to be successful at will be motivating compared to a task with lower expected success or value. Whereas past experience can predict the expectancy aspect of this model (e.g., the student has done well on prior essay exams), the value placed on the task is more mediated by outside factors, such as peers and family (e.g., the student's opinions are respected). Related motivational theories include the incentive or rewarding aspects of motivation, which may also stem from relationships with others.

Behaviorism provides one way to explain the association between motivation to learn and peer

interactions. In basic behaviorist theories, relationships between people affect learning only as much as people reinforce each other (or not) in the academic arena. For example, if the peer group encourages education and learning, then the individual student within that group will value learning, because the individual is reinforced, or rewarded, for behavior that indicates that learning is valued. Students in peer groups that do not value education lack the stimulation and reinforcement needed to encourage personal learning. These peer groups presumably stimulate and reinforce other values.

Albert Bandura's social learning theory speaks precisely to the human interactions involved in learning. Observational, or "vicarious" learning is based upon learning by watching then "modeling" or acting similarly to others. If the student views and works with people who appreciate learning by engaging in learning activities, then the student too will engage in learning and might work harder at learning. Peers with positive attitudes and behaviors toward education will allow and teach each other to set goals that include opportunities to learn and achieve. If peer models do not convey positive attitudes toward learning, then the students observing these models will not prioritize learning in their own lives. They will learn to prioritize other goals.

In 1978 Lev Vygotsky also presented ideas on the facilitation of learning through experiences mediated by other people. In his explanations, the learner cannot reach full potential without the aid of others. The processes of guiding the learner to higher stages of cognitive functioning rely on interactive human relationships. Mentors—for example, teachers or more capable peers—can raise the student's competence through the zone of proximal development (ZPD). ZPD is defined as the gap between what a student can do alone and what the student can achieve with assistance. In this view assistance is transitional, a "scaffold" that is removed when it is no longer needed and the student has internalized another's support.

In sum, varied theories agree that the values and attitudes of the peer group are essential elements in motivation and learning. Students who surround themselves with academically focused, goal-oriented peers will be more likely to appreciate, internalize, and exhibit these features themselves.

## Classroom Dynamics

With consideration of these social determinants, how then can the educational process be structured to boost the learning of individuals? For younger students, providing a whole-class environment that enriches learning opportunities with teachers who model positive learning values will set the new learner on a path toward academic achievement. Encouraging elementary students to interact with peers, adults, and family members who have strong learning desires can support the students' development as learners. Although peer influences may not yet be as powerful as they will become in student achievement motivation, the effects of young students' interactions cannot be disregarded.

As the learner matures, the importance of how peers view the learner's actions and decisions may well supercede the opinions of others, possibly even the views of the learners themselves. The academic environment needs to be structured in a fashion that allows for student interaction but sets boundaries that afford pro-social behavior. Students who are concentrating on unresolved issues in their social life, whether these issues result from social isolation or from social or home crisis, will be less able to profit from classroom opportunities. Recognition of the strategic effort required to maintain classroom social and academic order can help both the learner and the teacher decide how to approach problems addressed in either domain.

Within the classroom, time and organization can be established to focus students on their learning. Pairing and grouping students by their devotion to academics, for example, may benefit all involved. Those who value learning can share their enthusiasm and act as mentors for those who have other priorities. Students who motivate themselves in nonacademic directions can view and appreciate the choices of peer learners.

These dynamics must include consideration of the types of classroom curricula. The well-known and intended analytic curriculum taught to pre-service educators and recorded in the lesson plans and assignments may easily disregard the underlying informal curriculum of social and human interaction. As Mary McCaslin and Tom L. Good noted in 1996, "Learning is socially situated" (p. 642); the achievement of the student is a small part of who the student is and what she does. The responsibilities of education include helping students recognize their

own place as social contributors and maximizing the resources available to them through interpersonal relationships. For example, cooperative learning and help-seeking behaviors are essential resources for students in the classroom that facilitate both student achievement and social competence. Some students and educators view help-seeking as a sign of dependence or weakness, but research supports the contention that help-seeking is a sign of social competence that increases students' chances of academic success. Negative attitudes toward help-seeking may discourage low-achieving students from approaching peers and teachers and may further isolate them. This is especially detrimental to older students.

Students are not isolated in the pursuit of knowledge. They are social beings who need to interact and establish social contacts. Social learning is as much a part of any classroom curriculum as the printed guidelines. At a minimum, the influence of peers and a student's relationships with them can be understood as a function of student age, motivation, learning, and classroom opportunities.

*See also:* ADOLESCENT PEER CULTURE; COOPERATIVE AND COLLABORATIVE LEARNING.

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## **PEOPLE WITH DISABILITIES, FEDERAL PROGRAMS TO ASSIST**

Programs to assist people with disabilities initiated by the federal government in the early decades of the twentieth century were designed strictly with vocational rehabilitation in mind, that is, with an emphasis on assisting men injured in military service or work-related injuries to sufficiently overcome disabling conditions to return to the work force. Other programs were developed to provide income assistance to workers who were temporarily or permanently disabled and unable to earn an income. The last decades of the twentieth century increased the magnitude of federal programs to protect the rights of people with disabilities in such areas as employment, education, public transportation, and building accessibility. (The term *disability* instead of *handicap* and the phrase *individual with a disability* instead of *individual with handicaps* reflects legislative language and accepted terminology in the late twentieth and early twenty-first centuries. As with racial and ethnic epithets, the choice of terms to apply to a person with a disability is overlaid with stereotypes, patronizing attitudes, and other emotional connotations. Many individuals with disabilities, and organizations representing such individuals, object to the use of such phrases as *handicapped person* or *the handicapped*. Congress has recognized this shift in terminology in all legislative actions since about 1990.)

### **Federal Vocational Rehabilitation Programs**

The earliest federal programs created to develop some level of aid for people with disabilities date to the period following World War I. The Smith-Sears Veterans' Rehabilitation Act of 1918 initiated a program to vocationally rehabilitate veterans who were disabled during the war. The Smith-Fess Act of 1920 (the Civilian Vocational Rehabilitation Act) established the first broad-based federal program to provide vocational assistance to people whose disabilities were not the result of war. This program provided federal funds at a 50 percent matching rate to state rehabilitation agencies for counseling, vocational training, and job placement services for people with physical disabilities.

After the 1920s federal rehabilitation systems initially conceived to serve injured veterans expanded in magnitude. The Social Security Act of 1935 gave permanent status to these federal programs for the first time. Subsequent legislative changes expanded the nature of vocational rehabilitation programs, including the provision of medical services and prosthetic devices; creation of programs to serve people with mental disabilities, migratory workers, and disadvantaged youth; and provision of assistance to families of people with disabilities. The focus of vocational rehabilitation programs remains true to its original foundation of attaining and maintaining employment, although the definition of employment has expanded to support efforts of people with disabilities to gain access to their communities, live independently, and direct the course of their own lives.

### **Federal Income Support for People with Disabilities**

As the United States became more industrialized and sophisticated in its understanding of the role of the federal and state governments in increasing the American standard of living, services for people with disabilities also developed beyond their original mission to include programs that provided support through direct income subsistence to individuals born with disabilities. The Social Security Act of 1935 provided funds to states to assist indigent dependent children, elderly adults, and people who are blind. In the early 1930s, people who were blind, and shortly thereafter, those who were deaf, were the first disability advocates to organize and work collectively to advance their own positions at the federal level. For this reason, the first disability-related institu-

tions in many states, including disability-specific schools, were those that served people who were blind or deaf. While the act also initiated unemployment and old age insurance programs, it did not create a permanent program of disability insurance, although the idea was considered at the time.

As with other disability programs, amendments to the original legislation served to expand the program, in this case by removing the age limitation for eligibility and changing the definition of disability in the Social Security Act. In 1972 Congress created another federal income support program, Supplemental Security Income, that authorized uniform national benefits for people with disabilities, regardless of geographic location. Thus, the next stages in federal involvement led to the beginning of financial assistance and the right of children with disabilities to public education.

### **Federal Involvement in Access to Education for Children with Disabilities**

Federal government involvement in educating children with disabilities generally parallels the development of federal support for elementary and secondary education as a whole. Until the 1960s elementary and secondary education was viewed almost entirely as a state and local function and federal intervention was almost nonexistent. The Elementary and Secondary Education Act (ESEA) of 1965 (Pub. L. 80-10) was amended in 1966 to specifically provide federal support for the education of children with disabilities through the creation of Title VI. Title VI authorized funds to assist states in the initiation, expansion, and improvement of programs for the education of children with disabilities. Over the next five years, interest groups representing children with disabilities amassed major political support sufficient to expand federal involvement.

The legal underpinnings of the right to education for children with disabilities stems from the civil rights movement and the landmark *Brown v. Board of Education* (1954) and the Civil Rights Acts of 1964 and 1968. By the early 1970s the foundation was established for federal legislation ensuring the special education of disabled children. Active litigation and legislative efforts enacted from 1964 to 1974 produced strong legal and political support for expanded federal oversight of the education of children with disabilities, most significantly through *Pennsylvania Association for Retarded Children (PARC) v. Commonwealth of Pennsylvania* and *Mills v. Board of Edu-*

*cation of the District of Columbia*. The Rehabilitation Act of 1973 provided the initial protections to children with disabilities in public schools. This act requires nondiscrimination on the basis of disability in all federally conducted and assisted programs. State and local educational agencies (i.e., public school districts) that receive federal funding are required to provide programmatic access for children and others with disabilities. The Rehabilitation Act did not mandate special education services, but set the foundation of civil rights protections for people with disabilities.

The late 1960s and early 1970s saw a dramatic increase in federal involvement for children with disabilities. In 1966 the Bureau of Education of the Handicapped was created within the Office of Education and in 1975 the Education for All Handicapped Children Act (EAHCA; Pub. L. 94-142) was enacted for the education of children with disabilities needing special education and related services. Since 1975 EAHCA, now renamed the Individuals with Disabilities Education Act (IDEA), has evolved and remains the most significant legislation for special education.

IDEA mandates “a free appropriate public education” for all children with disabilities that require special education services. All fifty states, the District of Columbia, and freely associated states accept federal funding under IDEA and are thus compelled to implement all of IDEA’s requirements. IDEA specifies that children with disabilities be educated in the “least restrictive environment” with their nondisabled peers to the maximum extent appropriate. IDEA serves all eligible children with disabilities from birth through age twenty-one, and moves beyond the traditional school-age population aged five to seventeen or eighteen. IDEA extends federally mandated education to all children with disabilities from birth through age three through early intervention services and to young adults with disabilities aged eighteen to twenty-one who have not graduated with a regular high school diploma.

IDEA, together with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 (ADA; Pub. L. 101-336), represent the world’s most comprehensive civil rights initiatives, providing inclusion in regular educational environments for children with disabilities in public and private elementary and secondary education and for adults with disabilities in public and private colleges and universities in the United States. An exception ap-

plies to religiously affiliated or controlled schools, which may be exempt from coverage depending on the specific circumstances.

ADA extends the right to public and private education for all individuals with disabilities in previous areas not covered by federal law, such as activities open to parents or other individuals with disabilities, graduation ceremonies, parent-teacher organization meetings, plays, and adult education classes regardless of the source of funding.

*See also:* COLLEGE STUDENTS WITH DISABILITIES; FEDERAL EDUCATIONAL ACTIVITIES; SPECIAL EDUCATION.

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## PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES

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College and university students must adapt to environments plagued by rapid change, ambiguity, uncertainty, and depleted support systems. Students must also cope with a myriad of personal and psychological problems that range from basic adjustment and developmental, academic and learning, and career concerns to clinical-level mental illness. Within higher education, there exists general consensus that the ubiquitous role of personal and psychological counseling is to contribute to student development, adjustment, and learning while preventing dangerous and self-defeating behavior, thus enabling the individual to thrive in the college community. The mechanisms that colleges and universities utilize to achieve this goal vary dramatically from one institution to another, depending heavily on the institution's philosophy or mission, available resources, and campus need.

American colleges and universities confront the daunting task of serving the needs of a highly diverse campus. Within this environment, personal and psychological counseling incorporates an expanded interpretation of its role and responsibility. A comprehensive view of counseling within higher education reveals a set of role domains that include psychotherapy, career, academic and learning, and educational and psychological outreach. Not all institutions of higher education share this systemic perspective. Some schools define counseling within the strict confines of academics, devoid of a mental health dimension, offering only educational, career, and developmental services. Others adopt a more inclusive perspective of counseling in higher education—one that incorporates all domains. This holistic view of counseling enables services to reach and assist a vast majority of the campus community while contributing to an environment of support and encouragement.

#### Psychotherapy

Students arrive on campus with personal and psychological problems centered on dysfunctional family situations; anxiety around social, academic, and career concerns; and mental health issues. For many students, transition and adjustment to college is

marked by debilitating stress and anxiety. Deleterious effects result from personal and psychological problems stemming from these experiences and often manifest during the college experience, requiring psychotherapeutic attention. At an alarming rate, students are also experiencing serious mental disorders diagnosed prior to or following their admittance to college. Mood, anxiety, eating, substance, or other disorders complicate adjustment and the ability to meet personal, familial, and collegiate expectations.

The traditional-aged student typically presents developmental, career, and adjustment issues and crises. Identity development, sexuality, intimacy, relationships, substance use, grief and loss, family dysfunction, and values clarification denote challenges this group encounters. Generally, the adult returning student tackles different dilemmas, which focus on stress and time management, career and life transition and changes, family and relationship issues, and financial stress. Minority and other groups on campus require continual attention and support pertaining to such issues as racism, discrimination, marginalization, and academic and social integration.

Personal and psychological problems interfere with innumerable aspects of a student's life, causing significant impairment and distress. Attending to these mental health concerns, psychotherapy represents a viable mechanism in providing support and guidance across cognitive, affective, and spiritual dimensions within a confidential and safe environment. Utilizing individual, group, couples, and children and family counseling opportunities, therapists attend to the whole individual. Assessment, referral, and treatment extend the mental health counselor's ability to meet students' disparate needs. Collaborations with community mental health providers, support groups, and Twelve Step programs allow students to access services the college or university does not furnish.

### **Academics and Learning**

The general role of counseling, within the realm of academic and learning, is to improve academic proficiency. Programming and support services place considerable attention on strengthening basic reading and writing skills, while addressing issues of time management, test taking, comprehension and retention, and study strategies. With the advent of novel research aimed at enhancing campus programming

and student services, diagnostic criterion and tools, supportive programs, and medication, students diagnosed with varying degrees of learning disabilities and attention-deficit disorders are better equipped to successfully matriculate and prosper in higher education. Encouraging student interactions with academic advisers, faculty, and campus learning centers significantly strengthens a student's chances of being successful and contributes to a student sense of academic and social connection.

### **Career Counseling**

Counseling on a college and university campus inevitably involves issues encompassing career and vocational exploration. Within this domain, counseling assists individuals in selecting an area of study, choosing a career, or clarifying attributes that facilitate or detract from their present work. Exploration of personal values, goals, and characteristics, combined with assessments of career interests, enhance the student's successful transition through higher education. Facilitating student-faculty interactions represents another essential facet of career counseling. Such significant relationships are positively associated with changes in students' occupational values.

### **Educational and Psychological Outreach**

Educational and psychological outreach is critical if college counselors desire to serve as initiators and catalysts for change on the campus and in surrounding communities. Education and prevention comprise the foundation of outreach initiatives. Via thematic presentations, decimation of educational materials, special events, and educational programs counselors effectively address topics such as stress and time management, eating disorders, substance abuse, depression, study skills, career issues, and cross-cultural adjustment.

College counseling services typically acknowledge the scope of problems for which students seek assistance, yet disagree as to the resource feasibility and the level of responsibility schools have in meeting all these counseling provisions. Balancing the needs of traditional-aged students, returning adult students, minority students, and other groups represents a challenging and resource-exhaustive process.

The prevalence of developmental and adjustment problems as well as various forms and degrees of mental illness on college and university campuses cannot be ignored. Within the context of higher ed-

ucation, the role counseling assumes depends largely on the specific needs of the individual and the broad requirements of the campus community. Abetting student adjustment, development, and learning, counseling provides the means for clients to explore problems related to normal developmental issues such as careers, academics and learning, relationships, and identity. For a large number of students, problems of mental illness require more intensive therapy in order to maneuver life's daily tasks and successfully meet personal, parental, and school expectations. In recognizing the comprehensive role of personal and psychological counseling in higher education, colleges and universities substantially counteract student's perception of academic, social, and personal isolation by addressing all facets of the human being.

*See also:* ACADEMIC ADVISING IN HIGHER EDUCATION; ADJUSTMENT TO COLLEGE; CAREER COUNSELING IN HIGHER EDUCATION; COLLEGE STUDENT RETENTION; DRUG AND ALCOHOL ABUSE, *subentry on* COLLEGE; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS; STUDENT SERVICES.

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## PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS

An increasing amount of attention is being directed to the transition to higher education as experienced by traditional-age and adult students. It is a movement that incorporates a great deal of stress and challenge. Although some students are able to experience this transition as a challenge to personal growth, other students are overwhelmed by the changes and experience emotional maladjustment and depression.

Issues of adjustment and general development require persistent attention by campus professionals due to the immediate relevance to college success. Complex psychological histories often underpin these problems, further complicating treatment. These difficulties are often present as inefficiencies in coping with familial separation, time and stress management, basic study techniques, goal setting, relationship formation, handling emotions, and self-esteem crystallization. Personal, academic, social, and professional success depend on the student's ability to manage these aspects of their lives.

### Family Dynamics

Families in the United States are experiencing significant stress and functional discourse marked by unparalleled changes in family structures. The home environment for many young people represents a place of instability and emotional upheaval where security, caring, and nurturing are depleted or non-existent. Separation, divorce, death, or abandonment removes one or both parents from the family. The lack of attention and affection that may accompany such change adversely impacts children. Subsequent emotional and financial difficulties of a single parent household further strain the family dynamic.

Substance abuse; domestic violence; emotional, physical, and sexual abuse; and mental illness plague some families. At an alarming rate, young people enter higher education with dysfunctional family backgrounds that evoke stress and trepidation in students. For children of alcoholics, for example, the college social climate that is impressed by alcohol use produces significant anxiety as the student grapples with the personal and familial implications of watching and participating in drinking practices. It is imperative that schools recognize the existence

and impact of family discourse and childhood trauma on students, and provide them with the support necessary to enable them to cope with their situations and succeed within the collegiate environment.

### **Depression**

With a lifetime prevalence rate of 17 percent in the general population, a significant number of men and women suffer from a clinical episode of depression at some time in their lives, according to Chris Segrin and Jeanne Flora in 2000. An estimated 7 million women and 3.5 million men can be diagnosed with major depression in the United States; similar numbers are diagnosed as experiencing dysthymia, or minor depressive symptoms. College students are twice as likely to have clinical depression compared to people of similar ages and backgrounds in the workforce, according to Wayne A. Dixon and Jon K. Reid in 2000.

Depression manifests in varying degree from general symptomology to a clinical disorder. Symptoms occur in four general domains of human functioning: emotional, cognitive, physical, and behavioral, with mood disturbance being the predominant feature. Typical symptoms of depression include a change in appetite or weight, sleep, and psychomotor activity; decreased energy; feelings of worthlessness or guilt; difficulty thinking, concentrating, or making decisions; or recurrent thoughts of death or suicidal ideation. Anhedonia, or a loss of interest in activities that were once considered pleasurable, accompany social withdrawal. Depression is a risk factor for a number of other negative health outcomes including diminished immune function and poor illness recovery.

Depression constitutes a problem of enormous personal and social significance, and its impact on American college students is indisputable. Depression interferes with intra- and interpersonal processes, academic and social integration, and retention. Some depressed individuals may evince a hostile, uncooperative, and self-criticizing interpersonal style eliciting negative responses from others. Poor social skills and social acuity are thought to make people vulnerable to the onset of depressive symptomology and other psychosocial problems pursuant to the experience of negative stressful life events.

### **Eating Disorders**

Typically developing between the ages of twelve and twenty-five, eating disorders are a life-threatening

reality for 5 to 10 percent of American women and girls past puberty. An estimated 64 percent of college women exhibit some degree of eating disorder behavior, a situation that pushes the body image issue to the forefront of concern in higher education. Although most people diagnosed with anorexia or bulimia nervosa are women, men also suffer from these disorders.

Problematic eating behavior is best conceptualized on a continuum that illustrates the range of eating behavior from normal to weight-preoccupied to chronic dieter to subthreshold bulimia/anorexia and full bulimia/anorexia. Compulsive dieting and over-eating behaviors fail to meet the clinical criteria for a label of disorder. These practices, however, often intensify and reach eating disorder status.

Eating disorders stem from a complex interaction of biological, psychological, sociological, spiritual, and cultural factors. American culture's emphasis on thinness and physical beauty, the prevalence of dieting, myths about food and nutrition, and perfectionistic expectations contribute to this growing problem. Eating disorders often start when an individual experiences a major problem and feels helpless and out of control. It is not uncommon for a student suffering from an eating disorder to report a personal or family history of eating or mood disorders. They typically possess a character profile of achievement-oriented personality, low self-esteem, and drive for perfectionism. Obsession, loneliness, anxiety, depression, guilt, fear of sexual maturation, and feelings of inadequacy are psychological correlates often associated with problematic eating behaviors.

### **Substance Use**

Alcohol, tobacco, and other drug use on college and university campuses poses tremendous concern for parents, students, higher education professionals, governmental officials, and the general community. No school is immune to substance use and resulting adverse consequences. Alcohol, tobacco, and marijuana are the most commonly used drugs on college campuses, but this use encompasses drugs of varying forms including amphetamine, caffeine, cocaine, hallucinogen, inhalants, opioid, phencyclidine, sedative, hypnotic, anxiolytic, steroids, and polysubstances. An essential feature of substance abuse is a maladaptive pattern of substance use leading to recurrent and clinically significant impairment or adverse consequences. Substance use and abuse are

characterized by noted inefficiencies in life functioning, impaired relationships, high-risk behavior, and recurrent legal troubles. Substance dependency emerges from repeated use of the substance despite significant problems related to its use.

Substance abuse appears to be etiologically linked to “complex interactions of genetic predisposition, psychological vulnerability, and sociocultural influences” (Archer and Cooper, p. 77). Extensive family history of addiction, poor self-esteem, negative emotional orientation, and few coping skills actively play a role in substance dependency. Skewed perceptions of social norms, peer values and behaviors, and pre-college substance use influence a student’s use patterns. Many students who abuse substances are unready to recognize how their life is being adversely affected by their use, and believe substance use to be a part of normal development and experimentation.

The negative effects of student substance use are not campus centered, and impact both the campus and wider communities. Substance use is associated with increased absenteeism from class and poor academic performance. The majority of injuries, accidents, vandalism, sexual assaults and rape, fighting, and other crime on- and off-college campus are linked to alcohol and other drug use. Unplanned and uninhibited sexual behavior may lead to pregnancy, exposure to sexually transmitted diseases, and HIV/AIDS. Driving under the influence, tragic accidents, alcohol poisoning, overdosing, and even death from accidents, high-risk behaviors, and suicide carry tremendous, life-threatening implications for all involved. Tobacco use is associated with severe health risks and illness, physical inefficiency, and even death. Fires caused by careless smoking practices place all students at risk.

Students who abstain, use legally, or use in moderation often suffer secondhand effects from the behaviors of students who use substances in excess. Nonbinging and abstaining students may become the targets of insults and arguments, physical assaults, unwanted sexual advances, vandalism, and humiliation. Sleep deprivation and study interruption results when these students find themselves caring for intoxicated students.

### **Other Psychological Disorders**

Summer M. Berman and colleagues estimated in 2000 that 37 percent of Americans between the ages

of fifteen and twenty-four, many of whom are college students, have a diagnosable mental illness. The fact that the age of onset for many major illnesses is the years from eighteen to twenty-four, the range in which most traditional-age students fall, further complicates the matter. Higher education must realize that a large percentage of college students are, or will be, affected by mental illness. These disorders range from mild and short-lived to chronic and severe, including such illnesses as depression, anxiety, schizophrenia, and bipolar disorder, and appear at varying rates on campuses.

The early-twenty-first-century student brings a set of experiences and personal and psychological problems that may predispose them to mental illness. It is not unusual for a college counseling and mental health center to diagnose students with anxiety, mood, eating, impulse-control, personality, substance-related or other mental disorders. Students may enter college with challenges originating from learning, attention-deficit, and disruptive behavior disorders that are first diagnosed in infancy, childhood, or adolescence. Dual diagnosis further complicates students’ social and academic integration and success.

If detected, most mental illnesses are treatable or manageable, allowing the individual to proceed effectively through life’s daily routines. Unfortunately, many cases are not diagnosed or treated, and the consequences for the college student are life altering. Many students diagnosed with mental illness withdraw from college before earning a bachelor’s degree; however, with proper attention and support they may have been successful in the collegiate environment.

### **Campus Services**

The services that institutions provide to address students’ personal and psychological problems depend heavily on the school’s philosophy, available resources, and campus need. Colleges and universities of all types should develop and implement confidential services that span multiple policy arenas in order to sufficiently address these problems. Creating partnerships with various facets of the institution, such as the college counseling and mental health center, student health services, women’s center, learning center, spiritual and religious organizations, and other associations, expands the scope of programs offered and students affected.

Comprehensive initiatives that incorporate the domains of psychotherapy, treatment, prevention, outreach, academics and learning, and career, enable institutions of higher education to sufficiently ensure that services are meeting the diverse personal and psychological needs of students. Individual, group, couples, and children and family counseling opportunities address issues related to family, relationship, and personal dynamics. Psychological, neuropsychological, alcohol and drug, and career assessments provide information necessary to better serve the student. Colleges and universities also disperse self-help and educational materials as well as employ standardized programs and interactive computer systems. Schools may outsource counseling services or develop a referral system to direct students to services offered in the community. Connections with twelve step and support groups within the community further assist students. Outreach within and outside the campus enables schools to educate society about the issues surrounding personal and psychological problems and programs.

*See also:* ADJUSTMENT TO COLLEGE; DRUG AND ALCOHOL ABUSE, *subentry on* COLLEGE; HEALTH SERVICES, *subentry on* COLLEGES AND UNIVERSITIES; PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES.

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LEIGH Z. GILCHRIST

#### PESTALOZZI, JOHANN (1746-1827)

In the history of education, the significant contributions of Johann Heinrich Pestalozzi are (1) his educational philosophy and instructional method that encouraged harmonious intellectual, moral, and physical development; (2) his methodology of empirical sensory learning, especially through object lessons; and (3) his use of activities, excursions, and nature studies that anticipated Progressive education.

#### Career and Development of Educational Theory

The development of Pestalozzi's educational theory is closely tied to his career as an educator. Born in Zurich, Switzerland, Pestalozzi was the son of Johann Baptiste Pestalozzi, a middle-class Protestant physician, and Susanna Hotz Pestalozzi. Pestalozzi's grandfather, Andreas Pestalozzi, a minister in the rural village of Hongg, inspired his evolving philanthropic mission to uplift the disadvantaged Swiss peasantry.

Pestalozzi, who had an overly protected and isolated childhood, considered himself to be socially inept and physically uncoordinated as an adult. His formal education was in institutions in Zurich. He first attended a local primary school and then took the preparatory course in Latin and Greek at the Schola Abbatissana and the Schola Carolina. His higher education was at the Collegium Humanitatis and the Collegium Carolinum, where he specialized in languages and philosophy.

With other university students, Pestalozzi was influenced by Jean Jacques Bodmer, an historian and literary critic, whose reformist ideology urged regenerating Swiss life by renewing the rustic values of the Swiss mountaineers. Pestalozzi joined the Helvetic Society, an association committed to Bodmer's ideals, and wrote for *The Monitor*, a journal critical of Zurich's officials. Pestalozzi was jailed briefly for his activities, which the authorities deemed subversive.

In 1767 Pestalozzi studied scientific agriculture with Johann Rudolf Tschiffeli, a physiocrat and experimental farmer near Kirchberg. Pestalozzi married Anna Schulthess, daughter of an upper-middle-class Zurich family in 1769. His only child, named Jean Jacques after Rousseau, was born in 1770. After using Rousseau's work *Émile* as a guide to educating his son, Pestalozzi revised Rousseau's method in *How Father Pestalozzi Instructed His Three and a Half Year Old Son* (1774). Though still committed to Rousseau's natural education, Pestalozzi began to base instruction on a more empirically based psychology.

In 1774 Pestalozzi established his first institute, a self-supporting agricultural and handicraft school at Neu Hof. At its height, the school enrolled fifty pupils, many of whom were indigent or orphaned. Here, Pestalozzi devised *simultaneous instruction*, a group method to teach reading, writing, and arithmetic. However, financial indebtedness forced the school's closing in 1779.

Pestalozzi published *Leonard and Gertrude*, a popular didactic novel in 1781, which was followed by a less successful sequel, *Christopher and Elizabeth* in 1782. Between 1782 and 1784 he wrote educational essays for *Ein Schweizer Blatt*, the Swiss newspaper. His *On Legislation and Infanticide*, (1783), condemned killing or abandoning unwanted children. He wrote two children's books: *Illustrations for My ABC Book* (1787) and *Fables for My ABC Book*

(1795). Pestalozzi's *Researches into the Course of Nature in the Development of the Human Race* (1797) was a pioneering work in educational sociology.

Pestalozzi re-entered active educational service in 1799 when the Napoleonic-backed Helvetic Republic appointed him director of the orphanage at Stans. Here, he developed his concept of a residential school in which children were educated within an emotionally secure setting. Operating for less than a year, the orphanage closed when French and Austrian armies battled in its vicinity.

Pestalozzi then conducted a residential and teacher training school at Burgdorf from 1800 to 1804. He trained such educators as Joseph Neef, who would introduce Pestalozzianism to the United States, and Friedrich Froebel, the kindergarten's founder.

Pestalozzi's most systematic work, *How Gertrude Teaches Her Children* (1801) was a critique of conventional schooling and a prescription for educational reform. Rejecting corporal punishment, rote memorization, and bookishness, Pestalozzi envisioned schools that were homelike institutions where teachers actively engaged students in learning by sensory experiences. Such schools were to educate individuals who were well rounded intellectually, morally, and physically. Through engagement in activities, students were to learn useful vocations that complemented their other studies.

Pestalozzi's method rested on two major premises: (1) children need an emotionally secure environment as the setting for successful learning; and (2) instruction should follow the generalized process of human conceptualization that begins with sensation. Emphasizing sensory learning, the special method used the *Anschauung* principle, a process that involved forming clear concepts from sense impressions. Pestalozzi designed object lessons in which children, guided by teachers, examined the form (shape), number (quantity and weight) of objects, and named them after direct experience with them. Object teaching was the most popular and widely adopted element of Pestalozzianism.

Pestalozzi developed two related phases of instruction: the general and special methods. The general method in which teachers were to create an emotionally secure school environment was a necessary condition for implementing the special method. Emphasizing sensory learning, the special method, using the *Anschauung* principle, involved forming

clear concepts from sense impressions. Pestalozzi designed an elaborate series of graded object lessons, by which children examined minerals, plants, and animals and human-made artifacts found in their environment. Following a sequence, instruction moved from the simple to the complex, the easy to the difficult, and the concrete to the abstract.

Pestalozzi's object lessons and emphasis on sense experience encouraged the entry of natural science and geography, two hitherto neglected areas, into the elementary school curriculum. On guided field trips, children explored the surrounding countryside, observing the local natural environment, topography, and economy. A further consequence of Pestalozzi's work was the movement to redirect instruction from the traditional recitation in which each child recited a previously assigned lesson to simultaneous group-centered instruction.

In 1804 Pestalozzi relocated his institute to Yverdon, where he worked until 1825. He died on February 17, 1827 and was buried at Neuhof, site of his first school.

### Diffusion of Educational Ideas

Pestalozzianism was carried throughout Europe and America by individuals he had trained as teachers and by visitors who were impressed with his method. After Gottlieb Fichte promoted Pestalozzianism in his *Addresses to the German Nation* in 1808, Prussia incorporated selected elements of Pestalozzi's method in its educational reform of 1809 and dispatched teachers to study with him. In the United Kingdom, the Home and Colonial School Society in 1836 established a Pestalozzian teacher training school.

William Maclure, a philanthropist and natural scientist, began Pestalozzianism's introduction to the United States in 1806, when he subsidized Neef's school near Philadelphia. Neef's *A Sketch of a Plan and Method of Education* (1808) and *The Method of Instructing Children Rationally in the Arts of Writing and Reading* (1813) promoted Pestalozzian education in the United States. Under Maclure's auspices, Neef, Marie Duclos Fretageot, and William D'Arusmont conducted Pestalozzian schools at Robert Owen's communitarian experiment at New Harmony, Indiana, from 1824 to 1828.

Other American proponents of Pestalozzianism were Henry Barnard and Edward A. Sheldon. Barnard (1811–1900), a common school leader and U.S. Commissioner of Education, endorsed Pestalozzian

education in *Pestalozzi and Pestalozzianism* (1859). Sheldon (1823–1897) incorporated the Pestalozzian object lesson in the teacher education program at the Oswego normal school in New York. In 1865 a report of the National Teachers' Association endorsed object teaching.

Certain Pestalozzian elements could be found among American progressive educators of the late nineteenth and early twentieth centuries who, like Pestalozzi, opposed traditional schools' formalism and verbalism and emphasized children's interests and needs. Such educational emphases as the *child-centered school*, *child permissiveness*, and *hands-on process learning* had their origins with Pestalozzi.

Pestalozzi's paramount contribution to education was his general philosophy of *natural education* that stressed the dignity of children and the importance of actively engaging children in using their senses to explore the environment.

Specifically, his legacy to later educators was his emphasis on children's holistic physical, mental and psychological development; his emphasis on empirical learning; his reforms of elementary and teacher education; and his anticipation of child-centered progressivism.

*See also:* INSTRUCTIONAL STRATEGIES; PROGRESSIVE EDUCATION; SHELDON, EDWARD.

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# PHILOSOPHY OF EDUCATION

## HISTORICAL OVERVIEW

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## CURRENT TRENDS

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## HISTORICAL OVERVIEW

The word *education* is used sometimes to signify the activity, process, or enterprise of educating or being educated and sometimes to signify the discipline or field of study taught in schools of education that concerns itself with this activity, process, or enterprise. As an activity or process, education may be formal or informal, private or public, individual or social, but it always consists in cultivating dispositions (abilities, skills, knowledges, beliefs, attitudes, values, and character traits) by certain methods. As a discipline, education studies or reflects on the activity or enterprise by asking questions about its aims, methods, effects, forms, history, costs, value, and relations to society.

### Definition

The philosophy of education may be either the philosophy of the process of education or the philosophy of the discipline of education. That is, it may be part of the discipline in the sense of being concerned with the aims, forms, methods, or results of the process of educating or being educated; or it may be metadisciplinary in the sense of being concerned with the concepts, aims, and methods of the discipline. However, even in the latter case it may be thought of as part of the discipline, just as metaphilosophy is thought of as a part of philosophy, although the philosophy of science is not regarded as a part of science. Historically, philosophies of education have usually taken the first form, but under the influence of analytical philosophy, they have sometimes taken the second.

In the first form, philosophy of education was traditionally developed by philosophers—for example, Aristotle, Augustine, and John Locke—as part of their philosophical systems, in the context of their ethical theories. However, in the twentieth century philosophy of education tended to be developed in schools of education in the context of what is called *foundations of education*, thus linking it with other parts of the discipline of education—educational history, psychology, and sociology—rather than

with other parts of philosophy. It was also developed by writers such as Paul Goodman and Robert M. Hutchins who were neither professional philosophers nor members of schools of education.

### Types

As there are many kinds of philosophy, many philosophies, and many ways of philosophizing, so there are many kinds of educational philosophy and ways of doing it. In a sense there is no such thing as *the* philosophy of education; there are only philosophies of education that can be classified in many different ways.

Philosophy of education as such does not describe, compare, or explain any enterprises to systems of education, past or present; except insofar as it is concerned with the tracing of its own history, it leaves such inquiries to the history and sociology of education. Analytical philosophy of education is *meta* to the discipline of education—to all the inquiries and thinking about education—in the sense that it does not seek to propound substantive propositions, either factual or normative, about education. It conceives of its task as that of analysis: the definition or elucidation of educational concepts like teaching, indoctrination, ability, and trait, including the concept of education itself; the clarification and criticism of educational slogans like “Teach children, not subjects”; the exploration of models used in thinking about education (e.g., growth); and the analysis and evaluation of arguments and methods used in reaching conclusions about education, whether by teachers, administrators, philosophers, scientists, or laymen.

To accomplish this task, analytical philosophy uses the tools of logic and linguistics as well as techniques of analysis that vary from philosopher to philosopher. Its results may be valued for their own sake, but they may also be helpful to those who seek more substantive empirical or normative conclusions about education and who try to be careful about how they reach them. This entry is itself an exercise in analytical philosophy of education.

Normative philosophies or theories of education may make use of the results of such analytical work and of factual inquiries about human beings and the psychology of learning, but in any case they propound views about what education should be, what dispositions it should cultivate, why it ought to cultivate them, how and in whom it should do so,

and what forms it should take. Some such normative theory of education is implied in every instance of educational endeavor, for whatever education is purposely engaged in, it explicitly or implicitly assumed that certain dispositions are desirable and that certain methods are to be used in acquiring or fostering them, and any view on such matters is a normative theory of philosophy of education. But not all such theories may be regarded as properly philosophical. They may, in fact, be of several sorts. Some simply seek to foster the dispositions regarded as desirable by a society using methods laid down by its culture. Here both the ends and the means of education are defined by the cultural tradition. Others also look to the prevailing culture for the dispositions to be fostered but appeal as well to experience, possibly even to science, for the methods to be used. In a more pluralistic society, an educational theory of a sort may arise as a compromise between conflicting views about the aids, if not the methods, of education, especially in the case of public schools. Then, individuals or groups within the society may have conflicting full-fledged philosophies of education, but the public philosophy of education is a working accommodation between them. More comprehensive theories of education rest their views about the aims and methods of education neither on the prevailing culture nor on compromise but on basic factual premises about humans and their world and on basic normative premises about what is good or right for individuals to seek or do. Proponents of such theories may reach their premises either by reason (including science) and philosophy or by faith and divine authority. Both types of theories are called philosophies of education, but only those based on reason and philosophy are properly philosophical in character; the others might better be called theologies of education. Even those that are purely philosophical may vary in complexity and sophistication.

In such a full-fledged philosophical normative theory of education, besides analysis of the sorts described, there will normally be propositions of the following kinds:

1. Basic normative premises about what is good or right;
2. Basic factual premises about humanity and the world;
3. Conclusions, based on these two kinds of premises, about the dispositions education should foster;

4. Further factual premises about such things as the psychology of learning and methods of teaching; and
5. Further conclusions about such things as the methods that education should use.

For example, Aristotle argued that the Good equals happiness equals excellent activity; that for a individual there are two kinds of excellent activity, one intellectual (e.g., doing geometry) and one moral (e.g., doing just actions); that therefore everyone who is capable of these types of excellent activity should acquire a knowledge of geometry and a disposition to be just; that a knowledge of geometry can be acquired by instruction and a disposition to be just by practice, by doing just actions; and that the young should be given instruction in geometry and practice in doing just actions. In general, the more properly philosophical part of such a full normative theory of education will be the proposition it asserts in (1), (2), and (3); for the propositions in (4) and hence (5) it will, given those in (3), most appropriately appeal to experience and science. Different philosophers will hold different views about the propositions they use in (1) and (2) and the ways in which these propositions may be established.

Although some normative premises are required in (1) as a basis for any line of reasoning leading to conclusions in (3) or (5) about what education should foster or how it should do this, the premises appearing in (2) may be of various sorts—empirical, scientific, historical, metaphysical, theological, or epistemological. No one kind of premise is always necessary in (2) in every educational context. Different philosophers of education will, in any case, have different views about what sorts of premises it is permissible to appeal to in (2). All must agree, however, that normative premises of the kind indicated in (1) must be appealed to. Thus, what is central and crucial in any normative philosophy of education is not epistemology, metaphysics, or theology, as is sometimes thought, but ethics, value theory, and social philosophy.

### Role

Let us assume, as we have been doing, that philosophy may be analytical, speculative, or narrative and remember that it is normally going on in a society in which there already is an educational system. Then, in the first place, philosophy may turn its attention to education, thus generating philosophy of

education proper and becoming part of the discipline of education.

Second, general philosophy may be one of the subjects in the curriculum of higher education and philosophy of education may be, and presumably should be, part of the curriculum of teacher education, if teachers are to think clearly and carefully about what they are doing.

Third, in a society in which there is a single system of education governed by a single prevailing theory of education, a philosopher may do any of four things with respect to education: he may analyze the concepts and reasoning used in connection with education in order to make people's thinking about it as clear, explicit, and logical as possible; he may seek to support the prevailing system by providing more philosophical arguments for the dispositions aimed at and the methods used; he may criticize the system and seek to reform it in the light of some more philosophical theory of education he has arrived at; or he may simply teach logic and philosophy to future educators and parents in the hope that they will apply them to educational matters.

Fourth, in a pluralistic society like the United States, in which the existing educational enterprise or a large segment of it is based on a working compromise between conflicting views, a philosopher may again do several sorts of things. He may do any of the things just mentioned. In the United States in the first half of the twentieth century professional philosophers tended to do only the last, but at the end of the twentieth century they began to try to do more. Indeed, there will be more occasions for all of these activities in a pluralistic society, for debate about education will always be going on or threatening to be resumed. A philosopher may even take the lead in formulating and improving a compromise theory of education. He might then be a mere eclectic, but he need not be, since he might defend his compromise plan on the basis of a whole social philosophy. In particular, he might propound a whole public philosophy for public school education, making clear which dispositions it can and should seek to promote, how it should promote them, and which ones should be left for the home, the church, and other private means of education to cultivate. In any case, he might advocate appealing to scientific inquiry and experiment whenever possible. A philosopher may also work out a fully developed educational philosophy of his own and start an experimental school in which to put it into practice, as John Dewey did;

like Dewey, too, he may even try to persuade his entire society to adopt it. Then he would argue for the desirability of fostering certain dispositions by certain methods, partly on the basis of experience and science and partly on the basis of premises taken from other parts of his philosophy—from his ethics and value theory, from his political and social philosophy, or from his epistemology, metaphysics, or philosophy of mind.

It seems plausible to maintain that in a pluralistic society philosophers should do all of these things, some one and some another. In such a society a philosopher may at least seek to help educators concerned about moral, scientific, historical, aesthetic, or religious education by presenting them, respectively, with a philosophy of morality, science, history, art, or religion from which they may draw conclusions about their aims and methods. He may also philosophize about the discipline of education, asking whether it is a discipline, what its subject matter is, and what its methods, including the methods of the philosophy of education, should be. Insofar as the discipline of education is a science (and one question here would be whether it *is* a science) this would be a job for the philosopher of science in addition to one just mentioned. Logicians, linguistic philosophers, and philosophers of science may also be able to contribute to the technology of education, as it has come to be called, for example, to the theory of testing or of language instruction.

Finally, in a society that has been broken down by some kind of revolution or has newly emerged from colonialism, a philosopher may even supply a new full-fledged normative philosophy for its educational system, as Karl Marx did for Russia and China. In fact, as in the case of Marx, he may provide the ideology that guided the revolution in the first place. Plato tried to do this for Syracuse, and the philosophes did it for France in the eighteenth century. Something like this may be done wherever the schools “dare to build a new society,” as many ask schools to do.

Dewey once said that since education is the process of forming fundamental dispositions toward nature and our fellow human beings, philosophy may even be defined as the most general theory of education. Here Dewey was thinking that philosophy is the most general normative theory of education, and what he said is true if it means that philosophy, understood in its widest sense as including theology and poetry as well as philosophy proper, is what tells

us what to believe and how to feel about humanity and the universe. It is, however, not necessarily true if it refers to philosophy in the narrower sense or means that all philosophy is philosophy of education in the sense of having the guidance of education as its end. This is not the whole end of classical philosophy or even of philosophy as reconstructed by Dewey; the former aimed at the truth rather than at the guidance of practice, and the latter has other practical ends besides that of guiding the educational enterprise. Certainly, analytical philosophy has other ends. However, although Dewey did not have analytical philosophy in mind, there is nevertheless a sense in which analytical philosophy can also be said to be the most general theory of education. Although it does not seek to tell us what dispositions we should form, it does analyze and criticize the concepts, arguments, and methods employed in any study of or reflection upon education. Again it does not follow that this is all analytical philosophy is concerned with doing. Even if the other things it does—for example, the philosophy of mind or of science—are useful to educators and normative theorists of education, as, it is hoped, is the case, they are not all developed with this use in mind.

*See also:* ARISTOTLE; AUGUSTINE, ST.; BAGLEY, WILLIAM C.; BODE, BOYD H.; BRAMELD, THEODORE; CHILDS, JOHN L.; COMENIUS, JOHANN; COUNTS, GEORGE S.; DEWEY, JOHN; FREIRE, PAULO; HERBERT, JOHANN; JAMES, WILLIAM; KILPATRICK, WILLIAM H.; MONTESSORI, MARIA; NEILL, A. S.; PESTALOZZI, JOHANN; PLATO; ROUSSEAU, JEAN-JACQUES; WHITEHEAD, ALFRED NORTH.

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WILLIAM K. FRANKENA

#### CURRENT TRENDS

Philosophy of education is a field characterized not only by broad theoretical eclecticism but also by a perennial dispute, which started in the mid-twentieth century, over what the scope and purposes of the discipline even ought to be. In the "Philosophy of Education" article that was included in the previous edition of this encyclopedia, William Frankena wrote, "In a sense there is no such thing as *the* philosophy of education" (p. 101). During certain periods of the history of the philosophy of education, there have been dominant perspectives, to be sure: At one time, the field was defined around canonical works on education by great philosophers (Plato of ancient Greece, the eighteenth-century Swiss-born Frenchman Jean-Jacques Rousseau, and others); at other times, the field was dominated, in the United States at least, by the figure of John Dewey (1859–1952) and educational Progressivism; at other times, the field was characterized by an austere analytical approach that explicitly rejected much of what had come before in the field as not even being proper "philosophy" at all. But even during these periods of dominance there were sharp internal disputes within the field (such as feminist criticisms of the "Great Man" approach to philosophy of education and vigorous critiques of the analytical method). Such disputes can be read off the history of the professional societies, journals, and graduate programs that institutionalize the field, and they can be documented through a succession of previous encyclopedia articles, which by definition attempt to define and delimit their subject matter.

These sorts of struggles over the maintenance of the disciplinary boundary, and the attempt to define and enforce certain methods as paramount, are hardly unique to philosophy of education. But such concerns have so preoccupied its practitioners that at times these very questions seem to become the substance of the discipline, nearly to the exclusion of thinking about actual educational problems. And

so it is not very surprising to find, for example, a book such as *Philosophers on Education*. Consisting of a series of essays written by professional philosophers entirely outside the discipline of philosophy of education, the collection cites almost none of the work published within the discipline; because the philosophers have no doubts about the status of the discipline of philosophy of education, they have few qualms about speaking authoritatively about what philosophy has to say to educators. On the other hand, a fruitful topic for reflection is whether a more self-critical approach to philosophy of education, even if at times it seems to be pulling up its own roots for examination, might prove more productive for thinking about education, because this very tendency toward self-criticism keeps fundamental questions alive and open to reexamination.

Any encyclopedia article must take a stance in relation to such disputes. However much one attempts to be comprehensive and dispassionate in describing the scope and purpose of a field, it is impossible to write anything about it without imagining some argument, somewhere, that would put such claims to challenge. This is especially true of “categorical” approaches, that is, those built around a list of types of philosophy of education, or of discrete schools of thought, or of specific disciplinary methods. During the period of particular diversity and interdisciplinarity in the field that has continued into the twenty-first century, such characterizations seem especially artificial—but even worse than this, potentially imperial and exclusionary. And so the challenge is to find a way of characterizing the field that is true to its eclecticism but that also looks back reflexively at the effects of such characterizations, including itself, in the dynamics of disciplinary boundary maintenance and methodological rule-setting that are continually under dispute.

One way to begin such an examination is by thinking about the *impulses* that draw one into this activity at all: What is philosophy of education for? Perhaps these impulses can be more easily generalized about the field than any particular set of categories, schools of thought, or disciplinary methods. Moreover, these impulses cut across and interrelate approaches that might otherwise look quite different. And they coexist as impulses within broad philosophical movements, and even within the thought of individual philosophers themselves, sometimes conflicting in a way that might help explain the tendency toward reflexive self-examination

and uncertainty that so exercises philosophy of education as a field.

### The Prescriptive Impulse

The first impulse is prescriptive. In many respects this is the oldest and most pervasive inclination: to offer a philosophically defended conception of what the aims and activities of teaching ought to be. In some instances, as in Plato’s *Republic*, these prescriptions derive from an overall utopian vision; in other instances, such as seventeenth-century English philosopher John Locke’s *Some Thoughts Concerning Education* or Rousseau’s *Émile*, they derive from a fairly detailed reconception of what the day-to-day activities of teaching should look like; in still other instances, such prescriptions are derived from other social or moral principles, as in various Kantian views of education (even though eighteenth-century German philosopher Immanuel Kant himself had very little to say on the subject). These prescriptive inclinations are in many respects what people expect from philosophy of education: a wiser perspective, a more encompassing social vision, a sense of inspiration and higher purpose. It is what people usually mean when they talk about having a “philosophy of education.”

A broad range of perspectives in the field share this prescriptive impulse: many of these perspectives can be comprised in what was once called the “isms” approach (perennialism, idealism, realism, Thomism, and so on)—the idea that a set of philosophical premises could generate a comprehensive and consistent educational program. For many years, working out the details of these “philosophies of education” was considered the main substance of the field, and the debates among the “isms” were typically at the very basic level debates among fundamentally different philosophical premises. An implication of this approach was that disagreements tended to be broadly “paradigmatic” in the sense that they were based on all-or-none commitments; one could not, of course, talk about a synthesis of realist and idealist worldviews.

One wag has suggested that the “isms” have more recently been replaced by the “ists”—less purely philosophical and more social/political theories that now typify many scholars working in philosophy of education (Marxists, feminists, multiculturalists, postmodernists, and so on). These will be characterized as critically oriented philosophies below, but at this stage it is important to see that

these perspectives can be equally driven by the prescriptive impulse: many writers (for example, neo-Marxist advocates of Paulo Freire's "critical pedagogy") offer quite explicit accounts of how education ought to proceed, what it is for, and whose interests it ought to serve.

### The Analytical Impulse

The second impulse that drives much of philosophy of education is analytical. In a broad sense this includes not only philosophical approaches specifically termed "analytical philosophy" (such as conceptual analysis or ordinary language analysis), but also a broader orientation that approaches the philosophical task as spelling out a set of rational conditions that educational aims and practices ought to satisfy, while leaving it up to other public deliberative processes to work out what they might be in specific. In this enlarged sense, the analytical impulse can be seen not only in analytical philosophy per se but also in studies that focus on the logical and epistemological criteria of critical thinking; in the diagnosis of informal fallacies in reasoning; in certain kinds of liberal theory that spell out broad principles of rights and justice but that remain silent on the specific ends that education ought to serve; and even in some versions of German philosopher Jürgen Habermas's theory, which proposes a structure of communicative deliberation in which conversations must satisfy what he calls a set of general "validity" claims, but which does not specify or constrain in advance what that process of deliberation might yield.

The analytical impulse is often seen as expressing a certain philosophical modesty: that philosophers do not prescribe to others what their educational choices ought to be, but simply try to clarify the rational procedures by which those choices should be arrived at. Here metaphors such as referees who try to adjudicate an ongoing activity but remain nonpartisan within it, or groundskeepers who pull up weeds and prepare the soil but do not decide what to plant, tend to predominate in how this version of philosophy of education is presented and justified to others. The idea that philosophy provides a set of *tools*, and that "doing philosophy of education" (as opposed to "having a philosophy of education") offers a more workmanlike self-conception of the philosopher, stands in sharp contrast with the idea of philosophy as a system-building endeavor.

Of course, it must be said that this impulse is not entirely free of the prescriptive inclination, either. For one thing, there is a prescriptiveness about the very tools, criteria, principles, and analytical distinctions that get imported into how problems are framed. These are implicitly (and often explicitly) presented as educational ideals themselves: promoting critical thinking or fostering the conditions for Habermasian communication in the classroom, for example. However rationally defended these might be, they will undoubtedly appear to some as imposed from "on high." Moreover, at a deeper level, the analytical/prescriptive distinction is less than clear-cut: a theory of logic, or a theory of communication, however purely "procedural" it aspires to be, always expresses conceptions of human nature, of society, of knowledge, of language, that contains social and cultural elements that might appear "natural" or "neutral" to the advocates of those procedures, but that will be regarded as foreign and particularistic by others ("why must I justify my educational choices by *your* criteria?"). This is not meant as a criticism of the analytical orientation, but it just shows how these impulses can and do coexist, even within accounts that regard themselves as primarily one or the other.

### The Critical Impulse

Similarly, the third impulse, a critical orientation, can coexist with either or both of the others. The critical impulse, like the analytical one, shares the characteristic of trying to clear the ground of misconceptions and ideologies, where these misrepresent the needs and interests of disadvantaged groups; like the prescriptive impulse, the critical impulse is driven by a positive conception of a better, more just and equitable, society. Where the critical impulse differs from the others is in its conception of the contribution philosophy can play in serving these ends. From this orientation, philosophy is not just a set of tools or an abstract, programmatic theory; it is itself a substantive personal and political commitment, and it grows out of deeper inclinations to protect and serve the interests of specific groups. Hence the key philosophical ideas stressed in critically oriented philosophies of education (reflection, counterhegemony, a critique of power, an emphasis upon difference, and so on) derive their force from their capacity to challenge a presumably oppressive dominant society and enable put-upon individuals and groups to recognize and question their circumstances and to be moved to change them.

As there are prescriptive and analytical elements in critically oriented philosophies of education, so there can be critical elements in the others. Philosophers of education more driven by a prescriptive or analytical impulse can and do share many of the same social and political commitments as critically oriented philosophers of education; and some of them may see their work as ultimately serving many of the same goals of criticizing hegemonic ideologies and promoting human emancipation. This is why these three impulses or orientations must not be seen as simple categories to which particular philosophies (or philosophers) can be assigned. Stressing their character as impulses highlights the motivational qualities that underlie, and frequently drive, the adoption of particular philosophical views. While philosophers tend to stress the force of argument in driving their adoption of such views, and while they do certainly change their minds because of argument and evidence, at some deeper level they are less prone to changing the very impulses that drive and give vigor to their philosophical investigations. By stressing the ways in which all three impulses can coexist within different philosophical schools of thought, and even within the inclinations of a given philosopher, this account highlights the complex and sometimes even contradictory character of the philosophical spirit. When philosophers of education teach or speak about their views, although they certainly put forth arguments, quotations of and references to literature, and so forth, at a deeper level they are appealing to a shared impulse in their audience, one that is more difficult to argue for directly, and without which the arguments themselves are unlikely to take hold.

### Implications of the Impulses for Philosophy of Education

Given the existence of these three impulses, how can they help in providing an overview of the field of philosophy of education that does not fall into arguments about disciplinary boundary maintenance? First, these very broad orientations are in many respects easier to generalize within the field than would be any specific set of disciplinary criteria; many different kinds of philosophy of education can manifest these sorts of inclinations. Indeed, it makes for strange bedfellows when people consider that despite their vigorous paradigmatic differences they are actually motivated by very similar underlying philosophical commitments. Perhaps this recogni-

tion might create a stronger incentive for them to engage one another respectfully across those differences.

Second, it is beneficial for philosophers to consider that the validity they attribute to certain kinds of arguments may not be driven simply by the objective force of those arguments, but also by a particular appeal those kinds of arguments have *for them*. This sort of reflectiveness might be fruitful for various reasons, but a significant benefit could be in raising a person's appreciation for why others may not be moved by the arguments that seem so patently obvious to that person; and why the force of argument alone may not be sufficient to generate philosophical agreement or reconcile disagreement. Given the pervasively eclectic and interdisciplinary nature of the field of philosophy of education, such a spirit of tolerance and inclusiveness, while not needing to be unbounded entirely, would be a valuable corrective to the historical tendency to establish *the* methods or *the* philosophical school that will separate proper philosophy of education from the imposters.

Advocates of more prescriptive approaches typically buttress their case for dominance by reference to canonical Great Works (Plato, ancient Greek philosopher Aristotle, Locke, Rousseau, Dewey). This sort of system-building across epistemological, ethical, and social/political issues is what the great philosophers *do*, and it is revealing that for them philosophy of education was rarely seen as a distinct area of inquiry but merely the working out in practice of implications for teaching and learning that were derived from their larger positions about truth, value, justice, and so on.

Advocates of more analytical approaches, as noted, tend to put more reliance upon the tools of philosophical investigation, and less on particular authors or sources. In the twentieth century, versions of these approaches tended to dominate philosophy of education, especially in the English-speaking world, as they have many departments of philosophy itself. Indeed, when one surveys accounts of the field of philosophy of education from the 1990s forward, they nearly all chart the history as one of the rise to dominance of an analytical approach and then a succession of critiques and attacks upon it.

Advocates of more critical approaches suffer from a particular difficulty—carrying out their philosophical work in a way that is consistent with

their broader commitments. Naturally, any philosophical approach aspires to consistency of some sort; but to the extent that critically oriented philosophers are concerned with challenging power structures, hegemonic belief systems, and universalisms that obscure, not to say squelch, the particular beliefs, values, and experiences of those whom they seem to empower, such philosophers must also endeavor to avoid these potentially oppressive tendencies in their own writing and teaching. This tension is perhaps felt most acutely by contemporary post-modern philosophers of education, but it can be seen in much of the work of neo-Marxists, critical theorists, feminists, and Foucauldians as well: how to argue for and promote an emancipatory approach to education that does not itself fall into the habits of exclusionary language, authoritative (if not authoritarian) postures, and universalizing generalizations that are excoriated when detected in the work of others.

### Summary

This entry has tried to provide an overview of how the field of philosophy of education has seen itself, and it has recounted major elements in the narratives by which the history of the field has been traced by others. At the same time it has tried to reveal problems with the ways in which these different accounts have been driven in part by various agendas to define a scope and boundary for the field, and often to privilege one or another approach to philosophy of education, even when they have endeavored to be comprehensive and fair to all views. This entry has taken a different approach, first, by resisting the temptation to provide a single definition or characterization of the field; and, second, by stressing not schools of thought or methodological divisions as the categories for thinking about the field, but rather the underlying inclinations, or impulses, that animate philosophical inquiry. As noted, for a field that tends to resist and argue over every attempt to define it, such caution is probably prudent, but it has an added benefit as well. When philosophers think about the impulses that motivate their areas of inquiry and ways of thinking about them, they relate their philosophical work not solely to an abstract order of truth but to themselves; and it is a short step from that recognition to extending that way of thinking to others as well. The generosity of outlook that results might be the one thing that all philosophers of education can share.

*See also:* RESEARCH METHODS.

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## PHYSICAL DISABILITIES, EDUCATION OF INDIVIDUALS WITH

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In special education, physical disabilities are physical limitations or health problems that interfere with school attendance or learning to such an extent that special services, training, equipment, materials, or facilities are required. In the early twenty-first century, approximately 500,000 school children in the United States were classified as having physical disabilities or other health impairments for special education purposes. Since 1975, federal law (under the Education for All Handicapped Children Act, and since 1990, the Individuals with Disabilities Education Act [IDEA]) has mandated special education and related services for all students with physical disabilities that interfere with their education. Major classifications include neurological conditions, musculoskeletal conditions, and other health impairments.

### Types and Causes of Physical Disabilities

Neurological conditions involve damage to the central nervous system (brain or spinal cord). In 1990

traumatic brain injury became a separate category of disability under IDEA. Other major neurological conditions include cerebral palsy, seizure disorder (or epilepsy), and spina bifida, a congenital condition in which the spinal cord protrudes through the backbone resulting in partial or total paralysis below the site of the nerve damage. Disabilities associated with neurological conditions vary from very mild to severe and may involve physical, cognitive, speech-language, or sensory abilities, or a combination thereof.

Musculoskeletal conditions include muscular dystrophy, juvenile rheumatoid arthritis, limb deficiencies or amputations, and a wide variety of other deformities or degeneration of muscles or bones affecting the ability to move, walk, stand, sit, or use the hands or feet normally. Other health impairments include a wide variety of infectious diseases and chronic problems such as diabetes, asthma, cystic fibrosis, immunodeficiency (including HIV and AIDS), hemophilia, fetal alcohol syndrome, and the malfunction or failure of vital organs.

Causes include infectious disease, congenital conditions or malformations, and developmental problems or chronic health problems that are poorly understood. A wide variety of disabilities, especially those associated with traumatic brain injury, result from vehicular accidents, gunshot wounds, burns, falls, and poisoning. Substance abuse and physical abuse by caretakers, infectious diseases, and substance abuse by the child or by the mother during pregnancy cause some disabilities. Advances in medicine and related treatments are reducing or eliminating physical disabilities resulting from some diseases, injuries, and chronic conditions. Advances in medicine, however, also increase the number of children surviving congenital anomalies, accidents, and diseases with severe disabilities.

### The Basics and History of Special Education

Special education includes helping students have as normal an experience as possible in school. Much depends on access to the typical curriculum and use of adaptive devices when necessary. Emphasis is on overcoming attitudinal barriers among persons without disabilities to participation of students with physical disabilities in school and the community. Special educators must understand the operation of prostheses (artificial body parts), orthotics (braces and other corrective devices), and adaptive devices

(wheelchairs, communication boards, and other gadgets enabling people to accomplish tasks).

Special education in public schools dates from the early twentieth century. Programs have emphasized major health problems of the era. In the first half of the twentieth century the focus was on crippling conditions and the effects of infectious diseases, particularly tuberculosis and polio. After antibiotic drugs and vaccines dramatically reduced or eliminated many infectious diseases in the mid-twentieth century, the focus changed to cerebral palsy, spina bifida, and other congenital conditions or chronic health problems. In the late twentieth century, increasing attention was given to traumatic brain injury, spinal cord injuries, and AIDS.

### Trends and Controversies

Trends in the field are determined largely by changes in epidemiology and advances in medicine. The number of students needing special education and the focus of programs may change because of a resurgence of an infectious disease (e.g., tuberculosis), an advance in immunology (e.g., an effective vaccine for AIDS), or medical advances such as gene therapy, transplants, artificial organs, or extremely effective new treatments that reduce or eliminate a chronic health problem (as may occur for such conditions as diabetes, cystic fibrosis, and asthma). Advances in medicine and related services, such as physical therapy, technological applications, and adaptive devices that allow more normal functioning, may reduce or eliminate the need for special education or make education in a typical classroom feasible.

Issues and controversies include the extent to which placement in typical school environments is appropriate. Many students with even severe physical disabilities can attend regular schools and classes, given improved accessibility of school buildings, the use of technologies of treatment and adaptive devices, and improved attitudes of acceptance of disabilities in the school. Some students need highly specialized medical care and are thought to need education in the hospital where they are being treated or in a special class or school. A controversial issue is whether to include in regular schools and classes students who are near death or who have extreme physical and cognitive disabilities that leave them unresponsive to typical instruction.

*See also:* ADAPTED PHYSICAL EDUCATION; COUNCIL FOR EXCEPTIONAL CHILDREN; MOTOR LEARNING;

SEVERE AND MULTIPLE DISABILITIES, EDUCATION OF INDIVIDUALS WITH; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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SMITA SHUKLA-MEHTA  
JAMES M. KAUFFMAN

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## PHYSICAL EDUCATION

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### OVERVIEW

B. Ann Boyce

### PREPARATION OF TEACHERS

Murray Mitchell

### OVERVIEW

"Physical education is the study, practice, and appreciation of the art and science of human movement" (Harrison, Blakemore, and Buck, p. 15). While movement is both innate and essential to an individual's growth and development, it is the role of physical education to provide instructional activities that not only promote skill development and proficiency, but also enhance an individual's overall health. Physical education not only fulfills a unique role in education, but is also an integral part of the schooling process.

### Historical Perspectives

From the late 1700s to the mid-1800s, three nations—Germany, Sweden, and England—influenced the early development of physical education in the United States. German immigrants introduced the Turner Societies, which advocated a system of gymnastics training that utilized heavy apparatus (e.g., side horse, parallel and horizontal bars) in the pursuit of fitness. In contrast, the Swedish system of exercise promoted health through the performance of

a series of prescribed movement patterns with light apparatus (e.g., wands, climbing ropes). The English brought sports and games to America with a system that stressed moral development through participation in physical activities. The influence of these three nations laid the foundation for sport and physical education in America.

The 1800s were an important time for the inclusion of physical education in schools across America. The Round Hill School, a private school established in 1823 in Northampton, Massachusetts, was the first to include physical education as an integral part of the curriculum. In 1824 Catherine Beecher, founder of the Hartford Female Seminary, included calisthenics in her school's curriculum and "was the first American to design a program of exercise for American children" (Lumpkin, p. 202). She also advocated the inclusion of daily physical education in public schools. However, physical education was not offered in the public schools until 1855, when Cincinnati, Ohio, became the first city school system to offer this type of program to children.

In 1866 California became the first state to pass a law requiring twice-per-day exercise periods in public schools. Beecher's influence started the American system of exercise, and, along with her contemporaries Dio Lewis, Edward Hitchcock, and Dudley Allen Sargent, she was an early leader in physical education. In the profession's early years, between 1855 and 1900, there were several debates, referred to as the *Battle of the Systems*, regarding which system (American, Swedish, German, or English) could best provide a national physical education program for America.

During the 1890s traditional education was challenged by John Dewey and his colleagues, whose educational reforms led to the expansion of the "three R's" to include physical education. It was also during this time that several *normal schools* (training schools for physical education teachers) were established. All of these schools offered a strong background in the sciences that included courses in anatomy and physiology, with many of the early professors holding medical degrees.

In 1893 Thomas Wood stated that "the great thought of physical education is not the education of the physical nature, but the relation of physical training to complete education, and then the effort to make the physical contribute its full share to the life of the individual" (National Education Associa-

tion, p. 621). During the early twentieth century, several educational psychologists, including Dewey, Stanley G. Hall, and Edward Thorndike, supported the important role of children's play in a child's ability to learn. In line with the work of Wood in physical education, and the theoretical work of prominent educational psychologists, *The New Physical Education* was published in 1927 by Wood and Rosalind Cassidy, who advocated *education through the physical*.

This position supported the thesis that physical education contributed to the physical well-being of children, as well as to their social, emotional, and intellectual development. However, Charles McCloy argued against this expanded role of physical education, arguing that *education of the physical*, which emphasized the development of skills and the maintenance of the body, was the primary objective of physical education. The testing of motor skills was a part of McCloy's contribution to physical education, and his philosophy of testing paralleled the scientific movement in education.

The evolution of physical education, along with other educational professions, reflected contemporary changes in society. Throughout the early twentieth century, into the 1950s, there was a steady growth of physical education in the public schools. During the early 1920s many states passed legislation requiring physical education. However, shifts in curricular emphasis were evident when wars occurred and when the results of national reports were published. For example, as a result of the bombing of Pearl Harbor and the United States' entrance into World War II, the emphasis in physical education shifted from games and sport to physical conditioning. Similar curricular shifts were noted in 1953 when the Kraus-Weber study found that American children were far less fit than their European counterparts. As a result of this report, the President's Council on Physical Fitness was established to help combat the falling fitness levels of America's youth.

During the 1950s and the 1960s, physical education at the elementary level experienced tremendous growth. Today, many physical education programs emphasize overall fitness, referred to as *wellness*, as well as skill development. However, since the 1970s the number of schools offering daily physical education has drastically decreased—1995 statistics from the Centers for Disease Control and Prevention (CDC) show a drop from 43 percent in 1991 to 25 percent in 1995.

## Rationale

In the 1990s three national reports—*The Surgeon General's Report on Physical Activity and Health* (1996), *Healthy People 2000* (1990), and the CDC's *Guidelines for School and Community Programs* (1997)—have focused on the deplorable physical condition of Americans. These reports cited physical inactivity as a national health risk, based on statistics such as: (1) 13 percent of young people are classified as overweight; (2) only half of all youths are physically active on a regular basis (and this percentage decreases with age); and (3) inactivity and poor diet cause at least 300,000 deaths per year.

These reports advocated the need for daily physical activity, citing the following health benefits from moderate participation: improved strength and endurance, healthier bones and muscles, weight control, reduced anxiety and increased self-esteem, and, often, improved blood pressure and cholesterol levels. Physical education is the major vehicle for improving the health and fitness of the nations' youth. *Healthy People 2000* recommended the increase of daily physical education to a level of at least 50 percent of students in public schools by the year 2000.

In addition to the health benefits, cognitive performance can also be enhanced through physical education. There is a growing body of research that supports the important relationship between physical activity and brain development and cognitive performance. C. Edwin Benckraft (1999) found that "sensory and motor experiences play a prominent role in reinforcing . . . synaptic connections and neural pathways" (p. 45). Eric Jensen's 1998 research revealed that the cerebellum is not solely dedicated to motor activity, but includes both cognitive and sensory operations. Further, Jensen points out the strong relationship of the cerebellum to memory, perception, language, and decision-making, citing physical activity as a way to enhance cognition. In a summary of research findings, Benckraft suggests providing the following applications that could increase cognitive performance: (1) challenging motor tasks before the age of ten can increase cognitive ability due to a heavier, more dendrite-rich brain; (2) aerobic exercise improves cognitive functioning by increasing the number of capillaries serving the brain through the delivery of more oxygen and glucose and removal of carbon dioxide; (3) cross-lateral movements increase the communication ability between the brain's hemispheres; and (4) physical ac-

tivity reduces the production of stress chemicals that inhibit cognitive processing.

From the mounting evidence favoring physical activity, it appears that physical education in schools plays a dual role in serving both mind and body. The challenge to physical educators will be to implement programs that address the health crisis while building the child's mind through physical activity.

## Curriculum

According to the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD), a quality physical education program for grades K–12 includes instructional periods totaling at least 150 minutes per week at the elementary level and 225 minutes at the secondary level, qualified physical education specialists, and adequate equipment and facilities. In general, the curriculum should consist of: (a) instruction in a variety of developmentally appropriate motor skills that challenge students to develop physically, cognitively, socially, and emotionally; (b) fitness activities that educate and help students understand and improve or maintain optimal fitness levels; (c) instruction in concepts that lead to a better understanding of motor skills and fitness development; (d) opportunities to engage in experiences that enhance cooperation and develop multicultural awareness; and (e) experiences that foster the desire for lifelong participation in physical activity.

More specifically, the elementary curriculum should include many enjoyable activities that lead to the acquisition and refinement of fundamental motor patterns (e.g., running, skipping, jumping, catching, throwing, striking, balancing) that can be applied in game, sport, dance, and gymnastics contexts. The *movement-based curriculum* proposed and adapted by George Graham, Shirley Ann Holt/Hale, and Melissa Parker in 1998 introduces skill themes (fundamental motor patterns) and movement concepts that describe how a movement is performed (e.g., speed, direction, relationship). This curriculum pattern teaches children to move while challenging them to explore, modify, and refine motor patterns, and it can be used as a vehicle for teaching physical education. The *activity based* approach is the most common curriculum pattern used in both middle schools and high schools. This curricular pattern uses activity units in sport, fitness, and dance (e.g., volleyball, aerobic dance, swimming) to teach physical education.

Middle school curriculums should include a wide variety of team and individual sports utilizing motor skills introduced and refined at the elementary level. High school curriculums should focus on lifetime sports skills (e.g., golf, tennis, aerobic dance), with a secondary emphasis on team sports. During the high school years, students should become highly proficient in one (or more) sport and/or fitness activity of their own choosing. However, regardless of the level of schooling, fitness forms the base of the curriculum and it is an integral part of the program.

### Trends, Issues, and Controversies

School accountability, a major trend of the 1990s, has driven the need for national assessment (testing) and standards. This trend has become an issue and has created debate throughout education, including physical education. Proponents on both sides have valid points to make. Those who oppose national testing point out the need for people to enjoy physical activity. They believe that testing does not foster the desire for lifelong participation. In contrast, proponents of testing think it would parallel work completed in other disciplines, such as math and science, while helping students gauge their progress towards a national standard for fitness and/or skill competence.

The National Association for Sport and Physical Education has provided guidelines in the form of grade-level benchmarks, as well as an operational definition of the *physically educated person*. Such a person is skillful in a variety of physical activities, physically fit, participates regularly in physical activity, knows the benefits of physical activity, values physical activity and its contributions to a healthy lifestyle, respects diversity, and acts in a socially responsible manner. The question remains, however, of how much direction and specificity in the form of standards and assessment are needed.

In many school programs and business settings, the term *wellness* has replaced *fitness* and *health*. In general, this term refers to optimal health and well-being, but it has been broadened to include the dimensions of emotional, mental, spiritual, social, and environmental well-being.

There are many issues that are of interest to all educators, issues that pose a challenge to all of those who seek to teach children. These include discipline problems, student drug abuse, violence, insufficient

resources, lack of parental support for education, large classes, teacher burnout, and perhaps most importantly, a concern for the health and well-being of all children.

By far the greatest issue facing physical education in K–12 institutions is the reduction of time in the curriculum allotted to this important subject. The need for daily physical education is obviously important for the well-being of students, but it presents a dilemma for those who must balance academics, accountability, and what is best for the child's overall education. Given the support for the physical and psychological contributions of exercise, along with the health risks associated with inactivity, it is clear that daily physical education plays a crucial and unique role in each child's cognitive, psychological, and physical development.

*See also:* ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; HEALTH EDUCATION, SCHOOL; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SPORTS, SCHOOL.

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B. ANN BOYCE

## PREPARATION OF TEACHERS

In the United States, teacher preparation in physical education originally had close links to medicine. A program of study would commonly include anatomy, physiology, health, first aid, history and philosophy, educational psychology, and various physical skills—from gymnastics through dance, games, and sport. Major shifts across time have largely involved the length of programs of study on each of these topics.

## A Brief History

The early roots of physical education teacher preparation in the United States can be traced to the northeastern part of the country during the latter part of the 1800s. In 1952 Charles Bucher described a ten-week course at the Normal Institute of Physical Education in Boston (founded by Dio Lewis) as graduating the nation's first class of physical education teachers in 1861. A one-year course of study was developed in 1866 in New York City under the name of the North American Turnerbund. The Sargent School in Cambridge, Massachusetts, under the direction of Dr. Dudley Allen Sargent, began preparing teachers in 1881, and in 1886 the Brooklyn Normal School for Physical Education was opened.

In 1886 the International Young Men's Christian Association College at Springfield Massachusetts began operations. This institution, which evolved into the Springfield College, began with the mission to prepare physical education teachers for the Young Men's Christian Association (YMCA). Later, degrees at the bachelor's, master's and doctoral levels for study in physical education were awarded by this institution. In general, the preparation of physical education teachers in the late 1800s and early 1900s ranged from as little as two months to as much as five years.

Prior to World War I, preparation to teach physical education was primarily completed in normal schools. The poor condition of many of the men in the country who were called to serve in the war heightened interest in physical education. As a result of such concerns, there was some form of compulsory public school physical education in thirty-eight states by 1930.

At the beginning of the twenty-first century, the requirements for physical education teachers vary somewhat by state, since education is governed at that level rather than by national standards. The National Association for Sport and Physical Education (NASPE) has published guidelines for beginning teachers in an attempt to provide some professional leadership. These guidelines are not binding on either institutions preparing teachers or on state governments, where the responsibility of licensing teachers rests. In a collaborative effort with one of the major accrediting agencies for teacher preparation programs, the National Council for Accreditation of Teacher Education (NCATE), NASPE has created guidelines for programs seeking accredita-

tion in the preparation of physical educators for initial certification.

### Current Structure

Physical education teacher education (PETE) programs in the United States are designed around at least three models and five conceptual orientations. One model is delivered at the undergraduate level and two at the graduate level. At the undergraduate level, programs are usually delivered in a four-year program with course work in three major areas: general education (e.g., the broad concepts in many fields that the general public associates with an educated citizen), professional education (e.g., concepts specifically linked with what is known about teaching and learning), and content knowledge (e.g., the information unique to the field, often represented in a variety of subdisciplinary areas such as exercise physiology, biomechanics, and motor learning). The actual number of credits and sequence of these courses varies and is often dependent upon the philosophical orientation of the program and resources available to the faculty.

One type of graduate PETE program has evolved from various reform efforts, including the Holmes Group initiative. In this approach, students study for a four-year degree in the content area supporting the type of licensure they seek. In physical education, an undergraduate degree could be in sport studies, exercise physiology, biomechanics, or some other related subdisciplinary field. At the master's level, students then study the pedagogical content to learn how to deliver the content knowledge to students. This approach is a response to perceived needs of teachers to be better prepared in the content knowledge of their field.

A second type of graduate PETE program is sometimes characterized as a response to teacher shortages. In this approach, candidates have typically acquired an undergraduate degree in some field other than physical education. Graduate programs for this approach must include a combination of content knowledge and professional education. Students changing careers are often attracted to this model.

In 1990 Sharon Feiman-Nemser described five conceptual orientations to teacher education, regardless of the model; three years later Judith Rink provided adaptations to these models using examples appropriate to PETE programs. Both authors

suggest that the conceptual orientation guides the delivery of content. In contrast to Feiman-Nemser, however, Rink suggests that it is possible for parts of each orientation to exist in any program.

The *academic* orientation holds that the subject matter knowledge is central. The focus of these programs is on games, sports, dance, and fitness knowledge. In the *practical* orientation, experience and conventional wisdom are the focal points. Field experiences are key parts of these programs, where students are given ample practice time with practice-proven methods of teaching. The *technological* orientation has also been characterized as systematic, science-based instruction where there is an emphasis on mastering teacher effectiveness skills. Instruction is based on research-based teaching for student skill development. The *personal* orientation is a more humanistic approach where the teacher and learner are considered as people first; teaching, learning, and content are secondary concerns. Individualization, nurturing personal meaning, and growth are hallmarks of this approach to teacher education. In the *critical/social* orientation, the relationship between schools and the structure of society becomes central. Attention is drawn to the moral obligations of teachers to include all members of society, regardless of age, gender, race, religion, skill level, or socioeconomic level.

Michael Metzler and Bonnie Tjeerdsma (2000) suggest that teacher educators have a responsibility to assess the effectiveness of what they do, with whatever model or conceptual orientation is selected. They suggest that few teacher educators have spent much effort doing this type of assessment. In an effort to be of assistance, Metzler and Tjeerdsma provide a variety of tools for assessing and improving program delivery.

Daryl Siedentop and Larry Locke provided an alternative perspective on assessing PETE programs in 1997. They describe the minimum conditions necessary for the effective operation of a PETE program, and also suggest that the responsibility of PETE programs goes beyond educating new recruits and includes a duty to "create and sustain good school programs" (p. 27). These authors go on to lament that few PETE faculty have assumed any responsibility for the quality of programs in schools, instead adopting an "us" (e.g., faculty in higher education) versus "them" (e.g., teachers in the K-12 schools) mentality. The outcome of this adversarial relationship has been a declining level of competent

program delivery, with national health-related consequences. In 1990 John Goodlad identified a similar concern when he suggested that the reform or renewal of schools, teachers, and teacher preparation programs has to occur simultaneously.

### In-Service and Staff Development

Most states require some sort of ongoing accumulation of continuing education credits for teachers to retain their licensure. Most school districts create opportunities for continuing education related to topics relevant to the purposes of schools and needs of students in their community. Unfortunately, these opportunities are often too generic to address the specific needs of physical educators, and are often perceived to be ineffective.

Beyond state and school district requirements, there is a key challenge for licensure programs: convincing graduates that their preparation to become true professionals has not ended, but has just begun. Without an internal commitment to ongoing professional growth, few in-service or staff development efforts are effective at eliciting change. Indeed, although specific examples of successful change efforts can be cited, Linda Bain (1990) describes practice in physical education as “generally resistant to change” (p. 771).

Michael Eraut (1987) describes four approaches to in-service education that can be used to categorize some of the work in physical education. The *defect* approach involves behavioral training to build skills that teachers lack. In physical education, targets of this approach have included different verbal behaviors (e.g., feedback, prompts, questions, use of student names, etc.), teacher movement, task selection, and others. The *growth* approach is about helping teachers seek greater fulfillment, rather than helping them simply become competent. In physical education, this approach is difficult to distinguish from the *problem-solving* approach, where efforts are made to help teachers diagnose problems in their own instructional setting. Program research from places like Teachers College at Columbia University and the University of Massachusetts would be examples of this kind of in-service program. Lastly, the *change* paradigm involves efforts to make changes in programs that are responsive to greater societal needs. Attention to gender equity, mainstreaming, and nondiscrimination would be examples of this work in physical education.

### Trends and Controversies

The most critical concern facing physical educators in the United States is the viability of physical education programs as a required subject in schools. As opportunities for advanced placement courses; electives in art, music, and foreign languages; and other varied courses have occurred, time in the required curriculum for physical education has declined. There are consequences to this on at least two levels. First, the health of the nation is at risk when the most equitable delivery system for ensuring active lifestyles is curtailed. Second, there is a declining need for teacher education programs when there are fewer teaching positions available for program graduates.

Related to the time available for physical education programs in schools is an ongoing debate over the most appropriate content for programs. In some states (e.g., West Virginia and Florida) there is a major emphasis on student performance on fitness tests as an indication of physical education program effectiveness. In other states (e.g., Missouri) there is more of an emphasis on the demonstration of written competence in health-related fitness knowledge. In at least one other approach (South Carolina), there is an attempt to hold teachers accountable for fitness levels and fitness knowledge, as well as out-of-class behaviors and movement competence. There are obvious implications for teacher preparation programs in each of these states with respect to what will be expected of program graduates. It is also worth noting that none of these approaches is an exact match with NASPE guidelines.

Part of the debate over appropriate content for teacher preparation can be traced back to a classic 1964 work by Franklin Henry, where physical education was first conceptualized as an academic discipline in the United States. For the first time, the study of human movement spawned viable areas of study, leading to degrees and careers other than teaching. Today, locating departments of physical education in colleges and universities is a challenge, partly because such departments can go by so many different names: 114 have been counted by P. Stanley Brassie and Jack Razor, including Biomechanics, Kinesiological Studies, Kinesiology, Sport Science, and Sport Studies, to cite just a few. Approximately half of these departments are in colleges of education, while others are in colleges of liberal arts, applied sciences, health, or elsewhere. This identity

crisis has lead to marginal status for physical educators at all levels.

A common trend in teacher preparation programs is for early and frequent field-based experiences for students. The challenge is to find (or create) placements where desirable practices are being modeled. An additional challenge is to determine the amount and type of training required to prepare school-based supervisors.

The last major controversy that warrants mention in teacher preparation involves determining the most appropriate level for initial licensure. In some institutions (e.g., the Ohio State University), initial licensure in physical education is only available at the graduate level. In other schools (e.g., University of South Carolina), initial licensure is available at both the undergraduate and graduate level. In most of the rest of the country, initial licensure is predominantly delivered at the undergraduate level. There is no definitive evidence on which (if any) of these approaches is the most appropriate way to prepare physical education teachers.

**See also:** CURRICULUM, HIGHER EDUCATION, *subentry on* TRADITIONAL AND CONTEMPORARY PERSPECTIVES; CURRICULUM, SCHOOL; HEALTH EDUCATION, SCHOOL; SPORTS, SCHOOL.

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MURRAY MITCHELL

## PHYSICAL EDUCATION: ADAPTED

*See:* ADAPTED PHYSICAL EDUCATION.

### PIAGET, JEAN (1896–1980)

Director of the Institute of Educational Science in Geneva and professor of experimental psychology at the University of Geneva, Jean Piaget was the most influential developmental psychologist of the twentieth century. Many of Piaget’s concepts and research methods have become so much a part of the conventional wisdom and practice that psychologists are often unaware of their origin. The stages of development that Piaget observed and conceptualized are given extended treatment in every introductory psychology and developmental psychology textbook. In addition, much of contemporary research on infancy grows directly out of Piaget’s innovative studies of his own three infants. Moreover, a great deal of present day research and theory regarding adolescence starts from Piaget’s demonstration of the appearance of new, higher level, mental abilities during this age period. In these and in many other ways, Piaget’s research and theory continue to be a powerful stimulus in many different fields and areas of investigation.

Piaget’s work, however, has had an impact on other disciplines as well. The contemporary emphasis upon constructivism in education, for example, stems directly from Piaget’s theory of intellectual development. According to Piaget the child does not copy reality, but rather constructs it. Reality is developmentally relative; it is always a joint product of the child’s developing mental abilities and his or her experiences with the world. Piaget’s research and theory has also had considerable impact upon psychiatry. His description of the intellectual stages of development has provided a very important complement to the psychosexual stages of development outlined by the Austrian psychologist Sigmund Freud. In these, and in many other ways, the power of Piaget’s work continues to be felt in many diverse fields.

Jean Piaget was born in Neuchâtel, Switzerland. His father was a classics professor at the University of Neuchâtel while his mother was a deeply devout Christian. In his autobiography, Piaget suggests that the ongoing conflict between his father’s scientific beliefs and his mother’s spiritual convictions contributed to his theory of mental development. He came to regard the development of intelligence as motivated by the progressive resolution of conflicting ideas. Be that as it may, Piaget showed his genius early. At the age of fourteen he published his first scientific paper, his observations of an albino sparrow. He also became, thanks to the mentorship of the curator of the Neuchâtel natural history museum, a student of mollusks. He began experimenting with crustaceans and publishing his findings in the biological journals. These articles were so well received that he was offered the curatorship of a natural history museum in another Swiss canton. Piaget, however, had to refuse because he had not yet graduated from high school.

Once at the university, Piaget took courses in both philosophy and biology and struggled to find some way to reconcile his philosophical interests with his commitment to science. He hit upon a unique solution in an unexpected place. After receiving his doctorate, Piaget explored a number of different professions including psychiatry. He eventually took a position in Paris, translating some of the intelligence tests created by the English psychologist, Sir Cyril Burt, into French. As part of this endeavor, it was necessary for Piaget to test a number of children in order to ensure that his translations had not made the items easier or more difficult than they were for English children of comparable age. While administering these tests, Piaget became fascinated with the children’s wrong answers. To Piaget, these wrong answers did not seem random. Rather they appeared to be generated by a systematic way of seeing things that was not wrong, but simply reflected a different world view than that held by adults.

Piaget was fascinated by his unexpected discovery that children’s perception of reality was not learned from adults, as had heretofore been assumed, but was constructed. Children’s conception of the world, Piaget reasoned, was different than that of adults because their thought processes were different. Piaget assumed that he would pursue this problem, the development of children’s thinking, for a few years and then move on to other things. In-

stead, this pursuit of the ways in which children construct reality, became the foundation of a lifelong professional career. Piaget came to realize that the study of the development of children's adaptive thought and action, of their intelligence, was a way of pursuing both his philosophical and his scientific interests.

One field of philosophy is epistemology, the study of how people come to know the world. Most philosophers approach this topic by means of introspection and logical analysis. Piaget, however, believed that he could put epistemological questions to the test by studying the development of thought and action in children. Accordingly Piaget created his own new discipline with its own methods and problems. The field was genetic epistemology, the study of child development as a means of answering epistemological questions. Piaget's career exploration of genetic epistemology can be roughly divided into four different stages.

### Stage 1: The Sociological Model of Development

During this first stage, roughly corresponding to the 1920s, Piaget investigated children's heretofore unexplored conceptions of the world, the hidden side of children's minds. To further this exploration Piaget made use of a combination of psychological and clinical methods that he described as the *semiclinical interview*. He began with a standardized question, but followed up with nonstandard questions that were prompted by the child's answer. In order to get what Piaget called children's "spontaneous convictions" he often asked questions that the children neither expected nor anticipated. In his study of children's conception of the world, for example, he asked children whether a stone was alive and where dreams came from. He made a comparative study of children's answers and found that for these and for similar questions there was a gradual progression from intuitive to scientific and socially acceptable responses.

During this early period, Piaget published *The Language and Thought of the Child*, *The Child's Conception of the World*, *The Child's Conception of Physical Causality*, and *The Moral Judgment of the Child*. Each of these books was highly original and they made Piaget world famous before he was thirty. In these books he elaborated his first theory of development, which postulated the mental development was fueled by a social dynamic. He proposed that children moved from a position of egocentrism (a fail-

ure to take the other person's point of view into account) to sociocentrism (the recognition that others see the world differently than they do). Children moved from the egocentric to the sociocentric position thanks to social interaction and the challenge to younger children's ideas by the ideas of those children who were more advanced. Piaget made it clear, however, that the young children's egocentric ideas were not wrong, but merely different from those of the older children. Egocentric ideas are developmentally appropriate for young children, if not for older ones.

### Stage 2: The Biological Model of Intellectual Development

In 1928 Piaget married one of his graduate students and started a family in the 1930s. Having his own infant children set the stage for the second phase of Piaget's work, the exploration of the development of intelligence in infants. During this period, Piaget studied his own three offspring. The semiclinical interview was clearly not of much use with infants who could not talk. Piaget, therefore, invented a number of ingenious experiments to test the infant's knowledge about the world. For example, he placed a cloth over a toy that the infant was playing with to see whether or not the baby would try to remove the cloth to recover the toy. If the baby removed the cloth this would be evidence that he or she had some mental representation of the toy. If the baby did not remove the cloth, but merely cried in frustration, this would be evidence that the infant had not yet attained representational thought.

During this second period of his work, Piaget elaborated a biological model of intellectual development, which he combined with the sociological model of the earlier period. He now described intelligence as having two closely interrelated facets. One of these, carried over from the earlier period, was the content of children's thinking. The other, new to this period, was the process of intellectual activity. Piaget now introduced a truly powerful idea, namely, that the process of thinking could be regarded as an extension of the biological process of adaptation.

He argued, for example, that the child who sucked on anything and everything in his or her reach was engaging in an act of assimilation, comparable to the assimilation of food by the digestive system. Just as the digestive system transforms a variety of foodstuffs into the nutriment needed by the body, so the infant transforms every object into an

object to be sucked. At much higher level, whenever one classifies an object, say a dog, he or she in effect assimilates this exemplar to their more general dog concept. In so doing the particular dog is transformed into the universal, conceptual dog. At all stages of development, therefore, whenever one transforms the world to meet individual needs or conceptions, one is, in effect, assimilating it.

Piaget also observed that his infant children not only transformed some stimuli to conform to their own mental structures but also modified some of their mental structures to meet the demands of the environment. He called this facet of adaptation *accommodation*. At the biological level the body accommodates when, for example, its blood vessels constrict in response to cold and expand in response to heat. Piaget observed similar accommodations at the behavioral and conceptual levels. The young infant engages primarily in reflex actions, such as sucking the thumb or grasping. But shortly thereafter the infant will grasp some object and proceed to put that in his or her mouth. In this instance the child has modified his or her reflex response to accommodate an external object into the reflex action. That is to say, the infant's instinctual thumbsucking reflex has been adapted to objects in the environment. Piaget regarded this behavioral adaptation as a model for what happens at higher intellectual levels as well. Whenever one learns new facts, values, or skills, he or she is, in effect, modifying mental structures to meet the demands of the external world.

In Piaget's view, assimilation and accommodation are the invariant processes of intellectual processing and are present throughout life. Furthermore, because the two are often in conflict they provide the power for intellectual development. The child's first tendency is to assimilate, but when this is not possible, he or she must accommodate. It is the constant tension between assimilation and accommodation and the need for some form of equilibrium between them that triggers intellectual growth. For example, in the "hiding the toy experiment" described above, the six-month-old infant simply cried while the one-year-old infant lifted the cloth to reveal the hidden object. This initial upset, and failure of assimilation, thus led to the infant's construction of a mental image of the object. This new construction allows the child to solve the problem and remove the cloth from the toy. At each level of development, the failure of assimilation leads to a new accommodations that result in a new equilib-

rium that prepares for yet another level of disequilibrium.

Piaget published the results of these infant studies in three books, *The Origins of Intelligence in the Child*, *The Construction of Reality in the Child*, and *Play Dreams and Imitation*. These books continue to stimulate a wide range of investigations into the developing abilities of infants.

### **Stage 3: The Elaboration of the Logical Model of Intellectual Development**

During the third period of his work, from the 1940s through the 1960s, Piaget explored the development of many different physical and mathematical concepts in children and adolescents. To explore the physical and mathematical conceptions of children and adolescents, Piaget returned to the semiclinical interview, but in modified form. He decided that the way to test children's level of conceptual development was to challenge their understanding of conservation, that is, their understanding that an object's physical or mathematical properties do not change despite a change in its appearance. Piaget based this methodology on the fact that scientific progress occurs when judgments of reason win out over judgments based upon appearance. The discovery of the roundness of the earth is a good example. The ancients believed that the world was flat. It was only from later observations and reasoning about the disappearance of ships on the horizon and the shadow of the earth on the moon that the perception of flatness could be overcome.

To test children's understanding of conservation, Piaget presented children with a wide array of tasks in which the child had to make a judgment on the basis of either perception or reason. Only when the child made his or her judgment on the basis of reason was the child said to have attained conservation. For example, in his studies of children's conception of number, Piaget confronted children with two rows of six pennies, one spread apart so that it was longer than the other. Young children judge the longer row to have more pennies, while older children judge both rows to have the same amount. Older children have attained the conservation of number while younger children have not.

With this conservation methodology, Piaget and his longtime colleague, Barbel Inhelder, explored how children constructed their concepts of number, space, time, geometry, speed, and much more. In

this third phase of his work, Piaget introduced a logical model to explain children's attainment of conservation in different domains and at different age levels. It is this logical model of intellectual development for which he is perhaps best known. Piaget argued that intelligence develops in a series of stages that are related to age and that are progressive in the sense that each is a necessary prerequisite of the next. There is no skipping of stages. In addition, he contended that each stage was characterized by a set of mental operations that are logical in nature but vary in complexity. At each stage of development the child constructs a view of reality in keeping with the operations at that age period. At the next stage, however, with the attainment of new mental abilities the child has to reconstruct the concepts formed at the earlier level in keeping with his or her new mental abilities. In effect, therefore, Piaget conceived of intellectual development as an upward expanding spiral wherein the child must constantly reconstruct the ideas formed at an earlier level with new, higher order concepts acquired at the next level.

The first stage, infancy or the first two years of life, Piaget described as the *sensori-motor period*. In the first two years of life, the baby constructs elementary concepts of space, time, and causality but these are at the visual, auditory, tactual, and motoric level, and do not go beyond the here and now. At the next stage of development, the *pre-operational level*, children acquire the symbolic function and are able to represent their experience. Children now begin to use words and symbols to convey their experience and to go beyond the immediate. Concepts of space, time, and causality, for example, begin to be understood with terms like *now* and *later*, as well as *day* and *night*. Once the child's thought moves from the sensori-motor to the symbolic level, it has much more breadth and depth.

By the age of six or seven children attain a new set of mental abilities that Piaget termed *concrete operations*, which resemble the operations of arithmetic and which lift school-age children to a whole new plane of thinking. Concrete operations enable young children to reason in a syllogistic way. That may be the reason the ancients called these years the age of reason. Concrete operations enable children to deal with verbal rules and that is why formal education is usually begun at about this time. Following rules is in effect reasoning syllogistically. Consider the classic model of the syllogism.

All men are mortal.

Socrates is a man.

Therefore Socrates is mortal.

This is the same form of reasoning the child must employ if he or she is to follow the rule that says "when two vowels go walking, the first one does the talking."

When two vowels go walking the first one does the talking.

In the word *ate* there are two vowels and the first is an *a*.

In this word, *a* does the talking.

Concrete operations enable young children to construct their conceptions of space, time, number, and causality on a higher quantitative plane. It is during the elementary years that children are able to learn clock and calendar time, map and geographical space, and experimental causality.

At about the age of eleven or twelve young people develop yet a higher level of mental operations that Piaget labeled *formal*. These operations are formal in the sense that they are no longer tied to the here and now and are abstract in the sense that they can be in conflict with reality. For example, if you ask a younger child to imagine a world in which snow was black and to guess what color, in that world, Mickey Mouse's ears would be, the child would have trouble saying they were white. Adolescents who have attained formal operations have no trouble with this problem. Formal operations enable young people to understand celestial space, historical time, and multivariable causality. They can construct ideals, think in terms of possibilities, and deal with multiple variables at the same time. Formal operations move young people to a new plane of thought, which is on a level with adult thinking.

#### Stage 4: The Study of Figurative Thought

During the last stage of Piaget's work, which lasted until his death in 1980, Piaget explored what he called the *figurative facets of intelligence*. By figurative Piaget meant those aspects of intelligence such as perception and memory that were not entirely logical. Logical concepts are completely reversible in the sense that one can always get back to the starting point. The logical addition of concepts, such as "boys plus girls equals children," can be undone by logical subtraction, such as "children minus boys equals girls" or "children minus girls equals boys." But perceptual concepts cannot be manipulated in

this way. The figure and ground of a picture, for example, cannot be separated because contours cannot be separated from the forms they outline. Memory too is figurative in that it is never completely reversible. Piaget and Inhelder published books on perception, memory and other figurative processes such as learning during this last period of his work.

### Conclusion

Jean Piaget is clearly the giant of developmental psychology. His experimental paradigms have been replicated in almost every country in the world and with quite extraordinary comparability of results. Piaget's observations, then, are among the hardest, if not the hardest, data in all of psychology. No other research paradigm has received such extensive cross-cultural confirmation. In the early twenty-first century there has been a tendency of investigators to dismiss Piaget's work as passé. This would be a mistake. While it is important to challenge Piaget and to build upon the foundation he has provided, it would be wrong to discount his work without having a comparable database on which to found such a rejection. Indeed, the opposite is more likely the case, namely, that the value of much of Piaget's work both for developmental psychology education and for other disciplines is yet to be fully realized.

*See also:* LEARNING THEORY, *subentry on* CONSTRUCTIVIST APPROACH.

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DAVID ELKIND

## PLATO (427?–347 B.C.E.)

Plato (427?–347 B.C.E.) was a prominent Athenian philosopher who posed fundamental questions about education, human nature, and justice.

A student of the famous philosopher Socrates, Plato left Athens upon his mentor's death in 399 B.C.E. After traveling to other parts of Greece, Italy, and Sicily, Plato returned to Athens in 387 B.C.E. and founded a school of mathematics and philosophy called the Academy, which became the most prominent intellectual institution in all of ancient Greece. Plato authored a number of dialogues that often depicted Socrates engaging in the educational mode of dialectic. Like his mentor, Plato suspected that most people did not know what they claimed to know, and hence wondered why rigorous qualifications for rulers did not exist. Challenging the Sophists' claims that knowledge and truth were relative to the perspective of each individual, Plato developed an epistemology and metaphysics that suggested an absolute truth that could only be gleaned through rigorous self-examination and the development of reason—skills crucial for enlightened political leaders.

### The Ideal State

Plato's educational ideas derived in part from his conception of justice, both for individuals and for the ideal state. He viewed individuals as mutually dependent for their survival and well-being, and he proposed that justice in the ideal state was congruent with justice in the individual's soul.

Plato's ideal state was a republic with three categories of citizens: artisans, auxiliaries, and philoso-

pher-kings, each of whom possessed distinct natures and capacities. Those proclivities, moreover, reflected a particular combination of elements within one's tripartite soul, composed of appetite, spirit, and reason. Artisans, for example, were dominated by their appetites or desires, and therefore destined to produce material goods. Auxiliaries, a class of guardians, were ruled by spirit in their souls and possessed the courage necessary to protect the state from invasion. Philosopher-kings, the leaders of the ideal state, had souls in which reason reigned over spirit and appetite, and as a result possessed the foresight and knowledge to rule wisely. In Plato's view, these rulers were not merely elite intellectuals, but moral leaders. In the just state, each class of citizen had a distinct duty to remain faithful to its determined nature and engage solely in its destined occupation. The proper management of one's soul would yield immediate happiness and well-being, and specific educational methods would cultivate this brand of spiritual and civic harmony.

### The Dialectical Method

Plato's educational priorities also reflected his distinct pedagogy. Challenging the Sophists—who prized rhetoric, believed in ethical and epistemological relativism, and claimed to teach “excellence”—Plato argued that training in “excellence” was meaningless without content and that knowledge was absolute, certain, and good. As a result, teachers assumed a high moral responsibility. Plato doubted whether a standard method of teaching existed for all subjects, and he argued that morally neutral education would corrupt most citizens. He preferred the dialectical method over the Sophists' rhetorical pedagogy. For Plato, the role of the teacher was not to fill an empty reservoir with specific skills, but to encourage the student to redirect his or her soul and to rearrange the priorities within it to allow reason to rule over the irrational elements of spirit and appetite.

In the *Meno*, Plato examined a paradox that challenged the dialectical method of education: if one knows nothing, then how will one come to recognize knowledge when he encounters it? In response, Plato's Socrates proposed a different idea. Through a geometry lesson with a slave boy, he attempted to demonstrate that all possessed some minimal knowledge that served as a window into one's eternal and omniscient soul. Through dialectic, the teacher could refute the student's false opin-

ions until the student pursued a true opinion that survived the rigors of critical examination. Unacquainted with the storehouse of knowledge in one's soul, a person needed to learn how to access or “recollect” it. Plato distanced himself further from the Sophists by distinguishing knowledge (eternal and certain) from opinion (unreliable and ephemeral).

Plato developed this idea more fully in the *Republic*, declaring knowledge superior to opinion in both an epistemological and ontological sense. Opinion reflected a misapprehension of reality, while knowledge belonged to an essential or “intelligible” realm. In particular, Plato proposed a linear hierarchy of knowledge starting with the “visible” realms of imagination and then belief, and moving to the “intelligible” realms of reason, and ultimately, knowledge. In his celebrated cave metaphor, Plato's Socrates depicted chained prisoners, who presumed shadows of representations cast by artificial light to be real. The first step of education, then, was to turn one's soul away from this artificial world of shadows and toward the representations of objects and ideas themselves—leading one to the realm of belief. The objects of belief, however, were still empirical, and thus, ephemeral, relative, and unreliable. Beyond the cave lay the intelligible realm of reason and knowledge. Plato asserted that ideas did not possess any physical qualities, and to ascend beyond the world of tangible objects and ideas, one needed to develop the power of abstract thinking through the use of postulates to draw conclusions about the universal essence or “form” of an object or idea. Mathematics constituted a particularly useful tool for the development of reason, as it relied heavily on logic and abstract thought. The ultimate stage of awareness for Plato was knowledge of the “form of the good”—a transcendence of all postulates and assumptions through abstract reasoning that yielded a certain and comprehensive understanding of all things.

### Educational Programs

Plato also made clear that not all citizens of the ideal state possessed the same capacity to realize the “form of the good.” As a result, he proposed distinct educational programs for future artisans, auxiliaries, and philosopher-kings. Plato favored mathematics as a precise and abstract model for the development of thought in the future rulers of the just state. Knowledge, however, could only be attained through the use of dialectic to shed all assumptions and to glean the first principle of all, the “form of

the good.” After many years of mathematical and dialectical study, followed by fifteen years of public service, the best of this group would have come to understand the “form of the good” and have become philosopher-kings. Cognizant of the interrelationship of all things and confident of the reasons behind them, the intellectually and morally elite would be equipped to rule the just state in an enlightened manner.

### The Cultivation of Morals

In addition, Plato advocated the removal of all infants from their natural families to receive a proper aesthetic education—literary, musical, and physical—for the development of character in the soul and the cultivation of morals necessary for sustaining the just state. Suspecting that most writers and musicians did not know the subjects they depicted—that they cast mere shadows of representations of real objects, ideas, and people—Plato feared that artistic works could endanger the health of the just state. Consequently, he wanted to hold artists and potential leaders accountable for the consequences of their creations and policies. This is why Plato advocated the censorship of all forms of art that did not accurately depict the good in behavior. Art, as a powerful medium that threatened the harmony of the soul, was best suited for philosophers who had developed the capacity to know and could resist its dangerous and irrational allures. Exposure to the right kinds of stories and music, although not sufficient to make a citizen beautiful and good, would contribute to the proper development of the elements within one’s soul. For Plato, aesthetics and morality were inextricable; the value of a work of art hinged on its propensity to lead to moral development and behavior.

### A Less-Ideal State

In the *Laws*, Plato considered the possibility that not only the majority, but all citizens could be incapable of reaching the “form of the good.” He thus envisioned a second-best state with rulers ignorant of the “form of the good” but capable of thought. Such a society had absolute and unyielding rulers who eradicated any idea or thing that questioned their authority. Acting as if they possessed wisdom, such leaders established laws that reflected their opinions and their imperfect conception of the good.

### Modern Scholarship

Contemporary advocates of popular democracy have criticized Plato’s republican scheme as elitist and tyrannical in prizing order over individual liberty. Indeed, Plato believed that individuals could not stand alone, and as most would never reach internal harmony or virtue, the majority needed to be told how to conduct its life by those who possessed that knowledge. Incapable of understanding the reasons behind the laws, most citizens needed merely to obey them.

Some scholars have also questioned Plato’s treatment of women in his just state. For instance, Jane Roland Martin has argued that although he did not differentiate education or societal roles on the basis of sex, Plato was not committed to gender equality. Despite his abolition of the family, gender distinctions would have likely persisted, as Plato did not seek to ensure the equal portrayal of men and women in literature. According to this view, Plato’s female guardians-in-training warranted a distinct education from men to help mitigate the cultural, symbolic, and epistemological assumptions of female subordination. Identical education, then, did not necessarily constitute equal education, a point that holds significant implications for contemporary assumptions about the effects of coeducation.

These criticisms illustrate the longevity of Plato’s educational, metaphysical, and ethical ideas. In addition, other scholars have eschewed the tendency to evaluate the modern implications of Plato’s specific educational doctrines, and instead have highlighted his assumption that education could address fundamental social problems. They view Plato’s method of inquiry—critical self-examination through the dialectical interplay of teacher and student—as his primary contribution to educational thought. Indeed, perhaps education itself embodied the highest virtue of Plato’s just state.

*See also:* PHILOSOPHY OF EDUCATION.

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## POLICY

*See:* EDUCATIONAL POLICY.

## POPULATION AND EDUCATION

The relationship between education and population has attracted the attention of both scholars and policymakers, especially since the mid-1970s. The rate of population growth and the number of people living on earth have both increased spectacularly since the beginning of the nineteenth century. During the twentieth century, the human population increased at an average annual rate that was about fifty times as fast as the rate over the previous 10,000 years. Between 1800 and 2000, the number of people alive increased nearly seven-fold. Following World War II, the rate of population growth exploded—during the 1970s it was about four times as great as it had been a century earlier. By 2000, the living population exceeded the entire population born between the beginning of settled agriculture and the year 1900—a period of 10,000 years.

The implications of this explosive growth for both the physical environment and human well-being alarmed many observers and prompted an intense public policy debate. Many scholars and policymakers noted that high levels of educational achievement were associated with more moderate rates of population growth, suggesting that important opportunities for alleviating population pressures might be found in ensuring greater access to

education, particularly for females. The ensuing public policy debate has prompted an examination of how education affects the birth rate.

The explosive growth of the human population in the nineteenth and twentieth centuries was the result of a historically unprecedented decline in the rate of mortality, rather than an increase in the birth rate. The proportion of children dying before reaching the age of five fell from nearly one in three in most of the world to less than one in one hundred in the most advanced societies over this period, and to one in ten in low-income countries. In the wealthiest countries, birth rates adjusted quickly to restore a balance between births and deaths and establish a rate of population growth of less than 1 percent a year. In economically advanced societies, the average number of children born to each woman over her reproductive life has fallen from about seven to less than two. However, in the poorest countries, a sharp drop in death rates has not been accompanied by a corresponding fall in birth rates. As a result, the rate of population growth—the difference between the average birth rate and the average mortality rate—has increased dramatically in most of the world. The growth of population has been greatest in countries that are both poorest and least able to invest in social and educational services. The combined effects of these forces seem to imply that the gulf between rich and poor is likely to widen over the foreseeable future if aggressive policy measures are not introduced.

These facts suggest that the key to ensuring a sustainable rate of population growth lies in reducing the fertility rate. However, in a highly influential 1979 review of the research literature on the relationship between education and fertility, the economist Susan Hill Cochrane concluded that too little was known about the mechanisms through which education affects population growth to allow policymakers to rely on improvements in educational opportunities to slow the rate of population growth. Since 1976 a large number of scholars have focused on the impact of education—especially the education of the girl child—on fertility, mortality, and population growth. The central purpose of these studies has been to determine whether the nearly universal association of low fertility and high levels of educational attainment are causally linked or merely the result of their association with other forces that directly affect fertility. For example, the inverse relationship between female literacy and fer-

tility might have nothing to do with education as such, but might instead simply reveal that societies that seriously attempt to educate females also care about the welfare of women and therefore seek to control fertility in order to protect their health.

### Social and Economic Factors

The research literature has sought to identify the causal pathways that link education and fertility. The scholars working in this area have been drawn primarily from the disciplines of economics, sociology, and demography, and they have brought with them the conceptual and methodological traditions of their respective disciplines. Economists have suggested that the issues be organized around the familiar (for economists) ideas of supply and demand. They have argued that the number of children actually born to a couple is determined by the capacity to bear children, the factors that determine desired family size, and the couple's ability to achieve its aims. The capacity for meeting fertility goals is determined by such factors as age at marriage, the health of the woman, her fertility, and customs and taboos that affect sexual relations. Women who marry early or enter into sexual unions at a younger age have a greater potential for childbearing than those who marry late. Nutritional status and disease history affect a woman's ability to conceive or to carry a pregnancy to full term. Cultural prohibitions against sexual relations for a prescribed period following childbirth or during breast-feeding reduce the period during which a woman may become pregnant. Failure to ovulate during breast-feeding also reduces the period during which a woman might become pregnant.

The demand for children (the number of children that a couple desires) is also the outcome of complex calculations. Economists have predictably focused on the net contributions of children to the income and material welfare of the family. In very-low-income communities, children typically become contributors to the economic welfare of the family at a very young age. Small children care for younger siblings, thereby releasing their mothers to work either in the fields or in shops. Often, very small children also assist in the herding of small animals and in the care of kitchen gardens. In addition, children provide parents with economic security in their old age. As average incomes and aspirations rise, parents typically seek to have fewer children and to provide these children with more and better education.

Labor market demands and the cultural values of higher-income communities stress education as a requisite of social success. Therefore, as incomes rise, families tend to have fewer children but to invest much more in the nurturing and education of each child. The demand for children is also affected by the costs of providing daughters with dowries and wedding celebrations.

The ability of a couple to achieve its desired family size depends in part on access to contraception. The decision to control fertility is affected by a very complex set of customs and interpersonal forces. Cultural norms that value large families make the limitation of fertility a very difficult choice for many couples living in traditional societies. The social status of the couple and its autonomy relative to mothers-in-law and other members of the extended family, clan, or community influence the choices that are made. The research literature has focused on the impact that formal education has on the decision-making autonomy of women concerning contraception and fertility choices. The literature posits that women who are better educated are not only more knowledgeable about the available options for limiting fertility, but also better equipped to negotiate these subjects with husbands and extended families. The impact of educational status on the openness of communication between husband and wife has received particular attention.

A second approach to the organization of discussions of the determinants of fertility has relied on a framework based on macrosociological theories. Researchers have argued that the average educational attainment of members of a community, and the values and aspirations that emerge as a result, affect desired family size and access to contraception. These researchers have suggested that more-educated communities value smaller, higher-quality families. They have further argued that communities that have adopted modern values are more supportive of decisions to limit fertility.

### Conclusions

Empirical research into the relationship between education and fertility has drawn varied conclusions. At the most aggregate level—comparisons of countries—the conclusion is fairly consistent: countries in which women are better educated typically have smaller families and lower rates of population growth. However, when efforts are made to examine the relationship between education and fertility at

the level of the household, the findings become more ambiguous. The World Fertility Survey and the Demographic and Health Surveys (large-scale international surveys of the characteristics and behavior of individual households) have revealed that cultural norms play a significant role in mediating the impact of education on fertility. The inverse relationship between female education and fertility cannot be found in nearly half of the fifty countries that the two surveys have covered. The failures have been most notable in the Middle East, where Islamic cultural values appear to collide with efforts to limit fertility, and in sub-Saharan Africa, where education levels are often very low. A common generalization arising from research based on these surveys is that the education of females does not affect fertility until an average of four or five years of schooling is provided to most girls.

Quantitative research into the relationship between education and fertility has focused primarily on the relationship between girls' schooling and achieved family size. Efforts to examine simultaneously the impact of boys' education on fertility suggest that perhaps a third of the effect of education on family size operates through boys' education.

The extensive research literature on female education and fertility has been undertaken primarily in order to document the likely effect of additional investments in the education of girls on the rate of population growth. The literature has grown enormously since the mid-1970s. The complexity of the forces that determine desired and actual family size has grown more apparent as a result of this research. However, until a more powerful way of organizing and interpreting the facts can be developed, it will remain impossible to predict with reasonable accuracy the impact of improvements in girls' education on fertility, family size, or population growth. Nonetheless, the contributions that education makes to the economic productivity and the quality of life for both individual women and their families argue persuasively for investing in the education of girls.

*See also:* GENDER ISSUES, INTERNATIONAL; HEALTH AND EDUCATION.

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## POSTDOCTORAL EDUCATION

As graduate students complete their doctoral training, they have several options for employment. A natural step for a new Ph.D. is to enter the professoriate by accepting a faculty position at a college or university. Others choose to accept nonacademic positions in either private or public businesses. A third option is to enter a postdoctoral position (postdoc), with opportunities for continued research as neither a graduate student nor a permanent university employee.

The National Research Council notes that the "postdoc is difficult to quantify and describe because it is both 'further study' and 'employment'" (p. 2). A senior faculty member supervises (or mentors) the postdoc for a period of one to several years as the postdoc continues to research and expand her knowledge base. The postdoc receives a stipend or salary for the position and in most cases will also receive some benefits such as medical insurance. However, the postdoc is not a permanent position. There is also no standard job description for postdocs as each university, department, and supervisor may have different expectations of postdoctorate education. In the right situation, a postdoc can provide extra time for the new Ph.D. to hone research skills and increase publication productivity. In other cases, it is the best path to choose because of a poor job market and increased competition for faculty positions.

For years, postdoctorate positions have been standard in high-consensus disciplines such as chemistry and other science-based fields. Only at the end of the twentieth century did disciplines within

the humanities begin to offer postdoctoral positions to recent graduates in their fields, in order to give these graduates the opportunity to begin a strong research program prior to the start of tenure-track responsibilities.

There are several considerations one must take into account before pursuing and accepting a postdoctoral position. The first is what will ultimately happen to the new Ph.D. by delaying entry into the workforce. Will the position make the new Ph.D. a stronger candidate for future positions, or is she decreasing her chances of finding the best-ranking position by not pursuing a "real" job? Second, it is also important to consider the scope of the postdoctoral position. Will the postdoctorate education allow a Ph.D. to have responsibilities for all areas of a typical faculty position or will he be limited to one or two specific jobs? Either of these scenarios could hinder or assist a new faculty member as he pursues a chosen career path. Finally, those in the hard sciences may have the option to continue a project after the end of the postdoctoral job. This could make the candidate more marketable for prime faculty positions, but the postdoc supervisor may be reluctant to allow this.

Although postdocs have traditionally been temporary appointments under seasoned researchers at universities, a growing trend is for industry to offer postdoctoral opportunities to scholars in fields such as chemistry, biology, and physics. Industry jobs can provide a steady supply of funds and research equipment that may lead to more collaboration with other researchers because of reduced competition for research funds. However, these positions often afford the new Ph.D. less autonomy as companies often have specific research goals set for their researchers. Proprietary research may limit what the postdoc is allowed to publish as well.

The number of recent graduates actively searching for postdoctorate positions is contingent on several factors; the most prominent is the condition of the job market. In the hard sciences, for example, the number of research jobs available each year may be limited due to several factors, including industrial restructuring and reductions in the growth of federal research and development spending. At the same time, the number of Ph.D.s continue to rise in both the hard sciences and the humanities. Thus a greater number of new Ph.D.s are forced to compete for openings, leading many to pursue a postdoc as an alternative.

*See also:* DOCTORAL DEGREE, THE; FACULTY, ROLES AND RESPONSIBILITIES; FEDERAL FUNDING FOR ACADEMIC RESEARCH; GRADUATE SCHOOL TRAINING.

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PATRICIA A. HELLAND

## POVERTY AND EDUCATION

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#### OVERVIEW

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#### CHILDREN AND ADOLESCENTS

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#### OVERVIEW

In 1998, more than 13 million children (19 percent of all children) under age eighteen lived in families with incomes below the official poverty threshold. Although children age eighteen and under represent 26 percent of the United States population, they comprise nearly 40 percent of the poverty population. Despite a steady decrease from 1993 (23%) to 1999 (17%) in the rate of children in poverty, the United States still ranks highest in childhood poverty among all industrialized nations.

In the United States, income poverty is defined by the poverty threshold, developed in 1959 and based on expected food expenditures (thrifty food basket) for families of varying sizes. Each year the threshold is adjusted for the Consumer Price Index cost of living. In 1999, the poverty threshold for a single mother raising two children was \$13,423. Researchers have criticized the poverty threshold on numerous counts. First, government transfers such as food stamps and housing subsidies as well as tax benefits (e.g., the Earned Income Tax Credit) and

tax payments are not included when assessing the poverty threshold. Second, regional and urban differences in the cost of living are not considered when computing the poverty threshold. Despite the criticisms levied against the way poverty is assessed in the United States, the current review highlights research that has used this definition of poverty, while acknowledging its weaknesses.

This article reviews the literature linking family poverty to children's cognitive and educational outcomes such as achievement tests, grade completion, and high school graduation. Timing of poverty has been shown to make a difference *vis-à-vis* child outcomes; thus, the discussion focuses on three stages of childhood: early childhood (age two to four), middle childhood (age five to twelve), and adolescence (age thirteen to eighteen). For each stage, we examine the effect of income poverty on children's cognitive ability and school achievement. Depth and duration of poverty are also considered, as these features have been linked to numerous domains of child development.

### **Consequences of Income Poverty on Children's Educational Outcomes**

Simple comparisons between children in poor families and children in non-poor families using national datasets indicate that poor children are more likely to do worse on indices of school achievement than non-poor children are. Poor children are twice as likely as non-poor children to have repeated a grade, to have been expelled or suspended from school, or to have dropped out of high school. They are also 1.4 times as likely to be identified as having a learning disability in elementary or high school than their non-poor counterparts.

As with many studies examining the effect of poverty on children, correlational research is deficient in many ways. Simple comparisons between poor and non-poor children do not account for other family or child characteristics—such as single-parent households, maternal education, or child health problems—that may contribute to child development apart from the effect of poverty itself. Selection bias is another potential problem. Some researchers, such as Susan Mayer (1997), argue that poverty status often depends upon decisions made by family members, such as whether to apply for government services or seek employment, resulting in upwardly biased estimates of the relationship between income and child outcomes. Few feasible

strategies are available that are capable of completely eliminating the problem of selection bias, though some are more successful than others are.

Recently released national data sources address many of the inherent problems in research on family income and child development. These studies include longitudinal indicators of socioeconomic variables (e.g., occupational status and prestige, years of schooling, and family and neighborhood income), measures of family income, and numerous child development assessments. Utilization of the data from these longitudinal studies has made possible the distinction between family income and its correlates on child development and outcomes. Moreover, longitudinal designs allow for an assessment of how the timing (early vs. late) and duration (transient vs. persistent) of poverty may differentially affect children's outcomes. When possible, this discussion presents finding from studies that used standardized tests of school readiness, achievement, and cognitive ability, and controlled for key family and child characteristics, in its review of the impact of poverty on children's educational outcomes.

**Early childhood.** During the 1990s, the nation was inundated with reports on the importance of the early years on children's brain development and later cognitive achievement. While some of the reports may have overstated the issue and understated the importance of a child's later years on development, evidence suggests that the early years may be a critical period of development in which family poverty has particularly strong effects on young children. As seen in Table 1, poverty occurring early in a child's life (age two to four) is associated with large effects on indices of child school readiness and cognitive outcomes.

Judith Smith and colleagues (1997), using data from two national datasets, showed that family poverty was significantly associated with lower scores on several measures of child cognitive and school readiness outcomes for children age three to four years, even after controlling for the effect of mother's education, family structure, and child race, birth weight, and gender. Moreover, according to Pamela Klebanov (1998), the effect of poverty was seen among children as young as two years of age.

Judith Smith, Jeanne Brooke-Gunn, and Pamela Klebanov (1997) found that children living in families with incomes less than half the poverty threshold (deep poverty) scored nine to ten points lower on

TABLE 1

## Effects of family income on measures of children's ability and achievement by developmental period

Developmental Period	Size of Effect		
	None	Small or Moderate	Large
Early childhood (age 2–4)			BSID PPVT-R Stanford-Binet
Middle childhood (age 5–12)		Completed schooling Behind in grade for age	PPVT-R PIAT-Math PIAT-Reading
Adolescence (age 13–18)	Self-reported grades Completed schooling Odds of completing high school Odds of attending college	Completed schooling Odds of completing high school Odds of attending college AFQT score	

**Note:** Analyses control for mother's education, family structure, and other demographic characteristics.

Large effects: all income coefficients from income-based models were significant at  $p \leq .05$  and effect size was  $\geq$  one-third of a standard deviation.

Small to moderate effects: most income coefficients were significant at  $p \leq .05$  and effect size was consistently  $<$  one-third of a standard deviation.

None: few or no income coefficients were significant at  $p \leq .05$ .

BSID: Bayley Scales of Infant Development; PPVT-R: Peabody Picture Vocabulary Test-Revised; PIAT: Peabody Individual Achievement Test; AFQT: Armed Forces Qualification Test.

SOURCE: Adapted from Duncan, Greg J., and Brooks-Gunn, Jeanne. 1997. "Income Effects across the Life Span: Integration and Interpretation." In *Consequences of Growing Up Poor*, ed. Greg J. Duncan and Jeanne Brooks-Gunn. New York: Russell Sage Foundation Press.

cognitive ability than children in near-poor families (150 percent to 200 percent of the poverty threshold) at age three to four. Persistently poor children, those who spend all of their childhood years in poverty, experience more negative cognitive and educational outcomes than their peers who encountered only short-term or transient poverty. Children who lived in persistent poverty scored six to nine points lower on measures of cognitive ability and school readiness than children who were never in poverty. Although transient poverty was associated with worse child outcomes, the effect was not significant—children who had experienced short-term poverty scored only two to three points lower, on average, than children who were never in poverty.

**Middle childhood.** Measures of child educational outcomes in elementary school typically include school achievement test scores, grade failure, and learning and attention problems. Among school-age children, the effect of family poverty on child achievement parallels the findings for young children. Family poverty was significantly associated with lower reading and mathematics achievement scores for children at age five to eight. Other researchers, such as Thomas Hanson, Sara McLanahan, and Elizabeth Thomson, have found modest

associations between family income-to-needs ratio (income divided by poverty threshold for family) and school performance and grade point average.

Children living in deep poverty scored ten to twelve points lower than near-poor children on measures of achievement and cognitive ability at age five to six. This effect was also found for older children—those in deep poverty scored seven to nine points lower on the achievement measures at age seven to eight. The differential effects of persistent and transient poverty were also seen in middle childhood. Five- to eight-year-old children who lived in persistent poverty scored six to ten points lower on measures of cognitive ability and school readiness than children who were never poor. Children who had experienced transient poverty scored three to six points lower, on average, than children who were never in poverty. A study in Canada by Linda Pagani and colleagues also found that persistent poverty was significantly related to academic failure. Children who had experienced poverty throughout their lives were twice as likely as never-poor children to be placed in a non-age-appropriate classroom.

**Adolescence.** Academic measures of adolescent educational outcomes include high school dropout and graduation rates, school engagement, GPA, and

achievement test scores. Overall, the effect of poverty in adolescence on educational outcomes is relatively small. Findings suggest that a 10 percent increase in family income is associated with a .2 percent to 2 percent increase in the number of school years completed. Income poverty in the early years, however, is more strongly associated with high school completion than poverty during later childhood and adolescence, and most pronounced among those in deep poverty.

### **Pathways through Which Poverty Affects Children's Educational Outcomes**

Poverty's effect seems to be the strongest when it occurs early in the child's life, when it is persistent, and when children live well below the poverty threshold. Poverty may influence child development through at least five pathways: (1) child health and nutrition, (2) parent mental health and affective interactions, (3) provision of a stimulating home environment, (4) school and child care quality, and (5) neighborhood conditions. Emerging evidence suggests that the influence of family poverty on children's cognitive outcomes may be entirely mediated by these pathways. The latter four pathways are briefly reviewed below.

**Parental mental health and affective interactions.** Parents who are poor or who have a history of welfare receipt are more likely to have worse emotional and physical health than those who are not poor. Researchers such as Rand Conger and colleagues, using the family stress model, have linked parental depressive symptoms to more conflict with adolescent children, which in turn results in less optimal emotional, social, and cognitive outcomes. Poor parental mental health also is associated with less stimulating home environments and more discordant parent-child interactions.

**Provision of a stimulating home environment.** Family income directly influences the material resources available to children in their homes. Higher income children benefit from higher levels of cognitively stimulating materials available in their homes compared to low-income children. The provision of a stimulating home environment, in turn, accounts for much of the effect of income on the cognitive development of preschool and elementary school children and may be the most important pathway through which poverty operates.

**School and child care quality.** Children from poor families are also exposed to lower quality school and

child care settings compared to their non-poor counterparts. Findings from two national child care studies, as described by Deborah Phillips et al. (1994), indicate that up to 60 percent of subsidized and low-income child care centers failed to conform to legal child to staff ratios in toddler classrooms and most (70%) received low ratings on scales of appropriate caregiving and the provision of appropriate activities. Lower quality child care is associated with lower math and language ability, negative peer interactions, and more behavior problems.

**Neighborhood conditions.** The neighborhoods in which poor families reside are another pathway through which income poverty may negatively affect children's educational outcomes. Financial strain limits the housing and neighborhood choices available to low-income families, constraining these families to live in neighborhoods characterized by high levels of crime and unemployment, low levels of resources, and a lack of collective efficacy among the residents. Neighborhood residence, in turn, is associated with child and adolescent school outcomes above and beyond the effect of family poverty.

### **Conclusion**

The challenge currently facing researchers is how to accurately estimate the effect of income poverty net of other factors, such as measured and unmeasured family and individual characteristics. There are several statistical options available that may provide upper and lower bounds of effects. Regressions, such as those reviewed above, that control for a host of demographic and parental characteristics are one option that provide an upper bound of effects. Including more specific controls, such as maternal verbal ability or IQ scores (which most of the findings in this article did not do), would provide a more accurate estimated effect of poverty on child outcomes. Another option is to control for assets or permanent income. Sibling analyses, which control for many unmeasured family characteristics, also provide a more accurate effect of poverty. Experimental studies, in which participants were randomly assigned to receive income supplements or the usual welfare program, provide some of the most powerful evidence thus far that income influences child achievement. Parents randomly assigned to programs that increased earnings had elementary school-aged children who scored consistently higher in the area of school achievement, compared to those in the control program.

Although the complex pathways through which family poverty affects child educational outcomes have yet to be fully understood, it is clear that childhood poverty compromises the educational prospects of children and adolescents. Many poor children begin life at a disadvantage, due to family income, low maternal education, single parents, young parents, or a combination of these factors. The level of disadvantage may become exacerbated through the lack of cognitively stimulating or safe home environments, conflicted parent-child interactions, poor school and child care environments, and poor neighborhood conditions. As knowledge of the pathways through which income poverty affects child cognitive and educational outcomes expands, this nation will come closer to understanding how best to address the problem of childhood poverty.

*See also:* FAMILY SUPPORT SERVICES; NEIGHBORHOODS; NUTRITION AND CHILDREN'S PHYSICAL HEALTH; PARENTING; WELFARE REFORM.

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## CHILDREN AND ADOLESCENTS

Although the percentage of children ages 18 and under living in poverty in the United States dropped from 18.9 percent in 1998 to 16.9 percent in 1999, children in the United States are more likely to be poor than any other age group. Moreover, U.S. child poverty rates are well above those in other industrialized nations, such as Spain, Canada, and Australia. Put simply, 12.1 million children in the United States are living in families with earnings at or below the conservative income poverty line (\$17,601 or less for a family of four, according to the U.S. Census Bureau's 2001 guidelines), indicating they are likely to be lacking the finances to fund basic needs such as food, shelter, and clothing.

The rise in both divorce rates and out-of-wedlock births in the last quarter of the twentieth century is partially responsible for the staggering number of poor children in the United States. One-third of U.S. births in the early 1990s were to unmarried mothers. Single-parent families are more likely to be poor due to both their dependence on a single wage earner for income and the probability that the household heads are younger and less educated than their dual-parent counterparts. Given this information, it is not surprising that 53 percent of poor families are headed solely by a female adult.

Changes in employment patterns, declines in the manufacturing sector, relocation of jobs into the suburbs, and wage polarization may also explain the

high national poverty rates. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 also has the potential to affect U.S. poverty rates. With PRWORA's prescribed time limits, work requirements, sanctions, and categorical restrictions for cash assistance, many families may find themselves unable to receive needed benefits. Moreover, the current welfare legislation does not offer a safety net for parents facing difficulties transitioning into full-time work.

### Effects of Income on Child Outcomes

Findings are modest but significant regarding the direct role of poverty in influencing children's cognitive and school-related outcomes throughout early, middle, and late childhood. Children reared in conditions of poverty face more adverse developmental outcomes than their non-poor counterparts. Much of the research prior to the mid-1990s on the impact of poverty status on children suffered from shortcomings such as flawed measures or unrepresentative samples. Additionally, the differences between income and socioeconomic status (SES) were often blurred, elevating the risk of using inappropriate indicators of SES such as occupational prestige or level of maternal education (fairly stable variables) as proxies for income (which is often quite volatile). Large, longitudinal studies such as the National Longitudinal Survey of Youth (NLSY), the Infant Health and Development Program (IHDP), and the Panel Study of Income Dynamics (PSID) have remedied many of these methodological problems and include adequate child development assessment instruments, measures of family income, and socioeconomic status indicators. A common current practice of researchers is to calculate an income-to-needs ratio, which takes into account family size relative to the current poverty line; a ratio of one or below denotes living in poverty. Utilization of this poverty measure compared with a two-pronged (poor versus not poor) approach allows for a more thorough analysis of how different depths of poverty affect children's outcomes.

**Physical health.** Beginning prior to birth, poor children experience more health problems than their non-poor counterparts, even after adjusting for potentially confounding factors. Controlling for mothers' age, education, marital status, and smoking status, women with incomes below the federally established poverty line were found to be 80 percent more likely to bear an infant at low birth weight

(2500 grams or less) than women whose incomes remained above the poverty line. Children born at a low birth weight are at risk for negative outcomes well into their childhoods. Compared to full-term children, neurologically intact very-low-birth-weight children (1500 grams or less) present more impairments in arithmetic, motor and spatial skills, language, and memory, and perform worse on measures of achievement. Children with birth weights of less than 1000 grams are at the highest risk. One study revealed that 34 percent of low-birth-weight children were either repeating grades or placed in special education classrooms in school; only 14 percent of normal-birth-weight children experienced the same outcomes. Other research also reports elevated levels of grade repetition as a result of low birth weight. One study of siblings found that low birth weight reduces children's chances of graduating high school by nearly 75 percent when compared with their full-term siblings regardless of family income. Sibling studies control for unmeasured family characteristics and for selection bias—the fact that families with low-birth-weight children may be different in important ways from those who do not have low-birth-weight children—and therefore may provide more nuanced results and greater effects. The detrimental effects of low birth weight remain intact, though diminished, through the adolescent years and possibly into adulthood.

Although the rates of child malnutrition are lower in the United States compared with other countries, poverty is associated with nutrition-related disorders. Often linked with nutritional deficits, poor children in America experience higher rates of growth stunting (low height-for-age) and wasting (low weight-for-height) than their non-poor counterparts (13% and 5% respectively). These height and weight differences between poor and non-poor children are greater when long-term rather than single-year measures of income are used. Stunting and wasting are associated with lower cognitive test scores; short-term memory is especially diminished. Chronic malnutrition, often the cause of stunting, is associated with low cognitive test scores even after controlling for poverty status and its correlates. Children who are born both at low birth weight and short for their age have lower test scores than children who fit in only one of these categories.

Exposure to lead poisoning presents yet another heightened risk for poor children. The prevalence of

elevated blood lead levels (20 to 44  $\mu\text{g}/\text{dL}$ ; per deciliter) was four times greater for children from low-income families (16.3%) compared with their peers from high-income backgrounds (4.0%). Rates were especially high (28.4%) for low-income black children. The deleterious effects of lead exposure on children vary depending on the severity of exposure, and also on the developmental stage of the child. At young ages, elevated blood lead levels are associated with stunted growth, decreases in IQ, and various physical impairments. A study conducted by Walter J. Rogan and his colleagues explored the effect of chelation therapy to reduce blood lead levels in poor children ages twelve to thirty-three months. The study found that although the treatment did lower children's blood lead levels, IQ scores were lower and parent-reported behavior problems were higher for treated children than for controls who only received a placebo at a thirty-six-month follow-up. Chelation therapy proved unable to successfully prevent deleterious outcomes for lead-exposed children; therefore, prevention of lead exposure for poor children needs to be a priority.

Health problems and nutritional deficits are important ways through which poverty affects children's cognitive and school-related outcomes. Poor children face an increased probability of being born at a low birth weight and experiencing both nutritional deficits and elevated blood lead levels. Past research suggests that the prevalence of these conditions in addition to other health problems can account for as much as 20 percent of the difference in IQ scores between poor children and their non-poor peers during preschool. Efforts to improve the health and well-being of poor children, including improved access to affordable health care and the provision of nutritional supplements and food stamps, are necessary to promote school-related success and competence.

**Mental health.** Children's mental health can be assessed via dimensional scales that screen children for various types of less severe subclinical symptoms (e.g., behavior problems) or with scales that more formally determine whether or not a child's behavior falls within a clinical diagnostic category according to the *Diagnostic and Statistical Manual of Mental Disorders—Fourth Edition* (DSM-IV). Most large national studies contain measures that assess dimensionality/level, such as the Child Behavior Checklist. Parental reports of behavior problems are the most common indicator of children's mental health and

are generally classified along two dimensions: *externalizing* or undercontrolled behaviors including aggression, fighting, and acting out, and *internalizing* or overcontrolled behaviors such as depression, anxiety, and withdrawal. The reliance on maternal reports of behavior problems is a shortcoming in many of the large national studies. While these studies do control for maternal mental health and other characteristics that may influence how parents rate their children's behavior, higher instances of teacher-rated behavior problems are needed to corroborate mothers' responses.

Studies have established a negative link between income and behavior problems, although modest in size compared to the effects of income on both physical and cognitive outcomes. After controlling for a host of family-level variables including maternal education and single parenthood, the effects of income or poverty on children's emotional and behavioral outcomes are often muted or dissipate altogether. Some researchers, however, have found significant effects of poverty on children's mental health.

Using data from both the IHDP and the NLSY, researchers found that kindergarten-aged children growing up in persistently poor homes had substantially higher internalizing behavior problem scores than their peers who were never poor. Lower self-esteem, which is related to internalizing problems, most notably depression, may also result from persistent poverty, although mothers who are actively involved in their children's lives may lessen this effect. The timing of poverty in children's lives may also be relevant. Children who suffered from persistent poverty early in their lives maintained heightened levels of depression through the age nine in one study. Children who experienced economic hardship were also less popular among their peers than those who did not face economic adversity, possibly due to their higher levels of behavior problems.

Research is mixed as to whether current poverty status or persistent poverty contributes to children's externalizing behavior problems, including antisocial behavior. Data from the Charlottesville Longitudinal Study, examining elementary-school-aged children, found that children who endured even one year of family economic hardship possessed higher levels of externalizing behaviors than children who did not experience poverty; boys were more adversely affected than girls. Other research, using an income-to-needs ratio as an index of family poverty, reported a link between poverty and delinquency for

young boys studied longitudinally between the ages of 6 and 16 years. Boys experiencing transitory poverty were at greater risk of engaging in extreme delinquent acts than boys who were never poor. Less severe manifestations of externalizing behavior were not influenced by family poverty in this particular study. Thus, families' poverty status may have its greatest impact on externalizing behaviors in their most severe form.

Due to the confounding of race/ethnicity and class and the fact that poverty rates among blacks and Hispanics living in the United States are two to three times higher than that of non-Hispanic whites, it is important for researchers to consider children's racial/ethnic backgrounds when examining links between poverty and child outcomes. One line of research suggests that the effects of persistent poverty on children's behavior problems, both internalizing and externalizing scales, may be stronger for white than for African-American children, possibly explaining some of the discrepancies regarding the relationship between poverty and externalizing problems. Other research found the opposite pattern emerging with internalizing scores. For black children, internalizing behaviors increased with the number of years spent in poverty, whereas the inverse was found for persistently poor white children.

Thus far, the direct impacts of income on children's mental health have been considered. Risk indices, which take into account other factors correlated with family poverty status (i.e., low maternal education, single parenthood, and parental substance abuse and mental health), provide an alternate way of examining the effects of poverty on children. Not surprisingly, the more risk factors children experience, the greater the number of behavioral problems they show at six and seven years of age. Moreover, behavioral maladaptation is more likely to occur for children experiencing numerous risk factors simultaneously rather than one individually. Parental attributes or behaviors such as substance abuse, antisocial behavior, negative life events, and psychiatric episodes tend to be the most devastating risks for children. Thus, it may not be poverty per se that has a negative impact on poor children, but other risks experienced more frequently by poor children than by their nonpoor counterparts.

**Parenting behavior and parent mental health.** The Family Stress Model has been used by researchers to examine the indirect links between poverty and child

development. According to this model, stress generated by economic hardship and income loss results in parenting that is less consistent, less supportive, less involved, and more coercive and harsh. These lower quality parent-child interactions lead to higher rates of behavioral and school-related problems among poor children. Maternal mental health, most notably depression, is also negatively affected by poverty. The higher incidences of maternal depression and distress in poor families most likely drives the use of these less effective parenting styles. Many studies have documented the link between maternal depression and children's internalizing and externalizing behavior problems, indicating that the emotional detachment and disengagement resulting from depression is quite harmful to children. Other indirect influences include the home environment, child care and schools, neighborhoods, health care, and exposure to violence.

**Implications of mental health on children's educational outcomes.** Poor children's academic performance may be hindered due to the higher rates of behavior problems within this group. A large body of research has established a link between behavior problems and outcomes in the academic or cognitive domain early and late in children's school careers. Difficulty in paying attention, a form of externalizing behavior, is highly associated with underachievement for younger, elementary-school-aged children. Aggression toward peers in fifth grade has been found to predict school dropout. Compared with peers who were never poor, persistently poor children were found to be most at risk for fighting with peers in the sixth grade, even after teacher-rated behavior problems in kindergarten are taken into account. These same children were two times more likely than their never-poor peers to be in a non-age appropriate classroom and to be at risk for experiencing academic failure.

Other studies indicate that both externalizing and internalizing symptoms (including hyperactivity, intrapersonal adjustment, lethargy, and withdrawn behaviors) in kindergarten or first grade may be associated with poor reading and math achievement the following academic year. Early behavior problems have been found to have relatively long-term effects on reading skills, IQ, and class placement during later school years, possibly even into high school. Teacher-reported ratings of internalizing and externalizing symptoms in second and fifth grades predicted grade point averages and achieve-

ment test scores during children's freshman and senior years of high school.

Past research has shown that teachers at high socioeconomic level who teach poor children tend to regard their pupils in a more negative light, in terms of behavioral characteristics (maturity/immaturity), academic expectations and performance, even in the early school years. These teachers were also more likely to view the school and classroom contexts less positively than teachers of children at higher socioeconomic levels, possibly creating a self-fulfilling prophecy in which these children begin to act, behaviorally and academically, in line with their teachers' thoughts at very early ages. Some have argued that in order to mitigate the powerful effects of poverty and its correlates on children's school outcomes, teachers must allow students greater autonomy and decision-making, have positive expectations for all of their students, possess good management, disciplinary control, and exemplary organizational skills, and provide a variety of challenging, yet meaningful tasks.

### Policy Implications

It is always important to contemplate how government social policy concerning income transfers, employment, child care and schooling, social services, housing, and health care can potentially help or hinder our nation's poor families. Preliminary results from ongoing research examining the effects of mothers transitioning off welfare and obtaining employment suggest that job earnings often are not lifting families out of poverty. Without a significant increase in earnings, it is likely that these working families may not see any marked improvements in children's well-being. Moreover, if these families continue to live in high-poverty neighborhoods with elevated crime rates and inferior public schools, are unable to afford high-quality child care for their children, and do not receive family health benefits, the situation seems dire still. Policy efforts may need to go beyond cash transfers and concentrate instead on the provision of high-quality services such as medical care (e.g., Medicaid), the provision of nutritional information and supplements (e.g., food stamps; Women, Infants, and Children; and the National School Lunch Program), early childhood education (e.g., Head Start and Early Head Start), and housing (e.g., Section 8 vouchers). It is not clear whether programs that target some of the indirect effects of poverty, such as in-home interventions, are

effective in improving adults' parenting skills and their ability to facilitate literacy and learning within the home, which are crucial for children's school success. Continued investment in creating new and unique policies and programs that are aimed at either preventing economic deprivation altogether or help to assuage its negative effects are needed.

### Conclusion

The effect of poverty on children's physical and mental health begins early and often continues to leave its mark well into the adolescent years. While many researchers have examined the connections between growing up poor, children's health, and their cognitive and school-related outcomes, few independent research efforts have made similar connections between the pernicious effects of low income on youngsters' mental health and the subsequent impact of poor mental health and behavior problems on children's academic performance. The association between income poverty and mental health is not as strong as its effects on physical and cognitive and/or academic outcomes. In fact, when effects are found, they are often mediated by parenting and parental mental health. Children are negatively affected by poverty throughout their lives in many domains, especially when the poverty occurs at a young age and in severe form. Policy efforts to assist poor families in order to bolster children's chances of succeeding in school need to start early and target the entire family and their environs.

*See also:* FAMILY SUPPORT SERVICES; NEIGHBORHOODS; NUTRITION AND CHILDREN'S PHYSICAL HEALTH; MENTAL HEALTH SERVICES AND CHILDREN; PARENTING.

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## PREGNANCY

*See:* RISK BEHAVIORS, *subentries on* SEXUAL ACTIVITY AMONG TEENS; TEEN PREGNANCY.

## PRESCHOOL EDUCATION

*See:* EARLY CHILDHOOD EDUCATION.

## PRESIDENCY, COLLEGE AND UNIVERSITY

The chief executive officer of an institution of higher education in the United States is commonly known as *president*. There are some campuses, however, which use the titles of chancellor, dean, or chief executive officer in lieu of president. The diversity of higher education institutions in the United States has resulted in chief executive officers at U.S. colleges and universities with a wide variety of background characteristics and job responsibilities.

### Characteristics

Historically, college presidents have been overwhelmingly white, Protestant, and male. By the late 1990s more than 19 percent of college presidents were women and 11 percent were members of other minority groups. The average age for presidents was 57.6 years, with 30 percent never having served as a full-time faculty member. More than 80 percent hold an earned doctorate, with the single largest field of study being education. Most college and university presidents are members of their institution's governing board, although not all have voting rights. The average length of service for a president is seven years.

### Career Path

The path to the college presidency was historically pursued by ordained ministers. This held true especially for those institutions created to educate future religious leaders. As institutions began to educate beyond theology and law, presidents with educational backgrounds in the arts and sciences became predominant. These academic presidents still constitute the single largest type of all college presidents, particularly at four-year institutions. In the latter half of the twentieth century great changes occurred in higher education, shifting the role of the U.S. college president. Two-year public community college sys-

tems were created in most states as a means to provide greater access to higher education, and a number of four-year institutions were founded to accommodate the rising number of students going on to college. This exponential growth required the addition of many presidential positions. Many of those named to the presidency of the two-year colleges came from the ranks of professional educators, in particular from the staff of local school systems. Selection of presidents at four-year institutions shifted from academic ranks to mostly those from administrative positions at a college or university.

Increasingly, more chief executive officers are arriving at the presidency from areas other than the traditional vice president of academic affairs position. These nontraditional presidents are typically individuals who have worked in other areas of college or university administration, such as finance, institutional advancement, or student affairs. Some institutions have even gone to the business community for individuals to fill the presidency. This shift stems from the need of higher education institutions to run more like a business and to use skills of management and finance that are not as prevalent in academe.

Even with these changes in a president's educational and experiential background, it is still uncommon for college presidents to shift between different types of institutions. Individuals who have worked at two-year colleges typically remain at two-year institutions. The same is true for doctorate-granting, comprehensive, baccalaureate, and specialized institutions. For all institutional types, presidents are usually hired from another institution rather than from within the same institution. Due to the extensive nature of the position, the search process to select a college or university president often involves a number of individuals with a vested interest and often takes an entire year.

### **Roles and Responsibilities**

The college president is typically responsible to a governing board for the successful operation of the institution. Some presidents lead an institution affiliated with a church denomination or a state system, and may therefore report to the chief executive officer of that particular organization. The president's relationship with the institution's board of trustees is critical. One of the board's primary duties is to hire and fire the president, and thus it is important

for the president to be attentive to the needs and desires of the board.

Many presidents gain the full trust and support of their boards, which allows them to establish and carry out a vision for the institution. The construction of a vision for an institution by the president is critical because it tells the story of where an institution has been and provides direction for where the institution is headed. "This vision, if believed in by the faculty, administrators, staff and students, has the potential to transform an institution. The degree to which the president is respected and admired by the faculty will be the extent to which he or she is able to inspire trust and confidence, the extent to which he or she is believable, and can deliver" (Fisher, p. 101). Although the president is the voice for the vision, the president does not usually create this vision alone. The college or university president must identify, and be attentive to, the strengths and weaknesses of the institution. Understanding the capacity of those who work for the college or university and how the institution fits within the larger higher education sector allows the president to determine what the institution can achieve. The president must craft this vision, with members of the college community taking ownership in its development. Once the vision is crafted, the president must share it at every opportunity.

A significant aspect of the college president's role is symbolic in nature. Whether it is leading the opening convocation, dedicating a new facility, or presiding over commencement ceremonies, the president represents the institution. Within the college community, the president can use the influence derived from the symbolic nature of his or her position to move the institution in a given direction. Out in the greater community the president's role is often more prominent. Individuals not directly involved with the college typically believe a college or university president has authority and control over more than he or she really does. As a result, presidents may find themselves under greater pressure from external constituents than internal constituents. The resulting role for many presidents becomes one of mediator, facilitator, and consensus maker for issues both internal and external to the institution.

Internally, a college president is responsible for the effective operation of the institution. Most presidents have an advisory cabinet composed of vice presidents and potentially one or two other key indi-

viduals who help the president ensure that the goals and vision are being implemented in a positive fashion. The president's broad areas of responsibility include academic affairs, which encompasses development of the curriculum and new educational programs; oversight and maintenance of facilities; fund-raising and communicating the image of the institution through institutional advancement; enrollment management, which tracks graduation, admission rates, and financial aid to ensure stable student enrollment; the finances of the institution; and finally, the management of out-of-classroom issues in student affairs, such as judicial hearings, residence life, and health services. Although there are countless variations in the organizational structure and scope of responsibilities, these areas, in most instances, are overseen by a vice president. For example, many institutions combine facilities and finance into one functional area. The organizational structure of the president's cabinet reflects institutional as well as presidential values and goals.

Although the president has vice presidents and their staffs to carry out each functional role, the president will be involved at varying levels at different times, depending on the issue at hand. A president may serve as the final arbiter for a student judicial hearing, determine whether a faculty member receives tenure, or assist in the detailed development of a new facility for the campus. However, it is a rare campus where the president has developed authority in a top-down fashion. The president relies on the expertise and experience of his or her staff to accomplish the details of the institutional vision.

For most presidents their power is derived through their influence with the various campus and community constituents. In working with the curriculum and other components of the educational programs, the president typically encourages faculty to take the lead and reserves specific input for those items that are absolutely critical for the fulfillment of the institution's vision. As the college or university representative, the president's views typically carry significant weight. This significance allows for the opinion of the president to steer decisions in a manner perceived as beneficial to the college or university.

From the vision comes the task of strategic planning to enable an institution to achieve its goals. The president must look beyond next year's class size, the goal for the upcoming annual fund, and other short-term concerns of the institution to see beyond the

horizon and craft a path for the college or university on its way to fulfilling the vision. Crafting a long-range plan constitutes one of the major areas of time spent by a president. He or she must also spend considerable time on and off campus raising money for the institution, visiting with alumni in areas with significant numbers, and meeting with key individuals who may have the ability to support the institution.

*See also:* BOARD OF TRUSTEES, COLLEGE AND UNIVERSITY; COLLEGES AND UNIVERSITIES, ORGANIZATIONAL STRUCTURE OF; FACULTY SENATES, COLLEGE AND UNIVERSITY; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES.

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ALAN P. DUESTERHAUS

### PRESSEY, SIDNEY L. (1888–1979)

Father of the teaching machine, author of the first book on standardized testing, and founder of the Division on Adult Development and Aging of the American Psychological Association, Sidney Leavitt Pressey was an innovator. Although twenty-first century educators and psychologists are constantly rediscovering Pressey's contributions to their fields, few are aware of the range of topics that he explored.

Pressey was born in Brooklyn, New York; his father was a minister in the Congregational Church

and his mother was a teacher. Because of his asthma, the family eventually moved to a suburb of St. Paul, Minnesota, where he spent most of his childhood and youth. He received his B.A. from Williams College, his father's alma mater.

Although he majored in American history, a course in social psychology led him to attend graduate school at Harvard University in 1912. At Harvard he studied with several notables, Robert M. Yerkes chief among them. With Yerkes's assistance, Pressey became an intern at Boston Psychopathic Hospital while still in graduate school. During his internship he met Luella Cole who, for fifteen years, would be his wife and collaborator.

After receiving his doctoral degree in 1917, Pressey obtained an appointment as a special research assistant at Indiana University. After four years, he accepted an invitation to Ohio State University as an assistant professor and remained on the faculty of Ohio State for the next thirty-eight years, achieving the rank of full professor in 1926 and retiring from the university in 1959. During his retirement, Pressey remained very productive, authoring eighteen papers between 1959 and 1967.

Pressey was rather unique because he grounded his research in the problems that he encountered on a daily basis, rather than in theory or prior research. This "grounding" was evident very early in his career. While interning at Boston Psychopathic Hospital he studied ways of empirically differentiating among psychotics, alcoholics, and "feble-minded" individuals.

During his four years as a research assistant at Indiana University, he began studying children whom modern psychologists would term as having below normal IQs, but soon became interested in those possessing superior abilities. This research led to the publication of several journal articles and *Introduction to the Use of Standard Tests*. Following World War II, he returned to this line of research and published *Educational Acceleration: Appraisals and Basic Problems*. By "acceleration" Pressey suggests a means of accommodating the needs of academically gifted students.

During his initial years on the faculty at Ohio State University, he was concerned with the quality of graduate education, particularly the teaching of psychology. He investigated the study methods used by superior and failing students in an attempt to identify the most effective and least effective meth-

ods. He designed a teacher education program, the central feature of which was a project involving actual work in the school or with young people.

After retirement he would declare:

Now at the age of eighty, I am still battling long-continuing gross faults in our schools which first irked me as a boy in the grades. Trained as a laboratory psychologist, I was soon declaring the laboratory too piddling artificial and psychology either too biological or too theoretical to come helpfully to grips with major human problems. (Pressey 1971, p. 231)

Finally, as he aged, he began to study aging. Initially, he reflected on his experiences with the experiences of those he had studied at the Boston Psychopathic Hospital. Eventually, his writing became more personalized and introspective. He initiated the first American Psychological Association division—on maturity and old age—in 1945 to 1946.

Although Pressey's impact on educational thought and practice was substantial, it could have been even greater had he not been so far ahead of his time in so many respects. Pressey invented and patented the first teaching machine in 1924, fully thirty years before B. F. Skinner's popularization of teaching machines. Skinner based his machine on the behaviorist theory of learning that was prevalent at the time, and Pressey was amazed by the learning theorists' ignorance of the body of research concerning learning in school. He criticized Skinner and his associates for applying concepts derived primarily from rats that had learned to run mazes and students who had memorized pairs of letter combinations. Pressey was a cognitive psychologist who rejected a view of learning as an accumulation of responses governed by environmental stimuli in favor of one governed by meaning, intention, and purpose. In fact, he had been a cognitive psychologist his entire life, well before the "mythical birthday of the cognitive revolution in psychology" (Bruner, p. 780).

In commenting on Pressey's second autobiography, Geraldine Clifford wrote that "despite Pressey's participation in national meetings, his even greater national involvement in work on aging, and his frequent visiting teaching posts at various campuses, the impression persists that his environment was essentially an immediate one: that of his institution, department, his courses, his students, recognized

duties.” Clifford concluded: “Sidney Pressey probably would be an idol of today’s students—clamorously seeking from their professors involvement, dedication to teaching, meaningful guidance, and personal concern—as he indeed was to many among earlier generations of students” (p. 275).

*See also:* EDUCATIONAL PSYCHOLOGY.

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LORIN W. ANDERSON

## PRINCIPAL, SCHOOL

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The school principal is the highest-ranking administrator in an elementary, middle, or high school. Principals typically report directly to the school superintendent, but may report to the superintendent’s designee, usually an associate superintendent, in larger school districts. The highest-ranking school level administrator in some private schools is called the head master. Head masters have many of the same responsibilities as principals, but they may engage in additional activities such as fund-raising. In some school districts, a single person functions as

superintendent and principal. Principals, head masters, and others who are responsible for the overall operation of a school are often called school leaders. In an era of shared decision-making and site-based management, the term *school leader* may also be used in reference to other school administrators and leaders within the school such as assistant principals, lead teachers, and others who participate in school leadership activities.

Schools have not always had principals. Around the beginning of the twentieth century, as schools grew from one-room schoolhouses into schools with multiple grades and classrooms, the need arose for someone to manage these more complex organizations. This need was filled initially by teachers, who continued to teach while also dealing with their school’s management needs. These teachers were called principal teachers. As schools continued to grow, principal teachers became full-time administrators in most schools. Most principals soon stopped teaching because of the many demands their management responsibilities placed on their time. As managers, principals were responsible for financial operations, building maintenance, student scheduling, personnel, public relations, school policy regarding discipline, coordination of the instructional program, and other overall school matters. The management role included some curriculum and instruction supervision, but overall school management was the primary role principals played until the early 1980s. As the accountability movement gained momentum, the role of the principal changed from school manager to school instructional leader and then to the school reform leader. With this shift in role focus, principals retained their management roles. Principals currently play multiple roles: school manager, instructional leader, and the leader of school reform.

### The Role of Elementary and Secondary School Principals

Principals are responsible for the overall operation of their schools. Some of their duties and responsibilities are delineated in state statutes. States and school districts have also set expectations for principals through their principal evaluation criteria and procedures. During the latter part of the twentieth century, as schools began to be held more accountable for the performance of their students on national and state assessments, the duties and responsibilities of principals changed. Principals became

more responsible for teaching and learning in their schools. In particular, their duty to monitor instruction increased along with their responsibility to help teachers improve their teaching. With this change in responsibilities, principals discovered the need to more effectively evaluate instruction and assist teachers as they worked to improve their instructional techniques. The principal's duty to improve the school instructional program is mandated by legislation in some states. Some state legislation requires the removal of principals when schools are classified as low performing (students do not meet achievement expectations) for a specified period of time.

### **Principal Duties and Responsibilities**

With schools facing increased pressure to improve teaching and learning, the duties and responsibilities of principals expanded further to include the responsibility for leading school reform that would raise student achievement. Success in leading reforms to increase student achievement often hinged upon a principal's ability to create a shared vision within the school community and success in implementing new organizational structures that engage teachers in shared decision-making. Principals have discovered that engaging the entire school staff in making decisions results in more commitment to school reform initiatives.

Principals are also responsible for facilitating their school's interactions with parents and others in the school community. This responsibility includes working with parents when disciplinary issues arise, when students are not succeeding academically, and when parents have concerns. Principals also interact with parents who serve on school advisory boards, parent/teacher organizations, and booster clubs. Principals report that they spent a significant part of their time working with parents of students who have been identified as needing special services through the Individuals with Disabilities Education Act Amendments of 1997 (IDEA).

Principals continue to be responsible for the management of their schools even though their primary responsibility has shifted. One major management responsibility is school safety. This responsibility includes ensuring that facilities and equipment are safe and in good working order, the development of overall school discipline policies and the enforcement of those policies, and the assignment of supervisory responsibilities among school

personnel. At the elementary level, principals are cognizant of their responsibility to ensure constant supervision of the very young children in the school. As students advance into the higher grades, the need for supervision changes as students mature. The responsibility for supervision remains high for older students who are handicapped; who are in areas where the potential for injury is greater such as labs, shops, and athletic facilities; and who are in situations (field trips, athletic events, etc.) where additional caution is required.

### **Principal Qualifications**

A license is required for those who seek employment as principals in most states. Licensure requirements vary from state to state, but the requirements generally include experience as a teacher, graduation from a state accredited principal preparation program, and a passing score on a nationally validated licensure exam. Principal qualifications have been the subject of considerable debate during the 1980s and 1990s as pressure increased to make schools more accountable for student achievement.

The national organizations representing principals and other school administrators have actively engaged in the debate over appropriate qualifications for principals. The National Association of Secondary School Principals (NASSP) took an active role in identifying principal qualifications in the 1980s through the creation of an assessment process. This process focused on the leadership skills that were determined to most significantly impact their ability to effectively lead their schools, and the procedure was based on a task analysis conducted in cooperation with the American Psychological Association (APA). The skills assessed through the NASSP Assessment Center included leadership, sensitivity, organizational ability, judgment, problem analysis, range of interest, motivation, decisiveness, educational values, oral and written communication, and stress tolerance. Later the National Association of Elementary School Principals (NAESP) created an assessment process that assessed similar skills.

In the mid-1990s the National Policy Board for Educational Administration (NPBEA) decided to review principal qualifications. The NPBEA included most of the major national organizations that represent education administrators from state superintendents to principals. The NPBEA also included organizations that represent professors who prepare

school administrators. One of the members, the Council of Chief State School Officers (CCSSO), took on the major role of developing a set of standards for school leaders. Working with the member associations and representatives from thirty-seven states, the CCSSO led the effort to identify a new set of standards for principals. This group was known as the Interstate School Leaders Licensure Consortium (ISLLC).

The six standards that were created by ISLLC were designed to influence the preparation of principals, guide states in the development of their own state principal standards, and serve as a tool for licensure or evaluation. The six standards address a principal's need to promote the success of all students through the following:

- The creation and implementation of a shared school vision
- The nurturing and sustaining of a culture and instructional program conducive to learning and staff development
- The ensuring of the management of school operations to produce a safe and effective learning environment
- The collaboration with families and the diverse communities schools serve
- The promotion of integrity, fairness, and ethical behavior
- The interaction with larger political, social, legal, and cultural contexts of schooling

The ISLLC Standards became the basis upon which the Educational Testing Service (ETS) developed a licensure assessment for use by ISLLC member states. A number of states use this ETS-developed School Leaders Licensure Assessment (SLLA) along with other criteria to license principals.

### Research on School Leadership

Research has consistently shown that principals play a significant role in school reform efforts. As the accountability movement gained momentum during the 1980s and 1990s, research on school effectiveness, generally referred to as effective schools research, focused on principals and their role. These studies consistently found that the principal was the key to an effective school. Research found that the unique position principals hold, as the one person in a school who is responsible for and empowered to oversee the entire school, places them in a power-

ful position to coordinate the entire school operation and move it forward. The research further revealed that the most effective principals had a clear vision of how the school could serve its students; had aligned resources and priorities with the vision; and could engage other key players, within and outside the school, in achieving the goals embedded in the vision.

Other studies have supported the key roles principals play in their school's success and point to other leader characteristics as critical to the principal's success. These characteristics include high energy, initiative, tolerance for ambiguity, sense of humor, analytical ability, and common sense. As society grows more diverse, researchers are beginning to look into the principal's role in leading schools that are increasingly diverse.

Research on the principalship is focused on the changing role of school leaders in a changing society. Thus far, research has shown the principal to be a key to a school's successful transition into an institution that will adequately prepare students. This research was based upon an existing system of public and private education. As society continues to change and technological advances change the tools available for teaching, the role of the principal will likely change. Vouchers, charter schools, and technology have the potential to change schooling in fundamental ways. As these changes take place, the role of the principal will also change. The principal of an online school will function in very different ways than the principal of a traditional school.

### Demographic Profile of School Principals

Demographics on the principalship are collected and reported by the United States Department of Education. The National Center for Education Statistics collected data on the public and private school principal population in 1987 through 1988, 1990 through 1991, and 1993 through 1994. These data show a 2.2 percent growth in the number of public school principals from 1987 through 1988 to 1993 through 1994. There was no significant change in the number of private school principals over the same period. In 1993 through 1994 the number of public elementary school principals was almost triple the number of secondary school principals (71.9% to 24.4%).

The majority of principals at all three levels of public schooling (elementary, middle, and high

school) are males; however, the percentage of female principals increased from 24.5 percent to 34.5 percent from the 1987 through 1988 survey to the 1993 through 1994 survey. The most significant increase in the number of female principals occurred at the elementary level during this period. In 1993 through 1994, 41 percent of public elementary school principals were female. The number of female public school principals will continue to increase in the future based on data showing that 48.1 percent of the new public school principals hired in 1993 through 1994 were female.

Data on the principalship at the private school level shows that the majority of principals are female and the percentage of female principals is increasing. Female elementary principals of private schools outnumber their male colleagues three to one; however, this ratio is reversed at the secondary level. The number of private school female principals has increased from 1987 through 1988 to 1993 through 1994.

Public and private school principals are predominately white non-Hispanics. The 1993 through 1994 survey revealed that 84 percent of public school principals and 92 percent of private school principals were white non-Hispanics. The percentage of minority principals in public schools increased between 1987 and 1988 and 1993 through 1994 from 13 percent to 16 percent. Most minority public school principals (35%) were in central city schools in the 1993 through 1994 survey. There are few minority principals in school districts with less than 1,000 students. The number of minority principals increases as school district size increases. The percentage of private school principals has remained consistent at around 8 percent, and the number of new minority private school principals indicates the percentage is not going to change significantly in the future.

*See also:* CURRICULUM, SCHOOL; NATIONAL ASSOCIATION OF ELEMENTARY SCHOOL PRINCIPALS; NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS; SCHEDULING; SCHOOL-BASED DECISION-MAKING; SCHOOL FACILITIES; SCHOOL REFORM; SUPERVISION OF INSTRUCTION.

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KERMIT G. BUCKNER JR.

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## PRIVATE SCHOOLING

Considerable diversity was evident among the 27,223 private elementary and secondary schools that existed in the United States in the autumn of 1999. "Other religious schools" were the most numerous at 49 percent; followed by Catholic schools, at 30 percent; and then nonsectarian schools, accounting for 22 percent of all private schools. Parochial (parish) schools were the most numerous among Catholic schools, followed by diocesan and then private religious order schools. There were more conservative Christian or unaffiliated schools than affiliated ones (those affiliated with a specific denomination) in the "other religious" category. Regular schools, followed by special emphasis and then special education schools, were the most numerous among the schools not affiliated with a denomination or religious association.

The region with the most private schools, but not necessarily with the highest enrollment, was the South (30%); the West had the fewest (20%). Most private schools (82%) maintained a regular elementary/secondary program.

Private school students numbered 5,162,684 in the fall of 1999, representing approximately 10 to 11 percent of the total elementary and secondary enrollment in the United States. Approximately 49 per-

cent of these students were in Catholic schools, about 36 percent were in other religious schools, and about 16 percent were in schools not affiliated with any religious denomination. Approximately 77 percent of private school students were white, non-Hispanic; 9 percent were black, non-Hispanic; 8 percent were Hispanic; 4 percent were Native American/Native Alaskan; and 5 percent were Asian/Pacific Islander. About half (49%) attended schools that were in urban areas, approximately 40 percent attended schools that were located in an urban fringe or a large town, while only 11 percent attended schools in rural America.

These students were taught by 395,317 full-time equivalent (FTE) teachers. Catholic schools employed 38 percent and other religious schools had 39 percent of FTE teachers. The remainder were in schools that were not affiliated with any religious denomination.

### What Is a Private School?

Private schools (sometimes known as nonpublic schools) exist in the United States as corporate entities separate from public schools, which are supported by the government. Though they differ widely in function, geographical location, size, organizational pattern, and means of control, these schools have two features in common—they are ordinarily under the immediate control of a private corporation (religious or nonaffiliated), not of a government agency or board; and they are supported primarily by private funds. They are characterized by a process of double selection because the schools select their teachers and students and the parents select the schools for their children.

### History of Private Schools in the United States

Private schools date back to the schools opened by Catholic missionaries in Florida and Louisiana in the sixteenth century, which predated the beginning of formal education in Massachusetts. These Catholic schools were the offspring of missionary zeal. The distinction between public and private, of such importance during the second half of the nineteenth century and throughout the twentieth century, was not an issue in colonial North America. Schools quite frequently were the products of combined efforts of ecclesiastical and civil authorities, along with parental support, the latter often constituting the primary factor in the schooling of the young. No one pattern existed across the colonies; the government

had no de facto monopoly in the operation of schools anywhere. Some schools were free, some were supported by a combination of financial sources, and some relied solely on tuition. There were “old field” schools (schools that existed in abandoned fields in the South), and proprietary schools, which taught trades. In New England there were town schools, which existed alongside private schools; there were dame schools (taught by literate women in their homes) and writing schools. The Latin Grammar School, such as the one in Boston, often was the crown of the schools. In some places denominational schools were, in effect, public schools, operating under civil and religious supervision, with the goals of inculcating the essentials of faith and knowledge and making good citizens of the church and commonwealth. By the end of the colonial period the institution of school was firmly rooted on the American continent. But nothing resembled the modern concept of secular, free, compulsory, universal schooling.

**The national period.** Men such as Benjamin Franklin, Thomas Jefferson, Benjamin Rush, George Washington, and Noah Webster were among the leaders of the new nation who saw the need for intelligent leadership, an informed citizenry, and an educated professional class. Their proposals, however, had little impact on schooling arrangements. Quasi-public town schools, charity schools for the poor, and a variety of private schools for those who could afford them existed. As the nineteenth century opened, schooling was widely available without a government mandate. The line between public and private remained blurred; diversity of schooling persisted.

**The common school period—the age of the academies.** The combination of industrialization, urbanization, and immigration (mainly Irish) into the northeast, complemented by the civil disarray in Europe, led Horace Mann, Henry Barnard, and others to push for a “common school” that would forge an American identity. Private schools, especially those of a religious nature, were looked upon as divisive, even un-American. The universal, free, compulsory primary school, open to all, allegedly religiously neutral (but in practice Protestant) was the result. Meanwhile, the academies, both in the North and South, functioned as the major educational institutions at the “middle” level. Ranging from boarding schools for the upper class to institutions that barely surpassed, if at all, the common schools, the academies

mies reached their peak about 1850 when they numbered approximately 6,000. As was the case with the colonial schools, the distinction between “public” and “private” was largely meaningless then. Often popular, local, and with a rural character, the academies overlapped curricular levels, offered a variety of subjects, were flexible with regard to the individual student, and served as an “opener-upper” for girls for formal schooling beyond the elementary level. They often received tax and land subsidies, and sometimes tuition assistance, from local and state governments. They were to succumb in popularity, with some exceptions, to the rise of the public high school that accompanied the growing industrialization and urbanization following the Civil War (1861–1865).

**In the wake of the Civil War.** Following the Civil War, universal public schooling, separate by race and unequal, began at the primary level in the South. In the North, government regulatory activity increased. Private schools, especially those religiously affiliated, were often looked upon as being “un-American.” This allegation was hurled at Roman Catholic schools, in particular, founded as a defense against first the pan-Protestant nature of public schools, and second the secular, “Americanizing” school, each of which was perceived as a threat to the faith of a poor, besieged, immigrant population. Despite the widespread poverty of its members, the Catholic Church continued to found and operate parish elementary schools, able to do so because of the dedication of a teaching corps of vowed religious women, commitment from its members, the drive of its leaders, and ethnic concerns. The sometimes violent activities of the Know-Nothing Party, the American Protective Association, and the Masons that were directed against Catholics testified to the depth and breadth of anti-Catholic prejudice in American society, prejudice that was fanned by some statements of Catholic leaders, for example, the *Syllabus of Errors* by Pope Pius IX in 1864. Other denominations had also established private elementary schools. The Old School Presbyterians, for example, established almost 300 schools in the mid-nineteenth century, mainly because of concern over the alleged secularism of the common schools. For the most part, with the exception of the Lutheran Church-Missouri Synod, the schools founded by Protestant denominations did not endure.

Statistics for the percentage of enrollment in American K–12 private schools in the latter part of

the nineteenth century reveal that in 1879 private secondary enrollment made up 73.3 percent of the total; by 1889–1890, in the wake of the growth of public secondary education, that figure had dropped to 31.9 percent. By 1900, 7.6 percent of the total school enrollment was in private schools.

In the latter years of the nineteenth century, government regulatory activity in educational affairs increased. Doubts were cast on the ability and desire of some private schools, especially those with an “old-world” connection, to foster citizenship among their pupils. Laws were passed, as in Wisconsin and Illinois, that attempted to control or perhaps eliminate private schools. In 1889, for instance, Wisconsin passed the Bennett Law, which defined a school as a place where the subjects were taught in the English language and which required students to attend a school in the public school district within which they resided. Following a bitter political campaign, the law was repealed, in large measure because of the efforts of a Catholic-Lutheran alliance, many of whose schools were threatened because of their adherence to the German language and customs.

**The impact of World War I.** World War I (1914–1918) provided a major impetus to patriotism and an espousal of all things “American.” The nation looked to its schools to instill loyalty and civic virtue in its youth. The decade following the war witnessed a startling rise of membership in the Ku Klux Klan, a “Red Scare,” and vitriolic anti-Catholicism in the presidential campaign of 1928. Private schools, especially those connected with anything foreign, in particular German, were under suspicion of being disloyal. Government regulation of these schools grew; parental rights in the schooling of their children were under duress. Three U.S. Supreme Court decisions in the 1920s stand as testimony to the struggles that engulfed private schools and parental rights in those years, struggles against the allegations of some in government and their allies, who attempted to eradicate or at least minimize them. The first decision (*Meyer v. Nebraska*) was issued in 1923 as a result of a Nebraska law that forbade the teaching of a foreign language to any student prior to the ninth grade. Robert Meyer, a teacher in a Lutheran school, disregarded the law and tutored a boy in German. The Court upheld Meyer’s right to teach and the parents’ right to engage him, maintaining that the allegation by the state that a given practice endangered it was not sufficient to limit Meyer’s and

the parents' rights; Nebraska had not shown proof of any such danger.

The second decision, even more crucial for the rights of parents in education and of private schools came in Oregon as a result of *Pierce v. Society of Sisters* in 1925. Following a referendum, Oregon enacted a statute that required all Oregonians between the ages of eight and sixteen to attend a public school while such was in session, on the grounds that such attendance was necessary to produce good citizens (private schools were, obviously, socially divisive under this interpretation). The Court struck down the Oregon law on the basis of the Fourteenth Amendment, because the law's enforcement might have resulted in the closure of the appellee's primary schools, thus violating their due process rights. In interesting further comments, the Court declared that parents have the right to send their children to private schools that provide religious as well as secular education. The child, the Court held, "is not the mere creature of the state."

The third decision was issued in 1927 in *Farrington v. Tokushige*. This decision again limited the rights of the government and protected the rights of parents and private schools, this time Japanese-language schools in Hawaii. The decision was based on the Fifth Amendment. The court held that the law would have violated the due process property interests of the parents and schools that might have led to the schools' closure.

**The mid-twentieth century.** Private schools experienced phenomenal growth in the years during and following World War II (1939–1945), increasing by 118 percent, compared with 36 percent in the public sector, and enrolling 13.6 percent of the total elementary-secondary school population in 1959–1960, up from 9.3 percent in 1939–1940 and 11.9 percent in 1949–1950. Assuming an average cost of \$500 per pupil in the 1960s in public schools, private schools saved state and local governments roughly \$31 billion during that decade. Private schools also became embroiled in a number of legal struggles during that period, struggles that focused on religiously affiliated private schools. In the next several decades the Supreme Court upheld public bus transportation to private schools and the loan of secular textbooks to the schools, and forbade most other kinds of aid on the grounds that such aid violated the establishment clause of the First Amendment that requires the separation of church and state. The basic legal principles on which the Court based its

decisions were that: (1) the legislation must have a secular legislative purpose; (2) the principal or primary effect of the legislation could not violate religious neutrality; and (3) the legislation could not foster "excessive entanglement" between church and state (these were collectively known as the "Lemon Test," because of *Lemon v. Kurtzman*, 1979). The Court also invoked the "child benefit" principle, which identifies the child as the principle beneficiary of government aid. Indirect aid that flowed to the parents and through them to the schools had a better fate than direct aid to the private schools themselves.

In the midst of the debate regarding the legality of government aid to nonpublic or private schools, Catholic schools reached their all-time enrollment high in 1965–1966 with 5.6 million pupils, constituting 87 percent of private school enrollment. Catholic enrollment plummeted in the years following, stabilizing some years later. Meanwhile, Christian Day Schools, founded by evangelical and fundamentalist Christians, were established and proliferated. The number of these private school institutions founded between the mid-1960s and the early 1980s has been calculated at between 4,000 and 18,000, with an enrollment range from 250,000 to more than 1.5 million. The best estimates seem to be between 9,000 and 11,000 schools with a student population of around 1 million.

**The charge of elitism.** One of the most serious charges leveled at private schools of all types by their opponents is that they are "elitist." Several major studies were conducted in the 1980s that would seem to belie that accusation. One of these was *Inner-City Private Elementary Schools*, conducted in 1982, which was sponsored by the Catholic League for Religious and Civil Rights. Using a randomly selected sample of sixty-four schools in eight cities, fifty-four of which were Title I recipients, and with a minority population of at least 70 percent, this study found strong support for these schools by their patrons. Residing in rundown facilities, beset with financial problems, the majority operated under Catholic auspices, but with a third of the student body Protestant, these schools provided a safe environment, emphasized basic learning skills, and fostered moral values in their pupils. The academic achievement of minority students in Catholic secondary schools, which surpassed that of minority students in their public counterparts, was reported by the priest-sociologist Andrew Greeley. Further, the overall minority enrollment (African American, Hispanic

American, Asian American, and Native American) had grown from 4 percent of the total private school population in 1970 to 11.2 percent in 1987.

But it was two controversial studies headed by the noted sociologist James S. Coleman that occupied center stage for private schools in the 1980s. The first, *High School Achievement: Public, Catholic, and Private Schools Compared*, which was published in 1982 and which Coleman cowrote with Thomas Hoffer and Sally Kilgore, produced results indicating not only that students in Catholic high schools and possibly other private secondary schools academically outperformed those in public schools, but also that these schools were more integrated racially than were their public counterparts. Coleman, Hoffer, and Kilgore claimed to have controlled for “selection bias” in this study; they also maintained that private schools provided a safer, more disciplined, and orderly environment than public schools. The second book, *Public and Private High Schools: The Impact of Communities*, which was published in 1987 and written by Coleman and Hoffer, continued the line of reasoning present in the 1982 work. In this second report the authors stated that the goals of education are determined by the social organization of schools, their communities, and the families that they serve. In “functional communities,” in which the parents, teachers, and students know one another, schools—whether public or private—are more likely to be successful. “Social capital,” the relationships that exist among parents, and the parents’ relations with the institutions of the community that result promote high levels of academic achievement, particularly among students most at risk of school failure.

### Types of Private Schools at the Dawn of the Third Millennium

As noted in the beginning of this entry, the private sector includes Catholic, “other religious,” and independent private schools. There are three types of Catholic schools: parochial (parish), diocesan, and private (operated by a religious order). Other religious schools are those operated by other denominations, including various Protestant, Islamic, and Jewish organizations. Independent schools are conducted by groups that are not affiliated with any religious body. In addition, the nation witnessed the advent of proprietary “for-profit” schools in the 1990s. The Edison Company, for example, operated seventy-nine charter schools (which are nonreligious public schools) under several models with 37,000

students at the end of 2001. Other firms have joined Edison; some have predicted that by 2010 for-profit schools’ share of spending on K–12 education will increase considerably. Oftentimes these commercial firms seek out schools with academic problems. Sylvan Learning Center, for instance, looks to contract with Title I schools to raise the reading achievement of low-achieving students. Teacher unions have been in the forefront of the opposition to this “privatization” move.

Another form of schooling, a direct result of parental choice, is home schooling. While home schooling is not an institution of schooling per se, it is the direct result of parental choice and a consequence of parental rights in schooling. Home schooling has been a rapidly growing phenomenon since the 1970s, and estimates put the number of youngsters who were home schooled in 1998 at 750,000 to 1.7 million.

### Current Trends and Controversial Issues

Private, as well as public, schools were all but engulfed with controversy at the beginning of the twenty-first century. Among the debated issues were accreditation, minority enrollment, privatization, and school choice and vouchers.

**Accreditation.** States are responsible for the licensing or chartering of all educational institutions within their borders. A license is an authorization to operate, while accreditation certifies that a school meets minimum standards of quality adopted by the accrediting agency. Licensing and accrediting are means of controlling or regulating private schools; hence, they may become the source of conflict between government and private schools. Some private schools, for instance, operate without seeking government licensure of personnel or accreditation of programs. Where state approval is necessary to operate, the private school may not legally open until officially approved, and noncompliance may be a misdemeanor. States may exempt private schools from certain provisions, for example, because they are operated by a church. States may also offer tax exemptions to private schools because they perform a public service, are not operated for profit, or are conducted by a religious organization. Current accountability measures enacted by states may pose a threat to private schools via required curricular content, standards of measurement, and tests.

The most widely recognized accreditation of private nonprofit schools is conducted by six region-

al accrediting associations, founded between 1885 and 1924. The first of these was the New England Association of College and Secondary Schools, the last the Western Association of Schools and Colleges. A more recent organization, the National Council for Private School Accreditation, was founded specifically for the purpose of accrediting private schools. In 2002 it consisted of fourteen state and national accrediting organizations representing more than 2,500 accredited schools with more than 650,000 students. It was recognized, or was in the process of being recognized, by as many as fifteen states.

**Minority enrollment.** In the autumn of 1999, private school enrollment was approximately 9 percent African American, 8 percent Hispanic, 4 percent American Indian/Alaskan Native, and 5 percent Asian/Pacific Islander. Of the students enrolled in Catholic schools in 1999–2000, 24.9 percent were minorities; in inner-city and urban areas, that percentage was significantly larger. Urban Christian schools, which like the Catholic schools were founded to better meet the needs of students in urban centers, experienced an ever-increasing enrollment in the 1990s; the Association of Christian Schools International has a goal of establishing Christ-centered schools in each of the approximately 600 urban school districts in the United States. Minority parents, African American and Hispanic/Latino, are increasingly embracing school choice, thus confounding the contention that private schools are the haven of upper and upper-middle class whites seeking elitist schooling opportunities for their children. Furthermore, Jay Greene's studies suggest that private schools, on average, are more racially integrated than public schools.

**Privatization.** Some people fear that a trend toward privatization in education may have harmful effects on civic participation. Writing in 1999, the North Carolina sociologists Christian Smith and David Sikkink pointed out, however, that such is not necessarily the case. While private education and home schooling are not panaceas, these researchers suggested that private school families are considerably more involved in the public square than are their public school counterparts. If Smith and Sikkink are correct, then, private schooling will help renew participation in public affairs and advance, rather than harm, the public weal.

**School choice and vouchers.** School choice, both within and without the public school structure, has become a major issue since the 1990s. Vouchers, es-

pecially publicly funded ones, are the most controversial issue in American education. The controversy is said to be a struggle over America's educational future. Basically, a voucher means that the government issues a credit for education of children to their parents, who then take that credit to the school of their choice.

The concept of vouchers is not new. Catholic leaders, upholding the primary rights of parents in the education of their children, argued in the latter half of the nineteenth century that it was the responsibility of the state in distributive justice, the concept of giving to everyone what is their due, to support parents in the choice of schooling for their offspring. Under anti-Catholic attacks from Nativists and their allies, the Catholic bishops soft-pedaled their advocacy. There were other pre-1990 movements to have government acknowledge the primacy of parents (or in the case of adults as in the G.I. Bill, the adults themselves) in the education of their children. In the 1950s, basing his argument on the free market approach, the Nobel laureate economist Milton Friedman argued for the voucher. In the 1970s John Coons and Stephen Sugarman lent their support to the movement on social justice grounds. Others, such as Charles Glenn, emphasized parental liberty in their advocacy for the voucher. The publication of *A Nation at Risk* in 1983, followed by reforms such as site-based management, contributed to the growing sentiment that, at least in some instances, especially in inner cities, public schools were failing, and that enabling parents to have the means to be able to choose the appropriate school for their children would truly reform American K–12 education. The very system, which was publicized in the late nineteenth and early twentieth centuries as guaranteeing educational success to all students who sought it, was being criticized as an inept, cumbersome bureaucracy that contributed to student failure and, in the case of inner-city schools, often to their neglect and personal danger. John Chubb and Terry Moe called for implementation of the voucher in 1990, under the auspices of the free market.

It is well to note that school choice options exist within the public school system, namely, charter schools, magnet schools, and open enrollment. In addition to publicly funded vouchers, school choice options include privately funded schools, where individuals and corporations provide scholarships to children from low-income families. Deductions, tuition tax credits, and "child-care certificates" are

other public means of aiding students in private schools. Such programs are most notably operating in Indianapolis, New York City, and San Antonio.

Also worth noting is that not all private school groups are in favor of vouchers. Some are concerned that vouchers may make the private school subject to excessive government regulation and control and thereby negate the unique quality of their private school.

Advocates advance a number of arguments in support of the voucher. Dale McDonald noted in 2001 that the United States is the only Western democracy that does not provide parents with a share of their education tax dollars that would enable them to choose the school for their children. Some argue for the voucher (or other aid) on the basis of the value of competition in a free market. Others contend that the voucher would recognize the primacy of parents in the schooling of their children. Some maintain that the voucher is called for by distributive justice. Yet others hold that government should not have a *de facto* monopoly of pre-K–12 schooling. The call for vouchers (or other means of school choice) is especially strong in situations where poverty is widespread and where urban public schools are in serious trouble. Other school choice programs, such as those available in Illinois and Minnesota, tend to favor tax credits for educational expenses, which lessen the threat of government entanglement and regulation.

Opponents to the voucher advance a variety of reasons for their opposition. Some aver that the voucher would destroy the public school system, privatizing it. Others contend that in the case of religiously affiliated private schools the voucher would violate the establishment clause of the First Amendment. Some say that in the cases of the urban poor, the voucher does not cover the entire cost of schooling and so the very poor are eliminated from participation, while yet others hold that the voucher helps only a select few in those cities and ignores the plight of the majority of the poor. Some say the voucher would result in the balkanization of education and of the United States. Finally, some contend that the practice of vouchers does not make their adherents accountable to the public in the use of tax dollars as is the case with public education.

Proponents and opponents disagree as to the effect of the vouchers on the school achievement of children. Some scholars hold that research on the ef-

fects of voucher programs in Milwaukee and Cleveland is inconclusive. Others point to high levels of parental satisfaction with voucher schools and to the improving test scores of their students. In June 2002 the U.S. Supreme Court, which in effect upheld the constitutionality of the Milwaukee plan by not reviewing a lower court decision, ruled that Cleveland program is constitutional, thereby upholding the use of public funds for religious school tuition. It is interesting to note that the Black Alliance for Educational Options, headed by Howard Fuller, former superintendent of schools in Milwaukee, filed a brief on behalf of the parents who were participating in the program. Seventy percent of the students were minorities; 73.4 percent came from homes that were headed by a single mother, whose average annual income was \$18,750.

### Conclusion

Private education in the United States is undergirded by parental choice. That choice has been an essential, though not always respected, feature of the educational landscape since colonial times. Indeed, for a considerable time the concept of parental rights in the schooling of their young was all but submerged under the rising tide of public school bureaucracy. This often led to a conflict between the professional authority of the school and the moral authority of parents. The relationship between parents and school authorities became adversarial in many instances; in others, parents were allowed to participate in the education of their children in a way and at a level determined by school authorities. The balance of power between government officials and parents may, however, be changing. Parents in the early twenty-first century may choose from an increasing variety of educational options. Regardless of their economic status, parents may be able to choose from a growing number of institutions for the education of their children and for the accomplishment of public purposes such as preparation for citizenship. If such is the case, the line between public and private schooling may become blurred, as it was in the colonial period, and the focus of public policy in education may shift from public education to the education of the public.

*See also:* CATHOLIC SCHOOLS; HOME SCHOOLING; PROTESTANT SCHOOL SYSTEMS; SUPREME COURT OF THE UNITED STATES AND EDUCATION.

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## PROFESSIONAL DEVELOPMENT SCHOOLS

Professional development schools (PDSs) are innovative institutions formed through partnerships between teacher education programs and pre-K–12 schools. Their mission, like that of a teaching hospital in the field of medicine, is complex, consisting of strong professional preparation through intensive clinical experience, enhanced learning opportunities and outcomes for pre-K–12 students, and continuing education and development for experienced professionals. Their strategy for achieving this complex mission is also analogous to that used by teaching hospitals: professional education in the context of practice.

Unique demands are made on partners in a PDS. They are called upon to share responsibility for adult and children's learning, to commit and reallocate their resources to a new setting and new kinds of work, and to be accountable professionally and publicly for outcomes for all participants. Like their medical counterparts in teaching hospitals, PDS partners believe that by working together in these ways, the learning outcomes will be better for teacher candidates, faculty, and students.

Children's learning is at the core of all PDS work. Candidates and school and university faculty engage together in identifying and meeting children's learning needs. It is through this inquiry and implementation process that adult learning occurs and children's needs are met. Research thus becomes a tool for improving outcomes.

PDSs look different than traditional schools with student teachers. The use of alternative staffing patterns that incorporate candidates into instructional teams provides both unique learning opportunities for candidates and release time for school faculty to work as teacher educators that observe, mentor, and assess novice teachers. Faculty are selected and trained for their roles as mentors and supervisors. They meet high standards for professional

practice and they uphold high standards for candidates and pre-K–12 students. University faculty spend most of their time in the school setting working with candidates, supporting staff development, engaging in collaborative research with school faculty, and participating in the planning, instruction, and problem-solving activities of the school.

### **The Creation of Professional Development Schools**

Professional development schools grew out of efforts in the 1980s and 1990s to reform teacher education and to restructure schools. The Holmes Group, an organization of the deans of schools of education in research universities committed to the reform of teacher education, recommended in 1990 the creation of professional development schools to provide intensive clinical preparation to teacher candidates and create a bridge between academia and the schools.

At about the same time, school reformers called for students in the nation's schools to learn more and for teachers to teach for understanding. Educators realized that this would require a different kind of teaching and a new approach to teacher preparation. Professional teachers needed to be well prepared in their subject areas, but they also needed clinical experiences to reinforce the desired dimensions of professional practice. This included knowledge-based decision-making, work with colleagues, an orientation to problem solving and inquiry, and accountability for enhanced learning outcomes. PDS partnerships were developed, in part, to create clinical experiences grounded in these values and designed to provide the kinds of learning experiences associated with developing expertise in professional practice.

The second impetus for the creation of professional development schools originated from a desire to bridge the long-standing gap between universities and schools. Educators in both sectors pointed to the distance between research and practice, and to the lack of fit between professional preparation and the real world of schools. University educators believed that teacher education needed to be informed by practice. School faculty sought ways to make university-generated knowledge more accessible to teachers, and PDSs created a needed link between the sectors.

### **The Impact of Professional Development Schools**

Several hundred PDSs have been developed since the Holmes Group recommendations in 1990. The National Network for Education Renewal, organized by John Goodlad, was formed to support these partnerships, and they were endorsed by the National Commission on Teaching and America's Future as an approach to quality teacher education. The American Federation of Teachers and the National Education Association have supported major PDS projects, and the National Council for Accreditation of Teacher Education (NCATE) developed standards and an assessment process for PDS partnerships. In 2001 approximately 30 percent of the 525 institutions accredited by NCATE reported having PDS partnerships. PDS partnerships may involve elementary, middle, and secondary schools in urban, suburban, and rural communities. Public and private universities are involved in PDSs, as are large and small institutions, four- and five-year teacher education programs, and one-year certification or master's degree programs. In 2001 thirty-one states had school/university partnership initiatives supported by various federal higher education grants.

Early research on PDS partnerships consisted mostly of self-reports or case studies. In the late 1990s research on PDS effectiveness began appearing in the literature. Studies conducted in various partnerships using observational data, teacher competency test scores, and teacher attrition data suggest that teacher learning and retention are enhanced in PDS partnership schools. Similarly, studies have begun to indicate that student achievement, using a variety of measures, goes up in PDSs over a period of time.

### **Trends, Issues, and Controversies**

**Standards.** In 1996 NCATE initiated a project to develop PDS standards. Working with PDS practitioners, researchers, and policymakers, NCATE developed and field-tested standards in eighteen representative partnerships. The standards were endorsed by NCATE and are being used by many PDS partnerships and several states across the country.

**Institutional support.** Gaining institutional support can be a challenge for PDS partnerships. It is critical that leaders of universities, schools, and teacher's unions be committed to the innovation. Changes in roles and responsibilities require institutional sup-

port and incentives, and often require the removal of cultural and policy barriers. For example, universities must address promotion and tenure requirements, ensuring that they value clinical work and research. Schools, on the other hand, must restructure their programs to include teacher education as part of the responsibility of the school.

**Policy issues.** PDSs are part of the long-term teacher quality agenda. The standards movement of the 1990s introduced a new level of professional and public accountability to teacher education, and PDS partnerships have a critical role to play in that arena. For PDSs to be sustainable, teacher quality initiatives in teacher testing, licensing, mentoring, and induction must be consistent with the underlying vision of the PDS—teaching as professional practice.

The greatest opportunity for PDS development, however, may occur as states and school districts seek to address a growing teacher shortage. PDSs may be able to provide a viable alternative to placing underprepared individuals in classrooms. When PDSs are established in high-needs schools where shortages are most acutely felt, they can bring cadres of candidates into the school under the expert supervision of university and school faculty members.

**Controversies.** Because PDS partnerships require major restructuring in both the university and school, they often meet with opposition. The selection of PDS sites, in particular, can be contentious.

PDSs remain somewhat controversial within the teacher education community. The requirement of a full-year internship as part of professional preparation introduces an additional cost to teacher candidates, many of whom are already beginning low-paying careers with significant debt. The added value of the full-year internship in terms of teacher competency and retention is beginning to be documented, and salaried internships or stipends (supported by school districts) may be a way of addressing this issue in the future, particularly in the context of teacher shortages.

In the early part of the twentieth century, the education of doctors, the practice of medicine, and the hospital as an institution were all radically reformed by the creation of a new institution: the teaching hospital. PDSs have the potential for playing a similar role in the preparation of teachers, the practice of teaching, and the school as an institution that supports both professional and pre-K–12 student learning.

*See also:* EARLY CHILDHOOD EDUCATION, *subentry on* PREPARATION OF TEACHERS; NATIONAL COUNCIL FOR ACCREDITATION OF TEACHER EDUCATION; SCHOOL REFORM; TEACHER LEARNING COMMUNITIES.

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MARSHA LEVINE

## PROGRESSIVE EDUCATION

Historians have debated whether a unified progressive reform movement existed during the decades surrounding the turn of the twentieth century. While some scholars have doubted the development of a cohesive progressive project, others have argued that while Progressive Era reformers did not march in lockstep, they did draw from a common reform discourse that connected their separate agendas in spirit, if not in kind. Despite these scholarly debates, historians of education have reached a consensus on the central importance of the Progressive Era and the educational reformers who shaped it during the early twentieth century. This is not to say that historians of education do not disagree—in fact, they disagree intensely—on the legacy of Progressive educational experiments. What they do agree on is that during the Progressive Era (1890–1919) the philosophical, pedagogical, and administrative underpinnings of what is, in the early twenty-first century, associated with modern schooling, coalesced and transformed, for better or worse, the trajectory of twentieth-century American education.

### Philosophical Foundations

The Progressive education movement was an integral part of the early twentieth-century reform im-

pulse directed toward the reconstruction of American democracy through social, as well as cultural, uplift. When done correctly, these reformers contended, education promised to ease the tensions created by the immense social, economic, and political turmoil wrought by the forces of modernity characteristic of fin-de-siècle America. In short, the altered landscape of American life, Progressive reformers believed, provided the school with a new opportunity—indeed, a new responsibility—to play a leading role in preparing American citizens for active civic participation in a democratic society.

John Dewey (1859–1952), who would later be remembered as the “father of Progressive education,” was the most eloquent and arguably most influential figure in educational Progressivism. A noted philosopher, psychologist, and educational reformer, Dewey graduated from the University of Vermont in 1879, taught high school briefly, and then earned his doctorate in philosophy at the newly formed Johns Hopkins University in 1884. Dewey taught at the University of Michigan from 1884 to 1888, the University of Minnesota from 1888 to 1889, again at Michigan from 1889 to 1894, then at the University of Chicago from 1894 to 1904, and, finally, at Columbia University from 1904 until his retirement in 1931.

During his long and distinguished career, Dewey generated over 1,000 books and articles on topics ranging from politics to art. For all his scholarly eclecticism, however, none of his work ever strayed too far from his primary intellectual interest: education. Through such works as *The School and Society* (1899), *The Child and the Curriculum* (1902), and *Democracy and Education* (1916), Dewey articulated a unique, indeed revolutionary, reformulation of educational theory and practice based upon the core relationship he believed existed between democratic life and education. Namely, Dewey’s vision for the school was inextricably tied to his larger vision of the *good society*, wherein education—as a deliberately conducted practice of investigation, of problem solving, and of both personal and community growth—was the wellspring of democracy itself. Because each classroom represented a microcosm of the human relationships that constituted the larger community, Dewey believed that the school, as a “little democracy,” could create a “more lovely society.”

Dewey’s emphasis on the importance of democratic relationships in the classroom setting neces-

sarily shifted the focus of educational theory from the institution of the school to the needs of the school's students. This dramatic change in American pedagogy, however, was not alone the work of John Dewey. To be sure, Dewey's attraction to child-centered educational practices was shared by other Progressive educators and researchers—such as Ella Flagg Young (1845–1918), Dewey's colleague and kindred spirit at the University of Chicago, and Granville Stanley Hall (1844–1924), the iconoclastic Clark University psychologist and avowed leader of the child study movement—who collectively derived their understanding of child-centeredness from reading and studying a diverse array of nineteenth and twentieth-century European and American philosophical schools. In general, the received philosophical traditions employed by Dewey and his fellow Progressives at once deified childhood and advanced ideas of social and intellectual interdependence. First, in their writings about childhood, Frenchman Jean Jacques Rousseau (1712–1778) emphasized its organic and natural dimensions; while English literary romantics such as William Wordsworth (1770–1850) and William Blake (1757–1827) celebrated its innate purity and piety, a characterization later shared by American transcendentalist philosophers Ralph Waldo Emerson (1803–1882) and Henry David Thoreau (1817–1862). For these thinkers, childhood was a period of innocence, goodness, and piety that was in every way morally superior to the polluted lives led by most adults. It was the very sanctity of childhood that convinced the romantics and transcendentalists that the idea of childhood should be preserved and cultivated through educational instruction.

Second, and more important, Dewey and his fellow educational Progressives drew from the work of the German philosopher Friedrich Froebel (1782–1852) and Swiss educator Johann Pestalozzi (1746–1827). Froebel and Pestalozzi were among the first to articulate the process of educating the “whole child,” wherein learning moved beyond the subject matter and ultimately rested upon the needs and interests of the child. Tending to both the pupil's head and heart, they believed, was the real business of schooling, and they searched for an empirical and rational science of education that would incorporate these foundational principles. Froebel drew upon the garden metaphor of cultivating young children toward maturity, and he provided the European foundations for the late-nineteenth-century kinder-

garten movement in the United States. Similarly, Pestalozzi popularized the pedagogical method of object teaching, wherein a teacher began with an object related to the child's world in order to initiate the child into the world of the educator.

Finally, Dewey drew inspiration from the ideas of philosopher and psychologist William James (1842–1910). Dewey's interpretation of James's philosophical pragmatism, which was similar to the ideas underpinning Pestalozzi's object teaching, joined *thinking* and *doing* as two seamlessly connected halves of the learning process. By focusing on the relationship between thinking and doing, Dewey believed his educational philosophy could equip each child with the problem-solving skills required to overcome obstacles between a given and desired set of circumstances. According to Dewey, education was not simply a means to a future life, but instead represented a full life unto itself.

Taken together, then, these European and American philosophical traditions helped Progressives connect childhood and democracy with education: Children, if taught to understand the relationship between thinking and doing, would be fully equipped for active participation in a democratic society. It was for these reasons that the Progressive education movement broke from pedagogical traditionalists organized around the seemingly outmoded and antidemocratic ideas of drill, discipline, and didactic exercises.

### **Pedagogical Progressivism**

The pedagogical Progressives who embraced this child-centered pedagogy favored education built upon an experience-based curriculum developed by both students and teachers. Teachers played a special role in the Progressive formulation for education as they merged their deep knowledge of, and affection for, children with the intellectual demands of the subject matter. Contrary to his detractors, then and now, Dewey, while admittedly antiauthoritarian, did not take child-centered curriculum and pedagogy to mean the complete abandonment of traditional subject matter or instructional guidance and control. In fact, Dewey criticized derivations of those theories that treated education as a mere source of amusement or as a justification for rote vocationalism. Rather, stirred by his desire to reaffirm American democracy, Dewey's time- and resource-exhaustive educational program depended on close student-teacher interactions that, Dewey argued, required

nothing less than the utter reorganization of traditional subject matter.

Although the practice of pure Deweyism was rare, his educational ideas were implemented in private and public school systems alike. During his time as head of the Department of Philosophy at the University of Chicago (which also included the fields of psychology and pedagogy), Dewey and his wife Alice established a University Laboratory School. An institutional center for educational experimentation, the Lab School sought to make experience and hands-on learning the heart of the educational enterprise, and Dewey carved out a special place for teachers. Dewey was interested in obtaining psychological insight into the child's individual capacities and interests. Education was ultimately about growth, Dewey argued, and the school played a crucial role in creating an environment that was responsive to the child's interests and needs, and would allow the child to flourish.

Similarly, Colonel Francis W. Parker, a contemporary of Dewey and devout Emersonian, embraced an abiding respect for the beauty and wonder of nature, privileged the happiness of the individual over all else, and linked education and experience in pedagogical practice. During his time as superintendent of schools in Quincy, Massachusetts, and later as the head of the Cook County Normal School in Chicago, Parker rejected discipline, authority, regimentation, and traditional pedagogical techniques and emphasized warmth, spontaneity, and the joy of learning. Both Dewey and Parker believed in learning by doing, arguing that genuine delight, rather than drudgery, should be the by-product of manual work. By linking the home and school, and viewing both as integral parts of a larger community, Progressive educators sought to create an educational environment wherein children could see that the hands-on work they did had some bearing on society.

While Progressive education has most often been associated with private independent schools such as Dewey's Laboratory School, Margaret Naumberg's Walden School, and Lincoln School of Teacher's College, Progressive ideas were also implemented in large school systems, the most well known being those in Winnetka, Illinois, and Gary, Indiana. Located some twenty miles north of Chicago on its affluent North Shore, the Winnetka schools, under the leadership of superintendent Carleton Washburne, rejected traditional classroom practice in

favor of individualized instruction that let children learn at their own pace. Washburne and his staff in the Winnetka schools believed that all children had a right to be happy and live natural and full lives, and they yoked the needs of the individual to those of the community. They used the child's natural curiosity as the point of departure in the classroom and developed a teacher education program at the Graduate Teachers College of Winnetka to train teachers in this philosophy; in short, the Winnetka schools balanced Progressive ideals with basic skills and academic rigor.

Like the Winnetka schools, the Gary school system was another Progressive school system, led by superintendent William A. Wirt, who studied with Dewey at the University of Chicago. The Gary school system attracted national attention for its *platoon* and *work-study-play* systems, which increased the capacity of the schools at the same time that they allowed children to spend considerable time doing hands-on work in laboratories, shops, and on the playground. The schools also stayed open well into the evening hours and offered community-based adult education courses. In short, by focusing on learning-by-doing and adopting an educational program that focused on larger social and community needs, the Winnetka and Gary schools closely mirrored Dewey's own Progressive educational theories.

### Administrative Progressivism

While Dewey was the most well known and influential Progressive educator and philosopher, he by no means represented all that Progressive education ultimately became. In the whirlwind of turn-of-the-century educational reform, the idea of educational Progressivism took on multiple, and often contradictory, definitions. Thus, at the same time that Dewey and his followers rejected traditional methods of instruction and developed a "new education" based on the interests and needs of the child, a new cadre of professionally trained school administrators likewise justified their own reforms in the name of Progressive education.

Administrative Progressives shared Dewey's distaste for nineteenth-century education, but they differed markedly with Dewey in their prescription for its reform: administrative Progressives wanted to overthrow "bookish" and rigid schooling by creating what they believed to be more useful, efficient, and centralized systems of public education based

on vertically integrated bureaucracies, curricular differentiation, and mass testing.

Professional school administrators relied on managerial expertise in order to efficiently supervise increasingly large public school systems. Significantly, the new administrators, borrowing the language and practice of efficiency experts like Frederick W. Taylor, attempted to rationalize disparate school districts within one hierarchically arranged system of primary, middle, and high school institutions. Powerful school boards—often comprising elite business and civic leaders—hired professionally trained school superintendents to implement policies and to oversee the day-to-day operations of these vast educational systems. The superintendent, often a male, distanced himself from the mostly female corps of teachers, not to mention the students the school was intended to serve. In the name of efficiency, superintendents relied on “scientific,” if often sterile, personnel management techniques, which had been developed by and for private industry and imported to the school setting by way of business-friendly school boards and through graduate training at the newly developed schools of education.

The school’s turn toward bureaucratic efficiency directly shaped curricular construction. In particular, the idea of *differentiation* became a new watchword in administrative Progressive circles, reflecting the burgeoning economic and status markers signified by the attainment of educational credentials. By differentiating the curriculum along academic and vocational tracks, school administrators sought to meet the needs of different classes and calibers of students, and to more tightly couple educational training with educational outcomes. While administrators justified this curricular innovation (which was most often used in the high schools) on the basis of equal opportunity for all students based on ability, it reflected a larger, more significant shift in the basic aims and objectives of American education. Where the school once provided intellectual and moral training, in the face of an increasingly diverse student population, Progressive administrators took their chief professional administrative responsibility to be the preparation of students for their future lives as workers in the American labor force.

For many contemporary observers, however, curricular differentiation was little more than a euphemism for “social control,” which critics suggested curtailed liberal education in order to meet the labor demands of America’s budding industrial soci-

ety. While this is a cynical view of the Progressive administrative drive, there is much justification for it. Founded in 1906 by a committee of educators and business and industrial leaders, the National Society for the Promotion of Industrial Education (NSPIE) helped organize vocational education programs in high schools around the country during the first several decades of the twentieth century. Vocational education, which critics conveniently, if incorrectly, linked to Progressive education, was expressly designed to train students for immediate employment following, and often in lieu of, graduation.

On the other hand, administrative Progressives justified the rise of vocational tracks by pointing to the relatively miniscule college-going population and by proclaiming it as an effective means of assimilating newly arrived immigrants into American life and institutions. That these students’ high school education was essentially terminated before it ever started was of little concern, for in the face of rapid social upheaval, which reformers believed eroded the traditional institutions of church and family, the school was the last best hope to inculcate immigrants with American values, while simultaneously providing industry with a consistent influx of trained workers.

The interest in the efficient management of bureaucratic school systems and students was strengthened further by developments in educational psychology and intelligence testing. Among the twentieth century’s prominent educational psychologists, E. L. Thorndike (1874–1949)—who studied under William James at Harvard, and taught at Columbia University’s Teachers College during Dewey’s tenure—was undoubtedly the most influential. Presaging the rise of post–World War I mass intelligence testing by relying on intelligence tests in his own studies as early as 1903, Thorndike’s research advanced a narrowly focused stimulus-response definition of intelligence that justified the spread of worker training through vocational education at the same time that his mechanistic conception of intelligence corrupted Dewey’s own ideas about the organic connection between thinking and doing. Thorndike, relying on data gathered from his study of 8,564 high school students in the early 1920s, labeled his theory of intelligence *psychological connectionism*. Thorndike likened the mind to a “switchboard” where neural bonds (or connections) were created between stimuli and responses. He believed that students of higher intellect formed more

and better bonds more quickly than students of lower intellect.

For the administrative Progressives, Thorndike's findings were nothing short of revolutionary: By emphasizing the preponderant role of native intelligence through the statistical analysis of mass-administered intelligence tests, Thorndike and his fellow testers—H. H. Goodard, Lewis H. Terman, and Robert M. Yerkes, among them—provided school officials and policymakers with scientifically incontrovertible evidence in favor of increased psychometric testing and pupil sorting. In comparison with Dewey's more human and material-intensive approach to education, which required individualized student attention and creative pedagogy, Thorndike's conception helped reify separate curricula and perpetuate patterns of unequal access. Precisely (if paradoxically) because of the malleability of the idea of Progressive educational reform, it was possible for both pedagogical and administrative Progressives to advance their radically different agendas in the name of democracy during the first several decades of the twentieth century.

### Life-Adjustment Progressivism

Yet the internal contradictions and ideological inconsistencies of the pedagogical and administrative Progressives in many ways forecast the demise of the Progressive education movement. A system of education that championed both child-centeredness and individuated attention on the one hand, and explicit curricular differentiation through intelligence testing on the other, was perhaps destined to collapse; and with the introduction of life-adjustment education during the 1940s and 1950s, the Progressive education movement did just that.

Life-adjustment education emerged on the scene during the 1940s and witnessed its heyday during the early days of the cold war. The cause of life-adjustment education was advanced by leaders of the vocational education movement like Charles Prosser, who helped pass the monumental 1917 Smith-Hughes National Vocational Education Act, who believed that the school's main function should be to prepare students for the work world. To this end, the life adjusters borrowed generously from the pedagogical and administrative Progressive lexicon by advocating that schools should test and track students at the same time that they should improve students' physical and emotional well-being. Ultimately, the United States Office of Education's

Commission on Life Adjustment Education for Youth co-opted the mantle of Progressive education. Using commission reports published in 1951 and 1954 as its blueprint for action, the life adjustment movement succeeded in instituting its therapeutic curricula—geared toward the development of personal hygiene, sociability and personality, and industrious habits of mind—at thousands of schools around the country.

Critics denounced the public school's shift toward an overtly custodial function as both anti-American, anti-intellectual, and, ironically, antidemocratic. In the shadow of Joseph McCarthy's communist witch hunt, the Progressive's sponsorship of international understanding through education, the perceived penchant for feel-good classroom instruction, and the alleged liberal political orientation of Progressive educators cut against the grain of 1950s conservative America. The alleged anti-intellectualism of adjustment pedagogy, however, fueled even more criticism. Among others, the historian Arthur Bestor led the charge against life adjustment's anti-intellectualism. In his *Educational Wastelands* (1953) and *The Restoration of Learning* (1955), Bestor argued that life adjustment's emphasis on vocational instruction and life management skills marginalized the place of traditional core subjects. According to Bestor, it was impossible to be a fully educated person in the absence of at least some exposure to traditional liberal studies.

In this traditional view, most similar to the nineteenth century concept of education as mental discipline, Bestor was joined by other neotraditionalist educational luminaries, including Robert Maynard Hutchins, president of the University of Chicago and advocate of the great books curriculum, and James Bryant Conant, the highly respected and influential president of Harvard University. All three men agreed on the fundamental aimlessness and futility of life adjustment education in particular, and American high school education in general. Thanks to these men's efforts, the tenor of the national conversation on education changed dramatically, as more educators and public officials came to believe that it was once again time to think anew about the direction of American education.

Not surprisingly, in the midst of intense neotraditionalist scrutiny and growing public dissatisfaction with life-adjustment education, the Progressive Education Association, the principal administrative organ of the Progressive education

movement, closed its doors in 1955; two years later, following the Soviet Union's successful launch of *Sputnik I*, the general orientation of American education shunned life adjustment pedagogy and embraced traditional academic studies in the liberal arts, mathematics, and the hard sciences. With the communist threat looming ever larger, the neotraditionalists believed the future of American democracy depended on a return to traditional academic studies.

Progressive education did not entirely disappear, however. The fundamental tenants of Progressive education's pedagogical and administrative functions continue to inform contemporary educational debates. What is the relationship between education and democratic citizenship, between teachers and students? Are school districts too large? To what extent is the school responsible for the emotional as well as intellectual development of its pupils? Do achievement tests provide valid and reliable measures of student learning? Is the core curriculum sacrosanct or amenable to change? These are just some of the questions Progressive educators attempted to ask and answer, and they are questions that educators still wrestle with at the beginning of the twenty-first century.

*See also:* CURRICULUM, SCHOOL; DEWEY, JOHN; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; GARY SCHOOLS; PHILOSOPHY OF EDUCATION; PROSSER, CHARLES; SECONDARY EDUCATION, *subentry on* HISTORY OF; THORNDIKE, EDWARD L.; WASHBURN, CARLTON.

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## PROJECT METHOD

The project method is an educational enterprise in which children solve a practical problem over a period of several days or weeks. It may involve building a rocket, designing a playground, or publishing a class newspaper. The projects may be suggested by the teacher, but they are planned and executed as far as possible by the students themselves, individually or in groups. Project work focuses on applying, not imparting, specific knowledge or skills, and on improving student involvement and motivation in order to foster independent thinking, self-confidence, and social responsibility.

According to traditional historiography, the project idea is a genuine product of the American

Progressive education movement. The idea was thought to have originally been introduced in 1908 as a new method of teaching agriculture, but educator William H. Kilpatrick elaborated the concept and popularized it worldwide in his famous article, “The Project Method” (1918). More recently, Michael Knoll has traced the project method to architectural education in sixteenth-century Italy and to engineering education in eighteenth-century France. This illustrates that the project of the architect—like the experiment of the scientist, the sandbox exercise of the staff officer, and the case study of the jurist—originated in the professionalization of an occupation.

The project method was first introduced into colleges and schools when graduating students had to apply on their own the skills and knowledge they had learned in the course of their studies to problems they had to solve as practitioners of their trade. With some simplification, five phases in the history of the project method can be differentiated:

- 1590–1765: At the academies of architecture in Rome and Paris, advanced students work on a given problem, such as designing a monument, fountain, or palace.
- 1765–1880: The project becomes a regular teaching method; newly established schools of engineering in France, Germany, and Switzerland adopt the idea. In 1865, the project is introduced by William B. Rogers at the Massachusetts Institute of Technology into the United States.
- 1880–1918: Calvin M. Woodward adapts the project concept to schoolwork. At his Manual Training School students actually produce the projects they designed. Gradually the idea spreads from manual training (Charles R. Richards) to vocational education (David S. Snedden, Rufus W. Stimson) and general science (John F. Woodhull).
- 1918–1965: Kilpatrick conceives the project broadly as “whole-hearted purposeful activity proceeding in a social environment.” After being criticized by Boyd H. Bode, John Dewey, and other leading American Progressive educators, Kilpatrick’s approach loses its attraction in the United States, yet receives general approval in Europe, India, and the Soviet Union.
- The 1970s: Kilpatrick’s project method, now taken as the only adequate method of teaching

in a democratic society, is rediscovered in Germany, the Netherlands, and other European countries. Under the influence of British primary school education, U.S. educators attempt to redefine the project, viewing it as an important supplement to the traditional teacher-oriented, subject-centered curriculum.

There are two basic approaches for implementing the project method. According to the historically older approach, the students take two steps: initially, they are taught in a systematic course of study certain skills and facts, then they apply these skills and knowledge, creatively and self-directed to suitable projects. According to the second approach, the instruction by the teacher does not precede the project but is integrated in it. In other words the students first choose the project, then they discuss what they need to know for solving the problem and learn the required techniques and concepts. Finally they execute the chosen project by themselves. In both approaches, time for reflection should be provided during all phases of project learning, giving students the opportunity to evaluate their progress. Many teachers—especially vocational and industrial arts educators—use a series of small-scale projects to help students develop continuously increasing competence in practical problem solving.

*See also:* KILPATRICK, WILLIAM H.

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## PROSSER, CHARLES (1871–1952)

An important figure in the vocational education movement, Charles Allen Prosser is particularly known as the architect of the 1917 Smith-Hughes Act and as the figurehead of the 1945 campaign for life adjustment education.

Prosser, born as a steelworker's son in New Albany, Indiana, received B.A. (1897) and M.A. (1906) degrees from DePauw University, the LL.B. (1899) from the University of Louisville, and a Ph.D. (1915) from Teachers College, Columbia University. He worked as superintendent in the post office, practiced as lawyer in Missouri, served as teacher, principal, and superintendent in Indiana, went to New York for doctoral studies, became, under David S. Snedden, assistant commissioner of education in Massachusetts (1910–1912), and acted as executive secretary of the National Society for the Promotion of Industrial Education (1912–1915). From 1915 to 1945, the rest of his professional life, he served as director of the William H. Dunwoody Institute in Minneapolis, interrupted only by a short but crucial period as the first executive director of the Federal Board for Vocational Education (1917–1919).

Beginning in 1903 Prosser, like all Progressive educators, criticized the high school curriculum with its traditional emphasis on scholarship and college preparation. After the sixth grade, he argued, education should be differentiated because of marked difference in interests, aptitudes, and occupational opportunities that were open to the young. What the great majority of pupils needed was vocational education, that is, "real vocational education" and explicitly not manual training, homemaking, or industrial arts, since the traditional practical subjects had failed to help children "to get a job, to hold it, and to advance to a better one."

Like Edward Thorndike, Prosser believed that knowledge could not be transferred from one field of learning to another; like David Snedden, he maintained that learning, to be effective, had to be specific and directed to immediate ends; and following Georg Kerschensteiner, he pled for separate secondary schools which—apart from the traditional high school—offered as many specific vocational courses or groups of courses as there were occupations. In 1911 Prosser began campaigning for federal funds to provide social and economic opportunities for practically inclined children above fourteen years of age through the creation of specific vocational schools

and programs. From his view, the duties, tasks, and problems of shop, home, and farmwork had to be learned in practical ways, preferable by the activity and project method. Pointing to the German model, he propagated a system of "dual control," that is, the vocational schools and courses were to be administered not by the general boards of education which already existed, but by separate boards of vocational education, which had to be newly established. For the most part, Prosser wrote the influential *Report of the National Commission on Aid to Vocational Education* (1914), and many of the ideas and proposals he expressed there were included into the Smith-Lever Act of 1914 and the Smith-Hughes Act of 1917—federal laws that he shepherded through Congress. At Dunwoody, the school for workers he directed, Prosser made sure that the students carried out their exercises and projects under conditions as much like those of real work in industry as possible. Since he was convinced that specific industrial methods changed rapidly in the face of changing science and technology, he institutionalized in his school short-term courses for retraining and updating skills and knowledge.

In the "Prosser Resolution" of 1945 he once again accused the secondary schools of failing to prepare the great majority of children to take their place in adult society. He claimed that 20 percent of the high school population was receiving an appropriate college-entrance education and another 20 percent was being well served by vocational programs, but that the remaining 60 percent desperately needed "life adjustment education"—they needed practical training that included personality, etiquette, health, home, and family living. In essence, the resolution revived Prosser's old idea that the principal function of schooling should be the adjustment of individuals to the social and occupational circumstances in which they live. In the long run, most of Prosser's initiatives did not prevail; nevertheless, more than any other single person, he was responsible for the fact that vocational education in the United States became the most successful curricular innovation of the twentieth century.

*See also:* KERSCHENSTEINER, GEORG; SECONDARY EDUCATION, *subentry on* HISTORY OF; SNEDDEN, DAVID; VOCATIONAL AND TECHNICAL EDUCATION.

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**PROTESTANT SCHOOL SYSTEMS**

Protestant schools are a small but dynamic and diverse part of the landscape of education in the United States. These institutions, which are usually much smaller than their state-controlled counterparts and depend heavily on private financing, enroll about 3 percent of all K–12 students. In 2000 approximately 1.6 million students attended nearly 12,400 elementary and secondary Protestant schools (excluding pre-kindergarten and kindergarten-only schools) operated by churches affiliated with more than twenty denominations, institutions of higher learn-

ing, or groups of individuals committed to particular Protestant belief systems. These figures represent about 30 percent of the 5.2 million students in K–12 nonpublic schools and 45 percent of the nearly 27,400 private schools in the United States.

**Colonial and Nineteenth-Century Protestant Schooling**

Protestant schooling is not new to education in the United States. Prior to the advent of state school systems in the middle decades of the nineteenth century, the rich religious diversity that characterized overwhelmingly Protestant colonial and early national America was manifested in an equally rich diversity of Protestant schools. Throughout these years, Lutherans, Quakers, Presbyterians, Moravians, Mennonites, German and Dutch Reformed, Baptists, Methodists, and Anglicans established elementary schools and academies. Even the so-called town schools of colonial New England and the quasi-public district schools and charity schools of the early 1800s were de facto Protestant schools.

The mid-1800s marked an era of intense debate and reform focusing on issues of control, finance, and curriculum that led to major changes in education in the United States. By the 1850s in the North and the 1870s in the South, states had established public or common school systems. Student enrollment shifted significantly to the free common schools, the earlier practice of distributing tax dollars to schools under private control for the accomplishment of public purposes was sharply curtailed, and nonpublic schools were increasingly cast as un-American and divisive. During the period several Protestant denominations, such as the Methodist and Episcopalian, considered establishing alternative school systems, and in the case of the latter, a number of dioceses, mostly in the South, encouraged the establishment of schools. In the 1840s and 1850s, the Old School Presbyterians attempted to establish a system of schools to transmit orthodox beliefs. Although nearly 300 schools were founded, a schism bred by intersectional strife ended the experiment by the time of the Civil War. Individual churches continued to maintain schools, but with the exception of the Lutheran Church–Missouri Synod, Protestant denominations and most of their members accepted state provision of elementary schooling, though not without occasional expressions of concern about secularization of public education. They did so in large measure because nineteenth-century public

schools were general Protestant schools and were thought to be a principal means to creating and maintaining a moral, disciplined, and unified Protestant citizenry. Furthermore, as Roman Catholics asked for tax dollars to support their schools and complained about Protestant practices such as Bible reading in the common schools, a majority of Protestant denominations and their members set aside their denominational differences and supported the purportedly “nonsectarian” common school.

By the end of the nineteenth century, most Protestant denominations no longer discussed the possibility of establishing an alternative to the state school system. Only the Lutheran Church–Missouri Synod (which was founded in 1847 with a strong commitment to Christian education and by 1897 boasted 1,603 schools with an enrollment of 89,202); the Wisconsin Evangelical Lutheran Synod (which operated eighty-five elementary schools in 1875, twenty-five years after its creation); the Seventh-day Adventist Church (which committed itself to a system of elementary schools in the 1890s and by 1900 claimed more than 200 schools with an enrollment of about 5,000); and the Christian Reformed Church (whose commitment to Christian schools in the Calvinist tradition was only slowly realized—fourteen schools by 1900) maintained a significant denominational emphasis on Christian schooling to preserve or protect confessional and/or cultural distinctives. Though most denominations decided not to construct alternative systems, individuals, churches, and parishes sponsored Protestant schools, including a significant number of secondary institutions. Exact enrollment figures for Protestant-oriented schools in the late 1800s are not available. A 1985 study by the scholar Thomas Hunt, however, used the U.S. census of 1890 to arrive at the following figures: Lutheran, 151,651; Methodist, 58,546; Presbyterian, 37,965; Baptist, 29,869; Congregational, 27,453; and Episcopal, 21,650.

### Early Twentieth-Century Protestant Schooling

Compared to public school figures, enrollment in Protestant schools had declined markedly in the 1800s as tax-supported education became more widely available and a growing number of Protestants claimed the public schools as “theirs” and even asserted that all children, Protestant and Catholic alike, attend them. By 1900, 15,503,000, or about 92 percent of the 16,855,000 elementary and secondary students in the United States, were enrolled in public

schools, while 1,352,000, or approximately 8 percent, attended private institutions. About 854,000, or 63 percent of these students, were enrolled in the burgeoning Roman Catholic institutions. Most of the rest, about 3 percent of the total K–12 enrollment, attended Protestant schools, according to Otto Kraushaar’s 1972 study.

Charges that nonpublic schools were undemocratic and assertions that all children should attend schools run by the state, which had been voiced since the 1840s, as well as a rising tide of nativism in the late 1800s and early 1900s led to several efforts to restrict or eliminate Catholic and Protestant schools. In 1889, for example, Wisconsin and Illinois passed the Edwards and Bennett laws. Directed primarily at Catholic and Lutheran schools, which were heavily populated by children of German-speaking parents, the Edwards law defined a school as a place where subjects were taught in English and required children to attend school in the district in which they resided. The Bennett law mandated that all children between the ages of seven and fourteen attend a public school in the district in which they resided for at least sixteen weeks (eight of which had to be consecutive) per year. Catholics, Lutherans, and other religions joined forces to bring about the repeal of both laws within two years. The gravest threat came in Oregon in 1922 with a referendum-based law that required children between the ages of eight and sixteen to attend a public school. Three years later, the U.S. Supreme Court in *Pierce v. Society of Sisters* struck down the law, affirming the right of private schools to exist and right of parents to “direct the upbringing and education” of their children.

Spurred by the *Pierce* decision (often called the Magna Carta of private schools), a brief period of prosperity, and a gradual softening of the xenophobia of the 1910s and early 1920s, nonpublic school enrollment began to rise slowly from about 7 percent of all K–12 students in 1920 to 9.4 percent in 1930, declining only slightly to 9.3 percent in 1940. During the interwar years, however, Protestant school enrollment accounted for between only 1 and 2 percent of all K–12 students.

While enrollment remained fairly stable throughout the 1920s and 1930s, reforms were underway that brought many Protestant schools closer to the public school model. For example, the Lutheran Church–Missouri Synod, the Seventh-day Adventist Church, and the National Union of Christian Schools (renamed Christian Schools International in

1979), founded in 1920 to represent parent-governed Calvinist Christian schools, undertook efforts to upgrade teacher preparation and curriculum as well as prepare their schools for accreditation. In Missouri Synod schools, English replaced German as the primary language of instruction. Some critics, however, asserted that their schools were becoming too much like their public counterparts.

### Post-World War II Protestant Schooling

Private school enrollment increased significantly between the end of World War II and 1960, the year that nonpublic school enrollment reached a twentieth-century high of 13.6 percent of all K–12 students. Although the lion's share of the growth occurred in the Roman Catholic system, enrollments in most Protestant school groups grew during these years and, in some cases, beyond. By 1961, for example, the Lutheran Church–Missouri Synod (LCMS), which at that time operated the largest “system” of Protestant schools, claimed 1,323 schools with an enrollment of 150,440. (The term *system* is used loosely here as the control of most Protestant schools is very decentralized with local churches or boards owning the buildings and setting policy with denominations or national and regional associations providing services, resources, and accreditation.) According to Jon Diefenthaler's 1984 study, by 1983, LCMS figures had increased to 1,603 schools and 198,061 students. During the 1990s, however, K–12 enrollments have fluctuated between 165,000 and 172,000.

The much smaller, more conservative Wisconsin Evangelical Lutheran Synod also has maintained its historic commitment to Lutheran education. Its schools and enrollment have grown slowly from 239 and 27,448 in 1965 to an estimated 375 and 36,656 in 1999. On the other end of the theological spectrum, the congregations of the 5.1 million member Evangelical Lutheran Church in America, which was formed from a merger of three North American Lutheran bodies in 1988, operated an estimated 122 schools with an enrollment of 18,000 students in 1999. Like LCMS schools, ELCA institutions enrolled a significant minority of non-Lutheran children at the beginning of the twenty-first century.

Episcopal schools operated by parishes, independent corporations, or dioceses have increased rapidly since World War II. In 1951 approximately 100 Episcopal schools existed in the United States, more than half of which were long-established

boarding institutions. As a result of the increase in parish elementary schools, by 1966, 347 Episcopal schools enrolled 59,437 students. By 1981, 320 schools enrolled 76,888 students, and in 1999, 346 schools enrolled 92,466 students. Like their Quaker (Society of Friends) counterparts whose 76 broadly inclusive schools enrolled almost 19,000 students in 1999 (up from about 11,000 in 1966 and 13,000 in 1989), many Episcopal schools identify closely with the more secular, academically oriented independent school sector. More than two hundred members of the National Association of Episcopal Schools, a voluntary organization that provides support and services, also hold membership in the National Association of Independent Schools or one of its regional associations.

According to George Knight, though a relatively small denomination, the Seventh-day Adventist Church operated more than 5,500 schools worldwide in 1999. Following a century-long trend, enrollment in U.S. Adventist schools, which stress cooperation rather than competition and a biblical worldview, increased from 64,252 in 884 schools in 1966 to 81,507 in 1,324 schools in 1983. Since the mid-1980s, however, enrollment has declined. In 1999 the church operated approximately 1,013 schools with an enrollment of about 64,000.

Christian Schools International (CSI), which claims the Bible as explained in Reformed creeds as its organizational basis, provides services and support to Calvinist Christian schools. These schools have their roots in the Netherlands and emphasize the development of students who are capable of applying Christian principles to all realms of life. Once populated by students of Dutch descent, member schools now enroll students from a variety of ethnic and theological backgrounds. According to Peter DeBoer, though enrollment remained around 50,000 in the 1960s and 1970s, it increased significantly in the 1980s. Between 1981 and 1989 CSI membership grew from 217 schools with 51,849 students to 295 schools with 87,215 students. In 1999, 395 member schools enrolled approximately 88,000 elementary and secondary students.

Though Amish and Mennonites share a common Anabaptist heritage from the Protestant Reformation, their education philosophies differ. The education of Amish children is limited to elementary schooling in basic subjects, excluding science and physical education, followed by vocational training (an approach that brought persecution until the

Yoder decision of 1972 granted the Amish relief from laws that required schooling beyond the eighth grade). It is designed to prepare them for participation in a separate, nonconformist life in the Amish community. Most Mennonites, on the other hand, look to elementary and secondary schools to promote academic excellence as well as Mennonite distinctives such as peacemaking and service to the wider community. Until around 1900 Amish and most Mennonites sent their children to local public schools within their community that reflected their beliefs. Enforcement of compulsory attendance laws, increasing secularization, and consolidation prompted them to found their own schools in the 1920s through the 1940s. The National Center for Education Statistics estimated that in 1999, 414 Mennonite schools enrolled around 24,262 students, while 709 Amish schools enrolled 26,473 students.

Since the mid-1960s, when Lutheran, Calvinist, Episcopal, and Seventh-day Adventist schools dominated this segment of private education, fundamentalist and evangelical Protestants and their churches, few of which are members of "mainline" denominations, have been establishing alternatives to public education that are often referred to as independent Christian day schools. As many as 150 of these institutions were founded between 1920 and 1960. It was not until the 1960s, however, that disenchantment with the ongoing secularization of state schools, a resurgent evangelical faith, and, in some cases, fears related to desegregation sparked the rapid increase in the number of these schools, all of which profess centrality of Jesus Christ and the Bible in their educational endeavors and attempt to inculcate a Christian worldview, but are quite diverse in facilities, size, and ethos. The National Center for Education Statistics reports that approximately 10,000 Christian day schools were founded between the 1960s and 1990s, most of which were racially integrated by the end of the century. Furthermore, in the 1980s and 1990s a small but growing number of these schools were established by and for African Americans. In 2000 enrollment in Christian day schools, most of which are affiliated with either the Association of Christian Schools International or the more conservative American Association of Christian Schools, exceeded 1 million.

As is the case with Christian day schools, Protestant schooling as a whole is a diverse segment of education in the United States. Some schools endeavor to transmit orthodox beliefs, some to evangelize stu-

dents, some to promote academic excellence, and some to craft Christian citizens. Despite their differences, however, most Protestant schools face at least three questions in the early twenty-first century. First, how will they remain affordable to their middle-class clientele, not to mention poor families? Second, how religiously pluralistic can schools rooted in particular theological traditions become before they lose their identity? Finally, how will Protestant schools respond to the availability of tax dollars for private education expenses? Given the nature of Protestant schooling, responses will likely be many and varied.

*See also:* CATHOLIC SCHOOLS; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; ISLAM; JEWISH EDUCATION, UNITED STATES; NATIONAL ASSOCIATION OF INDEPENDENT SCHOOLS; PRIVATE SCHOOLING; SECONDARY EDUCATION, *subentry on* HISTORY OF.

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JAMES C. CARPER

## PSYCHOLOGIST, SCHOOL

School psychology is the application of psychological principles and techniques to the education of children. Drawing upon its own knowledge base and that of related fields, including clinical and educational psychology, school psychology focuses on the individual study of children's learning and adjustment primarily in educational settings.

School psychology originated in the late nineteenth century. Its origins are closely connected to those of special education, clinical and educational psychology, the rise of psychological science, the development of psychoeducational tests, and the implementation of special education programs in response to the needs of atypical children required to attend school under state compulsory attendance laws.

### Roles and Functions

The major roles and functions of practicing school psychologists include psychoeducational assessment, consultation, interventions, research and evaluation, in-service education, and administration.

**Psychoeducational assessment.** School psychologists spend at least 50 percent of their time administering psychological and educational tests, conducting observations and interviews, and gathering relevant information in the assessment of students experiencing learning and adjustment problems. The assessment often includes tests of cognitive ability, school achievement, psychomotor skills, adaptive behavior, social skills, and personal-social adjustment. Such assessments also involve interviews with parents and teachers, observations in school, and inspection of school records. Each case study is summarized in a written report.

**Consultation.** School psychologists spend about 20 percent of their time in consultation. This is an indirect method of providing services in which the psychologist works to alter the attitudes and behaviors of others (usually parents and teachers) to affect changes in student behavior, school curriculum, or school system policies.

**Interventions.** Practitioners spend about 20 percent of their time in direct interventions, including remediation and therapy, that involve referred children. Conducted individually or in groups, these services are intended to alleviate academic and behavior problems.

**Research and evaluation.** About 3 percent of practitioner time is devoted to research and evaluation. Although this is an important role for school psychologists, other priorities preclude much involvement in the design of research and evaluation projects that might better assess the efficacy of referral methods, assessment techniques, therapeutic outcomes, and the evaluation of district programs.

**In-service education.** Less than 3 percent of practitioner time is devoted to in-service education of dis-

strict personnel or parents. This activity may be directed at many topics, including reducing systemic problems in child study and improving teaching or parenting skills.

**Administration.** Modern-day services require an unusual amount of record keeping, accounting, and administrative tasks. This role may account for 5 percent of practitioner time.

### Employment Settings

Most school psychologists are employed in schools, colleges and universities, or private practice.

**Schools.** Surveys have consistently shown that at least 80 percent of school psychologists are employed in public school settings. Perhaps an additional 5 percent are employed in related settings such as private schools, correctional schools, residential treatment centers, and boarding schools.

**Colleges and universities.** About 4 percent of school psychologists have their primary employment in academic settings, usually as faculty members assigned to the training programs for school psychologists. Some hold positions in the institution's psychological services center or agency for assisting students with disabilities.

**Private practice.** About 4 to 5 percent of school psychologists work in private practice, many on a part-time basis. Some are independent practitioners, whereas others work within a group practice with pediatricians, psychiatrists, social workers, and other psychologists.

### Relationship to Special Education

School psychology practice is closely linked to special education programs. The need for psychologists to help determine student eligibility for placement and to recommend subsequent educational programs and interventions is formalized in federal and state regulations (e.g., the Individuals with Disabilities Education Act Amendments of 1997). Practitioners spend about two-thirds of their time in activities related to special education; these activities may include any of the roles mentioned above.

### Relationship to Other Pupil Personnel Workers

In most school districts, the school psychologist works with a pupil personnel services team. Other team members may be school counselors, social workers, nurses, and speech and language therapists. The team works with teachers, parents, and adminis-

trators to try to alleviate specific problems, and it consults with school personnel on district-wide prevention programs.

### Training

School psychologists are prepared in programs leading to master's (M.A., M.S., M.Ed.), specialist (Ed.S.), or doctoral (Ph.D., Ed.D., Psy.D) degrees. Approximately 220 institutions provide school psychology training in about 90 doctoral and 200 non-doctoral programs.

The National Association of School Psychologists (NASP) considers the specialist degree or its equivalent (a graduate program of at least sixty semester hours including internship) as the appropriate entry-level training for school psychology practice. The American Psychological Association (APA) considers the doctoral degree as the appropriate entry-level training for school psychology practice. The department of education in the program's home state typically approves programs. The NASP approves programs according to its standards at the specialist and doctoral levels and participates in the accreditation process of the National Council for Accreditation of Teacher Education. The APA has an accreditation office that accredits professional psychology programs at the doctoral level only.

### Credentialing

Practice credentials are available in every state, usually from two separate agencies. Credentials offered through the state's department of education are almost always required for employment in the settings under its jurisdiction, typically all public educational facilities in the state and often private schools as well. Each state's board of examiners in psychology offers a credential for practice in the settings under its jurisdiction, typically all nonschool settings. In some states these two agencies have overlapping authority to issue credentials. These agencies issue either a certificate or a license to practice.

### Growth and Current Status

The rapid development of the field is observed in the growth in the number of practitioners, organizational developments and memberships, expansion of professional literature, and the importance of professional regulation through accreditation and credentialing.

**Number of school psychologists.** School psychology has seen enormous growth since the 1950s.

Whereas there were only 1,000 people in the field in 1950, the number of practitioners grew to 5,000 by 1970, 22,000 by 1990, and to at least 25,000 by the early twenty-first century. Female representation among school psychologists rose from about 50 percent in the 1960s to 70 percent in the early twenty-first century. Minorities comprise less than 10 percent of the work force.

**Organizational representation.** The field of school psychology is represented at the national level by the NASP and by the Division of School Psychology within the APA. The NASP's membership is approximately 22,000, whereas that of APA's Division of School Psychology is about 2,500. Each group holds an annual convention, provides products and literature for its members, and advocates for school psychology according to its policies. Each state has a NASP-affiliated association that provides similar services. These associations are generally independent of the state's APA-affiliated psychology association, although in some states the school psychology association is a part of the state psychology group. There may also be local and regional groups of school psychologists that affiliate with the state groups.

**Literature.** Two journals specifically for school psychologists were founded in the 1960s: *Journal of School Psychology* and *Psychology in the Schools*. Additional journals for school psychologists in North America include *School Psychology Review*, *School Psychology Quarterly*, *Canadian Journal of School Psychology*, and *School Psychology International*. School psychologists also subscribe to related journals (e.g., *Journal of Psychoeducational Assessment*, *Journal of Clinical and Consulting Psychology*, *Exceptional Children*). State and national associations provide newsletters and other publications. Books specific to school psychology date to 1930, but most have been published since 1960.

**Employment and salaries.** There is a shortage of practitioners in almost every state. Opportunities for employment are greatest in urban and rural school districts, as well as in academic settings. Suburban school districts also have many job opportunities.

Salaries have followed inflation for several decades. According to Daniel J. Reschly, the median salary of NASP members was in the \$35,000 to \$40,000 range in 1990 and in the \$48,000 to \$50,000 range by the late 1990s.

**Future perspectives.** Demand for school psychologists is expected to outweigh supply indefinitely.

School settings will continue to be the primary practice locale, though job opportunities will be plentiful in other settings. Employment opportunities in training programs for persons holding doctoral degrees will be very attractive. Salaries will continue to increase at a gradual but steady rate.

Traditional practice roles will persist although the technical adequacy of test and intervention techniques will improve. The specialist level of training will continue to be the entry level for practice in school settings, but doctoral training will increasingly be expected in other settings. The number of training programs is not likely to rise by any significant extent, but more doctoral programs are expected to be established, especially in freestanding schools of professional psychology.

Credentialing for school-based practice will continue to be regulated by the state departments of education, most of which will continue to require nondoctoral training. Credentialing for nonschool practice will continue to be regulated by state boards of psychology, granting credentials mainly at the doctoral level, with increasing expectations for postdoctoral training.

The importance of diversity in school psychology training and practice will be a priority. Female representation among school psychologists may grow to 80 percent. The recruitment of males and minorities of either gender will become increasingly important.

**See also:** EDUCATIONAL PSYCHOLOGY; GUIDANCE AND COUNSELING, SCHOOL; PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES; SCHOOL-LINKED SERVICES, *subentry on* TYPES OF SERVICES AND ORGANIZATIONAL FORMS; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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## PTA

See: NATIONAL PTA.

## PUBLIC EDUCATION, CRITICISM OF

Despite several decades of reform, public education in the United States is criticized by some as not teaching all children effectively. Consistently poor test results and low graduation rates attest to this. As a result, many taxpayers criticize public schools and demand better results. At the same time, many Americans express a deep faith in the ability of public education to address the needs of the greater society.

There are five issues that cloud the public's perception of the public schools and fuel criticism.

While more than five issues could be identified by the public—who consistently rate the performance of schools as less than optimal—these are central issues found in schools across the country. Two of these issues are long-standing characteristics of the public education system: inequality of opportunity and the burden of bureaucracy. Two are highly debated, more recent movements that attempt to address these characteristics: achievement-based outcomes and school choice. The fifth issue concerns how these movements contribute to American public education reform.

### Inequality of Opportunity

Public education in the United States has long promised quality education for all children, regardless of ethnicity, race, or income. However, critics of public education argue that many children do not have equal opportunities to learn and are not likely to attend a quality school. In fact, critics suggest that the education system perpetuates poverty and disadvantage, providing rich and poor schools with stark contrasts in learning environments and physical surroundings. Impoverished neighborhoods typically house run-down schools with less money and poor conditions, while affluent neighborhoods house newer and safer schools providing better learning environments. Furthermore, ethnic minority students are more likely to attend the lower-quality urban schools. While there have been many efforts to improve this inequality of opportunity, such efforts are only the first step in achieving equity, even with millions of dollars invested in federal programs.

Since the 1950s, federal compensatory education efforts have tried to achieve equity in education with programs such as Head Start, giving preschoolers from low-income families a chance to start kindergarten at the same level as their middle- and upper-class peers. Other major federal policy efforts created categorical programs—such as Title I, bilingual education, and special education initiatives—to promote equity for children with economic disadvantages, language barriers, and physical or mental disabilities.

A groundbreaking federal commitment, the Elementary and Secondary Education Act of 1965, and subsequent amendments, supports education achievement and equity by providing federal funds to states and school districts. The Bilingual Education Act (1968), the Education for All Handicapped Children Act (1975), and Title IX (1972), which re-

moved barriers to women in education institutions, also serve as examples of early and sustained commitments by the federal government to achieve equity in schools.

Data from the National Assessment of Educational Progress (NAEP) reports that 63 percent of fourth graders perform at only basic, or below basic, levels in reading. Sixty-nine percent perform at these levels in mathematics. African-American, Hispanic, and Native American fourth graders perform consistently lower than their white counterparts. Furthermore, schools in the United States fail to teach higher-order skills to about half of the student population. And once again, this “bottom half” comprises primarily the poor and ethnic minorities.

The inequalities of access to quality schools and achievement of children in public schools have been the source of years of debate and millions of dollars in programs attempting to achieve equity for all students. Yet, as shown above, critics of public education cite ample evidence that inequality and inequity exists and that little has been done to level the playing field. NAEP data, however, does show that the gap in reading and mathematics between white students and their African-American and Hispanic counterparts narrowed between 1973 and 1999 at all grade levels.

### Highly Bureaucratic Systems

Critics of American public education argue that the United States is unable to educate all children effectively, partly because of the highly bureaucratic nature of its governance structure. Attached to most federal government funding are layers of rules burdened by paperwork and regulation; thus, federal programs become difficult to implement or change. This institutionalized problem of excessive bureaucracy shuffles funds and responsibility around to various bodies and, in the case of public education, shifts the responsibility of academic achievement onto parents, administrators, teachers, and students. The result of public education being tied to the agendas of so many stakeholders—voters, politicians, school boards, administrators, teachers, unions, parents, and students—has been fragmentation and lack of control, leaving the public to wonder who has the authority in the system.

The same burden of bureaucracy also exists at the state, district, and school level. Critics assert that oversight of public schools is unnecessarily heavy.

The state boards of education and administrative regulation by state departments of education add yet another layer to the policymaking process. Locally, elected school boards attempt to maintain the mission and vision of the district, yet they are often accused of micromanaging and adding layers of bureaucracy. District administrations, with central authority over the schools, are often fighting for control with the school boards.

One way to decrease bureaucracy is to decentralize control to the district or site level, known as *site-based management*. Not only will bureaucracy decrease when control is local, say proponents, but administrators, teachers, and the community will have a greater influence on the needs of their children, as well as strategies to serve those needs. Another way to lessen bureaucratic weight is to add competition and choice in public schools through charters and vouchers. Advocates of school choice believe, among other things, that some of the bureaucratic burden causing inefficiency and ineffectiveness will be lifted when schools are run more like businesses and parents can choose their children’s schools—more like consumers. Yet, these ideas of choice and localized control meet resistance from the education establishment, who often argue that maintaining and adding to current practices is the best bet for improving public education. This resistance to change also fuels criticism from the public.

### Achievement-Based Outcomes

To ensure students are mastering the skills necessary to successfully enter either the workforce or institutions of higher learning, measures of academic success have emerged. Most indicators come in the form of standardized tests, administered at several grades throughout elementary and secondary school. NAEP state performance indicators have confirmed that students are not learning and succeeding at the level expected by parents, taxpayers, and policymakers. In addition, some critics regard these high-stakes tests as unfair, citing data showing cultural bias against students from low-income families and racial/ethnic minorities, who often perform lower in these measures. However, most racial and ethnic subgroups of children have improved their scores over time, performing better on mathematics, reading, and science measures. Nevertheless, the gap in achievement, measured by these widely used tests, causes critics to blame the public education for failing to teach students.

Indicators of achievement on mathematics and science, such as the Third International Mathematics and Science Study (TIMSS) comparison of students in the fourth and eighth grades from forty nations (and twelfth-grade students from twenty nations), have revealed that the overall achievement of students in the United States is low compared to students in other industrialized nations. Twelfth graders in the United States were outperformed by fourteen of twenty nations in mathematics and science, according to TIMSS results, initiating a flurry of debate and concern nationwide about public education. Others have debunked criticisms of achievement in the United States based on TIMSS data since cross-national comparisons do not consider the dramatically different student diversity and pluralism in America and the varying governance serving its diverse population. Still, the aftermath of TIMSS resulted in government pressure on students to enroll in more difficult math and science classes, and also forced the nation to reevaluate its place among competing nations in the global economy. Despite all of this concern about students and their ability to perform in the economy of the early twenty-first century, data from 1990 to 2000 showed steady economic growth in the United States, the strongest in several decades, in fact.

State-level accountability systems have emerged across the country during the 1980s and 1990s. These systems include rules for state-administered standardized tests and curriculum standards for all grade levels. In these accountability systems, some states reward students, teachers, and school and district leaders for improving academic achievement. Part of the criticisms came when leaders had difficulty implementing these systems of accountability, often due to having standards not aligned with tests and curriculum not aligned with standards. Efforts to improve these disparities and ultimately improve achievement outcomes have been slow to show results. For example, experts continue to change the measures themselves, putting teaching strategies and curriculum used to teach them in constant flux. In addition, where schools are consistently performing very poorly on high-stakes tests, the state intervenes by way of sanctions or takeover of the school or district. Critics say these interventions and accountability systems are presented with little evidence of their likelihood to positively change the system. Seldom are these changes backed with research-based rationale.

## School Choice

Many believe competition among schools can solve the problems of poor student achievement, inequity, and government bureaucracy. Since the 1990s, school choice has gained enormous momentum, providing a variety of enrollment options for children, such as charter schools, voucher programs, district/school open enrollment, and tax credits/deductions. Advocates of school choice feel that when parents become consumers of education, schools will compete, forcing public schools to improve student academic performance or risk closure. They also believe that public schools are unable to reform successfully because of too much government oversight. Critics of school choice argue the lack of a monitoring mechanism will mean far less accountability with no guarantee that all children are learning basic skills. Others challenge the constitutionality of some choice programs, arguing that including religious schools in a choice program—particularly when vouchers with public funds are involved—violates the separation of church and state. A brief description of each of the various school choice options follows.

**Charter schools.** Charter schools are independent public schools formed by communities, and they are therefore relatively free from state and local laws and regulations. The school operates under the framework of a contract, or *charter*, established by the parents, businesses, and the community the school serves. Less controversial than vouchers, charter schools and their enrollment have grown tremendously since 1994 when Congress authorized the Public Charter School Program through Title X of the Elementary and Secondary Education Act. Since 1991, thirty-seven states have passed charter school legislation. Although there is some evidence that charters may improve academic achievement, the research is mixed. Early studies cited higher achievement for some groups in some grades when compared to conventional schools, as well as lower achievement for others.

**Vouchers.** Vouchers are public funds given to families and organizations to provide tuition for children at any public, private, or parochial school they choose. Advocates of voucher programs say they expand options for low-income parents. Critics claim that vouchers divert public funds away from already ailing public schools and into private and religious institutions. Furthermore, they argue that vouchers “skim” off the best students, thereby further stratify-

ing and segregating schools. Moreover, legal disputes related to the constitutionality of vouchers pervade state and federal courts. Capacity and cost are two major barriers to the implementing of a sound voucher program. While there is a demand for school choice, the supply of schools and their capacity to enroll additional students depend on their ability to expand, which adds to teaching staff, class size, and administrative faculty. In addition, private schools vary widely in their tuition costs. Because vouchers are given based on state per-pupil expenditures, many families may still have to pay significant costs to send their children to the school of their choice, and many families will be unable to afford to send their children to the school of their choice.

**District/school open enrollment.** Sometimes referred to as intradistrict/interdistrict choice, District/school open enrollment allows families to choose a school in their area other than the one the student was assigned, dependent on availability of space. Open enrollment laws can be either mandatory or voluntary.

**Tax credits/deductions.** Tax credits and deductions allow families to recoup money on their taxes spent on private education costs, including tuition, textbooks, transportation, and other direct school expenses. Since these deductions can only be taken after the money is spent, through deductions of taxes owed, many low-income families are not able to participate.

A strongly debated issue, criticisms of school choice come from many angles. Some criticisms have been aimed at the idea of competition among schools in general, while others criticize those in the system who are opposed to this promising effort to improve education for many American children.

### Reform after Reform

As educators and legislators continue to believe in the power of change through education reform, dollars will be spent on one innovative idea after another to improve academic performance, efficiency, or other structural characteristics of the schools. American public education has, since 1980, endured reform after reform, with few reforms sustained over the long-term, and little to show for the effort except frustration and lack of clarity in the mission of the reforms. Instructional reforms (e.g., whole language vs. phonics instruction in reading), pedagogical reforms (e.g., constructivist vs. direct instruction), and

management reforms (e.g., centralized decision making vs. site-based control) create a *reform build-up* in schools and districts. Even after years of reforms, some assert that classroom practices have changed very little. Yet, states, districts, schools, and classrooms have periodically seen positive outcomes from their reforms. This often results in countless efforts to replicate success stories when the context may not be conducive to the same effects. Research shows that effective reforms are gradual and incremental, suggesting that change and reform is a step toward progress, not progress itself. Educators and reformers are then charged with the task of asking the public to be patient in seeing results. Too often, this reform build-up creates doubt and mistrust among those inside and outside of the system.

Public education in the United States has historically been both the panacea for societal ills and the target for criticism and disapproval. For every critic pointing out the failures of the system, there's a success story to be told that outlines the progress public education has made. Given the many failed reforms and less than successful attempts to create a more equal and fair system, there is no evidence that eliminating the entire system would improve the system or halt any criticisms. Instead, like every other institution in America, educators, policymakers, and reformers learn from the mistakes of the past and continue to pave new ways of helping students learn and succeed.

**See also:** ASSESSMENT; INTERNATIONAL ASSESSMENTS; SCHOOL-BASED DECISION-MAKING; SCHOOL REFORM; TESTING.

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## PUBLIC SCHOOL BUDGETING, ACCOUNTING, AND AUDITING

The three major financial functions in education—budgeting, accounting, and auditing—are separate, discrete operations, but they are nonetheless closely interrelated. They are required activities in providing reliable fiscal information, guidance, and accountability in the use of the \$365 billion raised and

expended in 2001 on preschool through grade twelve public education in the United States. Budgeting is a process and plan for determining how money is to be raised and spent, as well as a document—the budget—developed and approved during the budgeting process.

Money is organized and spent according to an accounting system, using a general ledger that standardizes each spending category and accounts for its use. The National Center for Education Statistics published the *Financial Accounting for Local and State School Systems*, commonly called *Handbook II, Revised* (1990), by William J. Fowler. *Handbook II, Revised* is an accounting system with line codes for each category and function to make it easier for external agencies to analyze and audit school spending to ensure the legal and appropriate use of public funds.

### Budgeting

William Hartman, author of *School District Budgeting* (1999), defines education budgeting as a "working tool" for the successful operation of states and local school districts, and as a "significant opportunity to plan the mission, improve their operations, and achieve their education objectives" (p. 1). As such, the budgeting process allows various levels of government to "make better financial and program decisions, improve operations, and enhance relations with citizens and other stakeholders" (National Advisory Council on State and Local Budgeting, p. 2).

In more technical terms, a budget is a statement of the total educational program for a given unit, as well as an estimate of resources necessary to carry out the program and the revenues needed to cover those expenditures. A *vertical budget* includes the various income and expenditure estimates (by line item, function, object, and cost center) in a given fiscal year, while a *horizontal budget* will include current estimates for a given fiscal year, compared to prior audited income and expenditures, and a projection of costs into the future. Hence, the budget is a statement of purpose and a review of income and expenditures by function—with a timeline to explain past, current, and future financial practices.

Education agencies, like businesses and other enterprises, have experimented with various forms of budget organization: line-item and function/object budgeting are basic to all systems; and plan-

ning-programming-budgeting systems, zero-based budgeting, and site-based budgeting are attempts to link the budget to goals and objectives while devolving the budgeting process to the school level.

**Line-item budgeting.** Barry Mundt et al. define line-item, or “traditional,” budgeting as “a technique in which line items, or objects of expenditures—e.g., personnel, supplies, contractual services, and capital outlays—are the focus of analysis, authorization, and control” (p. 36). While helpful in tracking costs, line-item budgeting is virtually useless for planning or management, since the functions of the expenditures are not explained and the particular need, school site, and type of students being served are lost in spending aggregated by “line.” Thus, *teachers’ salaries*, for example, is a budget line-item; but which teachers, at which schools, teaching which types of students (e.g., bilingual special needs) is not explained.

**Function/object budgeting.** Most districts use function/object budgeting, since it organizes spending around the basic functions of the system, such as instruction, student support, operations, administration, and transportation. In addition, functions are subdivided (e.g., into elementary instruction, high school operations), while the object being purchased (e.g., elementary textbooks, high school cleaning equipment) is also specified. Personnel services or salaries and benefits may be handled by function; that is, for instructional, support, or plant maintenance staff, for example.

While these broad categories, objects, and processes are generally the same for education budgeting across the country, a strategic attempt has also been made to determine the most effective and efficient uses of resources. These efforts have led to such innovations as zero-based, program-planning, and site-based budgeting, which attempt to be more mission-driven and constituent-friendly than traditional types of budgeting in education.

**Zero-based budgeting (ZBB).** Popular in the 1950s and 1960s, ZBB began with the assumption that the school system starts out yearly with a “clean slate.” Thus, each function, program, and agency has to justify its expenditures annually, relating all costs to system goals and objectives to avoid habitual spending. Because so many costs, such as tenured teachers’ salaries and benefits, are “fixed” across annual budgets, and because the programs are so complex, zero-based budgeting becomes more an exercise

than a practical reality. As Hartman explains, “ZBB . . . forces comparisons of and choices among programs and activities that are often difficult to compare adequately” (p. 49). In addition, most programs are not “up for grabs” on an annual basis, since, for example, schools cannot eliminate their elementary school classes, making such a requirement difficult to justify.

**Program-planning-budgeting systems (PPBS).** Used by the U.S. Defense Department during the Vietnam War, PPBS seek greater efficiency by attaching spending to particular programs (e.g., the development of a new multipurpose fighter jet aircraft that might be used jointly by the Army, Navy, and Air Force—thus saving costs, but failing, in fact, to meet the needs of any of the armed services very well). While rarely used in education, PPBS would require school districts to spell out their mission and goals, lay out alternatives to reach these objectives, attribute costs to each choice, analyze the costs, select the best option, and then build the budget around this outcome, and finally feed data back to adjust the costs to the results. While this method sounds ideal, it often becomes so complex, and the programs so numerous, that school districts and states cannot readily sustain this approach.

**Site-based (school-site) budgeting (SBB).** SBB is concerned with who will do the budgeting and where in the organizational hierarchy the decisions will be made. In attempts to bring the budgeting process closer to “end-users”—the teachers, parents, and school administrators—SBB encourages, if not requires, decision-makers in each school to examine their programs and to set their budgets to meet their particular needs as part of the process of shared decision-making. Allan Odden et al. explain that school reform may require greater decentralization, a step “in which teams of individuals who actually provide the services are given decision-making authority and held accountable for results” (p. 5). Under site-based budgeting, districts must determine who will serve on SBB committees; which decisions and resources are devolved to schools—and using what formulas; how much autonomy is granted to spend for local school needs; exactly how to analyze the budget at each school; and what training and support are needed to make SBB work effectively.

In practice, school districts or divisions thereof will utilize variations of many, if not all, of the above methods in compiling their budgets. For example, a school principal may require teachers to justify their

individual budget requests (zero-based) in the development of a school (site-based) budget. A component of the district's budget may include a proposal for a new educational program, including all anticipated expenditures, revenues, and cost savings (program-planning budget). The entire district budget may be compiled onto a state-mandated format that requires line items to be categorized by fund, function, program, and object (function/object budgeting). Once the fiscal year begins, the budget is transformed from a financial plan into the initial baseline data for a working, dynamic financial accounting system.

### Accounting

Related to budgeting is the accounting system. If a school district's budget is a financial reflection of its educational mission, goals, and philosophies, then the accounting system becomes the method by which a district can assess the overall effectiveness of the financial plan. In fact, the accounting structure (line items, spending categories, costing and spending procedures) is reflected in the budget, and will later be used in auditing the system for legal, appropriate, and responsible spending.

David Thompson and Craig Wood explain five purposes for the use of accounting in schools. The first purpose is to "set up a procedure by which all fiscal activities in a district can be accumulated, categorized, reported, and controlled" (p. 111). The second function is to assess the alignment of the district's financial plan (budget) with the district's educational programs. An accounting system allows the district's management to assess whether a district has the financial resources to meet the needs of its programs.

The third function relates to the state and federal reporting requirements to which school districts must adhere. States have the constitutional authority for the provision of education, and, as such, they bear the final responsibility for fiscal accountability. Likewise, federal funds are distributed to local districts—through the states—and require adequate accounting and reporting procedures. These reporting requirements have led to the development and adoption of uniform budgeting procedures and accounting standards. The Governmental Accounting Standards Board (GASB), operating under the auspices of the Financial Accounting Foundation (FAF), is responsible for the establishment and revi-

sion of Generally Accepted Accounting Principles (GAAP) for local and state governments.

One significant difference in the utilization of GAAP for school districts and GAAP for private business is that school districts utilize fund accounting that classifies spending into three broad fund categories: governmental, proprietary, and fiduciary. Governmental funds represent those activities typical of district operations such as instruction, special revenues (grants), and debt service funds. Proprietary funds include those activities that are similar to private enterprise, such as food service and transportation funds. Fiduciary funds are utilized when the district is acting directly for a third party, including private trusts (scholarships), pension trusts, investment trusts, and agency (payroll) funds.

Budget preparation is the fourth purpose of accounting. By accumulating accurate baseline data, accounting provides the budget with the information necessary for a horizontal comparison (prior year, current year, and future annual revenues) of actual vertical (line-item) expenditures and budget performance. The fifth and final purpose of accounting, as proposed by Thompson and Wood, is to provide proper fiscal controls and accountability, which, in turn, build public trust and confidence.

Critics of the current system of accounting utilized in public schools have claimed that the collection and reporting of financial data no longer provides adequate information to policymakers. Jay G. Chambers asserts that the desire for programmatic cost information, the need for data compatibility, and the importance of understanding the relationship between educational inputs and outputs all point to the need for improving the standards for organizing and reporting educational resource data. To measure resources adequately in education, Chambers proposes a system that is related more to economics rather than accounting.

The *resource cost model*, which Chambers recommends, "places paramount importance on measuring productivity and the cost-effectiveness analysis, the economist's stock in trade" (p. 26). Several states, including Hawaii, South Carolina, and Rhode Island, have adopted another reporting tool that integrates with the existing GAAP accounting systems utilized at the school and district level. This financial analysis model allows expenditure data to be reported on a school-by-school basis and actually tracks dollars spent on the classroom for "classroom

instruction.” The reporting program allows policy-makers to “explore the equity, efficiency, and effectiveness of spending”(Cooper et al. 2001, p. 28) between schools as opposed to school districts.

Accounting is thus the tool by which school district management can structure, organize, and operationalize the district’s financial plan (the budget). Accounting also provides the roadmap by which fiduciary entities, such as board of education members, public citizens, and state government officials can evaluate a school’s financial status. In addition, school district accounting provides the necessary procedures and data to enable an independent, certified public accountant to conduct the district’s annual financial audit.

### Auditing

Since schools are public agencies, their raising and spending of money must be reviewed and audited on a yearly basis—and on an as-needed basis, as determined by the governing body. In addition, an effective management system would include internal reviews and audits on a continuous basis to ensure accuracy and prevent fraud. Thus, two broad categories of audits—external and internal—are important in holding schools accountable for the use of public funds.

An external audit is an objective, systematic review of resources and operations, followed by a written or oral report of findings. Robert E. Everett et al. (1995) define three basic types of external audits. *Financial compliance audits* address the “fairness of presentation of basic financial statements in conformity with Generally Accepted Accounting Principles (GAAP)” (p. 4). This type of audit is most commonly associated with the annual independent audit that most states require: namely, a Comprehensive Annual Financial Report (CAFR) to be prepared by the school district that conforms to standards developed by the Governmental Accounting Standards Board and state reporting requirements. It is the auditor’s responsibility to render an opinion of the financial statements contained in the CAFR, based on their audit of district records.

A *program compliance audit* is a review of a local education agency’s (LEA) adherence to the educational and financial requirements of a specific funding source, such as a discretionary federal grant. The third type of audit is a *performance audit*, which addresses the “economy and efficiency of the LEA”

(Everett et al., p. 4), examining an LEA’s internal controls for weaknesses, which would expose possible mismanagement or fraud.

Internal audits, on the other hand, are usually incorporated into a district’s internal control procedures, a system of checks and balances designed to ensure ongoing accountability by requiring certain members of the organization to perform a financial audit on an individual or department. For example, board of education members perform an audit each month on the financial statements submitted to them for their approval. The requirement of multiple signatures for the approval of a purchase order constitutes an internal audit of purchasing. The accounting or bookkeeping department may also perform an audit on the general ledger prior to closing the financial statements at the end of each month.

### Future Trends

The school finance system, with its budgeting, accounting, and auditing sub-systems, was designed to support the operation and improvement of public education. When a public budget is aligned to the needs and programs of the nation, state, district, or school; when the accounting structure is clear and well constructed to reflect the way money is collected and spent; and when the auditing process determines that money was managed legally and appropriately, then school should have the tools to use funds effectively, efficiently, and productively. With new technologies, a popular drive to improve the funding of education, greater interest in schools as the decision-making unit, increased privatization of education, and the growing influence of federal agencies in determining accounting and budgeting principles, the nation faces an interesting and challenging future in school finance. There are four key issues facing school finance: changing federal-state-local dynamics; privatization, expanding technology; and a move to funnel resources to students.

**Changing federal-state-local dynamics.** The drive to standardize accounting practices in education across the nation can lead to some interesting future developments. For example, in 1999 the General Accounting Standards Board (GASB), issued Statement 34, which requires, among other changes, that districts and states combine all funds that would account for their debt against the value of their monetary assets and fixed assets (e.g., land, buildings, and equipment). In some states, the balance between district assets and district debt is negative,

although presumably the ability of districts to borrow funds (backed by the relevant cities and state) will not allow school systems to go bankrupt. However, this subtle change in accounting requirements may have far-reaching effects for school districts, as their bond ratings may be affected negatively, thus limiting the amount of funds they may borrow for capital improvements. Future developments in budgeting, accounting, and auditing will see greater standardization as the levels of government work together to improve school spending, accountability, and performance.

**Increasing privatization of school provision.** Private provision of education, with public tax support, appears to be increasing. The number of charter schools, for example, has grown exponentially and U.S. President George W. Bush's national policies place "parental choice" and private provision as keys to school reform. As more and more public dollars are diverted to private providers—as a result of national, state, and local political decisions—the money will be placed into the hands of private organizations unaccustomed to the budgeting, accounting, and auditing in which public schools have developed expertise.

Further, the mingling of public funding and private (even for-profit) management will make budgeting-accounting-auditing systems even more complex, blurring the lines between public and private provision, funding, and accountability. As budgets are being approved by local school boards, for example, and funding is reaching individually-managed schools (i.e., charter schools), more profit-making corporations, such as the Edison Schools or Knowledge Is Power Program, will become part of the education budgeting-accounting-auditing process.

**Expanding technology and public awareness.** *Sunshine laws*, requiring that all official meetings in publication education be announced in advance and to open to the public, are converging with advances in technology, heightening the possibility of financial information becoming real-time data for public inspection. With computers, Internet accessibility, and growing public interest, one can assume that budgeting-accounting-auditing procedures will become more systematic, accessible, and transparent to stakeholders of education nationwide.

**Funneling resources to students.** The future will also include an increasing interest in school-site and

student-centered budgeting and accounting. Driven by interest in such devices as vouchers, whereby funding would be awarded to each student (family), future systems will include revising current budget and accounting models that link resources to students. Agencies as different as the State of Hawaii and the New York City Public Schools now account for spending by individual school, function, and program, creating greater interest in equity and productivity at the school and classroom levels. Whatever future financial structures U.S. schools adopt, the budgeting-accounting-auditing system will be required to plan, allocate, and hold decision-makers accountable for the enormous resources of the nation's largest public service: education.

*See also:* ACCOUNTING SYSTEMS IN HIGHER EDUCATION.

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## PUTNAM, ALICE (1841–1919)

A leader in the American kindergarten movement, Alice Putnam was a Progressive educator who trained many teachers and helped establish public kindergartens in Chicago. The daughter of Chicago Board of Trade founding member William Loring Whiting and Mary Starr, she was educated privately in a school run by her mother and sister, and at the

Dearborn Seminary. She married Joseph Robie Putnam, a businessman, on May 20, 1868, and became a Swedenborgian (members of a church basing its theology on the work of the philosopher and theologian Emanuel Swedenborg), like her husband. The mother of four children, she started a parents' group to discuss Friedrich Froebel's kindergarten pedagogy. Putnam then began a home kindergarten, a kindergarten organization, and a training school, and became involved in kindergarten and educational reform in Chicago and nationally. Although little known because of her self-effacing humor, Putnam was a major figure within the group of Progressive educators and social reformers whose radical ideas were the force behind child-centered education.

Putnam came by her interest in the kindergarten, one of the most successful and lasting of all Progressive reforms, through her concerns about the education of her two eldest children. The parents' group, which she began in her home in 1874, was made up of a dozen or so of her friends, including three men, and focused on Froebel's *Mother Play and Songs*, a book of finger plays, games, and songs intended for the home education of young children. Putnam then trained as a kindergarten teacher herself, at a school run in Columbus, Ohio, by Anna J. Ogden. In 1880, Putnam took over the training class Ogden had started in Chicago. Other influential kindergarten leaders, such as Anna Bryan (who revolutionized American kindergarten methods by including more activities based on children's actual lives) were trained by Putnam, who ran the class until 1910.

A model of the maternalistic, social housekeeping ideal in which women extended the private sphere of domestic caring to public good works, Putnam moved her training class to Hull-House, at the request of Jane Addams—the founder of the settlement that was the seedbed for so many progressive reforms. For seven years, Putnam commuted between her home on Chicago's suburban West Side to the South Side slum where Hull-House was located, and did fundraising to support the Children's Building at Hull-House. John Dewey was a frequent guest lecturer at Putnam's training school, and gained some of his knowledge about educational methods from her.

In 1880 Putnam's original parents' group became the Chicago Froebel Association, which further promoted the kindergarten cause. By this time the kindergarten movement was becoming faction-

alized into a conservative Froebelian, a progressive American, and a more radical scientific wing. Although she received training from Susan Blow in St. Louis and from Maria Kraus-Boelte in New York City, both traditional Froebelians, Putnam's pragmatic attention to the needs of her own children and those of other parents from different backgrounds had a liberalizing, stabilizing effect. Later, in 1901, Putnam became president of the International Kindergarten Union, the group that tried to mediate dissension within the kindergarten movement.

A strong believer in civic pride and stewardship, Putnam expanded her kindergarten work to serve the city of Chicago as a whole. In 1886, under Putnam's auspices and with the permission of the Chicago Board of Education, the Chicago Froebel Association began a kindergarten housed in a public school. By 1892, when the association successfully petitioned the school board to adopt the kindergarten, there were twelve private kindergartens in public schools. These classes were incorporated into the public system, as was usual in the transition from charity to public kindergartens. This evolution of private good work into public services, through the advocacy and support of energetic individual leaders or private foundations, was a hallmark of the establishment of social welfare programs in the United States, an endeavor in which Putnam played a major role in the city of Chicago.

Like many Progressives, Putnam was influenced by the growth of the new science of child psychology. In 1894, Putnam, along with a number of other charity, or "free kindergarten," directors, attended G. Stanley Hall's Clark Summer School of Higher Pedagogy and Psychology in Worcester, Massachusetts. There she was introduced to Hall's experimental child study methods and participated in educational research. Hall asked Putnam and her former student, Anna Bryan, to design a special kindergarten survey, or *topical syllabus*, that was sent out to kindergarten teachers' to find out their views on subjects such as hygiene, music, and stories. Putnam's and Bryan's questions about whether teachers felt free to deviate from Froebel's formal educational routines showed how American kindergarten teachers were beginning to modify his sequenced educational materials, or "gifts," and handwork "occupations." Unlike younger modern kindergarten leaders such as Patty Smith Hill, who became closely allied with developmental psychology, Put-

nam continued to focus on children primarily from the perspective of family life.

Putnam's personal, practical motivation and lack of dogmatism won her great respect within the kindergarten movement. She worked especially closely with Elizabeth Harrison, who shared Putnam's interest in parent education and was also a moderate within the kindergarten movement. In 1883 Putnam and Harrison started the Chicago Kindergarten Club, which many affluent mothers joined along with their children.

In addition to her kindergarten leadership, Putnam was a key member of the group of educational Progressives who made turn-of-the-twentieth-century Chicago a hotbed of social reform. Putnam was directly responsible for getting Francis Parker, one of the main architects of child-centered progressivism, appointed to the principalship of the Cook County Normal School. Eagerly open to new educational ideas, Putnam had attended a summer school that Parker had held on Martha's Vineyard, where she learned about Parker's Quincy Method, in which reading and language arts were integrated with other subjects. Always seeking to combine her private and public life, Putnam moved her family to a house near Cook County Normal School, so that her three daughters could attend the laboratory school attached to the school. Putnam herself taught a kindergarten class at Cook County Normal School for some years and was the kindergarten trainer there. She joined with other pedagogical progressives, such as John Dewey and Ella Flagg Young, who clustered around Parker and helped spread Dewey's child-centered educational philosophy. Dewey was a frequent lecturer in Putnam's training classes.

A woman of affluence and intelligence with little formal education, Alice Putnam had a great impact on the kindergarten movement and on Progressive education through her own ideas and work and through the way she supported and connected other educators with differing views and backgrounds. She wrote articles, some of which appeared in the *Kindergarten Review* and other kindergarten publications; gave speeches, some of which were published in *National Education Association Proceedings*; and maintained a voluminous correspondence. In 1906 she began teaching two correspondence courses at the University of Chicago, "The Training of Children (A Course for Mothers)" and "Introduction to Kindergarten Theory and Practice." Putnam designed this coursework to inform parents and teach-

ers about how children's learning could be integrated with children's lives, the central theme in Putnam's educational thinking. Putnam's work as a parent educator and kindergarten teacher, trainer, and leader and her involvement with Progressive education in Chicago had an important impact on the shift from subject-centered to child-centered pedagogy that was, and remains, the central dividing issue in American educational philosophy and methods.

*See also:* EARLY CHILDHOOD EDUCATION; FROEBEL, FRIEDRICH.

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BARBARA BEATTY

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## RACE, ETHNICITY, AND CULTURE

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### CULTURAL EXPECTATIONS AND STUDENT LEARNING

Jerome E. Morris

### LATINO GROWTH

David E. Hayes-Bautista

### RACIAL AND ETHNIC MINORITY STUDENTS IN HIGHER EDUCATION

Shederick A. McClendon

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## CULTURAL EXPECTATIONS AND STUDENT LEARNING

Students learn—whether in school or out. Of significance for the educational and scholarly communities is the extent to which certain kinds of learning are conducive to mainstream academic achievement within the context of formal educational institutions. The presumption is that a student's ability to acquire mainstream academic content and then demonstrate mastery of the content (often defined as learning and usually measured by standardized assessments) will lead to greater knowledge and to social and economic benefits in the dominant society. In multiracial and multiethnic societies such as the United States, a pressing issue is the various ways in which race, ethnicity, and culture might influence student learning in formal educational settings. This concern emanates from the fact that scores of students from some racial and ethnic minority groups do not "achieve" in schools at rates comparable either to those of European-American students or to those of students from other racial and ethnic minority groups. In order to examine how students'

race, ethnicity, and culture might influence learning, however, one must first examine the assumptions that underlie these concepts.

Race is not a biological category but a social construction that is given meaning and significance in specified historical, political, and social contexts. Historically, race has been predicated on phenotypic characteristics that mark "racial differences" in order to legitimate prejudice and discrimination on the basis of these supposed differences. As noted by Michael Omi and Howard Winant in their influential book *Racial Formation in the United States* (1994), the formation of race is social and historical in nature. At the dawn of the twenty-first century, most within the scholarly community no longer use biosocial terms such as *race* and embrace *ethnicity* instead. In the United States and Europe, ethnicity is commonly associated with membership in a non-dominant group (not of predominant European ancestry) and is perceived as constituting a different culture—in terms of language, style of dress, political consciousness and worldview, foods, music, and so on—than that of the dominant group. Membership status within ethnic groups can sometimes be negotiated, situational, or optional, particularly for some white ethnics. In comparison to the concept of race, ethnicity is a mutable and more flexible category.

Embracing ethnicity in place of race has shifted the discourse around human difference from one that is biological in nature to one that is greatly shaped by nurture, culture, and historical experiences. The change in terminology, however, does not automatically change the privileges and social disadvantages of being identified and categorized as a member of a particular group. Historically, such

identities and categories shaped a number of theoretical perspectives that attempted to explain academic school success or failure among various groups of students. While these perspectives are chronologically outlined below, the fact that one particular paradigm was the dominant paradigm during a particular time period does not mean that other (and equally convincing) paradigms did not also exist. Nor does it mean that theories that once predominated are no longer appropriated as explanatory models.

### Theoretical Explanations of Differing Academic Achievement and Learning

Of the proponents of different theoretical perspectives used to explain student achievement, the ones that have provoked the greatest degree of controversy—the geneticists—place ethnicity and race at the center of their thesis. In general, geneticists view race as static and as a major determinant of one's intellectual capabilities.

**Geneticists.** The geneticists consider the differences in academic achievement among various groups of students (often measured by test scores) as indicative of the innate intelligence of certain groups, rather than a product of socioeconomic, historical, and cultural factors. During the first half of the twentieth century, geneticists such as Lewis Terman and Henry Goddard considered the low performance on intelligence tests of some racial, ethnic, and linguistic minorities to be a reflection of these groups' genetic inferiority. These theorists attempted to "prove" that some European ethnic minorities (Jews, Hungarians, Italians, and Russians) and Native Americans, Mexican Americans, and African Americans were inferior. This perspective, however, did not go unchallenged. African-American social scientists, in particular Horace Mann Bond, W. E. B. Du Bois, and Allison Davis, critiqued the studies that tried to prove African-American intellectual inferiority. Nevertheless, remnants of this belief continue to germinate within the academy, as exemplified by Richard J. Herrnstein and Charles H. Murray's 1996 book, *The Bell Curve*. For instance, in this book the authors assert that a major reason why some groups in society today do not achieve in schools might be connected more to rank-and-file notions of intellectual inferiority than to persistent economic, structural, cultural, and historic forces.

**Cultural deprivation.** Emanating out of the thrust to eradicate poverty in the United States and reject-

ing the geneticists' arguments, cultural deprivation theorists during the 1960s viewed academic differences on standardized measures as a result of nurture—or lack thereof—rather than nature. Proponents of cultural deprivation theories attributed the academic failure among some ethnic and racial minorities to the failure of some students' families to transmit the values and cultural patterns necessary for the students to achieve in mainstream academic institutions. The deprivation paradigm guided the formulation of most programs and pedagogies for low-income populations during the 1960s such as Head Start and other compensatory educational programs.

Considered enlightened during its time, cultural deprivation theorists believed that schools should assist low-income and racial and ethnic minority students in overcoming deficits caused by their families and communities; the best time to intervene was early childhood. A landmark Research Conference on Education and Cultural Deprivation convened in Chicago, Illinois, in 1964 and included participants such as Benjamin Bloom, Erik Erikson, Edmund Gordon, and Thomas Pettigrew. Influential books that focused on addressing the needs of the "culturally deprived" included *The Culturally Deprived Child*, by Frank Riessman, published in 1962; *Education in Depressed Areas*, edited in 1963 by A. Harry Passow; and *Compensatory Education for Cultural Deprivation*, edited in 1965 by Benjamin Bloom, Allison Davis, and Robert Hess.

**Cultural difference and learning styles.** Also during the 1960s, anthropologists began to challenge cultural deprivation theories by positing an alternative view of the academic failures of ethnic and racial minority students. This new group of theorists argued that the extent to which students learned or did not learn in schools reflected the cultural differences of the groups, which were either congruent with or incongruent with the dominant culture of schools. Building on this view, sociolinguists during the 1970s followed by asserting that differences in culture resulted in cultural and linguistic conflicts between students and their teachers, many of whom were white. This shifted part of the discourse from the notion that some groups' cultures were deficient toward the notion that cultures varied. An assumption, therefore, was that racially and ethnically diverse students' learning could be enhanced if there was cultural congruence or synchronization between the home and the school, and if the schooling expe-

riences resonated with the unique cognitive or learning styles and cultural patterns of students.

Examples of the scholarship that documented this variation among cultures include Manuel Ramírez III and Alfredo Castañeda's 1974 book *Cultural Democracy, Bicognitive Development, and Education*, which describes Mexican-American students as field-dependent learners, in comparison to white students who are described as field independent. Native American and African-American students are also considered field-dependent learners. The research on African-American students' cognitive styles has generated much debate in the scholarly community. Significant scholarly contributions include Janice Hale-Benson's 1986 book, *Black Children: Their Roots, Culture, and Learning Styles*; Barbara J. Shade's 1982 article, "Afro-American Cognitive Styles: A Variable in School Success?"; and A. Wade Boykin's 1986 chapter, "The Triple Quandary and the Schooling of Afro-American Children." In general, these scholars assert that the instructional strategies used in schools do not work well with African-American students, and consequently, many do not experience academic success. Teaching strategies proposed to increase students' academic achievement include creating settings that are conducive to their learning styles such as cooperative environments, informal class discussions, a focus on larger concepts, and the de-emphasis of competition. Nevertheless, while these scholars find great value and potential in the research into learning styles for enhancing the achievement of students from diverse cultural backgrounds, Jacqueline Jordan Irvine and Darlene Eleanor York, in their exhaustive literature review from 1995, "Learning Styles and Culturally Diverse Students: A Literature Review," cautioned against using this body of research to automatically categorize students' styles of learning primarily on the basis of cultural characteristics.

Nevertheless, the cultural difference view of students' schooling experiences will remain a viable explanation because of an increasingly heterogeneous student population in which nonwhite students accounted for more than 30 percent of the school-age population at the end of the twentieth century. On the other hand, the teaching force in the United States is more than 90 percent white. Whereas proponents of the cultural difference paradigm would not assume that all white teachers are unable to teach these students, they would, however, continue to assert that for some students, this imbalance fos-

ters the kind of cultural incongruence that leads to school failure. The curriculum and the school environment serve as major areas in which this incongruence becomes manifested.

**Multicultural perspective.** With roots in the ethnic studies movement of the 1960s, multicultural education and cultural-centered approaches suggest infusing a multicultural ethos into schooling experiences, so as to reaffirm the social, cultural, and historical experiences of students from diverse cultural backgrounds. Though varied in the extent of the infusion and the scope of their critique of mainstream education, in general, multiculturalists such as James A. Banks, Geneva Gay, and Carl Grant, as well as proponents of ethnic-centered paradigms such as Molefi Asante (an advocate of Afrocentric education), assert that the European-American culture of schools distorts the history, culture, and background of students from non-European backgrounds. They note that the knowledge that school officials and society expect children to acquire often invalidates these students' cultural experiences. These scholars believe that an infusion of multicultural education and/or cultural-centered education can be part and parcel of the solution to improving the academic achievement of students from these diverse cultural backgrounds. They propose teaching students in ways that are culturally synchronized, culturally centered, empowering, and culturally relevant. This infusion would move beyond an additive approach and would transform the entire schooling experiences for students. Published sources that capture the arguments and critiques of multicultural and cultural-centered education include *Multicultural Education: Transformative Knowledge and Action*, edited by Banks and published in 1996, and *Handbook of Research on Multicultural Education*, edited by Banks and Cherry A. McGee Banks and published in 1995.

**Structural explanations.** Still another view subscribes to the notion that larger societal forces are key determinants of student learning, as are the cultural forces within a particular ethnic or racial community. For example, this view asserts that race, ethnicity, and culture are more likely to predict what educators and schools expect of students, rather than whether students will learn and achieve in schools. Proponents of this view note how some educators often create a self-fulfilling prophecy in relation to students from diverse racial and ethnic backgrounds: Teachers' expectations of students

greatly shape student learning and achievement. Structural inequalities that can have deleterious consequences for students' learning may entail the limited access to knowledge and resources, the systematic denial of formal schooling, state-sanctioned discrimination, and gross disparities in the level of school funding. Moreover, proponents of this view assert that contemporary examples of structural inequalities include differential levels of quality teaching for some students, as well as the disproportionate placement of some racial and ethnic minority group members into the lowest academic tracks. African-American and Latino students are disproportionately placed in lower academic tracks, in comparison to white and Asian students. Jeannie Oakes's book on academic tracking, *Keeping Track: How Schools Structure Inequality*, published in 1985, and Kenneth J. Meier, Joseph Stewart Jr., and Robert E. England's 1989 book on second-generation discrimination, *Race, Class, and Education: The Politics of Second-Generation Discrimination*, were pivotal in bringing to light the structural inequalities embedded in schooling students from diverse racial and ethnic groups.

**Differing cultural expectations and the impact on school experiences.** Another position within this range of theories suggests that students' learning and achievement in schools reflect the values, beliefs, and traditions of some racial/ethnic groups, which may place a greater or lesser emphasis on achieving in the dominant educational context. John U. Ogbu's scholarship captures the essence of this view by asserting that the extent to which many members of some minority groups fail in mainstream schools can be linked to the way different minority groups enter into a society and, thereby, approach schooling. Ogbu's comparative research on immigrant and nonimmigrant minorities radically shifted the discourse by suggesting that a macro level of analysis should be considered when investigating why students from some minority groups achieve in school at greater rates than others.

Using a cultural ecological model to explain school failure, Ogbu developed a typology of ethnic groups based on the groups' entry into the dominant society: voluntary or immigrant minorities (which include Asian Americans, recent African immigrants, and immigrants from the Caribbean) and involuntary or nonimmigrant minority groups such as African Americans and Native Americans. In general, Ogbu noted that voluntary immigrant groups are

more likely to accept the dominant achievement ideology, which holds the meritocratic view that hard work and motivation pay off. For example, although Asian-American students might come from different countries and also embrace cultural practices that starkly contrast with the dominant Anglo-American culture of schools, in general these students are more likely to be academically successful in the host society because of the way they approach the schooling process. On the other hand, students from nonimmigrant or involuntary minority groups are least likely to accept the dominant achievement model and are, therefore, more likely to resist schooling.

Building on Ogbu's theory were two 1986 publications: the highly cited article "Black Students' School Success: Coping with the Burden of Acting White," written by Signithia Fordham and Ogbu, and the book *To Be Popular or Smart: The Black Peer Group*, written by Jawanza Kunjufu. The latter work asserted that dominated (involuntary) minority groups develop secondary cultural characteristics as a resistive measure to a dominant white framework. Because of secondary cultural characteristics, some of these students do not achieve for fear of being labeled as trying to "act white." For many of these students, schooling becomes a culturally subtractive, rather than an additive, process.

Ogbu's thesis has been criticized as a "blaming the victim" approach because of its heavy emphasis on those factors and practices of the cultural group that contribute to school failure. Some scholars criticize Ogbu's model for being overly deterministic, note that it fails to capture the variation within groups, and assert that it overgeneralizes about some populations of students. In particular, Carla O'Connor posited in 1999 that ethnographic studies of involuntary immigrant groups (e.g., African-American students) should address the multiplicity of ways that students approach schooling, by also noting the heterogeneity that is present within social groups.

### The Future

The literature on how race, ethnicity, and culture affect the learning of students from non-European minority groups in the United States has overwhelmingly focused on school failure, rather than resilience. Nevertheless, an understanding of the various theoretical perspectives that have been used to explain the school performance of students from some racial and ethnic groups provides a backdrop

for anticipating future schooling prospects for these children. The issues are complicated because notions of race, ethnicity, and culture are not static concepts and are not so easily definable. Therefore, proceeding with caution is essential when appropriating any one particular paradigm to explain how these concepts influence student learning. Clearly some paradigms can be dismissed, while others might be most appropriate given certain contexts. Nevertheless, the influence of race, ethnicity, and culture on students' schooling experiences will continue to be debated well into the twenty-first century.

*See also:* COMPENSATORY EDUCATION; INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; LITERACY AND CULTURE; MULTICULTURAL EDUCATION; MULTICULTURALISM IN HIGHER EDUCATION.

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## LATINO GROWTH

The 2000 U.S. census counted 35.3 million Latinos in the fifty states (and counted 39.1 million if the Commonwealth of Puerto Rico is included). By 2010, the Latino population of the United States is projected to be 45.1 million, at which time this country will have a larger Spanish-speaking population than Spain, Colombia, or Argentina, and will trail only Mexico. By 2050, the U.S. Latino population is projected to be around 96.5 million, and one out of every four U.S. residents will be a Latino.

During the last half of the twentieth century, the Latino population was concentrated in nine states. In 2000, these nine states still had the largest Latino population (11.0 million in California, 6.7 million in Texas, 3.8 million in Puerto Rico, 2.9 million in New York, 2.7 million in Florida, 1.5 million in Illinois, 1.3 million in Arizona, 1.1 million in New Jersey, and 1.0 million in New Mexico), and 82 percent of all Latinos in the United States lived in those areas. However, Latino population growth has occurred in many states not traditionally thought of as Latino population strongholds, such as Georgia, Iowa, and Pennsylvania.

Most Latino population growth is due to births, rather than immigration. As a result, the school-age population in many areas will have a higher percentage of Latinos than the overall population. In California, 43.8 percent of all children age eighteen and under are Latino; 40.5 percent in Texas; 50.8 percent in New Mexico; and 36.1 percent in Arizona.

Immigration has been a secondary, but important, factor in Latino population growth. Some states such as California and Florida received a large number of Latino immigrants from 1960 through 2000, while others such as New Mexico and Colorado received relatively few.

### Educational Attainment

The educational attainment of the Latino population in 2000 was generally lower than non-Latino populations in the same area. Nationally, a lower percentage of Latino adults (57.0%) age twenty-five and older have graduated from high school, compared

with 88.4 percent of non-Hispanic whites. However, the Latino figure needs to be taken with caution, for it combines the educational attainment of two very different Latino groups: the U.S.-born and immigrant Latino adults.

Generally, Latino immigrants have far lower educational attainment than U.S.-born Latinos. In the 1998 California Current Population Survey conducted by the U.S. Census, 75.1 percent of U.S.-born Latinos age twenty-five and older had graduated from high school, while only 38.1 percent of immigrant Latino adults had done so. In California, of Latino adults age 20 to 39, 62.2 percent are immigrants. Combining the educational attainment levels of both groups gives a blended picture that misses important educational dynamics: Latino immigrants tend to be young adults who do not immigrate to seek education, but to join the labor force. Hence, even though they have low educational levels, their behavior—high labor force participation, low welfare utilization, strong family formation—is not typical of high school dropouts. U.S.-born Latinos who do not complete high school are closer to the image of the high school dropout, in that their labor force participation is lower, welfare utilization rates higher, and family formation lower than immigrants with far lower educational levels.

### Language

U.S.-born Latinos are usually either monolingual English speaking or are bilingual, but with an ability to speak English very well. Immigrant Latinos usually start as monolingual Spanish speakers, but over the course of the years acquire some facility in English. School-age Latino children are overwhelmingly U.S.-born; 90.2 percent of Latino children age five through nine in California were U.S.-born in 2000. Not surprisingly, most Latino children speak English well, in addition to speaking Spanish. In the 1990 census, 85 percent of Latino children age five through seventeen in Los Angeles spoke English well, as did 87 percent of children in Miami, 86 percent of children in Chicago, 92 percent of children in San Antonio, and 88 percent of Latino children in New York.

While Latino children are predominantly U.S.-born, in states such as California, Texas, Florida, and New York, the parents are largely immigrant (in 2000, 62% of Latino children in California had at least one immigrant parent). These largely immigrant parents are less fluent in English. As measured

by the 1990 census indicator of limited English proficiency (not to speak English at all, or not to speak it very well) in Latino adults age nineteen to sixty-four, 37 percent in Los Angeles, 35 percent in Miami, 32 percent in Chicago, and 28 percent in New York were not functional in English. Only in San Antonio were few parents—12 percent—not able to communicate well in English.

Latino parents want their children to learn English. A survey conducted in Los Angeles County in 2000 showed that 98 percent of U.S.-born Latino parents and 96 percent of immigrant Latino parents agreed that their children should be taught English in the schools. However, Latino parents also want their children to know how to speak Spanish. In the same Los Angeles county survey, 96 percent of U.S.-born Latino parents and 98 percent of immigrant Latino parents wanted their children to speak Spanish. Interestingly, 86 percent of non-Hispanic white parents and 90 percent of African-American parents also wanted their children to learn to speak Spanish. In that population-based survey, the only group that did not agree with the notion of children learning to speak Spanish were non-Hispanic whites who were not parents of children.

### Latinos and Race

The largely “mixed race” (or *mestizo*) Latino population has never fit comfortably into the U.S. biracial algorithm. In the 1930 census, Latinos of Mexican origin were considered a separate race, distinct from white, black, Indian, or Asian. Certainly, racial exclusion policy such as segregated schools, segregated public facilities, and restricted residential areas treated Latinos as a race. But in 1940, the Census Bureau reversed itself and counted Latinos as members of the white race. In spite of being classified racially as white, Latinos were still subject to racial restrictions.

In 1973 the Federal Office of Management and Budget developed a definition of the word *Hispanic* that was not a racial category, nor a national origin category, but a *sui generis* category, defined by the U.S. Census in 1993 as “those who indicated that their origin was Mexican, Puerto Rican, Cuban, Central or South American, or some other Hispanic origin.” In the 1980 and 1990 censuses, a person had to choose first a racial category, then declare if he or she were Hispanic, in addition to the chosen racial category. In the 2000 census, all respondents were asked first to determine if they were Hispanic, then later to select a race, or combination of races. As La-

tinians may be any combination of Indian, European, African and Asian, the majority in many states (such as California) did not choose any of the racial categories offered (white, black, Indian, or Asian) but instead chose the residual category “Other,” often writing in terms such as *mestizo* or “*raza*.” In 1993 the U.S. census reported that “it should be noted that persons of Hispanic origin may be of any race.” The Mexican author Carlos Fuentes best summed up the *mestizo* background of many Latinos when he described that he was “Indo-Afro-Ibero-American.”

### Latinos and Culture

Modern Latino culture is the outgrowth of the meeting of indigenous, Iberian, African, and some Asian populations in most of the western hemisphere. The proportion of these elements varies from place to place in Latin America, with some regions more markedly indigenous (Mexico, Peru, Bolivia), others more markedly African (Dominican Republic, Puerto Rico, Cuba) others more markedly European (Argentina, Uruguay, Chile). Unlike the “Indian removal” policy followed in the United States, during the colonial period the Spanish Crown sought to incorporate indigenous populations into its realms, where they provided a population base for cultural development. The devastating smallpox epidemics of the sixteenth and seventeenth centuries reduced the native populations by nearly 95 percent. The hemisphere became gradually repopulated, but with an increasingly *mestizo* population that embodied a fusion of the various population, hence cultural, inputs. While Castilian Spanish was imposed as an official language spoken by a small ruling minority shortly after the Conquest, it is spoken by around 95 percent of residents of Latin America in the early twenty-first century, but with distinctive vocabulary and accents in various regions, again reflecting the process of cultural fusion unique to each region.

In the southwest United States, Latino culture antedated the arrival of Atlantic-American culture, hence the names of many towns are in Spanish, such as Los Angeles, San Antonio, Nogales, and Santa Fe. The meeting of Latino and Atlantic-American cultures in that region gave rise to the “cowboy culture,” often considered worldwide to be the quintessential American image. In the northeast, Latino culture arrived during the last half of the twentieth century, along with the waves of immigrants from Latin America. Modern communications such as television, radio, telephones, coupled with a glo-

balization of population made possible by modern transportation, allow Latino cultural regions in the United States to communicate with one another, with the rest of the hemisphere, and with Atlantic-American cultural communities.

While the expectation in the mid-twentieth century was that Latinos would assimilate as had other immigrant groups, the perhaps unique dynamics and nature of Latino culture (a culture of fusion) coupled with population and economic growth, makes it unlikely that it will simply disappear. Instead, it will likely have a two-way dialogue with Atlantic-American culture, which will probably result in some new cultural fusions wherever there are large Latino populations.

*See also:* BILINGUALISM, SECOND LANGUAGE LEARNING, AND ENGLISH AS A SECOND LANGUAGE; INDIVIDUAL DIFFERENCES, *subentry on* ETHNICITY; LANGUAGE AND EDUCATION; LANGUAGE MINORITY STUDENTS; LITERACY AND CULTURE; MULTICULTURAL EDUCATION; MULTICULTURALISM IN HIGHER EDUCATION.

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### RACIAL AND ETHNIC MINORITY STUDENTS IN HIGHER EDUCATION

Since the 1960s, profound changes have occurred in minority-student patterns of college attendance and degree attainment in the United States. This change has led to a growing number of racial and ethnic minority students making up a considerable amount of the student population on American college campuses. In 1997 the National Center for Education Statistics (NCES) reported that African-American students, Hispanic students, Asian or Pacific Islander students, and Native American/Native Alaskan students constituted approximately 27 percent of the total college enrollment at degree-granting institutions. African-American students, Hispanic students, Asian or Pacific Islander students, and Native American /Native Alaskan students constituted 11

percent, 9 percent, 6 percent, and 1 percent, respectively, of all college students attending two-year and four-year institutions.

According to the U.S. Department of Education, the number of racial and ethnic minority students who were awarded degrees increased dramatically between the years of 1976 and 1998. Specifically, the number of bachelor's degrees awarded to racial and ethnic minority students increased as follows: African Americans, 58,636 to 98,132; Native American/Native Alaskan students, 3,326 to 7,894; Asian or Pacific Islander students, 13,793 to 71,592; and Hispanic Americans, 18,743 to 65,937. In 1997, 19.4 percent of all bachelor's degrees were awarded to racial and ethnic minority students. In 1998, 20.5 percent of all bachelor's degrees were awarded to racial and ethnic minority students.

Due to the growth in racial and ethnic minority participation in higher education, institutions of higher learning are being asked to provide optimal learning environments, equitable admission standards, and a welcoming environment for students representing a variety of multicultural and ethnic backgrounds. To that end, colleges and universities are confronted with many complex issues, such as addressing the diverse academic and social needs of racial and ethnic minority students in higher education, improving the admission process to account for past legally sanctioned discrimination, helping minority students cope with issues they may face on campus, and offering suitable programs and instituting appropriate policies to help racial and ethnic minority students make successful transitions to college from high school.

#### The Admissions Process for Racial and Ethnic Minority Students

To be sure, the admissions process for racial and ethnic minority students is similar to the admissions process for all students and includes such phases as making the initial decision to attend college, selecting the type of college to attend, and completing the necessary applications and admissions test required by the college or university. However, due to past racial discrimination and previous legal barriers, colleges and universities have had to consider innovative ways of trying to level the playing field in order to increase the number of racial and ethnic minority students in higher education—and to diversify the U.S. workforce to make it more representative of American society. Accordingly, colleges and univer-

sities have instituted two types of programs to aid in the enrollment of racial and ethnic minority students: enrollment programs and transition programs.

Enrollment programs are based on legislative mandates or statutes (e.g., Civil Rights Act of 1964, Higher Education Act of 1965). Enrollment programs are primarily instituted to ensure that a percentage of college or university incoming enrollments are members of a racial or ethnic minority group. An example of an enrollment program is the education component of the One Florida Initiative, which mandates that 20 percent of each high school senior class in Florida will receive guaranteed admission to any of the state-supported colleges or universities in Florida. This enrollment program makes it possible to enroll racial and ethnic minority students from low-performing high schools, as well as students that may not otherwise gain admission to college.

Transition programs are defined as programs and related services designed to assist students who may not gain admittance to a college or university through traditional channels. The College Transition Program at Virginia Commonwealth University is an example of a summer transition program designed for high school students who have low scores on admission tests and low high school grade point averages. Transition programs, which enroll a large number of racial and ethnic minority students, also offer cultural enrichment activities that promote college readiness and social integration on campus. Though transition programs vary in type and length, most of them offer a study skills component and courses in mathematics, reading, and/or English composition, which gives students a jump-start on earning college credit. Students who complete a transition program at a particular university are usually guaranteed admission into that university. As such, transition programs also serve to increase the enrollment of racial and ethnic minority students by offering preparatory college instruction to students who may not otherwise be admitted to college.

### **Issues Faced by Racial and Ethnic Minority Students on Campus**

Prior to 1973, the overwhelming majority of African-American college students were enrolled in historically black colleges and universities. In the early twenty-first century, however, predominantly white institutions grant the majority of baccalaureate de-

grees awarded to African Americans (and other racial and ethnic minority students). This dramatic shift in postsecondary education patterns among minority students naturally leads to questions about their educational experiences and outcomes.

Racial and ethnic minority students face a considerable number of problems once they arrive on campus. Research evidence suggests that racial and ethnic minority students are more likely to experience problems of alienation, marginalization, and loneliness than white students are. Additional evidence suggests that these and other challenges on campus may have either a direct or indirect impact on their academic performance and social development. These students continue to be severely disadvantaged, relative to white students, in terms of persistence rates, academic achievement levels, enrollment in advanced degree programs, and overall psychological adjustments. Some other problems include monocultural curricula, professors' expectations and attitudes, cultural conflicts, institutional racism, lack of support services, isolation, and problems involving socialization and motivation. While college students of all races face many of these challenges, minority students face them in a compounded manner, resulting in higher dropout rates.

### **Programs and Services for Racial and Ethnic Minority Students on Campus**

Many services exist on college campuses to help facilitate a smooth transition for racial and ethnic minority students on campus. These services can be divided into two groups: campus-based programs and federally funded programs.

**Campus-based programs.** Inequality in higher educational attainment between different racial and ethnic groups continues to be a critical problem. Accordingly, many institutions have developed programs and implemented policies to address the academic and social challenges that many minority students encounter. Though it is the case that minority students are less likely to persist in college than white students are, the persistence gap can be traced to differences in legal discrimination and in the quality of secondary education of both groups. As a group, minority students are more likely to come from poorer backgrounds and have experienced inferior education than their white counterparts. This is not to suggest that all racial and ethnic minority students are disadvantaged, or that all disadvantaged students are members of racial and eth-

nic minority groups. Some racial and ethnic minority groups (e.g., Asian Americans) have higher rates of educational success than do groups commonly classified as belonging to the ethnic and racial majority. Thus, it is sometimes necessary for institutions to develop programs targeted to the needs of distinct groups of students.

Early contact and transition programs are important not only because they help cement personal affiliations that tie students into the fabric of student culture, but also because they enable the students to acquire useful information about the informal character of institutional life. Thus, to ensure successful programs, it is critical that institutions integrate programs and services within the mainstream of the institution's academic, social, and administrative life. One important component to successful retention programs for racial and ethnic minority students is the establishment of specialized advising and counseling services. Several institutions have established advising programs and designated offices to which racial and ethnic minority students go for many different services. An example of such a program is the New Vision Program at the University of New Orleans. This retention program focuses on academically at-risk students and students who have not met the university's academic standards and subsequently left the institution. To increase graduation and retention rates, these students are allowed to re-enroll at the University of New Orleans and participate in special academic development programs that offer advising sessions, orientations, and instructional assistance.

Having counselors and advisers of like ethnicity is not a requirement of these programs; however, experience has shown that racial and ethnic minority students are inclined to utilize these services when people of color are present. To the degree that racial and ethnic minority students represent a distinct minority on campus, they also face distinct problems in seeking to become integrated into the life of what may appear to be a foreign and hostile college community. The use of support programs and mentor programs has proven to be quite effective in increasing student retention. In many cases, these programs are designed to provide racial and ethnic minority students with faculty mentors or advisers who can provide useful information and advice. In other instances, faculty, and sometimes upper-class students, of similar ethnicity are asked to guide newly arrived racial and ethnic minority students through

the institution, or at least through the first year of college. For example, ALANA—which is an acronym for Asian, Latin, African, and Native American—is a mentoring program developed at St. Clair County Community College in Port Huron, Michigan. This multifaceted support program focuses on providing academic and social support to freshman students of color through the use of peer mentors.

Many of the challenges that racial and ethnic minority students face on a predominantly white campus reflect the behaviors and attitudes that the students, faculty, and staff have about them. For that reason, an increasing number of institutions have instituted programs designed to educate the broader community on issues of racism and the diversity of cultural traditions that mark American life. Some institutions have even established programs to broaden the repertoire of teaching skills faculty use in the education of diverse student bodies. For example, the Center for Research on Learning and Teaching at the University of Michigan offers consulting services, seminars, and workshops to faculty members who seek to learn more about how to integrate multiculturalism in the college classroom and how to develop a welcoming and inclusive learning environment. Realizing the many possible categories of institutional types, there is much to be gained from understanding how similar types of institutions have successfully addressed the issue of retention. However, it falls upon the individual institution to assess for itself the most effective approach. The beginning point of any institutional policy consists of an assessment of institutional mission and institutional priorities, as well as an assessment of racial and ethnic minority students' experiences on campus.

**Federally funded programs.** There are many types of proactive intervention strategies for racial and ethnic minority students. Some are long-term; others focus on the first-year experience. Many of these programs seek to encourage capable students to pursue postsecondary degrees. One such initiative is the federally supported Upward Bound program, established in 1965. Upward Bound was designed to help disadvantaged students enroll in and graduate from postsecondary institutions. A product of the Economic Opportunity Act of 1964, Upward Bound targets youth between thirteen and nineteen years of age who have experienced low academic success. High school students from low-income families whose parents have not earned a bachelor's degree

and military veterans with only a high school diploma are eligible to participate. The program provides fundamental support, such as help with the college admissions process and assistance in preparing for college entrance examinations. It engages students in an extensive, multiyear program designed to provide academic, counseling, and tutoring services, along with a cultural enrichment component—all of which enhance their regular school program prior to entering college.

Most Upward Bound programs also provide participants with college experience through a five-to eight-week, full-time residential summer program at a postsecondary institution. The summer experience is reinforced with weekly tutorial and mentoring services during the school year. Upward Bound, along with four other federal initiatives that are collectively called the *TRIO programs*, receive funding under Title IV of the Higher Education Act of 1965. Upward Bound currently supports more than 560 projects serving approximately 41,000 students nationwide. The other TRIO initiatives are Talent Search, the Student Support Services program, Educational Opportunity Centers, and the Ronald E. McNair Postbaccalaureate Achievement program. These programs have much to offer institutions of higher education that seek to improve the educational outcomes of first-generation college students, racial and ethnic minority students, and low-income students.

Taken as a whole, the demographic in institutions of higher education has been changing and becoming increasingly more diverse. There is still a great need for innovative programming and policies to provide realistic guidance and counseling to assist minority students in dealing with academic, social, and economic challenges in college. Minority students come from different backgrounds with different orientations, ideologies, and perspectives—and with different perceptions of success and failure. When institutions properly recognize these differences and deal with them constructively, then they will be better able to address the problems faced by racial and ethnic minority students.

*See also:* ADJUSTMENT TO COLLEGE; AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; COLLEGE STUDENT RETENTION; LANGUAGE MINORITY STUDENTS; MULTICULTURALISM IN HIGHER EDUCATION; UPWARD BOUND.

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## RANKINGS, COLLEGE

See: COLLEGE RANKINGS.

### READABILITY INDICES

For several decades researchers have been concerned with the question of determining how easy or difficult a text will be for a particular reader to comprehend. For example, if a teacher is assigning a textbook to an eighth-grade class, how would the teacher determine whether the class will actually comprehend the book? Writers may also want to consider the comprehensibility of their texts during the writing and revision process. To address these goals, researchers have developed readability indices, which are tools or methods that provide assessments of the comprehensibility of texts. The term *readability indices* has also been used to describe the legibility of writing or the interest value of texts, but these aspects of readability will not be discussed here. The most effective readability indices for assessing comprehensibility are those that take into account how people actually go about processing the information in texts.

#### Readability Formulas

Beginning in the 1920s, many efforts were undertaken to describe the readability of texts in terms of objective characteristics that could be measured and analyzed. First, researchers tabulated surface characteristics of written texts that may be related to how difficult the texts would be to comprehend. Some examples of these characteristics are the difficulty or frequency of the words in a text, the average number of syllables per word, and measures of the length or complexity of sentences. These data were then compared with predetermined standards, such as the average grade level of students who could correctly answer a certain percentage of questions generated from the text passage. Text characteristics that provided the most accurate predictions of the standards were judged to be indices of readability. These characteristics were then developed into readability formulas, which were equations that specified how much weight to assign to each characteristic. Probably the most widely used readability formula was one of Rudolf Flesch's, which used the number of syllables per 100 words and the average number of words per sentence.

Readability formulas also gained favor as guidelines for revising texts to improve comprehensibility. The Flesch formula, for example, implies that texts can be made more comprehensible by using shorter words and shorter sentences. Such guidelines have been used in many contexts and are appealing at least in part because they provide concrete feedback and can be automated. The value of readability formulas is limited, however, because these surface characteristics do not *cause* texts to be easy or difficult to comprehend. Long words and sentences simply happen to be typical characteristics of texts that are hard to comprehend. This limitation is particularly problematic when considering text revision. In fact, George R. Klare, in a 1963 book titled *The Measurement of Readability*, reviewed efforts to improve comprehensibility by revising texts to lower the readability scores, and he found this method to be ineffective.

#### Readability and Comprehension Processes

Since the 1970s, researchers have made great advances in understanding the psychological processes that are involved in reading, and thus the factors that make a text comprehensible. As readers take in information from a text, they attempt to construct a coherent mental representation of the information. Semantic and causal coherence are critical factors that contribute to this process. When current text information is not coherent with previous text information, a reader must generate an inference in order to make sense out of the new information. More coherent texts require fewer inferences and are therefore easier to comprehend. Walter Kintsch and colleagues developed an index of semantic coherence based on the extent to which concepts are repeated across sentences. Tom Trabasso and colleagues have indexed events in a text according to the extent to which they are integral to the causal structure described in the text. Both of these indices of coherence are highly predictive of comprehension. In addition, generating inferences requires readers to use their own knowledge, such that readers with a lot of relevant knowledge will find texts more readable than readers with little knowledge. Readability is therefore not just determined by the text itself but is a product of the interaction between the text and reader.

Semantic and causal indices of readability can also be effectively used in revising texts to make them more readable. According to their 1991 article

Bruce K. Britton and Sami Gülgöz revised a textbook passage by repairing semantic coherence breaks (which incidentally did not alter the readability formula score). In another revision, they shortened words and sentences to lower the score on readability formulas. Comprehension improved for the coherence revision but not for the readability revision, indicating that readability indices based on psychological processes provide better guidance for revision than readability formulas.

Although textual coherence and reader knowledge can be effective readability indices, they are quite labor intensive to analyze and are impractical for use with long texts. Thomas Landauer and his colleagues, however, developed a computer model that provides a potential solution to this problem: Latent Semantic Analysis (LSA) estimates the semantic similarity of words and sets of words derived from their use in the context of large amounts of natural language. As reported in a 1998 article, Peter W. Foltz, Landauer, and Kintsch used LSA to assess the semantic coherence of texts by calculating the similarity between adjacent sentence pairs. The LSA model showed very high correlations between semantic coherence and comprehension, thereby suggesting an automatic measure of readability based on coherence. LSA has also been used to automatically assess knowledge about a particular topic by calculating the similarity between the content of short essays and standard texts on the topic. These LSA knowledge assessment scores were also predictive of comprehension, according to a 1998 article by Michael B. W. Wolfe and colleagues. LSA can therefore provide readability indices related both to the coherence of a text itself and to the interaction between the text and the knowledge of a particular reader.

In order to be truly useful, a readability index should be grounded in the psychological processes of reading. The LSA model represents a promising new technique for determining the readability of texts because it has psychological validity and can be automated. Nevertheless, LSA has not yet been developed into a practical index of readability for particular texts and readers. Only further testing on a broad range of texts and readers will reveal its potential.

*See also:* READING, *subentry on* COMPREHENSION.

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MICHAEL B. W. WOLFE

## READING

### BEGINNING READING

Banu Öney

### COMPREHENSION

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Tom Trabasso

### CONTENT AREAS

Cynthia Hynd

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VALUE OF READING ENGAGEMENT FOR CHILDREN  
Anne Cunningham

## BEGINNING READING

Beginning reading encompasses acquisition of the multiple acts, skills, and knowledge that enable individuals to comprehend the meaning of text. Reading is a complex psycholinguistic activity and thus beginning reading is a lengthy and complex process whereby the learner acquires expertise in the various perceptual, sensory, linguistic, cognitive, metacognitive, and social skills that are involved in literate behavior. Through this process the child gains functional knowledge of the purposes, uses, and principles of the writing system.

### Experiences before Formal Reading Instruction

Although a large portion of literacy acquisition occurs within the context of formal reading instruction, literacy-related awareness and knowledge start developing long before formal schooling, through pre-reading activities and interactions with print in the home and environment. The accomplishments before formal schooling prepare the child for later school-related literacy development.

There are important differences among children's early literacy experiences. Some children are exposed to a wide array of early literacy experiences. They are frequently and regularly read to, they are exposed to oral and written language activities such as playing on the computer or playing word games, they experience the functional use of print materials in their home and preschool environments, and they have model adults who value reading and use reading in various purposeful ways. In 1990 Marilyn J. Adams estimated that children from these mainstream homes are exposed to thousands of hours of pre-reading activities before they enter first grade. In contrast, there are children who are never or rarely read to, live in homes with few books, are rarely exposed to rich oral and written language activities, and interact with few adult models who use reading and writing for their own purposes. These two groups of children differ widely in their awareness and knowledge of literacy-related concepts.

**Concepts about print.** Through repeated interactions with literacy materials and activities children develop an awareness of the nature and function of text. Social routines practiced during one-on-one book reading between parents and children facilitate

children's acquisition of concepts about print. Very early on children learn about the way books are handled, the differences between pictures and print, the directionality of print, and the characteristics of written-language-like routines. Shared book reading allows children to develop a sense of story structure where characters, the setting, and the plot make up the story. By observing adults' functional use of literacy, children also learn the different purposes of different literacy activities such as writing a grocery list versus writing a letter. So, by the time they are four years old, children also learn quite a lot about the nature of print, including the names and sounds of some letters, and will pretend to "write" by scribbling as part of play activities.

The acquisition of the concepts about print is important, and several studies have shown that such awareness predicts future reading achievement and is correlated with other measures of reading achievement. Thus, the development of concepts about print early in life seems to create the foundation upon which more sophisticated skills are built.

**Language development.** Spoken language develops naturally and effortlessly within the context of social interactions in a community. With the exception of those who have some physical challenges all children can produce and comprehend spoken language naturally early in life. They exhibit developments in phonology, morphology, syntax, semantics, and vocabulary. Engagement in literacy activities provides children with added opportunities to experience and experiment with language. Book reading, for instance, offers multiple opportunities for the child to use language at a more abstract and complex level than would be possible through spoken language experiences. Children learn to have a decreased reliance on immediate context for communication. This decontextualized language is the language that they will need to rely on in most school activities later on. Early literacy experiences also set the ground for growth in meta-linguistic skills. Children learn to think about, play with, talk about, and analyze language in addition to using it effectively.

**Phonological awareness.** Alphabetical writing systems are based on the representation of speech sounds by letters. In order to understand the alphabetic principle, children need to be aware that the spoken message can be broken down into smaller units such as words, syllables, and phonemes. Phonological awareness is the awareness of and the ability to manipulate phonological segments such as

syllables, phonemes, and other intrasyllabic units such as onset-rimes in words. When phonological awareness refers to children's sensitivity to the phonemes in words, it is called phonemic awareness.

Tasks in which children are asked to isolate, segment, blend, or combine phonological segments have been typically used to assess phonological awareness. Phonemic segmentation and phonemic manipulation tasks yield particularly strong predictions of and correlations with beginning reading acquisition. There are also studies on phonemic awareness that point out that there is a bidirectional relationship between learning to read and phonemic awareness.

While studies on children's early experiences with print converge on the conclusion that these experiences and phonological awareness facilitate and set the ground for further development in the acquisition of reading, other research has investigated the relationship between IQ and reading achievement. These studies conclude that IQ is only weakly related to early reading achievement.

### **Instruction in Reading**

Children are immersed in formal instruction in reading once they enter kindergarten. Children come to school with different levels of awareness about print, and they encounter in school new expectations, new routines, and new experiences that dramatically broaden their concept of literacy. For children whose language and literacy experiences are closer to those in the school setting, this transition to school is relatively easy.

**Understanding the alphabetic principle.** Before formal instruction in reading begins, children can already recognize certain words, especially those occurring frequently in their environment, such as Coca-Cola or McDonald's. Nevertheless, a 1984 study by Patricia E. Masonheimer and colleagues investigating the features to which children attend to when they recognize these words showed that when the words were presented without the contextual cues, such as logos, most children up to five years of age failed to correctly identify them. Other studies also suggest that young children recognize words based on selective parts of the printed word. Thus, before formal reading instruction has begun, most young children cannot grasp how the writing system functions.

A dramatic change occurs when children are exposed to systematic reading instruction. Before they

begin to decode independently, children start using the phonetic values of letter names in identifying words. Although this is not yet an efficient word recognition strategy, it is a big step toward using the systematic relationships that exist between speech and the printed word. Full decoding becomes possible when children begin to use the full array of letters in words and map them unto phonemes, thus demonstrating an understanding of the alphabetic principle.

**Productivity and automaticity in word recognition.** It is not possible to characterize children's reading as productive unless they can recognize words that they have not encountered before. As children experience a growing number of letter patterns during reading, they gradually accumulate a large number of orthographic representations. Thus, instead of using single letters for word recognition they begin relying on letter strings and their corresponding phonologies. This growing knowledge of letter sequences and spelling patterns gradually allows readers to process words quickly and easily.

Every time a reader encounters a spelling pattern and attends to the particular sequence of letters in it, the pattern acquires more strength and is thus recognized faster and more efficiently during the next encounter. If on the other hand instead of focusing on the entire sequence, the reader's concentration is focused on resolving a single letter, or if one or some of the letters in the sequence cannot be correctly identified, the sequence may not be remembered as an entity. As the young reader's knowledge of the relationships between spelling and sound grows, this knowledge allows the child to form stronger associations between visual and phonological representations. Through experience with words in print, especially those of increasing complexity, word recognition becomes an automatic psychological process, enabling the reader to gain increasing levels of fluency. Thus, differences in exposure to print lead to differences in reading skill.

**Comprehension.** Reading comprehension is a complex skill that requires an active interaction between text elements and the reader. Since comprehension of text is the ultimate goal in reading, understanding comprehension processes is critical to the study of beginning reading.

Children beginning to read already have a well-developed system for oral language comprehension. By the end of preschool most children have well-

developed vocabulary and world knowledge as well as morphological, semantic, and syntactic processes that make oral language comprehension possible.

There is considerably less research on comprehension processes in beginning readers, compared to studies on word processing. One of the consistent findings in comprehension research is that compared to more skilled comprehenders, unskilled comprehenders are also less skilled in decoding. In fact, during the early stages of beginning reading, text comprehension is limited to children's skill in decoding. Until decoding processes are rapid and efficient, high-level comprehension processes are severely limited. There is now converging evidence that for both children and adults, difficulties in comprehension are related to difficulties in decoding as well as to problems with working memory.

Besides being better at decoding, skilled comprehenders also have better global language skills than less skilled comprehenders. Studies have shown a causal relationship between vocabulary and comprehension. There is evidence showing that vocabulary instruction leads to gains in comprehension and improvement on semantic tasks. It is also clear that both direct and indirect instruction in vocabulary lead to comprehension gains.

Skilled comprehenders also have better metacognitive skills than less skilled comprehenders. Skilled comprehenders are aware of how well they are comprehending and use various comprehension strategies that guide them as they attempt to understand text.

Young readers benefit from cognitive strategy instruction. Instruction in cognitive strategies usually involves helping students be aware of their own cognitive processes in reading. Usually a teacher either models the use of comprehension strategies or guides the students in the use of strategies. Many approaches to cognitive strategy instruction allow readers to practice their newly acquired cognitive strategies with the teacher until the readers master their use.

In short, beginning reading instruction needs to focus on children's acquisition of letter-sound relationships, as well as comprehension strategies to assure that both word recognition and comprehension skills can develop simultaneously.

*See also:* CHILDREN'S LITERATURE; LANGUAGE ACQUISITION; LITERACY, *subentry on* EMERGENT LIT-

ERACY; LITERACY AND CULTURE; LITERACY AND READING; READING, *subentry on* TEACHING OF.

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BANU ÖNEY

## COMPREHENSION

From 1997 to 2000 the National Reading Panel (NRP) carried out a review of research-based knowledge about reading and instruction, especially in the early elementary grades. The research topics relevant to early reading and instruction that the NRP concentrated on were phonemic awareness instruction, phonics instruction, fluency, vocabulary instruction, text comprehension instruction, teacher preparation, and comprehension strategies instruction.

The group that focused on text comprehension instruction located more than 500 studies on the teaching of comprehension instruction. Using scientific criteria such as whether a study of a strategy instruction included a control group, they found that just over 200 of these studies were conducted sufficiently well to be confident that the conclusions based on them are scientifically trustworthy.

Comprehension strategy instruction fosters active reading. The strategies are designed to guide a reader to become more self-aware of one's self-understanding during reading, to become more in control of that understanding, to create images related to contents, to make graphic representations, to write summaries, and to answer or to make up questions. Depending on what type it is, a strategy can be implemented *before*, *during*, or *after* the reading of a text.

Skilled readers may invent strategies that help them understand and remember what they read. Most readers, however, do not spontaneously invent these strategies. Unless they are explicitly taught to apply cognitive procedures they are not likely to learn, develop, or use them. Readers at all levels, in

fact, can benefit from explicit comprehension strategy instruction. A teacher begins by demonstrating or modeling a strategy. In some cases, the instruction is *reciprocal* or *transactional*, meaning that the teacher first performs the procedures and then the students gradually learn to implement them on their own. The process by which a student adopts the strategy—a process that is called "scaffolding"—is often a gradual one. Readers are first able to experience the construction of meaning by an expert reader, the teacher. As readers learn to take control of their own reading by practicing and acquiring cognitive strategy procedures, they gradually internalize the strategies and achieve independent mastery.

## History of Comprehension Strategy Instruction

Interest in reading comprehension strategies began to grow as a part of the new scientific understanding of cognition that emerged in the latter decades of the twentieth century. In 1978 Walter Kintsch and Teun A. van Dijk observed that a reader is an active participant with a text and that a reader "makes sense" of how ideas based on the text relate to one another by interpretive interactions between what the reader gleans from the text and what the reader already knows. They proposed that a reader actively builds meaning as *mental representations* and stores them as semantic interpretations held in memory during reading. These representations enable the reader to remember and use what had been read and understood.

In a landmark 1979 study Ellen M. Markman wondered whether readers would detect obvious logical contradictions in passages they read. She gave readers a passage about ants that indicated that when ants forage away from their hill they emit an invisible chemical with an odor that they use to find their way home. The passage also indicated, however, that ants have no nose and are unable to smell. Would readers notice that the passage did not make sense? Would they recognize that they did not understand the passage? What would they do? Her disturbing finding was that young and mature readers alike overwhelmingly failed to notice either logical or semantic inconsistencies in the texts. What instruction would help readers to be more conscious of their understanding and to learn strategies that would overcome these comprehension failures?

At about the same time Dolores Durkin observed reading instruction in fourth-grade classrooms over the course of a school year. For many

student readers, fourth grade is a transition year from “learning to read” to “reading to learn.” In a 1979 article Durkin reported that there was very little comprehension instruction in the classrooms. Teachers assigned questions and told students about content. But in seventy-five hours of reading instruction Durkin observed that year, teachers devoted only twenty minutes, less than 1 percent of the time, to teaching readers how to comprehend and learn new information from reading. Her studies and the others cited above anticipated an intense interest in helping students learn strategies to comprehend and learn from reading.

In the 1970s and early 1980s investigators generally focused on teaching an individual strategy to help readers construct meaning. There were literally hundreds of studies of individual comprehension strategies. One example is Abby Adams and colleagues’ 1982 research applying the SQ3R (survey, question, read, recite, and review) technique to fifth-grade classrooms. SQ3R is a text pre-reading *graphic organizer* instruction developed in 1941 for World War II military personnel undergoing accelerated courses. It is considered a “text previewing” comprehension strategy instruction in that it guides readers to look for the meaning *before* reading the text. In this instruction, readers learn to use the text’s headings, subheads, introductions, and summaries to construct graphic schemata of the text content. As did many of the other comprehension strategy instruction researchers, Adams and her colleagues obtained positive results, finding that students with the pre-reading instruction performed significantly higher on factual short-answer tests than did control group students.

Generally, many types of individual comprehension strategy instructions appeared to be successful in improving readers’ ability to construct meaning from text. With the observed success of various individual strategy applications, there were several reviews of this growing body of scientific literature. In 1983 P. David Pearson and Margaret C. Gallagher categorized cognitive strategies by what teachers do to teach the strategies, and Robert J. Tierney and James W. Cunningham’s 1984 review subdivided the cognitive strategies into pre-reading, during-reading, and post-reading activities.

With the success of individual strategy instruction in improving reading comprehension measures documented by research, focus shifted to using combinations of strategies to facilitate text comprehen-

sion, primarily in experimental situations rather than in natural classrooms. Among these was a very influential 1984 study of “reciprocal teaching” of comprehension by Annemarie S. Palincsar and Ann L. Brown. Reciprocal teaching is a method that involves the gradual release of responsibility for carrying out a strategy to the readers. It combines teacher modeling and student practice on four cognitive strategies: prediction, clarifying, summarizing, and question generation. Students who received this instruction showed marked improvement on a number of comprehension measures.

Success of teaching multiple strategies led to the study of the effectiveness of preparing teachers to teach comprehension strategies in natural, classroom settings. Two approaches are noteworthy, namely Gerald G. Duffy and Laura R. Roehler’s 1987 direct explanation model and Rachel Brown, Michael Pressley, and colleagues’ 1996 transactional instruction approach. Direct explanation emphasizes teacher-directed problem solving, whereas transactional instruction, similar to reciprocal teaching, employs teacher-directed actions with interactive exchanges with students in classrooms. Both direct and transactional approaches to training teachers have produced positive results.

### Strategies that Work

The NRP identified twelve categories of comprehension instruction that have scientific support for the conclusion that they help readers to construct meaning and thereby improve reading comprehension, including two categories involving the preparation of teachers in cognitive strategy instruction. These strategies stimulate both audio and visual perception, activate memory and semantic processing, enhance perception, engage syntactic knowledge and processing, teach narrative structure, and promote reasoning. The strategies of active listening, comprehension monitoring, and prior knowledge use all serve to promote listening and awareness of one’s thinking or “inner speech,” a process emphasized by the Russian psychologist Lev Vygotsky in the 1920s. Mental imagery, mnemonic, and graphic organizer instruction, on the other hand, make use of readers’ visual imagination and memory. Vocabulary instruction increases word and semantic knowledge and problem solving. Question answering and question generation require the access of what is known or understood and the prediction of future events. Story structure and summarization instruction

create awareness of the organization of ideas and what is important. Finally, multiple strategy instruction combines the use of several of these processes together in flexible and appropriate ways. Research conducted in the late 1990s also suggests that teachers can learn to integrate these kinds of strategy instructions in classroom settings and that peers working in cooperative learning situations can effectively tutor each other in comprehension strategies.

**Active listening.** To instruct active listening, teachers guide readers in learning to listen while others read. The listening reader follows the text as another student reads aloud. The teacher may also pose questions for the readers to answer while they listen. Active-listening training improves listening and reading comprehension. It increases a reader's participation in discussions, engenders more thoughtful responses to questions, increases memory for the text, and focuses the reader's attention and interest on material. For example, in Gloria M. Boodt's 1984 study of training critical-listening strategies with fourth-grade to sixth-grade remedial readers, there was a gradual increase over the eighteen weeks of the study in students' willingness to participate in group discussions and provide more thoughtful responses to direct questions. Overall, four studies of this strategy met NRP scientific criteria. The students in the active listening studies ranged from first grade through sixth grade; they improved in critical listening, critical reading, and general reading comprehension.

**Comprehension monitoring.** One can learn to listen to one's own reading and to monitor one's own comprehension. Instruction in comprehension monitoring during reading helps readers manage their inner speech as they read. Self-listening and self-monitoring of one's own understanding during reading promote more careful reading and better comprehension.

To teach comprehension monitoring, a teacher, when reading aloud to a class, demonstrates the strategy by interrupting her own reading to "think aloud." She articulates to the class her own awareness of difficulties in understanding words, phrases, clauses, or sentences in a text. When a text poses potential comprehension breakdowns, such as unfamiliar concepts or logical inconsistencies in a passage, the teacher might look back in the text to try to solve a problem, restate the text content in more familiar terms, or look forward in the text to find a solution. After observing a teacher model the

comprehension monitoring strategy, readers are encouraged to carry out the same procedures—first with teacher scaffolding and then on their own. Eventually the student readers take responsibility for recognizing comprehension difficulties and for demonstrating ways to overcome them (e.g., by guessing and looking back or reading forward in the text).

The teaching of comprehension monitoring is very effective. The NRP found twenty studies of comprehension monitoring instruction with readers in grades two through six that met scientific criteria. In them, readers who were taught to self-monitor comprehension improved one of the following: their detection of text inconsistencies, their memory for the text, or their performance on standardized reading comprehension tests.

**Prior knowledge.** Prior knowledge instruction is designed to assist readers in bringing to mind their own knowledge that is relevant to understanding the text. A teacher can activate prior knowledge by asking students to think about topics relevant to the passage, by teaching the requisite relevant knowledge, by using pre-reading activity on related but better-known topics, by having the readers predict what will happen in the text based on personal experience, by having readers make associations during reading, and by previewing the story or text.

In fourteen studies with students spanning grades one through nine reviewed by the NRP, prior knowledge instruction helped readers improve on recall, in question answering, and in content area and standardized reading comprehension performance. For example, in a 1988 study, Teresa A. Roberts found that prior knowledge instruction had a positive effect on both factual and inferential comprehension performance with students in grades five and nine.

**Mental imagery.** Mental imagery instruction teaches readers to construct images that closely represent the content of what was read and understood. In 1986, after instructing less-skilled fourth- and fifth-grade readers in imagery training, Linda B. Gambrell and Ruby J. Bales had them read stories with inconsistencies like those in the 1979 Markman study mentioned above and instructed them "to make a picture in your mind to help determine if there is anything that is not clear and easy to understand about the story." Control students, that is, those without the imagery training, were simply asked to "do whatever you can do to help determine if anything is not clear

and easy to understand about the story.” The results were that imagery-trained readers were more likely to detect inconsistencies than the controls. In four studies with students in grades two through eight, the NRP found that mental imagery instruction led to modest increases in memory for the text that was imaged and improved reader detection of text inconsistencies.

**Mnemonics.** Like mental imagery instruction, mnemonic instruction teaches readers to use an external memory aid, but unlike mental imagery instruction, the mnemonic image can be one that does not necessarily closely represent the text. A teacher demonstrates how to construct a picture, keyword, or concept as a proxy for a person, concept, sentence, or passage—such as using an image of a “tailor” to remember the name “Taylor.” These keywords and images aid later recall. In five studies examined by the NRP, mnemonic instruction improved reader memory of the assigned keywords and recall for the passages read. For example, in 1986 Ellen E. Peters and Joel R. Levin gave mnemonic instruction to good and poor readers and then gave them passages about “famous” people. As compared to the control subjects, the mnemonic-trained students were more likely to learn and remember information about new concepts and people who were unfamiliar to them.

**Graphic organizers.** Graphic organizer instruction shows readers how to construct displays that organize one’s ideas based on a reading of the text. Graphic organizers aim at creating awareness of text structures, concepts and relations between concepts, and tools to represent text relationships visually. They also assist readers in writing well-organized summaries. Diagrams, pictorial devices, and story maps can all be used to outline the relationships among text ideas. This instruction is useful for expository texts in content areas such as science or social studies.

In eleven studies reviewed by the NRP that used graphic organizers with readers in grades four through eight, readers generally benefited in remembering what they read, in improved reading comprehension, or in improved achievement in social studies or science courses. For example, in 1991 Bonnie Armbruster and her colleagues compared the effectiveness of a graphic organizer instruction that taught fourth- and fifth-grade social science students to visually represent the important ideas in a social science text. In contrast, the control students’ instruction consisted of workbook activity directions

recommended in the teacher’s edition of the social science textbook. The fifth-, but not necessarily the fourth-grade students, who received the graphic organizer cognitive strategy instruction scored higher on recall and recognition measures than the controls who received the workbook activity instruction.

**Vocabulary instruction.** There are many studies on teaching vocabulary but few on the relationship between vocabulary instruction and comprehension. In the context of comprehension strategy instruction, vocabulary instruction promotes new word meaning knowledge by teaching readers semantic processing strategies. For example, students learn to generate questions about an unknown word by examining how it relates to the text or noticing how a word changes meaning depending on the context in which it occurs. The teacher may model being a “word detective,” looking for contextual clues to find a word’s meaning, analyzing words and word parts, and looking at the surrounding text for clues to a word’s meaning. For instance, the word *comprehension* combines *com*, meaning “together” with *pre-hension*, meaning “able to grasp in one’s hand.” From this, an operational definition of *comprehension* can be constructed (e.g., putting together individual word meanings to grasp an idea).

In three studies of vocabulary instruction in a cognitive strategy context with fourth-grade students reviewed by the NRP, the instruction led to success in learning words, in use of word meanings, and in increased story comprehension. For example, in a 1982 study involving fourth-graders receiving vocabulary instruction, Isabel L. Beck and her colleagues taught the students to perform tasks designed to require semantic processing. These students performed at a significantly higher level than pre-instruction matched controls on learning word meanings, on processing instructed vocabulary more efficiently, and in tasks more reflective of comprehension. In the three NRP-reviewed studies, however, learning to derive word meanings did not always improve standardized comprehension performance.

**Question answering.** Question answering focuses the reader on content. *Why* or *how* questions lead the student to focus on causes and consequences. Question answering guides students and motivates them to look in the text to find answers. Instruction on question answering leads to improvement in memory for what was read, to better answering of

questions after reading, or to improvement in finding answers to questions in the text during reading.

In a 1985 study, Taffy E. Raphael and Clydie A. Wonnacott trained fourth-grade and sixth-grade readers to analyze questions, distinguishing those questions that could be answered by information in the passage from questions that required prior knowledge or information not in the text. The results were that students who had received this instruction provided higher quality responses to questions than a control group of students. In seventeen studies examined by the NRP for this strategy, the results were usually specific to experimenter tests of question answering and were greater for lower-grade than for upper-grade readers and greater with average and less-skilled readers than with high-achieving readers.

**Question generation.** Teachers demonstrate this strategy by generating questions aloud during reading. Readers then practice generating questions and answers as they read the text. Teachers provide feedback on the quality of the questions asked or assist the student in answering the question generated. Teachers teach the students to evaluate whether their questions covered important information, whether questions related to information provided in the text, and whether they themselves could answer the questions.

The scientific evidence that question generation cognitive strategy instruction is effective is very strong. In 1996 Barak Rosenshine and his colleagues conducted meta-analysis of twenty-six question generation studies with students from third grade through college. Like individual experimental studies, a meta-analysis applies scientific criteria to obtain a quantitative assessment of an instruction's effectiveness. A meta-analysis differs from single studies, however, in that it obtains a quantitative impact of a particular strategy by looking at effectiveness across a group of studies. In addition to the Rosenshine meta-analysis, the NRP examined twenty-seven question generation studies with students from grades three through nine. Question generation instruction during reading benefited reading comprehension in terms of improved memory, in accuracy in answering questions, or in better integration and identification of main ideas. The evidence that it improved performance on standardized comprehension tests is mixed.

**Story structure.** Story structure instruction is designed to help readers understand the who, what,

where, when, and why of stories, what happened, and what was done and to infer causal relationships between events. Readers learn to identify the main characters of the story, where and when the story took place, what the main characters did, how the story ended, and how the main characters felt. Readers learn to construct a story map recording the setting, problem, goal, action, and outcome of the story as they unfold over time.

Story structure instruction improves the ability of readers to answer questions, to recall what was read, and to improve standard comprehension test performance. The instruction also benefits recall, question answering, and identifying elements of story structure. For example, in 1983 Jill Fitzgerald and Daisy L. Spiegel found that instruction in narrative structure enhanced story structure knowledge and had a strong positive effect on reading comprehension with average and below-average fourth-grade students who had been identified as lacking a keen sense of narrative structure.

The NRP examined seventeen studies using story structure instruction with readers ranging from third grade through sixth grade. Story structure instruction improved readers' ability to answer short-answer questions and retell the story. In three of the studies, standardized tests were used for assessment. Story structure instruction led to improved reader scores in two of those studies.

**Summarization.** Teaching readers to summarize makes them more aware of how ideas based on the text are related. Readers learn to identify main ideas, leave out details, generalize, create topic sentences, and remove redundancy. Through example and feedback, a reader can be taught to apply these summarization rules to single- or multiple-paragraph passages by first summarizing individual paragraphs and then constructing a summary or spatial organization of the paragraph summaries.

In eighteen studies on summarization with students from grades three to eight examined by the NRP, readers improved the quality of their summaries of text not only by identifying the main ideas but also by leaving out detail, including ideas related to the main idea, generalizing, and removing redundancy. Further, the instruction of summarization improves memory for what is read, both in terms of free recall and answering questions. For example, in 1984 Thomas W. Bean and Fern L. Steenwyk examined whether training sixth-grade readers in rules for

summarization developed in 1983 by Ann L. Brown and Jeannie D. Day would improve comprehension. They found that readers receiving summarization instruction either by rule-governed or intuitive-summarization techniques performed better than controls who were told to find main ideas but who had no explicit instruction. The summarization-trained students significantly outperformed the control group in the quality of their summaries and on a standardized test.

**Multiple-strategy instruction.** Readers can learn and flexibly coordinate several comprehension strategies to construct meaning from texts. Palincsar and Ann L. Brown's reciprocal teaching method, described in 1984, instructs readers to use four main strategies during reading: generating questions, summarizing, seeking clarification, and predicting what will occur later in the text. Additional strategies may also be introduced, including question answering, making inferences, drawing conclusions, listening, comprehension monitoring, thinking aloud, and question elaborating. The teacher models strategies and, in some cases, explains them as they are modeled. Then the reader, either alone or as a leader of a group, applies the strategies.

The evidence indicates that demonstration and repeated use of the strategies leads to their learning by readers and improvement in comprehension. In 1994 Rosenshine and Carla Meister conducted a meta-analysis of sixteen reciprocal teaching studies with students in grades one through eight. Most of the readers were above grade three. Weaker and older readers benefited most from reciprocal teaching. In eleven studies of reciprocal teaching in grades one through six reviewed by the NRP but not covered by Rosenshine and Meister, reciprocal teaching produced clear positive improvement on tasks that involve memory, summarizing, and identification of main ideas.

Multiple-strategy programs that do not use reciprocal teaching mainly have the student practice strategies with modeling and/or feedback from the teacher. In explicit, direct approaches, the teacher always explains a strategy before the teacher models it during reading.

**Teacher preparation for text comprehension instruction.** Teachers have to learn strategy instruction in order to interact with students at the right time and right place during the reading of a text. Teachers also need to know about cognitive process-

es in reading and how to teach strategies through explanation, demonstration, modeling, or interactive techniques; how to allow readers to learn and use individual strategies; and how to teach a strategy in conjunction with several other strategies.

Four studies conducted in the late 1980s and 1990s indicated that teachers who learn multiple comprehension strategy instruction and use it in their classrooms improve the reading comprehension of their students, especially those who are below average in skill. Improvements occurred in subject matter learning and in performance on standardized reading comprehension tests. In 1996 Rachel Brown, Michael Pressley, and colleagues taught teachers to use transactional strategy instruction in a yearlong program where students made comprehension gains. Transaction instruction involves teacher-directed actions with interactive exchanges with students in classrooms.

**Cooperative learning by peers.** Readers may learn best when they are in social situations in which they are actively engaged with other learners who are near their same level of understanding. Cooperative learning involves readers reading together with a partner or in small groups. As they read aloud and listen to others, the teacher can guide them to use any of the various strategies for effective reading comprehension. At first the teacher may model reading through her demonstrated use of a strategy. Then the student readers carry out the demonstrated activities with a partner or in small reading groups. Readers take turns reading and listening, asking questions, answering questions, summarizing, recognizing words, predicting, and clarifying. The readers are encouraged to tutor each other on strategies. Group cooperative instruction has been found to promote intellectual discussion, increased student control over their learning, increased social interaction with peers, and savings in teacher time.

For example, in 1998 Janette K. Klingner, Sharon Vaughn, and Jeanne S. Schumm investigated the effectiveness of a cooperative learning approach designed to encourage culturally and linguistically diverse general education fourth-grade students to use strategic reading by employing various summarization and clarification procedures during reading. Students in the cooperative learning classes made greater gains in reading comprehension and equal gains in content knowledge than controls in measures that included a standardized reading test, a social studies unit test, and audiotapes of group work.

In ten studies on cooperative learning of comprehension strategies reviewed by the NRP, students successfully learned the reading strategies. Cooperative learning can also be effective for integrating students with academic and physical disabilities into regular classrooms. The social interaction increases motivation for learning and time spent by the learners on tasks.

### Implications for Future Research and Practice

Instruction of cognitive strategies for reading comprehension has been successful across a wide number of studies for readers in grades three to eleven. Despite these successful demonstrations, there are many unanswered questions. Among these are whether certain strategies are more appropriate than others for readers of certain ages or different abilities, whether comprehension strategy instruction would improve performance and achievement in all content areas, whether successful instruction generalizes across different types of texts, and whether comprehension strategies work better if what is being read engages the readers' interests. Researchers also need to find out more about important teacher characteristics that influence successful instruction of reading comprehension, especially in regard to decision-making processes (e.g., knowing when to apply what strategy with which particular student[s]). Finally, there has been little research that directly compares different methods of teaching comprehension. More needs to be known about "best approaches" to comprehension instruction and the circumstances under which they are successful. How does one best develop independent readers who have the abilities to understand what they read on their own?

### Conclusion

Cognitive strategy instruction does work to improve readers' comprehension performance. In her 2000 address to teachers, Carol Minnick Santa, president of the International Reading Association, noted that "teaching [comprehension] is a lot harder and more abstract than teaching phonemic awareness or language structures. Moreover, effective comprehension instruction . . . demands extensive teacher knowledge." In 1993, after a five-year study of teaching teachers to implement comprehension strategy instruction, Gerald G. Duffy, a developer of the direct-instruction approach to cognitive strategy instruction, concluded that teaching students to

acquire and use strategies requires a fundamental "change in how teacher educators and staff developers work with teachers and what they count as important about learning to be a teacher" (p. 244). Successful comprehension teachers must be strategic themselves, coordinating individual strategies and altering, adjusting, modifying, testing, and shifting tactics appropriately until readers' comprehension problems are resolved. For readers to become good reading strategists requires teachers who have appreciation for reading strategies.

*See also:* LITERACY, *subentry on* VOCABULARY AND VOCABULARY LEARNING; LITERACY AND READING; MEMORY; READING, *subentries on* BEGINNING READING, CONTENT AREAS, INTEREST, LEARNING FROM TEXT, PRIOR KNOWLEDGE, BELIEFS, AND LEARNING, TEACHING OF; READING DISABILITIES.

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#### CONTENT AREAS

Reading in content areas is also referred to as subject matter reading and disciplinary reading and embodies what educators call "reading to learn." These terms refer to reading, understanding, learning, and using content area, subject matter, or disciplinary texts such as texts in science, history, or literature, for the purpose of gaining, demonstrating, and possibly creating knowledge in that discipline. Proficiency in reading content area materials is influenced by: (1) the dispositions of individuals who read in the disciplines (including such influences as their levels of background and strategy knowledge, their understanding of the discipline, their attitudes and interest in the subject matter, and their ability levels); (2) the goals that students adapt for learning and the degree to which those goals are similar to the goals that their teachers have for their learning; (3) the structure, difficulty level, and tone of the texts; (4) the level of understanding required of the individuals (for example, memorization versus critical thinking); and (5) the form in which that understanding is displayed (such as written versus oral or recall versus recognition). Thus, reading content area materials involves complex processes.

Educators often state that "reading to learn" is different from "learning to read." When students learn to read, the focus is often on the pronunciation and comprehension of narrative texts. Comprehension of these narratives does not usually require expertise in literary criticism and interpretation, although teachers seek literal, inferential, and evaluative/applied understandings. Reading to learn, however, focuses on the understanding and use of largely informational texts in disciplines such as history and science and a mix of informational and literary texts in English. Reading to learn *does* require disciplinary expertise. When reading a literary text, for example, students benefit from knowing how literary critics think about and discuss literature as a guide to their own interpretation and discussion of that text. When reading a history text, students benefit from understanding the way that historians gather and interpret data and write about historical events. Reading to learn science requires a different set of understandings than reading to learn history, literature, or any other subject matter.

Level of background knowledge, interest, goals, and other student characteristics make a difference in how well students are able to understand and use the information in texts, but content area reading specialists disagree about the degree to which the approach to reading differs depending upon the discipline. Strategies for understanding and applying what is read will have some commonalities across disciplines; generally, however, the understanding of disciplinary texts is inextricably tied to understandings of the discipline.

In a 1997 article Patricia Alexander posited that disciplinary expertise is gained as a function of three interdependent influences—knowledge, interest, and strategy use. That is, as one increases, the others do as well. Alexander described three levels of disciplinary expertise. At the level of *acclimation*, knowledge is unorganized, strategies are general, and interest is extrinsic. At the level of *competency*, knowledge becomes organized (such as into processes in science), strategies become more specific, and interest becomes more intrinsic. At the level of *proficiency*, one may even create knowledge, strategies will not only be more specific but also become fluid and very efficient, and interest will be very closely tied to one's inner desires. Students may move from acclimation to competency because they get hooked on a topic and that hook helps them become more interested in other topics, because they develop

strategies that help them learn more effectively, or because they may learn more and, thus, understand how better to use strategies for learning. In any event, knowledge, interest, and strategy use are tied to the discipline rather than being seen as general constructs.

### Reading in Three Disciplines: History, Science, and Literature

Disciplines differ in their methods for creating and displaying knowledge. In addition, teachers in the disciplines expect students to understand those differences and to use them in learning information from texts.

**The case of history.** History texts are traditionally written as narratives that are sometimes interspersed with interpretation. For example, an event such as the Tonkin Gulf incident of the Vietnam War may be described sequentially, followed by a paragraph discussing the importance of the event in determining U.S. involvement in the war. Students often read historical texts as if they were “baskets of facts” to be memorized in sequential order, but this strategy is naive. Historians, when asked to read historical texts, read them differently. In a 1992 article Samuel Wineburg reported that historians read historical texts as arguments. When reading several historical documents, they engaged in *sourcing* (determining the expertise of the author and the source of the material), *contextualization* (determining when it was written and what surrounding influences there might be), and *corroboration* (determining whether or not the texts agreed).

The differences in the way students and historians read the documents can be attributed to differences in disciplinary expertise. That is, historians know the way that historical evidence is collected. They understand that there is the danger of bias in the selection process of that evidence. They also know that original documents are sometimes difficult to interpret. The documents are like pieces of a puzzle that must be assembled without a preexisting border, with the final picture being a creation of the historian. In interpreting those original documents historians are influenced by the time period in which they live, the political and philosophical approaches they have embraced, and past historical interpretations, to name a few influences. In addition, historians understand the power relations that exist among historians. They know what counts as good historical writing, model their own writing on that of oth-

ers, and examine the writing of their fellow historians accordingly. Historians understand the elements of their discipline and thus read historical texts with a critical eye.

But the processes of selecting and interpreting historical evidence and writing about historical events is hidden from the reader of historical texts. In presenting history as a coherent story, this information is obscured. Therefore, it is up to teachers of history to call to the attention of students the elements of the discipline that will help them engage in reading history.

What are students required to do when they read history texts? Typically, students are expected to engage in several levels of understanding of history as a result of reading historical texts. These include a mastery of the “facts” of history. They include understanding consensual interpretations of history, such as understanding various historians’ ideas of the causes and effects of important events. They also include students’ engagement in thinking about these interpretations for themselves. Students in history classes are often asked to make comparisons and contrasts and to discuss possible cause-and-effect relationships that have not been made explicit in the texts. Students are also often required to synthesize information across several texts. For instance, they may be required to read Benjamin Franklin’s writings and decide in what ways his ideas had embodied the principles of the Enlightenment. Sometimes students are asked to look at history from different perspectives. For instance, they may be required to read several versions of an event to consider how the context of those writings influenced understanding about it. Students sometimes are asked to engage in the gathering of and interpretation of historical evidence and to write their interpretations in report form, such as in a term paper. Finally, students are sometimes required to engage in thinking about the philosophical aspects of historical understanding. For example, they may be asked to consider whether important people create noteworthy events or whether noteworthy events create important people.

The tradition in history classes for demonstrating these various understandings turns increasingly toward essay writing as students move from naivete to expertise and from lower-level mastery of factual information to higher-level critical thinking and interpretation. Thus, students need to have a complex array of strategies for understanding historical texts

and for demonstrating that understanding. These include strategies for remembering the facts of historical events, engaging in historical research, making comparisons and contrasts, synthesizing information across texts, writing essays, and thinking critically about the nature of history and historical writing. Whereas these strategies share common elements with strategies needed for other disciplines, they are, in the end, discipline specific.

**The case of science.** The hard sciences such as physics and biology rest on the assumptions of the scientific method. Scientists understand and use the scientific method in their search for “truth.” They adhere to the principle of objectivity, understanding that their own biases and perceptual shortcomings may cause misinterpretations of evidence. Thus they engage in experimentation using controlled conditions whenever possible and rely on numerical rather than qualitative assessments of data as the main determinants of scientific principles. Yet, as scientists, they are still influenced by several constraining elements. The selection of research topic, the use of certain measurement devices, the importance assigned to various scientific findings, and the previous understandings of the research topic are all examples of constraints that are in part culturally and socially based. Which topics get studied and which findings gain acceptance in the scientific community are functions of power relations among scientists, of necessity, and of the veracity of the findings. As an example, consider that it took hundreds of years for the ideas of the seventeenth century Italian astronomer and physicist Galileo Galilei to be accepted by the scientific community, or that sterilization procedures were staunchly resisted by the scientific community despite evidence that such procedures were necessary.

Also in science, information is always partial and relational. Because the workings of the natural world are obscured for individuals by the limits of their perceptual and sociocultural understandings, scientific understandings are always in a state of flux. For example, the ideas about gravity and motion formulated by the English mathematician and physicist Isaac Newton (1642–1727) are functional on Earth but have become outmoded based upon newer conceptions of quantum physics. Scientists understand this flux; they have the disciplinary knowledge necessary to help them critically read and evaluate scientific texts. They also know what counts as written proof of a scientific finding. For example, they know

that the reporting of a scientific finding in the journal *Science* requires adherence to certain traditional rules for scientific reporting and has been anonymously reviewed (refereed) by a group of distinguished scientists. They know that such a report counts more than the accounting of similar findings in a local, nonrefereed publication. Students, however, do not have the disciplinary knowledge necessary to make these evaluations. Skillful reading of science is in part dependent upon students gaining that disciplinary knowledge.

What are students required to do as they read science texts? Typically, they are required to master a knowledge base that represents the current understandings of the scientific community. These understandings involve the identification of various elements and their function in carrying out common processes. For example, students are required to identify the parts and understand the workings of the human digestive system. They are also often required to solve problems or to make predictions about processes based upon their scientific understandings. For example, a student who understands the path of a projectile and how it is calculated might be asked to determine the time it would take a projectile to reach the ground if it were launched at a certain speed at a certain trajectory from a certain height. In other words, students must be able to understand the vocabulary and concepts of what they read and apply that understanding in new contexts.

In trying to understand the processes of science, students may need to suspend their own ideas in favor of scientific evidence. In the study of gravity, for example, students often have erroneous conceptions of how gravity works based upon their intuitive but scientifically disproven assumptions. Students may believe that a heavier object will fall faster than a lighter one, when, in reality, weight or mass do not influence the speed of a projectile as it falls to Earth. Scientists know that weight has no influence because they have performed controlled experiments. Students must suspend their intuitive beliefs to learn the scientific information, and those who understand the assumptions of the scientific method will more likely engage in that learning than students who do not.

Science texts are often seen as difficult to understand. Students complain that concepts are not sufficiently elaborated, the material assumes a level of background information that exceeds theirs, the vocabulary is too dense, and the content is dull. Texts

are even harder to understand when students begin their reading harboring misconceptions about the content that interfere with their understanding. Researchers have found that refutational text, or text that explicitly describes erroneous understandings and explains why they are erroneous, is more effective at helping students to learn counterintuitive ideas.

The procedures in science classes for demonstrating students' understandings are varied, including answering literal, inferential, and applied questions on multiple-choice tests; solving numerical problems; writing descriptive essays; writing field notes; making charts, graphs, and diagrams; and writing scientific reports. Students are required to have elaborative understandings of current conceptions of the working of the natural world, and they must have a number of strategies for learning at their disposal.

**The case of literature.** Literature has its own disciplinary traditions. Knowledge of the way that literary experts refer to such elements as genre, characterization, theme, conflict, symbolism, and language use is important. In addition, experts in literature often engage in various kinds of interpretation, for example, putting a feminist, Marxist, Freudian, or post-modern spin on the interpretation of a piece of literature. Experts in literature understand the different perspectives that are part and parcel of the field. They understand that literary criticism has evolved over time; that the relationship of the author, the text, and the reader and their importance in interpretation have fluctuated; and that arguments rage over what is important for students to read (the canon versus multicultural literature, for example). Students may not have this disciplinary knowledge but would benefit by it.

Students need to develop a common language with which they can discuss and write about their interpretations of text, and the tradition in literature classes is for the demonstration of disciplinary expertise to be in essay form. In addition, they are often expected to apply their knowledge of the elements of certain genres by engaging in writing literary texts themselves, such as in writing poetry or short stories. And they are sometimes required to write reports about authors or certain literary traditions. The strategies for engaging in these activities are quite complex, and, although they require literal, interpretive, and applied/evaluative thinking, the

way in which this thinking is used is different from the way it is used in history and science.

The three disciplines—science, history, and literature—are similar in that all require thinking at literal, inferential, and applied/evaluative levels. In addition, reading texts in these disciplines requires vocabulary knowledge and strategic effort. But the disciplines are different. For example, science is well-structured, history less well-structured, and literature relatively unstructured in relation to what is agreed upon as being “known.”

### Strategies for Reading Content Area Texts

When discussing strategy use, educators find it useful to make a distinction between teacher-generated and student-generated strategies. In both cases, however, content area specialists argue about whether general strategies can be used and applied across subject areas or whether strategies must be discipline specific. In reality, probably both ideas are true.

An example of a teacher-directed strategy is list-group-label. In this pre-reading strategy, the teacher solicits and makes a list of all the information students already know about the content of what they are about to read. Then, she directs the students to group the items in the list into meaningful groups and to label each meaningful group. From this activity, the teacher finds out what the students already understand and can, thus, be more effective in bridging any gaps between information in the text and student knowledge. In addition, the activity can be used to generate a list of questions that might be answered by the text. These questions would then make reading a more directed and interesting activity. The strategy can be applied across contents, but the lists that are generated and the way the lists are used might differ depending upon the discipline. For example, in a history class, groups may include events, policies, and people. In science they may include patterns of behavior or processes.

Regarding student-generated strategies, to be successful in classes in any discipline, students must read with the purpose of understanding and thinking about the information at deep levels, organizing the information into meaningful units, remembering the information, and displaying their knowledge in various ways. Strategies such as previewing, annotating, and outlining help students identify important information to study; strategies such as charting, mapping, and concept cards help students

to organize material across sources in meaningful ways; strategies such as verbal rehearsal help students to remember and think about the material; and strategies such as predicting and answering exam questions help students prepare for displaying their knowledge. If students think at literal, inferential, and applied/evaluative levels, they will be more likely to truly learn new information. But even though all of these strategies can be applied across content areas, they will, in practice, be different depending upon the content of the material. Evidence that strategy use in one discipline can be transferred to other disciplines without explicit instruction in strategy modification is rare, and so it seems necessary that students should get explicit strategy modification instruction in each discipline.

In conclusion, the more discipline knowledge they possess, the more content knowledge they have, the more they are interested in the subject matter, the more familiarity they have with the way knowledge is created and structured in a particular discipline, and the more closely their goals for learning match disciplinary goals, the more likely it is that students will be able to adapt general strategies or create new ones to meet their discipline-specific needs for learning and applying the information in their content area texts.

*See also:* CHILDREN'S LITERATURE; HISTORY; READING, *subentries on* COMPREHENSION, INTEREST, LEARNING FROM TEXT, PRIOR KNOWLEDGE, BELIEFS, AND LEARNING, TEACHING OF; READING DISABILITIES; SCIENCE EDUCATION; SCIENCE LEARNING.

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CYNTHIA HYND

#### INTEREST

The powerful facilitative effect of interest on academic performance in general has been well estab-

lished. For the purpose of this entry, the current conceptualization of interest is overviewed, followed by a review of interest research on reading.

#### The Conceptualization of Interest

Among the many conceptualizations of interest the most common are to consider interest as a state and/or as a disposition. It has also been demonstrated that interest has both cognitive and affective (emotional) components. Researchers also distinguish between individual and situational interest, with the former targeting personal interest and the latter focusing on creating appropriate environmental settings.

Individual interest has been viewed as a relatively long-lasting predisposition to reengage with particular objects and events. Increased knowledge, value, and positive affect have been connected with individual interest. Students bring to their academic experience a network of individual interests, some similar to and some incompatible with classroom learning. Social categories such as gender and race also function as individual interest factors that may affect classroom engagement.

Situational interest refers to a psychological state elicited by environmental stimuli. The state is characterized by focused attention and an immediate affective reaction. The affective component is generally positive, although it may also include some negative emotions. Once triggered, the reaction may or may not be maintained. Situational sources of interest in learning contexts may be particularly relevant for educators working with students who do not have preformed individual interests in their school activities.

Although differences exist between situational and individual interest, they are not dichotomous phenomena. First, both situational and individual interest include an affective component and culminate in the psychological state of interest. Such a state is characterized by focused attention, increased cognitive functioning, and increased and persistent activity. Second, investigators concede that both types of interest are content specific and emerge from the interaction of the person and aspects in the environment. Third, numerous researchers recognize that situational and individual interests may interact. In the absence of the other, the role of individual or situational interest may be particularly important. For example, individual interest in a sub-

ject may help individuals deal with relevant but boring texts, while situational interest generated by texts may sustain motivation even when individuals have no particular interest in the topic. In addition, situational interest may develop over time into individual interest.

It has been found that topic interest has both situational and individual components. Topic interest may have an especially significant role in reading and writing in schools because students usually have to deal with text on the basis of topics provided by teachers.

### **Interest and Reading Research**

The most important questions raised in the literature on interest and reading concerned the influence of interest on readers' text processing and learning, the factors that contribute to readers' interest, and the specific processes through which interest influences learning. These issues are considered next.

**The influence of interest on readers' text processing and learning.** Up to the early 1980s, the prevalent view in educational research was that proficient readers process and recall text according to its hierarchical structure. Thus it was believed that readers could recall best the more important ideas at the higher levels of text structures. Since the early 1980s, however, research has shown that readers' well-formed individual interests and their situational interests (evoked by topics and text segments) contributed to their reading comprehension and learning. Several studies have demonstrated that personally interesting text segments and passages written on high-interest topics facilitate children's as well as college students' comprehension, inferencing, and retention.

Researchers have also demonstrated that interest affects the type of learning that occurs. Specifically, beyond increasing the amount of recall, interest seems to have a substantial effect on the quality of learning. Interest leads to more elaborate and deeper processing of texts. In 2000 Mark McDaniel, Paula Waddill, Kraig Finstad, and Tammy Bourg found that readers engaged with uninteresting narratives focused on individual text elements, such as extracting proposition-specific content, whereas readers of interesting texts tended to engage in organizational processing of information. Furthermore, their research suggests that text differing in interest may affect the degree to which processing strategies benefit memory performance.

**Factors contributing to readers' interest.** Another important educational issue is to increase the amount of interesting reading that students engage in. The bulk of the research in this area examined text characteristics that contribute to making reading materials more interesting. In his seminal 1979 paper, Roger Schank indicated that certain concepts (e.g., death, violence, and sex) can be considered "absolute interests" that almost universally elicit individuals' interest. In 1980 Walter Kintsch, referring to these interests as "emotional interests," distinguished them from cognitive interests, which result from events that are involved in complex cognitive structures or contain surprise. Subsequent research has suggested that a variety of text characteristics contribute in a positive way to the interestingness and memorability of written materials. Features that were found to be sources of situational interest include novelty, surprising information, intensity, visual imagery, ease of comprehension, text cohesion, and prior knowledge.

Text-based interest can also be promoted by altering certain aspects of the learning environment such as modifying task presentations, curriculum materials, and individuals' self-regulation. For example, in 1994 Gregg Schraw and R. S. Dennison were able to change the interestingness and recall of text materials by assigning for reading various perspectives on the same topic. In addition, research has indicated that presenting educational materials in more meaningful, challenging, and/or personally relevant contexts can stimulate interest. Modifying the presence of others in the learning environment can also elicit interest. For example, German researchers Lore Hoffman and P. Haussler demonstrated that mono-educational classes in physics can contribute to girls' increased interest in the subject area. Finally, Carol Sansone and colleagues in a series of studies showed that individuals can self-regulate in order to make tasks more interesting and subsequently to develop individual interest in activities initially considered uninteresting. Although these studies did not deal specifically with interest in reading, they indicated that interest in reading could also be increased by similar methods.

**Specific processes through which interest influences learning.** Gregg Schraw and colleagues suggested in 1995 that interest should be thought of as a complex cognitive phenomenon affected by multiple text and reader characteristic. A critical question is how the elicitation of interest leads to improved

recall. One possibility is that interest activates text-processing strategies that result in readers being engaged in deeper-level processing. Suzanne Wade and colleagues reported in 1999 that the connections readers made between information and their prior knowledge or previous experience increased their interest.

Mark Sadoski and colleagues suggested in 1993 that interacting but separate cognitive systems (verbal and nonverbal) can explain the relationships among interest, comprehension, and recall. When verbal materials are encoded through both of these systems, comprehension and memory increase. The dual coding suggested by Sadoski and colleagues seems to account for the effects of some of the sources of interest that have been found to be associated with increased comprehension and memory, such as the processing of concrete, high-imagery materials. Nevertheless, some highly concrete and easily imaginable information is more interesting than other similar information. In addition, the informational significance of intensity, novelty, surprise, high personal relevance, and character identification reported in the literature to elicit interest do not seem to promote dual encoding prompted by concrete language and mental imagery. Another factor that has been associated with interest, reading, and increased learning is attention. Suzanne Hidi argued that interest is associated with automatic attention that facilitates learning. More specifically, she argued that such attention frees cognitive resources and leads to more efficient processing and better recall of information. In 2000 McDaniel, Waddill, Finstad, and Bourg reported empirical data supporting this position. Finally, as interest undoubtedly has a strong emotional component, this aspect may play a critical role in how interest influences learning. The effect of emotions on interest, however, is yet to be fully investigated in educational research.

*See also:* EFFORT AND INTEREST; LITERACY AND READING; READING, *subentries on* COMPREHENSION, CONTENT AREAS, LEARNING FROM TEXT, PRIOR KNOWLEDGE, BELIEFS AND LEARNING.

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SUZANNE HIDI

## LEARNING FROM TEXT

Text allows people to communicate their ideas with one another across time and space. Indeed, a large part of what each person knows comes from reading texts. People who never discover how to learn from text have strong constraints on what they can know and do. On careful reflection, however, learning from text is a more controversial topic than is readily obvious. Learning may be of higher quality when students experience the world directly rather than read about it. Fourth graders who construct electric circuits or twelfth graders who enact a mock trial may well understand more about the underlying principles of electricity or the judicial system than if they had read chapters from their science or social studies textbooks. As appealing as learning by doing may seem, it has its own limitations. It is unrealistic to assume that students would be able to acquire the understanding of electricity that the nineteenth-century German physicist Georg Ohm had or the understanding of the law that John Marshall, chief justice of the U.S. Supreme Court from 1801 to 1835, had by repeating the same school activities even countless times. Through reading, students can experience the thinking of these experts and come to know some of what they knew or know without completing the same years of study or possessing equal amounts of academic insight. Successful learning depends on a close match among reader goals, text characteristics, reader proficiencies, and instructional context.

### Reader Goals

People read for many reasons. A mystery lover reads a new novel to be intrigued and entertained. A cook reads a recipe to prepare a new dish successfully. A caller reads the telephone book to find a telephone number. The mystery lover, cook, and caller will have connected the words, sentences, and paragraphs of their texts together to be entertained, follow the set of prescribed steps, or locate the information they seek. In other words, they will have comprehended successfully. Nevertheless, they

probably will not have learned much. The goal of the mystery lover is to be entertained, not to learn. While the cook and caller read to find information, this information probably will remain in the text where it can be accessed again when needed rather than become a part of each reader's knowledge.

Comprehension, memorizing, and learning require different processes and different amounts of effort. Walter Kintsch, a cognitive psychologist who has studied text comprehension and learning, has shown that children can comprehend, or recall, an arithmetic problem without being able to solve it correctly and that adults can recall a set of directions without being able to find a particular location. To comprehend, readers connect the separate ideas in a text into a coherent whole that resembles the text. They know the meanings of most words and are able to draw necessary inferences between sentences, paragraphs, and larger sections of a text. As they draw these inferences, they distinguish superordinate topics or ideas from details. If asked to recall a text soon after reading it, they will tend to remember the superordinate topics, but not the details.

Memorizing requires rehearsal and therefore more effort than comprehension. Readers who reread a text several times, focusing attention on the superordinate ideas and some of the details, will be better able to reproduce what they have rehearsed, particularly if prompted. Memorization is often what students do when they study for an exam. If the test has multiple choice or true and false questions, memorization can be an effective strategy. Neither text comprehension nor memorization alone, however, will result in learning, according to Kintsch.

Kintsch found that children were able to solve a problem if they could apply what they know about arithmetic and life in general to imagine a situation that represents the details in the problem. He suggested that learning occurs when readers can use their own relevant knowledge to think about, perhaps rearrange, critique, and retain or discard the content in a text. Picture the master chef following a new recipe for a type of dish that she has cooked many times. Because of her knowledge about ingredients, preparation choices, cooking temperatures, and heat sources, this chef would notice any new features, critique the recipe, keep what she likes, and add to what she already knows about preparing the dish. Learning brings about a change in what readers know, understand, and can do rather than simply what they remember or comprehend.

## Texts for Learning

Learning requires more from a text than comprehensibility. To be sure, comprehensibility serves as a gatekeeper. Readers who comprehend a text have a chance at learning from it. Those who fail to comprehend will learn little without substantial intervention from the teacher. Centuries of scholarship on the features of effective writing accompanied by decades of comprehension research have revealed the characteristics of comprehensible text. Organization is important. Coherent texts are easier to comprehend than incoherent, poorly organized texts. In coherent texts sentences and paragraphs are organized around clear subtopics, and the overall text follows a well-known genre, such as argument or explanation. If the text has introductions, transitions, conclusions, paragraph topic sentences, and signal words that highlight this organization, readers will comprehend it better than they will a text without these features. In addition to organization, comprehension is affected by familiarity and interestingness. Readers comprehend texts better that are maximally informative, neither too familiar nor too unfamiliar, and that include vivid details and examples to capture interest. As important as text comprehensibility is, however, it does not address *what* students will learn from their reading or *whether* they will learn anything at all.

What is worth learning? The philosopher Alfred North Whitehead saw in schooling the potential to teach important understandings that students could use to make sense of the chaotic stream of events that make up experience. In his 1974 book *The Organisation of Thought*, he warned educators, “Do not teach too many subjects, [and] what you teach, teach thoroughly, seizing on the few general ideas which illuminate the whole, and persistently marshalling subsidiary facts round them” (Whitehead, p. 3.) The difficulty, of course, arises in choosing the few understandings to teach.

Ralph W. Tyler, in his classic 1949 book *Basic Principles of Curriculum and Instruction*, proposed five types of important understandings. First, subject specialists believe that the major understandings should come from the design of the knowledge domains themselves. Second, progressives and child psychologists maintain that the goal of education is to produce well-adjusted adults and that student needs should guide the choice of understandings. Third, sociologists, aware of the needs of society, argue that the understandings should be based on

whatever the pressing societal problems are; the goal of schooling is to produce good citizens. Fourth, educational philosophers point to important basic life values as a guide, because they believe that the goal of education is to produce an ethical populace. Fifth, educational psychologists explain that the understandings must be developmentally appropriate; the goal of schooling is to teach something. No curriculum could effectively incorporate everything worthwhile. Therefore, Tyler suggested that curriculum designers use their philosophy of education and what they know about educational psychology to decide which understandings to include from student needs, society needs, and the domain.

Besides being comprehensible and presenting valuable content, certain types of texts are intentionally instructional, designed specifically to enhance reader learning. Argument and explanation, two familiar genres, are particularly effective instructional text types. Both genres marshal subsidiary facts around general ideas, the optimal instructional approach for teaching important understandings according to Whitehead. Argument offers facts and examples to support a claim, or general statement. Twelfth graders studying the judiciary might read a text that presents details about court decisions in order to argue, “Through its decisions, the Supreme Court has a major influence on how the trials in lower courts are conducted.” Explanation presents facts, examples, illustrations, and analogies ordered logically to guide a reader from an everyday understanding toward the understanding of an expert. Fourth graders might read an explanation of electricity that introduces the scientific model of electric circuits. The explanation could begin by describing the everyday experience of turning a light switch on and off. Next it could present the steps for building a simple circuit and examples of circuits that light lamps, houses, and entire towns. The explanation could display diagrams with arrows that show how electricity moves in each of the circuits. It could conclude with a description of the atomic model and accompanying diagrams. Text features can substantially affect student learning.

## Reader Characteristics

In order to comprehend a text, integrate the ideas in the text with what they already know and understand, and then construct a model of the situation in the text, readers must be able to capitalize on a text’s comprehensibility and instructional features.

Reader knowledge is crucial. Readers who are familiar with a text's topic can rely on what they know to recognize important ideas and distinguish them from details. They can readily identify the meanings of familiar words in the text and can use what they already know to infer the meanings of unknown words. If they also know common text patterns and how they are signaled in introductions, conclusions, transitions, and topic sentences, readers can connect the separate ideas in the text into a coherent whole that resembles the text. Knowledge about arguments and explanations may be particularly important. Readers who expect to recognize and learn new ideas from reading these two genres will be far more likely to learn the ideas than readers who are oblivious to them.

But learning requires special reading strategies beyond what readers must know to be able to comprehend. In a 1997 article Susan R. Goldman, a cognitive psychologist, reviewed the extensive work on learning strategies, including some of her own work. She concluded that readers who explain and elaborate what they are reading and who have flexible comprehension strategies learn more from reading than readers who do not. The effective explainers actively search for the logical relationships among the ideas in a text. Thinking about the relationships reminds successful learners of related facts and examples from their own knowledge. These strategies lead readers to construct a model of the situation in the text closely intertwined with what they already know.

### The Learning Context

Contexts that effectively promote learning from text set learning as the goal for reading, provide students with comprehensible and "learnable" texts, draw connections between student knowledge and reading, and support and promote student thinking about text. Students may read to complete tasks, to understand activities more fully, to teach ideas to one another, to figure out the important ideas in a text, and to prepare reports, arguments, and explanations. Each of these learning goals requires that readers connect the ideas in the texts to what they already know. Teachers can promote connections by brainstorming with the students, reminding them of relevant experiences in and outside of class, encouraging them to read from several related texts, and pairing reading and experiential activities. Learning also requires readers to search for the logical

relationships among ideas in a text. Contexts that encourage students to formulate questions, summarize, explain, construct graphic organizers, and apply generic writing patterns teach students to seek out and identify the logical organization in a text. Because these strategies require conscious effort, successful learning contexts include time for students to reflect on the connections that they are making, the logical relationships that they are identifying, and whether they are successfully learning from the text.

The same instructional features that promote learning in general will also support successful learning from text. The text must be comprehensible and present significant content, however, and at least some of the instruction must focus on the ideas presented in the text. For fourth graders learning about electric circuits or twelfth graders learning about the judicial system, whether they learn from reading text will depend on the match among their goals for reading, the characteristics of the text, their reading strategies, and the entire instructional context within which their reading occurs.

*See also:* CHILDREN'S LITERATURE; LITERACY, *sub-entry on* INTERTEXTUALITY; LITERACY AND READING; READING, *subentries on* COMPREHENSION, CONTENT AREAS, INTEREST, PRIOR KNOWLEDGE, BELIEFS, AND LEARNING, TEACHING OF; TEXTBOOKS.

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## PRIOR KNOWLEDGE, BELIEFS, AND LEARNING

For most students, the process of learning is strongly dependent on their ability to make sense of linguistic information presented in either written or oral form. That is, for most students the process of learning is fundamentally the process of learning from text. The importance of text-based learning is as old as formal education. Yet, during the last three decades of the twentieth century, the concepts of text and learning underwent transformations that significantly influenced the nature of student academic development.

Traditionally, *text* has been viewed as the linear connected discourse typified by textbooks, magazines, or newspapers. This textual form remains a centerpiece of human learning and the source of most of the research in text-based learning. In the 1980s and 1990s other forms of text became increasingly important components in school learning. Specifically, students were also required to learn from the less linear, more dynamic, and more transient messages encountered daily in discussions and online. Thus, students must become conversant with all modalities of text if they are to learn effectively in the decades to come.

Moreover, when considering student *learning*, one must think beyond simple notions about the acquisition of declarative (i.e., factual) knowledge and procedural knowledge (i.e., knowing how to do something). Instead, learning is essentially the process of instigating deep and enduring changes in students' knowledge, beliefs, motivations, and problem-solving abilities. The focus in this entry is on the dimensions of knowledge and belief and their relationship to learning from text. As will become evident, learning from any text is a process inevitably intertwined with one's knowledge and beliefs, both in terms of the knowledge and beliefs one brings *to* the text, as well as the knowledge and beliefs one derives *from* it.

### The Text

Not surprisingly, the process of learning from text depends significantly on the genre, structure, and quality of the messages students encounter in books, in discussions, and online. For example, students must deal with texts written to tell a story (i.e., narrative), those that convey information (i.e., exposition), and those that are some combination of both (i.e., mixed text). Each of these genres affects student

learning in different ways. Further, some texts offer only one perspective on a topic or issue, whereas others present multiple, competing views. These varied structures have been shown to influence students' knowledge and beliefs differently. Finally, whether narrative or expository and whether one-sided or multisided in perspective, texts can be comprehensible and coherent or difficult and inconsiderate of their audiences. Such qualities can facilitate or frustrate student learning.

**Text genres.** Research has shown that text genre influences student learning. Narratives, such as myths and novels, are expressions of actual or fictitious experiences. Because of their common story structure and overall appeal, narratives are often easier forms of text to process. Also in narration, interesting segments are often important ideas to be learned. This perhaps explains why most students learn to read using narrative texts.

In contrast, expository texts (e.g., newspapers, encyclopedias) present information that explains principles and general behavioral patterns. Many subject-matter textbooks employ exposition. They are characteristically dense with facts and concepts and are often considered to be rather dry in style. Also, interesting and important content are likely to diverge in exposition. While exposition becomes increasingly prevalent as students move out of the early elementary grades, students are given little explicit instruction in how to learn from such texts, which might help explain students' difficulties in learning from their course textbooks.

A mixed text, by comparison, possesses properties of both narration and exposition, as when textbooks incorporate personally involving information about central figures. Biography is one of the most common examples of mixed text. One problem with mixed texts is that students are often uncertain about what is factual versus what is fiction. Interesting and important content might also diverge in mixed texts as it does in exposition.

**Argument structure.** Within each genre, texts can be written to conform to particular text structures (e.g., essay or argument). Texts characterized by an argument structure, for example, often open with a claim about a topic and then follow with supporting evidence. This format closes with a warrant, restatement, or summary of the claim and supporting evidence. Texts with an argument structure are often employed to alter students' knowledge and beliefs,

so studies employing various forms of argument structure appear in the literature on changing knowledge and beliefs.

In addition, a given text can have multiple arguments embedded in it. For instance, a substantive finding in the change literature is that texts presenting both sides of an argument and then refuting one side of the argument (i.e., two-sided refutational texts) are more likely to influence students' knowledge and beliefs than other argument structures. By comparison, texts that present only one side of the argument or present both sides in a more neutral fashion may be less likely to alter students' conceptions. Finally, the content or supporting evidence within a given argument also plays a significant role in learning. Students are more likely to believe and comprehend the argument if the supporting evidence comes in multiple forms (e.g., graphs, stories, and examples) or if the evidence includes personally relevant scenarios rather than consisting only of graphs and statistical data.

**Textual quality.** Among the multiple factors that contribute to text quality and subsequent learning are comprehensibility and text credibility. Simply put, when students understand the intended message in the text, text-based learning is more likely to take place. In a 1996 article Patricia A. Alexander and Tamara L. Jetton suggested that problems in text comprehension limit the acquisition of knowledge. Also, students must be able to judge the communication as coming from a reliable source. While students will likely judge textbooks as credible, this may not be the case for online materials, magazines, or newspapers. Text credibility is enhanced, however, when the message is judged as unbiased and if the author or communicator is perceived as an expert.

### The Learner

In addition to the genre, structure, content, and quality of the text, characteristics of the learner also play an influential role in text-based learning. Specifically, learning from text is mediated by a number of variables including one's prior knowledge and preexisting beliefs.

**Knowledge.** Of all the factors relevant to text-based learning, none exerts more influence on what students understand and remember than the knowledge they already possess. This background or prior knowledge serves as a scaffold for obtaining new knowledge. The term *prior knowledge*, in effect, rep-

resents individuals' mental histories or their "personal stock of information, skills, experiences, beliefs, and memories" (Alexander, Schallert, and Hare, p. 317).

Moreover, both the accuracy and extent or depth of one's knowledge seem to be critical factors in learning from text. For instance, changing students' understanding about a rather well-defined concept (e.g., the speed of falling objects) is more difficult when an individual's prior knowledge is less sophisticated or runs counter to the scientific knowledge presented in the text. The use of a two-sided refutational text that specifically counters students' naive or ill-formed concepts has proven effective under such circumstances.

The amount or level of an individual's knowledge also plays an influential role in the learning. It is relatively easier to change individuals' ideas about a particular topic if they possess some, but not too much, relevant knowledge. Individuals who are or who believe they are quite knowledgeable about a topic may feel that they have less to gain from engaging with a text message on that topic. Indeed, several studies have found that readers' perceptions of what they know (i.e., perceived knowledge) is critical and possibly even more predictive of learning than the amount of relevant knowledge they actually display (i.e., demonstrated knowledge).

**Beliefs.** Like knowledge, beliefs play a fundamental role in what students learn from text. One's beliefs are idiosyncratic, the result of the accumulation of experiences over the course of one's life. Unlike knowledge, however, definitions of beliefs vary widely from philosophy to psychology to education. Most agree that beliefs generally pertain to psychologically held understandings, premises, or propositions about the world that are felt to be true. As such, beliefs have much in common with concepts such as attitudes, values, judgments, opinions, dispositions, implicit theories, preconceptions, personal theories, and perspectives. In fact, the word *belief* is often used interchangeably with these terms. Also, the valence of truthfulness often associated with beliefs seems to give them even greater importance within text.

Perhaps one of the most important aspects about beliefs and text is the degree to which one is aware of them. While students have many beliefs that guide their actions, these beliefs may reside at the tacit level, and students may be unaware of their existence. Indeed, researchers contend that beliefs

are organized in such a way that certain beliefs—the more central ones—become connected to other beliefs and are more resistant to change. Further, beliefs may be organized in clusters, allowing incompatible beliefs to be held apart in separate clusters and thus protected from each other.

The more embedded individual beliefs or clusters of beliefs become in one's belief system, the more difficult it is to change them. Nevertheless, when individuals are presented with causal explanations concerning people, objects, or events, they are likely to change or alter their beliefs, even if they are deeply embedded. It would seem that the reading and discussing of argument texts helps to bring embedded beliefs to an explicit level where they are more open to alteration. Finally, as is the case for changing or altering one's knowledge, belief change is more likely to occur when individuals read well-written, comprehensible texts. Certainly, the learning and processing of written or oral text is an intricate endeavor involving the interaction of the learner *with* the text.

*See also:* LITERACY, *subentry on* INTERTEXTUALITY; LITERACY AND READING; READING, *subentries on* COMPREHENSION, CONTENT AREAS, INTEREST, LEARNING FROM TEXT, TEACHING OF.

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#### TEACHING OF

Reading instruction began in the United States in the early and mid-1600s with the ABC method exemplified by the hornbook, a paddle-shaped board on which were inscribed the alphabet, a few syllables, and the Lord's Prayer. *Webster's Blue-Backed Speller* replaced the hornbook, but instruction retained an emphasis on the alphabet and the Bible. *Webster's* remained at the center of reading instruction for more than a century and served mainly the upper class, as few others attended school. Those who did not attend received their education by being read to by those who did. Thus, a focus of instruction was on oral reading skills.

When the United States expanded westward, the widely dispersed people could not be serviced by a

few who attended school, and everyone, those on the eastern seaboard and elsewhere, needed to learn geography and history. In 1842, in an effort to make learning to read easy for the diverse students who now attended school, Horace Mann introduced his word-to-letters approach, which employed the opposite sequence for instruction as the letters-to-words approach (that of the ABC method and *Webster's*). Eventually Mann's approach became the whole-word approach, where little attention was given to letters.

The most common texts during this time were the McGuffey Readers, 122 million copies of which were sold between 1836 and 1920. The selections not only taught history and geography but also praised the virtues of hard work and honesty. They were read orally in classrooms and were the only source of knowledge and literature for many Americans.

In 1875 Francis Parker entered the picture with his emphasis on silent reading for the purpose of greater understanding. The pronunciation of words while reading orally was no longer a sign of a good reader. When World War I began, however, 24.9 percent of the soldiers could not read and write well enough to perform the simple tasks assigned to them. Instruction needed to change, and John Dewey led the way with an emphasis on a child-centered curriculum designed to accommodate individual differences.

Discontent with the numbers of students who continued to experience difficulty in learning to read, however, led William S. Gray to move away from student-centered instruction to a model where all students received identical lessons. He developed basal readers and created the first manuals with instructional advice for teachers. His "Dick and Jane" series, launched in 1930s, consisted of passages with increasingly difficult words instead of selections of literature. His characters, drawn from successful, suburban families, became the symbols of reading instruction at the time when the United States was emerging from the depths of World War II.

In the 1960s many reading instructors, worried about the students who continued to experience difficulty, started to return to a version of the old ABC method; they placed great importance on the sounding out of words. Phonetically spelled words in reading instructional materials became increasingly popular. Selections became even further removed from the literature selections that were favored in previous decades.

Also in the 1950s and 1960s, the differences among students expanded dramatically, and the civil rights movement brought African Americans into the mainstream public schools. As always, the evolution of the nation influenced reading instruction; many students experienced difficulty, and the search for the best method of instruction continued. In 1968 Robert Dykstra conducted a nationwide survey to find the most effective means of reading instruction, but he concluded that teacher behaviors were more influential than any particular instructional method in determining student success as a reader.

A few years earlier, in 1965, Kenneth S. Goodman's report on miscue analysis practices started to influence instruction; teachers were no longer to correct every error a student made when reading orally. If an error did not affect meaning, it was considered a sign of good comprehension. In the late 1970s Dolores Durkin, in an effort to further refine comprehension instruction, observed in classrooms and found that teachers were not teaching students strategies to use in order to compose meaning as they read. Instead, teachers asked students questions to find out if they understood what they read.

Instruction in comprehension evolved as schema theorists studied the influence of students' previous experiences on their comprehension. Teachers started to focus more attention on the inferences students needed to draw between their prior knowledge and the texts they were reading. By the late 1990s dual emphases on phonemic awareness and composition brought both comprehension (the act of composing meaning) and skills (attention to the details of letters and words) to the forefront of reading instruction.

### Research on Reading Instruction

The first research on reading instruction was in the form of surveys of teaching methods and was begun in the early 1900s. In 1915 the results of reading tests were first used to compare teaching methods, and in 1933 Gray used reading tests to measure improvements in several Chicago schools.

In 1963 researchers Mary C. Austin and Coleman Morrison surveyed more than 1,000 U.S. school administrators about reading instruction and found a high reliance on basal readers and ability grouping (separating students into reading groups based upon their reading achievement levels). They recommended that teachers use a wider variety of instructional

approaches and more flexible grouping plans, as differences will exist in any group despite efforts to achieve homogeneity. This survey was modified and replicated in 2000 by James F. Baumann and colleagues, and the results were compared to the original. The results of the 2000 surveys showed that basals were being used in combination with trade books and that the predominant mode for instruction had become whole-class instruction. Thus, the 2000 survey hearkened back to the earlier study where the researchers found “teachers who ignore the concept of individual difference” (Austin and Morrison, p. 219).

Large-scale, systematic comparisons of various approaches to beginning reading instruction, using objective measures of outcomes, were conducted in the 1960s and 1970s. The U.S. Office of Education sponsored the Cooperative Research Program in First Grade Reading Instruction, finding that no one program or single instructional method was superior for all classrooms or teachers. Project Follow Through, a second government study of the same era, sought specifically to determine which instructional approaches worked best to foster and maintain the educational progress of disadvantaged children through the primary grades. Again, no one instructional approach was strong enough to raise reading test scores everywhere it was implemented.

The quest for the best methods of reading instruction has continued into the twenty-first century. In 1997 the U.S. Congress authorized a national panel to assess the effectiveness of various instructional approaches to teaching reading. The National Reading Panel (NRP) conducted a meta-analysis of the effects of scientific research (experimental or quasi-experimental research) on reading instruction. The NRP limited their review to the major domains of instruction deemed essential to learning to read by the National Research Council. These domains included alphabets (phoneme awareness, phonics instruction), fluency (oral reading accuracy, speed, and expression), and comprehension (vocabulary instruction, text comprehension instruction, strategy instruction).

In the domain of alphabets, the NRP reported that teaching children to manipulate phonemes in words was highly effective under a variety of teaching conditions with a variety of children. In addition, systematic phonics instruction produced significant benefits for students in kindergarten through the sixth grade. In the domain of fluency, the panel con-

cluded that guided, repeated oral reading procedures yielded significant and positive impacts on word recognition, fluency, and comprehension across a range of grade levels. In the domain of comprehension, the panel concluded that vocabulary instruction led to gains in reading comprehension and that seven types of comprehension instruction were supported by the scientific research.

Another form of research in reading instruction consists of qualitative, descriptive research within classroom settings. It includes observational studies that link classroom procedures and interactions to student outcomes and teacher behavior. Such research has the potential to distinguish between the characteristics of an instructional method and how it is actually used. According to Rebecca Barr, descriptive research “complements the research on effectiveness by revealing how an instructional approach works and how teachers differ in using it” (2001, p. 406).

Classroom observational research linked critical features of the Project Follow Through studies to student outcomes. These studies revealed high correlations between the amount of time that students were engaged in academic tasks and their academic growth. The work of these researchers influenced much of the research on effective teaching practices conducted in the late 1970s and 1980s.

Ethnographic, sociolinguistic, and other descriptive studies of reading instruction view teaching and learning as responsive, interactive forms of socially constructed activity, and such studies capture a more complete picture of instructional contexts than research labeled scientific does. Qualitative, descriptive research has revealed that interactive learning produces more growth than instruction in which students are passive. Active engagement appears to be more important than the exact method of reading instruction.

### **Reading Instruction within the Overall Curriculum**

Prior to the 1980s reading instruction barely existed within the content areas of the curriculum; reading was taught during times of the day called *reading* and/or *language arts*. Within the content areas, students were given textbooks and were expected to be able to read them. But because one textbook did not accommodate the reading levels of all learners, secondary teachers often used the textbooks to deter-

mine the content they would teach and delivered lectures accordingly. Elementary students often engaged in round-robin reading as their way of using the text. At all levels, students wrote answers to end-of-the-chapter questions, so that teachers could assess their student's retention of the content.

During the early 1980s the textbook began to lose its position as the sole source of subject area knowledge. Teachers started to use manipulatives (small objects such as beans and buttons that students count and move about into various groupings) to teach math, hands-on activities to teach science, and community resources to teach social studies. They supported this instruction with a variety of children's literature, rather than a single textbook. Based upon a new view of reading largely influenced by theories on meaning-making in reading that Goodman and Frank Smith put forth, even the basal readers used to teach reading started to contain more natural-sounding language.

In the 1990s falling test scores and a new political climate forced a reexamination of reading instruction within the curriculum. Researchers, teachers, administrators, and government officials formed a set of national education goals called Goals 2000. They did not agree, however, upon the approaches needed to meet these goals. Various approaches, therefore, continue to influence the direction of reading instruction in the curriculum.

One of these approaches advocates the teaching of a specific body of knowledge found within state curriculum standards. Educators create these standards to reflect the content they believe is essential to the formation of a common knowledge, and teachers use these standards to guide their instruction. Teachers across grade levels work in collaboration to ensure that the content builds in a manner that allows students to use prior knowledge and make meaningful connections across the curriculum. Teachers access online resources and handbooks for a multitude of instructional suggestions.

Thus, reading instruction related to state-directed content involves the use of textbooks, trade books, computer programs, lectures, demonstrations, specific writing models, and hands-on activities, thereby providing students with opportunities to learn the material in a variety of ways. Reading materials on many reading levels address much of this content, and schools provide additional support to students who struggle. In these various instruc-

tional arrangements, students learn the reading and writing strategies they need in order to learn about and share knowledge.

Another approach to reading instruction across the curriculum focuses on the contexts present in the classroom, rather than upon a body of content. Researchers and teachers explore interactions among the learners, the teacher, the classroom, and the texts. These interactions lead to instructional arrangements unique to individual classrooms, in which the students use their own knowledge, interests, and personal cultures to make the curriculum meaningful and to create new understandings.

In 1998 Vivian Gadsden endorsed this contextual approach in response to the increasing diversity of classroom populations. In her collaborations with primary-grade teachers, the teachers incorporated a wide range of literacy experiences specific to the cultures of the students and involved students' extended families and community in planning the endeavors. These literacy events crossed the curriculum, becoming part of the family histories students wrote with family members. Students compared their histories to texts found in the classroom, building critical literacy.

Similarly, students in some urban high schools study U.S. history in accordance with their personal histories. They move beyond textbooks, using personal artifacts, historical documents, magazine articles, and photographs in their compositions. In these different grade level contexts, reading instruction involves learners in making connections among various texts, themselves, and the world.

Text-based and context-based approaches continue to define the role of reading instruction in the curriculum during the early part of the twenty-first century. New programs advocating a core curriculum, developed outside the classroom, arise at the same time that teachers and researchers develop new instructional arrangements based upon classroom contexts. In 1992 Judith A. Langer and Richard L. Allington urged researchers to reconceptualize reading and writing instruction within the curriculum, to abandon fragmentation of study, and to consider "the relative roles of content, skills, discipline-specific thinking, and the student in the instructional agenda" (p. 717).

### **Trends, Issues, and Controversies**

Increased immigration in the early twenty-first century is bringing more changes to U.S. schools. In

1993 Kathryn H. Au wrote about the need for teachers to consider the various forms of literacy that are significant in the lives of students of diverse backgrounds and to include critical literacy in their instruction.

Paulo Freire, a Brazilian educator, brought the notion of critical literacy to his country in the late 1960s, and at the turn of the millennium his work began to influence reading instruction in the United States. It is becoming increasingly important for students to critique power relationships within U.S. society.

In 2002 Arlette Ingram Willis reported on her study of the complex relationships among literacy, knowledge, privilege, and power through the lens of one institution, the Calhoun Colored School in Alabama from 1892 to 1945. She showed how the school's white founders controlled the aspirations of the school's students. Willis acknowledged the failure of countless attempts to discover the best methods of reading instruction but implored educators to remember the relationship between knowledge and power. She urged literacy instructors to critically examine the ways by which they provide opportunity for all.

This call for complexity in instruction becomes even more complicated when the nature of research enters the picture. Of the three types of research on reading instruction, the scientific method has predominated since the early twentieth century. Increases in the quantity of experimental studies have paralleled increases in immigration and scientific advances, from the beginning (the Industrial Revolution) to the end (the Technological Revolution) of the twentieth century.

According to Barr, however, this methodology treats teaching as a unidirectional variable, "an activity introduced to observe its effect on some outcome" (2001, p. 406). While outcome-based research on reading instruction yields important information about the effectiveness of instructional approaches, it does not reveal how the instructional approach works and how teachers differ in using it. Observations are necessary to elucidate the reality that scientific methods are supposed to discover. Socioconstructivist approaches to research in reading instruction examine teaching and learning in an interactive context and allow interactions among the teacher, student, and text to be seen.

These approaches have their dangers too, for if all classrooms are unique, then teachers will never

benefit from the generalizations made possible from broad-based conceptualizations of teaching that guide the critical decisions teachers make in providing instruction. Detailed descriptions are helpful when they show the day-to-day decisions teachers make when they select appropriate reading materials; achieve an effective balance of reading, writing, and word study instruction; differentiate instruction to meet diverse student needs; and empower students to take ownership of their own learning.

This call becomes complicated in the context of the standardized tests that influence reading instruction across the curriculum at the beginning of the twenty-first century. Given that many states use the results of the tests to determine school funding, teachers and school administrators often base the curriculum on the knowledge needed to answer specific items found within the tests. Teachers choose reading materials pertinent to the test content and focus reading instruction on retention of this material in the subject areas.

Educators use various kinds of reading materials to teach the above information, but textbooks occupy an important position in many classrooms. In 2000, however, Suzanne E. Wade and Elizabeth B. Moje reported on the lack of engagement of secondary school students in textbook reading. Wade and Moje advocated change and described classrooms that integrate the textbook with government documents, magazines, student-generated texts, novels, and hypermedia to provide students with opportunities to expand their perspectives on curricular concepts.

Also in 2000, the National Reading Panel reported on the lack of research into the use of technology in reading instruction in the curriculum. Given the workplace emphasis on accessing, processing, and communicating information via computers, and the increasing number of schools and homes with computers and Internet access, the roles of hypermedia and the Internet remain important areas for future exploration.

*See also:* ELEMENTARY EDUCATION, PREPARATION OF TEACHERS; LANGUAGE ARTS, TEACHING OF; READABILITY INDICES; READING, *subentries on* BEGINNING READING, COMPREHENSION, CONTENT AREAS, INTEREST, LEARNING FROM TEXT; TEACHER EDUCATION; SPELLING, TEACHING OF; WRITING, TEACHING OF.

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## VALUE OF READING ENGAGEMENT FOR CHILDREN

Educators have become increasingly interested in the role that reading engagement or volume—the

amount of print children are exposed to—plays in the growth of academic achievement. In the early twenty-first century, it is believed that reading activity itself serves to increase the achievement differences among children. Children who are exposed to more literacy experiences early in their development are positioned to take advantage of the educational opportunities presented to them in preschool and elementary school. In contrast, children who are largely unfamiliar with print find themselves less able to take advantage of those same educational opportunities. This reciprocal relationship is observed in the social and cognitive contexts of school and home. A model of these effects in reading has been emerging in the literature. Reading engagement is thought to be deeply intertwined and a contributing factor to the escalating differences observed among children in their reading achievement. Thus, on the basis of available evidence, there appears to be a strong rationale for educators and policymakers alike to call for increased amounts of reading volume or engagement in young children as means to improve their reading achievement.

### **The Importance of Reading Aloud to Children**

Reading aloud to children has been broadly advocated as an important educational practice in which to foster reading volume. Parents and teachers have been increasingly encouraged to read aloud to young children as a developmentally appropriate practice by professional societies such as the International Reading Association for the Education of Young Children. These reading experiences have been shown to provide a host of benefits to the young child. In addition to the socioemotional benefits of sitting in a parent's lap, many aspects of language and cognitive development are thought to be facilitated. For example, reading aloud to children has been found to facilitate the growth of vocabulary in preschool-age children and elementary-age students. Reading aloud has been shown to promote children's understanding of academic language of text, which differs significantly from oral language. This practice also introduces novel concepts of text structure and story grammar and provides an important avenue for learning about the world. One of the most commonly held beliefs regarding the value of reading aloud to young children is that such exposure will introduce them to the world of print and motivate them to seek out these experiences on their own. These outcomes are all important predictors of

children's reading achievement, yet it appears the effects of reading aloud to children are limited to certain facets of language and literacy.

### **Does Reading Aloud to Children Teach Them How to Learn to Read?**

A common hypothesis, held by many educators and parents, is that one of the primary benefits of reading aloud to children is the promotion of children's literacy development. Specifically, some researchers have argued that reading aloud to children is an effective and natural way for them to learn to read. Via a series of successive approximations while being read to, the young child will learn how to decode and recognize words. That is, the practice of reading aloud to children is thought to be an important mechanism (and for some the primary one) in learning to read and can explain individual and group differences in literacy growth among children. Although it makes sense intuitively that reading aloud should facilitate general literacy development, this hypothesis merits empirical investigation to understand under what conditions and for what readers reading aloud facilitates children's reading development. While it is difficult to isolate the literacy gains that accrue from reading aloud to children, one must attempt to compare this variable to the impact of other educational practices or experiences when inferring causality about certain practices.

Although many studies have shown a strong to moderate relation between reading aloud to children and their subsequent reading achievement, these studies failed to control for numerous mediating variables. The studies that attempted to tease apart the relative contribution of the time parents spend reading aloud to their children and determine the effect of this practice have demonstrated relatively low correlations when compared with other predictors such as promoting phonemic awareness (the ability to attend to the sounds of language and manipulate them) and letter-name knowledge (the ability to quickly name letters). David Share and colleagues' comprehensive study from 1984 indicted that parents reading aloud to their children made a weak indirect contribution to developing literacy and that children's phonemic awareness was a far more potent indicator. In the early 1990s Hollis Scarborough and her colleagues determined that other variables—such as early language, interest in solitary book reading, and emergent literacy skills—were significantly more predictive of later reading achievement. The

results of yet another large-scale study by Jana Mason suggested that when compared to other individual differences in children's abilities, reading aloud to children was a less direct and relatively weaker predictor of children's reading achievement. Parallel results have been observed through the examination of the contribution of teachers' reading aloud to their students and the students' subsequent growth in decoding and word recognition skills. Many of the studies demonstrate weak or moderately facilitative effects, whereas a few have even observed negative effects of reading aloud to children, which should be interpreted as largely owing to the displacement effect of reading to children instead of teaching them to read.

In the domain of children's beginning word recognition skills, the research is demonstrating that read-alouds by parents and teachers play a limited role. Yet when parents and teachers scaffold or help a child's attempts to read the words in a story (compared to reading the words out loud to the child), stronger effects are observed. The National Reading Panel Report in 2000 summarized the research demonstrating that the primary mechanism for acquiring fluent word recognition skills (e.g., letter knowledge, sound-symbol correspondences, decoding words and recognizing them automatically) is not through being read to but via methods that entail guided or direct instruction.

### Guided Reading and Reading Aloud to Children

In addition to direct instruction, guided oral reading is emerging as an important form of reading volume, particularly for beginning readers. Guided oral reading encourages children to read text orally and includes systematic, explicit guidance and feedback from their parent or teacher. In 1999 Linda Meyer and colleagues juxtaposed the practice of teachers reading *with* children (guided oral reading) versus reading *to* them (read-alouds) as different mechanisms for increasing reading engagement. In contrast to reading aloud to children, reading with children is a more effective practice for promoting reading skill and fluency. In 1997 Steve Stahl and colleagues provided further support for this conjecture. They observed significant differences in students' reading fluency and comprehension levels as a result of teacher-guided reading practices in a comprehensive study of second-grade students. Meta-analyses of guided oral reading have further demonstrated the value of this instructional practice

in promoting word recognition, fluency, and reading comprehension across a range of grade levels.

In conclusion, the emphasis on immersing children in literature and increasing their exposure to print is an educational practice that makes sense. Nonetheless, there are multiple purposes and mechanisms for fostering reading engagement and volume that must be considered. When discussing the value of reading engagement and volume, one should attempt to specify the purposes of these practices, especially when making causal attributions. Reading aloud to children is an important educational practice that promotes vocabulary growth, understanding of text and genre, general knowledge, and hopefully motivation to read. In contrast, guided oral reading is a practice that has been found to be a more effective method of promoting children's word recognition, fluency, and comprehension. The primary aim of these educational practices is to foster independent reading.

The variability in children's levels of reading volume serves to further exacerbate the growing disparities between good and poor readers. It is therefore essential to provide multiple reading experiences for young children: reading aloud to them from a variety of genres, reading with them and facilitating their oral reading with tailored feedback and guidance, and promoting extended independent reading opportunities at home and after school. If reading makes one smarter (as some research has found) and if reading is important for a child to get off to a successful early start for future reading ability and engagement, then the value of early reading engagements, as Anne Cunningham and Keith Stanovich have found, and volume across a variety of venues cannot be overestimated.

*See also:* CHILDREN'S LITERATURE; EARLY CHILDHOOD EDUCATION; READING, *subentries on* BEGINNING READING, INTEREST.

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## READING DISABILITIES

The concept of reading disability, while widely accepted, is not clearly understood. Traditionally, reading disability has been defined as unexpected underachievement characterized as a discrepancy between achievement and intellectual aptitude, despite adequate opportunity to learn and in the absence of sensory difficulties or cultural deprivation. This discrepancy is typically defined operationally in terms of a difference between IQ and scores on a test of reading achievement. The specific discrepancy necessary to qualify varies from state to state. Children who conform to this definition qualify for special education services under the learning disabilities label, whereas children who do not conform do not qualify, even though they may experience serious difficulties in becoming competent readers. While some low-achieving students who do not demonstrate the stipulated achievement-aptitude discrepancy may receive supplemental reading instruction in compensatory education or dyslexia programs, in

many locations they receive no extra attention. A small number of schools qualify students as having learning disabilities based on professional judgment rather than IQ-achievement discrepancies, so that these students can receive reading assistance.

### Historical Context

The concept of unexpected underachievement has appeared in the literature since the middle of the nineteenth century. The term *learning disability* (LD) first appeared in 1962, when Samuel Kirk applied it to unexpected difficulties in the areas of language, learning, and communication. In 1969 the Learning Disabilities Act made special education services available to students with LD. The category was reaffirmed in 1975 with the passage of the Education for All Handicapped Children Act. The concept of LD remains basically unchanged in the current authorization of the Individuals with Disabilities Education Act (IDEA). In the early twenty-first century more than 80 percent of students classified as learning disabled are identified as having a reading disability.

### Types of Reading Disabilities

The most widely recognized and researched reading disability is associated with difficulty with reading single words. This type of difficulty is the most pervasive characteristic of dyslexia. These single-word-reading problems are thought to be based on an underlying phonological processing core deficit. Persons with dyslexia experience great difficulty in applying the alphabetic principle to decode words quickly and efficiently. The result is that decoding is labored, fluency is poor, and comprehension is negatively affected.

A less common and poorly researched reading disability is associated with poor language comprehension. While much less frequent than decoding difficulty, this disability affects some persons who have normal phonological processing skills but who demonstrate difficulty in formulating main ideas, summaries, and inferences. This difficulty is demonstrated when listening to, as well as reading, text.

A third group of students who experience great difficulty in learning to read are those who experience both decoding problems and language comprehension problems. So far, little research has been conducted with these students. It can be argued, however, that students in this last category have the greatest needs and the most severe reading disabilities.

### Validity of the Discrepancy Model

Educational leaders and researchers have been questioning the validity of the definition of reading disability in terms of an aptitude-achievement discrepancy. Proposals under study in the early twenty-first century would identify a student as having a reading disability based on the growth of reading performance across time in response to quality instruction.

A convergence of research evidence has called into question the validity of the discrepancy models. Three groups of researchers have conducted meta-analyses of studies addressing the question of differences between students identified as having LD and other struggling readers.

Doug Fuchs and his colleagues examined seventy-nine studies that compared poor readers with and without the LD label. Across studies, and across many substantive and mythological variables associated with the studies, the mean-weighted effect size describing the difference between students identified as having LD and other low-achieving readers was 0.6 of a standard deviation. In other words, the LD-identified students on average performed worse on measures of reading than other low-achieving readers. The effect sizes were more pronounced on timed reading tests, and they were larger for students at higher grade levels. Interestingly, the difference between LD and low-achieving readers was greatly diminished when analyses were run only on researcher-identified LD samples, thereby eliminating school-identified samples. This finding suggests that schools identify LD as the lowest of the low performers.

The difference between school-identified and researcher-identified LD samples is an important distinction. Researchers are much more likely to apply IQ-achievement discrepancy criteria. Schools, however, are more likely to identify students who have IQs in a range that identifies them as having mild mental retardation or to use professional judgment, despite lack of a discrepancy, to label students as having LD. Thus, it would seem that schools are actually identifying more seriously impaired readers as having LD than strict application of the definitions would permit.

Looking specifically at the validity of discrepancy models, Maureen Hoskyn and H. Lee Swanson (2000) coded nineteen studies that met certain criteria for the definition of the IQ-discrepant and

IQ-consistent (nondiscrepant low-achieving) groups. Hoskyn and Swanson found that students in the two groups had minimal differences on measures of reading and phonological processing and had larger differences on measures of vocabulary and syntax.

Similarly, K. K. Stuebing and colleagues, in another study, coded forty-six studies that clearly defined groups of readers as IQ-discrepant or IQ-consistent, with the primary research question focusing on the validity of the use of aptitude-achievement discrepancies to categorize struggling readers. The researchers found little support for the validity of discrepancies for the classification of students as LD. There were negligible differences between the IQ-discrepant and IQ-consistent groups on measures most closely associated with reading. Taken together, these three syntheses suggest that there is little basis for continuing to base qualifications for special services on current discrepancy models.

Beyond the fact that the current model lacks validity, it tends to favor students with higher IQs, as it is difficult for a student with a low IQ to exhibit achievement scores low enough to qualify for the discrepancy. There is at best, however, a questionable relationship between IQ and the way students respond to early intervention. Five studies conducted between 1997 and 2000 found no relationship between IQ and intervention outcomes. One study found a small relationship between IQ and outcome on one of three outcome measures. David Francis and colleagues found in 1996 that IQ-discrepant and IQ-consistent groups had no significant differences in progress from kindergarten through high school.

Further, the use of the exclusionary criteria in the current definition of LD can result in the withholding of services to students from culturally different or impoverished backgrounds. Given the strong correlation between oral language development and socioeconomic level, it is likely that many children from impoverished families would experience difficulties with phonological processing and in language comprehension. Further, factors associated with inadequate instruction, emotional disturbance, and poverty may actually cause differences in neurological and cognitive development that lead to severe learning difficulties. The current definition of LD makes it all too likely that students experiencing difficulties stemming from these situations will be excluded from receiving services.

Another problem with using a discrepancy model to identify reading disabilities is that it is very difficult to detect discrepancies early. Typically, children have to fall behind before the discrepancy is identified. Thus, the use of IQ-achievement discrepancy is inherently a “wait to fail” model. The problem with waiting until a child fails is that reading problems become intractable as children age. Thus, it is important to begin intervention with children very early.

### **Changing Criteria for Reading Disability**

Rather than focus on whether a child has an IQ-achievement discrepancy, current proposals recommend that determination of reading disabilities be made based on an examination of response to quality intervention. This response to treatment would be determined using ongoing, frequent measures of word recognition, fluency, vocabulary, and comprehension, as well as subskills that correlate strongly with reading development, including phonological awareness (the ability to blend and segment sounds in speech), rapid naming, and phonological working memory.

A convergence of research indicates that early intervention in the primary grades is effective in preventing reading problems for most children and that, for those who continue to experience difficulty, the depth of the reading problem can be greatly reduced. In their 2001 analysis of response rates to interventions in five studies, G. Reid Lyon and colleagues estimated that the number of students experiencing serious reading problems could be reduced from about 20 percent to 5 percent or less of the school population through quality early intervention.

### **A Three-Tiered Approach to Intervention**

Current proposals recommend a three-tiered model of reading intervention. On the first tier, classroom-level general education instruction is improved. Research suggests that this first level of intervention is adequate to reduce substantially the large numbers of struggling readers. For example, in 1998 Barbara Foorman and colleagues found that classroom-level explicit instruction in phonological awareness and the alphabetic principle as part of a balanced approach to reading brought the majority of students in grades one and two in eight Title I schools to national averages. More recently, in 2002, Joseph Torgesen and colleagues demonstrated that the vast

majority of struggling first-grade readers in middle-class schools could attain above-average reading performance through quality classroom reading instruction alone.

Children who still experience difficulty after quality classroom-level instruction move into the second tier, which incorporates more intense interventions presumably delivered within general education in small groups. There are many examples of successful secondary-level interventions. In 1997 Torgesen and colleagues identified children in kindergarten who had poor phonological awareness. By second grade, intervention brought 75 percent of these children to grade-level reading. Frank Vellutino and colleagues in 1996 identified middle-class children with very low word recognition skills at the beginning of first grade. After one semester of intervention, 70 percent were reading at grade level. After two semesters, more than 90 percent were at grade level.

In the three-tiered intervention model, only after these two levels of interventions have failed would a child be considered reading disabled, requiring tertiary intervention. Tertiary intervention is typically described as having greater intensity and duration than secondary intervention. Presumably, at this point special education services would be provided.

Under this three-tiered model, there would be provisions for (1) early identification of children at risk for reading failure, followed by (2) carefully designed intense early reading instruction incorporating an emphasis on systematic, explicit instruction in alphabetic reading skills balanced with meaningful experiences with authentic texts and writing, and (3) continued support beyond the initial acquisition of reading skill to ensure continued academic growth into the upper grades. Thus, all students who are identified as at risk for possible reading problems would be provided with intervention within general education. Only children who do not make adequate progress would be considered for a reading disabilities label. This label, however, would not be based on IQ-achievement discrepancies, but rather on inadequate response to intervention.

### Quality of Intervention

The success of the three-tier model hinges on ensuring that instruction at each of the three levels is of high quality. As a result, it would unify general, spe-

cial, and compensatory education services into one adaptable unit and would require that all teachers involved in the process be provided with ongoing staff development and mentoring in the critical content of effective reading instruction. This critical content includes instruction that supports the development of phonological awareness, letter knowledge, and concepts of print in emergent readers. This type of curriculum ensures acquisition of accurate and quick word recognition skills and increases the speed and ease of reading connected text. Instruction linked to extensive engagement with authentic literature gives students the opportunity to learn new vocabulary and to acquire strategies such as making inferences, identifying main ideas, and summarizing text.

### Lingering Questions

Although there is substantial research evidence regarding effective models of reading intervention at the primary (classroom) and secondary levels, it is not yet known whether a three-tiered reading intervention model can be consistently implemented to identify students in need of more intense special services. Further research is necessary to validate this model as practical and accurate. A primary question focuses on how such a model based on instructional practices that have been validated in research projects can be “scaled up” to be implemented successfully within many school contexts.

Research has focused on classroom-level and secondary-level intervention that impacts the majority of students. What is much less clear is the content of tertiary instruction. Little has been done to follow up and provide additional services with the few children who have made poor progress in secondary intervention models. Thus, there is little guidance as to what will be required to promote adequate progress among this small set of impaired readers.

Likewise, the bulk of research on the prevention of reading difficulties has focused on the most common type of reading problems, those associated with phonological processing problems. Much less is known about how to appropriately intervene with students who experience language comprehension problems.

### Conclusion

Knowledge about reading disability is evolving. It is clear that many students struggle to develop reading competence. Although most of these students exhib-

it common characteristics related to difficulties in processing the sounds of language, researchers have yet to satisfactorily answer the question, "When is a reading difficulty a serious reading disability?" The current practice of identifying reading disability according to a discrepancy between IQ and achievement scores, although relatively easy to implement, has the potential to underidentify many students who need special services. A more useful way to identify reading disability may be through the evaluation of a student's response to well-implemented, quality intervention. Much remains to be learned, however, regarding the implementation of this type of identification system.

*See also:* LEARNING DISABILITIES, EDUCATION OF INDIVIDUALS WITH; LITERACY AND READING; READING, *subentry on* COMPREHENSION.

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PATRICIA G. MATHES

## RECORDS AND REPORTS, SCHOOL

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The information presented here is based on the Family Educational Rights and Privacy Act of 1974 (FERPA or the Buckley Amendment) and the Illinois School Student Records Act.

Public school records fall into two general categories. The first is the organizational records of the school district, which parallel those that any business or organization would ordinarily keep. Financial and personnel records, minutes of meetings, contracts, and schedules are generally open to the public under the provisions of the Freedom of Information Act.

The second category is student records. Their administration is governed by FERPA, or as it is also known, the Buckley Amendment. FERPA is intended to protect the privacy and confidentiality of a student's school records and to allow parents, guardians, and students access to those records. It affords a wide range of rights and privileges to students and parents and places great responsibilities on the schools. Individual states have statutes that govern the administration of student records and individual school districts have student record management policies. These statutes and policies generally mirror the language of FERPA but may not change the intent of the federal legislation. The following are the key provisions that outline students' protections, parents' rights, and the school's obligations.

### Records Custodian

Each school must designate an official records custodian who is responsible for the maintenance, care, and security of student records, whether or not that person has actual physical control of the student records. The building principal generally serves as records custodian because he has the authority to meet the responsibilities of record maintenance and is specifically charged with assuring that school personnel are informed of the provisions of the law.

### Categories

Student records fall into three basic categories: permanent, temporary, and directory information.

Permanent records shall contain the following information:

- Basic identifying information, including both the student's and parent's names and addresses, and student birth date, birthplace, and gender
- Academic transcript, including grades, class rank, graduation date or grade level achieved, and scores on college entrance examinations
- Attendance record
- Health record and accident reports
- Record of release of permanent record information

- Honors and awards received
- Information concerning participation in school-sponsored activities or athletics, or offices held in school-sponsored organizations

No other information shall be placed in the student's permanent record. FERPA has no provision for the length of time permanent records must be maintained, but states generally do. Illinois, for example, requires they be kept for sixty years.

Temporary records must contain a record of release of temporary record information and may include the following:

- Family background information
- Intelligence test scores, both group and individual
- Aptitude test scores
- Elementary and secondary achievement level test results
- Reports of psychological evaluations, including information on intelligence, personality, and academic information obtained through test administration, observation, or interviews
- Participation in extracurricular activities, including any offices held in school sponsored clubs or organizations
- Honors and awards received
- Teacher anecdotal records
- Disciplinary information, including information regarding serious disciplinary infractions that resulted in expulsion, suspension, or the imposition of punishment or sanction
- Special education files, including the report of the multidisciplinary staffing on which placement or nonplacement was based and all records and recordings related to special education placement hearings and appeals
- Any verified reports or information from non-educational persons, agencies, or organizations
- Other verified information of clear relevance to the education of the student

Although FERPA does not specify, most states require that temporary records must be maintained for at least five years after the student transfers, graduates, or withdraws from the school.

Directory information is that information that may be released to the general public in publications such as athletic programs or news articles, and in school publications, such as yearbooks. This information is limited to the following:

- Identifying information to include name, address, gender, grade level, birth date and birthplace, and parents' names and addresses
- Academic awards and honors
- Information in relation to school-sponsored activities, organizations, and athletics
- Major field of study
- Period of attendance in the school

Parents have the right to request that any or all directory information not be released for their child. Prior to the release of directory information, school districts must notify affected parents in writing and the notification must include date of notification, parents' names, student's name, directory information to be released, and scheduled date of release.

Although not an official category under the language of the Family Education Rights and Privacy Act, personal anecdotal records should be mentioned here. These are the written notes that school personnel keep for their own use. A principal, for example, may make notes that record the details of a disciplinary situation to aid in future decisions concerning that student. As long as they are used only by that principal for that purpose, they remain personal anecdotal records outside of the provisions of the act. If, however, they are shared with other personnel, or are used to upgrade or annotate the student's discipline record, those notes must become part of the student's temporary record.

### Access

The Freedom of Information Act has no bearing on student records, and only persons authorized by FERPA and the state's act shall be granted access. Access to student records is granted to parents or their designated representative and to the student. Access must be granted to students or parents within fifteen days of the request to inspect or copy records. All rights of access by parents cease and pass exclusively to the student when the student turns eighteen years of age, becomes legally emancipated, marries, graduates from high school, or enters into military service.

The following persons also have access to student records: (1) employees or officials of the school district on a "need to know" basis; (2) the records custodian of another school where the student is, or will become, enrolled; (3) legitimate researchers, provided no student is identified by name; (4) persons designated by court order; (4) persons required

by state or federal law; (5) in connection with an emergency, when information contained in the records is necessary to protect the health or safety of the student or other persons; and (6) government or social agencies who are investigating the student's attendance in connection with the compulsory attendance law.

Notification of rights regarding student records include a number of specific administrative regulations that require, upon the student's initial enrollment or transfer, that the school shall notify the student and their parents of their rights under the act. The notification shall be in English and in the language of the child's primary speaking ability if they are of limited English-speaking ability. The notification must include definition of student records (permanent versus temporary), inspection rights and procedures, right to control access to records, challenge procedures, maintenance procedures, and destruction schedule.

Upon graduation, transfer, or permanent withdrawal of a student, the school must notify the student and parents of the destruction schedule for both permanent and temporary records, and of their right to request copies of the records anytime prior to their scheduled destruction. Notification must include the notification date, names of the student and parents, scheduled destruction date, and the name of the records custodian.

Policies for transfer of student records between schools specifies that within fourteen days of enrolling a transfer student, the enrolling school must request directly from the student's previous school a certified copy of the student's records. Within ten days of receiving a request for records, the school must forward an unofficial record. Within ten days after all fees and fines are paid, the official records shall be forwarded to the requesting school.

Before records are sent, the student and parents must be notified of their right to inspect, challenge, and copy records. They may not challenge academic grades or references to expulsions or out-of-school suspensions. Appropriate records must be kept of any transfer.

### Review

A review of records must be made every four years or upon a student's change in attendance centers, whichever occurs first. The purpose of the review is to verify entries and to eliminate or correct all out-

of-date, misleading, inaccurate, unnecessary, or irrelevant information.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; PRINCIPAL, SCHOOL; PSYCHOLOGIST, SCHOOL.

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DAVID TURNER

## RECREATION PROGRAMS IN THE SCHOOLS

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As early as 1918 the relationship between the school and recreation was identified when the National Education Association (NEA) adopted the "Seven Cardinal Principles of Education," one of which was the "worthy use of leisure." Today, schools are involved in the provision of recreation using three approaches: school-sponsored activities, community-sponsored activities, and school-community cooperative partnerships.

### School-Sponsored Recreation

School-sponsored recreation often relates to course material taught within the school system, but it provides learning experiences in addition to academic studies. Programs aimed at the school's student population are called *extracurricular activities* and include such things as bands, debating teams, choral groups, athletics and intramural activities, hobby groups, and interest clubs. For many students, these activities fill an important need in their school experience.

Schools also offer programs for adults within the community, and these are commonly referred to as *continuing education*. Historically, the intent of these programs was to enable adult learners to enhance career-related skills and knowledge. Continuing education programs have expanded, however, to include a variety of lifelong learning opportunities and currently include language classes, computer courses, fitness programs, auto mechanics classes, public speaking programs, and travelogues.

### Community-Sponsored Recreation

Community-sponsored programs are activities that are planned and implemented by various community groups for all residents within the community. Local schools are used as the program site during evening and weekend hours when the school would otherwise be empty. When one considers that the typical school timetable occupies only 18 percent of the hours available in the school year, the potential for increased use is obvious. Schools, situated in neighborhoods and close to residents, provide excellent satellite locations for community-based programs because of their accessibility. Examples of these types of programs include recreational sports leagues, ballroom dancing classes, card clubs, neighborhood festivals, and local theater groups.

### School-Community Cooperative Partnerships

Partnerships between schools and community agencies is a third way that leisure-related programs are aligned with the schools. The Kids at Hope program is one example of a national program where multiple community agencies form partnerships with the schools to develop extracurricular programs for youth. Sharing a belief that all children can succeed, the teachers and community volunteers, who implement the program, seek to affirm the skills, abilities, and talents of children to boost their self-esteem in a safe and supportive environment. Similarly, the Partnership for Civic Change (PCC) program in Waco, Texas, is a partnership among agencies and schools organized to provide positive after-school and summer recreation alternatives for youth. The programs offered through PCC are aimed at preventing at-risk youth from becoming involved in the juvenile justice system.

### Current Trends

There are three key trends emerging in the early twenty-first century that are affecting recreation programs in the schools: fiscal restraint in the public sector, changing family demographics, and the development of innovative programs.

**Fiscal restraint in the public sector.** The climate of fiscal restraint prevailing in the early twenty-first century presents a challenge for school administrators whose primary mandate is the delivery of academic programs. Increasingly, schools have fewer resources for school-based recreation, and there is a recognition that a decrease in recreation programs in the schools could result in an increase in activities

that are commonly perceived to be a negative use of leisure time (drug use, vandalism, and high-risk activities). As a result, there is a growing impetus to find ways to ensure the future of recreation programs in the schools. Creative ways to meet this challenge are emerging and include such things as increased relationships with community agencies, the development of unique partnerships, the use of volunteers, and an increase in corporate support.

**Changing family demographics.** North American family structures are changing radically. With the increase of single-parent families and parents who hold jobs outside the home, schools and community agencies have a shared role in child care extending beyond the usual class times. Of particular concern are children and youth from economically disadvantaged households with few resources available to them for positive recreation activities or constructive play. For these families, dependence on extracurricular programs in the schools has been increasing.

**Innovations.** A number of innovations are emerging in regard to recreation programs in schools. In 1940 the NEA urged school districts to make their facilities available for community use. This has led to the common practice of joint facility planning. This trend is growing with the inclusion of a broader range of partners, including the school board, local government, community groups, individual donors, and the private sector. For example, a library may be planned so that the school and all members of the community have shared access to the collection and the library staff. Another common partnership is the development of parkland adjacent to school lands so that outdoor athletic fields can be developed for the use of both the school and community members.

In addition to joint facility and site planning initiatives, some schools and communities are developing funding partnerships so that building expenditures can be met. These partnerships can include funding from corporations, public sector organizations, local service clubs, and private donors.

It is apparent that recreation in the schools has grown beyond the traditional extracurricular programming. There is a greater understanding of the important role that recreation plays in the quality of community life. It is through the combined efforts of schools and community partners that recreation in the schools continues to play a key role in the provision of positive alternatives for children and families as they attempt to find channels for individual and creative expression.

*See also:* COMMUNITY EDUCATION; OUTDOOR AND ENVIRONMENTAL EDUCATION; PHYSICAL EDUCATION; SPORTS, SCHOOL.

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## REGIONAL LABORATORIES AND RESEARCH AND DEVELOPMENT CENTERS

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The U.S. government authorized formation of research and development (R&D) centers and regional educational laboratories (RELs) in 1965 under Title IV of the Elementary and Secondary Education Act (ESEA). Labs were reauthorized in 1994 under Title IX of the Goals 2000: Educate America Act.

During the Johnson administration's War on Poverty, the centers and laboratories were intended to be a network of institutions designed to revitalize American education through strategic research, development, and dissemination of new programs and processes. Since their inception, such external issues as the federal role in education and the allocation of

funding, along with such internal issues as the challenge of applying research to real-world school settings, have significantly affected the mission and operation of these institutions. Nevertheless, laboratories and centers continue to house the federal government's most concentrated efforts to improve U.S. education through research and development.

#### The 1960s and 1970s

At the outset, legislators envisioned R&D centers as conducting sustained scientific research concentrated on academic subject matter content (e.g., mathematics), skills (e.g., writing), or processes (e.g., instruction). In July 1964, John W. Gardner, then president of the Carnegie Foundation for the Advancement of Teaching, headed a presidential task force that proposed establishment of the RELs as a vital link to interpret, shape, and communicate the centers' research findings; tailor them for practical school use; and infuse them into the nation's classrooms, including college classrooms. This staged delivery system supplanted a diffused project-by-project strategy on research topics previously proposed for funding by university faculty.

Title IV of the Elementary and Secondary Education Act called for well-funded, large-scale institutions similar to atomic energy laboratories, the archetypes of R&D; however, appropriations for education R&D fell significantly short of that goal. Additionally, the legislation did not specify the number of laboratories and centers to be created, nor did it determine how they would be organized. By 1969, twenty RELs and eleven centers had been founded. The U.S. Office for Education closed fourteen of the laboratories in the next few years because of budget concerns and lack of confidence in their work.

In 1972 the National Institute of Education (NIE) was created, and the RELs and R&D centers were transferred to its jurisdiction. From 1973 to 1976, laboratories bid on individual projects defined by NIE through a program-purchase policy, rather than on contracts for institution-wide support. This process allowed for greater federal control, but reduced the laboratories' ability to address regional concerns. In 1979 education became a cabinet-level department. Laboratories and centers were placed under the jurisdiction of the Office of Education Research and Improvement (OERI) within the new Department of Education.

## The 1980s and Beyond

In the 1980s a fundamental change occurred in the government's attitude towards educational research: while it had been assumed in the 1960s that the government should shape the research agenda, it was now felt that state departments of education and private foundations should take the lead. The new role of the laboratories was to work "with and through" these other agencies instead of pursuing their own programs (Guthrie, pp. 9–10).

In 1984 and 1985 the first recompetition since the founding of the labs in the 1960s was held. RELs were required to submit five-year plans for their research, development, and dissemination activities. This recompetition also ensured that nine RELs would cover all regions of the nation. A tenth REL, which served Hawaii and islands in the Pacific Basin, was awarded in 1990. The contract period of 1990 to 1995 saw development of the Laboratory Networking Program (LNP), which allows the RELs to share their knowledge and experience as they collaborate on common issues.

The Request for Proposal for projects to be conducted between 1995 and 2000 initiated laboratory specialty areas, requiring that each laboratory exert substantial effort and resources toward providing national leadership in an area that reflects the laboratory's expertise and that is of national importance. Another focus of the contract was assisting states in designing and implementing Comprehensive School Reform Demonstration (CSR) programs. RELs provided technical assistance and created national resources, such as a database of all CSR awards across the country and a catalog of school reform models. The 2001–2005 contract focused on developing and codifying knowledge about how to improve the academic achievement of students in low performing schools.

The number of R&D centers has fluctuated from eleven in 1966 to a high of twenty-five in 1990 and to twelve in 2001. At the outset of the twenty-first century, the university-based centers focus on such topics as at-risk students, testing, teaching, early development and learning, and improving student learning in the content areas. Descriptions of the centers and their areas of research are detailed on the National Research and Development Centers page of the U.S. government's Office of Educational Research and Improvement (OERI) website. A description of the labs and their national leadership

areas may be found on the Regional Educational Laboratories page of the OERI website.

Besides the relatively low levels of funding for RELs and R&D centers compared to scientific laboratories, the laboratories and centers have "suffered from declining budgets: In 1973 NIE provided \$80 million for their operations (in 1990 constant dollars); by 1979 that had declined to \$52 million; and in 1991 the amount was \$47 million. For individual laboratories and centers, the effect has been more dramatic because there are now twice as many of them as there were in 1973" (Atkinson and Jackson, pp. 96–97). As a consequence, laboratories have had to become entrepreneurial almost from the beginning in order to secure sufficient operational funding.

While critics have pointed to laboratories' shortcomings, as noted by reviewers, no "systematic assessment of the laboratories' work" has yet been produced (Atkinson and Jackson, p. 78). After more than three decades, with the support of their regions and congressional representatives, laboratories and centers continue to receive funding from Congress.

*See also:* FEDERAL FUNDING FOR ACADEMIC RESEARCH; RESEARCH UNIVERSITIES.

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## RELIGIOUS AFFILIATIONS, COLLEGES AND UNIVERSITIES WITH

*See:* COLLEGES AND UNIVERSITIES WITH  
RELIGIOUS AFFILIATIONS.

## RELIGIOUS SCHOOLS

*See:* PRIVATE SCHOOLING.

## RESEARCH AND TEACHING

*See:* TEACHING AND RESEARCH, THE  
RELATIONSHIP BETWEEN.

# RESEARCH GRANTS AND INDIRECT COSTS

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During the later half of the twentieth century, the federal government of the United States invested heavily in research. Unlike other countries, such as Russia and Japan, which produce research within governmental laboratories, the research supported by the U.S. government primarily takes place within universities. To entice universities and their researchers to conduct the government's desired research projects, the federal government traditionally promises to cover much of the costs. The government pays the university the estimated cost of the project and allows the school to keep all funds whose occurrence can be documented.

This policy of cost-reimbursement is easy to implement for the expenses that are definitively associated with the particular project. These costs, often called direct costs, include such items as the equipment, materials, and personnel used during the project, and are relatively easy to measure and can be fully assigned to that project. Hence, the governmental policy toward direct costs receives little notice despite these expenditures accounting for 70 percent of the cost of research grants on average.

The other source of expenses in research grants are items that benefit other activities in the universi-

ty, such as education or extension, as well as federally funded research. These costs, usually called indirect or overhead costs, are partially assigned to several activities and include items such as building maintenance, library materials, utility costs, and central administrative staff. Unfortunately, deciding which portion of these costs should be assigned to federally funded research grants is not a straightforward task. The complexity of indirect costs ensures that any method used to allocate them among activities is likely to receive some criticism, explaining why much of the debate over governmental policy for research funding focuses on overhead.

The system used in the United States to measure the costs of research grants has not changed in principle since 1958. For each grant, the direct costs are estimated and then multiplied by the indirect cost rate of the university to compute the total indirect costs. The method used to determine the indirect cost rate contains the complexity and controversy of the policy. Before 1958, the same rate was used for all universities, but this simple policy was abandoned because it ignored the varying character and resources among schools. To better account for these differences, the revised policy computes a unique indirect cost rate for each institution in two steps. First, each university estimates the level of indirect costs due to federal grants for the next year by conducting elaborate and complicated costing studies. Then, this total is divided by their expected level of direct costs (excluding some categories) to compute that year's rate. The average indirect cost rate in 1997 was 56 percent for private institutions and 47 percent for public institutions. The lower rate for public schools is partially due to weaker incentives for aggressive cost recovery caused by state policies that require public institutions to return indirect cost payments to the states.

Although the theory of cost-reimbursement guides the policy for research funding, the federal government uses alternative methods to purchase other products such as office furniture. For these other goods, the government selects a producer through a competitive bidding process and then pays the company by their level of output. This method is not used for research because it is impossible to accurately measure the output of research. Although one can measure the quantity and quality of furniture in an objectively verifiable fashion, one cannot do the same for most types of research.

Therefore, payment for research is based on inputs, which can be objectively measured, as opposed to outputs. As just discussed, measuring inputs is complicated because some inputs simultaneously benefit other activities in the university, such as education. It is important, however, for research grants to include these indirect costs because overhead reimbursement encourages quality research in the universities in two ways. First, the funds provide universities with the resources necessary to maintain a strong research infrastructure. Second, the extra compensation increases the value of research grants to universities, and subsequently, provides incentives for universities to devote their efforts toward building a strong reputation for quality research.

Partly for these reasons, most agree that indirect costs should be covered in research grants, but no similar consensus exists on the proper method of indirect cost measurement. Critics of the current system have several grievances; the most prominent criticism suggests that inappropriate items are sometimes included in research grants as overhead. Politicians wishing to lower governmental spending usually voice this complaint, or researchers concerned that high indirect cost rates at their university limit their ability to win grant funding. This grievance received much attention in the press in the early 1990s when federal auditors questioned some of the indirect costs claimed by Stanford University. While the costs questioned by auditors are only a small part of the total level of federally funded research, the publicity from the case caused the federal government to more closely scrutinize the costs suggested by universities and to enact additional regulations that more specifically outlined which costs are acceptable.

To much less fanfare, the method utilized in the early twenty-first century for measuring indirect costs is also criticized for encouraging cost increases in institutions of higher education. Universities incur large administrative costs when they determine their indirect cost rate because the computation requires periodic costing studies that are expensive. Because these rates vary little across institutions of similar types, the information obtained from the studies may not justify the costs. In addition to creating additional costs, the system may also not adequately encourage universities to limit other costs. Universities are not rewarded for cost containment and are sometimes penalized for frugal behavior through lower indirect cost rates. To minimize

these weaknesses in the system, economists Roger Noll and William Rogerson suggest a more simple approach where universities of the same type use a fixed indirect cost rate that is based on an audit of a sample of peer universities.

*See also:* FEDERAL FUNDING FOR ACADEMIC RESEARCH; RESEARCH UNIVERSITIES.

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## RESEARCH METHODS

### OVERVIEW

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### SCHOOL AND PROGRAM EVALUATION

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## OVERVIEW

How do people learn to be effective teachers? What percentage of American students has access to computers at home? What types of assessments best

measure learning in science classes? Do college admission tests place certain groups at a disadvantage? Can students who are at risk for dropping out of high school be identified? What is the impact of new technologies on school performance? These are some of the many questions that can be informed by the results of research.

Although research is not the only source used for seeking answers to such questions, it is an important one and the most reliable if executed well. Research is a process in which measurements are taken of individuals or organizations and the resulting data are subjected to analysis and interpretation. Special care is taken to provide *as accurate an answer as possible* to the posed question by subjecting “beliefs, conjectures, policies, positions, sources of ideas, traditions, and the like . . . to maximum criticism, in order to counteract and eliminate as much intellectual error as possible” (Bartley, pp. 139–140). In collecting the necessary information, a variety of methodologies and procedures can be used, many of which are shared by such disciplines as education, psychology, sociology, cognitive science, anthropology, history, and economics.

### Evidence—The Foundation of Research

In education, research is approached from two distinct perspectives on how knowledge should be acquired. Research using *quantitative* methods rests on the belief that individuals, groups, organizations, and the environments in which they operate have an objective reality that is relatively constant across time and settings. Consequently, it is possible to construct measures that yield numerical data on this reality, which can then be further probed and interpreted by statistical analyses. In contrast, *qualitative* research methods are rooted in the conviction that “features of the social environment are constructed as interpretations by individuals and that these interpretations tend to be transitory and situational” (Gall, Borg, and Gall, p. 28). It is only through intensive study of specific cases in natural settings that these meanings and interpretations can be revealed and common themes educed. Although debate over which perspective is “right” continues, qualitative and quantitative research share a common feature—*data* are at the center of all forms of inquiry.

Fundamentally, data gathering boils down to two basic activities: Researchers either *ask* individuals (or other units) *questions* or *observe behavior*. More specifically, individuals can be asked about

their attitudes, beliefs, and knowledge about past or current behaviors or experiences. Questions can also tap personality traits and other hypothetical constructs associated with individuals. Similarly, observations can take on a number of forms: (1) the observer can be a passive transducer of information or an active participant in the group being observed; (2) those being observed may or may not be aware that their behavior is being chronicled for research purposes; and (3) data gathering can be done by a human recorder or through the use of technology (e.g., video cameras or other electronic devices). Another distinction that is applicable to both forms of data gathering is whether the data are developed afresh within the study (i.e., primary data) or stem from secondary sources (e.g., data archives; written documents such as academic transcripts, individualized educational plans, or teacher notes; and artifacts that are found in natural settings). Artifacts can be very telling about naturally occurring phenomena. These can involve trace and accretion measures—that is, “residue” that individuals leave behind in the course of their daily lives. Examples include carpet wear in front of exhibits at children’s museums (showing which exhibits are the most popular), graffiti written on school buildings, and websites visited by students.

What should be clear from this discussion so far is that there exists a vast array of approaches to gathering evidence about educational and social phenomena. Although reliance on empirical data distinguishes research-based disciplines from other modes of knowing, decisions about what to gather and how to structure the data gathering process need to be governed by the purpose of the research. In addition, a thoughtful combination of data gathering approaches has the greater chance of producing the most accurate answer.

### Purposes of Research

The array of questions listed in the introductory paragraph suggests that research is done for a variety of purposes. These include exploring, describing, predicting, explaining, or evaluating some phenomenon or set of phenomena. Some research is aimed at replicating results from previous studies; other research is focused on quantitatively synthesizing a body of research. These two types of efforts are directed at strengthening a theory, verifying predictions, or probing the robustness of explanations by seeing if they hold true for different types of individuals, organizations, or settings.

**Exploration.** Very little may be known about some phenomena such as new types of settings, practices, or groups. Here, the research question focuses on identifying salient characteristics or features that merit further and more concerted examination in additional studies.

**Description.** Often, research is initiated to carefully describe a phenomenon or problem in terms of its structure, form, key ingredients, magnitude, and/or changes over time. The resulting profiles can either be qualitative or narrative, quantitative (e.g.,  $x$  number of people have this characteristic), or a mixture of both. For example, the National Center for Education Statistics collects statistical information about several aspects of education and monitors changes in these indicators over time. The information covers a broad range of topics, most of which are chosen because of their interest to policymakers and educational personnel.

**Prediction.** Some questions seek to predict the occurrence of specific phenomena or states on the basis of one or more other characteristics. Short- and long-term planning are often the main rationale for this type of research.

**Explanation.** It is possible to be able to predict the occurrence of a certain phenomenon but not to know exactly why this relationship exists. In explanatory research, the aim is to not only predict the outcome or state of interest but also understand the mechanisms and processes that result in one variable causing another.

**Evaluation.** Questions of this nature focus on evaluating or judging the worth of something, typically an intervention or program. Of primary interest is to learn whether an organized set of activities that is aimed at correcting some problem (e.g., poor academic skills, low self-esteem, disruptive behavior) is effective. When these efforts are targeted at evaluating the potential or actual success of policies, regulations, and laws, this is often known as policy analysis.

**Replication.** Some questions revolve around whether a demonstrated relationship between two variables (e.g., predictive value of the SAT in college persistence) can be again found in different populations or different types of settings. Because few studies can incorporate all relevant populations and settings, it is important to determine how generalizable the results of a study to a particular group or program are.

**Synthesis.** Taking stock of what is known and what is not known is a major function of research. “Summing-up” a body of prior research can take quantitative (e.g., meta-analysis) and qualitative (narrative summaries) forms.

### Types of Research Methods

The purpose or purposes underlying a research study guide the choice of the specific research methods that are used. Any individual research study may address multiple questions, not all of which share the same purpose. Consequently, more than one research method may be incorporated into a particular research effort. Because methods of investigation are not pure (i.e., free of bias), several types of data and methods of gathering data are often used to “triangulate” on the answer to a specific question.

**Measurement development.** At the root of most inquiry is the act of measuring key conceptual variables of interest (e.g., learning strategies, intrinsic motivation, learning with understanding). When the outcomes being measured are important (e.g., grade placement, speech therapy, college admission), considerable research is often needed prior to conducting the main research study to ensure that the measure accurately describes individuals’ status or performance. This can require substantial data collection and analysis in order to determine the measure’s reliability, validity, and sensitivity to change; for some measures, additional data from a variety of diverse groups must be gathered for establishing norms that can assist in interpretation. With the exception of exploratory research, the quality of most studies relies heavily upon the degree to which the data-collection instruments provide reliable and valid information on the variables of interest.

**Survey methodology.** Survey research is primarily aimed at collecting self-report information about a population by asking questions directly of some sample of it. The members of the target population can be individuals (e.g., local teachers), organizations (e.g., parent–teacher associations), or other recognized bodies (e.g., school districts or states). The questions can be directed at examining attitudes and preferences, facts, previous behaviors, and past experiences. Such questions can be asked by interviewers either face-to-face or on the telephone; they can also be self-administered by distributing them to groups (e.g., students in classrooms) or delivering them via the mail, e-mail, or the Internet.

High-quality surveys devote considerable attention to reducing as much as possible the major sources of error that can bias the results. For example, the target population needs to be completely enumerated so that important segments or groups are not unintentionally excluded from being eligible to participate. The sample is chosen in a way as to be representative of the population of interest, which is best accomplished through the use of probability sampling. Substantial time is given to constructing survey questions, pilot testing them, and training interviewers so that item wording, question presentation and format, and interviewing styles are likely to encourage thoughtful and accurate responses. Finally, concerted efforts are used to encourage all sampled individuals to complete the interview or questionnaire.

Surveys are mainly designed for description and prediction. Because they rarely involve the manipulation of independent variables or random assignment of individuals (or units) to conditions, they generally are less useful by themselves for answering explanatory and effects-oriented evaluative questions. If survey research is separated into its two fundamental components—sampling and data gathering through the use of questionnaires—it is easy to see that survey methods are embedded within experimental and quasi-experimental studies. For example, comparing learning outcome among students enrolled in traditional classroom-based college courses with those of students completing the course through distance learning would likely involve the administration of surveys that assess student views of the instructor and their satisfaction with how the course was taught. As another illustration, a major evaluation of *Sesame Street* that randomly assigned classrooms to in-class viewing of the program involved not only administering standardized reading tests to the students participating but also surveys of teachers and parents. So, in this sense, many forms of inquiry can be improved by using state-of-the-art methods in questionnaire construction and measurement.

**Observational methods.** Instead of relying on individuals' self-reports of events, researchers can conduct their own observations. This is often preferable when there is a concern that individuals may misreport the requested information, either deliberately or inadvertently (e.g., they cannot remember). In addition, some variables are better measured by direct observation. For example, in comparing direct

observations of how long teachers lecture in a class as opposed to asking teachers to self-report the time they spent lecturing; it should be obvious that the latter could be influenced (biased upward or downward) by how the teachers believe the researcher wants them to respond.

Observational methods are typically used in natural settings, although, as with survey methods, observations can be made of behaviors even in experimental and quasi-experimental studies. Both quantitative and qualitative observation strategies are possible. Quantitative strategies involve either training observers to record the information of interest in a systematic fashion or employing audiotape recorders, video cameras, and other electronic devices. When observers are used, they must be trained and monitored as to what should be observed and how it should be recorded (e.g., the number of times that a target behavior occurs during an agreed-upon time period).

Qualitative observational methods are distinctly different in several ways. First, rather than coding a prescribed set of behaviors, the focus of the observations is deliberately left more open-ended. By using open-ended observation schemes, the full range of individuals' responses to an environment can be recorded. That is, observations are much broader in contrast to quantitative observational strategies that focus on specific behaviors. Second, observers do not necessarily strive to remain neutral about what they are observing and may include their own feelings and experiences in interpreting what happened. Also, observers who employ quantitative methods do not participate in the situations that they are observing. In contrast, observers in qualitative research are not typically detached from the setting being studied; rather, they are more likely to be complete participants where the researcher is a member of the setting that is being observed.

Qualitative strategies are typically used to answer exploratory questions as they help identify important variables and hypotheses about them. They also are commonly used to answer descriptive questions because they can provide in-depth information about groups and situations. Although qualitative strategies have been used to answer predictive, explanatory, and evaluative questions, they are less able to yield results that can eliminate all rival explanations for causal relationships.

**Experimental methods.** Experimental research methods are ideally suited for examining explanato-

ry questions that seek to ascertain whether a cause-and-effect relationship exists among two or more variables. In experiments, the researcher directly manipulates the cause (the independent variable), assigns individuals randomly to various levels of the independent variable, and measures their responses (the expected effect). Ideally, the researcher has a high degree of control over the presentation of the purported cause—where, when, and in what form it is delivered; who receives it; and when and how the effect is measured. This level of control helps rule out alternative or rival explanations for the observed results. Exercising this control typically requires that the research be done under laboratory or contrived conditions rather than in natural settings. Experimental methods, however, can also be used in real-world settings—these are commonly referred to as field experiments.

Conducting experiments in the field is more difficult inasmuch as the chances increase that integral parts of the experimental method will be compromised. Participants may be more likely to leave the study and thus be unavailable for measurement of the outcomes of interest. Subjects who are randomly assigned to the control group, which may receive no tutoring, may decide to obtain help on their own—assistance that resembles the intervention being tested. Such problems essentially work against controlling for rival explanations and the key elements of the experimental method are sacrificed. Excellent discussions of procedures for conducting field experiments can be found in the 2002 book *Experimental and Quasi-Experimental Designs for Generalized Causal Inference*, written by William R. Shadish, Thomas D. Cook, and Donald T. Campbell, and in Robert F. Boruch's 1997 book *Randomized Field Experiments for Planning and Evaluation: A Practical Guide*.

**Quasi-experimental methods.** As suggested by its name, the methods that comprise quasi-experimental research approximate experimental methodologies. They are directed at fulfilling the same purposes—explanation and evaluation—but may provide more equivocal answers than experimental designs. The key characteristic that distinguishes quasi experiments from experiments is the lack of random assignment. Because of this, researchers must make concerted efforts to rule out the plausible rival hypotheses that random assignment is designed to eliminate.

Quasi-experimental designs constitute a core set of research strategies because there are many instances in which it is impossible to successfully assign participants randomly to different conditions or levels of the independent variable. For example, the first evaluation of *Sesame Street* that was conducted by Samuel Ball and Gerry Bogatz in 1970 was designed as a randomized experiment where individual children in five locations were randomly assigned to either be encouraged to watch the television program (and be observed in their homes doing it) or not encouraged. Classrooms in these locations were also either given television sets or not, and teachers in classrooms with television sets were encouraged to allow the children to view the show at least three days per week. The study, however, turned into a quasi experiment because *Sesame Street* became so popular that children in the control group (who were not encouraged to watch) ended up watching a considerable number of shows.

The two most frequently used quasi-experimental strategies are time-series designs and nonequivalent comparison group designs, each of which has some variations. In time-series designs, the dependent variable or expected effect is measured several times before and after the independent variable is introduced. For example, in a study of a zero tolerance policy, the number of school incidents related to violence and substance use are recorded on a monthly basis for twelve months before the policy is introduced and twelve or more months after its implementation. If a noticeable reduction in incidents occurs soon after the new policy is introduced and the reduction persists, one can be reasonably confident that the new policy was responsible for the observed increase if no other events occurred that could have resulted in a decline and there was evidence that the policy was actually enforced. This confidence may be even stronger if data are collected on schools that have similar student populations and characteristics but no zero tolerance policies during the same period and there is no reduction in illegal substance and violence-related incidents.

Establishing causal relationships with the nonequivalent comparison group design is typically more difficult. This is because when groups are formed in ways other than random assignment (e.g., participant choice), this often means that they differ in other ways that affect the outcome of interest. For example, suppose that students who are having problems academically are identified and allowed to

choose to be involved or not involved in an after-school tutoring program. Those who decide to enroll are also those who may be more motivated to do well, who may have parents who are willing to help their children improve, and who may differ in other ways from those who choose not to stay after school. They may also have less-serious academic problems. Such factors all may contribute to these students exhibiting higher academic gains than their nontutored counterparts do when after-tutoring testing has been completed. It is difficult, however, to disentangle the role that tutoring contributed to any observed improvement from these other features. The use of well-validated measures of these characteristics for both groups prior to receiving or not receiving tutoring can help in this process, but the difficulty is to identify and measure all the key variables other than tutoring receipt that can influence the observed outcomes.

**Secondary analysis and meta-analysis.** Both secondary analysis and meta-analysis are part of the arsenal of quantitative research methods, and both rely on research data already collected by other studies. They are invaluable tools for informing questions that seek descriptive, predictive, explanatory, or evaluative answers. Studies that rely on secondary analysis focus on examining and reanalyzing the raw data from prior surveys, experiments, and quasi experiments. In some cases, the questions prompting the analysis are ones that were not examined by the original investigator; in other cases, secondary analysis is performed because the researcher disagrees to some extent with the original conclusions and wants to probe the data, using different statistical techniques.

Secondary analyses occupy a distinct place in educational research. Since the 1960s federal agencies have sponsored several large-scale survey and evaluation efforts relevant to education, which have been analyzed by other researchers to re-examine the reported results or answer additional questions not addressed by the original researchers. Two examples, both conducted by the National Center for Education Statistics, include the High School and Beyond Survey, which tracks seniors and sophomores as they progress through high school and college and enter the workplace; and the Schools and Staffing Survey, which regularly collects data on the characteristics and qualifications of teachers and principals, class size, and other school conditions.

The primary idea underlying meta-analysis or research synthesis methods is to go beyond the more traditional, narrative literature reviews of research in a given area. The process involves using systematic and comprehensive retrieval practices for accumulating prior studies, quantifying the results by using a common metric (such as the effect size), and statistically combining this collection of results. In general, the reported results that are used from studies involve intermediate statistics such as means, standard deviations, proportions, and correlations.

The use of meta-analysis grew dramatically in the 1990s. Its strength is that it allows one to draw conclusions across multiple studies that addressed the same question (e.g., what have been the effects of bilingual education?) but used different measures, populations, settings, and study designs. The use of both secondary analysis and meta-analysis has increased the longer-term value of individual research efforts, either by increasing the number of questions that can be answered from one large-scale survey or by looking across several small-scale studies that seek answers to the same question. These research methods have contributed much in addressing policymakers' questions in a timely fashion and to advancing theories relevant to translating educational research into recommended practices.

*See also:* FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; RESEARCH METHODS, *subentries on* QUALITATIVE AND ETHNOGRAPHIC, SCHOOL AND PROGRAM EVALUATION.

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## QUALITATIVE AND ETHNOGRAPHIC

A qualitative approach to research generally involves the researcher in contact with participants in their natural setting to answer questions related to how the participants make sense of their lives. Qualitative researchers may observe the participants and conduct formal and informal interviews to further an understanding of what is going on in the setting from the point of view of those involved in the study. Ethnographic research shares these qualitative traits, but ethnographers more specifically seek understanding of what participants do to create the culture in which they live, and how the culture develops over time. This article further explores what it means to conduct qualitative and ethnographic research by looking at them historically and then by describing key characteristics of these approaches.

### The Context in Education

Qualitative and ethnographic research developed in education in the late 1970s. Ethnographic researchers drew on theory and methods in anthropology and sociology, creating a distinction between ethnography of education (work undertaken by anthropologists and sociologists) and ethnography in education (work undertaken by educators to address educational issues). Other forms of qualitative research drew on theories from the humanities and other social and behavioral sciences, adapting this work to educational goals and concerns, often creating new forms (e.g., connoisseurship, a field method approach, interview approaches, and some forms of action research).

In the early development of these traditions, educational researchers struggled for acceptance by both other professionals and policymakers. This phase was characterized by arguments over the value of qualitative methods in contrast to the dominant paradigms of the time—quantitative and experimental approaches. Qualitative and ethnographic researchers argued that questions important to education were left unexamined by the dominant paradigms. Some qualitative researchers argued for the need to include and represent the voices of people in their research, particularly voices not heard in other forms of research involving large-scale studies.

Questions asked by qualitative and ethnographic researchers generally focus on understanding the local experiences of people as they engage in their everyday worlds (e.g., classrooms, peer groups, homes, communities). For example, some researchers explore questions about ways in which people gain, or fail to gain, access to ways of learning in a diverse world; others focus on beliefs people hold about education and learning; while still others examine how patterns learned within a group are consequential for participation in other groups and situations.

A broad range of perspectives and approaches exist, each with its own historical tradition and theoretical orientation. A number of common dimensions can be identified across these perspectives and approaches. Qualitative and ethnographic researchers in education are concerned with the positions they take relative to participants and data collected. For example, many qualitative and ethnographic researchers engage in observations over a period of time to identify patterns of life in a particular group.

The theoretical orientation chosen guides the design and implementation of the research, including the tools used to collect (e.g., participant observation, interviewing, and collecting artifacts) and analyze data (e.g., discourse analysis, document analysis, content analysis, and transcribing video/audio data). Theory also guides other decisions, including how to enter the field (e.g., the social group, classroom, home, and/or community center), what types and how much data to collect and records to make (e.g., videotape, audiotape, and/or field notes), who to interview (formally and/or informally), how long to remain in the field (e.g., for ethnography, one or more years), and what literature is relevant. It also influences relationships researchers establish with people in local settings, which in turn influences what can be known. Some theoretical perspec-

tives guide researchers to observe what is occurring from a distance by taking the role of passive observer, recording information for analysis once they leave the field. Such researchers often do not interview participants, preferring to “ground” their observations in patterns in the data, without concern for what members understand. These descriptions are called *etic*, or outsider descriptions, because the observer is not concerned with members’ understandings.

This approach is in contrast with ones in which researchers join the group and become active participant-observers, at times participating directly in events. Such researchers also make videotape records that enable them to step back from what they thought was occurring to examine closely what resulted from those actions. Those not using video or audio records reconstruct events by constructing retrospective field notes, drawing on their memories of what occurred to create a written record to analyze when they leave the field. Just which type of approach and position researchers take depends on their research goal(s) and theoretical orientation(s) as well as what participants permit.

### Approaches to Research Questions

Research questions in a qualitative study are generated as part of the research process. Qualitative and ethnographic researchers often begin a study with one or more initiating question(s) or an issue they want to examine. Qualitative and ethnographic research approaches involve a process of interacting with data, reflecting on what is important to members in the local setting, and using this to generate new questions and refine the initial questions. This interactive and responsive process also influences the data that are collected and analyzed throughout the study. Therefore, it is common for researchers to construct more detailed questions that are generated as part of the analysis as they proceed throughout the study, or to abandon questions and generate ones more relevant to the local group or issues being studied.

For example, in one study of a fifth-grade classroom, the initial research questions were open ended and general: (1) What counts as community to the students and teacher in this classroom? (2) How do the participants construct community in this classroom? and (3) How is participating in this classroom consequential for students and the teacher? As the study unfolded, the research questions became more

directed toward what the researcher was beginning to understand about this classroom in particular. After first developing an understanding of patterns of interactions among participants, the researcher began to formulate more specific questions: (1) What patterns of practice does the teacher construct to offer opportunities for learning? (2) What roles do the social and academic practices play in the construction of community in this classroom? and (3) What are the consequences for individuals and the collective when a member leaves and reenters the classroom community? This last question was one that could not have been anticipated but was important to understanding what students learned and when student learning occurred as well as what supported and constrained that learning. The shifts in questions constitute this researcher’s logic of inquiry and need to be reported as part of the dynamic design of the study.

### Approaches to Design and Data Collection

In designing qualitative studies, researchers consider ways of collecting data to represent the multiple voices and actions constituting the research setting. Typical techniques used in qualitative research for collecting data include observing in the particular setting, conducting interviews with various participants, and reviewing documents or artifacts. The degree to which these techniques are used depends on the nature of the particular research study and what occurs in the local group.

Some studies involve in-depth analysis of one setting or interviews of one group of people. Others involve a contrastive design from the beginning, seeking to understand how the practices of one group are similar to or different from another group. Others seek to study multiple communities to test hypotheses from the research literature (e.g., child-rearing practices are the same in all communities). What is common to all of these studies is that they are examining the qualities of life and experiences within a local situation. This is often called a situated perspective.

### Entering the Field and Gaining Access to Insider Knowledge

Entering the research setting is one of the first phases of conducting fieldwork. Gaining access to the site is ongoing and negotiated with the participants throughout the study. As new questions arise, the researcher has to renegotiate access. For example, a re-

searcher may find that the outcomes of standardized tests become an important issue for the teachers and students. The researcher may not have obtained permission to collect these data at the beginning of the study and must then negotiate permission from parents, students, teachers, and district personnel to gain access to these scores.

Qualitative research involves a social contract with those participating in the study, and informed consent is negotiated at each phase of the research when new information is needed or new areas of study are undertaken. At such points of renegotiation, researchers need to consider the tools necessary and the ways to participate within the group (e.g., as participant-observer and/or observer-participant, as interviewer of one person or as a facilitator of a focus group, or as analyst of district data or student products). How the researcher conducts observations, collects new forms of data, and analyzes such data is related to shifts in questions and/or theoretical stance(s) necessary to understand what is occurring.

### Research Tools

One of the most frequently used tools, in addition to participant observation, is interviewing. For ethnography and other types of field research, interviews occur within the context of the ongoing observations and collection of artifacts. These interviews are grounded in what is occurring in the local context, both within and across time. Some interviews are undertaken to gain insider information about what the researcher is observing or to test out the developing theory that the researcher is constructing.

In contrast, other forms of qualitative research may use interviews as the sole form of data collection. Such interviews also seek meanings that individuals or groups have for their own experience or of observed phenomena. These interviews, however, form the basis for analysis and do not require contextual information from observations. What the people say becomes the basis for exploration, not what was observed.

Other tools used by qualitative and ethnographic researchers include artifact and document analysis (artifacts being anything people make and use). The researcher in a field-based study collects artifacts produced and/or used by members of the group, identifies how these artifacts function for the indi-

vidual and/or the group, and explores how members talk about and name these artifacts. For some theoretical positions, the artifacts may be viewed as a type of participant in the local event (e.g., computer programs as participants). Some artifacts, such as documents, are examined for links to other events or artifacts. This form of analysis builds on the understanding that the past (and future) is present in these artifacts and that intertextual links between and among events are often inscribed in such documents. In some cases, qualitative researchers may focus solely on a set of artifacts (e.g., student work, linked sets of laws, a photograph collection, or written texts in the environment–environmental print). Such studies seek to examine the range of texts or materials constructed, the patterned ways in which the texts are constructed, and how the choices of focus or discourse inscribe the views that members have of self and others as well as what is possible in their worlds.

Although some qualitative studies focus solely on the documents, field-based researchers generally move between document analysis and an exploration of the relationship of the document to past, present, and future actions of individuals and/or groups. These studies seek to understand the importance of the artifact or document within the lives of those being studied.

### Ongoing Data Analysis

While conducting fieldwork, researchers reread their field notes and add to them any relevant information that they were not able to include at the time of first writing the notes. While reviewing their field notes, researchers look for themes and information relevant to the research questions. They note this information in the form of theoretical notes (or write theoretical memos to themselves) that may include questions about repeated patterns, links to other theories, and conceptual ideas they are beginning to develop. They also make methodological notes to reconstruct their thinking and their logic of inquiry. Sometimes they make personal notes that reflect their thoughts and feelings about what they are observing or experiencing. These notes allow them to keep from imposing their own opinion on data, helping them to focus on what is meaningful or important to those with whom they are working.

Researchers constantly use contrast to build interpretations that are grounded in the data, within and across actors, events, times, actions, and activi-

ties that constitute the social situations of everyday life. Many qualitative (particularly ethnographic) researchers examine material, activity, semiotic (meaning-carrying), and/or social dimensions of everyday life and its consequences for members. The analytic principles of practice that they use include comparing and contrasting data, methods, theories, and perspectives; examining part-whole relationships between and among actions, events, and actors; seeking insider (*emic*) understandings of experiences, actions, practices, and events; and identifying through these what is relevant to the local group.

### Reporting Research Findings

The final step in qualitative and ethnographic research is writing an account. The researchers make choices about how to represent the data that illustrate what was typical about the particular group being studied. Another choice might be to highlight actions of the group that were illustrative of their particular patterns of beliefs. In some studies, several cases are chosen to make visible comparisons across different activities within the group, or across different groups that may have some activities in common. For example, researchers who study classroom interactions might bring together data from different classrooms to make visible principles of practice that are similar in general terms such as asking students to understand various points of view. However, in each classroom, the actions of juxtaposing points of view will be carried out differently due to the different experiences within each classroom.

Researchers also select genres for writing the report that best enable the intended audience to understand what the study made visible that was not previously known or that extended previous knowledge. The researcher does not seek to generalize from the specific case. Rather, qualitative or ethnographic researchers provide in-depth descriptions that lead to general patterns. These patterns are then examined in other situations to see if, when, and how they occur and what consequences they have for what members in the new setting can know, do, understand, and/or produce. In qualitative and ethnographic studies this is often referred to as transferability, in contrast to generalizability.

*See also:* RESEARCH METHODS, *subentries on* OVERVIEW, SCHOOL AND PROGRAM EVALUATION.

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## SCHOOL AND PROGRAM EVALUATION

Program evaluation is research designed to assess the implementation and effects of a program. Its purposes vary and can include (1) program improvement, (2) judging the value of a program, (3) assessing the utility of particular components of a program, and (4) meeting accountability requirements. Results of program evaluations are often used for decisions about whether to continue a program, improve it, institute similar programs elsewhere, allocate resources among competing programs, or accept or reject a program approach or theory. Through these uses program evaluation is viewed as a way of rationalizing policy decision-making.

Program evaluation is conducted for a wide range of programs, from broad social programs such as welfare, to large multisite programs such as the preschool intervention program Head Start, to program funding streams such as the U.S. Department of Education's Title I program that gives millions of dollars to high-poverty schools, to small-scale programs with only one or a few sites such as a new mathematics curriculum in one school or district.

### Scientific Research versus Evaluation

There has been some debate about the relationship between "basic" or scientific research and program

evaluation. For example, in 1999 Peter Rossi, Howard Freeman, and Michael Lipsey described program evaluation as the application of scientific research methods to the assessment of the design and implementation of a program. In contrast, Michael Patton in 1997 described program evaluation not as the application of scientific research methods, but as the systematic collection of information about a program to inform decision-making.

Both agree, however, that in many circumstances the design of a program evaluation that is sufficient for answering evaluation questions and providing guidance to decision-makers would not meet the high standards of scientific research. Further, program evaluations are often not able to strictly follow the principles of scientific research because evaluators must confront the politics of changing actors and priorities, limited resources, short timelines, and imperfect program implementation.

Another dimension on which scientific research and program evaluation differ is their purpose. Program evaluations must be designed to maximize the usefulness for decision-makers, whereas scientific research does not have this constraint. Both types of research might use the same methods or focus on the same subject, but scientific research can be formulated solely from intellectual curiosity, whereas evaluations must respond to the policy and program interests of stakeholders (i.e., those who hold a stake in the program, such as those who fund or manage it, or program staff or clients).

### How Did Program Evaluation Evolve?

Program evaluation began proliferating in the 1960s, with the dawn of social antipoverty programs and the government's desire to hold the programs accountable for positive results. Education program evaluation in particular expanded also because of the formal evaluation requirements of the National Science Foundation-sponsored mathematics and science curriculum reforms that were a response to the 1957 launch of *Sputnik* by the Soviet Union, as well as the evaluation requirements instituted as part of the Elementary and Secondary Education Act of 1965.

### Experimentation versus Quasi-experimentation

The first large-scale evaluations in education were the subject of much criticism. In particular, two influential early evaluations were Paul Berman and Milbrey McLaughlin's RAND Change Agent 1973–

1978 study of four major federal programs: the Elementary and Secondary Education Act, Title VII (bilingual education), the Vocational Education Act, and the Right to Read Act; and a four-year study of Follow Through, which sampled 20,000 students and compared thirteen models of early childhood education. Some of the criticisms of these evaluations were that they were conducted under too short of a time frame, used crude measures that did not look at incremental or intermediate change, had statistical inadequacies including invalid assumptions, used poorly supported models and inappropriate analyses, and did not consider the social context of the program.

These criticisms led to the promotion of the use of experiments for program evaluation. Donald Campbell wrote an influential article in 1969 advocating the use of experimental designs in social program evaluation. The Social Science Research Council commissioned Henry Riecken and Robert Boruch to write the 1978 book *Social Experimentation*, which served as both a “guidebook and manifesto” for using experimentation in program evaluation. The best example of the use of experimentation in social research is the New Jersey negative income tax experiment sponsored by the Office of Equal Opportunity of the federal Department of Health, Education, and Welfare.

Experiments are the strongest designs for assessing impact, because through random sampling from the population of interest and random assignment to treatment and control groups, experiments rule out other factors besides the program that might explain program success. There are several practical disadvantages to experiments, however. First, they require that the program be a partial coverage program—that is, there must be people who do not participate in the program, who can serve as the control group. Second, experiments require large amounts of resources that are not always available. Third, they require that the program be firmly and consistently implemented, which is frequently not the case. Fourth, experiments do not provide information about how the program achieved its effects. Fifth, program stakeholders sometimes feel that random assignment to the program is unethical or politically unfeasible. Sixth, an experimental design in a field study is likely to produce no more than an approximation of a true experiment, because of such factors as systematic attrition from the program, which leaves the evaluator with a biased sample of partici-

pants (e.g., those who leave the program, or attrite, might be those who are the hardest to influence, so successful program outcomes would be biased in the positive direction).

When experiments are not appropriate or feasible, quasi-experimental techniques are used. Set forth by Donald Campbell and Julian Stanley in 1963, quasi-experimentation involves a number of different methods of conducting research that does not require random sampling and random assignment to treatment and control groups. One common example is an evaluation that matches the program participants to nonparticipants that share similar characteristics (e.g., race) and measures outcomes of both groups before and after the program. The challenge to quasi-experimentation is to rule out what Campbell and Stanley termed internal validity threats, or factors that might be alternative explanations for program results besides the program itself, which in turn would reduce confidence in the conclusions of the study. Unlike experimental design, which protects against just about all possible internal validity threats, quasi-experimental designs generally leave one or several of them uncontrolled.

### Implementation

In addition to focusing on the relative strengths and weaknesses of experiments and quasi-experiments, criticisms of early large-scale education evaluations highlighted the importance of measuring implementation. For example, McLaughlin and Berman’s RAND Change Agent study and the Follow-Through evaluation demonstrated that implementation of a specific program can differ a great deal from one site to the next. If an evaluation is designed to attribute effects to a program, varying implementation of the same program reduces the value of the evaluation, because it is unclear how to define the program. Thus, it is necessary to include in a program evaluation a complete description of how the program is being implemented, to allow the examination of implementation fidelity to the original design, and to discover any cross-site implementation differences that would affect outcomes.

In 1967 Michael Scriven first articulated the idea that there were two types of evaluation—one focused on evaluating implementation, called formative evaluation, and one focused on evaluating the impact of the program, called summative evaluation. He argued that emerging programs should be the subject of formative evaluations, which are designed

to see how well a program was implemented and to improve implementation; and that summative evaluations should be reserved for programs that have been well-established and have stable and consistent implementation.

Related to the idea of formative and summative evaluation is a controversy over the extent to which the evaluator should be a program insider or an objective third party. In formative evaluations, it can be argued that the evaluator needs to become somewhat of an insider, in order to become part of the formal and informal feedback loop that makes providing program improvement information possible. In contrast, summative evaluations conducted by a program insider foster little confidence in the results, because of the inherent conflict of interest.

### Stakeholder and Utilization Approaches

Still another criticism of early education evaluations was that stakeholders felt uninvolved in the evaluations; did not agree with the goals, measures, and procedures; and thus rejected the findings. This discovery of the importance to the evaluation of stakeholder buy-in led to what Michael Patton termed stakeholder or utilization-focused evaluation. Stakeholder evaluation bases its design and execution on the needs and goals of identified stakeholders or users, such as the funding organization, a program director, the staff, or clients of the program.

In the context of stakeholder evaluation, Patton in 1997 introduced the idea that it is sometimes appropriate to conduct goal-free evaluation. He suggested that evaluators should be open to the idea of conducting an evaluation without preconceived goals because program staff might not agree with the goals and because the goals of the program might change over time. Further, he argued that goal-free evaluation avoids missing unanticipated outcomes, removes the negative connotation to side effects, eliminates perceptual biases that occur when goals are known, and helps to maintain evaluator objectivity. Goals are often necessary, however, to guide and focus the evaluation and to respond to the needs of policymakers. As a result, Patton argued that the use of goals in program evaluation should be decided on a case-by-case basis.

### Theory-Based Evaluations

Besides stakeholder and goal-free evaluation, Carol Weiss in 1997 advocated for theory-based evaluations, or evaluations that are grounded in the pro-

gram's theory of action. Theory-based evaluation aims to make clear the theoretical underpinnings of the program and use them to help structure the evaluation. In her support of theory-based evaluation, Weiss wrote that if the program theory is outlined in a phased sequence of cause and effect, then the evaluation can identify weaknesses in the system or at what point in the chain of effects results can be attributed. Also, articulating a programmatic theory can have positive benefits for the program, including helping the staff address conflicts, examine their own assumptions, and improve practice.

Weiss explained that theory-based approaches have not been widespread because there may be more than one theory that applies to a program and no guidance about which to choose, and because the process of constructing theories is challenging and time consuming. Further, theory-based approaches require large amounts of data and resources. A theory-based evaluation approach does, however, strengthen the rigor of the evaluation and link it more with scientific research, which by design is a theory-testing endeavor.

### Data Collection Methods

Within different types of evaluation (e.g., formative, stakeholder, theory-based), there have been debates about which type of methodology is appropriate, with these debates mirroring the debates in the larger social science community. The "scientific ideal" of using social experiments and randomized experiments, which supports the quantification of implementation and outcomes, is contrasted with the "humanistic ideal" that the program should be seen through the eyes of the clients and defies quantification, which supports an ethnographic or observational methodology.

Campbell believed that the nature of the research question should determine the question, and he encouraged evaluations that have both qualitative and quantitative assessments, with these assessments supporting each other. In the early twenty-first century, program evaluations commonly use a combination of qualitative and quantitative data collection techniques.

### Does Evaluation Influence Policy?

Although the main justification for program evaluation is its role in rationalizing policy, program evaluation results rarely have a direct impact on decision-making. This is because of the diffuse and political

nature of policy decision-making and because people are generally resistant to change. Most evaluations are undertaken and disseminated in an environment where decision-making is decentralized among several groups and where program and policy choices result from conflict and accommodation across a complex and shifting set of players. In this environment, evaluation results cannot have a single and clear use, nor can the evaluator be sure how the results will be interpreted or used.

While program evaluations may not directly affect decisions, evaluation does play a critical role in contributing to the discourse around a particular program or issue. Information generated from program evaluation helps to frame the policy debate by bringing conflict to the forefront, providing information about trade-offs, influencing the broad assumptions and beliefs underlying policies, and changing the way people think about a specific issue or problem.

### Evaluation in the Early Twenty-First Century

In the early twenty-first century, program evaluation is an integral component of education research and practice. The No Child Left Behind Act of 2001 (reauthorization of the U.S. government's Elementary and Secondary Education Act) calls for schools to use "research-based practices." This means practices that are grounded in research and have been proven through evaluation to be successful. Owing in part to this government emphasis on the results of program evaluation, there is an increased call for the use of experimental designs.

Further, as the evaluation field has developed in sophistication and increased its requirements for rigor and high standards of research, the lines between scientific research and evaluation have faded. There is a move to design large-scale education evaluations to respond to programmatic concerns while simultaneously informing methodological and substantive inquiry.

While program evaluation is not expected to drive policy, if conducted in a rigorous and systematic way that adheres to the principles of social research as closely as possible, the results of program evaluations can contribute to program improvement and can provide valuable information to both advance scholarly inquiry as well as inform important policy debates.

*See also:* RESEARCH METHODS, *subentries on* OVERVIEW, QUALITATIVE AND ETHNOGRAPHIC.

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## VERBAL PROTOCOLS

Since the early 1900s, researchers have relied on verbal data to gain insights about thinking and learning. Over the years, however, the perceived value of verbal data for gaining such insights has waxed and waned. In 1912 Edward Titchener, one of the founders of structural psychology, advocated the use of introspection by highly trained self-observers as the only method for revealing certain cognitive processes. At the same time, this technique of observing and verbalizing one's own cognitive processes drew much criticism. Researchers questioned the objectivity of the technique and the extent to which people have knowledge of and access to their cognitive processes. With behaviorism as the dominant perspective for studying learning in the United States, verbal data were treated as behavioral products, not as information that might reveal something about cognitive processing. From about the 1920s to 1950s, most U.S. researchers abandoned the use of introspective techniques, as well as most other types of verbal data such as question answering.

While U.S. learning theorists and researchers were relying almost solely on nonverbal or very limited verbal (e.g., yes/no response) techniques, the Swiss cognitive theorist Jean Piaget was relying primarily on children's verbal explanations for gaining insights into their cognitive abilities and processes.

Piaget believed that children's explanations for their responses to various cognitive tasks provided much more information about their thinking than did the task responses alone. United States theorists, however, were not ready to consider Piaget's work seriously until about 1960, when cognitive psychology was beginning to emerge and there was declining satisfaction with a purely behavioral perspective.

With the rise of cognitive psychology beginning in the 1950s and 1960s, educational and experimental psychologists became interested once again in the usefulness of verbal data for providing information about thinking and learning. Cognitive researchers rarely use Titchener's original introspective technique in the early twenty-first century. Since the 1980s, however, researchers have increasingly used verbal protocol analysis, which has roots in the introspective technique, to study the cognitive processes involved in expert task performance, problem solving, text comprehension, science education, second language acquisition, and hypertext navigation.

### What Are Verbal Protocols?

Verbal protocols are rich data sources containing individuals' spoken thoughts that are associated with working on a task. While working on a particular task, subjects usually either think aloud as thoughts occur to them or they do so at intervals specified by the researcher. In some studies, researchers ask subjects to verbalize their thoughts upon completion of the task. The verbalizations are recorded verbatim, usually using a tape recorder, and are then coded according to theory-driven and/or empirically driven categories.

Verbal protocols differ from introspection. Subjects are not instructed to focus on the cognitive processes involved in task completion nor are they trained in the self-observation of cognitive processing. The goal is for subjects to express out loud the thoughts that occur to them naturally. Researchers use these data in conjunction with logical theoretical premises to generate hypotheses and to draw conclusions about cognitive processes and products.

### What Can Verbal Protocols Reveal about Thinking and Learning?

In order to verbalize one's thoughts, individuals must be aware of those thoughts and the thoughts must be amenable to language. Thus, verbal protocol analysis can reveal those aspects of thinking and learning that are consciously available, or activated

in working memory, and that can be encoded verbally.

One major advantage of verbal protocol data is that they provide the richest information regarding the contents of working memory during task execution. In studies of reading comprehension, for example, verbal protocols have provided a detailed database of the types of text-based and knowledge-based inferences that might occur during the normal reading of narrative texts. Data using other measures such as sentence reading time and reaction time to single-word probes have corroborated some of the verbal protocol findings. For example, corroborating evidence for the generation of causal inferences and goal-based explanations exists. Verbal protocols have also provided information about the particular knowledge domains that are used to make inferences when reading narratives, and about differences in readers' deliberate strategies for understanding both narrative and informational texts.

Verbal protocols have been used extensively in the study of expert versus novice task performance across a variety of domains (e.g., cognitive-perceptual expertise involved in chess, perceptual-motor expertise such as in sports, science and mathematical problem-solving strategies, skilled versus less-skilled reading). While the specific insights about the differences between expert and novice approaches vary from domain to domain, some generalities across domains can be made. Clearly, experts have more knowledge and more highly organized knowledge structures within their domains than do novices. But the processes by which they solve problems and accomplish tasks within their domains of expertise also differ. Verbal protocols have revealed that experts are more likely to evaluate and anticipate the ever-changing situations involved with many problems and to plan ahead and reason accordingly. Knowledge about expert and novice problem-solving processes has implications for developing and assessing pedagogical practices.

Another advantage of verbal protocol analysis is that it provides sequential observations over time. As such, it reveals changes that occur in working memory over the course of task execution. This has been useful in studies of reading comprehension where the information presented and the individual's representation of the text change over time, in studies of problem solving where multiple steps are involved in reaching a solution and/or where multiple solutions are possible, in studies of expert versus novice

task performance, and in studies of conceptual change.

### Limitations of Verbal Protocol Data

As is the case with most research methods, verbal protocols have both advantages and limitations. Obviously, subjects can verbalize only thoughts and processes about which they are consciously aware. Thus, processes that are automatic and executed outside of conscious awareness are not likely to be included in verbal protocols, and other means of assessing such processes must be used. Also, nonverbal knowledge is not likely to be reported.

Most authors of articles examining the think-aloud procedure seem to disagree with the 1993 contention of K. Anders Ericsson and Herbert A. Simon that thinking aloud does not usually affect normal cognitive processing. It is thought that the think-aloud procedure may lead to overestimates and/or underestimates of the knowledge and processes used under normal task conditions. The need to verbalize for the think-aloud task itself might encourage subjects to strategically use knowledge or processes that they might not otherwise use. Alternately, the demands of the think-aloud task might interfere with subjects' abilities to use knowledge and/or processes they might use under normal conditions. Self-presentation issues (e.g., desire to appear smart, embarrassment, introversion/extroversion) might affect subjects' verbal reports. Finally, the pragmatics and social rules associated with the perception of having to communicate one's thoughts to the researcher might also lead to overestimates or underestimates of knowledge and processes typically used.

Unfortunately, it is not possible to know if a verbal protocol provides a complete picture of the knowledge and processes normally used to perform a task. Typically, however, no single research technique provides a complete picture. Only the use of multiple measures for assessing the same hypotheses and for assessing various aspects of task performance can provide the most complete picture possible.

A final limitation of verbal protocol methodology is that it is very labor intensive. The data collection and data coding are extremely time consuming as compared with other methodologies. The amount of potential information that can be acquired about the contents of working memory during task performance, however, is often well worth the time required.

### Optimizing the Advantages and Minimizing the Limitations

Several suggestions have been put forth for increasing the likelihood of obtaining verbal protocol data that provide valid information about the contents of working memory under normal task conditions. The most frequent suggestions are as follows:

- Collect verbal protocol data while subjects are performing the task of interest.
- Ask subjects to verbalize all thoughts that occur. One should not direct their thoughts or processing by asking for specific types of information unless one wishes to study the planned, strategic use of that type of information.
- Make it clear to the subjects that task performance is their primary concern and that thinking aloud is secondary. If, however, a subject is silent for a relatively long period as compared to others during task execution, prompts such as “keep talking” may become necessary.
- To minimize as much as possible the conversational aspects of the think-aloud task, the researcher should try to remain out of the subject’s view.

*See also:* LANGUAGE AND EDUCATION; LEARNING, *subentry on* CONCEPTUAL CHANGE; READING, *subentries on* COMPREHENSION, CONTENT AREAS; SCIENCE LEARNING, *subentry on* EXPLANATION AND ARGUMENTATION.

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## RESEARCH MISCONDUCT

Research encompasses a broad range of activities that are bound together by the common goal of advancing knowledge and understandings. Its usefulness to society rests on the expectation that researchers undertake and report their work fairly, accurately, and honestly. Researchers who fail to fulfill this expectation lack integrity and can be accused of engaging in research misconduct.

### Policies and Procedures

In 1981 when Congress convened its first hearing to investigate fraud in biomedical research, researchers expressed confidence in their ability to police their own affairs. The fact that researchers who engaged in misconduct were caught seemingly justified this confidence. A few professional societies subsequently issued reports discussing the importance of integrity in research, including the Association of American Medical Colleges, which published *The Maintenance of High Ethical Standards in the Conduct of Research* in 1982, and the Association of American Universities, which published its *Report . . . on the Integrity of Research* in 1983. A small number of research universities also adopted research misconduct policies—primarily the ones directly affected by misconduct cases, such as Yale and Harvard universities. However, neither government nor the majority of research universities saw any pressing need to make major changes. Through the mid-1980s, research misconduct remained largely undefined on most university campuses and was policed only through the informal mechanisms of peer review and general policies governing academic conduct.

The Health Research Extension Act of 1985 changed this situation and required government and universities to take a more aggressive approach to investigating research misconduct. In response to this call for action, the Public Health Service (PHS) published an Interim Policy on Research Misconduct in 1986 and adopted a final policy in 1989. The latter established two offices to investigate and adjudicate research misconduct cases: the Office of Scientific Integrity (OSI) as part of the National Institutes of Health (NIH) and the Office of Scientific Integrity Review (OSIR), affiliated with the Office of the Assistant Secretary of Health (OASH). The National Science Foundation (NSF) also published *Final Regulations for Misconduct in Science and Engi-*

*neering Research* (1987) and assigned administration of its regulations to the NSF Office of the Inspector General (OIG). These actions established policies and procedures for investigating research misconduct. They also required research universities to establish their own policies and procedures for handling research misconduct cases, which they slowly did over the course of the 1990s.

The responsibility for administering research misconduct policies on most university campuses is assigned to the chief research officer, although in a few cases universities have established research integrity or misconduct committees. On campuses with large research budgets, one staff person, sometimes called the “research integrity officer,” is assigned primary responsibility for initiating inquiries, setting up investigation committees, making timely reports, and handling other matters relating to research misconduct. The process for determining whether misconduct has been committed usually follows the three-step model outlined by the federal government—inquiry, investigation, and adjudication. During inquiry, charges are informally assessed to determine whether there is enough evidence to proceed with a formal investigation. If there is, a formal investigation follows, after which decisions about innocence or guilt and appropriate penalties or exoneration are made (adjudication).

Proper handling of misconduct cases proposes three challenges for universities. First, since state and federal governments provide no funds to comply with research misconduct regulations, other sources of support are needed. Second, misconduct cases often pit one university employee against another, making it difficult for the university to provide equal justice and protection to all concerned. Third, universities have conflicts of interest when they confront reports of research misconduct.

Several factors can make it tempting for universities to dismiss cases early in the process prior to fair and complete investigations. Investigations can be expensive and divisive. Findings of misconduct can require that funds be returned to a funding agency, even if some or all of the funds have already been spent. Reports of research misconduct can also erode public confidence in a university. However, in addition to the clear responsibility universities have to assure that public research funds are used properly, the costs of cover-ups can be high and may lead to further regulation. Therefore universities must

take their responsibility for conducting fair and complete investigations seriously.

### Definitions

The first formal government definition of research misconduct was published in the 1986 PHS Interim Policy. This initial definition framed all subsequent discussions of research misconduct in two important ways. First, in rejecting the use of the term “fraud” for describing inappropriate behavior in research, PHS officials helped assure that all subsequent discussions would be framed in terms of “research misconduct.” Second, the three key terms used in the Interim Policies to describe research misconduct—“fabrication, falsification, and plagiarism,” or FFP—have been used in all subsequent federal and many university definitions.

As important and long-lasting as the framework established in the Interim Policy turned out to be, it raised points of contention that to this day continue to polarize discussions of research misconduct. Most importantly, PHS proposed and the National Science Foundation (NSF) soon officially included, in 1987, one additional phrase in the government definition of research misconduct: “other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting, or reporting research.” The “other practices” phrase turned out to be very controversial. Scientists worried that professional disagreements over methods or theories might be construed as *other practices that seriously deviate from those that are commonly accepted*. They wanted a tight, unambiguous definition that left no room for arbitrary interpretation. Government officials, particularly at NSF, felt they needed some flexibility to investigate behavior that did not constitute FFP but that nonetheless was clearly inappropriate and undermined the public’s investment in research. NSF officials backed up their claim with several examples, including a widely publicized case of inappropriate sexual behavior by an anthropologist who had an NSF grant to train students in field research.

Two efforts to resolve disagreements over the definition of misconduct in the 1990s failed to produce a consensus. The first, led by a subcommittee of the National Academy of Sciences, dropped the “other practices” phrase from the formal definition of research misconduct, but agreed that there were “other questionable research practices” that needed to be investigated, not by government but by re-

search institutions and professional societies. The second effort to produce a consensus definition by a specially appointed PHS Commission on Research Integrity failed to win serious support and was largely ignored. The failure of these efforts and the lack of a common government definition led eventually to a new government effort to produce a uniform federal definition for research misconduct, coordinated this time by the Office of Science and Technology Policy (OSTP) in the Executive Office of the President.

The new OSTP policy, which was published in the *Federal Register* in December 2000, defines “research misconduct” as “fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.” It also sets three criteria for proving misconduct, which further narrow the definition of research misconduct. When adopted, the new definition will require evidence that the behavior:

- [represents a] significant departure from accepted practices of the relevant research community; and
- [was] committed intentionally, or knowingly, or recklessly; and
- [can be] proven by a preponderance of evidence.

With the publication of the OSTP Policy, nearly two decades of intense debate over the definition of research misconduct reached a tentative conclusion, assuming the federal agencies that fund research follow through and adopt the proposed OSTP definition.

### Misconduct Cases

The evolution of research misconduct policy has unquestionably been driven by a small number of prominent cases. In the early 1970s, William Summerlin, working at the Sloane Kettering Institute, tried to pass off black patches painted on white mice as genuine skin grafts that he had applied using a new technique. Elias Asabati, while at Temple University and Jefferson Medical College in Philadelphia and the Anderson Hospital in Houston, took published articles, replaced the authors’ names with his own name, made occasional minor modifications in the text, and then submitted them to other journals for publication. His misdeeds, which eventually included the submission of eighty fraudulent articles, became public in 1978. A junior researcher at Yale

University, Vijay Soman, used information from an unpublished article from another laboratory being reviewed by his mentor, Philip Felig, to publish his own, supposedly original findings on the same topic. Yale initially ignored the charges of plagiarism and data falsification brought by the researcher whose work Soman used. The charges were confirmed in 1980 by an investigation conducted by the NIH. The 1981 Congressional hearings on fraud in biomedical research were convened specifically to investigate these cases.

Reports of new cases of research misconduct and the 1982 publication of *Betrayers of the Truth: Fraud and Deceit in the Hall of Science*, by *New York Times* writers William Broad and Nicholas Wade, guaranteed that the problem of research misconduct did not disappear after the 1981 hearings. One case, which involved data falsification by John Darsee, a promising young cardiovascular researcher at Harvard, dragged on for five years, due not to uncertainty about the actual misconduct but to a dispute over the responsibilities of others who oversaw Darsee's work. A paper by NIH researchers Walter Stuart and Ned Feder raised serious questions about the role of Darsee's chief mentor, Eugene Braunwald, in reviewing publications he coauthored with Darsee. Disagreement over the publication of Stuart and Feder's paper kept the Darsee case alive through most of the 1980s.

As the Darsee case was slowly coming to an end, two new cases assured continued public interest in research misconduct. The first involved disputed data published in an article in *Cell* in 1986, based on research conducted by Tufts University researcher Thereza Imanishi-Kari. A postdoctoral student working in Imanishi-Kari's laboratory, Margot O'Toole, raised questions about research misconduct when she was unable to replicate some of the results reported in the *Cell* article. Eventually, the article's most prominent co-author, Nobel scientist and Whitehead Institute Director David Baltimore, was drawn into the dispute. After numerous investigations by the Massachusetts Institute of Technology (MIT) and the Office of Scientific Integrity (renamed the Office of Research Integrity in 1992), the charges against Imanishi-Kari were dismissed by a Health and Human Services appeal board in 1996, ten years after the original article was published and five years after the article had been retracted by four of the five co-authors, including Baltimore. (David Baltimore was never formally charged with miscon-

duct.) The bitter dispute between Baltimore and his supporters on the one hand and Congressman John Dingell of Michigan and research critics on the other seriously polarized the debate over the importance of and ways to deal with research misconduct.

The second prominent case involved NIH AIDS researcher Robert Gallo, a researcher in his laboratory, Mikulas Popovic, and their 1984 article published in *Science* claiming discovery of the AIDS virus. At issue was whether Gallo's team had isolated the virus described in the article or whether they had improperly used samples supplied by the Institut Pasteur in France. A series of articles by *Chicago Tribune* reporter John Crewdson and reports issued by the ORI and a subcommittee headed by Representative John Dingell cast serious doubts on Gallo's claims. However, the charges against Popovic were dismissed in 1995 by the same HHS appeal board that had dismissed the charges against Imanishi-Kari. ORI therefore decided to drop its charges against Gallo, arguing that the appeal board had adopted a new definition of misconduct that ORI was not prepared to meet.

In the late 1990s the focus of interest in research misconduct shifted to clinical research, following the report of the death of a young subject, Jesse Gelsinger, in 1999, during a gene therapy trial at the University of Pennsylvania. In this and other cases involving clinical research, the questionable research behavior does not constitute research misconduct, narrowly defined as FFB, but rather raises questions about conflicts of interest, misleading or incomplete reports on past research, the failure to inform research subjects of risks, and noncompliance with federal rules. These new concerns have raised questions about the way researchers are trained and steps that can be taken to foster the "responsible conduct of research."

### Responsible Conduct of Research

Interest in instruction in the "responsible conduct of research" (RCR) emerged in the late 1980s as one solution to growing public concern about research misconduct. Although a number of earlier reports had stressed the importance of education in research training, few substantive changes in the way researchers are trained were made prior to the 1989 Institute of Medicine report *The Responsible Conduct of Research in the Health Sciences*. Within a year, NIH and the Alcohol, Drug and Mental Health Administration (ADAMHA) published rules that required

researchers seeking a special type of award known as a “training grant” to include a description of “activities related to the instruction about the responsible conduct of research” in their applications.

Over the course of the 1990s the modest NIH/ADAMHA training grant requirement fostered the development of a growing number of RCR courses on university campuses and related instructional materials, such as textbooks, videos, and Internet resources. This development was given a considerable boost in 2000, when NIH implemented *Required Education in the Protection of Human Research Participants* and ORI published an RCR requirement that would have affected all PHS funded research, had it not been suspended due to Congressional questions about the way it was developed. However, even without the broad ORI RCR requirement, efforts continue on university campuses to formalize instruction in the responsible conduct of research, relying more and more on web-based training.

### Future Considerations

When research misconduct first emerged as a public concern in the late 1970s, it was seen primarily as an aberration that did not typify the conduct of most researchers. By implication, it was therefore assumed that most researchers adopted high standards for integrity in their work. Since the early 1980s, research misconduct has continued to occur, but its overall rate of occurrence is still small in comparison to the total number of active researchers. Research misconduct, defined as intentional FFP, still seems to be an aberration that does not typify the conduct of most researchers. However, based on a growing body of research on research integrity, it can no longer be assumed that most researchers do in fact adopt high standards for integrity in their work.

Studies of peer review, publication practices, conflicts of interest, bias, mentoring, and other elements of the research process consistently report that significant numbers of researchers (defined as 10% or higher) do not adhere to accepted norms for the responsible practice of research. Significant numbers inappropriately list their names on publications, are unwilling to share data with colleagues, use inappropriate statistical analyses, provide inaccurate references in publications, fail to list conflicts of interest, and engage in other practices that fall short of ideal standards for the responsible conduct of research. There has been widespread agreement that these other “questionable research practices” as

titled in the 1982 NAS report should not be considered research misconduct. However, whether classed as misconduct or not, these practices unquestionably waste public research dollars, undermine the integrity of the research record, and can even endanger public health. As a result, the focus of attention both in government and on university campuses is slowly shifting from confronting misconduct to fostering integrity through education and the serious appraisal of what it means to be a research university.

*See also:* ETHICS, *subentry on* HIGHER EDUCATION; FEDERAL FUNDING FOR ACADEMIC RESEARCH; MISCONDUCT AND EDUCATION.

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NICHOLAS H. STENECK

## RESEARCH UNIVERSITIES

Research universities are postsecondary institutions that devote a large portion of their mission, resources, and focus to graduate education and research. Currently, there are more than 250 of these institutions in the United States. Research universities such as Harvard, Stanford, Berkeley, and Michigan are often mentioned in the media due to their size, resources, status, and athletic teams. These are among the best-known, but there are many different kinds of research universities.

Research universities in the United States vary according to size, control, focus, selectivity, and the number of degree programs offered. They include public universities, such as the universities of Michigan and Virginia, and private universities, such as Duke University and MIT (Massachusetts Institute of Technology). They range in size from very large universities such as the University of Minnesota, which has almost 60,000 students enrolled at three campuses, to small universities such as Rice University in Houston, which has fewer than 4,500 students. A few research universities are very focused in mission and offer degree programs in specialized areas, such as The Rockefeller University, which offers graduate programs, including a Ph.D., in biomedical sciences only. Others, like Michigan State University, offer a dizzying portfolio of undergraduate and graduate degrees across seventeen colleges and hundreds of undergraduate and graduate degree programs. Some research universities embrace open admissions policies, while others are very selective and admit less than 20 percent of those students that apply.

What all research universities have in common—and what makes them research universities—is an emphasis on graduate education and research. All research universities offer advanced degrees, up to and including the doctorate. Most research universities also enroll a sizeable number of undergraduates in a comprehensive set of bachelor's degree programs.

### Faculty and Students

Research universities occupy a unique position within the United States higher education system. For example, unlike students enrolled at liberal arts colleges, undergraduate students attending research universities generally pursue a specialized curriculum with a very large number of requirements for

the major and a smaller number of electives and general education requirements. Due to the large size of most research universities, students who attend these institutions are likely to have large lower-division classes, some of which may be taught by graduate students who serve as teaching assistants.

Faculty members at research universities are expected to devote a larger amount of their time to research than are faculty members at liberal arts colleges and comprehensive universities, where the faculty's primary role is that of teacher rather than researcher. At research universities, faculty members are sometimes researchers first and teachers second, and are expected to publish articles and books and secure research grants from external sources.

While these qualities have provoked some criticism of research universities, they remain a very popular option for postsecondary students. As of 1998, for example, research universities enrolled more than one out of every five students attending a college or university in the United States. Research universities also attract a large percentage of the best and brightest students. Annually, research universities enroll the largest numbers of National Merit Scholars. These students are attracted to research universities because of their high-profile faculty members, the prestige associated with these institutions, and their resources, including state-of-the-art labs and technology.

### **Beyond Academics**

The U.S. research university is much more than academics, however. The research university is a far-flung and complex organization with multiple campuses, extension centers, research centers and institutes, multiple campuses, student services and programming for diverse student groups, and often high-profile athletics teams. The Big Ten, Big 12, and PAC-10 athletic conferences consist entirely of research universities, for example. It is not unusual for research universities to establish their own research parks where private companies and the university engage in technology transfer and spin off new businesses. In the early twenty-first century, it is difficult to think of something in which research universities are not involved.

In this sense, Clark Kerr refers to the modern U.S. research university as a "multiversity" and a "community of communities" where the complexity and sheer number of goals the organization strives

to achieve creates great specialization and multiple communities of actors who share little in common, except for the fact that they work for the university. Similarly, higher education researchers Michael Cohen and James March refer to research universities as "organized anarchies" where, at times, there appear to be no rules governing the organization, and no recognized leaders, only a sort of chaos that someone familiar with the research university can sort out.

### **The History of the Research University**

The lineage of the U.S. research university can be traced to the great German and English universities and their respective forms and traditions. In fact, throughout most of the nineteenth century, there were no true research universities in the country. It was during the latter portion of the 1800s that several influential higher education leaders, including Daniel Coit Gilman of Johns Hopkins University, William Rainey Harper of the University of Chicago, and G. Stanley Hall of Clark University, established universities devoted to the primacy of research and specialized graduate education. These universities were modeled after the German traditions and structures found at Berlin and Heidelberg, including the graduate seminar and academic freedom (*Lehrfreiheit*). Before this time, earned Ph.D.s were largely unheard of in the United States. These leaders and their universities adopted the Germanic university form, and other universities followed. Soon after the founding of Johns Hopkins, Chicago, and Clark, universities that were founded during the colonial period were adopting and adapting the forms legitimated by Johns Hopkins and others.

Yet the U.S. research university also functions like an English university in many ways. For example, the research university in the United States almost always features a comprehensive undergraduate curriculum with a residential component that is more akin to Oxford and Cambridge than it is to Berlin. Similarly, student development and providing student services occupies a significant focus for U.S. research universities. This is a function of the fact that colonial colleges were organized according to an Oxbridge model, and their graduate education and research functions were superimposed on this existing organizational structure and culture.

### **Classifying and Ranking Research Universities**

Given the variance in the characteristics of research universities, how can the different types of research

universities be categorized? Traditionally, this has been accomplished by the Carnegie Foundation for the Advancement of Teaching through its *Classification of Institutions*. Begun in 1973, and continuing throughout the classifications of 1976, 1987, 1994, and 2000, this scheme categorized all postsecondary institutions in the United States. As part of this larger classification, the Carnegie Foundation placed research universities in one of two categories, Research Universities I and Research Universities II, prior to the 2000 classification. Research universities were placed within these two categories depending upon the number of doctorate degrees they awarded and the amount of federal research funding they received. For the 2000 classification, these categories were expanded and renamed Doctoral/Research Universities—Extensive and Doctoral/Research Universities—Intensive, respectively. According to this classification, there are 261 research universities in the United States.

There are other recognized ways of determining what a research university is, and which are of the highest quality. There are organizations such as the Association of American Universities, a prestigious, invitation-only group of sixty-one American and two Canadian universities, all of which are high-quality research universities. Historically, organizations such as the National Research Council have also worked to qualitatively and quantitatively describe the relative quality of research universities and their various academic departments. Most recently, magazines such as *U.S. News and World Report* have introduced very popular rankings of postsecondary institutions, including research universities. These rankings are quite controversial, however, because of the great weight they place on inputs and reputation, and because they attempt to rank what is arguably a very diverse set of colleges and universities.

*See also:* CARNEGIE CLASSIFICATION SYSTEM, THE; COLLEGE RANKINGS; HARVARD UNIVERSITY; HIGHER EDUCATION IN THE UNITED STATES; JOHNS HOPKINS UNIVERSITY; TEACHING AND RESEARCH, THE RELATIONSHIP BETWEEN; UNIVERSITY OF CHICAGO; UNIVERSITY OF VIRGINIA; YALE UNIVERSITY.

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## RESIDENTIAL COLLEGES

Islamic in origin, the residential college may well be the oldest organizational model in Western higher education. Established as foundations to provide support for advanced students, residential colleges first appeared at the University of Paris and Oxford University in the twelfth century. From these medieval roots, the residential colleges of Oxford and Cambridge University evolved to become academic communities made up of students and faculty sharing living quarters, meals, and tutorial study. Oxford and Cambridge served as models for colleges and universities throughout the former colonies of England and beyond.

### Defining Residential Colleges and Related Terms

Residential colleges have evolved over the centuries and under different local conditions. As a consequence, there is a range of variation in their structures and a lack of consensus about the meaning of the term *residential college*. In its most generic sense, the term may be used to refer to an institution that houses most of its students on-campus as opposed

to an institution with a large commuter or off-campus population. Many small, independent, liberal arts colleges conform to this definition of residential college. In a more restricted sense, the term residential college may be used interchangeably with terms such as *living-learning center*, *theme house*, and *residential learning community*. This usage, however, may obscure important differences between the classical model of residential college, conventional residence halls, and other types of contemporary residence education programs.

Conventional residence halls are on-campus facilities intended to provide low-cost, attractive, safe, and convenient living quarters for undergraduate students in close proximity to academic buildings. Residents may participate in dining plans provided by centralized dining facilities and services. Conventional halls are usually supervised by undergraduate resident advisers and professional staff members trained in student affairs administration. Staff members are trained to assist students with adjustment and developmental issues or to make appropriate referrals to other campus professionals. Conventional residence halls may offer a range of social, recreational, and educational programming organized by their staffs.

Contemporary residence education programs attempt to more completely integrate out-of-class experiences with in-class learning. In a 1998 opinion paper, the Residential College Task Force of the Association of College and University Housing Officers presented a number of models of existing residence education programs. There is considerable overlap among these models; the differences are often matters of emphasis. These programs are generally the result of partnerships between student affairs professionals, academic staff, and faculty.

Living-learning centers are programs with direct connections to specific academic programs such as foreign languages, premedical studies, or science. For instance, the McTyeire International House at Vanderbilt University clusters students interested in studying one of five foreign languages on halls with native speakers as program coordinators. Faculty advisers guide the programming of each language hall.

Theme houses offer opportunities for students with special interests to live and work together. Stanford University offers a variety of theme halls. Casa Zapata (Chicano/Mexican-American theme) and Ujamaa (black/African-American theme) are cross-

cultural theme halls exploring issues of ethnic identity, culture, and history. Other halls offer programs for students with interests in community service and environmental issues.

*Academic residential programs* provide academic support services, such as academic advising, career planning, tutoring, and programming in study skills, to residential students. At Washington State University, the Academic Resource Center is located in the freshman residential complex. The center provides a computer lab, academic advising, tutoring, and programming on study skills, career planning, and time management. Specially trained, upper-level residents are assigned as academic peer advisers to freshmen.

Residential learning communities create opportunities for students attending the same classes to live in the same residence hall. Participants in the Scholars Program at the University of Maryland—College Park are grouped so that they can take fourteen to seventeen credits of curricular theme courses together over the first two years of college and participate in a colloquium on their theme.

*Freshman Year Experience housing* provides specialized housing configurations to focus delivery of student affairs and academic services to first-year students. At the University of Missouri—Columbia, groups of up to twenty freshmen take three courses together and live on the same floor with a peer adviser assigned to help first-year students with adjustment issues.

### **The Classic Residential College**

Residential colleges and the aforementioned forms of contemporary residence education programs share a common goal of seeking to integrate in-class learning with out-of-class experiences in residential settings. What distinguishes classic residential colleges from other forms of residence education is the level and quality of faculty involvement. In residential colleges found in leading universities, faculty and students live and work in shared residential facilities. Further, the program is staffed and directed by the affiliated and resident faculty. In rare instances, the college is itself a degree-granting institution.

While the functions, nomenclature, and organizational structures of colleges differ from university to university, leading institutions in the United States share certain general patterns. In institutions such as Harvard, Yale, Princeton, and Rice Universi-

ties, residential colleges are decentralized academic societies or associations composed of faculty and student members. They range in size from 250 to 500 members. A distinction is usually drawn between senior and junior members of the college. The senior membership includes faculty, selected staff, and distinguished members of the local community. The junior membership includes undergraduate and graduate students. Residential colleges are microcosms of their universities. Senior members are drawn from all schools and departments; care is taken to achieve a balance in disciplinary representation. The junior members of a college reflect the full range of academic interests and backgrounds present in the university as a whole. Some schools randomly assign junior members to their colleges. Others take into consideration the preferences of junior members but also take measures to ensure that students do not self-segregate on the basis of demographic characteristics.

A faculty member is appointed to serve as the master of the college and has oversight responsibility for the college as a whole. The master reports to the chief academic officer or the chancellor or president of the university. A college dean is also appointed from the faculty and is responsible for academic advising and the personal welfare of student members of the college. Affiliated senior members are expected to attend college functions, dine frequently at the college, and take an interest in the life of the college. Senior members are appointed for specific terms and periodically reviewed. Resident tutors are selected from the graduate student members of the college and serve as intellectual role models, mentors, and advisers for the undergraduate students. They are supervised by the dean.

In a residential college, the staff works to create an orderly, satisfying, and nurturing environment that fosters a sense of belonging, promotes positive relationships among all members of the community, and is organized around the experience of learning. The master, the dean, and, especially, the resident tutors are visible and available members of the community; they closely observe their students, listen to their concerns, and respond as needed. Colleges have active student governments and seek to provide leadership opportunities for all junior members. The senior members of the college and the resident tutors are expected to participate in the evening activities, both formal and informal, of the college.

A residential college has its own character and culture; a conscious effort is made to create and sustain a tradition and a sense of history. A college program has a measured temporal structure providing for regular interactions of its members and for special events with ritual significance. Colleges hold regular weekly, monthly, and annual meetings. A common meal plan for students and staff plays a central role in establishing the college community. Welcoming events are held for new members as well as commencement events for departing members. Colleges create unique identities by celebrating selected events such as specific holidays or anniversaries. The pattern of events and activities is intended to be meaningful for its members; the program fosters shared norms, values, and expectations. These shared meanings may even be embodied in artifacts such as murals, facebook (containing photographs of and biographical information on the college's residents), commonplace books, insignia, and mascots.

The central purpose of the college is academic. Colleges may provide academic advising for their junior members, offer for-credit classes or not-for-credit study, and organize opportunities for formal and informal discussions with faculty and visiting scholars and artists. Social activities are organized around opportunities for learning. Poetry readings, recitals, theatrical productions, scientific experiments, reading groups, field trips, and attendance at cultural and artistic events are common activities in residential colleges.

The architecture of the classic residential college promotes its educational mission. College buildings and gardens generally demarcate some sort of an enclosed space, such as a quadrangle. The enclosure helps foster a sense of communal identity and can be used to create traffic patterns promoting positive interaction among the college's members. The master, the dean, the resident tutors, and their families are provided with living quarters. Each college has an office complex to support the master, dean, and resident tutors. Central to the life of a college is a dining commons large enough to seat all of the members of the college. The dining commons can be used for announcements, college meetings, social activities, and special events. Separate meeting or social rooms are provided for senior and junior members. Libraries, classrooms, guest apartments, art studios, computer labs, kitchens, and laundries are often included in college facilities.

## Benefits of Residential Colleges

The benefits for students derived from simply living on campus, as opposed to living off campus, are well documented. Living on campus has been linked to increases in aesthetic, cultural, and intellectual values; increases in self-concept, intellectual orientation, autonomy, and independence; gains in tolerance, empathy, and interpersonal skills; persistence in college; and degree attainment. According to a 1991 book by Ernest T. Pascarella and Patrick T. Terenzini, there is little evidence linking living in a conventional residence hall with knowledge acquisition or cognitive growth. A 1998 meta-analysis by Gregory Blimling of studies published from 1966 through June 1997 shows, however, that residential colleges, as compared to conventional halls, increase students' academic performance and retention and enhance the social climate of the living unit. Blimling's study does not distinguish clearly between classic residential colleges and living-learning centers.

According to studies conducted in 1991 by George D. Kuh and associates and in 1993 by Jerry A. Stark, faculty participating in residential colleges or living/learning centers report improvement in their teaching skills and enhanced relationships with faculty from other disciplines. Frances Arndt reported in 1993 that faculty also held positive attitudes about opportunities offered by residential colleges for teaching a variety of special and experimental courses.

## Challenges and Prospects

In the 1996 book *Importing Oxbridge*, Alex Duke analyzed factors affecting the failure of residential college systems in North America. While attempting to model their colleges after the exemplars of Oxford and Cambridge, North American educators did not understand the historical development or social context of these institutions. Further, the departmental organization of academic disciplines does not cohere with the interdisciplinary character of residential colleges. Finally, the rapid postwar growth in enrollment simply outstripped the ability of institutions to provide housing for students. In a chapter in the 1994 book *Realizing the Educational Potential of Residence Halls*, Terry B. Smith argued that institutional reward structures focus on disciplinary achievement in the form of scholarly research, publication, and grant awards. There is little incentive for faculty to work with students in out-of-class contexts. Will

Koch reported in a 1999 article in *College Student Affairs Journal* that students may prefer conventional housing assignment practices that permit self-segregation by demographic characteristics. Finally, residential colleges require considerable investments in personnel and facilities. Funding for programming and space requirements as well as compensation for participating faculty make residential college programs more expensive than conventional residence halls.

Since the publication of the landmark study *Involvement in Learning: Realizing the Potential of Higher Education*, published by the National Institute of Education in 1984, numerous reports have called for increased emphases on improving teaching and learning, increasing student involvement in learning, and integrating in-class and out-of-class learning. Residential colleges are clearly one way to achieve these goals. There is evidence of growing interest in living-learning centers and residential college models. The future of the residential college model may depend on its cost-effectiveness relative to other means for achieving these educational goals.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE AND UNIVERSITY RESIDENCE HALLS; COLLEGE STUDENT RETENTION; LEARNING COMMUNITIES AND THE UNDERGRADUATE CURRICULUM; LIVING AND LEARNING CENTER RESIDENCE HALLS.

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## RESOURCE ALLOCATION IN HIGHER EDUCATION

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Institutions of higher education—be they large public universities or small private colleges—are not homogeneous organizations. Because of differing missions, goals, programs, histories, traditions, laws, and explicit procedures, they obtain and expend revenues, or financial resources, in myriad ways. Therefore, there is no universal model about the best way to allocate financial resources within higher education. Nevertheless, there is general consensus within the U. S. higher education community about the meaning of certain terms pertaining to resource allocation, as well as a general consensus about certain methods and processes for channeling financial resources into specific programs and projects.

### Budgetary Concepts and Terms

For the layperson, the terms *budget* and *allocation* are often confused. Although the two terms are certainly related, and often synonymous, there are differences that one should be aware of in order to gain an appreciation of the resource allocation process.

Broadly interpreted, the term *budget* represents both an institution's revenue sources and its expenditures. For public institutions, this side of the coin is usually comprised of legislative appropriations; tuition based on the number of credit hours and level of courses taken; contracts and grants—which comprise revenues received from external sources for research and certain types of off-campus program development; auxiliary operations—which refer to on-campus operations that are self-supporting, for-profit enterprises (such as the campus bookstore, cafeteria, and laundry); and local funds. Local funds, particularly within public universities, refer to those revenue sources not kept within the state treasury, but within local banks. Local funds may be comprised of fees and assessments charged against students for the support of campus-wide student activities, intercollegiate athletics revenues, concessions, and financial aid monies.

Taken together, these revenue sources make up an institution's operating budget. They represent the totality of monies required to finance the institution's normal and recurring expenses (its core operations). However, this is not the complete picture, for the operating budget does not include fundraising revenues, which are monies donated to the

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MARK BANDAS

institution by private donors, usually for specific purposes (such as endowed academic chairs, athletic scholarships, or a new academic program that is acceptable to the institution and a priority of the donor). Although fund-raising revenues have become ever more critical for institutional operations, they are rarely considered part of the traditional operating budget.

Expenditures represent the most common understanding of the term *budget*. In this sense, the budget formally represents the institution's strategic priorities and associated costs. That is, the budget is a detailed plan for expending revenues for various institutional purposes. Moreover, these purposes are, or should be, focused on long-term strategic imperatives that parallel and support the accomplishment of the institution's most critical needs and aspirations.

Traditionally, expenditures for the operating budget fall into certain main categories that apply to both public and private institutions. Certainly, the largest slice of the budget pie is earmarked for instruction and research (I & R)—the core activities of any college or university. At Florida State University, for example, approximately 70 percent of the operating budget is designated for I & R purposes. Other large slices of the budget pie include administrative support services, such as centralized computing and accounting services; student services, such as the registrar's office and financial aid; plant operations and maintenance, including grounds, building services, and utilities; and libraries.

Expenditures from the operating budget are generally *unrestricted*. That is, there is some flexibility in allocating resources within and between the various categories that make up the operating budget. However, there are also restricted budgets, both within and external to the operating budget. *Restricted* means just that—monies can only be expended for strict, narrowly defined purposes. For example, within I & R, a public university could receive a restricted legislative appropriation to fund a Title IX (gender equity) program. Likewise, restricted budgets outside the operating budget may include monies earmarked for sponsored research or financial aid monies received from external sources, such as the federal government.

For most core operations, whether financed by unrestricted or restricted budget expenditures, one should be aware of exactly how the monies are ear-

marked within the major expenditure categories. Generally, the monies fall into three main activities: (1) salaries and benefits, which are certainly the most costly activities; (2) capital outlay, which refers to major purchases of expensive equipment, such as computer systems; and (3) expense items, which include less expensive items and continuing costs such as office furniture, service contracts, expendable supplies, and travel.

One critical budgetary category that is not considered a part of the traditional operating budget is *fixed capital outlay*, which comprises the monies earmarked for major construction and renovation projects. The *auxiliary budget*, also kept separate from the core, concerns the receipt and expenditure of monies obtained from revenue producing campus enterprises (e.g., a bookstore). Institutions with medical schools and teaching hospitals often have separate budgets for these purposes.

Some institutions have service-center budgets, which refers to certain centralized services such as photography, printing, and copying. These services are not financed by operating budget expenditures. Rather, units under the umbrella of the service-center budget are reimbursed for their services by charging operating budgetary units, which, in turn, pay the service-center unit from operating budget expenditures, usually from the expense category.

### Allocation Concepts and Terms

For the purpose of understanding the differences (and nuances) between the concepts of *budget* and *allocation*, one could say that the formal budget is the architecture (or basic plan per category) of how monies will be expended. *Allocation*, however, refers to the actual funneling of dollars to various units within an institution. In some instances, allocation flows will exactly mimic the expenditure categories. However, were this always the case, the descriptive analysis of budgets and allocations would end here. Rather, allocations often do (and should) have an element of flexibility built within them to reflect changing environmental conditions—including both internal and external environments, such as political circumstances, economic exigencies, and the strategic direction of the institution.

Although most institutions do permit some flexibility within their allocation decisions, many eminent higher education leaders, such as Dr. James J. Duderstadt, the former president of the University

of Michigan, have publicly noted that far too many allocation decisions have become overly mechanistic. This has become particularly true within large, public institutions, which have also publicly expressed their collective concern over the ineffective and inefficient ways that monies are allocated. In addition, the National Association of College and University Business Officers (NACUBO) has also publicly expressed concern about the deficiencies currently inherent within internal allocation systems and processes.

Before discussing normative issues concerning how such deficiencies may be corrected, one must first understand the basic processes of allocations, particularly within the unrestricted I & R category. Historically, both academic and administrative units have relied upon incremental budgeting for determining allocations. Incremental budgeting simply means that the unit will sum the dollars contained within its current (annual) salary and benefits, capital outlay, and expense activities, and then increase the sum by a percentage to cover inflation and other expected cost increases. Incremental budgeting certainly simplifies the allocation process and facilitates accounting. With limited exceptions, incremental budget requests are accepted as forwarded to the central budget authority, funds are allocated according to the three major activities, and the unit lives within the allocations. At some institutions, academic and administrative units, with approval of a central budget authority, are able to transfer a minimal percentage of funds among salaries and benefits, capital outlay, and expense—if critical exigencies so demand. Nevertheless, this type of allocation system remains basically static.

The problem with static allocation systems is that they are inherently unable to anticipate change. Duderstadt duly notes that within large public universities, legislative appropriations, in terms of real dollars, have continuously diminished since the 1970s. Diminishing public appropriations, coupled with the opportunities and threats posed by a volatile environment, limit an institution's ability to adapt. During extreme economic situations, static allocations based upon incremental budgeting could actually spell the death of a public institutions' major academic offerings.

Another allocation process, often coupled with incremental budgeting, is formula-based allocation. This can be more flexible than simple incremental budgeting, because such formulas are usually based

upon total credit hours or full-time head count per academic unit. This type of allocation process rewards those academic units that are most popular with students, and therefore does provide flexibility to fund those programs that are most in demand. Conversely, if an academic program is critical to a university's mission, but does not attract large numbers of students, it is automatically punished by formula-based allocations. In short, this is a market-based allocation process. While a for-profit organization can and should allocate its resources into the maintenance and expansion of its most profitable offerings, higher education institutions are striving for both tangible and intangible successes that may not necessarily be popular among students.

Colleges and universities, recognizing the inadequacies of incremental and formula-based budgeting, have enacted certain allocation adjustments to enhance flexibility and the quality of certain programs. At one university, for example, a 1 percent flat tax was charged against the allocations to all academic units to replenish a central reserve fund and enhance certain graduate programs. However, according to a report by that university's provost, this type of allocation mechanism proved itself insufficient to meet most challenges facing the institution.

In order to meet institutional objectives, and depending upon the authority granted to an institution by its governing board or its state legislature, an institution may be required to reduce allocations in one area to cover allocation demands in another. In order to meet the salary needs of the faculty, for example, resource allocations may be significantly diminished for libraries, computing systems, or facilities maintenance.

Flat taxes and other short-term options, such as hiring adjunct faculty or downgrading positions, can only operate at the margin, however, because not enough financial resources are generated, particularly on a long-term basis, to solve problems resulting from a lack of allocation flexibility. Similarly, wholesale raiding of funds from one allocation category to fill the coffers of another, if permitted, can only serve to weaken the entire university structure over time. Whether the allocation process is incremental, formula-based, or stopgap in nature, such processes focus only upon short-term, year-to-year allocations.

In 1999, Drs. Edward Ray and William Shkurti, the provost and senior vice president for finance, re-

spectively, at Ohio State University, succinctly stated the problems accruing to that particular institution as a result of allocation inefficiencies:

- Current practices were not supportive of the instructional mission.
- Current practices were not supportive of the research mission.
- Current practices did not provide sufficient incentives to reduce costs and/or generate additional revenues required to address academic priorities.
- Current practices did not provide sufficient accountability for the costs of individual unit decisions that impact the entire university.

### **Achieving Normative Consensus**

The problems inherent within traditional budgetary and allocation processes indicate the need for a new approach. Notwithstanding the fact that public institutions are further hampered by legislative mandates, private institutions also face the same problems inherent within incremental and formula-based allocations.

The challenge facing higher education is to embrace new philosophies and outlooks that take a long-term, wide-ranging view of what the institution is, what it should be, and how it can move from what is to what should be.

Appropriate, sufficient, and equitable resource allocation processes simply can no longer be based on what worked in the past. In this sense, most colleges and universities have embraced strategic planning—a long-range, holistic examination of what the overall mission of the institution should be; in other words, a vision. To better define this vision, one must further ascertain the specific goals that should be set to accomplish the mission, and what environmental factors exist—internally and externally—that can either enhance or inhibit the accomplishment of the vision. Specific questions need to be asked, such as: What does the university plan to accomplish over the next several years? How does the university plan to accomplish its goals and objectives? What resources are needed to carry out this plan? What are the funding sources from which the institution can obtain the necessary financial support?

To best answer these questions, institutions should first examine their decision-making struc-

tures. Colleges and universities are not pyramidal, hierarchical structures ruled by an autocracy at the top that transmits decrees downward through the chain of command. Conversely, colleges and universities cannot be anarchistic organizations where decision-making is randomly conducted by individual units. The problem, thus, is to create a decision-making structure that seeks consensus through participation.

At one Eastern university, for example, allocation decisions remain the basic prerogative of university executives, such as the president, provost, vice president for finance, and the deans. Nevertheless, to reach its highest-priority strategic objectives, faculty and staff members from colleges and departments are invited to submit their own ideas on how best to achieve the institution's overall mission, long-term strategic initiatives, and specific goals—all within the context of maintaining and enhancing the quality of priority programs identified by strategic planning. Specifically, faculty and staff members are requested to review the allocation and adequacy of resources vis-à-vis the quality of programs relative to peer institutions, the centrality of programs to the university's mission, and the cost-effectiveness of programs relative to the best practices of higher education and the private sector. To facilitate and direct this endeavor, a university-wide committee, the Strategic Plan Advisory Committee (SPAC) was formed. SPAC not only identified allocation problems in detail, it helped develop a long-term, multi-year plan that will enable the university to respond to special opportunities and eventually solve the most basic and continuing allocation problems.

Similarly, at the small, private-college level, Wheaton College in Massachusetts has set up a formal group—the Budget Advisory Committee—similar to the SPAC. Wheaton's committee, consisting of faculty and staff members, reports directly to the college president, and operates with the long-term view that allocations should be treated as strategic investments, not simply as annual costs. Hence, it has determined that allocations should regularly include reallocations from lower priorities to higher priorities, and that cost savings should be actively pursued in order to increase the college's strategic flexibility.

In short, if realistic and successful allocation processes are to be developed and accepted throughout the institution, structural arrangements must be

designed to facilitate the participation of stakeholders and attainment of consensus.

Once consensus on basic allocation–decision parameters is achieved, a second consideration includes the formal allocation structures and processes that might be adopted. To help identify these means, decision-makers and participants in the decision-making process should be provided with feasible and workable alternatives.

One alternative, as suggested by Duderstadt, is an institution-wide, integrated resource-allocation model he calls *Responsibility Center Management*. Resource-allocation decisions are shared between academic units, administrative units, and the central administration. After determining strategic priorities, this alternative allows critically-important units to keep the resources they generate, makes them responsible for meeting costs they incur, and then levies a tax on a unit's expenditures to provide a central pool of resources for supporting central operations and facilitating flexibility funding. This alternative has the potential to reduce some of the inequities and inefficiencies inherent within formulaic or incremental allocation processes.

Another alternative is *substitution*, or the elimination or reduction of noncritical activities to release allocations for more critical, strategically oriented activities. This alternative not only reallocates resources to those programs deemed most critical for strategic purposes, it also alerts the public and the institution's stakeholders that the college or university has taken cost effectiveness very seriously.

Other structural and process alternatives for resource allocations include: differential tuition rates based upon program popularity; using foundation allocations to replace traditional allocations; permitting the carry-over of surpluses from one year to another; and permitting the most productive research units to retain a large portion of the overhead (indirect) costs assessed against their research awards. The point is that viable and reasonable alternatives should be presented at the start of the analysis in order to preclude time being wasted.

### Conclusion

Traditional budgetary and resource allocation procedures that have been utilized for decades in America's colleges and universities are rapidly losing their functionality. Indeed, reliance upon their continued use can cause irreparable damage to the system of higher education.

Budgets and resultant allocations are complicated subjects. Because of their complexity and a reliance on the fact that they worked well enough in the past, inertia exists. However, in light of the volatile higher education environment of the early twenty-first century, the increasing inequities and inefficiencies of current systems and processes, and greater demands for accountability by legislative bodies and institutional stakeholders, structures and procedures for budgeting and allocating financial resources must be re-examined. The task is not easy—the problems are complex, and consensus about what should be done is difficult to attain. Nevertheless, to ignore the problem can, and will, have a negative impact upon public and private higher education systems.

*See also:* ACCOUNTING SYSTEMS IN HIGHER EDUCATION; FINANCE, HIGHER EDUCATION.

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JOHN R. CARNAGHI

## RICE, JOHN A. (1888–1968)

Founder and first rector of Black Mountain College, a renowned experimental and progressive endeavor in higher education (1933–1956), John Andrew Rice Jr., was a major figure in debates during the 1930s and early 1940s among educators concerning the appropriate means and methods of a liberal education. Through magazine articles and his book *I Came Out of the Eighteenth Century* (1942), he became known as an eloquent and harsh critic of a variety of approaches to education such as lecture, over-reliance on "great books," memorization, and counting credits by time in seat; and a proponent of Progressive education philosophies concerning student centered curriculum and classroom community.

Born in Lynchburg, South Carolina, Rice was the son of John Andrew Rice Sr., a Methodist minister who eventually became the president of Columbia (South Carolina) College and a founding faculty member at Southern Methodist University (Dallas, Texas). His mother, Annabelle Smith, was the sister of U.S. Senator Ellison Durant ("Cotton Ed") Smith. Two years after her death in 1899, the senior Rice married Launa Darnell who became stepmother to Rice and his two younger brothers.

Rice attended the Webb School, a highly regarded college preparatory boarding school in Bell Buckle, Tennessee, from 1905 to 1908, where he encountered the teacher he would revere all his life, John Webb. Webb's penchant for open and wide-ranging classroom discussion sparked young Rice's first interest in learning. Rice then attended Tulane University and, after graduating in three years with a bachelor of arts degree, won a Rhodes scholarship to Oxford University.

At Oxford Rice met Frank Aydelotte, future president of Swarthmore College, and the latter's sister Nell. Rice and Nell Aydelotte were married in 1914, after Rice graduated from Oxford with first honors in jurisprudence. He began his teaching career at Webb School, but left after a year to pursue doctoral studies in classics at the University of Chicago.

Although Rice never completed his doctoral dissertation, he secured a faculty position at University of Nebraska, where he and Nell Rice and their two young children lived from 1920 to 1927. Rice proved brilliant in the classroom and in counseling individual students. His Socratic style and ability to provoke free-ranging conversations drew students to his courses in increasing numbers. His methods aimed at their emotional and intellectual maturity rather than their store of subject knowledge and he began writing articles that criticized American higher education for teaching unconnected course subjects with pedagogy that emphasized lecture and response. As he insisted in an article in Harper's in 1937, "What you do with what you know is the important thing. To know is not enough" (p. 590).

When Rice's candid and critical opinions extended to his immediate surroundings, he could seem audacious and insulting. His stay at the University of Nebraska ended when the president who hired and protected him fell ill. Next, at New Jersey College for Women, he quickly managed to rankle Dean Mabel Smith Douglass and was forced to resign after two years. After a year in England on a Guggenheim fellowship, he landed a faculty position at Rollins College in Winter Park, Florida.

At Rollins, Rice would eventually earn a national reputation as the subject of an early and highly publicized investigation by the American Association of University Professors (AAUP). He managed to polarize faculty and students by speaking out against fraternities and sororities and by objecting to various policies of Rollins president Hamilton Holt. Students and colleagues found him either brilliant and charismatic or argumentative and insulting. After three years, President Holt asked Rice to resign, an act that resulted in a nationally reported AAUP investigation that eventually censured Rollins and exonerated Rice. A number of supportive Rollins faculty and students resigned during the fracas and, along with Rice, began planning the learning community that would become Black Mountain College, located near Asheville, North Carolina, on the campus of a YMCA summer conference facility in the town of Black Mountain.

### **Black Mountain College**

The college opened in 1933 with twenty-one students and eventually grew to nearly 100 students. It quickly gathered national notice for testing a number of innovative ideas about the means and ends of

American higher education. Among these were the following: (1) the centrality of artistic experience to support learning in any discipline; (2) the value of experiential learning; (3) the practice of democratic governance shared among faculty and students; (4) the contribution of social and cultural endeavors outside the classroom; and (5) the absence of oversight from outside trustees.

Rice recruited artist Josef Albers and weaver Anni Albers from Germany's famed Bauhaus Art and Architecture Institute after it was closed by the Nazi regime. They were joined by Bauhaus stage designer and graphic artist Xanti Schawinsky. Although students might select economics, foreign languages, mathematics, or music as major areas in their individually tailored programs of study, all were required to take Josef Albers's drawing course and Rice's classics course. As the college gained national renown for its art program and its experimental approaches to education, numerous well-known visitors joined the community for days or weeks at a time, including John Dewey, Buckminster Fuller, Marcel Breuer, Thornton Wilder, Aldous Huxley, Henry Miller, and others.

Rice enjoyed incorporating visitors into classes, evening seminars, even campus dramatic productions or community work projects. He committed the college to the practice of participatory democracy among students, faculty, staff, and families in order to prepare students for life in a democratic society. Although formal degrees or graduation ceremonies were absent, students needed to pass oral examinations by outside examiners in their chosen areas of emphasis in order to complete their course of study. Those who did had little problem entering graduate programs at selective universities.

### Life as a Writer

Rice's outspoken and polarizing personality contributed to his resignation from the college, requested by the faculty, in 1940. He and Nell Rice divorced; he later married Dikka Moen with whom he had two children. Rice forged a second career in writing, starting with a collection in 1942 of his own memories and essays, *I Came Out of the Eighteenth Century*, named by his publisher as a winner of its one hundred and twenty-fifth anniversary prize for best non-fiction. Rice then turned to fiction, writing short stories mostly about life and race relations in the South for *The New Yorker*, *Saturday Evening Post*, *Collier's*, *Harper's*, and others. His stories also ap-

peared in several anthologies and were collected in his book *Local Color* (1957).

When financially struggling Black Mountain College closed in 1956, Rice exchanged correspondence with final rector Charles Olson in an attempt to retrieve books he had left for the college library. However, he was never directly involved with teaching or educational ideas after his departure from the college.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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KATHERINE C. REYNOLDS

## RICE, JOSEPH MAYER (1857–1934)

Physician, journal editor, education critic, and originator of comparative methodology in educational research, Joseph Mayer Rice is recognized, along with Lester Frank Ward and John Dewey, as a major figure in the Progressive education movement in the United States.

Rice was born in Philadelphia, Pennsylvania, the son of Mayer and Fanny (Sohn) Rice, natives of Germany who immigrated to America in 1855. Rice at-

tended public schools in Philadelphia and New York City, where his parents and older brother, Isaac Leopold Rice, relocated in 1870. He attended the City College of New York, and in 1881 received a degree in medicine from the College of Physicians and Surgeons of Columbia University. Rice, having established a successful private practice in pediatrics in New York City, became interested in the physical fitness programs offered by the New York City public schools. His research into these programs led to an interest in the schools as educational institutions.

In 1888, Rice traveled to Europe to observe the school systems of various countries. He settled in Germany for two years to study psychology and pedagogy at the universities of Jena and Leipzig. Although specific reasons for his decision to remain in Germany for these two years remain speculative, Rice's studies paralleled other American academics and educators who traveled to Germany during this time to learn the rudiments of empirical research and foundations for scientific pedagogy.

Rice observed the first laboratory of experimental psychology, directed by Wilhelm Wundt at the University in Leipzig, and studied Herbartism as it was conceptualized and enacted at the University of Jena and its laboratory school. The theories of German educator and philosopher Johann Freidrich Herbart, known as the originator of the science of education and of modern psychology, focused on the development of a cultured human being who strove to discover as well as be guided by the highest ethical values. Education, then, was a moral enterprise for Herbart. Although the corpus of Rice's writings extend well beyond this particular focus, Rice returned home from Germany in 1890, greatly influenced by his studies and with strong ideas about ways to improve elementary education in the United States.

An interview with Rice, focused on his school reform ideas, ran for three issues in the New York City weekly *Epoch* in July 1891, and the weekly published another series of articles by Rice from October through December of that same year. The *Forum*, a monthly magazine owned by Rice's brother, also published an article in 1891 in which Rice proposed two essentials for the natural development of the child: proper training of the teacher and a curriculum based on sound psychological principles. Rice maintained that these could be assured only when those who managed educational systems were themselves trained educators.

At the time, the *Forum* was edited by Walter Hines Page. Under Page, the monthly had published articles on education and social reform. Page was intrigued with Rice's ideas about pedagogy; thus, in 1892, under the sponsorship of the *Forum*, Rice conducted a six-month tour of thirty-six cities in the United States, visiting six to eight urban public elementary schools in each city. During this survey, Rice spent the school hours of every day observing actual classroom events. He talked with approximately twelve hundred teachers, met with school officials and school board members, interviewed parents, and visited twenty teacher-training institutions.

Rice devoted the summer of 1892 to the analysis of data from his survey of schools. From October 1892 through June 1893, the *Forum* published a series of nine articles by Rice, where he reported tedious, pedantic teaching in traditionally structured schools, unassisted superintendents responsible for the supervision of hundreds of teachers, and board of education reports portraying deplorable conditions of schools. As anticipated by Page, Rice's study generated outraged reactions among a public that heretofore had assumed a fully functioning and effective educational system. Rice's articles earned him a reputation (not a pleasant one among many professional educators) for bringing the topic of schooling into the public's eye, and, in effect, introducing muckraking to the field of education.

In the spring of 1893, Rice undertook a second survey of schools. This five-week tour focused on those schools said to represent new (Progressive) education. He visited schools in Indianapolis, Minneapolis, St. Paul, La Porte (Indiana), and Cook County (Illinois). These were schools that had expanded their curricula, as recommended by Herbartian theory, beyond the traditional "Reading, Writing, and Arithmetic," and had encouraged an integrated approach to curriculum and pedagogy. This study was reported in *The Public-School System of the United States* (1893) along with the nine original *Forum* essays, and continued Rice's critique of the public schools and their inadequate pedagogical knowledge.

Rice returned to the University of Jena in the summer of 1893. Upon his return, he was determined to further document his conviction that the wider curricula of the Progressive schools enhanced rather than detracted from students' overall achievement. Thus, Rice embarked on another *Forum*-

sponsored tour of classrooms in 1895. This time he was armed with the first comparative test—a school/student survey—ever used in American education or psychology. During sixteen months of study, Rice administered his survey to nearly 33,000 fourth- to eighth-grade children, and he carefully tabulated modifying conditions such as age, nationality, environment, and type of school system. The survey focused, in part, on the pedagogy of spelling. Rice found no link between the time spent on spelling drills and students' performance on spelling tests. His study was far ahead of its time, not only methodologically but also pedagogically, as he pointed to "the futility of the spelling grind."

Rice served as editor of the *Forum* from 1897 through 1907. He retired in Philadelphia in 1915, the same year that he published his last book, *The People's Government*. He had married Deborah Levinson in 1900; they had two children. He died in Philadelphia, June 1934.

**See also:** ASSESSMENT, CLASSROOM; EDUCATION REFORM; HERBART, JOHANN.

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JANET L. MILLER

## RISK BEHAVIORS

### DRUG USE AMONG TEENS

Christopher L. Ringwalt

### HIV/AIDS AND ITS IMPACT ON ADOLESCENTS

Denise Dion Hallfors

Carolyn Tucker Halpern

Bonita Iritani

### SEXUAL ACTIVITY AMONG TEENS AND TEEN

PREGNANCY TRENDS

Sheila Peters

**TABLE 1**

### Trends in alcohol, tobacco, or other drug use by twelfth graders, 1975–2000

	1975	1980	1985	1990	1995	2000
Tobacco						
lifetime	73.6	71.0	68.8	64.4	64.2	62.5
30-day	36.7	30.5	30.1	29.4	33.5	31.4
Alcohol						
lifetime	90.4	93.2	92.2	89.5	80.7	80.3
30-day	68.2	72.0	65.9	57.1	51.3	50.0
Other drugs						
lifetime	55.2	65.4	60.6	47.9	48.4	54.0
30-day	30.7	37.2	29.7	17.2	23.8	24.9

SOURCE: Adapted from University of Michigan News and Information Services. 2000. "'Ecstasy' Use Rises Sharply Among Teens in 2000: Use of Many Other Drugs Stays Steady, but Significant Declines Are Reported for Some." December 14 news release. Ann Arbor: University of Michigan News and Information Services.

### SEXUALLY TRANSMITTED DISEASES

Angela Huang

### SMOKING AND ITS EFFECT ON CHILDREN'S HEALTH

Christopher S. Greeley

### SUICIDE

Peter L. Sheras

### TEEN PREGNANCY

Douglas B. Kirby

## DRUG USE AMONG TEENS

Substance abuse is an international problem of epidemic proportions that has particularly devastating effects on youth because the early initiation of alcohol, tobacco, or other drug (ATOD) use within this population is linked to abuse and related problem behaviors among adults. The cost of alcohol abuse to society is estimated to be \$250 billion per year in health care, public safety, and social welfare expenditures. Key trends in substance use by twelfth graders are displayed in Table 1.

### Causes

A number of models and theories address the causes of adolescent ATOD use. The most salient of these is the "Risk and Protective Factor" framework, which has identified a variety of psychosocial factors associated with ATOD use. In the *individual* domain, substance use has been linked to values and beliefs about and attitudes toward substances, genetic susceptibility, early ATOD use, sensation seeking, and various psychological disorders including anti-social, aggressive, and other problem behaviors. In

the *family* domain, ATOD use has been associated with familial substance use, poor parenting practices including harsh or inconsistent discipline, poor intrafamilial communication, and inadequate supervision and monitoring of children's behaviors and peer associations. In the *peer* domain, substance use has been linked to social isolation and association with ATOD-using and otherwise deviant peer networks. In the *school* domain, ATOD use has been linked to poor academic performance and truancy, as well as a disorderly and unsafe school climate and lax school policies concerning substance use. In the *community* and *environmental* domains, ready social and physical access to ATODs has been associated with use, as has lack of recreational resources (especially during the after-school hours).

### Protective Factors

Protective factors, or factors that promote resiliency, have also been identified in these various domains. Among those most frequently cited are religiosity or spirituality, commitment to academic achievement, strong life skills, social competencies, and belief in self-efficacy. Protective factors in the family and school domains include strong intrafamilial bonds, positive family dynamics, and positive attachment to school. In the community and environmental domains, strongly held adult values antithetical to substance use constitute protective factors, as do clearly communicated and consistently enforced regulations concerning use.

### Prevention Strategies

A variety of strategies have demonstrated effectiveness in preventing or reducing ATOD use. Project Alert, described by Phyllis Ellickson and colleagues in a 1993 article, and Life Skills Training Program, described by Gill Botvin and colleagues in 1995, are the two most-prevalent effective *classroom-based curricula*. The "Reconnecting Youth" Program, described by Leona Eggert and colleagues in 1994, is designed for high school students who manifest poor academic achievement or who are at high risk for dropping out and other problem behaviors. In the family domain, the Iowa Strengthening Families Program, described by Richard Spoth and colleagues in 1999, has received considerable attention. In the community and environmental domains, strategies have been developed to increase the enforcement of public policies and ordinances that inhibit adolescent substance use. These include efforts targeting

tobacco and alcohol outlets, including restrictions on their location and density and on alcohol and tobacco advertising. Also effective is the vigorous enforcement of laws governing sales to minors, including using underage youth to buy alcohol and tobacco products in "sting" operations. Increasing excise taxes on alcohol and tobacco products has also been associated with reductions in use, as has linking apprehension for infractions of laws related to purchasing and consuming ATODs to suspension or revocation of driver's licenses. Other preventive measures that target youth drivers include "zero tolerance" laws linking evidence of alcohol on the breath with suspension or revocation of driving privileges.

The results of two decades of evaluative research have yielded considerable information suggesting that a number of approaches to adolescent ATOD use prevention do *not* work. Scare tactics, designed to frighten adolescents into avoiding drugs, are often recognized as such by their target audiences and can even be counterproductive. Efforts to raise self-esteem as a drug prevention strategy have long been discredited given the lack of association between self-esteem and ATOD use. Strategies designed to increase knowledge and convey information about the risks and dangers of drug use are generally recognized to be failures, in part because of the lack of association between knowledge and use. Indeed, all largely didactic approaches to prevention education, such as Project "Drug Abuse Resistance Education" (Project DARE), are widely understood to be ineffective, especially if they concentrate on long-term risks. Mass media campaigns are of dubious value, especially if they are brief, aired in contexts that are unlikely to reach their target audience, and uncoordinated with a comprehensive, community-wide strategy.

Unfortunately, relatively little is also known about prevention on college campuses. Many college campuses have cultures that are at least covertly supportive of alcohol consumption, and many administrators treat the issue with benign neglect. While most drinking on college campuses occurs in neighborhood bars and residential contexts such as fraternities, relatively little has been done to develop and implement demonstration programs that increase enforcement of, and penalties for, selling or otherwise supplying liquor to underage students.

It is known that even the most effective and comprehensive school-based strategies, and even

those that reinforce their messages across multiple grade levels, are only slightly more effective than school-based programs that are generally discredited in the early twenty-first century. There has evolved a consensus among both practitioners and researchers that school-based programs, by themselves, are insufficient. Such efforts should be part of a broad and comprehensive array of prevention approaches that integrate both supply and demand reduction strategies in the family and community, as well as the individual, domains.

*See also:* DRUG AND ALCOHOL ABUSE; GUIDANCE AND COUNSELING, SCHOOL; FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ALCOHOL, TOBACCO, AND OTHER DRUGS; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; RISK BEHAVIORS, *subentry on* SMOKING AND ITS EFFECT ON CHILDREN'S HEALTH.

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CHRISTOPHER L. RINGWALT

## HIV/AIDS AND ITS IMPACT ON ADOLESCENTS

Acquired immunodeficiency syndrome (AIDS) is a significant threat to youth and young adults. It is the seventh leading cause of death among U.S. youth aged fifteen to twenty-four. More than 126,000 cases of AIDS among individuals ages twenty to twenty-nine had been diagnosed in the U.S. through June 2000. Given the long latency period between infection and symptoms, most of these individuals were infected as adolescents. Estimates of human immunodeficiency virus (HIV) among adolescents range from 112,000 to 250,000 in the United States, although actual prevalence is not known because representative data are not available. Estimates of HIV incidence in the early twenty-first century suggest that at least 50 percent of the 40,000 new infections in the United States each year are among individuals under twenty-five years old, and 25 percent are among persons aged twenty-one or younger.

### HIV Transmission

The majority of HIV infections among adolescents are contracted through sexual activity. Among HIV positive thirteen to nineteen year-old females who had not developed AIDS, 49 percent of the cases were associated with exposure through sexual contact, 7 percent through injection drug use, 1 percent through blood exposure, and 43 percent through a risk not reported or identified. Among males in the same age group, 50 percent were associated with male to male sex, 5 percent with injection drug use, 5 percent with both male to male sex and injection drug use, 5 percent with hemophilia or coagulation disorder, 7 percent with heterosexual exposure, 1 percent with blood exposure, and 28 percent with an unreported or unidentified risk.

Many adolescents are sexually experienced, but the extent of experience and risk varies for different groups of adolescents. Youth Risk Behavior Survey (YRBS) data indicate that about half of all high school students report having engaged in intercourse at least once. Almost 10 percent of youth were younger than age thirteen at first sexual intercourse, and by twelfth grade, 65 percent of students have become

sexually active. Sexual risk increases with the number of partners and the failure to use condoms. In the YRBS data, about 16 percent of high school students report having had sex with four or more partners; 48 percent of adolescent African-American males report four or more sexual partners. Forty-two percent of sexually active respondents did not use a condom at last intercourse.

The presence of other sexually transmitted infections (STIs) can also facilitate HIV transmission. Adolescents and young adults are physiologically and behaviorally at higher risk for acquiring STIs. An estimated three million cases of STIs other than HIV are acquired each year among persons between ten and nineteen years old. Youth under the age of twenty-five account for two-thirds of the total number of cases of STIs diagnosed annually. Rates of chlamydia, gonorrhea, and human papillomavirus are particularly high among sexually active female teens. An individual's risk is affected by STI prevalence among the pool of potential sex partners. African-American and Hispanic teens, for example, are disproportionately overrepresented among AIDS cases and cases of other STIs. Given that sexual networks tend to be homogeneous by race, these youth are more likely to face greater prevalence of HIV among their sex partners.

Drug use also places young people at risk for HIV. The most direct route is through sharing needles. Addicts may engage in sex with multiple partners to obtain drugs or money to buy drugs, and may thus increase the spread of infection to otherwise low-risk individuals. Non-injected drugs may also reduce inhibitions, influencing the individual to engage in risky sexual activity. Studies show that there are positive relationships between substance use and various facets of sexual behavior, such as timing of initiation, frequency, persistence, and risk taking, for both adolescents and young adults. However, findings regarding this pathway are mixed and may vary by race/ethnicity. For example, the link between substance use and sexual activity may be less strong among African Americans. Alcohol consumption has been linked to sexual risk taking among white adolescents, but a more recent study found that young women's condom use patterns were not linked to pre-coital substance use.

### Pathways to HIV Prevention

Longitudinal studies that follow high-risk youth into adulthood provide a way for researchers to under-

stand the developmental pathways of problem behavior. Greater involvement with problem behavior as a youth is predictive of greater involvement in young adulthood. However, problem behavior in the teen years does not necessarily lead to poor adult outcomes. For most adolescents, drug use and sexual activity reflect behavior that is experimental and socially normative. Longitudinal studies have shown that a “maturing out” process typically occurs, particularly if the individual is embedded in conventional institutions such as marriage.

Although most adolescents will grow out of many risk behaviors, prevention efforts are needed to reduce the risk of HIV infection during adolescence. As has been found with other risk behaviors, studies have demonstrated that knowledge about risk is not sufficient for the prevention of HIV risk behavior. This is not really surprising, given the variety of individual and contextual factors that contribute to motivation and the persistence of risk behaviors into young adulthood. For example, substance abuse, suicidality, and depression in adolescence are strong predictors of increasing or maintaining HIV high risk behaviors in young adulthood. Other contributing factors are problems in relationships with parents, friends’ misbehaviors, stressful events, and neighborhood violence and unemployment.

Given the complexity of factors that contribute to risk behavior, prevention efforts that focus exclusively on knowledge are unlikely to be successful. However, there are effective school-based HIV prevention programs, which typically rely on principles of Social Cognitive (Learning) Theory. These principles include the use of experiential activities that allow for the modeling and practicing of skills, and the reinforcement of group norms against unprotected sex. A focus on reducing sexual risk behaviors and the use of trained motivated teachers enhance program effectiveness. However, adolescents live and learn in a variety of social contexts, and it is important to expand the scope of HIV prevention to include contextual interventions. For example, consistent adult monitoring can reduce opportunities for risky behaviors, and religious involvement protects adolescents from premature sex and drug use behaviors. Although they are currently very limited, school-based or school-linked clinic services, such as condom distribution and STI diagnosis and treatment, can be another important strategy for prevention.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; HEALTH SERVICES; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; RISK BEHAVIORS, *subentries on* SEXUAL ACTIVITY AMONG TEENS AND TEEN PREGNANCY TRENDS, SEXUALLY TRANSMITTED DISEASES; SEXUALITY EDUCATION.

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### SEXUAL ACTIVITY AMONG TEENS AND TEEN PREGNANCY TRENDS

Adolescent sexuality is often viewed from a negative perspective that focuses primarily on sexual behavior and its association with other high-risk behaviors. Youth are sometimes negatively viewed as sex-crazed, hormone-driven individuals who want the perceived independence of adulthood without the responsibility of adulthood. On the other hand, psychosexual development is a critical developmental process during adolescence. P. B. Koch has identified the need for research identifying healthy psychosexual development in adolescents. As children emerge into adolescence, their developing gender identity shapes whom they interact and associate with, especially peers. Negative media images that appear to promote lustful, irresponsible sexual behavior are often associated with early sexual activity among adolescents. However, it is crucial to identify what protective factors can shape positive psychosexual development, including delaying the onset of sexual activity. Research has yet to identify gender-specific strategies that can promote positive psychosexual development in boys and girls.

#### Early Sexual Activity

Early sexual activity is a growing issue in adolescent development. According to both the National Sur-

vey of Family Growth and the Youth Risk Behavior Survey, adolescents are engaging in sexual activity at earlier ages. In general, older adolescents (age fifteen and older) demonstrate a reduction in early sexual activity, whereas adolescents younger than thirteen demonstrate an increase in sexual activity. In addition, two-thirds of high school students report having sex before graduating from high school. These findings persist in the face of an apparent leveling off of sexual activity in adolescents.

Peer pressure to engage in adult-like activities can encourage adolescents to engage in various levels of sexual experimentation. Adolescents who engage in sexual experimentation are at increased risk for sexually transmitted diseases, including HIV/AIDs, and pregnancy. Moreover, risk for early sexual experimentation is associated with other high-risk behaviors in adolescence, including sexual abuse and drug and alcohol use, and emotional adjustment.

In regard to puberty, early-maturing adolescents are more likely to engage in early sexual experimentation than are later-maturing adolescents. They confront their emerging sexuality at younger ages than their peers do, and are more likely to be pursued by older peers in social settings because they appear physically older than their chronological age.

For both male and female adolescents, adolescence represents, in part, a time for pressure to engage in sexual intimacy. As girls enter adolescence (typically a few years before boys), they begin to grow into womanhood and become sexualized objects. Within the media, images of sexuality and overly thin body images can socialize girls into seeing themselves as sexual objects. On the other hand, boys are pressured to exhibit their manhood through sexual conquests.

Much of the research on early sexual activity in adolescents does not address early patterns of noncoital sexuality. Noncoital sexuality is defined as involvement in sexual contact that does not include the exchange of body fluids. Research suggests that by middle adolescence most youths have begun to engage in sexual experimentation, including kissing, with 97 percent of adolescents experiencing their first kiss by age fifteen. Understanding the onset of noncoital sexuality and factors influencing its timing is vital to delineating patterns of early sexual activity in teenagers.

Adolescent condom use has increased for both males and females. The decline in teenage pregnancy

is, in part, attributable to an increase in contraceptive use. However, since psychosexual development is a new challenge faced during adolescence, some youths are ill informed, and even though they may choose to use contraceptives, they may use these methods incorrectly.

### Teenage Pregnancy

The association of early sexual activity with teenage pregnancy has been a societal concern for decades. For females, teenage pregnancy can complicate adolescent development and contribute to a troublesome transition to young adulthood, which involves a potential future as a single parent with limited educational and economic opportunities. Since the 1990s the overall teenage pregnancy rate has declined, though, according to the National Campaign to Prevent Teen Pregnancy, four out of ten girls still get pregnant before their twentieth birthday. The United States has the highest teen pregnancy, birth, and abortion rates of any industrialized nation.

Teenage mothers are at risk for poverty and school failure, while their offspring are at risk for low birthweight, poor access to health care, poverty, and early childhood developmental problems. Programs such as Aid to Families with Dependent Children (AFDC), which were created to support single parent mothers, have been criticized as being an incentive for the birth of children out of wedlock in poor communities. Consequently, poor teen mothers have sometimes been blamed for their circumstances and negatively portrayed within the media and the public arena. Yet the overall decline in teenage pregnancy has occurred across all ethnic groups, including the poor ethnic minority groups that are most likely to be demonized in the media as having excessive teenage pregnancy rates.

A significant risk factor for early sexual experimentation is a history of sexual trauma. This is true for both males and females, though the level of risk is increased for females. Adolescent girls who have a history of sexual trauma during childhood and/or adolescence may try to cope during their adolescent years by being sexually provocative. This coping mechanism is negative; however, victims of sexual abuse may try to control future sexual encounters by initiating sexual contact. This may influence the likelihood of their involvement in prostitution and other sexually exploitative illegal activities.

Girls with a history of sexual trauma are also at great risk for involvement in the juvenile justice sys-

tem, particularly if they do not have supportive home environments that allow them the opportunity to heal from their traumas. Girls within the juvenile justice system are likely to exhibit runaway behaviors in an effort to get out of abusive home environments. Through these runaway patterns, some girls are introduced to sexual exploitation in their effort to survive on the street. Boys who are victims of sexual abuse are at risk for offending behaviors if they lack supportive home environments, and they are also at risk for involvement in the juvenile justice system.

The use of alcohol and drugs reduces inhibitions, and can therefore influence participation in unprotected sexual activity. Boys and girls with a history of smoking and alcohol use have an increased risk for early sexual activity, in part because the use of these substances can influence the decision making of adolescents in social contexts.

Efforts to conduct sexuality education within the home environment have been found to be insufficient. Parents need to provide supportive learning environments in which children can develop a healthy understanding of their sexuality, particularly during their adolescent years. Adolescence represents a time of fundamental change, as adolescents are introduced to new reproductive capacities that have to be understood cognitively, socially, and emotionally.

### **Pregnancy Prevention**

Adolescents receive most of their information about sexuality from peers, which often leads to misinformation. Adolescents need structured formal and informal learning environments with age-appropriate peers to address issues of sexuality. These programmatic models may be available within school and community-based settings. Most pregnancy prevention programs fall within three categories: knowledge interventions, access to contraception, and programs to enhance life options. Lisa Crockett and Joanne Chopack suggest three categories of programs: programs that focus on sexual antecedents, programs that focus on nonsexual antecedents, and programs that focus on a combination of both sexual and nonsexual antecedents. Programs that focus on sexual antecedents directly target sexual behavior and often focus on reducing sexual activity, minimizing the number of sexual partners, and contraceptive use. Programs that focus on nonsexual antecedents indirectly target sexual activity by focus-

ing on other outcomes, such as academic achievement, youth development (including leadership skills), and service-learning models.

Joy Dryfoss has proposed the need for comprehensive health-promotion models as the best practice within sexuality education. This practice not only seeks to minimize risk, but to provide leadership and prosocial skills development to shape the changing lives of young people. Scholars and activists continue to debate the usefulness of abstinence versus education, including birth control strategies. Abstinence-based models show mixed results when rigorously researched, with a limited demonstrated effect on sexual behavior. Many abstinence-only proponents believe that birth control education increases the likelihood of teen sexual activity; however, the evaluations do not support this notion. Sex education models designed to support the psychosocial development of adolescents have been extensively debated, based on religious, moral, family, and community values and attitudes. Educational systems have been permitted to provide abstinence-based education to combat historically high teenage pregnancy rates. Those that propose that birth control education should include life-skills development assert that interventions need to be grounded in the realities of those who are at greatest risk for premature sexual activity and associated negative consequences.

Young people from poor, underserved, inner-city communities are at risk for poor access to health care, including health education, which increases their risk of negative developmental outcomes related to early sexuality activity. Programmatic efforts need to take into account the social context of these communities. Young people living in such an environment particularly need increased life options rooted in effective decision making, which may lead to a delay in early sexual activity in the adolescent years. According to Saul Hoffman, author of "Teenage Childbearing Is Not So Bad After All . . . Or Is It? A Review of the New Literature," teenage pregnancy prevention programs targeting teen mothers in poor, underserved communities may yield indirect effects in addition to reducing teen pregnancy. These programs may represent pathways out of poverty for these poor populations of teen mothers.

Within inner-city communities of color, program models such as the I Have a Future program founded by Dr. Henry Foster provide a supportive learning community for youths residing in economi-

cally deprived communities with high rates of multi-generational teen pregnancy and sexually transmitted diseases. Such families often remain trapped in poverty, poor health care systems, and economic deprivation. The I Have a Future model provides comprehensive adolescent health services, prosocial skills development, leadership development, alcohol and drug education, gender and ethnic identity development, and academic support. In addition, participants gain exposure to positive role models within the supportive staff and through community linkages to colleges and universities. This program represents a mixed-gender context in which both males and females adolescents can develop positive decision-making skills regarding delayed sexual activity, and it provides a promising framework for effective interventions for high-risk youth.

Positive psychosexual development is important in making a successful transition through adolescence. Adolescents need safe opportunities to relate to peers and develop meaningful attachments without bringing harm to themselves. Psychosexual development is shaped by media, family, community, and peer contexts, and comprehensive strategies that address these contexts are needed to fully support adolescent development. Media literacy can be incorporated into intervention models in order to increase understanding of gender stereotypes. Girls must confront the overwhelming stereotypes of thin, sexually provocative body images of females, whereas males must confront macho images reinforcing masculine control.

### **The Role of Parents**

Parents need resources to support their vital role in shaping the lives of adolescents. Families, and parents in particular, need help in learning effective ways of supporting their adolescent's psychosexual development. In the face of declining teenage pregnancy rates, it is imperative that research focus on targeted evaluations of promising practices that can influence positive developmental outcomes. Some communities and individual programs are strapped for funds to establish and maintain programming, while evaluation goals are deferred because of limited funding. Academic communities can partner with local communities and health promotion agencies to assist in the development of rigorous research paradigms that can increase knowledge of effective interventions that can be potentially replicated in other communities.

In the face of community efforts to address teenage pregnancy, some parents may be apprehensive about other adults influencing their children regarding personal, sensitive issues. For parents who feel comfortable and equipped in addressing these issues with their children, the National Campaign to Prevent Teen Pregnancy offers several tips for parents, including being aware of their own personal values and attitudes regarding sexuality and how they want their children to be introduced to the sensitive topic of sexuality. Effective parent-child communication regarding love and intimacy, as well as family rules and standards about teenage dating, can provide needed support for adolescents who are confronting the social and emotional challenges related to puberty. Parents are encouraged to introduce the topic of sexuality and sex education early in a child's development. How early this occurs is again influenced by the personal values and attitudes of the parents. Parents can also assist as interpreters of negative media images that foster inconsistent and controversial attitudes toward early sexual activity and promiscuity.

In addition, parents are encouraged to become knowledgeable about their children's social contexts. Monitoring children's activities includes not only knowing where one's children are, but also who are the friends and peer associates of one's children. It is also important to provide life options that provide children with constructive, safe opportunities for personal growth.

Other effective models of service include gender-specific interventions that assist adolescents in understanding positive manhood and womanhood development. Through the development of positive gender identity, adolescents can fully consider their role in relationships with family, peers, and community.

There has been some debate regarding gender-specific versus mixed-gender programs to address the issue of teenage pregnancy. Programs are encouraged to be intentional in their efforts to maximize opportunities for education and life-skills development, whether in same-gender or mixed-gender environments. Same-gender programs can provide safe learning environments in which groups can fully consider the challenges facing adolescents to engage in early sexual activity. In particular, for girls who may have been traumatized by males, it is critical that they have opportunities to voice their concerns and experiences without any perceived

threat by male counterparts. On the other hand, in the absence of trauma-related experiences, adolescents may benefit from healthy, mixed-gender programs that focus on the shared responsibility of both sexes in family planning. Otherwise, the burden for safe sex, including contraceptive use, is often perceived as the responsibility of the female. Even though females are more likely to experience pubertal changes earlier than their male counterparts, these females are not necessarily advanced in their emotional maturity to the point that they can assume sole responsibility for sexual behavior.

In order to address premature sexual activity among teenagers effectively, comprehensive community strategies are needed to address the myriad of issues involved and the diversity in social and community contexts. In 2002, thirteen community partnerships within eleven states were implementing comprehensive youth preventive interventions to combat teenage pregnancy. These partnerships distribute the responsibility for sexuality education across the family, community, and school.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; HEALTH SERVICES; PARENTING; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; RISK BEHAVIORS, *subentry on* SEXUALLY TRANSMITTED DISEASES; SEXUALITY EDUCATION.

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SHEILA PETERS

## SEXUALLY TRANSMITTED DISEASES

Sexually transmitted diseases (STDs) are viral and bacterial infections passed from one person to another through sexual contact. In 1960 there were two common STDs; by the beginning of the twenty-first century, there were more than twenty-five. In 1980 alone, eight new STD pathogens were recognized in the United States. In 1995 STDs accounted for 87 percent of cases reported among the top ten diseases in the United States.

The Institute of Medicine coined the phrase "the hidden epidemic" to describe the problem of STDs in the United States. STDs disproportionately affect women and young people. In 1996 an estimated 15 million new cases of STDs occurred in the United States, of which at least one-quarter were among adolescents between the ages of fifteen and nineteen. Adolescents are at a higher risk for contracting sexually transmitted disease because of biological and behavioral factors.

### Biological Factors

During each sexual encounter, women are at an inherently greater risk of acquiring an STD than men are. Young women are especially vulnerable to infec-

tion because of the increased amount of immature ectopic tissue on the endocervix, which increases the likelihood of acquiring certain STDs such as chlamydia, gonorrhea, and HIV. Adolescent women also have “immature” or unchallenged local immune systems that make them more vulnerable to STD infections. Most sexually transmitted diseases are asymptomatic and go undiagnosed, further promoting the spread of infection.

### **Behavioral Risk**

Behavioral risk factors that predispose individuals to STDs include age at initiation of sexual activity, having multiple sexual partners or a partner with multiple partners, use of barrier protection, and use of diagnostic and treatment services. Furthermore, risk of STDs may be compounded by additional socioeconomic factors, though this relationship is unclear. Many markers of STD risk (e.g., age, gender, race/ethnicity) are associated with fundamental determinants of risk status (e.g., access to health care, residing in communities with high prevalence of STDs) to influence adolescents’ risk for STDs. Since the early 1980s the age of initiation of sexual activity has steadily decreased and age at first marriage has increased, resulting in increases in premarital sexual experience among adolescent women and an increasing number of women at risk. Multiple (sequential or concurrent) sexual partners rather than a single, long-term relationship increases the likelihood that a person may become infected. The Centers for Disease Control and Prevention (CDC) showed that almost 45 percent of women who initiated sexual activity before the age of sixteen had more than five lifetime sexual partners. Among women who delayed first sex until after the age of twenty, however, only 15 percent had more than five lifetime sexual partners. Of women who delayed their first sexual activity until after the age of twenty, close to 52 percent had only one lifetime sexual partner, compared with about 19 percent of women who had initiated sex before the age of sixteen. The risk of STDs increases with the total number of lifetime sexual partners, whether over a short time period or spread over a life course.

In addition to having more than one sexual partner, adolescents may be more likely to engage in unprotected intercourse or engage in high-risk sexual activities such as anal sex. They may also select partners at higher risk. For example, young women are more likely than women in other age groups to

choose a partner who is older than themselves. Additionally, oral sex and mutual masturbation may also lead to the spread of infection and should be considered risky activities.

Studies have shown that adolescents who are involved in one risky behavior are more likely to be involved in others. Adolescent boys and girls who have had sex are also more likely to drink alcohol, take drugs, and smoke cigarettes than adolescents who have not had sex. A quarter of adolescents interviewed reported that they were under the influence of drugs or alcohol when they last engaged in sexual intercourse. There is evidence that young people who avoided risky behavior had positive influences in their lives, such as a strong relationship with their parents.

The high prevalence of STDs among adolescents may also reflect multiple barriers to quality STD prevention services. Adolescents may lack insurance or the ability to pay for such services. They may lack transportation to reach an adequate facility. Additionally, they may feel uncomfortable in facilities and with services designed for adults. Adolescents may also be concerned about the confidentiality of their visits. Most studies following adolescents who have been diagnosed and treated for STDs by health care providers show a high incidence of reinfection at follow-up visits.

### **Prevalent Bacterial STDs**

The most prevalent bacterial STDs are gonorrhea and chlamydia. Ongoing surveys of women in clinic settings has shown that adolescent women consistently have higher rates of chlamydia infection when compared to other age groups. In 2000 women aged fifteen to nineteen years old had the highest rates of chlamydia infection among all women even when overall prevalence declined. Chlamydia rates are low among men. Though the rates of gonorrhea decreased among adolescent women ages ten to nineteen years between 1996 and 2000, in 2000 the highest age-specific gonorrhea rates were among women in the fifteen- to nineteen-year-old age group. Adolescent men ages fifteen to nineteen years had the third-highest rates of gonorrhea when compared to other age groups of men.

### **Prevalent Viral STDs**

Genital herpes simplex virus (HSV-2) and human papillomavirus (HPV) are prevalent among sexually experienced adolescents. Furthermore, infection

with HSV-2, HPV, or HIV may result in negative reproductive morbidity, including neonatal transmission of these infections, cervical and genital cancer, and even premature death. As of yet, there are no effective cures for these viral infections.

Studies indicate that one in six Americans is infected with HSV-2, reflecting a ninefold increase since the early 1970s. An estimated 4 percent of Caucasians and 17 percent of African Americans are infected with HSV-2 by the end of their teenage years. One study of low-income pregnant women found an HSV-2 infection rate as high as 11 percent in women fifteen to nineteen years of age and 22 percent in women twenty-five to twenty-nine years of age.

Based on data from twenty-five states with integrated HIV and AIDS reporting systems, the CDC reported that for the period from January 1996 to June 1999 young people (aged thirteen to twenty-four) accounted for a much greater proportion of HIV (13%) than AIDS cases (3%). Though the number of new AIDS cases diagnosed during the period declined, no decline was observed in the number of newly diagnosed HIV cases among youth. Because progression from HIV infection to AIDS may be on the order of years, the reported number of AIDS cases may not reflect the actual rate of HIV infection among adolescents. At least half of all new HIV infections in the United States are among people under age twenty-five, and the majority of young people are infected sexually. In 1999 there were 29,629 cumulative cases of AIDS among those aged thirteen to twenty-four years. The CDC further reported that in 1999, of the cases of AIDS in young men aged thirteen to twenty-four years, 50 percent were among men who have sex with men; 8 percent were among injection drug users; and 8 percent were among young men infected heterosexually. Among young women aged thirteen to twenty-four years, 47 percent of cases reported were acquired heterosexually and 11 percent were acquired through injection drug use.

### Impact

STDs prevent adolescents from leading healthy lives. They lead to declines in school performance, increased poverty, and higher crime rates. The financial cost of STDs runs in the billions each year. As a consequence of STDs, many adolescents experience serious health problems that often alter the course of their adult lives, including infertility, diffi-

cult pregnancy, genital and cervical cancer, neonatal transmission of infections, and AIDS.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; HEALTH SERVICES; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; RISK BEHAVIORS, *subentries on* HIV/AIDS AND ITS IMPACT ON ADOLESCENTS, SEXUAL ACTIVITY AMONG TEENS AND TEEN PREGNANCY TRENDS; SEXUALITY EDUCATION.

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ANGELA HUANG

## SMOKING AND ITS EFFECT ON CHILDREN'S HEALTH

The impact of tobacco use in the United States and worldwide is staggering. According to the World Health Organization, 1.1 billion people worldwide regularly smoke tobacco products, and smoking accounts for 10,000 deaths per day. In 1990 there were 418,000 deaths in the United States alone attributed to smoking and its effects. Smoking kills two and one-half times more people than alcohol and drug use combined. In the United States 25 percent of the population regularly uses tobacco, with 6,000 new adolescent smokers each day—half of whom will go on to be regular smokers. Every day more than 15

million children are exposed to smoke in their homes. Environmental tobacco smoke (ETS), also known as "second hand smoke," poses significant risks to children. The United States Environmental Protection Agency (EPA) has classified ETS as a class A carcinogen, which means that ETS is known to cause cancer in humans. Exposure to ETS before the age of ten will increase a child's chances of developing lymphoma and leukemia (i.e., cancers of the blood) as an adult. The effects of ETS are actually worse than those acquired from smoking cigarettes directly.

### **Pregnancy/Perinatal/SIDS**

It has been estimated that 19 percent to 27 percent of pregnant women smoke during their pregnancy. The pregnant woman who smokes not only affects her own health, but she harms the baby she is carrying as well. A major risk of smoking during pregnancy is the increased rate of premature delivery of the baby. Infants who are born prematurely can have many severe medical problems, including lung immaturity and brain injury. Maternal smoking contributes to 5 percent of all perinatal deaths (i.e., 2,800 deaths per year). Pregnant women who smoke are at a greater risk of miscarriage and low-birth-weight infants, as well as higher rates of long-term behavioral and mental problems in her child. Infants born to mothers who smoked during pregnancy have a much higher rate of Sudden Infant Death Syndrome (SIDS) than infants born to mothers who did not smoke during pregnancy. There is a dose-dependent relationship between ETS exposure during pregnancy and the rate of SIDS: The greater the exposure of cigarette smoke to an unborn baby, the higher their risk of SIDS. Cigarette smoke exposure is one of the few preventable risk factors for SIDS.

Newborn infants are in a unique situation when it comes to exposure to their mothers' smoke. Cotinine, a metabolite of nicotine, is found in newborn babies' blood at levels almost equivalent to their mothers'. There are significant levels of cotinine in a newborn's blood even if the mother herself does not smoke, but simply lives in a household where there is ETS exposure. There is a direct relationship between the maternal and newborn infant's blood levels of cigarette smoke products. The mother who smokes during pregnancy transfers the products in cigarette smoke to the fetus through the placenta, as well as to the newborn infant through breast-feeding. In fact, breast-fed infants have the same urinary cotinine levels as active adult smokers.

### **Childhood Diseases**

The risks of ETS are not simply restricted to the newborn infant. There are many childhood illnesses that are dramatically worsened by exposure to smoke. A 1994 study by Joan Cunningham and colleagues showed that there was an increased risk of colds, wheezing, shortness-of-breath, and emergency room visits by children living in households where there is a smoker. There is also a significant increase in the risk of ear infections in children who live in households where there are smokers. Children born to mothers who smoke have a higher risk of developing asthma. Along with an increased risk of asthma, children of mothers who smoked during pregnancy will be at a greater risk of have problems with environmental allergies (e.g., hay fever). These effects can be seen in newborn infants as well as school-aged children.

### **Adolescence**

Between 4 million and 5 million adolescents in the United States smoke daily. Each year more than 1 million people under eighteen years of age become daily smokers. Ninety percent of adults who regularly smoke began smoking before they were nineteen years of age. Throughout the 1990s the age at which children began smoking became increasingly younger. In 1990, 31 percent of all twelfth graders reported recent (within the last month) tobacco use while 21 percent were daily smokers. Shockingly, 8 percent of all eighth graders reported daily tobacco use. By the end of the 1990s the percentages of twelfth and eighth graders who recently used cigarettes was up to 36 percent and 21 percent, respectively. The younger and younger beginning smoker is reflected in the higher percentage of adolescent smokers as compared to the adult population. Besides the negative health effects of smoking itself, adolescents who smoke are fifteen times more likely to use drugs than their peers who do not smoke.

There are many reasons why a child or adolescent will begin to smoke. The most common influence is family and peer pressures, but the most potent factor is the media portrayal of "glamorous" smoking. The top three most popular brands of cigarettes amongst adolescents were the top three companies that spent the most on advertising. In 1993 these companies collectively spent \$153 million dollars on advertising. Many popular sporting events are still sponsored by tobacco companies, and there is some evidence that advertising had been directed

toward recruiting new child or adolescent smokers. To combat the draw of the media for adolescents to begin smoking, the Centers for Diseases Control and Prevention (CDC) began, in the fall of 2000, the *Surgeon General's Report for Kids on Smoking*. This was an attempt to enlist celebrities and sports figures to promote an antismoking message to young people. It involves posters and media advertisements directed toward children and adolescents, informing them of the health damages caused by cigarette smoking.

### Costs

The true cost of smoking is incalculable, but there are some very practical measures that can be seen. In 1997 American children made more than 500,000 doctor visits for asthma, and 1.3 million visits for cough that were directly attributed to smoke exposure. This does not include the 115,000 cases of pneumonia, 260,000 cases of bronchitis, and more than two million ear infections. The annual cost of ear infections in children in the United States caused by smoke exposure is \$1.5 billion. The actual total financial costs, directly related to the exposure of American children to ETS, are broken into direct medical costs and the loss of life costs. In 1997 the total medical cost of the complications of cigarette smoke on American children was \$4.6 billion. The loss of life cost (calculated based upon loss of earnings and costs needed to prevent disease) was \$8.2 billion. The true cost of cigarette smoking, however, is in the impact smoking has on the health of infants and children.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; HEALTH EDUCATION; HEALTH SERVICES; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; RISK BEHAVIORS, *subentry on* SEXUAL ACTIVITY AMONG TEENS AND TEEN PREGNANCY TRENDS.

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CHRISTOPHER S. GREELEY

## SUICIDE

School-age children can engage in many behaviors of concern to adults as a function of their development as well as the changing culture and environments in which they live. Perhaps the most concerning and baffling of these risk behaviors are the tendencies in some to consider ending their own lives at so young an age. Why children and adolescents consider these self-destructive actions is a complicated puzzle to understand and solve. Such behaviors must be considered in light of young people's vulnerability to external models, their increased anxiety related to issues of social acceptance, their desire to develop a unique identity, and the existence of unstable and abusive families.

In 1999 the surgeon general of the United States, David Satcher, issued a call to action to prevent suicide. Satcher noted the continuing increase in suicide rates among the young, with the rate tripling from 1952 to 1996. He stated that Americans under the age of twenty-five accounted for 15 percent of all completed suicides and that risk factors for suicide attempts among the young included depression, alcohol or drug use disorders, and aggressive and disruptive behaviors. Suicide was not just a mental health problem but a public health problem as well.

### Occurrence

Suicide rates for children and adolescents are regularly reported by the National Center for Health Sta-

tistics in the U.S. Department of Health and Human Services. These reports count only those for whom suicide is listed as the cause of death. For this reason it is believed that suicides may be underreported. Those who sign death certificates (family physicians, emergency room staff, and medical examiners) may not always list the cause of death as intentional in order to avoid stigma for the family or because evidence of suicide may not be immediately present. It is suspected that vehicular accidents and deaths related to substance abuse, for instance, may in some cases be suicides, but they may not be recorded as such.

A review of statistics regarding rates of suicide reveal a number of facts. For those aged fifteen to twenty-four, suicide stands as the third-leading cause of death behind accidents and homicides. As of 1996, the rate of suicide deaths for Americans aged ten to fourteen was 1.6 deaths per 100,000 population (2.3 per 100,000 for males and 0.8 per 100,000 for females). For fifteen- to nineteen-year-olds the rate was 9.7 deaths per 100,000 (15.6 per 100,000 for males and 3.5 per 100,000 for females), and for those aged twenty to twenty-four the rate was 14.5 deaths per 100,000 (24.8 per 100,000 for males and 3.7 per 100,000 for females). Young males (aged fifteen to nineteen) are more likely to succeed at killing themselves than females by a ratio of at least five to one. Reports from the surgeon general also suggest that gay and lesbian youth may be two to three times more likely to commit suicide. Although accomplished suicide rates were highest for white males, young African American males showed the greatest increase during the 1980s and 1990s. White females had the next highest rates, followed by African-American females. Research on Hispanic populations indicated that rates of suicide in young men and women may be higher than for whites.

Suicides can be completed using a variety of means. Nearly 63 percent of suicides occur using firearms. Most other deaths are a result of more passive means such as drug poisonings or hangings. Suicide attempts are less likely to involve firearms and may, therefore, provide opportunities for discovery and rescue.

In addition to completed or accomplished suicides, many young people attempt suicide. Accurate rates for this group of attempted suicides, often called *parasuicides*, are even more difficult to obtain. Hospitals and emergency rooms may identify attempters, but many *parasuicides* go completely un-

detected or are confided only to the closest of friends. Possible ratios of attempts to completions may range from 10:1 to 150:1, depending upon the research and the definition of attempts. The continuum of suicidal behaviors, which includes actual suicide on one end and attempted suicides in the middle, includes on the other end the least severe form of self-destructiveness, usually identified as suicidal ideation or intent. The idea of killing oneself may occur quite frequently in young people, but it becomes serious only when there is intent to actually act. Such suicidal intent often includes a plan and a timetable in the person's mind.

### Risk Factors

Many factors have been examined as contributors to the likelihood that a school-age child will become suicidal. Some factors appear to be historical or situational whereas others are psychological. A large percentage (perhaps as high as 90 percent) of those who are victims of suicide have diagnosable psychiatric disorders at the time of death. Many suffer from mood disorders, and a large percentage have made previous suicide attempts. Risk factors may include: psychiatric disorder, previous suicide attempt, co-occurring drug use and mental disorder, family history of suicide, impulsive or aggressive tendencies, feelings of hopelessness, loss of significant relationship, loss of job, physical illness, stress, lack of access to mental health treatment, availability of lethal means (e.g., guns or drugs), feelings of isolation and alienation, influence of peers or family members, unwillingness to seek help, cultural or religious beliefs or traditions, influence of the media, current epidemics of suicidal behaviors, and being a victim of bullying.

In the case of children and adolescents, two major themes related to increased risk for suicide are fears of humiliation by others and feelings of invisibility. Additional themes may also include general levels of stress, breakdown of psychological defenses, self-deprecatory thoughts, and a negative personal history.

### Protective Factors

Just as some factors seem to increase the incidence of self-destructive suicidal intent, so also there appear to be conditions that make these thoughts and behaviors less likely. Such circumstances or characteristics are considered to be protective. Among those cited by the surgeon general in 1999 were: ef-

fective and appropriate clinical care; access to treatment and support for seeking help; restricted access to lethal means; family and community support; ongoing medical and mental health care relationships; learned skills in problem solving, conflict resolution and nonviolent dispute management; and a belief system, either cultural or religious in nature, that discourages suicide. Skills in anger management, impulse control, and appropriate action in the face of victimization have been also cited as protective factors.

### Warning Signs

The warning signs of imminent suicidal behaviors can appear in many forms. They can be verbal, spoken to others; written as poems, songs, diary entries, or suicide notes; or made as threats directly ("I am going to kill myself") or indirectly ("You won't have me to kick around anymore"). Other warning signs include social withdrawal, getting things in order, giving things away, constant crying, or an angry or hostile attitude. Some signs occur in the person's environment, such as the death of someone close, family problems, or failure in school or at work. Lastly, some signs are those characteristic of depression or general mental and emotional difficulties. These latter signs might include sleep disturbance, feelings of despair, appetite change, or radical and abrupt changes in behavior or personality.

### Formulation of the Problem

According to Jerry Jacobs, writing in 1971, early research into suicide examined five major stages seen in suicidal children. These included a history of problems, an escalation of problems, the failure of coping, the experience of helplessness, and finally, a justification for taking a self-destructive action. Although these stages may be present, in many cases adults do not observe them, but rather they are shared with peers. Adults may merely see the final behaviors.

It is important to realize that suicidal behavior can best be seen not as a disease (although it may in some cases be the manifestation of one), but rather as a symptom with many different possible underlying causes. Just as a headache could be caused by many things, so the action to end one's own life can be a result of any number of causes: depression or other mental illness, stress, grief or loss, unresolved conflict, substance use, unexpressed anger or rage, social pressure, lack of problem-solving or conflict

resolution skills, hopelessness or frustration, chronic victimization, a desire for visibility or respect, the need to avoid humiliation, or the desire to be noticed.

### Prevention

The best strategies for the prevention of suicide are those that reduce the number of risk factors and increase protective factors. This means making resources available to families and schools to aid in this process. In some cases early intervention is needed. Prevention or primary interventions need to: develop strategies for detecting suicidal individuals, treat all threats seriously, educate those who work with kids about suicide, increase peer education about suicide, teach families and communities to look for warning signs, reduce the availability of lethal means, make twenty-four-hour hotlines available, and use the media to teach the public how to recognize those at risk.

Finally, it must be acknowledged that the problem of self-destructive behavior affects everyone. Parents, schools, and communities must make a commitment to work to end this behavior and its causes.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; MENTAL HEALTH SERVICES AND CHILDREN; PARENTING; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS.

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PETER L. SHERAS

## TEEN PREGNANCY

In the United States, teen pregnancy is an important problem. In 1997, the last year for which accurate estimates are available, about 896,000 young women under the age of twenty became pregnant. Among women aged fifteen to nineteen, 94 per 1,000 (or about 9%) became pregnant. This rate is much higher than that in other Western industrialized countries. In addition, according to a 1997 publication of the National Campaign to Prevent Teen Pregnancy, more than 40 percent of young women in the United States become pregnant one or more times before they reach twenty years of age.

The U.S. pregnancy rate is higher for females aged eighteen and nineteen (142 per 1,000) than for females fifteen to seventeen (64 per 1000). It is also higher for African Americans (170 per 1,000) and Hispanics (149 per 1,000) than for non-Hispanic whites (65 per 1,000). Much of this ethnic variation, however, reflects differences in poverty and opportunity.

On the positive side, the 1997 teen pregnancy rate in the United States was the lowest pregnancy rate since it was first measured in the early 1970s. The rate fluctuated considerably over the course of the 1970s, 1980s, and 1990s, however, reflecting both changing percentages of youth who have sex and improved use of contraception among those having sex.

While the teenage pregnancy rate is, by definition, based upon female teenagers, this does not

mean that all the males involved in these pregnancies are teenagers. Indeed, in 1994, whereas 11 percent of fifteen- to nineteen-year-old females became pregnant, only 5 percent of fifteen- to nineteen-year-old males caused a pregnancy.

About four-fifths of teen pregnancies are unintended. Accordingly, in 1997, 15 percent of all teen pregnancies ended in miscarriages, 29 percent ended in legal abortions, and 55 percent ended in births.

Among mothers under the age twenty, the percentage of births that occur out of wedlock has risen dramatically—from 15 percent in 1960 to 79 percent in 2000. This large increase in and high rate of non-marital childbearing has alarmed many people and motivated many efforts to reduce teenage pregnancy.

## Consequences of Teen Childbearing

According to a 1996 report written by Rebecca A. Maynard, when teenagers, especially younger teenagers, give birth, their future prospects decline on a number of dimensions. Teenage mothers are less likely to complete school, more likely to have large families, and more likely to be single parents. They work as much as women who delay childbearing for several years, but their earnings must provide for a larger number of children.

It is the children of teenage mothers, however, who may bear the greatest brunt of their mothers' young age. In comparison with those born to mothers aged twenty or twenty-one, children born to mothers aged fifteen to seventeen tend to have less supportive and stimulating home environments, poorer health, lower cognitive development, worse educational outcomes, higher rates of behavior problems, and higher rates of adolescent childbearing themselves.

Although the greatest costs are to the families directly involved, adolescent childbearing leads to considerable cost to taxpayers and society more generally. Estimates of these costs are in the billions.

## Adolescent Sexual and Contraceptive Behavior

Obviously, teens become pregnant because they have sex without effectively using contraception. In the United States, the proportion of teens who have ever had sexual intercourse increases steadily with age. In 1995, among girls, the percentage increased from 25 percent among fifteen-year-olds to 77 percent among nineteen-year-olds, while among males it in-

creased from 27 percent among fifteen-year-olds to 85 percent among nineteen-year-olds. Among students in grades nine through twelve across the United States in 1999, 50 percent reported sexual experience.

Most sexually experienced teenagers use contraception at least part of the time. Condoms and oral contraceptives are the two most common methods, but small and increasing percentages of teens use long-lasting contraceptives such as Depo-Provera or Norplant. Like some adults, however, many sexually active teenagers do not use contraceptives consistently and properly, thereby exposing themselves to risks of pregnancy or sexually transmitted diseases (STDs).

### **Factors Associated with Sexual Risk-Taking and Pregnancy**

While nearly all youth are at risk of engaging in sex and thus girls becoming pregnant, many risk and protective factors distinguish between youth who engage in unprotected sex and sometimes become pregnant and those who do not. For example, when teens have permissive attitudes toward premarital sex, lack confidence to avoid sex or to use contraception consistently, lack adequate knowledge about contraception, have negative attitudes toward contraception, and are ambivalent about pregnancy and childbearing, then they are more likely to engage in sex without contraception.

Other more indirect environmental factors, however, also affect teen sexual risk-taking, either by decreasing motivation to avoid sex or through other mechanisms. For example, teens are more likely to engage in unprotected sex and become pregnant (1) when they live in communities with lower levels of education, employment, and income and thereby have fewer opportunities and encouragement for advanced education and careers; (2) when their parents also have low levels of education and income; (3) when they live with only one or neither biological parent and believe they have little parental support; (4) when they feel disconnected from their parents or are inappropriately supervised or monitored by their parents; (5) when they have friends who obtain poor grades and engage in nonnormative behaviors; and (6) when they believe their peers are having sex and are failing to use contraceptives consistently.

Furthermore, teens are more likely to engage in sex when they, themselves, (1) do poorly in school

and lack plans for higher education; (2) use alcohol and drugs, engage in other problem or risk-taking behaviors, and are depressed; (3) begin dating at an early age, go steady at an early age, have a large number of romantic partners, or have a romantic partner three or more years older (the latter being a particularly telling factor); or (4) were previously sexually abused. These individual and environmental, sexual and nonsexual, risk and protective factors are the factors that programs try to change when they attempt to reduce teen sexual risk-taking and pregnancy.

### **Family Planning Services**

The efforts most directly involved with preventing pregnancy among sexually experienced teens are family planning services. The primary objectives of family planning clinics or family planning services within other health settings are to provide contraception and other reproductive health services and to provide patients with the knowledge and skills to use their selected methods of contraception.

Large numbers of sexually active female teenagers obtain family planning services each year. Many of these young women receive oral contraceptives and to a lesser extent other contraceptives that are more effective than condoms or other non-prescription contraceptives. Accordingly, these family planning services prevent large numbers of adolescent pregnancies.

In addition to those practicing at family planning clinics, some clinicians in health clinics also focus upon the adolescent's sexual behavior. Several studies have found that these visits can increase contraceptive use when clinicians spend more time focusing upon the teen patients' sexual behavior; give a clear message about always using protection against pregnancy and STDs; show videos or provide pamphlets and other materials; discuss patients' barriers to avoiding sex or using contraception; and model ways to avoid sex or use condoms or contraception.

### **Sex and HIV Education Programs**

To reduce teen pregnancy and also STDs, including HIV, most schools have implemented sex and HIV education programs. Typically, these programs emphasize that abstinence is the safest method of avoiding pregnancy and STD, but they also encourage condom and contraceptive use if teens do have sex. Contrary to the fears of some people, a large number

of studies have demonstrated that these programs do not have negative behavioral effects, such as increasing sexual behavior. To the contrary, many studies have demonstrated that some, but not all of these programs, delay the initiation of sex, decrease the frequency of sex, and increase the use of contraception once youth have sex. They thereby reduce risk of pregnancy, as well as STD. Some sex and HIV education programs have been found to be effective in multiple states in the country, and some have found positive behavioral effects for almost three years.

Programs that are short and that focus upon knowledge increase knowledge, but they tend not to change behavior. In contrast, programs that effectively reduce sexual risk-taking (1) focus on changing specific sexual or contraceptive behaviors; (2) are based on health theories that specify the risk and protective factors to be addressed by the program; (3) give a clear message about avoiding unprotected sex; (4) provide basic, accurate information about the risks of teen sexual activity and about methods of avoiding intercourse or using contraception; (5) address social pressures that influence sexual behavior; (6) provide modeling and practice of communication, negotiation, and refusal skills; (7) employ a variety of teaching methods designed to involve the participants and help them personalize the information; (8) are appropriate to the age, sexual experience, and culture of the participants; (9) last a sufficient length of time to complete important activities adequately; and (10) select teachers or peer leaders who believe in the program they are implementing and then provide them with training.

Many people have proposed abstinence-only programs as a solution to reducing teen pregnancy and STDs. Such programs emphasize that abstinence is the only acceptable method of avoiding pregnancy, and they either fail to discuss contraception or emphasize its limitations. Although some abstinence-only programs might delay sex, there is thus far simply too little research to know which abstinence-only programs are effective.

In an effort to reduce teen pregnancy and STDs, including HIV, hundreds of high schools have made condoms available or have opened school-based health centers that provide reproductive health services. Although studies have demonstrated that these services do not increase teen sexual behavior, they have also found inconsistent results on improved contraceptive use.

### Service-Learning Programs

Whereas the programs summarized above focus primarily on changing the sexual risk factors of adolescent sexual behavior, some programs focus primarily on the *nonsexual* risk and protective factors. In 1997 researchers Joseph P. Allen and associates found the strongest evidence for teen pregnancy reduction for one type of program, service learning.

By definition, service-learning programs include voluntary or unpaid service in the community (e.g., tutoring, working in nursing homes, helping fix up recreation areas) and structured time for preparation and reflection before, during, and after service (e.g., group discussions, journal writing, composing short papers). Often the service is voluntary, but sometimes it is prearranged as part of a class.

Although service learning does have strong evidence for reducing teen pregnancy, other youth development programs have not reduced teen pregnancy or childbearing (e.g., the Conservation and Youth Service Corps, the Job Corps, JOB-START). Thus, it remains unclear why some programs are effective and others are not.

### Comprehensive and Intensive Programs

A few programs designed to reduce teen pregnancy have been designed for high-risk youth and are both intensive and comprehensive. One of them, the Children's Aid Society Carrera program, is an intensive program operating five days per week and lasting throughout high school. It includes family life and sex education, medical care including reproductive health services, individual academic assessment and tutoring, a job club, employment, arts, and sports. Research demonstrates that it reduced both pregnancy and birthrates over a three-year period.

### Conclusion

Despite declines in the teen pregnancy rate in the United States in the 1990s, teen pregnancy remains an important problem and diminishes the well-being of both teen mothers and their children. Fortunately, by the beginning of the twenty-first century there were a diverse group of programs that were demonstrated to be effective in reducing teen sexual risk-taking or pregnancy. These include reproductive health services and clinic protocols focusing upon patient sexual behavior, sex and HIV education programs, service-learning programs, and intensive and comprehensive programs for higher risk

youth. The diversity of these programs increases the choices for communities. To reduce teen pregnancy, communities can replicate much more broadly and with fidelity those programs with the greatest evidence for success with populations similar to their own; replicate more broadly programs incorporating the common qualities of programs effective with populations similar to their own; and design and implement programs that effectively address the important risk and protective factors associated with sexual risk-taking in their communities.

*See also:* GUIDANCE AND COUNSELING, SCHOOL; HEALTH SERVICES; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; RISK BEHAVIORS, *subentries on* HIV/AIDS, SEXUAL ACTIVITY AMONG TEENS AND TEEN PREGNANCY TRENDS, SEXUALLY TRANSMITTED DISEASES; SEXUALITY EDUCATION.

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DOUGLAS B. KIRBY

## RISK MANAGEMENT IN HIGHER EDUCATION

During the late twentieth century, American society and higher education experienced a substantial increase in lawsuits resulting from some form of personal injury, according to John F. Adams and John W. Hall. A response to the trend of litigiousness, risk management seeks to control exposure to legal risk, thus limiting the negative impact of liability on the institution. In 1995 William A. Kaplin and Barbara A. Lee described four of the most common methods

of risk management: risk avoidance, risk control, risk transfer, and risk retention. Risk avoidance entails an effort on the institution's part to limit risk by eliminating programs or activities or avoiding creating those that involve risk. A less extreme approach is risk control, which seeks to manage liability by structuring activities and programs in ways that reduce or limit institutional risk. There are several methods of transferring risk to other parties including insurance, indemnification agreements, and releases and waivers. Risk retention describes the self-insurance as a means to prepare for the financial implications of legal liability.

### Tort Liability

One of the primary areas of legal liability that risk management addresses is tort liability, which is generally defined as "a civil wrong, other than a breach of contract, for which the courts will allow a damage remedy" (Kaplin and Lee, p. 98). The area within tort liability with which institutions of higher education must most often deal is negligence. Most of these cases involve lawsuits by students and others who suffered injuries that they claim the institution should have prevented through the exercise of reasonable care. The four elements of negligence are duty, breach of that duty, injury (physical or emotional), and proximate cause.

In addition to duties commonly associated with any business enterprise, colleges and universities, according to some courts and authors, have a special relationship with students that demands a higher level of care. Many of the cases heard in the 1980s and 1990s rejected this claim of a higher duty. For example, in *Beach v. the University of Utah* (1986) the institution was freed from any legal responsibility for the injuries that befell Donna Beach while on a university-sponsored field trip where underage students, including Beach, were served alcohol in the presence of the faculty member supervising the trip. The Utah Supreme Court ruled that no special relationship existed between Beach and the university to prevent her injuries. This decision was not anomalous during this period. In rulings in such cases as *Bradshaw v. Rawlings* (1979), *Baldwin v. Zoradi* (1981), and *Rabel v. Illinois Wesleyan University* (1987), the courts continued to reject the idea that college and universities had any heightened duty for the safety of their students and others on campus.

These cases and a number of others led Robert D. Bickel and Peter F. Lake in 1999 to describe this

period and line of reasoning as the bystander university that "cast the university in the legal and cultural role of helpless 'bystander' to student life and danger" (p. 49). During this time, colleges and universities were often seen as having no duty to their students, and as a result no legal liability for the harm their students may suffer. However, not all courts embraced this no-duty reasoning. For example in *Mullins v. Pine Manor College* (1983) and *Tarasoff v. Board of Regents of the University of California* (1976), the courts clearly articulated heightened duties for colleges and universities to their students and others. In *Mullins* the Massachusetts Supreme Court found Pine Manor College liable for the rape of a student in a residence hall by a third party, noting that a residential college has a general duty to provide for campus security and noting that efforts by the college to provide for campus security (including fences around the campus) represented a voluntary assumption of a duty as well. A series of cases in the 1990s including *Furek v. The University of Delaware* (1991) and *Nero v. Kansas State University* (1993) continued in the view of earlier duty cases as courts ruled that institutions had an obligation in the prevention of foreseeable harm. In cases such as *Tanja H. v. Regents of the University of California* (1991), however, the courts continued to reject any heightened duty owed to students by the institution. In their analysis, Bickel and Lake suggested that cases such as *Furek* and *Nero* should be viewed as beginning a larger body of cases that redefine the duty that institutions owe their students, "Duty is owed if danger is foreseeable from prior indicia or assumption of duty and reasonable precautions could prevent harm" (p. 145). Throughout these cases from the 1970s to the early twenty-first century, several common sources of institution liability can be seen with multiple elements present in many cases such as those involving alcohol, fraternities, and campus crime—particularly sexual assault.

### Other Sources of Risk

Risk management in higher education does not end with the consideration of tort liability and negligence. Public and private institutions must address the issue of potential institutional contract liability in the enforcement of contracts in which its agents enter the institution. Public institutions may also face lawsuits brought under 42 USC 1983 for intentional violations of federal constitutional rights. Additionally, institutions must pay careful attention to

compliance with federal legislation and regulations governing higher education, which expand and grow more complicated with each congressional session.

Much of the legislation directly affecting higher education passed in the late 1980s and 1990s must be viewed in the context of the negligence cases involving harm to students. Congress passed legislation related to both alcohol (Drug-Free Schools and Communities Act) and campus crime (Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act). In 1998 Congress authorized the use of fines by the Department of Education to enforce the Campus Security Act. Under federal law, another significant concern for institutions is sexual harassment, which is a form of sexual discrimination prohibited under Title IX of the Educational Amendments of 1972. The Supreme Court has allowed students to recover monetary damages for both quid pro quo (*Gebser v. Lago Vista Independent School District*, 1998) and hostile environment sexual harassment (*Davis v. Monroe County Board of Education*, 1999). In order to win monetary damages, the student must show that a school official with authority to take corrective action had actual knowledge of the sexual harassment and responded with deliberate indifference. However, the Department of Education's Office of Civil Rights holds institutions of higher education to even higher standard in administrative enforcement of the legislation.

Risk management is an issue that demands careful attention by all institutions of higher education. In the fall of 2000 the Massachusetts Institute of Technology settled the lawsuit brought by the parents of Scott Krueger, a freshman who died as a result of excessive alcohol consumption at a fraternity, for \$6 million. This is a clear indication of the profound financial implications of educational institutions' lack of response to this important issue.

*See also:* DRUG AND ALCOHOL ABUSE, *subentry on COLLEGE*; TITLE IX; SUPREME COURT OF THE UNITED STATES AND EDUCATION.

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JOHN W. LOWERY

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### ROGERS, CARL (1902-1987)

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American psychologist and therapist, Carl R. Rogers relied on personal experience as well as scientific inquiry to guide his methodology, much of which foreshadowed late-twentieth-century practice of psychotherapy.

Rogers was born in Oak Park, Illinois, to a prosperous and quite religiously conservative Protestant upper-middle-class family. He was a precocious child, reading bible stories before he entered school, achieving an A grade average through high school, and testing near the top of every intellectual aptitude test he took. As an adolescent some of his interests in science and agriculture were crystallized in work-

ing on his father's farm and reading a major book on scientific farming. A five-month YMCA trip to China while still a twenty-year-old college student confirmed his religious interests, but also gave him a chance to begin to formulate his own personal philosophy independent of his parents. During the following year, he remembered in 1967, he spoke of the trip as "the greatest experience of my life." After college (University of Wisconsin), he attended the liberal Union Theological Seminary, but he completed his Ph.D. at Teachers College, Columbia University, in 1931.

Intellectually Rogers was liberal, idealistic, and optimistic. In a very critical biography David Cohen, drawing on unpublished notes, letters, and essays in the 140 boxes of the Rogers archives in the Library of Congress, painted a different picture of Rogers: a troubled man, often in conflict with his parents, siblings, wife, children and their spouses, and a number of colleagues. Rogers, in more temperate terms, made public only an inkling of his problems, in some brief comments in his chapter in the *History of Psychology in Autobiography* by David Boring and Gardner Lindzey. In contrast, Howard Kirschenbaum in a biography based on many interviews with Rogers and others presents what he, Kirschenbaum, views as "a balanced picture of the man" (p. xvi).

### Counseling and Clinical Practice

Rogers's concern for making clinical work in psychology scientific appeared early in his dissertation "Measuring Personality Adjustment in Children Nine to Thirteen Years of Age" (1931). He developed a paper and pencil objective test with six kinds of item formats, which were derived heavily from clinical interview questions and four subscales of adjustment, and summarized into an overall score. The test was empirically developed, cross-validated, and had norms based on elementary school children from New York City. One group of items required the children to rate perceived self versus ideal self, a conception that would be increasingly a part of Rogers's long-term view of personality.

The dozen years he spent doing clinical work and directing what became the Rochester Guidance Center resulted in the *Clinical Treatment of the Problem Child* (1939). He dealt with testing, interviewing, camps, foster homes, families, and schools, and the beginning of "relationship therapy," with an acknowledgment of the work of Otto Rank, Jessie Taft, and Frederick Allen. The comprehensiveness of the

book along with Rogers's developing point of view presages an intellectual and writing style in his later efforts.

He became a candidate for, and accepted, a full professorship at the Ohio State University, teaching courses in mental hygiene and counseling practices and guiding Ph.D. students in their dissertations. There he wrote what is arguably his most important and provocative book, *Counseling and Psychotherapy* (1942). Significantly it carried the subtitle, 'Newer concepts in practice,' which accented the shift from diagnosis to therapy that was occurring in several of the helping disciplines. The audience was broadly construed: psychologists, college counselors, marital advisers, psychiatrists, social workers, and high school guidance counselors. Methodologically, his intent was to present his extensive personal experience in the practical work of counseling in a number of settings over the 1930s and 1940s—increasingly important, personal experience as well as scientific research became a major baseline for his ideas and practices.

More recent theorists and methodologists might have labeled his efforts "action research," "a discovering/generating grounded theory," and "reconstructions." The seeds of nondirective and client-centered counseling are readily apparent, as are the beginnings of basic conceptions of fully functioning, authenticity/congruence, unconditional positive regard and acceptance, and empathy. Transcripts of phonographic recordings of counseling interviews document every idea in the text. The back-and-forth dialogue between the data and the conjectures is stimulating. The apex of the recording thrust appears in part four, "the case of Herbert Bryan." All eight counseling interviews were recorded, a full 178 pages. The verbatim transcripts carry interpolated reactions, thoughts, hunches, criticisms, and suggestions, and the reader is able to follow along and make his or her own interpretations.

Less than a decade later, Rogers edited *Client-Centered Therapy: Its Current Practice, Implications, and Theory* (1951), and was teaching at the University of Chicago. The preface acknowledges the large group of counselors at the Chicago Counseling Center whose thought and effort had contributed to his thinking. The preface, in emotional and near spiritual terms, thanks the clients from whose struggles and concerns he and his colleagues have learned. Mostly though, the book is a treatise on Rogers's evolving point of view, almost an intellectual autobiography.

Beyond the continuity and the elaboration of issues in nondirective counseling or client-centered therapy, several other aspects stand out: discussions of group-centered therapy and leadership, a move toward student-centered teaching, and a theory of personality and behavior. The chapter on theory of personality and behavior formalized much of Rogers's contribution to what came to be called "third force psychology," a complex set of alternatives to behaviorism and psychoanalysis. He commented: "Like Maslow, the writer would confess that in the early portion of his professional life he held a theoretical view opposed at almost every point to the view he has gradually come to adopt as a result of clinical experience and clinically oriented research" (Rogers 1951, p. 482).

### The Move beyond Individual Counseling

One of Rogers's most significant contributions involved his concern for the education of children and adolescents, as well as adults. *Freedom to Learn: A View of What Education Might Become* (1969), represents an attack on traditional formal schooling. In one chapter, Rogers based the work on a diary kept by a teacher about her efforts to refocus her sixth-grade class toward better learning. Interpreting her actions, Rogers recounted the realities of a class experiencing apathy, discipline problems, and parental concerns, and the teacher who, after reading an account of student-centered teaching—"an unstructured or non-directive approach"—worked to build a more exciting and stimulating classroom. The diary is supplemented with responses written to questions raised by Rogers. In another chapter Rogers extended his ideas to the college level, using a college professor's descriptive account and adding his own interpretations. Then he wrote of his personal experience in teaching a course, "Values in Human Behavior Including Sensitivity Training," at the Western Behavioral Sciences Institute. One of the most fascinating chapters in the book is a four and a half page statement, "Personal thoughts on teaching and learning," which was a very radical document that received major criticism. Rogers began, "I find it very troubling to think, particularly when I think about my own experiences and try to extract from those experiences the meaning that seems genuinely inherent in them." He then stated thirteen propositions/hypotheses with five consequences. His first proposition is "My experience has been that I cannot teach another person how to teach." His

fourth is "I have come to feel that the only learning which significantly influences behavior is self-discovered, self-appropriated learning." After a baker's dozen of these, the consequences include doing away with teaching, examinations, and grades.

In 1970, he joined the faculty of the Western Behavioral Sciences Institute and later the Center for the Study of the Person, writing another major book *Carl Rogers on Encounter Groups* (1970). He and the times had shifted dramatically. The book continues his personal and autobiographical style, this time his experiences with the nature, process, and impact of groups on the lives of individuals. Quickly he grounds the reader in prior key figures (e.g., Kurt Lewin), in prior labels (e.g., T-groups), sensitivity training, and encounter groups. Notes, letters, stories, and individual accounts illustrate processes, changes, and personal experiences. He then turns autobiographical, "Can I be a facilitative person in a group?," to ward off a brief general statement that "would have to be so homogenized that every truth in it would also be so some extent a falsehood" and also to minimize "the flavor of expertise in it, that I did not want to emphasize" (p. 43). Then, too, the more traditional scientist in him leads to a chapter "What we know from research." The book has a persuasive rhetorical quality in the mix of vivid data, startling personal experiences from leaders and participants, and broad useful practical ideas and suggestions.

### An International Dialogue

Rogers was at the forefront of psychology, engaging in discussions with international scholars. He discussed individual psychotherapy as an approach to the "I-Thou" relationship with the eminent Jewish intellectual Martin Buber in 1957, asking him "How have you lived so deeply in interpersonal relationships and gained such an understanding of the human individual without being a psychotherapist? (Buber laughs)" (Kirschenbaum and Henderson, p. 45). A long elaborate answer followed and the dialogue continued. A discussion with the theologian Paul Tillich moved into a major give-and-take on the nature—multiple natures—of man. With the behaviorist psychologist B. F. Skinner, the issue of freedom and control in human life became central. Others would argue that the soul of psychology was in debate. Discussions with Gregory Bateson, Michael Polanyi, and Reinhold Niebuhr enlarged the scope of the discussions. With Rollo May, the role

of evil and the daimonic and demonic came to the fore and cut to the heart of Rogers's central tenets of the goodness of man versus man having the potentiality for goodness and evil. In short, one finds Rogers, a brilliant psychologist and therapist, in contention with some of the most important minds of the twentieth century, over issues that have puzzled human beings for centuries—millennia, really.

*See also:* EDUCATIONAL PSYCHOLOGY; GUIDANCE AND COUNSELING, SCHOOL; PERSONAL AND PSYCHOLOGICAL COUNSELING AT COLLEGES AND UNIVERSITIES.

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LOUIS M. SMITH

## ROUSSEAU, JEAN-JACQUES (1712–1778)

A political and moral philosopher during the Enlightenment, Jean-Jacques Rousseau developed pro-

vocative ideas about human nature, education, and the desired relationship between individuals and the ideal society.

Born in the city of Geneva, Switzerland, Jean-Jacques Rousseau lost his mother hours after his birth and was abandoned by his father at the age of seven. After many years of failed apprenticeships and employments, Rousseau rose to intellectual prominence in 1750 upon winning first prize in an essay contest in France. This marked the beginning of a long period of scholarly production in which he authored a number of philosophical treatises that addressed the problem of individual and collective freedom—and how education might help to resolve the dilemma by producing enlightened citizens who would uphold an ideal state. Forced to flee France and Switzerland as a result of the social criticisms inherent in his work, Rousseau found temporary refuge in England and then surreptitiously returned to France where he remained until his death.

#### Social Inequalities

Rousseau's discontent with contemporary society became evident in his *Discourse on the Arts and Sciences* (1750). Addressing the question of whether progress in the arts and sciences had abetted or detracted from morals, Rousseau portrayed civilization as evil, and he chastised scholars for pursuing knowledge for fame instead of social progress. Similarly, in his *Discourse on Inequality* and his article on political economy written for Denis Diderot's *Encyclopédie* (both published in 1755), Rousseau lamented man's departure from the state of nature and his consequent preoccupation with artificial social customs and institutions—all derived from vain and illusory desires to dominate others. Although he accepted individual or innate differences among human beings, Rousseau attacked the existence of social and civil inequalities in which people crushed the spirits of others in attempting to control them.

In the wake of these social criticisms, Rousseau sketched his vision for an ideal society. Particularly in *The Social Contract* and *Émile*, both published in 1762, Rousseau delineated a society without artificial social constraints or civil inequality. Ruled by a "general will" that encapsulated the essential commonality of all men, citizens would utilize reason to reconcile their individual interests with the laws of the state. Educated to be self-interested and self-reliant, a citizen would not measure himself against other people nor seek to control them. He would es-

chew selfish inclinations in favor of social equality. How, then, could such an ideal state emerge? For Rousseau, it required the complete education of a child.

### *Émile*

Echoing his disdain for contemporary culture and politics in *The Social Contract*, Rousseau begins *Émile* by declaring: “God makes all things good; man meddles with them and they become evil.” Society held man hostage in artificial institutions and traditions, thereby corrupting the natural goodness of human nature. This proclamation contradicted the notion of original sin, widely accepted in eighteenth-century Europe. It implied that a complete social revolution—not mere pedagogical reform—was necessary to replace the artificial social mores of the bourgeoisie with a new class of natural, self-reliant citizens. In accordance with John Locke’s empirical epistemology, moreover, Rousseau believed that children were born ignorant, dependent, impressionable, without rational thought, and gained all knowledge through direct contact with the physical world.

As a result, Rousseau removed his fictional pupil, *Émile*, from his family and placed him in rural isolation. The first three stages of a child’s development (infancy, boyhood, and pre-adolescence) required a kind of “negative” education. Protected from the artificial and pernicious influences of contemporary society, *Émile* would not develop unrealistic ambitions and feelings of jealousy or superiority with regard to other men (*amour propre*). In such a way, the tutor would encourage the child’s physical development, shield him from social and religious institutions, prevent the formation of bad habits and prejudices, and preserve his natural inclination of self-interest (*amour de soi*).

Educated free from the manipulations and desires of others up to this point, Rousseau wanted *Émile* to remain ignorant of social duty and only to understand what was possible or impossible in the physical world. In such a way, his student would learn to obey the immutable laws of nature. For instance, if *Émile* were to break the window to his room, he would face the consequences of sleeping with a cold draft. If *Émile* were to ignore his astronomy lesson, he would endure the panic of losing his way in the woods at night. Through this kind of trial and error, the child would gradually develop reason,

adapt to different situations, and become an autonomous man.

The only appropriate book for Rousseau’s future citizen was *Robinson Crusoe*, as it depicted the independent activities of a man isolated in a natural setting. And to abet *Émile*’s self-reliance, Rousseau exposed his student to a variety of artisan trades. Thus, the child would not crave things he could not get, nor would he engage in a vain desire to control other people. An independent and rational young man, *Émile* learned to accept what was available to him. It is important to note, however, that although the tutor was always behind the scenes, he constantly manipulated conditions to give *Émile* the illusion of freedom.

Having developed the power to reason by the age of fifteen, the child then needed to develop his morality by understanding society and God. Through the safe and detached medium of historical study, Rousseau wanted his pupil to construct his understanding of human character. Detailed historical accounts of men’s spoken words and actions would allow *Émile* to recognize the universality of natural human passion. As a self-confident and rational adolescent, he would neither envy nor disdain those in the past, but would feel compassion towards them.

This was also the time to cultivate *Émile*’s religious faith. Rousseau did not want his pupil to become an anthropomorphic atheist. Nor did he want his pupil to fall under the authority of a specific religious denomination, with its formal rituals and doctrines. Such trappings smacked of the very artificial social institutions from which *Émile* was to be freed. Instead, *Émile* was to recognize the limitations of his senses and to have faith that God—the supreme intelligent will that created the universe and put it into motion—must in fact exist. In this respect, Rousseau deviated from the Enlightenment faith in man’s reason as the sole vehicle for understanding God. Rousseau also alienated himself from formal religious institutions in demeaning their authority and asserting the original goodness of human nature. The corrupt codes and institutions of society had tarnished the purity of human nature, fueled a quest to rule over others, and made man a tyrant over nature and himself. The only salvation, however, rested not with God but society itself. A better society, with civil equality and social harmony, would restore human nature to its original and natural state and thereby serve the intent of God. In this way, Rousseau’s

brand of religious education attempted to teach the child that social reform was both necessary and consistent with God's will.

In Rousseau's final stage of education, his pupil needed to travel throughout the capitals of Europe to learn directly how different societies functioned. *Émile* also needed to find an appropriate mate, Sophie, who would support him emotionally and raise his children. Assuming that women possessed affectionate natures and inferior intellectual capacities, Rousseau relegated Sophie to the role of wife and mother. In direct contrast to *Émile's* isolated upbringing for developing his reason and preparing him as a citizen, Sophie's education immersed her in social and religious circles from the outset, thereby ensuring that she would not become a citizen. Despite this inequality, Rousseau believed that *Émile* and Sophie would comprise a harmonious and moral unit in the ideal state and produce future generations who would uphold it.

### Gender Considerations

Some scholars have explored the implications of Rousseau's gender-distinct education and have suggested that *Émile's* societal isolation rendered him inadequate as a husband and citizen. Raised in social isolation and without family, *Émile* developed the capacity to think rationally, but at the expense of affectionate and empathetic feelings necessary to sustain a relationship with his future wife or with the ideal state. As delineated in *The Social Contract*, Rousseau's ideal state required not merely rational thinkers, but citizens who empathized with one another and the state. Thus, according to this view, Rousseau's gender-distinct assumptions produced an inadequate education for Sophie (whose reason had not developed) and *Émile* (emotionally cold and prey to his wife's manipulations). The family, fragmented and incomplete, could not sustain the ideal state.

A number of scholars have doubted whether *Émile's* isolation in the countryside could necessarily be free of social forces and whether the tutor could exemplify abstract principles without alluding to examples from conventional society. On the other hand, generations since Rousseau have altered their child-rearing practices and adopted his developmental view of childhood as a period of innocence. Some have accused Rousseau, in his manipulation of *Émile* and stress on the general will, of advocating a proto-totalitarian state. On the other hand, many scholars

have identified Rousseau's faith in the agency of individuals to make rational and enlightened decisions both for themselves and their society as a precursor to democracy. Indeed, this lack of consensus about Rousseau's legacy speaks less to his inadequacies than to his profound contributions to the fundamental, enduring, and controversial questions about human nature, self, society, and education.

*See also:* PHILOSOPHY OF EDUCATION.

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SEVAN G. TERZIAN

### RUGG, HAROLD (1886–1960)

Harold Rugg, a longtime professor of education at Teachers College, Columbia University, was one of the best-known educators during the era of Progressive education in the United States. He produced the first-ever series of school textbooks from 1929 until the early 1940s.

Rugg was born in Fitchburg, Massachusetts, the son of a carpenter. His early poverty seemed to pre-

clude his attending college. Nevertheless, he was able to matriculate at Dartmouth College, graduating in 1908 with a bachelor's degree in civil engineering and earning a graduate civil engineering degree from Dartmouth's Thayer School of Civil Engineering in 1909. Rugg worked briefly as a civil engineer, then taught civil engineering at Milliken University in Decatur, Illinois, where he grew interested in how students learn. This interest inspired him to gain a doctorate in education at the University of Illinois in 1915, and he began a college teaching career at the University of Chicago, where he taught until 1920. He then went to Teachers College at Columbia University, where he taught until his retirement in 1951. After his retirement he continued publishing books in education and also served as an educational consultant in Egypt and Puerto Rico.

The field of education was still in its formative stages when Rugg began his career, and he proceeded to have a major impact in a number of areas. Although Rugg was trained as an engineer and educational psychologist, his major initial impact was in the field of curriculum. Rugg applied his training to reassessing how curriculum was created. His editing of and writing in both the twenty-second and twenty-sixth yearbooks of the National Society for the Study of Education provided groundbreaking syntheses of the fields of social studies and general curriculum, respectively.

Rugg was a cofounder of the National Council for the Social Studies and edited yearbooks for a number of respected educational organizations. Rugg, however, did not get very involved in the duties and tasks of such organizations, instead concentrating on his own research and writing projects.

In 1922 Rugg assembled a team to create his Social Science Pamphlets, a series of booklets that comprised the social studies materials for junior high school (grades six to eight). These materials were adapted and published by Ginn and Company starting in 1929. Over the course of the next fifteen years Rugg and Ginn and Company would sell over 5 million textbooks, and the pattern of creating textbook series became a model in publishing still used in the early twenty-first century. With Louise Krueger, Rugg also developed an elementary education (grades one through eight) social studies textbook series in 1939. Unfortunately, Rugg's junior high textbooks were the subject of censorship efforts headed by the National Association of Manufacturers and the American Legion. In this controversy,

these groups accused Rugg of anti-Americanism, socialist or communist leanings, as well as anticapitalism. He was not the only target of such accusations, with other Progressive educators also being so accused. Rugg, however, gained more notoriety because of the enormous popularity of his textbooks. In the 1940s the texts ceased to be published.

In 1928 Rugg cowrote his first major work, *The Child-Centered School*, which described the historical and contemporary basis for "child-centered" education. This work had a major impact on Progressive educators and remains an excellent explanation and critique of this topic. It also was one of the first treatises on the two major emphases within Progressive education—child centeredness and social reconstruction.

As Rugg's career progressed he became as much a critic and discussant of contemporary American culture as an educator. He was an outspoken Social Reconstructionist and a strong advocate of the reform programs of President Franklin Roosevelt. Indeed Rugg was outspoken in much that he did. He was a large man with a commanding presence. People had strong feelings about him, both negative and positive. Despite criticism, he was not easily intimidated and remained confident and hard driving in his work.

Rugg directed his attention primarily toward teacher education and foundations of education in the last years before his retirement. His books in these areas were well respected and received but did not have the lasting impact of his curriculum work. At his death Rugg was attempting to understand and explain creative thought, and his last book, *Imagination*, focused on this area and was published posthumously, not fully completed.

**See also:** CURRICULUM, SCHOOL; EDUCATION REFORM; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION; SOCIAL STUDIES EDUCATION.

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MURRY NELSON

## RURAL EDUCATION

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### OVERVIEW

Hobart L. Harmon

### INTERNATIONAL CONTEXT

Sheldon G. Weeks

### OVERVIEW

Rural education reflects the circumstances, challenges, and context of places in America called "rural." Rural America has been and continues to be a vital part of the nation. As of 2001, rural America comprised 2,288 counties, contained 83 percent of the nation's land and was home to 21 percent of its population (51 million people). The United States, like the rest of the world, is steadily becoming more urban. Two national censuses illustrate the point dramatically. For the first 140 years of the nation's existence, most Americans lived in open country and small towns. The 1920 census was the first to record that urban people outnumbered those living in open country and small towns. Just seventy years later, the 1990 census recorded not only that most Americans lived in urban areas but also that they lived in metropolitan areas of 1 million or more people.

#### The Changing Nature of Rural America

Rural America has changed in many ways. The rural economy in particular has changed—shifting from a dependence on farming, forestry, and mining to a

striking diversity of economic activity. Improvements in communication and transportation between urban and rural areas have reduced rural isolation and removed many of the cultural differences between the two areas. Television, phone service, and transportation systems have helped bring rural and urban dwellers much closer together in terms of culture, information, and lifestyles. And while it continues to provide most of the nation's food and fiber, rural America has taken on additional roles, providing labor for industry, land for urban and suburban expansion, sites for hazardous activities and the storage of waste, and natural settings for recreation and enjoyment.

No one industry dominates the rural economy, no single pattern of population decline or growth exists for all rural areas, and no statement about improvements and gaps in well-being holds true for all rural people. Many of these differences are regional in nature. That is, rural areas within a particular geographic region of the country often tend to be similar to each other and different from areas in another region. Some industries, for example, are associated with different regions: logging and sawmills in the Pacific Northwest and New England, manufacturing in the Southeast and Midwest, and farming in the Great Plains. Persistent poverty also has a regional pattern, concentrated primarily in the Southeast. Areas that rely heavily on the services industry are located throughout rural America, as are rural areas that have little access to advanced telecommunications services. Many of these differences—regional and nonregional—are the result of a combination of factors including the availability of natural resources; distance from and access to major metropolitan areas and the information and services found there; transportation and shipping facilities; political history and structure; and the racial, ethnic, and cultural makeup of the population. As a result, rural areas differ in terms of their needs and the resources they possess to address those needs.

Understanding rural America is no easy task. It is tempting to generalize and oversimplify, to characterize rural areas as they once were or as they are now in only some places. Still, there is an overall pattern of economic disadvantage in rural areas. The historical and defining features of rural economies often constrain development. Regardless of other differences, efforts to assist rural areas must take into account three common rural characteristics: (1) rural settlement patterns tend to be small in scale

and low in density; (2) the natural resource-based industries on which many rural areas have traditionally depended are declining as generators of jobs and income; and (3) low-skill, low-wage rural labor faces increasingly fierce global competition.

Connecting rural America to the digital economy and raising the skills of workers and leaders found there will be essential for rural America to compete more effectively. A third of all rural counties captured three-fourths of all rural economic gains in the 1990s. This concentration of economic activity is the result of powerful shifts in demographics, technology, and business practices. And while rural America has often based its development on relatively low labor costs, future opportunity will be based more on skilled workers and capital investments. Many rural schools need to raise their standards and become fully integrated into telecommunication networks.

Some observers point to technology as the driving force of the rural economy in the twenty-first century. Others believe a significant portion of today's rural America will be "metropolitanized" in the years ahead, continuing the trend in which the fastest growing portion of the U.S. economy from the 1970s into the twenty-first century was the part that was "formerly rural." That is, rural areas adjacent to the nation's metro areas, or ones growing fast enough to become a metro area in their own right, probably have very bright economic futures.

Rural areas suffer from the out-migration of both young and highly skilled workers, leaving an aging population and strained public services (including public education). Most areas have difficulty providing the capital and infrastructure to encourage and sustain new rural entrepreneurs. As a result, many rural areas are searching for local features that can spur new growth, such as scenic amenities, environmental virtues, or unique products that reflect the cultural heritage of a particular region. Expanding agricultural opportunities will be important, through value-added processing and new specialized crops. Better educated residents and improved rural economic networks are essential to the development of new rural businesses.

### Defining Rural Schooling

No single definition exists to define rural America and rural schools. All that is not metropolitan is often said to be rural. As noted earlier, one should

remember that rural America is quite diverse from one part of the country to another. Issues and trends in rural education may be place (region) specific for any number of factors. Generalizations about education in one rural area of the United States may or may not be true for another. Nevertheless, generalizations can provide a foundation of information for examining issues and trends in a regional and local area.

The *Common Core of Data* (CCD), maintained by the National Center for Education Statistics, uses information on two locale classification schemes to identify every school and district in the nation. The first locale scheme consists of seven types of locale codes created in the late 1980s, ranging from a large city to rural. The categories of *rural* and *small town* are often used to describe the rural segment of American schooling. In 1997–1998, nearly 64 percent of all school districts were classified as rural or small-town districts. The second locale classification scheme in the CCD is *metropolitan location*, divided into three categories: a central city of a metropolitan area, metropolitan but not central city, and non-metropolitan. About 53 percent of all districts were located in nonmetropolitan areas. Interestingly, in these two schemes, rural and small-town schools were found in both metropolitan and non-metropolitan areas. Of the 9,249 districts identified as rural and small town, 1,693 were located in metropolitan areas. Lastly, fewer than 1,000 kindergarten through grade twelve unit schools remained in the United States, that is, schools with all grades—kindergarten through twelve—located in the same building.

In 1998 the National Education Association used data primarily from studies conducted by federal agencies to describe public education in rural areas and small towns compared to central city schools and urban fringe schools. A few of the findings were as follows:

- Approximately one-half of the nation's 80,000 public schools and approximately 40 percent of the 41.6 million public school students were located in rural areas and small towns. Rural schools were smaller, less likely to have minority students, and less likely to provide bilingual education, English as a second language, magnet schools, and job placement programs. But rural schools were more likely to offer remedial programs and Title I programs that serve high poverty populations.

- Of the approximately 2.56 million public school teachers, approximately 40 percent were in rural and small town schools. Compared to teachers in central city schools and urban fringe schools, rural teachers tended to be less well educated, slightly less experienced, younger, and less likely to belong to a minority group. Rural school principals were more likely to be male and less likely to belong to a minority group compared to principals in central city schools and urban fringe schools.
- Teachers in rural and small town schools spent more time with students at school and outside school hours, had smaller incomes, and were less likely to have benefits of medical insurance, dental insurance, group life insurance, and pension contributions.
- Teachers in rural and small town schools perceived student use of alcohol to be a more serious problem and were less likely to perceive a serious problem in student absenteeism, tardiness, verbal abuse of teachers, and student disrespect for teachers. Teachers in rural schools were less likely than teachers in central city schools, but more likely than teachers in urban fringe schools to perceive poverty as a serious problem in their schools.

In his 1982 book *Rural Education: In Search of a Better Way*, Paul Nachtigal contended that the important factors that differentiate a rural community in one part of the country from a community of similar size and isolation in another part of the country appear to be related to the availability of economic resources, cultural priorities of the local community, commonality of purpose, and political efficacy. Nachtigal described some basic differences between rural and urban areas, which are listed in Table 1.

Perceptions of all rural schools as inferior schools are incorrect. States with a predominance of small, community-centered schools do rather well. For example, on achieving the National Education Goals, in 1998, eight of the top ten states on math and science performance, six of the top seven on student achievement in the core subjects, and all top five on parent involvement were rural states. In fact, many of education's so-called best practices were born out of necessity long ago in the rural school. Examples include cooperative learning, multigrade classrooms, intimate links between school and community, interdisciplinary studies, peer tutoring,

**TABLE 1**

Basic differences between rural and urban areas	
Rural	Urban
Personal/tightly linked	Impersonal/loosely coupled
Generalists	Specialists
Homogeneous	Heterogeneous
Nonbureaucratic	Bureaucratic
Verbal communication	Written memos
Who said it	What is said
Time measured by seasons of year	Time measured by clock
Traditional values	Liberal values
Entrepreneur	Corporate labor force
Make do/respond to environment	Rational planning to control environment
Self-sufficiency	Leave problem solving to experts
Poorer (in spendable income)	Richer (in spendable income)
Less formal education	More formal education
Smaller/less density	Larger/greater density

SOURCE: Based on Nachtigal, Paul. 1982. *Rural Education: In Search of a Better Way*. Boulder, CO: Westview Press.

block scheduling, the community as the focus of study, older students teaching younger ones, site-based management, and close relationships between teachers and students.

### Challenges and Issues

Many of the challenges and issues that confront rural schools are not new, and in large measure they are linked to regional and local circumstances of change and reality in rural areas.

**Adequate funding.** Rural school districts, with their modest fiscal bases, usually cannot generate sufficient local resources to supplement adequately the state school finance programs the way that more affluent localities can. In at least sixteen states, supreme courts have ruled that their state system of school funding is unconstitutional and have ordered that new systems be developed. While equity and efficiency arguments have been prevalent in most of these cases, these court challenges also highlight the need to provide a level of funding for providing adequate educational opportunities if students are expected to meet state-mandated standards of performance.

**Setting standards.** Americans want schools where students must meet some standard of achievement. But who sets the standard is a critical issue being debated in rural schools and their communities. Local versus state (or federal) control of public schools is at the center of the controversy of setting standards. Rural schools and community advocates, such as the

Rural School and Community Trust, believe that standards should originate within the community in which the students live. Others argue that the state should set standards because local schools in some rural areas traditionally have low expectations for student achievement and because taxpayers in some rural areas have low interest in funding high standards for all students. Rural interests also argue that rural communities cannot afford to fund the requirements for state-mandated standards and that school consolidation—in the name of fiscal efficiency—is the likely result. Some policymakers also believe federal and state interests in having an educated citizenry for competing in a global economy compels standards be set at the state level, with local schools having flexibility to decide how to teach the content rather than what to teach.

**School size.** The majority of schools in rural settings are small, enrolling fewer than 400 students. Only 2 percent have enrollments exceeding 1,200 students. Research reveals that a high school with an enrollment of 400 is able to offer a reasonably comprehensive curriculum and that high schools ought not to enroll more than 600 to 1,000 students. Schools with high populations of students from low-income families do best academically in small schools. Public concerns regarding school safety issues also reinforce the need for small schools, where teachers know students well and students have a feeling of belonging in the school and community.

**School facilities.** While rural schools may be located in some of America's most beautiful areas, in 1996 about 4.6 million rural students were attending schools in inadequate buildings. Three out of ten rural and small-town schools have at least one inadequate building. One in two schools have at least one inadequate building feature, such as a roof, a foundation, or plumbing. Approximately one-half have unsatisfactory environmental conditions in the buildings. Approximately 37 percent have inadequate science laboratory facilities, 40 percent have inadequate space for large-group instruction, and 13 percent report an inadequate library/media center.

Technology needs also force building modifications. Many older schools lack conduits for computer-related cables, electrical wiring for computers and other communications technology, or adequate electrical outlets. Without the necessary infrastructure, schools cannot use technology to help overcome historical barriers associated with ruralness and isolation. In 1990 rural schools expressed a need for an

estimated \$2.6 billion for funding maintenance on existing buildings and almost \$18 billion to replace obsolete rural schools.

**Diversity and poverty.** Addressing issues of education in rural areas includes confronting the realities of people in poverty and the growing diversity of rural America. Geographic diversity best defines the issue of diversity in rural America. Using 1990 census data, 333 of the 2,288 rural counties have a minority group that makes up one-third of the population. These counties contain only 12 percent of the total rural population. They are geographically clustered, however, according to the residents' race or ethnic group. Rural minorities often live in geographically isolated communities where poverty is high, opportunity is low, and the economic benefits derived from education and training are limited. Rural counties in which African Americans make up one-third or more of the total population are found only in the South. Native American (American Indian, Alaskan Native) counties are clustered in three areas: the northern High Plains, the Four Corners region in the Southwest, and Alaska. Most of the Hispanic counties lie near the Rio Grande, from its headwaters in southern Colorado to the Gulf of Mexico. Hispanics are the fastest growing rural minority group. Agricultural areas in Washington, ski resorts in Colorado, and meatpacking centers in Kansas, Nebraska, and Iowa saw new or greatly expanded Hispanic settlements in the 1990s.

Nearly 10 million poor people live in rural America, comprising almost one of every five rural residents. A poverty gap exists between rural minorities and the white population. Rural minorities are significantly more impoverished as a percentage of the population. Nevertheless, the overwhelming majority of poor people living in rural America are white (72.9%). Fewer than one-fourth (23.6%) are African Americans, and Hispanics make up only 5.4 percent of the total. Less than 5 percent are Native Americans. These facts contradict the widely held notion that poverty in the United States is a minority problem. These people are the working poor in rural America. Addressing rural education will require solutions to both the poverty gap of minority groups and the persistent impoverished conditions of all rural poor, especially those who work for low wages.

**School improvement capacity.** Major initiatives in the 1990s—such as the National Science Foundation's Rural Systemic Initiative, the federal government's Comprehensive School Reform Demon-

stration Program, the Annenberg Foundation's Rural Challenge (now the Rural School and Community Trust), and the U.S. Department of Education's Regional Educational Laboratory program—have each in their own way attempted to give assistance to rural school systems. Increasingly, rural school districts are relying on regional educational service agencies (ESAs) in their respective states as vital partners in school improvement efforts. In his 1998 book *Expanding the Vision: New Roles for Educational Service Agencies in Rural School District Improvement*, E. Robert Stephens called on ESAs to pursue strategic goals that will enable them to be the first line of school improvement support for their rural school districts. ESAs are particularly important in giving rural schools the capacity to educate students with special and exceptional learning needs. The Association of Educational Service Agencies is the national professional organization serving ESAs in thirty-three states.

**Teacher recruitment and retention.** Attracting and retaining quality teachers will be critical in creating and implementing higher standards for student academic achievement. According to Said Yasin's report "The Supply and Demand of Elementary and Secondary School Teachers in the United States," during the 1998–1999 school year there were 2.78 million teachers in public schools. More than a million of those teachers (approximately 40%) were in six states: California, Florida, Illinois, New York, Ohio, and Texas. These six states also have almost 1,400 rural school districts. The number of elementary and secondary school teachers was projected to increase by 1.1 percent annually to a total of 3.46 million by 2008. Urban and poor communities will have the greatest need for teachers, with more than 700,000 additional teachers needed by 2010.

The rural teacher shortage affects all subject areas but particularly math, science, and special education. According to the National Association of State Boards of Education, an adequate number of teachers is trained each year. The problem is one of distribution. Causes for a teacher shortage in rural areas include: social and cultural isolation, poor pay and salary differentials, limited teacher mobility, lack of personal privacy, rigid lockstep salary schedules and monetary practices, the luring of teachers away by higher paying private sector businesses and industries, strict teacher certification and licensure practices and tests, lack of reciprocal certification and licensure to enable teaching in another state, re-

cruitment cost (time/costs to gather information), and a high rate of teacher turnover (30% to 50% in some areas).

**Leadership.** The most critical issues in managing and running small rural school districts are finances, regional economic conditions, state regulations, salaries, and providing an adequate variety of classes. The greatest turnover among superintendents occurs among the smallest districts, those with fewer than 300 students. An environment of high-stakes testing and increasing public accountability for student and school success is placing a premium on persons who can effectively lead schools (and school districts). As is noted in the 1999 book *Leadership for Rural Schools: Lessons for All Educators*, edited by Donald M. Chalker, being an effective principal in a rural area means building positive relationships with the people in the rural community. The school in the rural community is still a respected institution, with much more focus on people than on business. Building trust and finding ways to make the curriculum incorporate the strengths of the community are key features of successful school leaders in rural areas. In the decades ahead, leading rural schools and school systems in ways that contribute to community and economic development appear essential for sustaining a prosperous school and community in much of rural America.

**Policy action.** Lack of a precise demographic rural definition frustrates those who work in setting educational policy. In 2000, for the first time in history, an organization—the Rural School and Community Trust—systematically attempted to gauge and describe the relative importance of rural education in each state. This first effort used both *importance* and *urgency* gauges. The results revealed a cluster of seven states where rural education is crucial to the state's educational performance and where the need for attention is great: Alabama, Arkansas, Kentucky, Mississippi, North Dakota, South Dakota, and West Virginia. These states are in regions that are chronically depressed, suffer large areas of out-migration, and are deeply distressed by changes in the global economy. Louisiana, Montana, and Oklahoma rounded out the top ten states where rural education was important and the need for policy action was urgent. That twenty-five states now have affiliate organizations with the National Rural Education Association also reflects the growing trend for rural education interests to unite and seek solutions to public education issues.

**Research.** In 1991 Alan J. DeYoung pointed out in his book *Rural Education: Issues and Practices* that rural educational issues rarely attract the attention of prestigious colleges of education and their professorates. Part of the reason is that rural areas are places with traditions and cultures of labor and of working, rather than demand for intellectual understanding and for abstract scholarship. In 1996 rural education researchers Hobart L. Harmon, Craig B. Howley, and John R. Sanders reported in the *Journal of Research in Rural Education* that only 196 doctoral dissertations were written between 1989 and 1993 on the topic of rural education.

Since 1997, the U.S. Department of Education's Office of Educational Research and Improvement has operated Regional Educational Laboratories. These labs were authorized by federal law to devote 25 percent of their funding to meeting the needs of rural schools, part of which has been the conduct of applied research. In 1996 the Education Department designated one of the labs to operate the National Rural Education Specialty, a practice that ended with the start of a new five-year contact period for the labs in 2001. The need for research and evaluation of practice in rural education is likely to increase as more accountability and results are expected from public investments in education.

### **Educational Services in Rural Areas**

Public elementary and secondary schools are the greatest provider of educational services in most local rural communities, and often are the community's largest employer. In 1917, passage of the Smith-Hughes Act by the U.S. Congress provided funds for teaching agriculture to boys in high school, as well as to young farmers and to adults who came to school on a part-time basis. In the 1960s, Congress initiated many educational programs, including Title I of the Elementary and Secondary Education Act, which provided funds for educating disadvantaged children. In the 1970s, federal vocational funds helped establish regional vocational centers in rural areas. Federal school-to-work funds in the 1990s encouraged school systems, including rural school systems, to better connect the school curriculum with the workplace. By the mid-1990s, the U.S. Department of Education operated more than 140 elementary and secondary assistance programs, of which twelve specifically targeted or included rural schools.

Passage of the Morrill Act in 1862 provided an opportunity for persons interested in agriculture and the mechanical arts to attend a land-grant college. In 1914 Congress passed the Smith-Lever Act, which created the Cooperative Agricultural Extension Service, arguably the agency that has provided more educational opportunities for rural adults than any other agency. The Cooperative Extension's 4-H youth program has also been a leading educator of young people in rural America. Like much of rural America itself, these traditional agricultural-focused agencies have been responding to the need to serve a broader constituency in rural areas, in addition to agriculture.

Rapid expansion of community colleges in the 1960s and 1970s greatly expanded higher education and adult education opportunities to many rural communities. These efforts expanded the informal adult education opportunities made available by organizations such as the National Grange, the National Farmers Union, the American Farm Bureau Federation, and the National Farmers Organization.

In addition to the U.S. Department of Agriculture, the Appalachian Regional Commission, the U.S. Department of Health and Human Services, the U.S. Department of Labor, the U.S. Department of Commerce, and a host of other federal agencies operate programs serving the educational needs of rural America.

*See also:* AGRICULTURAL EDUCATION; COMMUNITY EDUCATION; FEDERAL EDUCATIONAL ACTIVITIES; FINANCIAL SUPPORT OF SCHOOLS; POVERTY AND EDUCATION; SCHOOL FACILITIES.

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HOBART L. HARMON

## INTERNATIONAL CONTEXT

Rural education is always considered in comparison to urban education. There are other dichotomies, including government versus private or mission schools; access to the first year of schooling for male versus female pupils; the standard of facilities and resources; the education and experience of teachers; and the quality of education offered and the language of instruction (the national language is often a foreign tongue to people in rural areas).

### The Challenges of Rural Education

When outside teachers who do not speak the local language staff rural schools, cultural conflict occurs. Often they feel superior to the local people and refuse to take the time to learn about the culture of their host community. Teachers posted to rural schools usually apply for transfers and if denied them simply "run away." Even when "at post," they often teach only a portion of their load, as they find excuses to leave—to collect their pay, to go to the health center, to attend funerals, and so on. Teacher absenteeism is a major problem in rural areas.

In the Majority World (or Third World, the South, where the majority of the peoples of the world live) there exists a range of possibilities that are encompassed by *rural*. Population densities vary but are usually small and scattered. The environment is also diverse, ranging from plains and deserts to mountain areas with deep valleys and flowing rivers, to places with small islands scattered across large areas of open sea. "Remote" and "isolated" are other categories of rural. Schools in rural areas tend to lack amenities. Electricity is either not available or limited. Where education systems rely on interactive radio and television to deliver primary school class-

es, the isolated schools are left out. Even if they have batteries for radios, the signal either does not reach them or is too weak to be understood. If the community must construct the classrooms and teachers' houses, they are often built out of local or temporary materials, which are perceived as inferior by outsiders. School supplies may never arrive, so teachers fall back on teaching from their kit from their training college days and rely more on rote learning.

Rural schools tend to harbor untrained or unqualified teachers. School inspectors do not like walking or riding in canoes for a number of days, so remote schools rarely get visited. Where population densities are small, rural schools tend to need only one or two teachers. This requires either staggered intakes—a class every two or three years—or multi-grade teaching (as in the old one-room, one-teacher schoolhouses in rural America that went from kindergarten to grade twelve, which are now museums as they have been replaced by busing and regional schools).

The solution to this problem in the Majority World has been boarding schools or primary schools with hostels for students from remote communities. Most secondary schools still rely on boarding students from far away.

Some countries, such as Jamaica, Papua New Guinea, and Tanzania, have experimented with "quotas" to control the transition from primary to secondary school so that a fair proportion of those pupils in rural schools are able to continue their education (or to ensure that females are represented at the next level). Selection systems employing quotas have lasted for only a few years because urban elites, who make the decisions, find rural children taking places in schools where their children might have gone.

Where rural schools are inferior in facilities and the quality of teachers (for example, the majority of South African farm schools, which enroll 40 percent of the primary pupils), the consequence is that students tend not to get selected for the next level of schooling. The examinations—the item banks written by educators who live in cities—contain clear urban biases and favor the progression of urban children. "First-past-the-post" examination systems in rural areas have tended to favor the children of outsiders (such as health professionals, police officers, extension officers, and teachers) over local children.

It has been found, when intelligence tests have been administered, that bright rural children do not

get admitted into secondary schools, whereas duller urban children do. This is because first-past-the-post selection systems based on formal primary-school-leaving examinations favor children from urban areas where there are better facilities, equipment, and teachers, and more diverse experiences. All of this contributes to the vicious cycle of rural poverty and neglect. The policy debates are never ending. Where successful, the best students who excel on examinations generally leave their communities, never to return. This results in a leadership vacuum in rural areas. Even youth who have been barred from further studies often migrate to gain experience or seek employment in unskilled jobs that are not available at home.

### Changing Strategies

Some policymakers believe that in order to keep young people in rural areas, rural education should be different from urban education. It is claimed that if schooling is more relevant to local conditions and designed to contribute to rural development, the youth may not want to migrate. They also assume, usually fallaciously, that teachers can become community development workers and assist in the transformation of rural areas. The change in name from primary to community schools, which has occurred in many countries, reflects this bias. Planners often ignore the aspirations that rural parents have for their children—to become educated, obtain a job in a city, and send remittances home to their aging parents.

Ways of adapting primary education to local conditions, while maintaining standards and permitting the quality of learning and supporting upward mobility for the brighter children, are being explored in many countries. An example is integrating school gardens with agricultural and nutrition education and school lunch programs. Another is new programs in minority education that address local needs without undermining quality or equality of opportunity.

Urban elites may clamor for “vocalization,” but for other people’s children, not their own. Generally there has been a rejection of vocalization of primary schooling. Rural education must not become “unequal” education. The conviction remains that primary schooling must be a firm foundation for further education, while being terminal for those who are unable to continue to the next level. This was the key message in the 1967 book *Ed-*

*ucation for Self-Reliance*, written by Julius Nyerere, president of Tanzania. The challenge of how to achieve both objectives at once continues to exist in the early twenty-first century.

The distribution of school supplies and materials remains a critical issue. Urban schools tend to get supplied first and rural and remote schools last. This syndrome is found in the delivery of most government services and prompted Richard Chambers, a leading rural sociologist, to call in 1997 for “the last first” as fundamental policy to support rural development. It is perhaps unlikely that central ministries of education, either nationally or in regions or districts, will provide isolated schools with computers, solar power, and communication dishes before they have provided the new panacea of information technology or e-learning to their urban schools. The gap between the poor and undereducated in rural areas and their urban counterparts is bound to increase.

Other strategies that have been employed with varying degrees of success include the Book Flood in Fiji, in which schools were given large numbers of storybooks, intended to attract students’ attention and to expose them to a wide variety of subjects. The Book Flood was endorsed by the World Bank and has spread to other countries (reading enhances learning, no matter what is read). Inducement allowances have been used to attract and hold qualified teachers in isolated schools. In some countries a “bridging” or extra year of schooling is provided to help children from remote communities catch up. Indonesia has relied on nonformal education centers. In New Zealand and Papua New Guinea vernacular preschools, where reading and writing is taught before grade one, has enhanced the capacity of rural pupils to comprehend formal schooling and to excel in school. In some places, particularly in Central and South America, missionaries run private schools that are of a better quality than those provided by the government. More than 160 countries are struggling with issues related to developing rural education. Rarely do the policymakers strive for a comparative perspective or try to learn from each other. Therefore the policies employed are very diverse.

*See also:* INTERNATIONAL EDUCATION; INTERNATIONAL GAP IN TECHNOLOGY; POVERTY AND EDUCATION.

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SHELDON G. WEEKS

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## SANCHEZ, GEORGE I. (1906–1972)

Reformer and activist, George I. Sanchez is recognized for his contributions to educational equity, especially for Mexican-American children. Sanchez was born in Albuquerque, New Mexico, and attended schools in Arizona and New Mexico before graduation from high school in Albuquerque. He taught for eight years in rural schools while working on his bachelor's degree and taking weekend and summer courses at the University of New Mexico. After graduation Sanchez received a fellowship for graduate study from the General Education Board (GEB), a foundation funded by the Rockefellers, and the funding provided the means for him to receive his master's degree in education with specializations in educational psychology and Spanish, and his Ed.D. in educational administration from the University of California at Berkeley. His master's thesis concerned the inequity of using I.Q. tests developed for English-speaking children for evaluation of Spanish-speaking children.

### **Career**

The GEB provided the funding for his first position as director of the Division of Information and Statistics of the New Mexico State Department of Education (1931–1935). Sanchez's abilities were noticed by prestigious, national foundations. In 1935 the Julius Rosenwald Fund (founded by the owner of Sears Roebuck) asked Sanchez to conduct field studies concerning rural and Negro education in the south and in Mexico. The latter resulted in *Mexico: A Revolution by Education*, which remained the definitive source on education in Mexico for many years. Two years later Sanchez was invited to become a member

of the Venezuelan Ministry of Education and to be responsible for organizing a normal school for secondary teachers. After serving as director of the Instituto Pedagógica Nacional from 1937 to 1938, he returned to New Mexico and to the renewal of a battle over school finance reform. Prior to leaving for Venezuela, he had served as president of the teachers association in New Mexico. In that capacity, he led the fight for the equalization of school finance through legislation. Sanchez had been told that he would be offered a tenured position at the University of New Mexico on his return, but after the school finance controversy, his politically powerful opponents blocked his appointment.

From 1938 to 1940 he surveyed Taos County, New Mexico, for the Carnegie Foundation (a survey that resulted in Sanchez's book, *Forgotten People: A Study of New Mexicans*) and taught at the University of New Mexico. *Forgotten People* brought about a public awareness of the severity of inequities for the school children of New Mexico. Sanchez pointed out that two-thirds of the other states had higher literacy ranking compared with New Mexico, with an illiterate population of 13.3 percent. He emphasized the lack of literature in rural schools, the low enrollment of Spanish-speaking children, the low expenditures per pupil, and the highest infant mortality rates in "counties where more than half of the population is Spanish-speaking" (Sanchez 1940, p. 29).

Sanchez's most productive years as an activist with national influence began after he came to Austin, Texas, in 1940 as a tenured, full professor at the University of Texas. His outspoken political opinions and actions exasperated many members of various boards of regents, but he never allowed himself to be pressured into denying his principles. Sanchez

was hired as the first professor of Latin American studies and later served as chair of the History and Philosophy of Education Department.

In 1946 and 1947 Sanchez conducted a survey of Navajo education for the U.S. Department of the Interior. His findings, as presented in *The People: A Study of the Navajo*, pointed out the inequities of the education of Navajo children. Only about 25 percent of eligible children attended school, the schools were inadequate in materials and facilities, and most were located by traveling through roads that he described as gullies. He stated, "The Navajos are people—Americans worthy of a dignified, American way of life" (Mowry, p. 152).

After World War II Sanchez began a period of unceasing activism on behalf of equity for Mexican Americans, especially Mexican-American children in public education. In 1941 he was national president of the League of United Latin American Citizens (LULAC), and while he appreciated the contributions of LULAC, he saw a need for a more active approach to civil rights. The end of the war and return of veterans, the G.I. Bill, and Sanchez's foundation contacts all came together to assist him in his mission. Mexican-American men returned from World War II with a feeling that they should have equal rights in the country for which they risked their lives. Also, many had an opportunity for higher education not possible previously; many entered law school. Both undergraduates and law school students sought out Sanchez, and he later worked with them on court cases affecting the right of Mexican-American children to equity. His dedication to civil rights influenced many to become active in challenging discrimination in the courts. At this time Sanchez began to look for funding and court cases concerning equal rights. Throughout his career he was involved in causes that received support, moral and/or monetary, from Alianza Hispano-Americana, the American G.I. Forum, the American Council of Spanish-Speaking People, American Civil Liberties Union, the Marshall Trust, and the Mexican-American Legal Defense and Education Fund. During the 1950s Sanchez received funding from the Marshall Trust to found an organization to work for equity for Mexican Americans. This organization, the American Council of Spanish-Speaking People, funded several court cases and provided encouragement and support for Mexican-American concerns, especially in the area of education.

## Contribution

The University of California at Berkeley recognized Sanchez in 1984 with a retrospective honoring him as the leader in laws affecting Mexican Americans. He was involved as advisor, expert witness, or investigator concerning legal issues throughout his life, and two cases are considered to be landmark cases. In *Delgado v. Gracy* (1948), a case that resulted in an agreed judgment, Sanchez and Gustavo Garcia, an attorney, were specifically given credit by the Texas State Board of Education for the formal policy adopted by the state board to oppose segregation of Mexican-American children in schools because of their Spanish surnames. The Delgado case set a precedent—the legality of separating and treating Mexican-American children as a class apart had been successfully challenged.

The other case, *Hernandez v. Texas* (1954), was the first U.S. Supreme Court case concerning Mexican-American rights and was decided unanimously in favor of the plaintiffs. Although the appeals concerned equity in jury selection, the final ruling could be applied to public education. Again the concern had been the treatment of Mexican Americans as a class apart. Garcia and Carlos Cadena were the lead attorneys, and Cadena gave credit to Sanchez for developing the theoretical basis for the brief—Sanchez's class apart theory—that it was illegal to discriminate and segregate based on Spanish surname. In numerous other cases Sanchez was called as an expert witness because of his research and publications on the misuse of I.Q. tests to place Mexican-American children. Besides his expert testimony, Sanchez's major contributions to legal cases were the following: (1) to advise attorneys to use the precedent of the class apart theory; (2) always to ask for one dollar in damages because opponents will rarely appeal since it would open the case back up for damages; and (3) to sue the members of the state board of education in each case because they usually will make a deal in order to have their names dropped. None of the cases in which he was involved was appealed.

As an individual Sanchez was a man of many interests. *Arithmetic in Maya* was written by him. His papers at the Benson Latin American Collection at the University of Texas contain his drawings of a computer—an unknown device for most people—and he corresponded with Walt Disney about making educational movies.

Professionally, Sanchez wrote books on education in Mexico, higher education in Mexico, education in Venezuela, and the education of New Mexicans and Navajos, as well as many journal articles. For many years he was on the editorial board of the *Nation's Schools*. He also wrote several textbooks.

National recognition was widespread. Sanchez served in the following capacities: member of John F. Kennedy's Committee of Fifty on New Frontier Policy in the Americas; National Advisory Committee for the Peace Corps; Latin American Consultant to the U.S. Office of Civil Defense as well as to U.S. Office of Indian Affairs; U.S. Office of Education on Migrants; U.S. Office of Interior; and Navajo Tribal Council.

After Sanchez's death in 1972 schools were named for him in Texas and California, as well as a room in the U.S. Office of Education. On May 2, 1995, the University of Texas at Austin named the College of Education after him. In life he was considered an all too vocal radical by university presidents and regents; in death a new, more enlightened leadership recognized him as a pioneer reformer.

*See also:* MULTICULTURAL EDUCATION; RACE, ETHNICITY, AND CULTURE, *subentry on* LATINO GROWTH.

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MARTHA MAY TEVIS

## SCHEDULING

In 1994 the National Education Commission on Time and Learning found the issue of how time is spent in schools to be a matter of urgency. Likewise, the National Education Association reported that "across the nation in schools and districts engaged in transforming schools into more effective learning communities, the issue that has emerged as the most intense and the one that universally dominates discussion is time" (p. 9). To spend the "time budget" more wisely, schools use a variety of scheduling arrangements. Discussed here are the various types of schedules that schools use to make optimum use of the school day.

### Historical Background of Scheduling

In the early nineteenth century, teachers typically had a limited education and were expected to function well in all subject areas. Staff at all levels taught any subject at any time of the day. In the late 1800s, the *Carnegie unit*—comprised of approximately fifty-minute class periods in which a single subject is taught, and for which teachers specialize in particular subject areas—became the most frequently used scheduling format. J. Lloyd Trump's *An Image of the Future*, published in 1958, caused schools to experiment with ungraded instruction, long periods of independent study, and large group instruction. The plan failed, however, partly due to the large amount of unstructured, independent study time for students.

Other scheduling experiments have also failed. In the 1970s, the notion that flexibility in scheduling is beneficial to staff and students led to the Open School concept. Divisions between classrooms in elementary schools were eliminated and students were able to progress at their own speed, moving from one grade area to another. During the 1960s and 1970s, some schools modified the traditional seven-period day, breaking the day up into twenty-minute *modules* and calling the plan *modular flexible scheduling*. Neither plan took hold.

In the 1970s, with flexibility continuing to be a priority, *fluid block scheduling* became popular and successful. This scheduling pattern allots a block of two to three hours to teams of teachers from various subject areas, allowing teachers to schedule instruction according to student needs. Another flexible scheduling alternative that began in the late 1980s and continues in popularity is the *zero period schedule*. Designated courses begin an hour earlier than the regular school day, allowing some students to leave an hour earlier or enroll in an extra class.

The 1989 publication of *Turning Points*, by the Carnegie Council on Adolescent Development, brought major changes for middle-level schools. Recognizing that junior high schools were simply mirror images of high schools, the council recommended that schools be reconfigured to fit the developmental needs of young adolescents. Thus, various forms of block scheduling and interdisciplinary teaming took hold in middle schools, and later in high schools as well. With *block scheduling*, teachers are given longer periods of time—usually ninety minutes—to work with students. *Interdisciplinary teaming* is a popular arrangement where a group of teachers (usually four or five) works with 125 to 150 students, essentially creating a school within a school. Interdisciplinary units of study help students' understand the connections between subjects. Teaming is sometimes combined with block scheduling.

Throughout the history of school scheduling, the need for flexibility and the need for teachers to work cooperatively for the benefit of students are recurring themes. These themes impact educators' scheduling choices.

### Selecting a Schedule

Selecting an appropriate school schedule involves some fundamental assessments, including examining what teachers are doing and determining if classroom instruction is improving student achievement. When teachers make instruction optimally effective for students, it is appropriate to consider how use of time could further enhance learning—the schedule must support, not drive, the instructional program. As teachers become more innovative and experimental in their classroom activities, they adopt flexible and cooperative approaches that demand new organizational arrangements.

What students need is another consideration when choosing a schedule. For example, elementary

and middle school students are restless, have short attention spans, and require frequent physical movement, and frequently changing settings allows for such movement. Elementary students need close relationships with adults, and thus need to remain in the care of one teacher, not five or six, during a school day. High school students need opportunities to explore more specialized areas of interest, and thus require a wide variety of courses from which to choose.

Other considerations can impact scheduling. Whether or not to group students by their ability levels is an issue on which parents and teachers do not always agree. If improving student behavior is a priority, reducing the number of times students change classes and interact in the halls is considered. Teachers' preferences for teaching assignments and planning periods, assigning enough lunch periods to accommodate students, arranging for televised classes, including courses that are popular (or eliminating outdated ones), and parents' attitudes about courses all impact scheduling decisions.

### Scheduling Models

Scheduling models are generally described in terms of the amount of time students spend in a specified classroom. The most frequently used scheduling models are (a) the traditional, self-contained classroom, (b) forty-five to fifty-minute class periods, (c) a variety of configurations of block scheduling, and (d) teaming.

**Self-contained classrooms.** Typically seen in elementary schools, self-contained classrooms are settings where a single teacher is in charge of instructing twenty to thirty students for the major portion of the day. The advantages of self-contained classrooms include strong student-teacher and student-to-student relationships; flexibility in time spent on subject areas; and buildings designed for self-contained classes. The cost of this arrangement is in the loss of high-quality instruction for some subject areas, and possibly in all subjects, if the teacher is not a master of instruction and discipline.

**Forty-five to fifty-minute class periods.** The traditional high school and middle school schedule, shown in Figure 1, is of fixed length and classes meet the same hour each day. Benefits include daily drill and practice for such subjects as mathematics; students miss only one period in each subject when they are absent; and schools are likely to be similar when

FIGURE 1

**Traditional seven-period day schedule for seventh and eighth grades**

Period	Math		Science		English		Social Studies		Reading			Electives		
	7th Jones	8th Smith	7th Joe	8th Mims	7th Toms	8th Abbott	7th Sole	8th Hughes	Dunbar	Tool	Typing	Art/Life Skills	P.E./Athletics	
1	Seat Count Course Number											1st Term 2nd Term	Art	Athletics Boys
2													Art	P.E.
3	Planning Period												Art	P.E.
4													Life Skills	P.E.
Lunch														
5													Life Skills	P.E.
6													Life Skills	P.E.
7													Life Skills	Athletics Girls

All periods are 45 minutes.

SOURCE: Schroth, Gwen. 1997. *Fundamentals of School Scheduling*. Lanham, MD: Scarecrow. Page 76. Reprinted with permission.

students transfer from one to another. The disadvantages are that periods are too short for extended teaching activities such as science labs; there is not enough time to form quality relationships; discipline problems occur during the frequent passing periods; teachers teach 150 or more students each day; and the class period, not the instruction, determines activity length.

**Block scheduling.** Of the many configurations possible under the umbrella of *block scheduling*, the *alternate day block schedule*—sometimes termed the *A/B block*—is the most popular (see Figure 2). Classes meet each day for ninety minutes. Four classes meet on A days, and four meet on B days, with days of the week alternating as A or B. Several combinations of forty-minute and longer periods are possible. For example, with the *fluid block schedule* three periods a day are ninety minutes in length and two are forty minutes long, allowing for such subjects as

mathematics to meet daily, while giving subjects such as science longer periods.

Some other forms of block scheduling are available but infrequently used. The *semester block schedule* allows students to attend just four classes for ninety minutes each day for an entire semester. The following semester students enroll in another four classes. The *75-30-75 plan*, proposed by Robert Canady and Michael Rettig, divides the school year into three blocks of time: two seventy-five-day terms and a thirty-day term. During each seventy-five-day term, the school day includes three 112-minute block classes and one forty-eight-minute period. The thirty-day term offers students the opportunity to study one core course intensively. The *trimester plan* divides the school year into three, rather than two, semesters, and combinations of forty-five-minute and ninety-minute periods are possible. A drawback to all such variations is coordination of schedules for transfer students.

FIGURE 2

Alternate (A/B) day block schedule					
	A Day	B Day	A Day	B Day	A Day
8:30-10:00	Period 1	Period 5	Period 1	Period 5	Period 1
10:10-11:40	Period 2	Period 6	Period 2	Period 6	Period 2
11:40-12:20	Lunch				
12:20-1:50	Period 3	Period 7	Period 3	Period 7	Period 3
2:00-3:30	Period 4	Period 8	Period 4	Period 8	Period 4

All periods are 90 minutes.

SOURCE: Schroth, Gwen. 1997. *Fundamentals of School Scheduling*. Lanham, MD: Scarecrow. Page 83. Reprinted with permission.

Canady and Rettig designed the *parallel block schedule* for elementary and middle schools. To reduce class size for key subjects such as reading and mathematics, small groups are rotated out for special education and talented and gifted classes, as well as for computer labs. Advantages of all types of block scheduling arrangements are:

- The number of subjects students take yearly is increased
- Time is available for developing more meaningful relationships
- Daily homework is assigned for half as many classes
- Passing periods are reduced, which may decrease discipline problems
- Teachers have fewer students to instruct in one day
- Opportunities are available for instructional creativity and in-depth learning

Some disadvantages are:

- Some subjects require daily drill and practice
- New instructional methods are necessary to make full use of longer periods
- Staff, central office, parent, and community support must be sought
- An increased staff is necessary and costly

**Teaming.** For years, elementary school teachers have acknowledged the value of integrating instruction to blur the lines between subject areas and stress the links between fields of knowledge. A shift toward a more student-centered approach to educating middle school students became more prevalent with the publication of *Turning Points* in 1989. Consequently, interdisciplinary teams are formed and provide continuity for group membership and instruction, similar to what exists at the elementary level. When teaming, two or more teachers of two or more subjects share a common group of students. Students can be grouped and regrouped during the shared time period, depending on the activity. Interdisciplinary teaming requires more complex configurations because instruction is coordinated across subjects to offer a less fragmented and more relevant curriculum. Thematic units of instruction are the usual planning tools. The *flexibly blocked team*, sometimes termed the *team block schedule*, incorporates not only the sharing of a common set of students and the opportunity for a coordinated curriculum, but also the flexibility of long class periods, which provide optimum use of the instructional time. Advantages to teaming are:

- Teachers get to know students personally
- Studies report improvement in thinking and learning skills
- Stable friendships can develop
- Class time can be used flexibly
- Changes within the team do not interfere with other teams' plans, such as a scheduled field trip
- The team collectively assumes responsibility for each student's learning and meets with parents as a group

The disadvantages are:

- Ability grouping is more difficult
- Interpersonal problems are intensified
- An adjustment period is required for teachers
- Staff training on integrated instruction is necessary
- Support from central administration, parents, and community must be obtained
- Buildings are not designed for division of classrooms according to teams.

### Staff Development

All types of schedules require staff training. For example, teachers need to be able to teach to a variety

of learning styles, teach higher-order thinking skills, use problem-solving techniques, and use technology in the classroom. In order to vary instruction during the longer block-scheduled class periods, teachers should additionally be trained to move beyond lecture, drill, and practice and include cooperative learning, learning centers, inductive learning, the use of manipulatives, and student-conducted experiments. When teamed, teachers should understand interdisciplinary instruction and be able to address issues that arise when a small group of students and teachers interact intensely with one another. Training can include team building and teaching, consensus building, conflict resolution techniques, and interdisciplinary instruction.

Whatever the scheduling model, finding a schedule that works best for teachers and students while satisfying community needs is important. If instruction and student achievement drive choices, such satisfaction is more likely to be achieved.

*See also:* CARNEGIE UNITS; ELEMENTARY EDUCATION; INSTRUCTIONAL STRATEGIES; SCHOOL REFORM; SECONDARY EDUCATION; SOCIAL ORGANIZATION OF SCHOOLS; TEAM TEACHING.

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GWEN SCHROTH

## SCHOOL-BASED DECISION-MAKING

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Since the release in 1983 of the National Commission on Excellence in Education report *A Nation at Risk*, there has been widespread call for education reform. The reform efforts of the 1980s and 1990s focused on organizational, curricular, and instructional changes necessary to improve the quality of education. Almost without exception, national reform reports advocated decentralization and enhanced teacher involvement in decision-making as a means of fostering necessary changes within school.

*School-based decision-making* is a concept based on the fundamental principle that individuals who

are affected by the decision, possess expertise regarding the decision, and are responsible for implementing the decision, should be involved in making the decision. This concept often is attached to the broader school-system reform efforts of decentralization and school-based management (SBM), where decision-making authority is shifted from the district to the local school level. Some educators use the terms *shared decision-making* and *school-based management* interchangeably; others see shared decision-making as a component of SBM or decentralization. In general, the goal of school-based decision-making is to “empower school staff by providing authority, flexibility, and resources to solve the educational problems particular to their schools” (David, p. 52).

### Key Elements

School-based decision-making rests on two well-established propositions:

1. The school is the primary decision-making unit; and its corollary; decisions should be made at the lowest possible level.
2. Change requires ownership that comes from the opportunity to participate in defining change and the flexibility to adapt it to individual circumstances; the corollary is that change does not result from externally imposed procedures. (David, p. 46)

These propositions recognize that those closest to the technical core in education systems, because of their access to information concerning students’ diverse characteristics, needs, learning styles, and performance levels, are better positioned to make decisions about educational programs than those farther removed from the teaching and learning process. Thus, decisions concerning curricula, instructional technologies, and other school initiatives will be most effective and enduring when carried out by those who feel a sense of ownership and responsibility for those decisions.

For school-based decision-making to work, four key resources need to be present to develop the capacity to create high performance organizations:

1. *Knowledge and skills* in new instructional strategies; interpersonal, problem-solving, and decision skills for working together as a team; business knowledge for managing the organization, including budgeting and fiscal planning; and assessment strategies for

analyzing, interpreting, and acting on school performance data.

2. *Information* about the performance of the organization, including student performance data, budgets, and demographic-trend data.
3. *Power and authority* to make decisions, especially in the areas of curriculum and instruction, staffing and personnel, and resource allocation and budgeting.
4. *Rewards* for high performance, including intrinsic and extrinsic rewards, such as salary adjustments, professional development opportunities, performance-based pay, group or team-based rewards, and public recognition for their accomplishments.

### Scope of Decision-Making

In general, three areas of decision-making can be school based: budget, personnel, and curriculum. Regarding school finances, under school-based decision-making models, schools receive either a lump-sum budget or some portion of the district budget from which they may make decisions regarding personnel, equipment, materials, supplies, and professional development. Although budget authority implies a new level of autonomy, because personnel expenditures account for approximately 85 percent of the district budget and other fixed costs cover an additional 5 to 10 percent, few discretionary dollars actually remain for school-level allocation. Therefore, staffing expenditures and decisions regarding staffing structures and assignments are key to schools making decisions that might substantively affect the school’s operation and effectiveness.

In terms of personnel decisions, schools are afforded flexibility and the power to determine how best to staff their schools. Personnel decisions typically fall in two areas: determining staffing needs based on the school’s mission and educational plan and selecting people to fill the positions. Schools are afforded the latitude to decide whether their personnel funds are best spent on teachers, instructional aides, specialists, or clerical support. Once determinations are made regarding staffing needs, schools are actively engaged in the selection of new school personnel.

In the third decision area, decisions regarding the curriculum and instructional strategies are determined at the school level within a framework of district or state goals, while attending to the school’s

unique mission and needs. School-level personnel draw on their professional expertise and localized knowledge in making decisions that affect the school's educational program and instructional system. School personnel monitor the effectiveness of their programs and their students' academic performance. Decisions pertaining to budgeting, staffing, and the instructional program are often restricted and controlled, however, by district policies regarding matters such as class size, tenure, hiring, firing, assignment, curriculum initiatives, textbooks, and assessment procedures.

### **Decision-Making Structures**

To operationalize school-based decision-making, structures at the school level need to be implemented to facilitate the involvement of key stakeholders in the decision-making process. Schools embracing shared decision-making typically develop councils consisting of representative stakeholders in the school, such as teachers, parents, support personnel, and administrators. The school's governance structure is supported by guidelines that specify representation, terms of membership, council size, meeting format, and delineated lines of authority. Frequently, site councils further disperse involvement through the use of subcommittees. Subcommittees allow greater numbers of teachers to participate in the formal decision-making process and reduce the overall burden of extended involvement of others.

In addition to decision-making governance councils, schools that embrace shared decision-making understand that reaching collective agreement and consensus around difficult decisions require extended discussions, off-site meetings, and collective planning. Thus, schools that engage in shared decision-making at an authentic level set aside time for teachers to meet and places for them to congregate and talk. In addition, school schedules are often redesigned to facilitate teacher interaction by structuring common planning periods.

### **Effectiveness of School-Based Decision-Making**

Although school-based decision-making is often the centerpiece of school reform, there remains little empirical evidence that relates it to improved school performance. Most of the evidence of effectiveness of decision involvement at the school level focuses on teachers and administrators. Studies exploring organizational variables have generally found positive relationships between decision involvement and

organizational outcomes, such as organizational commitment, job satisfaction, and organizational change. In addition, studies have found that participation enhances communication among teachers and administrators, contributes to the quality of teachers' work lives, and assists in professionalizing teaching and democratizing schools. Other research on school-based decision-making has generally been descriptive, and yet a substantive body of research has not yet explored causative relationships between school empowerment and school improvement or student achievement. Nonetheless, the combined effects related to participative structures that are democratic and collaborative and focus mainly on issues of curriculum and instruction are likely to bring about change at the classroom level.

### **Issues and Controversies**

The successful implementation of school-based decision-making is affected by a number of organizational factors and institutional constraints, including (1) clarity of purpose and access to information; (2) power and authority relationships; (3) administrative support and the changing role of central office personnel; and (4) policies at the district, state, and federal levels. These issues taken singularly or collectively affect the long-term effectiveness of decentralizing decision-making at the school level.

**Clarity of purpose and access to information.** Schools that are active in decision-making have a vision statement that focuses their decision-making process on the technical core of schooling—teaching and learning. Determining the school's vision is a schoolwide effort affording the faculty the opportunity to understand the power of their commitment to decisions they make. Those involved in decision-making understand the necessity of using school-based and student-centered data to inform their decisions. In districts where data are limited or not disaggregated at the school level, the decision-making process is limited and curtailed to issues that hold less promise of impact on the school's educational program.

**Power and authority relationships.** Frequently, when decision-making authority is delegated, the degree of authority given to the site is often limited and ambiguous. In schools where there is confusion over decision-making authority, issues addressed at the school level tend to focus on secondary-level issues, such as school climate, scheduling, safety, and parent involvement, rather than on primary con-

cerns, such as instructional programs and strategies, student achievement, and school performance. In order to focus on the primary issues affecting school success, decision-making authority in the areas of curriculum, staffing, and budgeting must be real and authentic.

**Administrative support and the role of central office personnel.** District-level support of school-based decision-making is critical to its success. Superintendents play instrumental roles in moving central offices from a directive function toward a service orientation and resource support network. This shift in roles from a bureaucratic orientation to a service organization is often difficult and misunderstood by those occupying various roles in the district office and in the schools.

**Policies at the district, state, and federal levels.** In a similar manner, decision-making latitude is often restricted at the school level by various state and federal policies or mandates. Under school-based decision-making, schools are encouraged to make decisions regarding the curriculum and supporting instructional strategies. These decisions should be made within a framework of district goals or the core curriculum required by the district or state. Yet schools are often limited by state mandates affecting their educational programs and are similarly restricted by compliance requirements related to federally funded programs within their school or district. Thus, these competing and often contradictory policies constrain school-based decision-making.

### Conclusion

School-based decision-making provides a framework for drawing on the expertise of individuals who are interested in and knowledgeable about matters that affect the successful performance of students. This process depends heavily on the district's leadership to define the parameters of decision-making, to define overarching goals, and to provide the information and professional development necessary to make effective, long-lasting decisions.

*See also:* DECENTRALIZATION AND EDUCATION; SCHOOL CLIMATE; SCHOOL REFORM.

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## SCHOOL BOARD RELATIONS

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Michael D. Usdan

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Kenneth K. Wong

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Thomas E. Glass

**CONTROL OF THE SCHOOLS**

American public education is uniquely structured: Unlike most other nations that tend to have highly centralized national systems of education, the locus of educational decision-making in the United States has traditionally been local. Some 14,000 local school districts in fifty diverse state systems have had delegated to them much of the operational responsibility for public education. Legally, education is a responsibility of the states, which have historically given local districts broad discretionary latitude to operate their systems. The federal government, until the last decade or so of the twentieth century, has had little overt control over education, but has always had considerable influence as national programs have multiplied through the years.

Beginning in the 1990s, and to some extent before then, these traditional roles of the federal, state, and local governments have been changing. As in so many other policy areas of the American polity, the focus of decision-making in education is shifting from the local to the higher levels of government. Increasingly, educational problems are being discussed and resolved in state capitols and Washington, D.C. Citizens have recognized that the problems confronting the public schools cannot be detached from society's broader social, economic, and political concerns. There has been widespread concomitant acknowledgment that local property taxes cannot be the major source of support for schools and that local boards of education will be compelled to rely increasingly on state and federal governments for fiscal assistance. Thus, issues like inequities in school finance, racial and ethnic disparities in student achievement, the relationship of schools to economic growth and development, and related education problems require attention at the state and national levels.

Although many important issues are now debated and acted upon in state capitols and in Washington, D.C., it would be a mistake to underestimate the continuing influence of local school boards. School boards retain important powers that often are overlooked by education reformers who frequently ignore the district level—a vital, strategic cornerstone of the education governance structure.

Rightly or wrongly, local boards and the administrative staffs whom they employ are often regarded by reformers as part of the problem and not the solution to the complex issues confronting American education. As a result, local school boards and superintendents frequently have been unengaged in the ongoing education reform debate.

Indeed, other than a few studies, the relative strengths and weaknesses of the local governance structure have been remarkably ignored during a period of unprecedented public ferment and national interest in public education. But the school board, a unique grass roots representative institution with 97,000 individuals serving as members in approximately 14,000 local districts, persists as a crucial governance linchpin between the school and state levels.

Local school boards and the superintendents whom they employ do not necessarily have to be proactive, progressive, or creative to influence educational policy in very significant ways. Reformers must recognize that many boards and district administrators also influence and shape policy through their inaction. Indeed, as public polls reflect, in many school systems board members and administrators may be accurately reflecting and translating local values and goals in behaving in ways that do not aggressively push for education reform. In other words, in many communities there is basic acceptance of the status quo in schools; reformers, if they are to be successful in their laudable efforts to institutionalize change in the system, must be sensitive to the importance of such local values and goals. Critics will likely have to work with school boards as they appear to be permanent institutions and will continue in exercise considerable direct and indirect influence over the nation's decentralized and diffused educational system.

Local boards have enormous influence because they have the power to hire and fire the superintendent of schools, and have ultimate budgetary responsibilities and set the policy parameters for the district. Board members set the tone with regard to relationships with teachers, parents, and administrators as well as the community at large. If, for example, decentralization or restructuring (however defined) is to have any meaning, local school boards must support and perhaps prod their superintendents into delegating meaningful personnel and budgetary prerogatives to the building level.

Although it is extremely unlikely that the United States would create a fragmented governance struc-

ture with 14,000 local units if it could build the system de novo, the local board evidently appears to be too much a part of the fundamental political and educational tradition and culture to be structurally tampered with despite widespread apprehensions in the early twenty-first century about the effectiveness of schools and the pervasive and all too often justified criticism of school boards.

Education reformers can work more effectively within the existing structure to implement changes with the support of influential local officials; for example, district officials in their strategic position between state and building levels could serve as brokers or mediators. There are, for example, some definite contradictions between the “restructuring” movement with its emphasis on the importance of building level autonomy and the top-down regulatory nature of many late-twentieth-century state enactments that often have generated a numbing standardization in the educational process. Local boards and superintendents could be well-positioned intermediaries in efforts to reconcile these basic contradictions between top-down state regulations and bottom-up building level initiatives. Other steps could be taken to propel local boards more directly into the forefront of public discourse about education reform designed to increase student achievement. There is widespread civic ignorance about the roles and responsibilities of local boards and their strategic position in the education governance structure. Indeed, many of the new architects of educational policy from the political and business worlds could be given basic grounding in the rudiments of how schools are governed and organized.

More public attention should be focused upon issues such as the rapid turnover of local board members, the abysmally low voter turnout in local board elections, and the serious managerial, policy-setting, and operational problems that confront many local school officials. Educational reformers and the public at large must pay more attention to strengthening a vital institution that will continue to play an important role in shaping the nation’s education future.

*See also:* NATIONAL SCHOOL BOARDS ASSOCIATION; SCHOOL BOARDS.

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MICHAEL D. USDAN

### RELATION OF SCHOOL BOARD TO THE COMMUNITY

American public schools are still primarily controlled by local school boards. There are fewer boards than in the past: In the early twenty-first century, 14,000 local school boards govern more than 90,000 schools; in the 1920s, there were 130,000 school boards. Although four out of five school boards are responsible for fewer than 3,000 students, the average size of each board has grown over the years. About a third of all boards are located in five states: California, Texas, Illinois, Nebraska, and New York. While 95 percent of the school boards are popularly elected, school boards in Chicago, Cleveland, Philadelphia, Boston, and several other cities are appointed by the mayor.

#### Characteristics of School Boards

Autonomous school board control can be justified by several widely held views in the literature. First, the school board as an autonomous institution is embedded in strongly held public beliefs in demo-

cratic, nonpartisan control over public education. The public has traditionally equated local control with districtwide board authority in the constitutional-legal framework of educational governance. In contrasting private and public schools, John Chubb and Terry Moe characterized public school governance as “direct democratic control” (p. 2).

From an economic perspective, the presence of multiple school board systems resembles a quasi-market arrangement that can be cost-efficient to the consumers. States and localities with multiple suppliers of services promise a better fit between consumer-taxpayers’ preferences and the level and quality of local services. As Charles Tiebout’s (1956) classic work suggested, taxpayers make residential decisions that would maximize the benefits they expect to obtain from public services and minimize the level of taxes that they have to pay for those services. In particular, middle-class taxpayers who can afford to spend more on goods and services are keenly concerned about the quality of basic services, such as schools. As Albert Hirschman (1970) argued, they are more ready to exit when they perceive a decline in those municipal services that they value. Studies of district-level performance in metropolitan areas suggest that interdistrict competition can improve service quality. The out-migration of middle-class families to suburban school districts seems to provide the empirical support for this line of argument. Recent establishment of quasi-public boards that oversee charter schools also shows the increasing popularity of parental choice when the neighborhood schools are failing.

Yet a third view is based on functional consideration. Thomas Shannon, former executive director of the National School Boards Association, has argued that school boards serve several indispensable functions for the common good. They develop strategic plans, manage the operation of the system, comply with federal and state laws, evaluate educational programs, arbitrate complaints from citizens and employees, and represent the collective interests of the entire district. The boards also negotiate contracts with teachers unions and serve as managerial buffers between individual schools and state and federal agencies. In other words, local school boards make a “non-nationalized” educational system functional.

### Performance-Based Accountability

As the public increases its demands for performance-based accountability in public schools, the quality of school board governance is called into question. *Facing the Challenge: The Report of the Twentieth Century Fund Task Force on School Governance* by the Twentieth Century Fund observed in 1992 that school boards “are facing a serious crisis of legitimacy and relevance” (p. 1). According to a 1988 to 1990 survey by Jacqueline Danzberger and colleagues of school board members in 128 districts in 16 states, even school board members perceived themselves as least effective in “the core elements of governance—leadership, planning and goal setting, involving parents and the community, influence on others, policy oversight, board operations, and board development” (p. 56). For example, the survey showed that boards used inconsistent performance measures to evaluate their superintendents. Further, due to the Progressive tradition of taking politics out of schools, school boards are largely isolated from other lateral institutions (e.g., housing and health care agencies) that affect the well-being of children.

The decline in public confidence over school board leadership seems salient in urban districts. Based on a 1998 survey, the National School Boards Foundation found that “[t]here is a consistent, significant difference in perception between urban school board members and the urban public on a number of key issues” (p. 12). Although 67 percent of the urban board members rated schools in A and B categories, only 49 percent of the urban public did. Whereas three out of four board members rated the teachers as excellent and good, only 54 percent of the public agreed. The public seemed half as likely as the board members to agree that the schools were “doing a good job” in the following areas: preparing students for college, keeping violence and drugs out of schools, maintaining discipline among students, and teaching children who do not speak English. Subsequently, the National School Boards Foundation called upon urban leaders to sharpen the focus on student performance.

In light of these concerns, several reforms have been tried to improve accountability. One reform aims at promoting a sense of “ownership” among parents at the school site. While New York City and numerous urban districts experimented with some form of site-based governance in the 1960s, the most extensive decentralization occurred in Chicago when

1988 state legislation created local school councils in all the public schools in the city. Between 1989 and 1995, each of the 550 Chicago schools was primarily governed by an elected, parent-dominated local school council, whose authority included the selection of principal and the use of a substantial discretionary fund. However, community support for the local school council gradually declined. From 1989 to 1993, turnout among parents and community residents plunged by 68 percent, and fewer candidates signed up for local school council offices. As the reforms of the local school councils failed to turn around low performing schools, the legislature enacted another reform that enabled mayoral control over schools in 1995.

### Race and School Boards

A second type of reform is associated with racial succession in school boards. Many analysts observe that the predominantly white power structure seems less ready to respond to the minority and low-income constituency in urban schools. According to this view, a shift in racial control over governmental institutions would improve school quality and promote student performance. However, this conventional expectation is not empirically supported by a study in 2000 by Jeffrey Henig and colleagues of school reform in four African-American-led cities, namely Atlanta, Georgia; Baltimore, Maryland; Detroit, Michigan; and the District of Columbia. None of the cities were able to produce any measurable educational progress for minority students. The authors found that “racialized politics” has contributed to governance ineffectiveness in both direct and indirect ways. Particularly important is the intensity to which local stakeholders are affected by “fears, suspicions, expectations, loyalties, tactics, and habits related to race” (p. 7). Multiple facets of racialized politics are illuminated by the authors’ careful analysis of interviews with hundreds of actors both outside and inside the formal governmental institutions, including generally influential people (e.g., city council members and business leaders), community advocates, and education specialists.

The four cities provide ample evidence on how racial concerns have constrained the collective behaviors of both black and white elites. For example, African-American community activists are reluctant to criticize African-American city officials because they want to preserve the reputation of black institutions in general. Likewise, white business elites tend

to refrain from criticizing African-American-controlled school systems for fear that their actions are seen in racial terms. In other words, race “complicates” coalition building because it “continues to affect perceptions, calculations, loyalties, and concerns in ways that tug at the thread of collaboration and erode civic capacity to undertake meaningful and sustained reform” (p. 212). Interracial trust and confidence become so limited that civic capacity lacks a solid foundation.

### Integrated Governance

The third strand of reform is “integrated governance,” where there is an integration of political accountability and educational performance standards at the systemwide level. In numerous urban districts, the mayor takes control over schools with an appointed school board and superintendent (for example, Chicago began such a system in 1995). In this regard, mayoral leadership in education occurs in a policy context where years of decentralized reform alone have not produced systemwide improvement in student performance in big city schools. Reform advocates who pushed for site-based strategies may have overestimated the capacity of the school community to raise academic standards. Decentralized reforms are directed at reallocating power between the systemwide authority and the schools within the public school system. However, decentralized initiatives often fail to take into full consideration powerful quasi-formal actors, such as the teacher union and other organized interests. Decisions made at the school site are constrained by collective bargaining agreements. In addition, decentralization may widen the resource gap between schools that have access to external capital (such as parental organizational skills and grants from foundations) and those that receive limited support from nongovernmental sources. In response to these concerns, “integrated governance” enables the mayor to rely on systemwide standards to hold schools and students accountable for their performance. Failing schools and students are subject to sanctions while they are given additional support.

### Measuring Performance

Efforts to improve school board accountability also present a challenge for developing a framework to measure performance of the school boards. Although student performance serves as a useful indicator of the overall performance of a school system,

its aggregated character falls short of specifying the link between the functions of the school boards and school performance. In other words, there is a need to develop indicators of institutional effectiveness to assess the school boards. Toward this goal, Kenneth Wong and Mark Moulton attempted in 1998 to develop an institutional "report card" on various state and local actors, including the school board. Using survey responses from members of the broad policy community in Illinois, Wong and Moulton found that the school board and the central administration in Chicago have significantly improved their institutional rating following mayoral control.

In short, school boards are in transition. While many communities maintain the tradition of non-partisan, popularly elected school boards, urban districts that are perceived as low performing are likely to attempt alternative governance. In the early twenty-first century, a greater number of urban school boards are likely to be appointed by mayors and/or challenged by charter schools. Thus, school boards, regardless of their student enrollment and region, will be driven by public concerns over accountability.

*See also:* EDUCATIONAL ACCOUNTABILITY; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; SCHOOL BOARDS.

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KENNETH K. WONG

#### RELATION OF SCHOOL BOARD TO THE SUPERINTENDENT

By providing a free public education for rich and poor, local school boards have nurtured and protected American democracy for more than a century. This American institution anchors a local governance model that is unique among the national systems of education throughout the world.

The organization of school districts and school boards has changed little in one hundred years. The

new millennium finds about 14,320 school districts predominantly governed by elected layperson boards of five or seven members. The average school district enrolls 2,200 students and is located in a nonurban setting. Although the majority of Americans live in cities and suburbs, the majority of school districts are located in small towns and rural areas. There are nearly 80,000 school board members but only several hundred urban board members guide policy and management for half the nations' school children. Each decade a higher percentage of children attend schools in suburbs and the cities.

### **School Board Members**

Unfortunately, there is little available data describing demographics and characteristics of local school board members. It can be reasonably assumed from scattered data that about 60 percent of board members are men with a college education who work in white-collar positions. The number of women and minority board members appears to be increasing. It also seems that a minority of board members are parents of school-age children.

The role of local boards is characterized in the literature as the means by which community members can participate in setting educational policies affecting their children and the spending of local tax dollars. The local school board member role involves seeking out the opinions of the community and representing their educational interests through formulation of policy.

### **School Board Service**

Most members serve without pay in positions that require countless hours per week of listening to citizens, reading, and attending meetings. Until the 1960s, most authorities described a typical board members' motivation for serving as filling a community obligation. Boards were comprised of "main street" businessmen, professionals, and occasionally retired school administrators. These boards usually functioned without partisan politics, and seldom did members focus on single or controversial personal agendas.

Many boards in the early twenty-first century are comprised of members who are elected to represent specific interest groups, such as teachers or taxpayer groups. Or, they serve on the board with a single agenda interest, such as special education, bilingual education, school prayer, fixing a school program, or firing a coach or superintendent. Most

authorities agree school boards are considerably more politicized than in the past. Board members with political agendas sincerely believe their actions serve the schools and the public interest.

### **The Superintendent**

The most important action a school board takes is the selection of a superintendent. For the average school district this happens every six or seven years. For districts mired in conflict it might occur every two or three years. Superintendent tenure data suggests that districts with stable boards and communities tend to attract higher quality superintendents and keep them longer. Since a school district is almost a perfect reflection of its community, it is not surprising to find turmoil-ridden boards in communities beset by contentious issues, such as poverty, high unemployment, illiteracy, and racial tension.

The impression, established by media and journal articles, is that constant turmoil and struggle between boards and superintendents exist in all districts. Fewer than 1 percent of superintendents are terminated each year. A larger number, however, move on to other districts after acrimonious relations with the board or certain board members. The American Association of School Administrators study conducted every ten years gives a more realistic picture of the state of school board and superintendent relations. For decades superintendents have reported their annual evaluations given by boards to be "excellent" or "good." In about fifteen percent of the districts reported, however, the superintendent's evaluation does signal a problem in board relations.

The root of many conflicts between boards and superintendents is a "zone of acceptance." This is the zone in which the superintendent may operate and make decisions. Most boards directly and indirectly create the parameters of the zone. Often individual board members try to add to or delete from the actions a superintendent has been led to believe are in the zone. The result is conflict with the board or individual board members. In turn, superintendents generally create "zones of acceptance" within which other district administrators work. When the superintendent's "zone" is altered, sometimes the entire administrative structure of the district is changed.

### **Boards and Superintendents: The Working Relationship**

The relationship between board and superintendent begins prior to hiring. The superintendent search

process for most districts is intensive and includes several visits to the district by each finalist. During these one- or two-day interviews, board members form an initial relationship with the future superintendent. This is probably not true if in-house candidates are being considered. Often one or more board members are not enthusiastic about a candidate later selected by the board majority. This may create a situation where the new superintendent must quickly “prove” himself or herself to the board member(s).

In many districts after initial hiring the superintendent enjoys a “honeymoon” period with the board. This is seldom more than six-months in duration, or until a serious problem arises with the superintendent’s position or an action is opposed by one or more board members. During these first few months the superintendent and board are becoming acquainted with each others’ views about district operations. This is a critical time for board and superintendent to establish parameters of decision-making. Perceptive boards set limits within which the superintendent may make unilateral decisions. The types of decisions that can be made by the board and those that are the responsibility of the superintendent should be clearly understood and respected by each party. By doing this many potential conflicts can be avoided between boards and superintendents. Well-functioning boards appear to have clear role definitions for the superintendent and themselves.

### **Communication**

Communication is the critical element of superintendent and board relations. Many superintendents spend very little time in direct communication with board members. Several national superintendent studies claim the average superintendent spends less than three hours per week in talking or meeting with board members. Not included in direct communication are written memos and letters from the superintendent to the board. Most likely a sizable percentage of the time superintendents do spend in board communication is with the board president.

A 2000 study of 175 of the nation’s leading superintendents showed this group spent three times more effort in direct communication with board members. It was not uncommon for these superintendents to spend more than a full work day each week in talking with board members.

The lack of time spent with board members by some superintendents can be explained by a long-

held negative view of boards and board members. Often educators view boards as “outsiders” possessing power to make unwise or arbitrary decisions affecting schools, students, and staff. Collective bargaining often hardens negative opinion about boards in the eyes of district staff.

An important piece of written communication is the “board package.” In nearly every school district, prior to board meetings, a loose-leaf binder that contains information about each meeting agenda item is distributed by the superintendent’s office. This board package can be voluminous, taking several hours of study time for board members. The content of the board package often serves to initiate communication between board members and the superintendent. A few superintendents take the initiative and personally call board members to ask if they have questions or concerns about the meeting agenda and the information included in the board package. Others wait for board members to call. The flow and type of superintendent and board communication varies from district to district, and is certainly being modified by the use of e-mail.

Some boards desire that the superintendent directly communicate with the board president (or chair), leaving to that board member the responsibility to inform other members. Most boards, however, wish to give each member the opportunity to directly communicate with the superintendent.

Communication problems arise when board members initiate communication directly with principals and staff without giving the superintendent prior notification. Some board members will go so far as to directly, or by insinuation, instruct a principal or staff member. This undercuts the superintendent’s authority and creates confusion in the district. Teachers and administrators often interpret intrusion by board members to mean the superintendent lacks authority. The superintendent and other board members may take offense, and the result may be a severe strain on board and superintendent relations.

School problems of board members’ children are sometimes a source of conflict between superintendents and individual board members. These personal conflicts can permanently damage working relationships. Despite restrictions on nepotism, in some states, board members have spouses or relatives working in the district. This can be the source of another serious personal conflict between the superintendent and board members. Lastly, some

board members may possess direct or indirect business links with district vendors or competing vendors. Board business interests can create conflict with the superintendent and a legal problem for district.

Perhaps the most often encountered superintendent and board conflict area is the "special" interest of board members. Frequently, board members seek board office in order to see a specific objective enacted. This might be the termination of a coach or administrator, or even the superintendent. Or, the special interest might be to have the Ten Commandments posted in classrooms or open the school day with prayer. Superintendents (and other board members) are placed in a difficult position, as they might be required by law or procedure to withhold support of a given special interest. The problem is accentuated many times when the board member is allied with special interest groups in the community. A good example would be a board member who represents the interests of an antitax group. This board member may resist establishing a budget, setting a referendum for a new building, or negotiating with teachers. This type of resistance creates tension within the board, community, and with the superintendent.

Actually, the most serious board and superintendent conflict originates within the board itself. As boards become politicized, identifiable member coalitions emerge and clash with other board members. This is especially the case in large urban districts with boards divided by racial issues.

Conflict among board members often leads to each group trying to receive the superintendent's support for their position. In many conflicts there is little chance for the superintendent to remain neutral and efforts to do so result in alienation on the part of both groups. Internal board politics is a very serious problem in many districts, and there are usually no outside neutral parties available to mediate intraboard differences that are often disguised as superintendent and board conflict. Most likely a majority of superintendents leaving districts in midcontract do so because of intraboard conflict.

The outcome of board conflict, made public when the board votes on an issue, is usually a "split" board, meaning that consensus is very difficult to achieve. Generally, the public interprets the vote supporting a given proposition as reflecting the group of board members who support the superin-

tendent. Some superintendents attempt to insulate themselves from what they consider to be unfair board criticism or interference. A frequent strategy that is used is to create a citizens' advisory group for the superintendent comprised of leaders in the community. Superintendents believe this group can provide protection in the event of conflict with the board or act to stop intraboard squabbling. In addition many of the advisory group members are in a position to be future board candidates, giving the superintendent potential allies in these possible board members.

The superintendent's actions in the community can be a flashpoint for board conflict. Even though superintendents are prohibited from participation in board elections, conflict sometimes arises when board members perceive the superintendent's encouraging a community member to run for a board position. Some board members are also suspicious of a superintendent who serves as chief spokesperson for the district. They perceive this as diminishing their political stature with constituent groups.

### **Putting Together a Superintendent/Board Relations Plan**

Nearly all authorities indicate role conflict to be the leading cause of superintendent and board conflict. In order to reduce the likelihood of conflict it seems important that roles are clarified at the beginning of a superintendent's or a board's tenure. This is difficult to accomplish without a neutral third party facilitator and also because of increased board turnover in thousands of districts.

A potential source of assistance for board members and superintendents is in-service training offered to new board members by state school board associations. Districts that use a strategic planning process have a natural opportunity for the board and superintendent to mutually determine roles and responsibilities.

A majority of superintendents provide orientation sessions for new board members. This is another opportunity for the superintendent to clarify roles with at least one board member. Unfortunately, the politicization of boards has resulted in the increase of sensitive political issues, which makes superintendent and board relations very difficult. In a number of cases, superintendents never even have an opportunity to establish working relations with a board. More often board members are elected on a quasi-

political platform of candidates who are sponsored by special interest groups. When this slate of candidates is elected, they immediately “buy out” the superintendent’s contract in order to hire a person sharing their political views.

One problem contributing to a negative climate between superintendents and boards can usually be adjusted if not eliminated by the superintendent. This is the time required for board members to spend on district governance and activities. Many board members complain board membership is actually a second full-time job. This is nearly true in large urban districts with serious student achievement and political problems. Board time can be dramatically reduced by the superintendent and management team through careful examination of time demands placed on the board. The superintendent must know the board well enough to be able to screen out unnecessary paperwork and meetings. Needless hours of time can be eliminated if the board is willing to trust the superintendent and management team to perform this task.

Board members who give up family and even work time for board business often believe the superintendent and management team are foisting off decision-making and management responsibilities on the board. In districts where board members spend no more than five hours per week on board business, it is quite likely that superintendent and board relations function more effectively.

The relationship between a board and superintendent establishes a tone for the district environment. If the relationship is cooperative and harmonious district employees feel secure as roles are clarified, expectations are clear, and ambiguity does not cloud attempts to change and improve programs. Conflict between the superintendent and board creates tension inside the district and in the community. The situation discourages program innovation and reform, and deters constructive community involvement in the schools. It certainly can be fatal to any bond or tax rate referenda attempts. Unfortunately, many districts are not proactive in meeting the challenge of board and superintendent relations.

*See also:* SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS; SUPERINTENDENT OF SCHOOLS.

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THOMAS E. GLASS

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## SCHOOL BOARDS

- DUTIES, RESPONSIBILITIES, DECISION-MAKING, AND LEGAL BASIS FOR LOCAL SCHOOL BOARD POWERS  
Joseph Beckham  
Barbara Klaymeier Wills
- SELECTION AND EDUCATION OF MEMBERS  
Kent M. Weeks

## **DUTIES, RESPONSIBILITIES, DECISION-MAKING, AND LEGAL BASIS FOR LOCAL SCHOOL BOARD POWERS**

Local school boards have been an integral feature of the U.S. public education system for nearly 100 years, and they are widely regarded as the principal democratic body capable of representing citizens in local education decisions. The formal institutional roles assigned to school boards, and the designated position board members play as representatives of the community, would lead one to believe that the school board has a decisive role in public education policy and school system administration. In the minds of many lay citizens, school boards have considerable influence over educational decisions and provide a key social and political connection to the schooling process.

Although research has affirmed the important role that local school boards played in implementing educational reforms such as student testing and graduation requirements, some critics have contended the traditional leadership and policymaking roles of local school boards have been compromised by bureaucratic intransigence, a tendency to micro-manage school system operations, and divisiveness caused by special interest groups. While one researcher has suggested that lay control of schools is a myth, others have argued that the school board is essential to ensure the quality of public education services at the local level.

### **Legal Basis for Local School Board Powers**

The U.S. Constitution contains no mention of education. With the federal government limited to those powers either expressly stated or implied in the Constitution, the federal role in public education is secondary to that of the states. Power over public education is as essential an attribute of state sovereignty as that of the power to tax or to provide for the general welfare of the state's citizens. The state legislative mandate to provide for a system of public schools is found in the state constitution, usually in language requiring a "general," "uniform," "thorough," or "efficient" system of public schools.

Even though power officially resides with the states, concerns about efficiency and local involvement are addressed through the delegation of authority from the legislative branch to the local school board. Although the powers and duties of the local board vary by state jurisdiction, all fifty states except

Hawaii have a two-tiered governance structure and provide for local school districts governed by an elected or appointed board. States also govern through state boards of education, administer through state departments of education, and typically provide for an elected or appointed chief state school officer.

Sources of authority that influence the duties and responsibilities of the local school board include state and federal constitutions, legislative enactments, rules and regulations promulgated by the U.S. Department of Education and the state board of education, and legal interpretations by judges, attorneys general, and administrative agencies. A school board functions locally, within the confines of the state's delegation of power and the geographical boundaries of the district, but is a legal agency of the state and thus derives its power from the state's constitution, laws, and judicial decisions. By state legislative enactment, school boards are delegated power and authority to develop policies, rules, and regulations to control the operation of the schools, including system organization, school site location, school finance, equipment purchase, staffing, attendance, curriculum, extracurricular activities, and other functions essential to the day-to-day operation of schools within the district's boundaries. Boards may also be authorized by the state legislature to levy taxes, invest resources, initiate eminent domain proceedings, acquire land, and assume bonded indebtedness.

School boards are corporate bodies created for the purpose of implementing state legislative policy concerning public schools and locally administering the state's system of public education. Board members are state officers who act under color of state law when conducting the official business of the state. The exercise of the local board's authority must be predicated upon an express or implied delegation of authority from the legislature and must meet a test of reasonableness that avoids a judicial presumption of arbitrary or capricious action. Because the authority of the local board lies in its status as a corporate body created by the state legislature, an actual meeting of the board is an essential prerequisite to official action. Individual board members are not vested with powers outside their role as a member of the local school board, although the board is often vested with power to ratify the actions of its members, agents, or employees if the ratifica-

tion vote occurs in an official board meeting and is documented in the official minutes of the board.

### State and Federal Reform Efforts

The states and the federal government increased their visibility in public education policy from the 1950s into the twenty-first century. The federal role in education was spurred with implementation of the National Defense Education Act of 1958 and the Elementary and Secondary Education Act of 1965. Federal antidiscrimination policy became a crosscutting social issue for public schools and school districts with the passage of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, and the Rehabilitation Act of 1973. Federal entitlements to special education were initiated with the Education for All Handicapped Children Act of 1975. Whether in the form of categorical aid designed to meet targeted educational needs or in the form of block grants permitting states discretion in the allocation of funds, federal largess has been influential in shaping educational policy and shifting the locus of control over public schools.

At the same time that the state role in public education expanded to accommodate federal funding initiatives, demands for reform of public school finance systems were being heard in state and federal courts. The Texas school finance system survived a constitutional challenge in the 1973 case of *San Antonio Independent School District v. Rodriguez*, but judges in state courts showed less deference to the state legislature's authority to construct a school finance scheme and a concomitant willingness to interpret state constitutional provisions as a mandate providing for a system of public education. State courts in Kentucky, New Jersey, and Texas have been among those adopting an active role in the reform of school finance. With the possibility of litigation mounting in each state, the momentum for finance reform led state legislatures to embrace changes that centralized education governance and restricted the authority and influence of local school boards.

In 1954, prior to the decision in *Rodriguez*, the U.S. Supreme Court struck down racial segregation in the Kansas public school system in *Brown v. Board of Education of Topeka, Kansas*. The *Brown* decision was followed by a series of cases compelling local school district boards to desegregate public schools under consent decrees that were overseen by court-appointed special masters. As the Supreme Court expanded the desegregation mandate to address the

pattern and practice of segregation in school districts throughout the United States, local school districts found their influence diminished and their actions scrutinized by federal courts intent on addressing a history of international segregative practices in America's public schools.

With the 1983 publication of *A Nation at Risk: The Imperative for Educational Reform*, by the National Commission on Excellence in Education, a dramatic escalation of national concern about public education led state and federal policymakers to advocate for quality and to require rigorous testing, higher graduation requirements, and more demanding academic standards. In a policy environment in which demands for scarce public resources were outstripping the revenue generated by the state's system of taxation, concern for state level accountability and efficient use of resources was magnified. The education reform movement considerably strengthened the power of the states in relation to the historic discretionary power that had been exercised by local school boards. Policies previously left to the discretion of local school boards were increasingly prescribed by the state.

Local school boards have been characterized as the largest losers in the reform efforts of the 1980s and 1990s. State legislatures have generated educational policies and regulations directed to academic standards, professional certification and preparation, and curriculum development. Bypassing local school boards in the haste to reform public education, additional legislation has emphasized choice as well as quality, and encouraged the development of charter schools with limited regulatory ties to the local school system, school-based management, vouchers, tax credits, and home-schooling options.

### Duties and Responsibilities

In most states, it is the local board that is charged with the responsibility to establish and maintain a basic organizational structure for the local school system, develop curriculum, meet federal and state mandates for public schools, appoint a superintendent and key members of the central office staff, adopt an annual budget, and create a climate that promotes educational excellence. Consequently, school boards initiate educational policies at the local level and have a responsibility for implementing a variety of state and federal policies. These boards provide important administrative oversight relative to the educational policies and programs

they institute; play a central role in establishing systems and processes to ensure the school system's fiscal, programmatic, and outcome accountability; and undertake broad human resource functions that include making crucial decisions regarding the district's top-level leadership and key staff. Finally, school boards provide leadership for the local school system, adopting a unifying vision and mission, soliciting and balancing the participation and input of members of the community, and advocating on behalf of the educational needs of children at the local, state, and national levels.

Local school boards function as legislative, executive, and quasi-judicial agencies. They must develop, implement, and assess policy; institute sound employee relations; conduct open meetings; recognize and conform to the legal mandates imposed by state and federal laws; and govern within the limits of a delegation of state authority. Additionally, the board has an obligation to assess its successes and failures; inform the public of all deliberations and decisions; promote accountability; avoid abuse of power; enhance public understanding of its mission; conform to standards of ethical behavior; provide a framework for setting goals; and develop strategic plans for the accomplishment of those goals.

From the myriad tasks that have been delegated to school boards, or which have accrued over their history, three overlapping and often contradictory responsibilities can be distinguished. First, the board is a policymaking entity for the local school district. Second, the board is an administrative agency that must provide oversight for the operation of the local school system and is ultimately accountable for the system's operation. Third, the board is a democratically elected body that provides school system leadership and represents the interests of the community on public education issues.

**Policymaking.** The first responsibility of the local school board is to make policy for the sound operation of the school district. State statute law typically requires that the local school board approve the district's budget; develop long- and short-term goals; establish educational objectives, performance indicators, and pupil assessment systems; and approve curricular frameworks and standards for student achievement. In a rational planning model, board policies begin with the articulation of a shared vision and mission for the school district, followed by the establishment of key goals and strategic objectives. Comparing current outcomes with desired out-

comes and analyzing gaps between current outcomes and desired outcomes should then lead to the development and implementation of strategic plans for the accomplishment of key objectives. In reality, school boards often make policy under conditions in which competing demands and legal imperatives make systematic and rational planning difficult. As a result, board policies cover a vast array of school operations, and the policies may appear ambiguous or contradictory when viewed by those who are charged with the responsibility to implement the policy in practice.

The policy environment in which local school boards operate is complicated by a number of factors. Legal mandates based on state and federal legislation, judicial decisions, and negotiated union contracts may impose substantial constraints on the local board's policymaking authority. Board members may have conflicting and irreconcilable views on the appropriate means to achieve key objectives. Educators may insist that the board defer to the professional expertise of administrators and teachers on matters of educational policy. The degree of board turnover may affect policymaking capabilities because of a loss of institutional or collective memory essential to recall the purpose and intent of previous policies. In addition, the policymaking environment often involves urgent and immediate policy decisions inflamed by public controversy, influenced by local interest groups, and complicated by insufficient time to analyze the policy in light of system objectives.

**Administration.** Another major role of the school board is that of administrative agency. While local boards are discouraged from becoming involved in the day-to-day operation and administration of schools, demands for public accountability dictate some level of involvement in the administration of the school system. Public accountability requires that the board must, at a minimum, provide oversight, adopt standards, and assess progress toward the accomplishment of key district objectives. To some extent, the board's administrative functions require knowledge of the operational procedures and organizational structures instituted to accomplish board policies. This knowledge cannot be achieved without some degree of administrative oversight.

A regular criticism of local boards is the tendency of board members to confuse monitoring of key outcomes and executive performance with prescrib-

ing how to manage the components of the system. A study conducted in West Virginia found that school boards spent 3 percent of their time on policy development and as much as 54 percent of their time on administrative matters. A study of fifty-five randomly selected school boards indicated that financial and personnel issues were among the most frequent areas of decision-making, displacing deliberations on educational policy by a significant margin.

It is axiomatic that school boards should focus on policymaking and eschew micromanagement of the school system. One national report—*Facing the Challenge: The Report of the Twentieth Century Task Force on School Governance*—has proposed that school boards emphasize their role as policy boards instead of collective management committees, with the aim of establishing policies to enhance student academic progress. As a practical matter, many local boards assume time-consuming duties that are primarily administrative. For example, many local boards act as hearing agencies for employee and student grievances. This quasi-judicial role conflicts with the policymaking priorities of the board. It has been recommended that school districts delegate the responsibility to hear complaints and appeals from individual students or employees to administrative law judges or other qualified third parties.

The local school board's responsibility for district personnel is another illustration of the practical difficulty in separating policymaking and administrative functions. In an organization that is labor intensive and commits a substantial portion of its annual operating budget to salaries and benefits for its teachers, administrators, and support staff, the board's administrative responsibility for personnel is unavoidable. State law typically requires that school boards select a superintendent, adopt and implement personnel policies for staff, appraise school and employee performance, ratify individual and collective employee contract agreements, and serve as the final administrative agency in dismissal proceedings. Issues such as recruitment, selection, and retention of teachers; setting compensation levels; and developing contract provisions are recurring agenda items for local school boards.

**Leadership.** The local school board has a vital role in providing leadership for district schools, serving as a forum for citizen input relevant to public education, and inculcating the beliefs, behaviors, and symbolic representations that define the organizational culture of the school system. In this role, the board's

responsibilities include adopting a unifying vision and mission, soliciting and balancing the participation and input of members of the community, and advocating on behalf of the educational needs of children at the local, state, and national levels. Consistent with this leadership responsibility, the local school board should emphasize the standard of continuous improvement for its own operations as well as that of the school system as a whole and undertake to evaluate its performance and improve upon that performance.

As a democratically elected body intended to represent the interests of the community on public education issues, the local school board is a symbol of local control of public education. By providing an accessible forum for discussion of education issues that affect local communities, school boards maintain a key component of their viability. Founded on the belief that citizens should play a dominant role in determining how children in a community are educated, local school boards have been described as a historic linchpin of American educational governance. In a diverse society with a multiplicity of cultures, the board has become the body in which all constituencies find expression, a role seen as crucial to sustaining participatory and representative government.

Though the local school board must provide leadership for the school system, the complexity, ambiguity, and uncertainty clouding the environment for public education in the United States makes assuming this role difficult. Education policymakers at the federal and state level; competing interest groups with substantial influence in the political process; and a multitude of stakeholders, including business organizations, parents' groups, taxpayers, labor organizations, and special-interest groups, complicate the policymaking process. As laypeople with limited experience, board members may hold outdated beliefs about best practices or be focused on a single issue that subsumes the broader responsibility for visionary leadership. Because elected school boards are especially sensitive to public criticism, board members may adopt a posture of reacting to these groups rather than taking a proactive role, resulting in crisis management and a tendency to consider issues on an ad hoc basis rather than in the context of defined goals and objectives.

## Decision-Making

A host of contemporary concerns present challenges to the local school board's pivotal role in the governance structure in American public education. These challenges include declining public confidence in public schools; limited financial and operational support; changing demographics; perceived drops in student achievement and performance; persistent student attrition or dropouts; reports of crime and violence in the school setting; and adversarial relationships with employee groups. At the same time that major challenges confront local boards, centralization of educational policymaking at the state level, initiated by the educational finance reforms of the second half of the twentieth century, when coupled with a heightened federal role in public education, has changed the locus of control over public schools and diminished local board powers.

Given the variety of policy considerations for school boards, the decision-making process of the board will vary depending upon the issues addressed, the parties involved, and the organizational interests, operational procedures, time constraints, and personal values of the decision makers. School boards are political organizations with members elected to serve a broad constituency. Decision-making in this environment is a highly political process in which coalition building, bargaining, competition, and adaptation are common. As with most organizations, it cannot be assumed that school board members are unified actors, and studies of school board decision-making show that individual role interests and social roles often serve as analytical constructs to explain decision-making processes. Local boards typically consist of members who possess divergent individual agendas and a limited set of mutually shared values or beliefs. Nevertheless, existing school board policies, extant procedures, and regularized customs and practices create and then enforce a unifying culture within the school board that is designed to maintain the status quo and has a relatively conservative perspective.

Board meetings follow the policies and procedures traditionally created to manage operations and are often characterized as ritualistic, systematic, and programmed. Although local boards are authorized by state law to adopt their own procedures, they are bound by law to follow those procedures once adopted. For example, procedural rules for establishing a quorum in order to take official action must be followed. A record of minutes of board

meetings must be maintained in order that the board documents its deliberations and actions. Notice of meetings must conform to state sunshine laws, and business must be conducted in public, open meetings unless an exception to state law permits an executive session authorizing the board to deliberate in private.

The work of board members is seldom self-selected and is more likely to be defined for them by the superintendent, other professional educators, community leaders, interest groups, or state and federal actors. Despite the importance of policymaking, board members report that day-to-day responsibilities consume most of their time and complain that they seldom have time for reflection, brainstorming, and long-term planning. Despite concerns for educational equity and quality, boards more often address matters of financial accountability, which tends to enforce a role as steward of the public purse and a perspective of fiscal conservatism.

Models of decision-making emphasize inventing, developing, and analyzing possible solutions before selecting a particular course of action. Selecting a possible course of action is informed by the judgment of the decision maker, the analyses of the alternatives on a logical or systematic basis, and the political bargaining process. A major criticism of decision-making in the context of local school boards is that adequate alternative solutions are not always considered in the decision-making process prior to drafting policies. Educational policymaking is distinctive because of its lack of regular formal procedures for generating alternative proposals to those advanced by professional educators or school officials. School board members are often constrained by limits imposed by existing law and policy and become dependent on school district professionals and administrators for proposals and information. Some authorities contend that school boards perform the function of legitimating the policies of the school system in the larger community rather than representing the various segments of that community to the school system.

*See also:* EDUCATIONAL LEADERSHIP; NATIONAL SCHOOL BOARD ASSOCIATION; SCHOOL BOARD RELATIONS; SCHOOL FACILITIES.

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## SELECTION AND EDUCATION OF MEMBERS

Local control of public education, grounded in the federal constitution, is exercised through local school boards. Although they enjoy some autonomy, local school boards are the product of state legislatures with enumerated powers. The federal government, state legislature, and state boards of education also make policy decisions affecting local schools.

In 2000 about 95,000 school board members adopted policies for some 15,000 public school districts. Due to consolidations and other restructuring, the number of school districts has dramatically declined from 1940, when there were 117,000. The state of Hawaii has only one board of education for the entire state. From 1999 to 2000 public school districts educated about 47 million students in pre-kindergarten through grade 12 with about 3 million teachers, according to the National Center for Education Statistics.

### Elected Versus Appointed Members

Most states prefer to elect school board members: Citizens in school districts elect more than 94 percent of their school board members. Several states both elect and appoint members. There is an increasing trend to appoint and not elect superintendents.

The typical school board member is a college-educated homeowner, who lives in a suburb or small town, and serves a school system enrolling between

1,000 and 5,000 students. Many districts are larger or smaller and reflect a greater diversity in membership. In western states, school boards have a higher percentage of Hispanics than do boards in other parts of the country. In southern states, 16 percent of school board members are African American, the highest percentage in the country, according to the National School Boards Association.

### Advantages and Disadvantages of Selection Processes

Advocates of electing school board members argue that elected boards are more responsive to the public will. In addition, electing members increases public interest in the schools as it ensures that people have a direct voice in the selection of the school system's governing body. Elected school board members have greater independence and freedom to act in the best interests of the school system than do appointed board members. An elected board is in a better position to work closely and effectively with its superintendent and professional staff than an appointed board.

The proponents of appointing board members assert that the appointive method provides opportunity for greater selectivity in choosing board members, thus assuring capable board members with proper motives. Appointment of board members helps ensure harmonious working relationships between the school board and the local government. Appointing board members ensures board stability and continuity of service are better secured by the appointive method. The elective method encourages candidates for board office to develop issues for their public appeal or to make charges against incumbent board members or professional staff in order to secure votes, while appointed board members generate less community controversy. In order to depoliticize the process and to be proactive in candidate selection, some school districts work through a citizen advisory or caucus process in order to identify and seek out qualified school board candidates.

There is no definitive literature on whether elected or appointed school boards are more effective in improving student achievement. Furthermore, governance and organizational changes do not appear to improve classroom instruction.

### Geographic Selection

Most school board members are elected from single-member districts; however, some school board

members are elected at large. It has been argued that single-member districts tend to create a more parochial school board member; however, at large elections a single-member district can generate legal challenges in states covered by the Voting Rights Act of 1965. Several lawsuits alleging minority dilution in the establishment of single member or at large elected board districts have been decided (*Reno v. Bossier Parish School Board* (1997), *Perez v. Pasadena Independent School District* (5th Cir. 1999), and *Valdespino v. Alamo Heights Independent School District* (5th Cir. 1999)).

### Term and Turnover of Office

Most school board members serve terms of three to six years. Most boards have three to nine members; however, some are larger to accommodate large populations or to reflect interests of multiple constituencies. Although in most cases, term limits do not apply to board service, in the 1990s some advocates called for term limits for school board members, arguing that some school board members use their offices for political gain and promotion.

The national tenure for school board members is declining. According to a study by the National School Boards Association, the average term of a board member has dropped from five and a half years in 1982 to five years in 1992. School board members choose not to seek another term because of changing interests, frustrations with the job, and the demands of mounting an election campaign.

### State Takeovers

In the 1990s rising national concerns about the quality of public education led states to adopt laws providing for the takeover of school districts or, in some cases, individual schools. At the beginning of the twenty-first century, twenty-four states have enacted policies that allow them to take over a school district due to academic problems within the school district. These state policies provide for application of progressive sanctions on a school district, with the ultimate sanction being a takeover. State policies may also permit a takeover for reasons other than academic problems: these include fiscal mismanagement, inept administration, corrupt governance, and crumbling infrastructure within the school district. Through state law, policy, or court action, the state designates an entity to manage the school district for a certain amount of time.

The consequences for school board members vary. For example, state officials can relieve school

board members and other high level administrators of their duties and appoint others to manage the school district in their place. Or, school board members and high level administrators might remain in place as an advisory group. In certain large cities, the mayor has governance authority. In cities such as Boston, Chicago, Cleveland, and Detroit, mayors, enabled by state legislation, have taken over the school systems and assumed the governance of them. Mayors either appoint the school board members or the superintendent or appoint the chief executive officer of the system.

The proponents of state takeovers argue that takeovers are a necessary extension of a state's constitutional responsibilities: They provide a good opportunity for state and local decision makers to combine resources and knowledge to improve children's learning and allow a competent executive staff to guide an uninterrupted and effective implementation of school improvement efforts. State takeovers also serve as a catalyst for creating the right environment for the community to address a school district's problems and allow for more radical, necessary changes in low-performing school districts. Finally, takeovers place school boards on notice that personal agendas, nepotism, and public bickering have severe consequences. Typically the new leadership uses achievement data collected from school districts and schools to bolster accountability efforts.

Opponents of this approach assert that state takeovers represent a thinly veiled attempt to reduce local control over schools and increase state authority over school districts. Takeovers imply that the problem lies with the community and it is up to the state to provide the solution; Thus, there is a false assumption that states have the ability to effectively run school districts. States may place poorly prepared state-selected officials in charge, who will not be able to produce meaningful change in the classroom, and will use narrow learning measures (i.e., standardized test scores) as the primary justification for takeover decisions. State takeovers often focus on cleaning up petty corruption and incompetent administration, and do not go to the root of the social problems that face disadvantaged students in urban school districts. Takeovers can foster negative connotations and impressions that hinder the self-esteem of school board members, administrators, teachers, students, and parents. Finally, takeovers encourage confrontation between state and local of-

ficials that slows the overhaul of management practices, drains resources from educational reforms, and reinforces community resentments.

### **Continuing Education of Board Members**

The educational background of school board members varies widely; some members have high school degrees or diplomas and others have doctorates. Formal education by itself does not adequately prepare school board members for their specific functions. Accordingly, many argue that school board training and education should be mandatory for all school board members.

In the 1970s board members attended a national convention, but relatively few attended systematic and targeted programs of continuing education. By 2001, however, more than half of the states required mandatory training for school board members. Typically, the school board member must participate in some recognized form of continuing education for a specified number of hours per year. In a study conducted by Marilyn Grady and Bernita Krumm in 1996, it was determined that of forty-three states in the study, ten states had mandatory training for school board members and thirty-two had voluntary training. In some states, if members do not attend training they could lose their seat on the school board. Often they are compensated for attendance at these required continuing education programs. The programs are provided by state school boards association or other recognized school board agencies such as the National School Boards Association or the Council of Urban Boards of Education.

### **Orientation**

As part of school board training, new school board members need orientation. New board members join a board of existing members who are continuing their service and who have developed a culture and context for their decision-making process. It is important that new school board members understand substantive information on school programs and operations. Without pre-service or orientation programs, it will take at least two years of school board service before board members gain the background and confidence to perform effectively and confidently.

### **Content of Education**

The key topics offered in state training included education law, finance, and board-superintendent

relations. Other topics included negotiations, curriculum management, labor relations, policy development, roles and responsibilities, leadership, legislation, community relations, strategic planning, and special education.

A significant new dimension to school board training is acquainting the school board members with research-based information. The data available to educators to support and assess educational programs is extensive. Many school board members are not accustomed to consulting research materials to inform their decisions. Solid information can also form the foundation for alternative solutions and provide the basis for choosing the best option.

In 2000 the National School Boards Association urged school boards to concentrate on raising student achievement by focusing on eight key areas: vision; standards; assessment; accountability; alignment; climate; collaborative relationships; and continuous improvement. This position undergirds the need for adequate school board training on issues of student expectations, achievement, testing, assessment, and accountability. A school board member also needs to be able to respond to questions from the press regarding achievement measures and the school board's assessment of its progress toward meeting its district's measurable goals.

One of the key challenges for school board education is not only to define its objectives and mission, but also to stay focused on these key issues. Even though many school boards attempt to concentrate on student performance and achievement, in some circumstances, boards might devote a minimum amount of their time to these critical issues. To forestall this, there must be a change in governance structure, culture, and agenda of boards so that they will remain focused on student achievement and performance.

Toward the end of the twentieth century, the role of local boards of education received scrutiny. Although most observers acknowledge that school boards have an important role in maintaining involvement of local citizens and in governing local schools, some confusion regarding the specific functions of boards persists.

In response to the changing demands on school boards, a National School Boards Association task force identified four core decision-making functions that are fundamental to a school system's accountability:

1. The establishment of a long-term vision for the school system.
2. The establishment and maintenance of a basic organizational structure for the school system, including employment of a superintendent, adoption of an annual budget, adoption of governance policies, and creation of a climate that promotes excellence.
3. The establishment of systems and processes to ensure accountability to the community, including fiscal accountability, accountability for programs and student outcomes, staff accountability, and collective bargaining.
4. Advocacy on behalf of children in public education at the community, state, and national levels.

### Training Activities

According to one study, the most common type of activities for training were annual conventions, orientations for new members, regional meetings, board president training sessions, and some summer and winter conferences. Other activities include the reading of appropriate literature, discussions of important issues, visiting schools, and board self-evaluations.

In order to encourage continuing education and training, state associations utilized awards for board members who completed extensive training. The more hours earned in a continuing education, the higher the award to the board member. Further, state school board associations select a “school board of the year” composed of members from the state who have demonstrated leadership including commitment to continuing education.

Superintendents play an important role in training of school board members. They can supply members with position papers, provide members with options and best practice research, conduct special briefing sessions on key issues, and model continuing improvement in the area of professional development.

School board education requires balancing issues of structure such as board–superintendent relations and education law with issues of student achievement and accountability that are part of the national agenda in the early twenty-first century.

*See also:* EDUCATIONAL LEADERSHIP; NATIONAL SCHOOL BOARD ASSOCIATION; SCHOOL BOARD RE-

LATIONS; SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS; SUPERINTENDENT OF SCHOOLS.

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## SCHOOL CLIMATE

Anyone who spends time in schools quickly discovers how one school can feel different from other

schools. *School climate* is a general term that refers to the feel, atmosphere, tone, ideology, or milieu of a school. Just as individuals have personalities, so too do schools; a school climate may be thought of as the personality of a school.

The concept of *organizational climate* has a rich history in the social science literature. In the early 1960s George Sterns was one of the first psychologists who saw the analogy with individual personality and used the concept of organizational climate to study institutions of higher education. The use of the concept quickly spread to schools and business organizations, each with a somewhat different conceptual view of climate. Although there are a variety of conceptualizations, there is general agreement that organizational climate arises from routine organizational practices that are important to an organization's members, that it is defined by member perceptions, and that it influences members' attitudes and behavior. Thus, school climate is a relatively enduring character of a school that is experienced by its participants, that affects their actions, and that is based on the collective perceptions of behavior in the school.

### Measuring School Climate

Andrew Halpin and Don Croft's pioneering analysis, *The Organizational Climate of Schools*, has had a great impact on the study of school climate. They developed the Organizational Climate Description Questionnaire (OCDQ), a sixty-four-item Likert-scale questionnaire that is used to assess the teacher-teacher and teacher-administrator interactions found in elementary schools. Teachers and administrators are asked to describe the extent to which key behaviors occur, such as how frequently (rarely, sometimes, often, or very frequently) "The principal stays after school to help teachers finish their work," "The principal looks out for the personal welfare of teachers," and "The teachers accomplish their work with great vim, vigor, and pleasure." Thus, school climate is defined in terms of educators' perceptions of the leadership behavior of the principal and interactions among teachers. Patterns of principal and teacher behaviors are then arrayed along a rough continuum, ranging from *open* to *closed* school climates. An open school climate is one in which teacher and principal behavior is supportive, genuine, and engaged, whereas a closed climate is characterized by lack of authenticity, game playing, and disengaged behavior. There were a number of limitations to

early versions of the OCDQ. For example, it only measured the climate of elementary schools, and the validity of some of its subtests was questioned.

Subsequent revisions of the OCDQ have addressed these issues, and three new and simplified versions of the questionnaire have been formulated for use in elementary, middle, and secondary schools. The revised OCDQ was conceptualized using the same framework of open versus closed climates and behaviors. For example, open principal behavior in elementary schools is measured through items that describe supportive principal behavior that is neither directive nor restrictive, and open teacher behavior is that which is collegial, intimate, and committed to teaching and learning.

Another climate framework uses a health metaphor—school climate is measured in terms of healthy interpersonal dynamics. In the tradition of the OCDQ, the Organizational Health Inventory (OHI) is a set of descriptive statements that tap productive relationships in school. There are three versions of the OHI—elementary, middle, and secondary. This broad climate perspective examines the relationships between the school and environment, the leadership of the principal, relationships among teachers, and relationships between teachers and students. For example, the secondary version maps seven aspects of school climate:

1. *Institutional Integrity* is the extent to which the school is able to manage its constraints from the community
2. *Consideration* is principal behavior that is genuinely collegial, friendly, open, and caring toward the faculty
3. *Initiating Structure* is principal behavior that is oriented toward both tasks and achievements through clearly articulated work expectations and performance standards
4. *Principal Influence* describes the principal's ability to influence superiors
5. *Resource Support* is the ability of the principal to obtain classroom materials and supplies needed by teachers
6. *Morale* is the collective sense of friendliness, openness, and enthusiasm among members of the teaching staff
7. *Academic Emphasis* is the extent to which the teachers and students are committed to academic excellence

A pattern of high scores on these variables defines a healthy school climate. There are, of course, other measures of school climate, but the openness and health frameworks have generated the bulk of the systematic research on school climate.

### School Climate and Outcomes

Empirical evidence has linked school climate with achievement. Though school climate is often defined differently in various studies, the research evidence using the OCDQ and the OHI measures of climate is encouraging. Openness of school climate has been linked primarily to expressive characteristics in schools. For example, the more open the school climate, the more committed, loyal, and satisfied the teachers are. Similarly, the more open the climate of the school, the less alienated students tend to be. School climate, from the health perspective, has been positively related to school effectiveness. Most of the health variables correlate significantly with general subjective measures of effectiveness, and the variable of academic emphasis has consistently been related to student achievement in high schools, middle schools, and urban elementary schools. In fact, the relationships hold even controlling for the effects of socioeconomic status.

### Trends, Issues, and Controversies

School climate has become a global construct that researchers often use loosely to group together studies of school environment, learning environment, learning climate, sense of community, leadership, academic climate, and social climate. This broad application reveals both the strength and weakness of school climate study—it is a useful integrating concept on the one hand, but it also suffers from a lack of clear definition. Like so many other terms that are bandied about, the word *climate* threatens to become meaningless. Because its referents are so diverse, the word sometimes obscures, rather than creates, understanding. *School culture* is a related term that has been used to describe the work environment; in fact, climate and culture are often used interchangeably by some educators to refer to the distinctive workplace of a school. A useful distinction is that culture consists of shared values and assumptions, whereas climate is defined by shared perceptions of behavior.

In many studies, after a small number of “effective” and “ineffective” schools are identified, researchers catalog each school’s organizational

characteristics and attempt to find consistent differences between the two types of schools. Not surprisingly, the differences vary from study to study when such post hoc methods are used, and the list of effective school attributes grows as such studies accumulate. In addition, organizational characteristics are defined differently in each study, so that reviewers use general terms to summarize the characteristics of effective schools—terms such as *positive school climate* and *strong leadership*, which are often defined quite differently in various studies.

What is missing in much of the research on school climate is the theoretical linkage that explains these relationships. It is important, for example, not only to know that climate is related to student achievement, but also to ascertain why this is so. What are the generalizations and mechanisms that explain higher achievement? These are critical questions, and their answers will provide a deeper understanding of the dynamics of organizational life in schools and suggest more effective and lasting solutions to the problems of practice. Evidence is beginning to suggest, for example, that a school climate with open, healthy, and collegial professional interactions and strong academic emphasis empowers teachers and creates norms of collective efficacy that shape the normative environment of schools and influence teacher behavior. When teachers believe that they can organize and execute their teaching in ways that are successful in helping students learn, and when the school climate supports them, teachers plan more, accept personal responsibility for student performance, are not deterred by temporary setbacks, and act purposefully to enhance student learning. It is important to try to understand how specific school climate attributes influence critical teacher behaviors that improve teaching and learning in the classroom.

**See also:** PRINCIPAL, SCHOOL; SCHOOL-BASED DECISION-MAKING; SOCIAL ORGANIZATION OF SCHOOLS.

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WAYNE K. HOY

## SCHOOL CURRICULUM

See: CURRICULUM, SCHOOL.

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## SCHOOL FACILITIES

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### OVERVIEW

Jeffery A. Lackney

### MAINTENANCE AND MODERNIZATION OF

Lawrence O. Picus

### OVERVIEW

An effective school facility is responsive to the changing programs of educational delivery, and at a

minimum should provide a physical environment that is comfortable, safe, secure, accessible, well illuminated, well ventilated, and aesthetically pleasing. The school facility consists of not only the physical structure and the variety of building systems, such as mechanical, plumbing, electrical and power, telecommunications, security, and fire suppression systems. The facility also includes furnishings, materials and supplies, equipment and information technology, as well as various aspects of the building grounds, namely, athletic fields, playgrounds, areas for outdoor learning, and vehicular access and parking.

The school facility is much more than a passive container of the educational process: it is, rather, an integral component of the conditions of learning. The layout and design of a facility contributes to the *place experience* of students, educators, and community members. Depending on the quality of its design and management, the facility can contribute to a sense of ownership, safety and security, personalization and control, privacy as well as sociality, and spaciousness or crowdedness. When planning, designing, or managing the school facility, these facets of place experience should, when possible, be taken into consideration.

### Constructing New Facilities

During strategic long-range educational planning, unmet facility space needs often emerge. The goal of educational planning is to develop, clarify, or review the educational mission, vision, philosophy, curriculum, and instructional delivery. Educational planning may involve a variety of school and community workshops and surveys to identify and clarify needs and sharpen the vision of the district. Long-range planning activities, such as demographic studies, financing options, site acquisitions, and community partnering opportunities are often initiated by the district administration as a response to the results of educational planning. An outcome of long-range planning is the development of a comprehensive capital improvement program to address unmet facility needs.

The district superintendent appoints a steering committee to oversee the details of the capital improvement program. The responsibility of the steering committee includes the selection of various consultants, the review of planning and design options, and the reporting of recommendations to the school board for a final decision. Depending on the needs of the district, one of the first tasks of the

steering committee is to retain a variety of consultants. Educational and design consultants, financial consultants, bond counsels, investment bankers, and public relations consultants are retained to perform pre-referendum planning activities during which project scope, budget, financing, legal issues, and schedule are defined. Once project feasibility is established, a public referendum package is developed and presented to the taxpaying public through public hearings. Upon passage of the public referendum, more detailed facility planning of the school can begin.

An architect is often selected to assist in facility planning in cooperation with the educational planning consultant and in-house facility staff. The school board, as the owner, enters into a contract for services with the chosen architect. The architect, in turn, negotiates contracts with a variety of consultants, including interior designers, landscape architects, mechanical, electrical, and civil engineers, and land surveyors.

The facility planning process at its best involves an assessment of functional needs in light of the educational program developed during educational planning. There are several names for this process: Educators refer to the development of *educational specifications*, while architects refer to it as *facility programming*. Facility planning includes any or all of the following activities: feasibility studies, district master planning, site selection, needs assessment, and project cost analysis. Spatial requirements and relationships between various program elements are established. The outcome of the facility planning process is a public facility program, or educational specifications document, that outlines physical space requirements and adjacencies and special design criteria the school facility must meet.

The design phase of the process, which includes schematic design, design development, and construction documents and specifications, can last from six months to one year. Each step in the design process involves more detailed and specific information about the technical aspects of the building systems, components, and assemblies. The design process requires school board decisions and approval, with each phase offering more detailed descriptions of the scope, budget, and schedule. The products of this phase include sketches, drawings, models, and technical reports, which are shared with the school and community through public hearings, workshops, and other forms of public relations and

community involvement. Community participation during the earliest stages of the design phase can be as critical for stakeholder support as it was in the educational planning process.

There are several construction delivery methods available to the school district: competitive bidding, design/build, and construction management. Each state has evolved its own laws regulating the acceptable forms of construction project delivery. Competitive bidding is still the most common form of construction delivery. It allows contractors in each trade, such as general, mechanical, electrical, and plumbing, to compete for individual prime contracts and form separate contracts with the school district. In principle, it provides the most open and fair competition appropriate for a public sector project; however, project communication and coordination may ultimately affect schedule and budget. Design/build is most popular with private sector owners but is occasionally used in the public sector. Under a design/build contract, the owner contracts with one firm that completes both design and construction of the project under one contract. Cost and time savings are possible but often with a loss in quality of the product. Construction management is a service that often is established simultaneously with the hiring of the architect. A construction manager's responsibility is to act as project manager throughout the design and construction process, coordinating the project budget and schedule along the way. A fourth form of construction delivery is actually a comprehensive project management delivery service, which includes construction management but also extends from pre-referendum through occupancy and even facility management, offering one-stop shopping for facility development. Large school districts that have multiple projects often contract with project management services. Project management firms offer a wide array of financial, legal, and construction services promising economies of scale.

Following the competitive bidding process, the next phase of the school building process is that of bidding and negotiation. An *Invitation for Bids* is publicized to obtain bids from prime construction contractors. Most states require the school district to accept the lowest responsible and responsive bidder. However, the school district reserves the right to reject all bids. Once low bids are accepted, the school district, as owner, negotiates a contract with each prime contractor. The architect represents the owner

in the construction phase, but the contract and legal relationship is between the school district, as owner, and each prime contractor. The construction of the school can last from twelve to eighteen months, depending on the project scope, material selections, lead times for shipment to the site, weather, unforeseen subsurface site conditions, and a variety of other factors. With the use of school buildings being tied to the school year schedule, project phasing is always an issue that needs to be addressed. Other factors that can escalate cost and slow the project are change orders to rectify unforeseen conditions or errors and omissions in the original construction documents. Once the architect is satisfied that the project is complete, a *Certificate of Substantial Completion* is issued and the owner can legally occupy the facility.

### Facility Management

While the planning, design, and construction of the school facility may take two to three years, the management of it will last the entire life cycle of the facility. At the beginning of the twenty-first century, the mean age of a school building in the United States as forty-two years, with 28 percent of school buildings built before 1950. Many of the building materials, furnishings, and equipment will not last half that long and will require constant upkeep, maintenance, and inevitable replacement to defer building obsolescence.

The costs of managing school facilities have historically received much less attention than facility planning. The percentage of the operating budget for the maintenance and management of school facilities has steadily decreased, creating a capital renewal crisis as a result of years of deferred maintenance at all levels of education.

Best practice requires that a comprehensive facility maintenance program be established and monitored by the school district. The maintenance program often includes several distinct programs, including deferred, preventive, repair/upkeep, and emergency maintenance. Responsibility for facility management is divided between the district office and the school site, with the principal being the primary administrator responsible for the day-to-day operation of the school, including custodial, food, and transportation services. Custodians are typically hired by the school district but managed by the principal. Custodial staff is generally responsible for cleaning the building; monitoring the mechanical,

electrical, and plumbing systems; and providing general maintenance of both building and grounds. District staff is responsible for long-term maintenance programs and the procurement of outsourced services for specialized maintenance projects.

Several environmental quality issues have emerged over the past few decades, such as classroom acoustics, indoor air quality, water quality, energy conservation, and abatement of asbestos, radon, and other hazardous materials. Many of these issues require the services of facility consultants hired through the district. Other issues for the building-level administrator include safety and security, vandalism and threats, and acts of violence and terrorism. All of these functions must be conducted within a constantly changing set of government mandates, such as energy deregulation, accessibility guidelines, codes, and other regulations and guidelines at the state and federal levels.

### Trends and Issues

Many communities recognize that in addition to school facilities being cost effective, they should be more learner-centered, developmentally and age appropriate, safe, comfortable, accessible, flexible, diverse, and equitable. By location of new facilities in residential neighborhoods and partnering with other community-based organizations, schools are becoming true community centers. In addition, schools are taking advantage of educational resources in the community, as well as partnering with museums, zoos, libraries, and other public institutions and local businesses.

Based on mounting evidence that smaller schools lead to improved social climate as well as better achievement, school leaders have begun to create smaller schools or have created schools within schools.

The design of safe schools increasingly recognizes the desirability of providing natural, unobtrusive surveillance mechanisms, rather than installing checkpoints and security guards. Smaller scaled school buildings allow for both natural surveillance and territorial ownership, where students and teachers are on familiar terms, thereby decreasing the possibility that any one student is overlooked.

The self-contained classroom can no longer provide the variety of learning settings necessary to successfully support project-based, real-world authentic learning. Research indicates that smaller class

size is a factor contributing to improved achievement. Learning settings are being designed to support individualized, self-directed learning and small informal group learning, in addition to traditional large-group instruction. Rather than lining up classrooms along a long corridor, instructional areas are being organized around central cores of shared instructional support.

A trend in the provision of professional space for teachers has emerged as well. Teacher office space, including desk and storage, phone/fax, and information technologies, is seen as essential to the development of teachers as professionals.

Information technology is precipitating a variety of changes in the organizational and physical form of schools. With respect to instructional processes, technology is facilitating the movement toward project-based, self-directed learning and individualized instruction. As learning becomes increasingly virtual, web-based, and wireless, it still must physically take place somewhere. As information technology is becoming ubiquitous, more schools are decentralizing technology throughout the school building and across the community.

The trend toward *smart buildings*, or buildings that are designed and constructed to integrate the technologies of instruction, telecommunications, and building systems, will have increased responsiveness to occupant needs as well as the educational process.

Finally, because of the recognition that spending too much time in buildings can be detrimental not only to health but also to learning, school buildings will begin to connect more to the natural environment visually, aurally, and kinesthetically by including transitional indoor and outdoor learning spaces.

### Cost Considerations

Estimates of cost to repair and modernize school facilities nationwide continue to grow from the \$112 billion estimated by the U.S. General Accounting Office (GAO) in their landmark 1995 report, to the National Center for Educational Statistics (NCES) estimate of \$127 billion in 1999, to \$268.2 billion estimated by the National Education Association in 2000.

The construction and operation of a school building involves a substantial expenditure of public funds. The investment for construction, however, represents only a fraction of the cost of operating a

school over the life of the building. When life-cycle costs of operating a school are considered (including staff salaries and overhead costs, in addition to maintenance and operation of the facility), the initial cost of the school facility may be less than 10 to 15 percent of the life-cycle costs over a thirty-year period. Properly designing and constructing school buildings for the realities of management can often provide cost savings over time that could in turn provide additional funds for education. Operational costs for power and fuel, water and sewer, garbage disposal, leases and insurance, building maintenance, and custodial staff are important items in the annual budget, competing yearly for funds identified for educational delivery. Building life-cycle cost analysis is admittedly difficult for taxpayers and school boards to comprehend when available building funds are tight, but the rewards in effective facility management are potentially great.

*See also:* CLASS SIZE AND STUDENT LEARNING; FINANCIAL SUPPORT OF SCHOOLS; LIABILITY OF SCHOOL DISTRICTS AND SCHOOL PERSONNEL FOR NEGLIGENCE; RURAL EDUCATION; SCHOOL BOARDS; SCHOOL CLIMATE; YEAR-ROUND EDUCATION.

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JEFFERY A. LACKNEY

## MAINTENANCE AND MODERNIZATION OF

As public education in the United States entered the twenty-first century, educational leaders and policy-makers were faced with increasing costs for the maintenance and modernization of educational facilities. Driven by two factors—a considerable backlog of deferred maintenance expenditures and needs, and the need to ensure that classrooms have adequate facilities to accommodate the growing use of technology—estimates of the costs for maintenance and modernization of school facilities have soared.

In a 2002 article, Philip E. Geiger stated that as of January 2002 it would cost between \$112 and 150 billion to “bring the nation’s schools up to good condition” (p. 43). The U.S. Department of Education (DoE) estimated that the cost would be \$127 billion. Moreover, the DoE estimated that 30 percent of the country’s schools needed extensive repairs and another 40 percent needed replacement of some major component. This suggests that at the begin-

ning of the twenty-first century some 70 percent of schools across the United States were in need of major repairs.

In 2000 the National Education Association estimated that total school infrastructure needs—including technology—amounted to some \$322 billion. This estimate included costs of new school construction, additions to existing buildings, renovation and retrofitting, deferred maintenance, and major improvements to school grounds, as well as the costs of technology.

Estimating the age of a school building is difficult because many schools have had additions or major remodeling at some point in their history, either to accommodate more students or to update and upgrade the facility. The DoE found that in 1999 the average age of public schools across the United States was forty years. Moreover, on average it had been eleven years since these schools had been renovated. The DoE estimated the functional age of each building and found that the average functional age of school buildings was sixteen years.

Schools in central cities tend to be older than those in other areas. Moreover, in such urban districts, it has often been somewhat longer since a major renovation has taken place. While the differences are relatively small, high minority population schools tend to be in older buildings as well. Many of these older schools need substantial repairs as well as upgrading to meet newer building codes and fire safety standards.

In addition, it is generally these older buildings that do not have sufficient capacity to meet the wiring demands of new technology. Frequently classrooms do not have enough electrical outlets to support more than one or two computers, and many remain without connections to the Internet, even via telephone modem connections. Wiring for school-wide networks is also made difficult because older construction often has solid walls and no false ceilings where wires and networking cable can be installed. This adds yet more to the costs of modernization for technology.

### Maintenance

When faced with a revenue shortfall, most school districts strive to keep major funding reductions away from the classroom. One way to save money in the short term is to defer maintenance on school facilities. While this is often a useful tool for short-

term savings, the deterioration in the condition of an improperly maintained building is very obvious and can often begin within a matter of a few years. Given the high cost of building new schools, this approach may be inappropriate in the long term. California, for example, has an estimated school infrastructure need of more than \$22 billion, with another \$10 billion or more needed for technology.

Much of this could be prevented if proper preventative maintenance procedures are implemented and used by school districts. Geiger provided a list of seven priorities school districts need to consider in developing a high-quality school maintenance program:

1. A commitment on the part of the board, the superintendent, and senior staff to facility maintenance.
2. Development of a comprehensive preventative maintenance program.
3. Adequate funding for both preventative maintenance and capital improvement.
4. A willingness to consider new ideas for construction and maintenance of facilities.
5. Continual search for new and different ways to pay for maintenance and construction needs.
6. Careful review of district goals and policies to make sure facility management receives appropriate levels of funding in the annual budget cycle.
7. A plan to link academic programs to facility needs.

In a 1999 article, Michael Zureich provided evidence of the success of adopting the fourth priority above, that of considering new ideas. Zureich described three schools where a coordinated design and building committee had led to better use of less expensive and easier-to-maintain construction materials, resulting in reduced construction costs and lower life-time maintenance costs. He pointed out that it is important to consider the strength, reliability, and life of all construction materials and to plan for maintenance needs in the initial construction. Zureich suggested that schools using this process have reduced design, construction, and maintenance costs by between 18 and 25 percent.

### Modernization

In addition to maintaining existing school buildings, there is a continual need for modernization. This is

a far broader need than the typical concern over creating an infrastructure for technology. Many schools built in the past do not provide adequate space resources for the way schools educate children in the early twenty-first century. Efforts to reduce class size across the nation along with growth in the number of students have placed a burden on school facilities and increased the demand for more classroom space. Moreover, teacher efforts to use classrooms in different ways to maximize learning often require additional square footage in each classroom. For example, in elementary schools, the traditional room full of tables has often been replaced by a room with desks on one side and a large carpet in another part of the room where students sit on the floor for certain activities. Some rooms have special corners for computers or for quiet reading activities. All of this requires additional space and reorganization of the classroom space.

In earlier periods, schools were built to meet the requirements of educational methods that are no longer in favor. Many schools built in the 1970s relied on the “open classroom” model where there were no walls between classrooms. As teaching moved away from this model, schools had to spend substantial sums of money to reconfigure their facilities.

Other more mundane changes are also an important part of a continuous modernization process. Installation of white boards to replace traditional chalk boards or changing wall surfaces to make it easier to hang displays and teaching aids can make a tremendous difference in the appearance of a classroom. Yet even these simple things can be expensive, and planning for such upgrades is important. Furthermore, as new schools are built with such features as work areas for teachers attached to clusters of classrooms, the school budget needs to provide adequate funds for work materials and equipment for teachers (such as computers, copiers, and telephones) and for reasonable replacement programs for these important tools.

### Technology

The growing use of technology—particularly computers—in instruction has placed a whole new set of demands on the construction, maintenance, and modernization of school facilities. Although technology in schools is a much broader concept than simply the use of computers, it is computers that are most frequently thought of in discussions of educa-

tional technology today. Schools face problems with acquiring adequate numbers of computers, replacing them on a regular and frequent basis, providing the electrical power to operate them in each classroom, and providing and maintaining the wiring infrastructure needed to keep them connected with the school and across the district and the community more generally.

Computers represent a new challenge to school budgeting processes as they have a life span of three to five years, somewhat longer than typical “current” expenditure plans and considerably shorter than the traditional capital funding models used by school districts. As a result, many districts have had difficulty in purchasing and keeping adequate numbers of up-to-date computers. Some have turned to lease programs; others rely on donations of computers—new and used. Other districts have simply not replaced old and obsolete computers in a timely fashion.

Even if a district has managed to develop a purchase plan to provide adequate computer systems for all its schools, there is still the problem of electrical wiring and connections between computers. Older schools simply do not have the capacity to handle the electrical and wiring needs of state-of-the-art computers. Funding for installation of the infrastructure may be available through the e-rate funding, a process whereby telecommunications firms contribute to a fund whose proceeds are distributed on a competitive basis to school districts for technology needs.

Once installed, there are also substantial costs to maintaining computer networks. Updating all of the routers and servers needed to keep the computers communicating as well as repair technicians to fix computers and related peripherals when they break down are essential to successful technology implementation. Funding for all of this needs to be a regular part of a district’s budget.

### Sources of Funding

The maintenance and modernization needs of schools require both one-time and continuing sources of money, with maintenance and modernization requiring different approaches. Maintenance is probably best funded through budget allocations of current resources. This means that adequate funds need to be allocated each year to be sure that the investment a district has made in facilities is not

lost because of premature deterioration of the buildings. Some districts in some states have had some success in getting community redevelopment agencies to provide a portion of the tax increment they receive to stimulate development for school facility needs. Often this money is used to supplement existing allocations for maintenance.

Modernization may require one-time funding options. Some of the alternatives available to school districts include:

- **Bond Issues:** By taking advantage of the tax-exempt status of school district bond issues, education agencies can often borrow funds for capital projects at relatively low interest rates. Bonds typically require voter approval and, depending on state law, may need to be accounted for in a separate budgetary and accounting fund. Nevertheless, they remain a powerful and relatively inexpensive way to fund facility needs.
- **Special Local Option Sales Taxes:** Allowed in some states, these are sales tax increments added to the state and local sales taxes already collected. While such taxes can be a reliable source of funds, local sales taxes may also inhibit development of commercial and retail centers in the district.
- **Voter-Approved Levies or Sinking Funds:** Some states allow school districts to levy special taxes for specific purposes such as technology. Others allow districts to levy taxes for a sinking fund, which collects the revenues and accumulates interest so that construction and/or modernization needs can be funded through the cash balance in the fund.
- **State and Federal Funding:** Special state and federal programs are sometimes available to fund improvements and construction. Individual state programs to help meet deferred maintenance needs are common, and the federal government has provided funding for school facilities through the Qualified Zone Academy Bond program. In each case these programs provide local school districts with funds for improving or building school facilities.

### Conclusion

Maintaining school facilities is important to providing high-quality education programs. More important, by investing in strong preventative maintenance programs, school facilities can continue to

serve students for long periods of time. Modernization of school facilities has faced a number of new challenges in recent years with the advent of the personal computer. As new technologies are increasingly integrated into programs of instruction, the ability to adequately finance the acquisition of this equipment and to have the infrastructure in each school to support this technology is also important.

*See also:* FINANCIAL SUPPORT OF SCHOOLS; RURAL EDUCATION; SCHOOL BOARDS; TECHNOLOGY IN EDUCATION; URBAN EDUCATION.

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LAWRENCE O. PICUS

## SCHOOL FOOD PROGRAMS

Food service programs have long been recognized as important components of education in the American schools. "You can't teach a hungry child" has been an accepted principle since the early years of the country, when children were expected to bring lunches from home to get them through the day. However, not all children were able to do so because of financial and other circumstances. In addition, the food brought from home was often lacking in nutritional quality and desirability, and the schools usually lacked the facilities to store milk and other perishable food products. At the same time, food supplies in this country have usually been abundant and, at least during recessionary periods, in excess of market demands.

Particularly during the 1930s, farmers faced extremely low prices and excess food supplies while

people were literally starving. Children were perceived as being in critical need of food support. To solve both problems, the Congress passed Public Law 74-320, authorizing the U.S. Department of Agriculture (USDA) to purchase surplus agricultural commodities and distribute them to needy families and specifically to school lunch programs. At the same time, the Works Progress Administration (WPA), established in 1935, provided labor and trained supervisory personnel for staffing school lunch program on a national scale.

### Early Lunch Programs

Precedents for school lunch programs date back to the mid-nineteenth century in England and western Europe. In 1849, school canteens were established in France, and in 1866 the Destitute Diner Society was established in London. By the beginning of the twentieth century, most western European countries had national laws or extensive municipal legislation providing for school meals.

In 1853, the Children's Aid Society of New York served food to all children who attended its industrial schools, which later became public schools. Serving food became an inducement to children from the slums to attend school. In the economic downturn of 1893, the problem of hungry school children came to public attention. The conviction arose that children in a weak physical and mental state resulting from poverty learned little or nothing at school.

The Star Center Association began school food service in Philadelphia elementary schools in 1894. In 1909, the Philadelphia Board of Education took over all school food service in secondary schools, making Philadelphia the first large city to establish central food control. School lunch programs increased rapidly in the 1920s, as new knowledge of nutrition led to greater concern for the health of children. As a result, the purpose of school food service broadened from provision for the needy and undernourished to provision for all children who need food at school.

### The National School Lunch Program

During World War II, many U.S. draftees were found to be malnourished to such an extent that they were turned down for military service. The realization of this low nutritional state of the general population led to the passage of the National School Lunch Act (NSLA) in 1946, which established the National School Lunch Program (NSLP) in elemen-

tary and secondary schools. This landmark legislation, although amended many times, continues in force today, with its original objectives still in place. These objectives are “to safeguard the health and well-being of the Nation’s children, and to encourage the domestic consumption of nutritious agricultural commodities and other food.”

The NSLA provided annual appropriations to the USDA to purchase surplus foods and apportion them to state agencies, along with certain funds that were to be matched three-to-one with state funds or volunteer labor. Commodities and funds were provided to state educational agencies and to other non-profit agencies participating in the program (private schools in about twenty-five states that could not transmit funds through their state educational agency). These agencies managed the lunch programs at the local level, and sometimes added state funds. They were provided with state operating expenses that covered part, but not all, of their own expenses, also on an apportionment basis. Apportionments after 1962 were made on the basis of state level of participation during the previous year and per capita state incomes relative to the U.S. total. Nonfood assistance for the purchase of food service equipment was also provided selectively in low-income areas by grants authorized by the Child Nutrition Act of 1966 (Pub. L. 89-642).

The Food and Nutrition Service of the USDA operates the NSLP at the national level, and the individual states must sign agreements to operate the program in accordance with the regulations to receive federal reimbursements for meals served. Normally, the state educational agency is responsible for operating the program at the state level. More than 97,700 public and nonprofit private schools and residential child-care institutions operated the program in fiscal year 2002. Among the important requirements for operating the program, NSLP meals served at the local level are required to meet nutritional standards specified in the NSLA. Those requirements originally were called the *Type A* lunch pattern (as opposed to *Type B*, which consisted only of milk). That term, while still in use locally in many places, was replaced in the 1970s with *USDA menu pattern*, which refers to service of specified portions of meat, milk, vegetables or fruits, and bread. The legislation recognized that federal support was only supplemental to total costs, and therefore it was expected that meals would be sold at cost to the chil-

dren that could afford to pay, while low-income children would receive their lunches free.

### More Recent Program Changes

Three key changes have been made in the funding and operations of the NSLP: (1) Public Law 91-248, enacted in 1971, specified that federal dollar appropriations apportioned to the states for the program’s operation were to be replaced with a federal reimbursement entitlement of a certain number of cents in cash and another entitlement value of commodities for each meal served that meets requirements. Funds and commodities provided per meal are updated annually based on changes in prices of *food-away-from-home*, as measured by the Consumer Price Index (CPI). Thus, the program was transformed into an ongoing, performance-based federal obligation. (2) With the same legislation, the federal government assumed the obligation for the full cost of all meals served to needy children, with entitlements updated annually based on price changes reflected in the CPI. Eligibility for free or reduced-price meals was specified by law and measured in accordance with the Federal Income Poverty Guidelines. These guidelines are also updated each year, based on changes in the CPI. (3) In 1995, nutritional requirements were changed from specifying the service of specified portions of specified kinds of food to the requirement that nutritional meals needed to be provided (Pub. L. 103-448). These requirements are tied to the service of meals that meet one-third of the daily Recommended Dietary Allowances (RDAs), as specified by the Food and Nutrition Board of the National Research Council, which is part of the National Academy of Sciences, as well as the Dietary Guidelines for Americans.

Another change occurred in 1998 when Congress expanded the NSLP to include reimbursement for the service of snacks in after-school, educational, and enrichment programs to students up to eighteen years of age. Organized sports activities with limited eligibility of student participation do not qualify for support.

### NSLP Payment Rates

In school year 2001–2002, all qualified meals served, regardless of the income level of the students’ parents, were reimbursed at 20 cents per meal. But if the meals were served in relatively low-income districts, these meals received an extra 2 cents reimbursement. The qualification of “low-income district” is mea-

sured by the percentage of free or reduced-price meals served in the district two years previously. If more than 60 percent of the meals served went to students qualifying for free or reduced-price meals, the district gets the extra 2 cents. If the number is less than 60 percent, they get only the basic reimbursement level.

For student meals served free to qualifying low-income students, an additional federal reimbursement of \$1.89 was made, for a total, including the above 20 or 22 cents, of \$2.09 or \$2.11 per meal depending on whether the meals were served in low-income areas. Reduced-price meals were reimbursed at 40 cents per meal less than for free meals. In total, reduced-price meals were reimbursed at \$1.69 or \$1.71, depending on the income level of the location served.

The above rates were the same in each of the forty-eight contiguous states and the District of Columbia. Higher rates were paid for meals served in Alaska and Hawaii, in recognition of their higher costs. All meals served in Alaska in 2001–2002 received 32 or 34 cents reimbursement. Free meals received a total of \$3.38 or \$3.40, and reduced-price meals received a total of \$2.98 or \$3.00. In Hawaii, the rates were 23 or 25 cents for all meals, for a total of \$2.44 or \$2.46 for free meals and \$2.04 or \$2.06 for reduced-price meals, depending on the income criteria. Note that the 2-cent differential for income level of the district was the same as in the 48 states, and the 40-cent differential between free and reduced-price meals was maintained.

The above payment rates increase by law each year, as noted above. The average increase for school year 2001–2002 year was 2.85 percent, reflecting price increases over the previous year.

In addition to the above cash payments, schools also receive in-kind commodity support. They received an entitlement level of 15.5 cents worth of foods in 2001–2002 for all meals served. These foods are purchased and distributed to the states by the USDA. The types of foods purchased are determined in consultation with the states to be those preferred by program operators, based on feedback from children's preferences. In addition, a variable amount of bonus foods are provided when foods are in surplus from an agricultural supply perspective. The entitlement level of 15.5 cents increases each year based on wholesale food-price increases as measured by the Bureau of Labor Statistics.

### **Free and Reduced-Price Lunches**

Since 1971, free lunches have been available to all children from households with incomes below 100 percent (or more) of the Income Eligibility Guidelines, which were patterned after the Income Poverty Guidelines published by the Office of Management and Budget (OMB). In August 1981, the level of eligibility for free lunches was raised to 130 percent of the guidelines, and reduced-price meals were made available to all children from households with incomes between 130 percent and 185 percent of the Guidelines.

In school year 2001–2002, these guidelines provided free meals to students from four-person households with annual cash incomes (before taxes and other deductions) below \$22,945 in the forty-eight contiguous states and the District of Columbia. Income levels varied by household size, and were about 25 percent higher in Alaska and 15 percent higher in Hawaii. Reduced-price meals were available to students from four-person households with incomes below \$32,653 in the forty-eight states, with similar adjustments by household size and for Alaska and Hawaii. The numbers for 2001–2002 were raised by 3.52 percent from the previous year, based on CPI price changes measured by the Bureau of Labor Statistics.

In order to receive free or reduced-price lunches, a household must return applications sent home with students each Fall soon after school begins. Applications include household income levels, which are used to determine the income criteria given above. Every attempt is made to keep applications confidential, as well as the daily service to students of the free or reduced-price meals. Often, meal coupons are used for this purpose; they are purchased by those paying for their meals and provided free or at reduced price to qualifying students.

All meals are provided free to students in Puerto Rico and the Virgin Islands. Federal reimbursements are based on incomes of households with students, using the forty-eight-state eligibility levels as a benchmark.

### **Nutrient Standards**

Public Law 103-448, passed in November 1995, offered three alternative ways of meeting the new menu standards: (1) NuMenus, or Nutrient Standard Menu Planning (NSMP); (2) Assisted NuMenus, which provides outside assistance in

conducting NSMP; and (3) Food-Based Menu Planning, which consists of a modified set of foods from the traditional USDA menu-planning system. A fourth menu planning system was authorized by the Healthy Meals for Children Act (Pub. L. 104-149), which was passed in May 1996. This system provides a further option that allows schools additional freedom in using various food-based menu planning systems, as long as they ended up meeting the basic nutrient standards.

Even though much flexibility is provided in menu planning, the nutrient-based requirements of Public Law 103-448 remain in effect. Once every five years, each school district is monitored by the state agency, and a week of menus is evaluated for conformance in meeting the nutrient standards. These standards consist of specified levels of energy (calories), fat and saturated fat, protein, calcium, iron, Vitamin A, and Vitamin C. The levels are specified as averages for kindergarten through sixth grade, and for seventh through twelfth grades.

### **The School Breakfast Program**

The School Breakfast Program (SBP) is a federal nonprofit entitlement program that operates independently of, but alongside, the NSLP. It began as a pilot program in 1966, authorized by the Child Nutrition Act of 1966, and was made permanent in 1975. The original purpose of the program was to primarily to provide breakfasts to elementary and secondary school children coming from poor economic areas, and to those traveling long distances to school. After becoming permanent, the program has been equally available to all eligible children. However, reimbursement rates favor those areas in severe need, which are those districts serving a relatively large share of meals at free or reduced prices.

The program is similarly administered at the federal level by the Food and Nutrition Service of the USDA, and usually at the state level by state education agencies. It is still not as broadly available as the NSLP, but operates nationally in 72,000 schools and institutions. All meals served under SBP must meet the recommendations of the Dietary Guidelines for Americans. In addition, they must provide one-fourth of the daily recommended levels of calories and RDAs for protein, calcium, iron, Vitamin A, and Vitamin C.

Any child at a school with an approved program may purchase breakfasts under the program, and

those meeting NSLP requirements may also receive free or reduced-price breakfasts. However, the preponderance of those participating receive their meals free or at reduced prices, which reflects the original purposes of the program. As in the case of lunches, funds for SBP were initially allocated on a state-by-state basis, with a basic grant of \$50,000 per state. The program was later turned into a federal entitlement, with meals reimbursed on the basis of the number of meals served.

Paid breakfasts were reimbursed by the federal government at 21 cents in school year 2001–2002, one cent more than for paid lunches served under NSLP. Free breakfasts received \$1.15 and reduced-price breakfasts received 85 cents under the regular program. However, districts classified as in severe need received \$1.37 for free breakfasts and \$1.07 for reduced-price meals—two-thirds of the total breakfasts served usually meet this criterion. As in the case of lunches, Alaska and Hawaii receive higher reimbursement levels for all breakfasts served.

There have long been strong feelings that the breakfast program provides key nutritional benefits to schoolchildren, perhaps even greater than those provided by the lunch program. In part, these feelings reflect the fact that the lack of breakfast can adversely affect student performance until lunch is served at school. However, no known studies have established a firm basis for this conclusion. The 1992 School Nutrition Dietary Assessment Study found that the availability of a SBP at school did not increase the likelihood of a child eating breakfast. This 1992 study confirmed an earlier study of data from the 1980–1981 National Evaluation of School Nutrition Programs that had found the same result. However, a 1998 Mathematica Policy Research study showed that these conclusions depended heavily on the content definition of a breakfast. The 1992 study defined breakfast as eating any food containing at least fifty calories. The conclusion was that if a breakfast was defined to require the serving of more substantial nutrients, then the SBP would be found to be more useful. Partly for this reason, Congress, in 1998, funded a three-year evaluation of a pilot program in which all children would receive free breakfasts regardless of household income.

### **The Special Milk Program**

The Special Milk Program (SMP) provides federal reimbursements for milk (alone) served to children in nonprofit schools and child-care institutions that

**TABLE 1**

	National School Lunch Program				School Breakfast Program			
	Free	Reduced	Paid	Total	Free	Reduced	Paid	Total
	millions of participants							
Fiscal year 1981	10.6	1.9	13.3	25.8	3.05	0.25	0.51	3.81
Fiscal year 1991	10.3	1.8	12.1	24.2	3.61	0.25	0.58	4.44
Fiscal year 2001	12.9	2.6	12.0	27.5	5.80	0.67	1.32	7.79

SOURCE: Courtesy of author.

do not participate in other federal food service programs. These would include schools without NSLP or SMP food service, as well as those with half-day kindergarten programs where children do not have access to the lunch or breakfast program. The SMP program has declined slightly in scope over time as the NSLP and SBP have expanded, but the SMP has remained a viable niche program. In 2000–2001, SMP milk was served in nearly 7,000 schools and residential child-care institutions, along with 1,100 summer camps and 500 nonresidential child-care institutions.

Those schools or institutions that participate in SMP offer milk on a paid or free basis using the same criteria of eligibility as under the NSLP. Reimbursements of paid milk are made on the basis of the number of half-pints of milk served. In 2001–2002, schools received 14.5 cents per half pint. But for free milk served, they are reimbursed at the net purchase price for the milk. Various kinds of milk—flavored or unflavored, low-fat or whole milk—are eligible to be served.

### After-School Care Program

The After-School Snack Program, which began in 1998, must operate under the school food authority that operates the NSLP. It must provide children with regularly scheduled educational or enrichment activities in an organized, structured, and supervised environment to be eligible for federal reimbursements. It also must be located in a geographic area served by a school in which 50 percent or more of the children enrolled are eligible for free or reduced-price school meals.

Reimbursement rates for 2001–2002 were 55 cents for free snacks, 27 cents for those at reduced price, and 5 cents for those paid. Rates were higher for Alaska and Hawaii, where free snacks were reimbursed at 93 cents and 67 cents, respectively.

### Participation and Costs of School Food Service

Table 1 shows the average daily participation, by payment categories, in the National School Lunch Program and School Breakfast Program for fiscal years 1981, 1991, and 2001. The data represent sums of monthly averages of participation reported by the states, averaged for the federal fiscal years for the months of October through May, plus September. Participation is defined as the number of meals per enrolled student, adjusted for absenteeism.

One can readily see that participation in the NSLP increased slightly between 1981 and 2001, and that the increase in participation is centered on free or reduced-price meal participants. Paid meal participation declined 10 percent. In terms of percentages, the reduced-price category increased the most (more than one-third) but it remained less than 10 percent of total participation. Paid lunch participation accounted for less than one-half (44 percent) of the total in 2001.

In contrast, the SBP increased quite substantially over the two decades. In fact, total participation doubled. This growth was no accident, for considerable attention was focused on growing the School Breakfast Program during this period. Free meals dominate the program, accounting for nearly three-fourths of the total in 2001. Reduced-price participants accounted for another 9 percent, leaving paid participants at 17 percent. SBP participation was small in 2001 in relation to the NSLP, at less than one-third the total number of participants.

Table 2 shows the federal costs of the NSLP and SMP, in millions of dollars, again for fiscal years 1981, 1991, and 2001. Total federal costs for the NSLP doubled over the two decades, with most of the increase in terms of cash payments. Commodity costs increased only slightly, and they included bonus commodities that had shrunk considerably,

TABLE 2

**Federal costs for National School Lunch Program and School Breakfast Program**

	National School Lunch Program			School Breakfast Program
	Cash	Commodities	Total	Total
	millions of dollars			
Fiscal year 1981	2,381	895	3,276	332
Fiscal year 1991	3,526	699	4,224	685
Fiscal year 2001	5,605	963	6,468	1,445

SOURCE: Courtesy of author.

accounting for only \$60 million in 2001, compared with \$316 million in 1981. Entitlement commodities increased from \$579 million to \$802 million over this period. Federal SBP costs increased more than four times over the 20 years, reflecting increases in participation, as well as an increase in reimbursements per meal.

Not included in Table 2 are the costs of the SMP and a relatively small program that provides only commodities to some schools not participating in NSLP. The federal SMP cost \$15.4 million in 2001, down from \$19.8 million in 1981. During this period the number of half-pints of milk served declined from 177 million to 115 million in FY 2001. The commodity-only program cost \$23.3 million in 2001, compared with \$21.9 million a decade earlier.

The data in this section were obtained from unpublished sources from the Food and Nutrition Service of USDA (*Program Information Reports*). However, the primary data were published annually for 1981 through 1995 in the *School Food Service Research Review*.

### Related Food Programs

Child and adult care programs and summer food service programs supported by USDA reimbursements may operate in school locations. These programs are very substantial in many areas, but they are not included in this discussion because they are not directly supporting school educational programs.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; NUTRITION AND CHILDREN'S PHYSICAL HEALTH.

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STEPHEN J. HIEMSTRA

## SCHOOL LIBRARIES

The modern school library media center has a professionally trained school library media specialist who manages a central collection of diverse learning resources to support a school's curriculum, meet individual students' needs and interests, and ensure that young people develop information literacy skills within the school's curriculum. This concept of a learning resource center is both a social development of the twentieth century and an evolution of information exchange.

### History

The ancient library in Alexandria, founded in the fourth century B.C.E., was a treasure trove of written manuscripts. Medieval libraries comprised collections of hand-copied, illuminated manuscripts that were typically created and maintained by monks and used by privileged classes; manuscripts were often as valuable as farms or houses. An early print format put into the hands of children and used for reading instruction from the fifteenth to the eighteenth century was the hornbook, typically a small wooden paddle with printed paper pasted on top and covered with translucent horn. By the seventeenth century the concept of books created specifically for young people was established with such works as the first picture book, *Orbis Sensualium Pictus* by Johann Amos Comenius in 1657. The invention of the printing press in 1455 promised young people greater access to printed materials, and philosophers like John Locke (1632–1704) and publishers like John Newbery (1713–1767) promoted materials that were both pleasurable and informative to young people. Yet, well into the twentieth century, books and other learning materials remained expensive and rare for most young people in the United States.

Although Benjamin Franklin envisioned a library in his academy (founded in 1740), widespread public recognition and support for school libraries did not develop until the nineteenth century when state legislatures (beginning in 1835 with New York) acknowledged the value of school library resources and began promoting their funding. By 1876, nineteen states appropriated funding for school libraries. Two factors, however, limited the overall success of these early efforts to support school libraries: the lack of library facilities for maintaining the developing collections within the schools and the lack of trained personnel for selecting, organizing, and cir-

culating the collections. The resources were often overseen in small classroom collections by individual teachers, who could not ensure students had access to materials throughout a school; who were not coordinated with other teachers to track library inventories; and who often took materials from one building to another as they changed teaching positions. Meanwhile, the public library movement was developing in the United States, and trained public librarians reached out to address public school needs. Their outreach efforts coincided with the founding in 1876 of the American Library Association (ALA), and at the close of the nineteenth century, the professional voice for school library services to young people often had a public library perspective.

The twentieth century was a tumultuous one in which school librarians continued to address the challenges of the nineteenth century and developed the vision for school library media programs in the twenty-first century. Setting the stage for changes to come was the dialogue in the early 1900s on such educational principles as the importance of intrinsic motivation, the creation of genuine learning experiences in a field setting or a learning laboratory, and the teacher as a guide not a taskmaster. Even in 1900, these were not new ideas, but the educator and philosopher John Dewey, with the 1899 publication of *School and Society*, envisioned a single concept of Progressive education, comprising these elements, in opposition to rote learning, inflexibility, conformity, and competition. Thus, challenges to nineteenth-century assumptions were an aspect of educational planning as school libraries began their twentieth century transformation that included such milestone events as:

**1900** Mary Kingsbury, librarian at Erasmus Hall High School in New York City, becomes the first professionally trained school librarian.

**1915** The School Libraries Section of ALA holds its first meeting.

**1918** The National Education Association (NEA) adopts Standard Library Organization and Equipment for Secondary Schools of Different Sizes. These first national standards define expectations that a professionally trained librarian should manage a centralized collection that included audiovisual resources.

**1920** ALA adopts the 1918 NEA standards.

- 1925** The Department of Elementary Principals of the NEA and the School Librarians' Section of ALA develops the *Report of the Joint Committee on Elementary School Library Standards*. This first set of national library standards for elementary schools emphasizes the library's support of teaching and learning within a flexible schedule that ensures ready access for students and teachers.
- 1945** ALA publishes *School Libraries for Today and Tomorrow, Functions and Standards*, the first national standards for both elementary and secondary school library programs. These standards link the quality of school library programs to qualitative and quantitative guidelines.
- 1951** ALA adopts Standards for Accreditation, which moves the first professional degree in librarianship to the master's level.
- 1951** The American Association of School Librarians (AASL) becomes a division within ALA.
- 1958** The U.S. Congress passes the National Defense Education Act, which funds major development of school libraries in the 1960s.
- 1960** AASL and the Department of Audiovisual Instruction (DAVI) of NEA publishes *Standards for School Library Programs*, national guidelines that address the integration of library skills into classroom work and provide a descriptive narrative with quantitative recommendations and detailed lists.
- 1962** AASL receives the Knapp Demonstration Project, a \$1.13 million grant supporting a five-year demonstration project of exemplary school libraries.
- 1965** The U.S. Congress passes the Elementary and Secondary Education Act, which supports funding of library resources.
- 1969** ALA and the DAVI of NEA publishes *Standards for School Media Programs*, national guidelines that unify the roles of librarians and audiovisual personnel under the terminology of library media program and library media specialist.
- 1971** The DAVI of NEA becomes the Association for Educational Communications and Technology (AECT).
- 1972** AASL begins publishing *School Library Media Quarterly*, the division's research journal.
- 1975** AASL and AECT publish *Media Programs: District and School*, national guidelines that are the first to focus on district goals and responsibilities in the support of building-level library media programs.
- 1988** AASL and AECT publish *Information Power: Guidelines for School Library Media Programs*, national guidelines that define the mission of the library media program to "ensure that students and staff are effective users of ideas and information" (1988, 1).
- 1988** ALA becomes a specialty organization within the National Council on Accreditation of Teacher Education (NCATE).
- 1988** The DeWitt Wallace—Reader's Digest Fund initiates Library Power, a 10-year, \$40-million-grant project for the revitalization of school library media programs across the United States.
- 1998** AASL and AECT publish *Information Power: Building Partnerships for Learning*, national guidelines that set forth AASL's information literacy standards for student learning.

Milestone markers for progress across the twentieth century are the eight sets of published national standards and guidelines.

### Goals and Purposes

Although school library media specialists collaboratively establish library media program goals relevant to the needs of individual schools, they are guided by a mission such as that articulated by the American Association of School Librarians (AASL) and Association for Educational Communications and Technology (AECT) "to ensure that students and staff are effective users of ideas and information" (1998, p. 6). The authors identify seven library media program goals through which the library media specialists support the mission by providing the following:

- Learning activities that foster in students the abilities to select, retrieve, analyze, evaluate, synthesize, create, and communicate "information in all formats and in all content areas of the curriculum"

- “Physical access to information”
- Learning experiences in “communications media and technology”
- Consultation with teachers in designing instruction
- Learning resources and activities that accommodate “differences in teaching and learning styles, methods, interests, and capacities”
- Access to a “full range of information beyond the school building”
- Learning resources “that represent diversity of experiences, opinions, and social and cultural perspectives and to support responsible citizenship in a democracy” (American Association of School Librarians and Association for Educational Communications and Technology 1998, pp. 6–7).

### Materials and Equipment

The materials and equipment in a library media program provide information that supports active, authentic learning, and thus ensures that young people develop the information literacy skills crucial to their success as students and as lifelong learners. Historically the primary source of information for an entire school was an on-site collection of diverse materials and equipment. However, technological changes have altered this traditional view by increasing the quantity of information, accentuating the need for strong literacy and technology skills, creating new formats and packages of information, and interconnecting worldwide information. Such developments have changed the nature of the local collection, now defined in terms of access to and delivery of information and learning resources within and beyond the school. The early-twenty-first century library media collection includes printed materials, realia (the “real thing,” i.e., living, synthesized, or preserved animal, vegetable, or mineral objects in their natural state), hardware and software, online databases, production equipment, and adaptive resources for students and others with special needs.

Access to and delivery of information and learning resources has two dimensions: physical and intellectual. Physical access to library media resources is ensured when resources are usable from a central location that oversees circulation, distribution, organization, and classification for effective and efficient use, and managed according to policies that ensure flexible scheduling that supports focused and pro-

ductive use of learning resources. Intellectual access to information and learning resources requires that they are matched to individual needs and interests; that students and others can find, evaluate, and use them; and that they are supported by comprehensive reference services, including bibliographies and resource lists.

Physical and intellectual access is guided by principles of intellectual freedom, legal standards, and professional ethics. Intellectual freedom is essential for students to become critical thinkers and lifelong learners who can contribute productively and responsibly in a democratic society. Access guided by legal standards and professional ethics ensures confidentiality in the use of information, respect for intellectual property rights, and equity for all students, regardless of ability or cultural considerations.

### Personnel

Qualified school library media personnel are fundamental to successful programs that contribute to student learning, and a program’s level of professional and support staffing is based upon a school’s instructional program, services, facilities, and the quantity of students and teachers. Basic, building-level staffing for an effective program necessitates at least one certified or licensed school library media specialist per building. The library media specialist should hold a master’s degree in librarianship from a program accredited by the American Librarian Association or a master’s degree with a specialty in school library media from an educational institution accredited by the National Council for the Accreditation of Teacher Education. In addition to the minimum of one school library media specialist, each school program requires qualified clerical and technical support staff. The paraprofessional support staff are key to the library media specialist’s ability to fulfill the position’s professional roles. There is a distinction between a technician, who works with hardware and systems software, and a technologist, who integrates people, learning, and the tools of technology.

According to the American Association of School Librarians and the Association for Educational Communications and Technology, the library media specialist accomplishes the program’s primary charge, to “ensure that students and staff are effective users of ideas and information” (1998, p. 6), by fulfilling four roles: teacher, instructional partner, information specialist, and program administrator.

The four roles focus on instilling nine student information literacy standards across the school's curriculum. According to those AASL/AECT standards, young people should be able to:

- Access “information efficiently and effectively”
- Evaluate “information critically and competently”
- Use “information accurately and creatively”
- Pursue “information related to personal interests”
- Appreciate “literature and other creative expressions of information”
- Strive “for excellence in information seeking and knowledge generation”
- Contribute “positively to the learning community” and recognize “the importance of information to a democratic society”
- Behave ethically “in regard to information and information technology”
- Participate “effectively in groups to pursue and generate information” (American Association of School Libraries and Association for Educational Communications and Technology 1998, pp. 9–43).

Library media specialists value information literacy as the foundation of lifelong learning, and they emphasize the process of learning rather than the accumulation of information. By collaborating with diverse individuals within and beyond the school, by building awareness of the program's contributions, and by applying and introducing instructional and informational technologies, library media specialists promote a clear vision for successful library media programming.

*See also:* ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; TECHNOLOGY AND EDUCATION, *subentry on* SCHOOL.

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KATHY HOWARD LATROBE

## SCHOOL-LINKED SERVICES

TYPES OF SERVICES AND ORGANIZATIONAL FORMS

Robert L. Crowson

OUTCOMES

Sidney L. Gardner

### TYPES OF SERVICES AND ORGANIZATIONAL FORMS

There has been a rapid expansion of coordinated-services efforts throughout the United States since the late 1980s. Solid historical roots can be found in the Progressive era of the early twentieth century, as well as some of the Great Society interventions of the 1960s. However, the aggressive development of a system of coordinated services for children and families in need received its major impetus in the late 1980s in reports of some service-needs conferencing, the results of some early experimentation, and in reports of the conditions of children and families in poverty. Two of the most influential documents were *The Conditions of Children in California* (1989) by Michael Kirst and *Joining Forces* (1989) by Janet Levy and Carol Copple.

The spread of children's services programs, from the late 1980s on, was so rapid that by 1993 one of its foremost advocates, Sharon Lynn Kagan, was claiming that efforts were "blossoming across the country from Maine to California" (Kagan and Neville, p. 78). Such "blossoming" had already received a solid boost from state legislation in New Jersey (1988), Kentucky (1990), and California (1991); with each establishing statewide family services programs.

In 1993 in the *American Journal of Education*, Robert Crowson published the first in a series of co-authored inquiries into issues surrounding the administration and organization of school-based services. Drawing on the available reports, handbooks, evaluations, and case studies of the time, it was observed that an array of institutional realities presented a difficult, uphill climb for service coordination. Among the problematic elements were mat-

ters of professional control and turf; organizational disincentives to collaboration; legal and budgetary dilemmas; communications and confidentiality barriers; questions of governance and managerial support; and reconceptualizations of professional or organizational roles.

Through the 1990s additional reports and analyses continued to document the deep administrative problems encountered by those attempting to coordinate services. A substantial blow to the movement in the United States occurred in 1994 when the Pew Charitable Trust announced the termination of its then sizeable support of school-linked family centers. The Trust's decision came on the heels of some weak evaluation results.

Just a year later, an assessment by Julie White and Gary Wehlage of the New Futures initiative, then funded by the Annie E. Casey Foundation, added fuel to the no-effects fire. Among the most damaging of the findings was the observation that the outreach programs were invariably of the from-the-top-down variety, and that they ignored family and community expressions of service needs, depending instead upon professionally identified definitions of client need.

However, none of this bad press stopped, or even slowed, the movement. The notion of coordinated services has continued to increase in popularity into the twenty-first century. In a 1997 survey of school-based and school-linked initiatives across some forty states, Mary Driscoll, William Boyd, and Crowson found a particularly heavy emphasis nationwide upon programs in parenting education, family support and advocacy, and family health services. A surprising finding was that nearly a third of the programs surveyed in 1997 reported efforts in employment-related services for families, a feature not highlighted in the existing literature on service integration. Perhaps the greatest growth, however, continues to be in the specialized area of health services. Indeed, another survey in late 2000 reported a more than ten-fold increase during the 1990s in the number of school-based health clinics in operation across the United States.

### Current Directions in Service Provision

Amid its continuing growth, a conception of the central problem behind much of the services effort has undergone a bit of change. The talk of a dangerously fragmented delivery system, and of the need

for a heavy emphasis upon the coordination of children's and family services, has declined. Coordination, it has been discovered, is exceptionally hard to do. Instead, in the United States, there has been a reduced focus upon interagency cooperation and a greater emphasis upon the provision of an array of services, coordinated or not.

There has also been less attention paid to school-centered programs of family assistance. Instead, efforts have gone toward the development of a much greater variety of forms and strategies for outreach, including neighborhood organization-led programs, communities-of-faith efforts, private-sector interventions, and many more school-linked, rather than school-based, programs. Finally, activity in the services movement has been directed toward efforts that bridge pedagogically between schools and families and communities—particularly with programs of after-school activities and after-school tutoring, youth development and assistance programs, summer schooling, arts and music education, and day care.

This changed direction is finding roots in a sense of the ecology of community development activities, as opposed to programs of family assistance. Although interest continues in interagency partnering, the focus has increasingly been on community action rather than the delivery of professional services to a poverty-area clientele.

Lizabeth Schorr, nationally known advocate for children and youth, has argued in favor of this new paradigm, claiming that the added delivery of professional services by themselves falls far short of the full scope of efforts needed to strengthen families and improve learning opportunities in low-income neighborhoods. As Schorr puts it, people increasingly recognize that educational success necessitates a key place for the school “at the table where community reform is being organized” (p. 291).

There have been a number intellectual shifts of consequence in the movement toward a community development approach to family assistance. First, the concept of social capital has grown in importance and application. Much influenced by the work of James Coleman, social capital has, over time, become central to the rationale underlying coordinated services. The claim is that critical cultural resources and supports, as well as so-called hard resources through direct assistance, are passed from institutions to families in full-services programming.

Second, without denying the power and importance of services to children and families, the altered ecological paradigm foresees a much larger program of economic outreach beyond professional, interagency partnering. A services agenda may be necessary but not sufficient—especially in deep-poverty circumstances with major infrastructure needs in housing quality, employment opportunities, recreational outlets, law enforcement, and other areas. Matters of public and private investment, entrepreneurialism, regeneration, rebuilding, resourcefulness, incentives creation, market forces, and assisting self-help efforts can all join in creating a climate of assistance that goes far beyond the narrow scope of activity captured in a purely services agenda.

### New Issues in the Organization of Services

The coordinated-services movement encountered many well-documented difficulties in the ability of cooperating partners to share information, deal with turf issues, retain and reorient participating professionals, mingle resources, merge or blend disciplinary perspectives, and involve the neighborhood clientele. In comparison, however, the newer community ecology approach is by no means without its own set of organizational issues.

As an initial issue, there has been a central question regarding basic assumptions of “approach” in assistance to families. The community development idea assumes that market forces can be effectively introduced to low-income communities—that enterprise and investment, incentives and subsidies, employment and empowerment, and rebuilding and repair can begin a transformation process that trickles down to produce much-improved opportunities for families and their children, and reformed and better-performing schools. In contrast, the earlier and narrower services approach has strong Progressive era roots in efforts to *protect* poor families from the ravages of the market. Healthy homes and neighborhoods, and what was thought to be “good” for families and children, were to be provided by a well-trained cadre of informed and committed persons as a hedge against the horrors of sweatshop industrialism. A residue of distrust against the market forces characterizes much of human-services professionalism.

A second unresolved organizational issue involves questions of ownership. To be sure, ownership emerged as a constraint in school-based

programming—ranging from turf protection to determining just what is involved in partnering and who's in charge administratively. With its much broader scope of linkages and collaborations, with less focusing upon a from-the-school-outward delivery of services, and with overtones of community development and empowerment (as well as assistance), the new ecological paradigm is far from clear on just what, or whose, property rights are to be attended to. Foundations, banks, businesses, and schools may initiate community development activities, but the paradigm calls for a quick shift to grassroots ownership. Institutional controls may well be operative, but the paradigm calls for a full recognition of the controlling forces present in the very culture of each community.

As a key organizational issue, consider that school-based services have typically been backed by the best professional practices and undertaken by highly trained (and usually certified) service providers. Under such a structure, agency services will look much the same whatever the community. But, with lessened professional ownership, local values and some clashes around basic premises can easily introduce into best-practice professionalism some extremely strange elements of local accommodation. Professionals are put to a test around just how much ownership they are comfortable in giving up.

### Implications and Conclusions

In brief recapitulation, the emerging context surrounding service provision in the United States finds less activity than earlier in school-centered programs of generalized assistance to families, and somewhat more interest today in direct pedagogical services to children. Additionally, there is a movement away from fairly narrow services agendas and toward a larger arena of community development activity, as well as a decided movement toward initiatives working up from the community rather than trickling down from professional and academic sources.

Increasingly, community-based organizations, rather than schools, are displaying an initiative in offering an array of after-school services (e.g., after-school child care, youth development programs, tutoring, successful parenting classes). These neighborhood organizations typically cover the institutional waterfront, and include local churches, city parks departments and libraries, Boys and Girls Clubs, YMCAs and YWCAs, community organizers, and banks or local for-profit organizations.

As community institutions have displayed a greater level of initiative, a larger and broader paradigm around interagency partnering has been emerging as well. A definition of the problem has proceeded from community responsiveness, through children's and family services, to cooperation in the regeneration of the community itself. By no means, however, is there less regard than before for the local school. Indeed, an added embeddedness of the school in the culture of its community, and a leadership role for the school as part of an overall community of support for families and children, are both very much a part of the revised agenda.

There are implications in the new scenario for the organization of administrative activities. One administrative implication is the need for rethinking some key mental models of school leadership. A longtime part of the lore of school principalship has been a balancing act in the school-community relationship, usually referred to as *bridging and buffering*. School administrators have been taught to walk the tightrope of bridging to the community while simultaneously buffering the organization and its professionals from undue intrusion by the community.

The result, a number of scholars claim, has been the maintenance over the years of a sizeable gap between schools and their communities. This has created a call for a new role that replaces bridging and buffering with a more outreach-oriented exercise of *civic capacity*. School administrators who exercise civic capacity reach out actively from their schools to help build or develop their respective communities.

A related implication is the need to clarify just what it means to partner in linkages with other community groups. Seymour Sarason and Elizabeth Lorentz argue that partnering in the early twenty-first century requires much more than just a bit of collaboration. It means meaningful boundary crossing—where there is resource exchange, a true network approach to shared objectives, and much more selflessness (or less ownership) than is typical of most interagency relationships. This is the type of partnership activity that was called for by White and Wehlage in 1995. Community services, they argued at that time, should be judged less by their success in providing resources and services and more by their success in reshaping the priorities and practices of schools toward a closer understanding of, and partnership with, the family and the neighborhood.

See also: DENTAL HEALTH AND CHILDREN; FAMILY SUPPORT SERVICES; HEALTH SERVICES, *subentry on* SCHOOL.

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## OUTCOMES

School-linked services are health and family services that are provided to students in one or more schools through a variety of linkages. Services may be located at or near a school (e.g., a mobile medical van, a family resource center housed in a modular classroom), provided after school to some students, or students may be referred to services provided by an external agency made available based on an agree-

ment between the school and the provider agency. Appropriate measures to assess the effectiveness of these services differ depending on the form of school-linked services being reviewed.

*School-linked services* is a label that overlaps with earlier phrases that describe school-connected efforts to connect students with community resources they need to perform in the classroom and to address problems that may impair their learning. *Community schools, school-based clinics, full-service schools, learning supports, and family resource centers* located at schools are all labels used currently as well as in earlier eras. The emphasis upon linkage is usually intended to signal that services may not be physically located at schools, but are intended to be connected with schools through a variety of administrative and policy agreements among schools and other agencies.

School-linked services are in addition to those health and social services provided by school staff, including psychologists, counselors, social workers, school nurses, and others. Within the broad field of noneducational learning supports, some policy advocates and practitioners have emphasized the need for better connections among the staff already working for schools, while others have emphasized the relatively small number of these professionals compared to the number of students with noneducational problems that affect their learning. That number may be as high as one-third of all students in some schools who are affected by poor health and other factors, including:

- dental, physical, vision, and other health problems;
- inadequate or no health insurance coverage;
- family stress due to substance abuse, low income, family violence, or behavior by the students themselves that involves high-risk sexual activity, substance abuse, or criminal activity and gang involvement.

The need to tap outside agencies that are funded to work with youth is the basis for the argument that school-linked services are a critical supplement to what the school systems' own professionals can accomplish in addressing these problems.

### Measuring Effectiveness—Which Outcomes?

A question that arises early in the discussions between school and agency over school-linked services is what standards and measures should be used in as-

sessing the effectiveness of these services. Are they to be assessed based on their impact on the core mission of the school—academic performance by students—or are there other, noneducational measures of the impact of school-linked services on students?

Each party to this discussion has a different starting point. Schools naturally begin the dialog stressing the academic outcomes for which they are held accountable, while other agencies with a greater concern for health, family services, and youth development measure what school-linked services do for students and their parents. The negotiations about goals and outcomes among the sponsoring agencies and schools turn on the relative importance of classroom performance compared with interventions aimed at the external causes of classroom achievement gaps.

School-agency-community partnerships eventually need to move toward agreement on the specifics of the outcomes and indicators to be used as fair measures of progress. Three types of outcomes typically emerge from these discussions, each moving out in a wider circle from a core of education-only outcomes and indicators.

For school-based outcomes, the triad of achievement measured by test scores, attendance, and school completion/graduation rates constitutes the standard that most schools would take seriously as basic measures of school-linked services. Some schools would add the number of suspensions and classroom behavior as measured by disciplinary incidents as indicators of effectiveness. These are the core outcomes for most schools.

In the next circle of outcomes, beyond the classroom, the outcomes are still related to academic achievement, but are no longer restricted to what happens in the classroom. These outcomes include parent involvement, help with homework, reading to primary-age children, and parent engagement with teachers in responding to behavior problems in the classroom.

The third circle consists of those outcomes that are further out into the arenas of community building and youth development, and may include such things as schools' success in attracting community volunteers, children's health coverage in the immediate neighborhood, and the effects of early childhood programs that aim at school readiness goals.

These three circles of outcomes, marked by their increasing distance from academic achievement, set

up a further distinction between tightly-linked learning supports, in which the objectives of school-linked services are closely connected with academic achievement and are stronger than in those looser-linked systems in which noneducational goals are given standing independent of their impact on classroom achievement. Experience suggests that the choice of which system is most appropriate should emerge from each district's negotiations with its partners, rather than being mandated by external funders. In a district with weak leadership or strained relations with its surrounding community, academic achievement may be all the partnership can handle. But in a district that has built credibility with its neighbors, parents, and nearby agencies, the wider circles of outcomes may be exactly the right way to take advantage of that history of good relationships.

At the same time, evaluation of school-linked services models in multiple sites underscores the importance of a close fit between what is being measured and what resources are devoted to achieving. To use educational outcomes to measure an after-school program that primarily focuses upon health and recreation goals, rather than academic activities, is not an appropriate use of outcomes. Improved family functioning is unlikely to result from tutoring models and using family functioning scales to measure the effects of such programs is not a good allocation of evaluation resources.

Two other sets of distinctions are also important to keep in mind when evaluating the outcomes of school-linked services.

1. Between short-term and longer-range outcomes, that is, between those outcomes that are markers of movement in the right direction, such as student attendance improvements, and those which are long-term positive results, such as college entrance/completion or mastery of key vocational skills.
2. Between measures of negative behavior—suspensions and expulsions—and measures of positive development. In working with youth, in particular, it is important not to overemphasize those measures that connote negative behavior, as they convey a message that youth are being monitored only for their mistakes. Emphasizing positive accomplishments in developing outcomes provides better feedback to students.

### What Is Known About Outcomes?

A recent compilation of evaluation results from forty-nine different community school models was developed by Joy Dryfoos for the Community Schools Coalition, an organization based at the Institute for Educational Leadership. In forty-six of these reports, positive effects were noted. Thirty-six programs reported academic gains, nineteen reported improvements in attendance, eleven reported a reduction in suspensions, eleven reported reductions in high-risk behaviors, twelve reported increases in parent involvement, and six reported safer communities as a result of the initiative. Another compilation, developed by the UCLA School Mental Health Project, provides information on outcomes from a sample of almost 200 programs. These outcomes were organized into six basic areas that addressed barriers to learning and enhance healthy development: (1) enhancing classroom-based efforts to enable learning, (2) providing prescribed student and family assistance, (3) responding to and preventing crises, (4) supporting transitions, (5) increasing home involvement in schooling, and (6) outreaching for greater community involvement and support—including use of volunteers.

The challenges facing evaluation of these initiatives should not be underestimated. Such evaluations seek to separate the effects of programs that were deliberately designed to combine different interventions, aimed at highly disparate student populations that are hard to compare with students not receiving the interventions, and taking place in complex, partially open systems that include large bureaucracies, complex funding streams, and strongly held professional and community values. These evaluation problems correspond closely to those encountered in evaluating comprehensive community initiatives, which have been the subject of several reports by the Aspen Institute Roundtable on Comprehensive Community Initiatives.

### Enduring Importance

School-linked services are a continuing effort to respond to educational challenges that arise in the wider community, reminding us that children are in school only 9 percent of the time from birth to adulthood at age eighteen. As schools come under increasing pressure for academic outcomes through discussion of statewide and national testing standards, it is important to recognize that the test scores and academic performance of some children are sig-

nificantly affected by problems that arise outside the schools and that cannot be addressed by schools alone. It is crucial that that school-linked services are evaluated as broadly as possible in their impacts on academic outcomes as well as their effects in addressing the underlying problems that some students bring to school.

*See also:* DENTAL HEALTH AND CHILDREN; FAMILY SUPPORT SERVICES; HEALTH SERVICES, *subentry on* SCHOOL.

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## SCHOOL PRINCIPAL

*See:* PRINCIPAL, SCHOOL.

## SCHOOL PSYCHOLOGIST

*See:* PSYCHOLOGIST, SCHOOL.

### SCHOOL READINESS

School readiness refers to the extent to which a child exhibits the behaviors, skills, and knowledge necessary to be successful in elementary school. These can be grouped into four categories: social and emotional development, oral language development and pre-reading skills, oral mathematics development and pre-mathematics skills, and general knowledge. Because individual schools vary in the timing with which they introduce academically demanding reading and mathematics instruction in kindergarten and first grade, the skills and habits recommended below are only approximate goals, to be attained to the greatest extent possible during the preschool and kindergarten years.

#### Social and Emotional Development

To be ready for school, the child must develop the social and emotional maturity to participate appropriately and learn from classroom activities. This requires adequate nutrition and health. It also requires that any hearing or speech deficits have been reduced to the greatest extent possible. Physical maturity may also be important and may be interrelated with social and emotional development. For example, the child must be able to care for her own toiletting needs without supervision. Other self-help behaviors that must be developed include the ability to locate and care for personal belongings, to feed oneself independently, to get on and off the school bus with minimal supervision, to avoid obvious dangers, to put on and remove outer clothing within a reasonable length of time, to recognize problems and try strategies for solving them, and to communicate one's own needs and wants.

Beyond self-help, the child must also show appropriate group-oriented social behavior and classroom conduct. He must separate from parents and accept school personnel. The student must learn appropriate means for expressing emotions and feelings and properly play the role of an individual within the group. This includes showing respect for others and their property, playing cooperatively, and sharing and taking turns. The student must initiate and maintain peer interactions, and do so without

aggression, while defending himself as needed. The student should be able to play both independently and with the group. When required, he should imitate peer actions, such as lining up and waiting appropriately. The student should be willing to try something new. The student should follow classroom rules, including voice control. He must respond to warning words (e.g., "No," "Stop") and modify his behavior when given verbal feedback.

Finally, the child must have sufficient maturity to successfully engage in task-related behaviors. This includes finding the materials needed for a task, holding and manipulating the materials, and doing so without disrupting other students. The student must be able to stay in her "own space" during the activity, work on the activity for an appropriate amount of time (e.g., fifteen minutes) with minimal cues and supervision by teachers, and complete the task on time and at a satisfactory performance level. If help is needed, the student should ask peers or the teacher for assistance in an appropriate manner (e.g., raising her hand). She should also replace materials, "clean up" the workspace, and follow classroom routines in the transition to the next activity.

In sum, to be socially and emotionally ready for classroom participation and learning, the child must be able to learn classroom routines and comply appropriately with teacher instructions. The child must maintain appropriate focus on the group's activity, learn from the activity, make choices, and generalize the knowledge gained to future activities.

#### Oral Language and Pre-Reading Skills

The child's understanding and production of oral language is the principal mechanism by which she communicates with others. To be ready for school, the child must be sufficiently skilled in both receptive and expressive language, and in verbal reasoning. In this regard, it is helpful if the child speaks Standard English, including the use of Standard English grammar. Vocabulary knowledge is also important. The child's transition to schooling is facilitated by already being familiar with the words and concepts employed by the teacher. In addition, such vocabulary knowledge can be critically important in learning to read. The size of a child's vocabulary on entering school has been shown to be one of the key predictors of the ease with which the child learns to read.

A rich oral language environment in the home and/or preschool provides the best preparation for

schooling. This includes extensive conversation with adults, in which the child uses language to answer questions and discuss issues. The parent should interact with the child in a way that assists the child to develop reasoning skills and to understand and express more complex ideas.

By being read to and engaging in other print activities, such as playing with magnetic letters, puzzles, games, and so on, the child should have developed a variety of “concepts about print.” These include the purpose of reading, the structure of written text, how stories work, what a word is, how words are composed of letters, and what spaces signify. The child should be able to show the front cover of a storybook and open it to start reading. He should know that one goes from left to right and top to bottom when reading English text. He should be able to identify a few words by sight. He should already have had some practice identifying and writing the letters of the alphabet. This practice, along with related activities in drawing and coloring, should be developing the child’s fine motor skills to prepare for more systematic and demanding writing exercises.

A particularly important aspect of the child’s oral language skill is her *phonemic awareness*. This is the ability to consciously pick out and manipulate from spoken words the smallest sound chunks that make up those words. These chunks are called *phonemes*. Learning to consciously pick these out of the sound stream of spoken language is a form of “ear training” that is very useful for the child’s first major task in school—learning to read. This is because phonemic awareness involves identifying the spoken sound units that correspond to the letters or letter groups in written words. This helps the child to understand the “alphabetic principle”—that any combination of written letters can be “sounded out” and may represent a word that has meaning in the child’s oral vocabulary. That is, groups of letters written together constitute a “code” that can be “decoded” by sounding out and listening for meaning. Another aspect of this principle is the idea that spoken words are composed of sounds that can be represented by letters, which can be written down to “encode” the spoken language into its written form. Thus, reading involves going from written to spoken words, whereas spelling involves going from spoken to written words (or at least to the letters required to write the words). The two together illustrate the one-to-one correspondence between spoken and written language.

Because speech is heard naturally as a continuous stream of sound, and short words and syllables are heard as one sound, children must be taught how to segment these sound chunks. For example, children and adults hear the word *mat* as a whole, even though it is made up of three phonemes. Teaching phonemic awareness to preschool children begins with the ability to hear and reproduce rhymes and alliteration, as in nursery rhymes. It then moves on to the ability to do oddity tasks (which first sound is different in the oral words *big*, *hill*, and *bit*?; which last sound is different in *ball*, *pop*, and *mop*?; or which middle sound is different in words such as *pin*, *fun*, and *sit*?). This skill may also be practiced by asking the child to repeat the first or last sound in a series of words spoken by the teacher or parent. It may help to prolong beginning sounds when pronouncing them for the child—for example, “ssssat” or “mmmmat.”

With kindergarten-age children, one can begin to teach the ability to orally blend separate sounds (what word do the sounds /m/, /a/, and /t/ make?). This is a key skill that will be needed when the child first tries to read by sounding out words. A related ability is phonemic segmentation—skill at breaking a spoken word into its separate sounds. Instruction can begin by having the child tap out the separate phonemes, progressing to having the child actually reproduce the separate sounds after the instructor has said the word (for example, *mat* becomes /m/, /a/, /t/).

Oral vocabulary knowledge and phonemic awareness ability have already been discussed as keys to success in the most important first-grade task—learning to read. Other keys include knowing the names of the letters and the sounds they are associated with. Children should be able to identify most letters of the alphabet upon request and to indicate what sound the letter makes. They should be able to write the letters on request. Kindergartners also can begin to write some easy words. At this point they should begin to fully understand the alphabetic principle underlying the language, that letters combine to make words and that words, properly pronounced, carry meaning.

### Oral Mathematics and Pre-Mathematics Skills

To be ready for first-grade mathematics, preschool and/or kindergarten children need skill, knowledge, and experience with mathematical ways of thinking and performing. It is helpful if children have been

involved in games and activities in which they sort and classify objects by size, shape, and function. They should be given practice recognizing sets of objects and identifying items that belong and do not belong in a given set.

Children should learn to use concepts such as “the same as,” “more than,” “less than,” “most,” and “least.” They should know the first ten or twenty numbers, being able to recite them and use them to count objects. They should recognize these numbers when they are written down and should be able to write them upon request. They should be able to orally respond to simple adding and subtracting tasks. They should understand simple geometric shapes and be able to copy them and answer simple questions about them. (What are their names? Which are alike? Which are different? In what ways?) They should be able to copy more complex geometric figures, such as a star or parallelogram, and be able to answer questions about them. They should know the parts of a whole and be able to identify half of a region, object, or set of objects.

In sum, to succeed in first-grade mathematics students should have as much experience as possible with numbers, counting, and simple geometric concepts. They should be able to count at least to ten, and perhaps to twenty or thirty, both forward and backward. They should be able to identify written numbers and to write down the first ten numbers on request. They should be able to apply this knowledge to simple counting problems. They should know the symbols “+” and “-” and be able to do simple addition and subtraction problems, as well as play games involving pattern recognition and strategic choices. The student should be prepared for first-grade work in both computation and problem solving. She should also be able to copy and identify simple geometric figures (square, triangle, and circle) and discuss their properties.

### General Knowledge

To be ready to be successful at school, children need sufficient general knowledge to orient them properly within the school and the world at large, and to correctly respond to teacher requests. They should be able to tell their full name and age and be learning to write these. They should be able to identify the colors by name. They should know the names of their parents and the city or town where they live. They should be able to draw simple pictures, such as of people, animals, and places.

Children should know that objects have properties, such as length, weight, and capacity. They should have played hands-on games involving counting, comparing, sorting, and ordering objects. They should recognize pennies, nickels, dimes, and quarters. They should have some experience with measurement, using a ruler, a scale, and a thermometer. They should be able to orient themselves in time: morning, afternoon, tomorrow. They should be able to tell time to the hour using a clock face. They should know the days of the week and the months of the year. They should know their left and right hands and be able to explain such contrasts as top/bottom, on/under, and in front/behind.

### Summary

To be ready to be successful in kindergarten and/or first grade, a child must demonstrate adequate social and emotional maturity, oral language and pre-reading skills, oral mathematics and pre-mathematics skills, and general knowledge. Where maturity is concerned, the child must have adequate self-help skills. He must also show appropriate group-oriented social behavior and classroom conduct, including the ability to successfully engage in task-related behaviors. Regarding oral language and pre-reading skills, the child must be skilled in both receptive and expressive language and in verbal reasoning. He should be familiar with “concepts about print” and be developing phonemic awareness (the ability to hear and manipulate the separate sounds in spoken language). For oral mathematics and pre-mathematics skills, the child should be able to understand and use simple arithmetic and geometric concepts. Where general knowledge is concerned, the child needs sufficient command of information to be properly oriented within the school and to correctly respond to teacher requests. When these behaviors and skills are in place, the child is ready to take his place as a member of the learning community in the classroom and the school.

*See also:* EARLY CHILDHOOD EDUCATION; READING, *subentry on* BEGINNING READING.

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GEORGE FARKAS

## SCHOOL RECORDS AND REPORTS

See: RECORDS AND REPORTS, SCHOOL.

## SCHOOL REFORM

Two decades of school reform came to a close at the end of the twentieth century. These efforts, led by E. D. Hirsch and Ted Sizer, began in the early 1980s and continued through the 1990s, leading to the development of programs such as Success for All. These programs were aimed at developing comprehensive school reform models. The New American Schools Development Corporation supported many of these models.

This massive education reform effort set out to achieve educational goals never before attempted in the United States. Two major premises drove these ambitious goals. The first premise was that nearly everyone in the United States deserved, was capable of, and should be required to receive academic instruction through high school regardless of race, economic status, or post-high school plans. Second, academic standards needed to be raised considerably for all students. These driving premises were a result of the nation's leaders coming to an understanding that education, the economy, and a sustainable democracy are deeply intertwined in a postindustrial society.

The impetus for these two decades of reform took place in the 1980s, but it was a result of the

major challenges facing education in the years before. In these years the nation's education system realized a major decline in enrollment. The 1970s marked the baby boom's departure from the schools and schools all over the country faced a sharp decline in enrollment. Along with this came a growing disengagement with education. As fewer and fewer residents had children in school, communities became less interested in schools and began resenting funding them through property taxes. This, along with other economic factors, brought on a major property-tax revolt in the late 1970s.

The school system was further challenged by social revolution. Teacher unions, the disabled, students with limited English proficiency (LEP), minorities, and women began to demand fair treatment in schools. Teacher unions in the late 1960s became increasingly active, organizing strikes regularly. Congress and the judiciary became more involved in protecting school-age citizens from discrimination with resolutions such as the Rehabilitation Act of 1973, the Education for All Handicapped Children Act of 1975, and the 1974 Supreme Court decision *Lau v. Nichols*.

Perhaps the most important of all the discrimination decisions was *Brown v. Board of Education* (1954) which demanded that public schools be racially desegregated. In order to desegregate schools busing was mandated. This practice caused major upheaval. As minorities entered traditionally segregated schools looking for stable learning environments, they found themselves amid great chaos and violence. The result of the efforts mainly led to "white flight" from public education to private schools.

Concurrent efforts to make education a place of equal opportunity for all led to a de-emphasis on teaching and learning. Schools across the nation became increasingly bureaucratic as the nation became more litigious. School employees were often more concerned with enforcing and maintaining order and the new regulations than with teaching their students. It was said educators became more concerned with "dodging lawsuits than with the quality instruction in their schools, and they made the broadening of education opportunities rather than the quality of education the priority in much of public schooling" (Toch, p. 7).

As American public education was deteriorating rapidly in the late 1960s and early 1970s, it began to

draw the attention of critics who published many reports detailing the problems in schools and calling for widespread reform. In 1966 James S. Coleman released a study reporting that socioeconomic status was the primary determinant in academic achievement. In other words, schools, teachers, and money had little bearing on the level of academic achievement that a student could reach. Another leading sociologist, Christopher Jencks, reaffirmed Coleman's study by stating that academic achievement was more an indicator of the student's characteristics than of the school input.

Despite more and more public attention to the education crisis, the federal role was still limited. Not until 1979, after a major lobbying effort by the National Education Association (NEA), which later became the largest teacher union in the country, was the U.S. Department of Education created by the Carter administration.

With a cabinet-level education office the problems in education drew more and more public attention. Newspapers reported major declines in students' scores on the SAT and the National Assessment of Educational Progress (NAEP). The National Science Foundation also reported that academic standards were declining in the nation's schools. This news was alarming when compared to the high standards that the United States' economic competitors required of their students. By the early 1980s business leaders, the government, and the general public had decided that public education in the United States was in "parlous trouble" (National Commission on Excellence in Education).

### ***A Nation at Risk***

Major economic problems in the 1980s magnified the public's disenchantment with public education. More and more people began to connect the downturn in the economy to the poor system of education in the United States. Under the direction of President Ronald Reagan, the Department of Education faced sharp criticism and calls for its abolition from the president's own political party. Reagan had appointed Terrel H. Bell to the department as Secretary of Education despite the skepticism of the Republican Party, who considered Bell too moderate. The new secretary of education was sympathetic to the department and was reluctant to entertain efforts to abolish the new cabinet office.

In response to claims that he was too soft on the problems in education, Bell proposed the creation of

a independent presidential commission to investigate the state of education in the United States in a fair and balanced manner. Reagan, who saw little value in presidential commissions, turned down Bell's proposal. As a result, in 1981 Bell commissioned his own cabinet-level panel, to be called the National Commission on Excellence in Education (NCEE), to review education. The eighteen-member panel was composed of representatives from a wide spectrum of political perspectives. The panel produced the report *A Nation at Risk: The Imperative for Education Reform*, which stands as perhaps the most important document in the late twentieth century's history of education reform. *A Nation at Risk* became the impetus for two decades of standards-based reform. Ironically, once the report's themes became known at the White House, Reagan adopted the report as his own.

The seminal report came in the form of an open letter to the American people and President Reagan in April 1983. The report was a serious indictment of education in the United States. It stated, "Our nation is at risk. . . . If an unfriendly foreign power had attempted to impose on America the mediocre education performance that exists today, we might well have viewed it as an act of war" (p. 5). Despite acknowledging some gains in education, the report overall displayed a severely negative portrait of American education. Even though Bell's commission was pessimistic it maintained that if their strict recommendations were followed, they could reverse the declines and restore excellence in education.

*A Nation at Risk* made five recommendations for attaining excellence in education. The recommendations were: (1) that "five new basics" be added to the curriculum of America's schools. The basics included four years of English, three years of mathematics, three years of science, three years of social studies, and half a year of computer science in high school; (2) that more rigorous and measurable standards be adopted; (3) that the school year be extended in order to make more time for learning the "New Basics"; (4) that the teaching be improved with enhanced preparation and professionalization; (5) that accountability be added to education.

*A Nation at Risk* shocked the country. The report galvanized the public to demand action to restore education in the United States. The report was followed by a series of other critical reports on education from organizations such as the Committee for Economic Development and the Education Com-

mission of the States. While no other report had the impact that *A Nation at Risk* did, the accumulation of the reports created the impetus for the start of two decades of education reform. The nation needed to regain its competitiveness among its economic rivals globally.

The calls to arms energized the nation's governors. Education reform became one of the most politically popular agendas for governors regardless of political leanings. The South became the hotbed for education reform led by governors. Progressively minded governors such as Lamar Alexander of Tennessee, William Clinton of Arkansas, James Hunt of North Carolina, and Richard Riley of South Carolina accepted the challenge of reforming education in their states and in turn led the country. The president, who even before *A Nation at Risk* wanted to return the responsibility of education to the states, embraced the new energy of the governors.

Leadership from the nation's "education governors" inserted itself into the National Governors' Association (NGA), which released its own report on the state of education. The NGA report reaffirmed the NCEE notion that without reforming education the nation would not continue to be economically competitive on a global level. This theme was especially provocative for the nation's business leaders, who began to call for improvement in the schools. Business leaders became a strong force in the reform movement and influenced political leaders to allocate more resources to education.

Education reform desperately needed the support of an unlikely ally—the president. Reagan had been opposed to a major federal role in education, had attempted to dismantle the Department of Education, and even denied the creation of the presidential commission, eventually established at the cabinet level by Secretary Bell, that wrote *A Nation at Risk*. After this report, however, Reagan realized the importance of the growing reform movement and began to champion school reform.

Reagan took *A Nation at Risk* on the road for eleven weeks after its release to announce his new emphasis on education. The president's leadership was essential in elevating the movement to the highest level. Reagan was able to use his control of the media to make education reform the highest national priority.

## Reform in Action

With new levels of publicity, recommendations at hand, and ambitious governors, education reform activity was high. In fact some real improvement was taking place. High school curricula broadened and became more focused on academics. High school graduation requirements increased, modeled after the NCEE recommendation, in opposition to old ideas that proposed that intellectual/academic education was not for everyone. Reformers, especially business leaders, recognized that a new postindustrial economy needed skilled workers with higher-order thinking skills. No longer was an uneducated worker needed to stand in an assembly line. Employers demanded workers who could think.

With the reform movement's success in establishing more rigorous intellectual content in American education, students returned to the public schools. Enrollment surged and course work in the academic subjects became standard for almost every student. Students graduated with evidence of solid backgrounds in mathematics, science, history, and foreign languages on their transcripts. Many students even took Advanced Placement tests for college. As a result of the new emphasis of academic subject matter and higher rates of enrollment more teachers prepared with strong content were required. Unfortunately, there were not enough teachers with the content knowledge to meet the demand. Teachers were underprepared and their teaching methods were inadequate. As a result, curricular reform for most students came in name only; most students did not receive real academic training due to the lack of infrastructure to support it.

In addition, watered-down courses began to pop up in the school curricula across the country. In essence a new sequence of courses was created. Students could spend most of their high-school careers without being exposed to academic subject matter in depth. Critics began to note that American education was "an inch deep and a mile wide" for most students. Many students migrated to the easier tracks and many were forced into a shallow education experience. Despite advances in curricular reform, the majority of students felt few real learning gains. At the same time, with the new emphasis on academics, vocational education was fighting to stay alive in schools.

Still the education reforms were mostly undercut by the lack of teachers with the essential content

knowledge to teach students adequately and accommodate the growing enrollment in academic courses. Teachers were being assigned to subjects in which they had no training or experience, just to satisfy the new curricular requirements. Tracking persisted and became more problematic as students in the lower tracks received instruction more often from the least-qualified teachers.

This led to a movement that spawned many initiatives promoting the professionalization of teaching, although the NEA often attacked the movement. Despite much work done to improve teaching and to improve the profession, it remained “business as usual” for most teachers. The NEA preserved the status quo.

### **Better Teachers, Greater Goals, and More Accountability**

In response to the Carnegie Forum on Education report, *A Nation Prepared: Teachers for the Twenty-First Century*, the focus on the teaching profession was magnified. The Carnegie task force responded to *A Nation at Risk* by proposing solutions to improve the teaching profession. The report called for the formation of the National Board for Professional Teaching Standards and later national board certification for exemplary teachers.

With the reform movement well underway in 1987, there was a call by the U.S. Secretary of Education William Bennett for accountability. The significant amount of money and effort spent to reform education required results. Business leaders and state lawmakers led the way in demanding evidence of change in education. The National Governors Association also began demanding greater accountability from the schools.

The nation’s governors had played a large role in education reform since the announcement of *A Nation at Risk*. Their leadership became most prominent in September 1989 when President George H. W. Bush convened them in Charlottesville, Virginia, for an education summit.

The nation had already come to grips with the fact that improvement in education needed to be measurable if all the attention and resources were going to be recognized as worthwhile. In order to be able to recognize educational progress goals had to be established. President Bush and the governors made a commitment to establish measurable goals for education reform that they named America 2000.

They agreed on a process for developing the goals at the education summit that would involve teachers, parents, local administrators, school board members, elected officials, business and labor communities, and the public at large. Their charge was to establish a common mission for improving education for all.

The goals the panel finally agreed upon and released early in 1990 were:

- By the year 2000, all children will start school ready to learn.
- By the year 2000, the high school graduation rate will increase to at least 90 percent.
- By the year 2000, all students will leave grades four, eight, and twelve having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography. Every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our nation’s modern economy.
- By the year 2000, the nation’s teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.
- By the year 2000, U.S. students will be the first in the world in mathematics and science achievement.
- By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.

The governors and the president accepted responsibility for achieving these measurable goals. The conclusion of their declaration stated that “as elected chief executives, we expect to be held accountable for progress in meeting the new national goals, and we expect to hold others accountable as well . . . . The time for rhetoric is past; the time for performance is now.”

### **Striving to Achieve Measurable Goals**

In response to growing talk of creating academic standards Congress established the National Council

on Education Standards and Testing (NCEST) in June 1991. The council was formed to explore establishing national education standards and to assess progress in reaching these standards. In 1992 NCEST released its report recommending that voluntary national standards be created. This report, combined with statements from the National Council of Teachers of Mathematics (NCTM) and the National Research Council, propelled the creation of rigorous academic standards that would establish the appropriate content for learning grade by grade. It was hoped that the depth and breadth of knowledge would be increased for all students.

In March 1994 President Clinton signed into law the Goals 2000: Educate America Act. Goals 2000 encompassed the goals established at the Charlottesville education summit as well as two additional goals that stated:

- By the year 2000, every school in the United States will be free of drugs, violence, and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.
- By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.

The Goals 2000: Educate America Act also established the National Education Standards and Improvement Council (NESIC), which had the responsibility to review and certify voluntary state and national education standards that were being developed. The NCEST and NESIC faced severe opposition, however, from those who raised the specter of federal involvement in education.

Despite opposition to national standards, efforts to develop state standards and assessments continued. The chief executive officer of IBM, Louis Gerstner, and Governor Tommy Thompson of Wisconsin convened the nation's top business leaders, governors, and the White House and Department of Education elite in Palisades, New York, for the 1996 National Education Summit. The summit was a reaction to the declining progress in education reform after Goals 2000.

The participants in the summit continued the work started in Charlottesville. In fact, the summit pushed for a sustained and more directed effort in establishing academic standards and assessments. Participants recognized that some opponents criti-

cized standards as too much federal involvement in education, but noted that state standards were essential for improving education for all. Writing and measuring standards was not enough for the summit participants, however. They recognized that a commitment to helping students achieve the standards was essential. Another outcome of the summit was the call for an independent clearinghouse, free of ties to any federal agency, that would provide information to help the coordinate states' efforts to establish standards and assessments.

In 1997 in a landmark report, *What Matters Most: Teaching for America's Future*, the National Commission on Teaching and America's Future once again established that teachers were critical to improving student achievement. The report challenged the nation to install high quality teachers in every classroom in America by 2006.

### Options for Parents and Students

Throughout this period of reform many suggested school choice as a solution to improving education. School choice can mean several different things. Some of the models are districtwide, or intradistrict, which allow parents to choose from schools within their own district; statewide, or interdistrict, in which students can choose from the entire state's public schools; and perhaps the most controversial, private-school choice, which permits parents to send their children to private schools using public funds.

Although controversial, school choice has been a significant contributor to education reform. Perhaps the most salient examples took place in Wisconsin and Ohio. Since the early 1990s the city of Milwaukee has engaged in an experiment in private-school choice. Milwaukee offers vouchers for children to attend private schools, including religious schools. Although the program has come up against lawsuits, the courts have upheld the practice in Wisconsin. In November 1998, the U.S. Supreme Court declined to take up a case against Milwaukee that claimed that the program led to racial segregation in Milwaukee schools. The U.S. District Court in Ohio questioned the Cleveland school-choice program because 98 percent of the students leaving public schools were migrating to religious schools, raising the issue of separation of church and state. In June 2002 the U.S. Supreme Court overturned the lower court ruling and upheld the use of public money for religious school tuition.

The court decisions have helped proponents of school reform who claim that a free-market approach to education will improve the schools. In addition, the movement has also gained some victories as more and more analysis of data shows some success in educating children through school choice. Studies from Harvard University and Princeton University suggest that children participating in school-choice programs are at least performing as well as their counterparts in traditional public schools and the Harvard study even suggests that privatization might make schools more efficient.

### Staying the Course

The contemporary standards movement that resulted from *A Nation at Risk* continues; in fact the message remains that the nation must “stay the course.” In 1999 another national education summit was convened and it reasserted that the standards movement was the most prudent way to improve education for all. In addition, the participants demanded that action be taken to ensure that all students achieve the rigorous standards that had been set.

Yet the United States continues to be “a nation at risk.” Business leaders, government officials, educators, and the public at large are heeding the Third International Mathematics and Science Study (TIMSS) warning that the United States ranks in the middle of the pack of its global economic competitors in student achievement. Continued focus on raising standards, improving teachers to help students achieve the standards, and holding all stakeholders (parents, teachers, and the business community) accountable for the education of the nation’s future leaders is essential.

President George W. Bush continues to follow the direction of Secretary Bell’s National Commission for Excellence in Education. President Bush’s proposal for education calls for higher standards, annual measurement and accountability, more parental choice, and greater flexibility in federal funding. Perhaps the most significant part of Bush’s proposal is the annual assessment of student achievement from grades three through eight to determine the value added by each school year and increase accountability.

*See also:* CURRICULUM, SCHOOL; EDUCATION REFORM; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; MAGNET SCHOOLS; NATIONAL BOARD FOR PROFESSIONAL TESTING STANDARDS; NO CHILD

LEFT BEHIND ACT, 2001; PAIDEIA PROGRAM; SCHOOL-BASED DECISION-MAKING; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

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CHRISTOPHER T. CROSS  
M. RENÉ ISLAS

## SCHWAB, JOSEPH (1909–1988)

University of Chicago professor of education and natural sciences, Joseph Schwab was the originator of *The Practical*, a program for educational improvements based on curriculum deliberations.

### Education and Career

Joseph Jackson Schwab was born in Columbus, Mississippi, where he attended a private elementary school. After the sixth grade, Schwab entered the public schools, where he discovered science. As Schwab was virtually alone among his classmates in this interest, the principal of the high school, a former science teacher, encouraged his creative license by giving him free reign in the school laboratory. Schwab became fascinated with the poisonous snakes and other animals kept there, and delighted in setting off homemade gunpowder by pounding it with an ax. He finished high school in three years, and in 1924, at the age of fifteen, he set off for the University of Chicago, where he was to remain for almost fifty years, receiving degrees in English literature

(Ph.B), zoology (S.M.), and genetics (Ph.D). Schwab was also a Visiting Fellow at the Center for the Study of Democratic Institutions.

Since the late 1930s Schwab has had an important impact on educational research and practice, conceptualizing and instigating reform at all levels of schooling. His early work through the 1940s was part of Robert Hutchins's efforts to create an undergraduate curriculum of general education at Chicago. Schwab taught practically every course in the College of the University of Chicago, developed classroom discussion as a viable alternative to lecture, worked on integrating the humanities and natural sciences, and won the award for excellence in teaching twice, the first to do so. In 1942 he began writing comprehensive examinations for the biological sciences, and by 1947 had become chairman of the natural sciences staff.

### Scholarly Work

In the 1950s and 1960s, as the "Hutchins College" period ended, Schwab turned his attention to wider pursuits. From 1959 to 1961 he was chairman of the Committee on Teacher Preparation for the Biological Sciences Curriculum Study, he coauthored the Curriculum's *Biology Teacher's Handbook*, and edited the first editions of its textbooks. He helped found *The Journal of General Education*, and consulted on *The Great Books of the Western World*. He also worked in Jewish education as chairman of the Academic Board of the Melton Research Center at the Jewish Theological Seminary of America.

In *College Curriculum and Student Protest* (1969) Schwab diagnosed student turmoil as symptomatic of failures in schooling. He prescribed curricular changes and teaching devices that were based on liberal arts, which could actively engage students in their education. Arguing against undergraduate education as a body of rote methods or rhetoric of conclusions, he explored the liberal arts as resources for students to find their own questions for texts or problems so they could become their own critics. Most importantly, he showed how the disintegrating college communities could be restored and renewed.

Schwab is best remembered for the last and most comprehensive of his critiques of education, focused on curriculum making. His invited address in 1969 at the annual meeting of the American Educational Research Association challenged the field of curriculum research, which had become moribund

because of inveterate unexamined reliance on direct application of theories, especially from the social sciences. Schwab believed that any given theory was necessarily incomplete in terms of its subject and oversimplified the complexities of problematic situations. His proposal that the field must identify and solve its own practical problems continues to energize curricular debate.

### *The Practical*

*The Practical* requires that five bodies of disciplines and experience be represented in a collaborative group that undertakes the task of curriculum revision. Schwab called four of these the "commonplaces" of educational thinking, which require representatives of the affected learners, teachers, subject matters, and (sociocultural) milieux. The fifth is that of the curriculum specialist, who must work with the other representatives to ensure that the commonplaces are properly coordinated, because changes in any one will have consequences for the others. Unbalanced deliberations, either dominated by a single commonplace or omitting some, lead to successive "bandwagon" curricula, each based on an exclusive theory (e.g., of child development, teacher needs, subject matter innovation, or social change). Schwab designed a set of eclectic arts to join theories across disciplines so that scholarly and research materials could be shaped into teachable curricula. He developed another set of practical arts for the problem-posing and problem-solving activities required by the unsatisfactory curricular situation.

As the members of the curriculum group discover and develop their capacities in an actual deliberation, they turn the commonplaces into "particular places," by perceiving details in the "pinch" of their problem. The process is incremental, local, and ongoing. Institutions need gradual, coherent improvements, not destruction. They must discover their own problems and resources, without dictation by centralized authorities. Ongoing deliberations change a problematic situation into a situation of problems discerned and solutions undertaken and evaluated. The deliberative process develops in a spiral rather than a serial progression as the deliberators discover what solutions can run with which problems, what problems or solutions can be combined with other problems and solutions, and how the effects of solutions can have unintended consequences that create further problems and opportunities.

From 1969 to 1986 Schwab produced six articles (the last two unpublished) on the various dimensions of the *The Practical*, the first three of which are included in a compilation by Ian Westbury and Neil J. Wilkoff. *Practical 1* gives his basic critique in terms of flights from the curriculum field. *Practical 2* demonstrates the proper use of the eclectic arts on theories through an imagined course in educational psychology. *Practical 3* focuses on the constitution and functions of the curriculum group. *Practical 4* gives special attention to the institutional role of the curriculum specialist as chairperson of the group. *Practical 5* and *Practical 6* describe the eclectic arts for development and use of commonplaces that can map pluralistic views of subject matter, using literature and psychology as examples.

### Legacy

As a scholar and teacher Schwab pulled together such wide experience in the five bodies of disciplines necessary for curriculum development that he became a genuine polymath in education. He was quick to trace positions to unexpected consequences. Expressed in a down-to-earth no-nonsense rhetoric, this made him a formidable and provocative presence in public forums and the classroom.

Schwab's concern for education as a deliberative activity connects him to John Dewey and American Pragmatism. His respect for the formulations and proper uses of theories connects him to the Aristotelian distinction between theoretical, practical, and productive activities. Internationally, educational practitioners in the European Didaktik tradition, especially in Germany and Norway, have recognized the *The Practical*.

Overall, Schwab's continuing effect is that of Socratic gadfly whose stinging critiques have stimulated education by pointing out chronic deficiencies and indicating new directions for inquiry and action. The recurring nature of educational problems makes much of his work, such as that on defining and testing objectives, still applicable.

*See also:* CURRICULUM, SCHOOL; EDUCATIONAL REFORM, *subentries on* OVERVIEW, REPORTS OF HISTORICAL SIGNIFICANCE; UNIVERSITY OF CHICAGO.

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THOMAS W. ROBY IV

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## SCIENCE EDUCATION

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### OVERVIEW

Robert E. Yager

### PREPARATION OF TEACHERS

Robert E. Yager

### OVERVIEW

Science has become an important component in the K–12 curriculum in American schools—but less so than reading and mathematics. At the end of the twentieth century reading and mathematics received more attention, government support, and focus for testing. It was assumed that reading and mathemat-

ics must be mastered first and that these skills were essential before the study of science and social studies. Science is often not taught daily in elementary schools, does not receive major attention in middle schools, and is often organized around disciplines that emphasize college preparation in high schools.

### The Role of Science and Technology Education

As the twentieth century ended, it was clear that science and technology played significant roles in the lives of all people, including future employment and careers, the formulation of societal decisions, general problem solving and reasoning, and the increase of economic productivity. There is consensus that science and technology are central to living, working, leisure, international competitiveness, and resolution of personal and societal problems. Few would eliminate science from the curriculum and yet few would advance it as a curriculum organizer. The basic skills that characterize science and technology remain unknown for most.

As the twenty-first century emerges, many nations around the world are arguing for the merger of science and technology in K–12 schools. Unfortunately many are resisting such a merger, mostly because technology (e.g., manual training, industrial arts, vocational training) is often not seen as an area of study for college-bound students. Further, such courses are rarely parts of collegiate programs for preparing new teachers. Few see the ties between science and technology, whereas they often see ties between science and mathematics. Karen F. Zuga, writing in the 1996 book *Science/Technology/Society as Reform in Science Education*, outlined the reasons and rationale for and the problems with such a rejoining of science and technology. A brief review of what each entails is important.

Although science is often defined as the information found in textbooks for K–12 and college courses or the content outlined in state frameworks and standards, such definitions omit most essential features of science. Instead, they concentrate wholly on the products of science. Most agree with the facets of science proposed by George G. Simpson in a 1963 article published in the journal *Science*. These are:

1. Asking questions about the natural universe, that is, being curious about the objects and events in nature.
2. Trying to answer one's own questions, that is, proposing possible explanations.
3. Designing experiments to determine the validity of the explanations offered.
4. Collecting evidence from observations of nature, mathematical calculations, and, whenever possible, experiments that could be carried out to establish the validity of the original explanations.
5. Communicating evidence to others, who must agree with the interpretation of evidence in order for the explanation to become accepted by the broader community (of scientists).

Technology is defined as focusing on the human-made world—unlike science, which focuses on the natural world. Technology takes nature as it is understood and uses the information to produce effects and products that benefit humankind. Examples include such devices as lightbulbs, refrigerators, automobiles, airplanes, nuclear reactors, and manufactured products of all sorts. The procedures for technology are much the same as they are for science. Scientists seek to determine the ways of nature; they have to take what they find. Technologists, on the other hand, know what they want when they begin to manipulate nature (using the ideas, laws, and procedures of science) to get the desired products.

Interestingly, the study of technology has always been seen as more interesting and useful than the study of science alone. Further, the public has often been more aware of and supportive of technological advances than those of basic science.

Science (along with technology) in the school curriculum has assumed a central role in producing scientifically (and technologically) literate persons. Since 1980 the National Science Teachers Association (NSTA) has identified such literacy to be the major goal of science instruction. The organization also described what literacy would entail. Its *NSTA Handbook, 1999–2000* defined a scientifically literate person as one who can:

- Engage in responsible personal and civic actions after weighing the possible consequences of alternative options
- Defend decisions and actions using rational arguments based on evidence
- Display curiosity and appreciation of the natural and human-made worlds

- Apply skepticism, careful methods, logical reasoning, and creativity in investigating the observable universe
- Remain open to new evidence and realize the tentativeness of scientific/technological knowledge
- Consider the political, economic, moral, and ethical aspects of science and technology as they relate to personal and global issues

Whatever schools can do to produce graduates who have such skills defines the role for science education in schools. The curriculum is the structure provided to accomplish such goals. The 1996 National Science Education Standards set out just four goals, namely, the production of students who:

- Experience the richness and excitement of knowing about and understanding the natural world
- Use appropriate scientific processes and principles in making personal decisions
- Engage intelligently in public discourse and debate about matters of scientific and technological concern
- Increase their economic productivity through the use of the knowledge, understanding, and skills of the scientifically literate person in their fields

### History of Science Courses in American Schools

Early American public schools did not include science as a basic feature. The purpose of the early school was to promote literacy—defined to include only reading and numeracy. The first high schools primarily existed to prepare students for the clergy or law. Typical science courses were elective and included such technology courses as navigation, surveying, and agriculture. Not until the turn of the twentieth century did the current science program begin to form.

Physics began to be offered as a high school course in the late 1800s. It became even more common when Harvard University required it for admission in 1893; Harvard also required chemistry ten years later. Physics and chemistry were soon identified as college preparatory courses as other universities followed Harvard's lead in requiring both for college entrance. Biology, the third high school course, was not identified until the 1920s—resulting from the merger of such common courses as botany, physiology, anatomy, and zoology.

Traditionally the high school curriculum has consisted of physics in grade twelve, chemistry in grade eleven, and biology in grade ten. Often schools have moved to second-level courses in each of these three disciplines; at times these advanced courses are titled *Advanced Placement* and can be counted toward college degrees if scores on national tests are high enough to satisfy colleges. This focus on school science as preparation for college has been a hindrance to the casting of science courses as ways to promote science and technology literacy.

Science below the high school level (grade ten) has a varied history. Science classes at this level became more common in the middle of the twentieth century with the creation of junior high schools—often grades seven, eight, and nine. In many instances the science curriculum was similar to the high school curriculum except that science was usually termed *general science*, with blocks for each course coming from biology, chemistry, physics, and earth science. There have been attempts to unify and to integrate science in these middle grades. With the emergence of substantial national financial support for curriculum and teacher professional development, however, the major effort in the 1960s was to create life, physical, and earth science courses for the junior high schools. During the 1970s and 1980s, middle schools were created with ninth grade returning to high schools (grades nine through twelve) and sixth grade becoming a part of the middle schools. As the National Science Education Standards emerged in 1996, the middle grades were defined as grades five through eight.

Middle school philosophy calls for teams of teachers (from all facets of the curriculum) to work with a given set of middle school students and to unify and relate all study for those students. Project 2061, formulated in the late twentieth century, is a reform project that ties the curriculum together, especially science, mathematics, technology, and social studies.

Elementary school science was rarely found until the middle years of the twentieth century. Although there were textbooks and courses listed in the offerings, science frequently did not get taught. This was because teachers placed reading and mathematics first, they often lacked preparation in science, and there was no generally accepted way of measuring science learning across grade levels.

During the 1960s and 1970s several national curriculum projects were funded, developed, and of-

ferred across the K–12 years. This continued into the twenty-first century, with many programs that provide ways to meet the visions of the National Science Education Standards supported by the National Science Foundation. Unfortunately not many of these ideas are in typical textbooks offered by the major publishers, who, understandably, are more interested in sales and offering what teachers, schools, and parents want. These textbooks are often quite different from what reform leaders and cognitive science researchers envision for an ideal science curriculum.

### Comparing Science Education Requirements around the World

Reformers in most industrial nations across the world advocate similar school reforms of science with new goals, procedures, materials, and assessment. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has initiated a reform effort for the twenty-first century that is targeted for developing nations and relates science to technology. Many educational teachers across the world call openly for a science curriculum that is responsive to personal needs, societal problems, and attentive to technological as well as scientific literacy. New attention to assessment and evaluation has arisen from the Third International Mathematics and Science Study.

Elementary school science is similar the world over with the focus being hands-on and minds-on activities that are not discipline-based. Often middle schools have science programs that frequently focus on problems. In the United States some of the major science programs include Event-Based Science and Science Education for Public Understanding Program. Similar programs exist elsewhere, especially in the United Kingdom, Israel, the Netherlands, and Australia, and in other European countries.

Although the goals for high school science are the same in most countries, the traditional discipline-based courses (biology, chemistry, and physics) in the United States are typical yearlong courses for grades ten, eleven, and twelve. Most other countries organize the secondary curriculum to respect discipline divisions, but spread the courses over a five- or six-year sequence. They do not delay physics and chemistry to grade eleven or twelve or place biology solely in grade ten.

The interest in international comparisons has never been greater. There is great concern that test-

ing and learning is based on little other than students' ability to recite definitions and/or to solve mathematical problems given to them. Cognitive science research indicates that most of the brightest science students can do little more than to repeat what they have been told or what they read, or to duplicate procedures they have been directed to follow. Educators now want more evidence that students can use information and skills in new situations. Such performance is demanded to assure scientific and technological literacy.

### Trends, Issues, and Controversies

Science education is evolving once again—as it has since the emergence of public schools in the United States—to a focus on mastering basic concepts and skills that can be used in new situations. Yet, in order to truly accomplish this, contexts need to be established first. Concepts and process skills are desirable end points. But if real learning is to occur, concepts and skills cannot be approached directly and used as organizers for courses and instruction. Without the proper background, students do not understand and are rarely able to use the information and skills that are taught. This explains why science lacks popularity and why most students stop their study of science as soon as they are permitted to do so. Little is gained by simply requiring more for a longer period of time.

Another trend is the open inclusion of technology with the study of science. Contrasting the two can help develop an awareness of the history, philosophy, and sociology of both. Since more students are interested in technology than in science, including technology within science education can provide a vehicle for getting students more involved with basic science. Instead of authorities proclaiming science as important and useful, students discover that for themselves as they develop and use new technologies.

Taking statements of goals seriously is another trend. Goals can and should provide the framework for the curriculum, indicate the instruction selected, and provide form and structure for evaluating successes and failures. Each of these critical factors provides a basis for doing science in education.

The involvement of more people and organizations in the process of educating youth is another important trend. Responsibility for setting science goals, choosing instructional strategies, determining

curriculum structure, and defining assessment efforts must rest with teachers as well as with students. Outside agencies—administrators, state departments of education, national governments, professional societies, and the public—all must be involved and are integral to the plan to improve science education.

Major issues include how to evaluate and enlarge goals, how to change instruction, how to move assessment from testing for memory and repetition (copying) of procedures to making these constructs and skills a part of the mental frameworks of the students. When does real learning pass from mimicry to understanding and personal use?

Engaging student minds requires changes that are essential to current reform efforts. According to Vito Perrone, such engagement is accomplished when:

1. Students help to define the content—often by asking questions.
2. Students have time to wonder and to find interesting pursuits.
3. Topics often have strange features that evoke questions.
4. Teachers encourage and request different views and forms of expression.
5. The richest activities are invented by teachers and students.
6. Students create original and public products that enable them to be experts.
7. Students take some actions as a result of their study and their learning.
8. Students sense that the results of their work are not predetermined or fully predictable.

Can science teachers really become major players in cross-disciplinary efforts in schools? Can they embrace technology as a form of science and/or an entry point to it? Can they refrain from telling students what they want them to do and to remember (for tests)? According to the National Research Council's 1998 book *Every Child a Scientist*, Carl Sagan argued that "every student starts out as a scientist." Students are full of questions, ready to suggest possible answers to their questions. Unfortunately, however, most lose this curiosity as they progress through their science studies. In typical schools they rarely design their own experiments, get their own results, and use the results for any purpose. They do not see or practice science in any full sense.

Major controversies remain. But why should this not be so? Science is an activity where there are changes, differences of opinions, differences in designing good experiments or making calculations, and differences in collecting evidence and convincing others of the validity and accuracy of the evidence offered.

Certainly most educators remain committed to the model of relying on the science found in textbooks, state curriculum frameworks, and standards documents. They are committed in spite of the research evidence that highlights the advantages of new approaches to learning and new ways of measuring learning and understanding. Humans tend to resist change—even when they know it will occur. It is sad that science educators do not lead in the attack on the unchanging curriculum and lack of attention and use of the new information on how humans learn.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; NATIONAL SCIENCE TEACHERS ASSOCIATION; SCIENCE EDUCATION, *subentry on* PREPARATION OF TEACHERS; SCIENCE LEARNING; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; TECHNOLOGY IN EDUCATION, *subentry on* SCHOOL.

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ROBERT E. YAGER

## PREPARATION OF TEACHERS

Programs for preparing science teachers in the United States are numerous—numbering about 1,250. These programs vary considerably, though most require a major in one discipline of science and a strong supporting area. The professional sequence varies greatly with smaller programs unable to maintain a faculty with expertise in science education per se. The programs generally consist of half the credits in science, a quarter in education, and a quarter in liberal arts requirements. In the 1990s the quantity of preparation in science and in science education increased—often making it difficult to complete

programs as part of a four-year bachelor's degree program. Fifth-year programs that include more time spent in schools with direct experience with students are becoming the norm.

### Historical Background

Early in the 1800s science teachers typically had no formal preparation; often they were laypersons teaching such courses as navigation, surveying, and agriculture in the first high schools. By 1870, with the emergence of the first teacher training colleges, some science teachers completed formal study of science in colleges. Qualifications for specific teaching, however, varied considerably across the United States.

In the early 1890s Harvard University required completion of a high school course in physics for admission. This spurred the beginning of the science curriculum in American schools. Ten years later Harvard added chemistry to its requirements for admission. Many other colleges and universities followed suit. High school science classes became gatekeeper courses for college admission—a situation that turned out to be a continuing problem for science in schools and for the preparation of science teachers.

By the end of World War II, the place of science in school programs had attained universal acceptance. Teacher education programs were standardized to include science methods courses and student teaching after a year of introduction to education and educational psychology courses. School programs were to provide functional science experiences, that is, skills and knowledge that students could use. Faculty at preparatory institutions became the chief proponents for a useful science program for students.

Science education changed in the 1950s as leaders and the general public demanded improvements to match the Soviet successes in space. National spending for improving school science programs and the preparation of science teachers were made a priority in the National Science Foundation (NSF). Scientists were called to provide leadership in the reform of school programs and the development of better-prepared teachers.

In the 1970s these national efforts to improve school programs and teacher education, including the goals for science teaching, were reassessed. The public had become disillusioned with the expendi-

tures for science teacher enhancement and curriculum development projects. The NSF Project Synthesis effort established four new goals: science for meeting personal needs, science for resolving current societal issues, science for assisting with career choices, and science for preparing for further study.

In this climate the NSF established a new program to influence science teacher education directly. Called the Undergraduate Pre-Service Science Teacher Education Program (UPSTEP), its premises included the following:

1. Effective preservice programs integrate science and education and often require five years.
2. Science faculties are important ingredients in program planning, teaching, and program administration.
3. The preparation of an effective science teacher involves more than providing a student with up-to-date content and some generalized teaching skills.
4. Effective programs involve master teachers, school and community leaders, and faculty members.
5. Teacher education can be evaluated and used to improve existing programs.
6. Effective programs should include advances in computer technology, educational psychology, philosophy, sociology, and history of science.

### Current Structure and Organization

Most of the 1,250 institutions that prepare science teachers start with the assumption that an undergraduate major in one of the sciences is a must. Many teacher education programs merely require science courses (typically about one-half of a degree program) and increase the number of methods courses and associated practica (experiences in schools) prior to student teaching. Many institutions moved to a five-year program and/or the completion of a master's degree before licensure.

In the 1990s the U.S. Department of Education funded studies, known as Salish I and Salish II, to discern the condition of preservice teacher education programs in the United States. Salish I was a three-year study of programs and graduates from ten different universities across the United States. The study's major findings included the following:

1. During their initial years of teaching, most new science teachers use little of what teacher education programs promote.

2. Few teacher education programs are using what is known about science as envisioned by the National Science Education Standards.
3. The courses comprising teacher education programs are unrelated to each other.
4. There are few ties between preservice and in-service efforts.
5. Support for teacher education reforms has been largely unrecognized and underfunded.

Salish II involved fifteen new universities, which agreed to alter some aspects of their teacher education programs and to use research instruments from Salish I to determine the effectiveness of the changes. Major findings from Salish II were as follows:

1. Significant changes in teacher education majors can be made during a single year, when part of a collaborative research project.
2. There is strength in the diversity of institutions and faculty involved with science teacher education.
3. Science instruction at colleges must change if real improvement is to occur in schools.
4. Collaboration in terms of experimentation and interpretation of results is extremely powerful.

### In-Service and Staff Development Programs

A persistent problem has been the lack of articulation between pre- and in-service science teacher education. NSF support for in-service teacher education from 1960 to 1975 focused on updating science preparation in an attempt to narrow the gap. In fact, NSF efforts often tended to deepen the problem. The NSF assumed that science teachers needed only more and better science backgrounds and the NSF model was simply one of giving teachers current science information, which they were to transmit directly to their students. What was needed was a set of intellectual tools with which teachers could evaluate the instruction they provided.

According to David Holdzkom and Pamela B. Lutz, authors of the 1984 book *Research within Reach: Science Education*, effective science teachers must have a broader view of science and of education. They need to be in tune with the basic goals of science education in K–12 settings and be prepared to deal with all students in efforts to meet such objectives. H. Harty and Larry G. Enochs, in a 1985 article in the journal *School Science and Mathematics*,

offered an excellent analysis of the form in-service programs should take, contending that such programs should:

- Have a well-defined, organized, and responsible governing mechanism
- Involve teachers in needs-assessment, planning, designing, and implementing processes
- Provide diverse, flexible offerings that address current concerns of the practitioner and that can be used readily in the classroom
- Include an evaluation plan of the individual components of the program and their effect in the classroom.

The content versus process debate continues and is counterproductive at best. Science cannot be characterized by either content (products produced by scientists) or process (behaviors that bring scientists to new understandings). Effective teacher education programs cannot be developed if science preparation focuses on content mastery and the education component focuses on process. Teachers must learn to use both the skills and processes of science to develop new knowledge of both science and teaching. They need to use the research concerning learning, such as the National Research Council's 1999 book *How People Learn*.

In the late 1990s NSF initiated new programs designed to improve in-service teachers—and later preservice teachers as well. These systemic projects were funded at approximately \$10 million each in about twenty-five states. Later urban, rural, and local systemic projects were conceptualized and funded. Teacher education programs involving several college/university situations were also funded to relate in-service efforts directly to the preparatory programs. These collaborations often tied institutions together in order to share expertise, faculty, and program features.

### Major Trends, Issues, and Controversies

Major trends in science teacher education include:

- Extending the pedagogical facet of the program over two calendar years with extensive school practica provided as places to try new ideas
- Replacing four-year bachelor's programs with five-year master of arts in education programs
- Using the National Science Education Standards for visions of goals for all students, effective teaching strategies, content and curricula features, assessment strategies, and staff development

- The extensive collaborating of all stakeholders (administrators, parents, community leaders, and all teachers across the curriculum) for reform efforts
- Broadening the view of science to include the human-made world (technology) as well as natural science, science for meeting present and societal challenges, a focus on inquiry as content and skills that characterize science, and the history/philosophy/sociology of science.

Some of the major unresolved controversies include:

- Limiting the number of institutions preparing science teachers
- Teaching teachers, over a five-year program, in the same manner that they should teach
- Using the four goals for school science to prepare teachers to internalize the National Science Education Standards, including experiencing science as: an investigation of natural phenomena, a means for making sound personal decisions, an aid in public discussion and debate of current issues, and a means of increasing economic productivity.

Optimism for even greater successes with meeting the goal of scientific literacy for all is a central focus for science teacher education. Certainly the new Centers for Learning and Teaching that NSF began funding in 2000 are designed to help. By definition they combine preservice and in-service science education—making the two seamlessly connected. They require a common research base while also assuring that a major effort of the center will be to extend that research base. They must design and implement new doctorate programs to prepare future leaders. The history of science education is replete with identification of current problems, new ideas for their resolution, major national funding (since 1960), and then almost immediate abandonment after initial trials are not successful. The current challenge facing science teacher education is whether there is adequate national commitment, determination, and know-how to realize the visions elaborated in current reform documents.

*See also:* NATIONAL SCIENCE TEACHERS ASSOCIATION; SCIENCE EDUCATION, *subentry on* OVERVIEW; SCIENCE LEARNING.

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## SCIENCE LEARNING

## EXPLANATION AND ARGUMENTATION

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## KNOWLEDGE ORGANIZATION AND UNDERSTANDING

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## STANDARDS

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## EXPLANATION AND ARGUMENTATION

The K–12 U.S. science education standards, now published state by state, without exception cite competence in scientific investigation as an important curriculum goal from the early grades on. Students, it is claimed, should be able to formulate a question, design an investigation, analyze data, and draw conclusions. Reference to such skills in fact appears in discussions of curriculum objectives extending well beyond the discipline of science. The following description, for example, comes not from science edu-

cation literature but from a description of language arts goals specified by the National Council of Teachers of English (NCTE): “Students conduct research on issues and interests by generating ideas and questions, and by posing problems. They gather, evaluate, and synthesize data from a variety of sources . . . to communicate their discoveries in ways that suit their purpose and audience” (NCTE and International Reading Association website).

It is important that the cognitive skills involved in such activities be defined in a clear and rigorous enough way to make it possible to specify how they develop and how this development is best supported educationally. At the same time, to make the case that scientific thinking is a critical educational objective, it must be defined more broadly than “what professional scientists do.” Scientific thinking is essential to science but not specific to it.

But are not children naturally inquisitive, it may be asked, observant and sensitive to the intricacies of the world around them and eager to discover more? Do inquiry skills really need to be developed? The image of the inquisitive preschool child, eager and energetic in her exploration of a world full of surprises, is a compelling one. But the image fades as the child grows older, most often becoming unrecognizable by middle childhood and certainly by adolescence. What happens to the “natural” inquisitiveness of early childhood? The answer is that it needs to be channeled into the development of the cognitive skills that make for effective inquiry. More needs to be done than keeping alive a “natural curiosity.” The natural curiosity that infants and children show about the world around them needs to be enriched and directed by the tools of scientific thought.

### Coordination of Theories and Evidence

One way to conceptualize these scientific thinking skills is as skills in the coordination of theories and evidence. Even very young children construct theories to help them make sense of the world, and they revise these theories in the face of new evidence. But they do so without awareness. Scientific thinking, in contrast, involves the *intentional* coordination of theories with new evidence. Another way to define scientific thinking, then, is as *intentional knowledge seeking*. Scientific thinkers intentionally seek evidence that will bear on their theories. Defined in this way, the developmental origins of scientific thinking lie in awareness of knowledge states as generating

from human minds. Awareness of the possibility of false belief is thus a prerequisite to scientific thinking. If knowledge states are fallible, one’s own knowledge may warrant revision in the face of new evidence.

Regarded in this way, scientific thinking is more closely aligned with argument than with experiment and needs to be distinguished from *scientific understanding* (of any particular content). Scientific thinking is something one does, whereas scientific understanding is something one has. When conditions are favorable, the process of scientific thinking may lead to scientific understanding as its product. Indeed, it is the desire for scientific understanding—for explanation—that drives the process of scientific thinking. Enhanced understandings of scientific phenomena are certainly a goal of science education. But it is the capacity to advance these understandings that is reflected in scientific thinking.

Scientific thinking requires that evidence be represented in its own right, distinct from the theory, and that the implications of the evidence for the theory be contemplated. Although older children, adolescents, and even adults continue to have trouble in this respect, young children are especially insensitive to the distinction between theory and evidence when they are asked to justify simple knowledge claims.

Note that the outcome of the theory-evidence coordination process remains open. It is not necessary that the theory be revised in light of the evidence, nor certainly that theory be ignored in favor of evidence, which is a misunderstanding of what is meant by theory-evidence coordination. The criterion is only that the evidence be represented in its own right and its implications for the theory contemplated. Skilled scientific thinking always entails the coordination of theories and evidence, but coordination cannot occur unless the two are encoded and represented as distinguishable entities.

The following six criteria for genuine scientific thinking as a process (in contrast to scientific understanding as a knowledge state) can be stipulated:

1. One’s existing understanding (theory) is represented as an object of cognition.
2. An intention exists to examine and potentially advance this understanding.
3. The theory’s possible falsehood and susceptibility to revision is recognized.
4. Evidence as a source of potential support (or nonsupport) for a theory is recognized.

5. Evidence is encoded and represented distinct from the theory.
6. Implications of the evidence for the theory are identified (relations between the two are constructed).

### The Epistemology of Scientific Learning

There is more to scientific thinking that needs to develop, however, than a set of procedures or strategies for coordinating theories with evidence. As hinted earlier, at its core this development is epistemological in nature, having to do with how one understands the nature of knowledge and knowing. An until recently largely neglected literature on the development of epistemological understanding shows a progression from an absolutist belief in knowledge as certain and disagreements resolvable by recourse to fact, to the multiplist's equation of knowledge with subjective opinion. Only at a final, evaluativist level is uncertainty acknowledged without foregoing the potential for evaluation of claims in a framework of alternatives and evidence.

If facts can be readily ascertained with certainty, as the absolutist understands, or if all claims are equally valid, as the multiplist understands, scientific inquiry has little purpose. There is little incentive to expend the intellectual effort it entails. Epistemological understanding thus informs intellectual values and hence influences the meta-level *disposition* (as opposed to the competence) to engage in scientific thinking.

Similarly, a strategic meta-level that manages strategy selection can be proposed. This meta-strategic level entails explicit awareness of not so much *what* to do as *why* to do it—the understanding of why one strategy is the most effective strategy to achieve one's goals and why others are inferior. It is this meta-strategic understanding that governs whether an appropriate inquiry or inference strategy is actually applied when the occasion calls for it.

The phases of scientific thinking themselves—inquiry, analysis, inference, and argument—require that the process of theory-evidence coordination become explicit and intentional, in contrast to the implicit theory revision that occurs without awareness as young children's understandings come into contact with new evidence. Despite its popularity in educational circles, once one looks below the surface of inquiry learning, it is less than obvious what cognitive processes are entailed. Research suggests that

children lack a mental model of multivariable causality that most inquiry learning assumes. They are not consistent over time in their causal attributions, attributing an outcome first to one factor and later to another, and infrequently do they see two factors as combining additively (much less interactively) to produce an outcome. A mature mental model of causality in which effects combine additively to produce an outcome is critical to adoption of the task goal of identifying effects of individual factors and to the use of the controlled comparison strategy (which has been the focus of research on scientific reasoning) to achieve that goal. If a single (not necessarily consistent) factor is responsible for any outcome (as reflected in the inferential reasoning of many young adolescents), what need is there to worry about controlling for the effects of other factors?

If it is this total structure (including meta-strategic, meta-cognitive, and epistemological understanding, as well as values) that needs to develop, where do educators start? They probably need to begin at multiple entry points. Opportunities should be plentiful for the frequent and regular exercise of skills of inquiry, analysis, inference, and argument, thereby enabling these skills to be practiced, elaborated, consolidated, and perfected. At the same time, meta-level awareness and understanding of skills should be promoted by helping students to reflect on what and particularly *how* they know and what they are doing as they acquire new knowledge. The two endeavors reinforce one another: understanding informs practice and practice enhances understanding.

### The Social Context

Equally critical is the social context in which all of this needs to take place, the often neglected dispositional side of knowing. Educators want children to become skilled scientific thinkers because they believe that these skills will equip them for productive adult lives. But it is not enough that these adults believe it. If children are to invest the sustained effort that is required to develop and practice intellectual skills, they too must believe that learning and knowing are worthwhile. These values and beliefs can develop only through sustained participation in what Ann Brown in 1997 called a "community of learners." Here, scientific thinking skills stand the best chance of developing because they are needed and practiced and socially valued.

Returning scientific thinking to its real-life social context is one approach to strengthening the meta-level components of scientific thinking. When students find themselves having to justify claims and strategies to one another, normally implicit meta-level cognitive processes become externalized, making them more available. Social scaffolding (supporting), then, may assist less able collaborators to monitor and manage strategic operations in a way that they cannot yet do alone. A number of authors have addressed scientific thinking as a form of discourse. This is of course the richest and most authentic context in which to examine scientific thinking, as long as the mistake is not made of regarding these discourse forms as exclusive to science. Scientific discourse asks, most importantly, “How do you know?” or “What is the support for your statement?” When children participate in discourse that poses these questions, they acquire the skills and values that lead them to pose the same questions to themselves. Although central to science, this critical development extends far beyond the borders of traditional scientific disciplines.

*See also:* DISCOURSE, *subentries on* CLASSROOM DISCOURSE, COGNITIVE PERSPECTIVE; LEARNING, *subentries on* CONCEPTUAL CHANGE, KNOWLEDGE ACQUISITION, REPRESENTATION, AND ORGANIZATION; READING, *subentry on* CONTENT AREAS; SCIENCE EDUCATION.

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#### KNOWLEDGE ORGANIZATION AND UNDERSTANDING

Educational research is frequently construed as focusing on how teachers should teach. However, be-

fore this question is addressed, it is important to ask what should be taught. One might ask if the problem of what to teach is really a problem. Why not just ask scientists or rely on existing textbooks? There are good reasons a serious inquiry cannot be sidestepped, however. A fundamental realization of cognitive science is that almost all of the competence of experts is tacit. Careful studies of what scientists actually do show a vast repertoire of invisible (to them) processes and structures. Furthermore, textbooks are at best secondary sources, and they are much more likely idiosyncratic products of a complex social history than trustworthy sources for the essence of science. Progress is being made, even if cognitive science (including history, philosophy, and sociology of science) has not definitively identified the essence of scientific knowledge.

### Target Areas

The essence of “what to teach” can be divided into five target areas: content, process, meta-content and process, representational competence, and discourse and membership.

**Content.** *Content* concerns science concepts that students need to acquire. Content is of two different types: (1) central, difficult to learn ideas; and (2) concepts that are more peripheral and more amenable to straightforward instruction. Starting in the late 1970s, a huge literature emerged delineating certain misconceptions. The idea behind studying misconceptions is that difficult-to-acquire concepts are difficult not only (if at all) because of any intrinsic complexity, but because they are incompatible with well-developed and entrenched prior ideas. *Conceptual change* describes learning that involves substantial recrafting of prior ideas. While learning science concepts might, in principle, be difficult for many reasons, the preponderance of research suggests that conceptual change is a major factor. Conceptual change has been implicated in learning about force and motion, optics, electricity, heat and temperature, evolution, particulate theory of matter, and other topics.

Probably the most robust result of conceptual change research is that such change is not difficult for simple or accidental reasons, such as bad instruction. Instead, even the best instructional strategies require time and effort on the part of both students and teachers. This has major implications for selecting targets of instruction. Most notably, at the start of the twenty-first century, especially in the United

States, curricula are dramatically overly ambitious in terms of coverage. If students are to understand any science deeply, then choices must be made about the things that are to be taught. Study of cross-national science instruction has come to a similar conclusion. The U.S. science curriculum seems to be lacking in comparison to the best science instruction in the world because it is too shallow; it has been called “a mile wide and an inch deep.”

Another result of conceptual change research is that calculation does not seem to be strongly tied to conceptual change. Students can often calculate without understanding, and numerical exercises do not often promote conceptual change. Quantitative reasoning is a hallmark of scientific thought, yet its centrality to deep understanding is questionable.

Conceptual change researchers have suggested several promising instructional techniques. One notable suggestion is that the curriculum needs pedagogically specific *intermediate models* that abandon a direct aim at scientifically complete and correct ideas. Instead of trying to jump a wide stream directly, metaphorically speaking, one may need to hop to rocks midstream, and then to the far shore. While teaching intermediate ideas—which are prone to be described as “wrong” or “incomplete”—may be counterintuitive, the scientific rationale is sound, and results are encouraging.

Conceptual change research is developing a new and refined vocabulary for various types of knowledge and knowledge system organizations, such as concepts, theories, mental models, ontologies, and various forms of intuitive, inarticulate knowledge. Identifying which of these are central instructional targets helps to define curriculum, plausible instructional techniques, and assessments.

**Process.** The process of *doing* science is the traditional complement to content. For example, introspection of scientists and textbook descriptions of what scientists do led to the introduction of the *scientific method* as part of science instruction. Scientists supposedly (a) define problems carefully; (b) generate hypotheses; (c) design experiments to select among hypotheses; and (d) carry out those experiments to determine results. This sort of instructional goal has generally been discredited by cognitive and other researchers. It seems quite likely that no general skills exist for “defining problems carefully” or “generating hypotheses.” Instead, these are knowledge-intensive activities that require knowing many

specific things about the particular domain that is being investigated. This is an important cognitive principle, which may be called the *virtual knowledge problem*, meaning that naming a process does not entail a particular body of knowledge. Instead, the process might require different knowledge in different circumstances, hence it may not name a coherent instructional target.

Other formulations of process skills in science (e.g., careful observation) seem certain to suffer from the virtual knowledge problem. Even if a general skill is real, rather than virtual, it is often very weak and overwhelmed by domain-specific knowledge. Mathematical problem-solving research has found similar results.

Jean Piaget (1896–1980) began an important line of thinking about science process. However, his assumptions about broad changes in logic and reasoning (e.g., younger students can think only concretely) have proved generally unsupportable. Young students, given proper support, can engage in remarkably abstract and cogent scientific study. More specific skills from Piagetian studies, such as *proportional reasoning* (reasoning in ratios), and *controlling variables* (understanding that experiments that change many things at once are difficult to evaluate), have proven more productive, although their importance is uncertain.

An important trend in the late 1990s was to regard many process issues as matters of effective frameworks for action, rather than matters of knowledge or skills. For example, many educational researchers embed instruction in an *inquiry cycle*, where students formulate ideas, test them, and then iteratively refine them. However, the consequences of such activities may be robust content learning and epistemological sophistication, rather than learning science process. A concern for frameworks for action also reflects the realization that students' taking fuller responsibility for authentic activities has many advantages over exercising isolated skills. This parallels the well-supported result that remediation by practicing isolated skills fails to produce transferable, long-term improvement.

**Meta-content and process.** Starting about 1990 research focused increasingly on students' conceptions of knowledge, or, more specifically, scientific knowledge. Students have naive assumptions about the nature of knowledge, in somewhat the same way that they have naive conceptions about the content of

science. Students may believe (falsely) that their own sense of what is sensible is irrelevant to science—they must be told everything that is true and should not expect to figure anything out on their own. Students may also believe (falsely) that knowledge of science is embodied in small, simple chunks (e.g., sentences or equations) that can be memorized and do not form a larger fabric. Researchers refer to this knowledge as *student epistemologies* (theories of knowledge).

Unlike most versions of science process, it appears in theory and practice that improving student epistemologies also improves science-content learning. However, the precise nature of student epistemologies is unsettled. Some researchers hold closely to epistemological ideas that characterize professional science, such as: “Scientific knowledge is contingent and always subject to revision.” Others focus on general qualities of knowledge, like simplicity or modularity (as in the example beliefs stated above). Still others teach schemes abstracted from the history of science (e.g., evaluating the plausibility and productivity of competing theories) as part of inquiry-based science instruction.

**Representational competence.** A comparative newcomer to the repertoire of potential knowledge goals is *representational competence*. Representation competence entails knowing: How do representations (like pictures, graphs, or algebra) work? What are qualities of good representations? and How does one design effective, new, scientific representations? Older conceptions of representational competence were restricted to a narrower, less creative base, such as being able to generate and interpret a few standard representations. Promising characteristics of this new conception of representational competence are (a) students appear to have strong and productive intuitive ideas to build on; (b) concern for it parallels the broader move toward more authentic frames for action, rather than a focus on isolated skills; and (c) the rapid computerization of science evidently requires a more flexible representational competence than previously. This may entail interpreting dynamic, three-dimensional data displays or adjusting and interpreting color-coded visualizations.

**Discourse and membership.** Among the instructional trends in science learning is an increased reliance on social, rather than individual, methods, such as whole-class or small-group discussion. The parallel theoretical move is the realization that science is,

in essence, a social process. Ways of speaking and interacting, and one's feeling of affiliation to various groups (*membership*), are not only means to an end, but are, in fact, vital to scientific competence. Adherents to this view often hold apprenticeship to be a fundamental model for learning and instruction.

Viewed *instrumentally* (only as a means to another goal—developing robust conceptual or procedural competence), considerations of discourse and membership are particularly appropriate for understanding difficulties encountered by cultural or linguistic minorities. If one does not speak or have values aligned with privileged modes in schools, one will be at a disadvantage. On the other hand, interpreted *essentially* (i.e., particular discourse patterns are goals in themselves, the essence of science), study of discourse and membership suggests a radical shift in current instructional goals.

### Implications

The potential practical impact of research on science learning goals is obvious and immense. The very things students should understand and be able to do are at stake. On the other hand, science is slow and arduous, and although research is progressing, definitive answers are not at hand.

An important social process to determine science-learning goals is to engage multiple stakeholders, particularly disciplinary scientists and teachers, and to establish common standards. While this approach has advantages, a review of existing standards suggests areas of concern.

**Definition and learnability.** Standards rely on common-sense meanings of *understanding* and *knowing*. Cognitive research suggests that there are many different ways of knowing; appropriate means of instruction (memorizing, discussing, experiencing) and assessment (verbal answers, competence in extended inquiry) depend strongly on which is involved. Standards do not systematically distinguish easy-to-accomplish goals from deep conceptual change. Not calibrating how much time it takes to master particular items perpetuates a failing *mile-wide and inch-deep* curriculum. Limited empirical testing of the feasibility of standards does not screen out virtual knowledge.

**Focus.** Current standards only minimally reflect topics that have emerged from cognitive research. Representational competence and student epistemologies are almost absent. Furthermore, interme-

diated models and goals tend to be screened out because they are unfamiliar to both disciplinary scientists and teachers. Lack of consideration of discourse and membership may perpetuate marginalization of cultural or linguistic minority students.

**Sequence.** Bad theories of sequencing, or no theory at all, prevent students from encountering ideas as early as they might—and they do not build optimally. For example, as previously mentioned, characterizing young science students' thinking as *concrete* seems to have inappropriately limited instruction.

**Coherence.** Long lists of goals (the bread and butter of most standards) encourage piecemeal instruction, which is at odds with a fundamental shift in thinking about learning, which is that coherent frames for activity almost always enhance learning—compared to rehearsing isolated facts or skills. A common strategy in standards for providing coherence via *broad themes* is likely to lead to the virtual knowledge problem.

Pitting standards against scientific research suggests a false dichotomy. Both are appropriate. However, bringing standards and the standards-producing process into better alignment with research will provide a great opportunity for advancement.

*See also:* LEARNING, *subentry on* CONCEPTUAL CHANGE; READING, *subentry on* CONTENT AREAS; SCIENCE EDUCATION.

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#### STANDARDS

The release in 1983 of *A Nation At Risk: The Imperative for Educational Reform* is a reasonable place to begin consideration of the standards movement in science education in the United States in the later twentieth and early twenty-first centuries. This document, prepared by the National Commission on Excellence in Education (NCEE), was a response to “the widespread public perception that something is seriously remiss in our educational system” (p. 1). The document contained sentiments that became slogans of the standards movement. Science education for all is foreshadowed: “All, regardless of race or class or economic status, are entitled to a chance and to the tools for developing their individual powers of mind and spirit to the utmost” (p. 4). Recommendations focused on content, standards and expectations, time, teaching and leadership, and fiscal support. Science content was defined as “(a) the concepts, laws and processes of the physical and biological sciences; (b) the methods of scientific inquiry and reasoning; (c) the application of science knowl-

edge to everyday life; and (d) the social and environmental implications of scientific and technological development” (p. 25).

The science education community both anticipated and responded to this report with numerous efforts. The American Association for the Advancement of Science (AAAS) initiated Project 2061, which began by defining scientific literacy for all high school graduates. The National Science Teachers Association (NSTA) began its Scope, Sequence, and Coordination Project and ultimately, in 1992, published *Scope, Sequence, and Coordination: The Content Core*. Professional organizations and curriculum development corporations began to produce curriculum materials that emphasized hands-on science, another slogan of the period.

### Mathematics Standards and National Education Goals

In 1989 two events occurred that would influence the development of national science education standards. The National Council of Teachers of Mathematics (NCTM) released *Curriculum and Evaluation Standards for School Mathematics*. The term *standards* assumed new prominence in education reform.

Also in 1989 the National Governors Association met with then U.S. President George H. W. Bush at an education summit. They endorsed six national education goals, which were articulated as America 2000 under the Bush administration and were enacted as the Goals 2000: Educate America Act in 1994, during the administration of Bill Clinton. Two of the national goals made specific reference to improving the knowledge and skills of students in science:

Goal 3: Student Achievement and Citizenship. By the year 2000, American students will leave grades four, eight and twelve having demonstrated competency in challenging subject matter, including English, mathematics, science, history and geography; and Goal 4: Science and Mathematics. By the year 2000, U.S. students will be first in the world in science and mathematics achievement. (Malcom, p. 4)

The National Council on Education Standards and Testing, instituted by the U.S. Congress, referred explicitly to the mathematics standards when they recommended in 1992 that standards for school sub-

jects were a desirable and feasible vehicle for meeting the national education goals. This council noted that the mathematics standards had been developed by a professional society that included mathematicians and teachers. Further, the standards had been subjected to cycles of public review and feedback that encouraged consensus building about what students should know and be able to do. Development by a professional society and public review became two requirements as federal agencies began awarding grants to develop high, voluntary, national standards in school subjects including science.

While there was public consensus that educational standards were good and useful, there was no consensus on what standards were. Examining ordinary dictionaries, two apparently contradictory meanings are found. A standard is an object used as an emblem, symbol, and rallying point for a leader, people, or movement; standards are banners. A standard also is an established basis or rule of comparison used to measure quality or value; standards are bars. Further, three types of standards were identified: content standards, performance standards, and delivery standards. Shirley Malcom, in a 1993 report of the National Education Goals Panel, defined content standards as what students should know and be able to do and performance standards as specifying how good is good enough. Diane Ravitch, in the 1995 book *National Standards in American Education: A Citizen's Guide*, defined delivery standards, later called opportunity-to-learn standards, as conditions for schooling under which content and performance standards would be attained.

### Two Key Documents: NSES and Benchmarks

When the U.S. Department of Education (DoE) began to deliberate about which association to consider to develop national education standards for science, two were immediately apparent: AAAS and NSTA. Each had reasons to assume leadership in the enterprise. Project 2061 was well underway at AAAS and in 1989 had produced *Science for All Americans*, which was having an impact on thinking and practice in curriculum and instruction in science. Work had begun on *Benchmarks for Science Literacy*, which parsed what students at different grade levels needed to understand if they were to attain science literacy by grade twelve. Alternatively, NSTA is the largest organization of science teachers in the country and is analogous to NCTM.

In spring 1991 the president of NSTA, supported by the unanimous vote of the board, asked the president of the National Academy of Sciences (NAS) with its operating arm, the National Research Council (NRC), to coordinate the development of national science education standards. The DoE encouraged NAS/NRC, a prestigious organization, to draw on expertise and experience from both AAAS and NSTA. Subsequently, by the early twenty-first century, two works were acknowledged at the national level as setting education standards for science: *National Science Education Standards* (NSES), which was produced by NRC in 1996; and *Benchmarks for Science Literacy*, which was published in 1993 by AAAS and is one product of Project 2061. A 1997 analysis of the science content in NSES and *Benchmarks* conducted by Project 2061 revealed that, although organized differently, there is greater than 90 percent overlap in what the two documents claim all students should understand and should be able to do.

NSES describes science content as fundamental and included as a standard if it: represents a central event or phenomena in the natural world; represents a central scientific idea and organizing principle; has rich explanatory power; guides fruitful investigations; applies to situations and contexts common to everyday experience; can be linked to meaningful learning experiences; and is developmentally appropriate for students at the grade levels specified. In NSES, the science content begins with the unifying concepts and process standard: systems, order, and organization; evidence, models, and explanations; change, constancy, and measurement; evolution and equilibrium; and form and function. These are not sorted by grade level but are applicable in some form to all students and all science disciplines. The other science content standards in NSES are displayed in Table 1. An array of the fundamental ideas in science that constitute the standards illustrates three points. The ideas build on one another from grade level to grade level. The ideas increase in complexity and abstractness across grade levels. There is an increase in the number of ideas across grade levels.

At the standard statement level the knowledge and abilities of students about inquiry and about technological design are similar for all students. Across grade levels, the ideas with which inquiry and design interact are increasingly complex and sophisticated. The increased complexity and sophistication of inquiry and design are captured in the guide to

the standards. For example, grade K–4 students are to “Ask a question about objects, organisms and events in the environment” (NRC, p. 122). Grade 5–8 students are to “Identify questions that can be answered through scientific investigations” (p. 145), while grade 9–12 students are to “Identify questions and concepts that guide scientific investigations” (p. 175).

The NSES went beyond the charge from DoE and developed standards for teaching and assessment, recognizing that change in content is not sufficient to produce change in teaching and learning. Further, NSES produced professional development standards, which focus on initial and continuing education of teachers; program standards, which focus on changes for schools and school districts; and system standards, which focus on changes in the entire educational system. *Benchmarks* extended science content to mathematics and to human society.

### Implementation

Although science education standards have been generally well received, their implementation has been difficult and uneven. Returning to an emphasis on local control in education, some states chose to keep the frameworks they had in place prior to 1989, some adopted the NSES or *Benchmarks*, others adapted either NSES or *Benchmarks*, while still others created their own state science standards. By 2000 most instructional materials claimed to be standards based. An analysis of many of them in 2001 by Project 2061, however, indicated that few actually are. Some of the questions that plague those implementing standards include: What is inquiry? What does it mean to understand a science idea? and Are the indicated grade levels appropriate? To answer these and other questions and to extend the influence and implementation of the NSES, the NRC has held numerous conferences and published more than fifteen documents addressed to teachers, parents, policymakers, and curriculum and assessment developers. *Benchmarks* is only one in a series of materials available or planned by Project 2061 to promote science literacy. The *Atlas of Science Literacy*, published by AAAS in 2001, graphically presents how the understanding of important science ideas is developed by students over time. Project 2061 also has developed a number of online tools such as *Blueprints for Reform*, which was published by AAAS in 2001, and conducts meetings and workshops for various stakeholders in science education.

TABLE 1

<b>Science content standards in <i>National Science Education Standards</i></b>		
<b>Grades K–4</b>	<b>Grades 6–8</b>	<b>Grades 9–12</b>
<b>Science as inquiry</b>		
Abilities to do scientific inquiry	Abilities to do scientific inquiry	Abilities to do scientific inquiry
Understanding about scientific inquiry	Understanding about scientific inquiry	Understanding about scientific inquiry
<b>Physical science</b>		
Properties of objects and materials	Properties and changes of properties in matter	Structure of atoms
Position and motion of objects	Motions and forces	Structure and properties of matter
Light, heat, electricity, and magnetism	Transfer of energy	Chemical reactions
		Motions and forces
		Conservation of energy and increase in disorder
		Interactions of energy and matter
<b>Life science</b>		
Characteristics of organisms	Structure and function in living systems	The cell
Life cycles of organisms	Reproduction and heredity	Molecular basis of heredity
Organisms and environments	Regulation and behavior	Biological evolution
	Populations and ecosystems	Interdependence of organisms
	Diversity and adaptations of organisms	Matter, energy, and organization in living systems
		Behavior of organisms
<b>Earth and space science</b>		
Properties of Earth materials	Structure of the Earth systems	Energy in the Earth system
Objects in the sky	Earth's history	Geochemical cycles
Changes in Earth and sky	Earth in the solar system	Origin and evolution of the Earth system
		Origin and evolution of the universe
<b>Science and technology</b>		
Abilities to distinguish between natural objects and objects produced by humans	Abilities of technological design	Abilities of technological design
Abilities of technological design	Understanding about science and technology	Understanding about science and technology
Understanding about science and technology		
<b>Science in personal and social perspectives</b>		
Personal health	Personal health	Personal and community health
Characteristics and changes in populations	Populations, resources, and environments	Population growth
Types of resources	Natural hazards	Natural resources
Changes in the environment	Risk and benefit	Environmental quality
Science and technology in local challenges	Science and technology in society	Natural and human-induced hazards
		Science and technology in local, national, and global challenges
<b>History and nature of science</b>		
Science as a human endeavor	Science as a human endeavor	Science as a human endeavor
	Nature of science	Nature of scientific knowledge
	History of science	Historical perspectives

SOURCE: Based on National Research Council. 1996. *National Science Education Standards*. Washington, DC: National Academy Press.

### Other Standards Documents

The picture of education standards in science would be incomplete without mentioning the *Standards for Technological Literacy* released by the International Technology Education Association in 2000. Also, in 1989 the National Board for Professional Teaching Standards produced standards for experienced science teachers, while the Interstate New Teacher As-

essment and Support Consortium published *Standards in Science for New Teachers: A Resource for State Dialogue* in 2001. There are also standards for programs that educate science teachers and for instructors in such programs.

At the beginning of the twenty-first century, standards are seen alternatively as vision or hurdle, as influential or intrusive, as realistic or impractical.

Beyond question, however, they have become an integral part of the science education enterprise.

*See also:* NATIONAL BOARD FOR PROFESSIONAL TEACHING STANDARDS; SCIENCE EDUCATION; SCIENCE LEARNING, *subentry on* KNOWLEDGE ORGANIZATION AND UNDERSTANDING; STANDARDS FOR STUDENT LEARNING; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

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ANGELO COLLINS

### TOOLS

Research on the use of technology to support science learning reveals promise to improve learning and potential pitfalls. Technology offers promise for increasing science inquiry and is a major component

of science education reforms and standards. In inquiry activities, students intentionally address challenging science questions by engaging in complex, sustained, reflective reasoning to design solutions, test ideas, revise solutions, critique ideas, and collaborate with others.

The focus here is on technologies including scientific visualizations, statistical modeling, real time data collection, dynamic modeling software, and collaborative environments that support inquiry practices. This discussion highlights uses of technology that are integrated into an inquiry-based, science curriculum and often delivered using a learning environment, to help students engage in substantial scientific reasoning. Technology research seeks applications that help students develop a coherent understanding of science rather than fragmented ideas, and that set students on a path toward lifelong learning.

Many researchers and software designers have identified pitfalls of technology use. Often technology distracts learners with glitzy animations or colorful photographs that not only do not connect to the ideas that students hold, but also reinforce perceptions of science as inaccessible, irrelevant to personal concerns, or inscrutable. Internet sites and software designed to transmit information can deter students from viewing scientific sources critically. Applications like word processors or spreadsheets designed for business may require valuable classroom time to learn yet not contribute to understanding of science. Software designers are just beginning to develop robust applications that contribute to students' understanding by capitalizing on both late twentieth-century research on learning and iterative design studies conducted in settings where learning takes place.

Consistent with the rapid change in educational technologies, this article presents criteria for selecting promising technological tools that are synthesized from research on effective uses of technology and describes applications that exemplify these criteria and have supporting empirical research to demonstrate effectiveness in the classroom. The purposes is to seek benefits in terms of student learning gains, student engagement in scientific practice, or teacher professional development using a range of methodologies, and the criteria are based on reviews of studies featuring general comparisons, studies based on iterative design, and case studies of student learning.

## Engaging Students in Scientific Inquiry Activities

Technological resources can help students in inquiry activities, such as researching a complex question, building explanations, testing ideas, and refining understanding of the world. Applications that support modeling phenomena, visualizing, or collecting data also support inquiry. Emphasized are highlight modeling and simulation, visualization, and real time data collection.

**Modeling and simulation environments.** Modeling and simulation environments allow students to perform “what if” experiments or simulate experiments that would be difficult, impossible or dangerous to perform using real-world materials. Learners typically manipulate computer-based objects to see how they react under different conditions. Models represent complex scientific situations like an ecosystem or the world of Newtonian physics. Students construct or manipulate models to make conjectures, test ideas, and explore rules underlying scientific phenomena. Modeling and simulation environments generally fall within two types, either content based or open ended.

The software program Interactive Physics is an example of a content-based modeling environment. Interaction Physics provides a simulation environment and libraries of simulations for physics curricula. This program allows students to conduct controlled, simulated experiments without costs in time and materials. Students readily repeat experiments, change values of variables, and explore parameters of experiments. Students interact with their simulations in real time, and display measurements graphically in a variety of ways. Research demonstrates that students improve their physics understanding when interacting with modeling tools.

Open-ended, simplified modeling environments include Model-It, which is based on a more complex precursor, STELLA (Structural Thinking Experimental Learning Laboratory with Animation). Using Model-It, students can readily construct qualitative and quantitative models. Students define objects and factors within a system and build relationships between factors. Students “run” their models and monitor changes by viewing indicators or graphs. The design and use of Model-It in high school and middle school science classrooms is the focus of research at the University of Michigan. Model-It supports learners by allowing students to use personally meaningful images, providing infor-

mation in qualitative, quantitative and graphical form, and prompting students for explanations. Case studies show that students use several higher order cognitive tasks when creating models with Model-It, including identifying causal relationships and elaborating upon explanations. Students learn the scientific content that forms the basis of their models as well as ideas related to the nature of science, including purposes of modeling.

**Visualization software.** Visualization software provides students with access to scientific visualizations such as molecular models or geographic information systems. For example, WorldWatcher uses scientific visualization software and historical data to help students recognize patterns in weather data by translating numerical data, such as temperature, to a palette of colors and displaying results on a world map. The software allows students to annotate data, make predictions, and perform sophisticated analysis by overlaying data sets. A Global Warming Project, an eight-to-ten-week unit intended for students in grades seven to ten, involves teams of students advising world leaders on issues countries may face due to global warming. The WorldWatcher formative classroom research reveals the challenges that students face in interpreting complex data and suggests ways to reduce complexity to support inquiry.

**Real-time data collection software.** An important technological support for science learning connects sensors to a computer, calculator, or handheld Personal Digital Assistant (like a PalmPilot or Visor), and allows students to record real-time data about their environment. Common probes include temperature, voltage, and motion sensors. Researchers have studied the use of probes in computer-based labs and microcomputer-based labs, showing how real-time graphing helps students understand complex scientific phenomena. The use of probes in an inquiry environment assists student in distinguishing between important scientific concepts, such as heat and temperature.

### **Complex Science Content and Integrated Understanding**

Technology can help students make sense of standards-based complex topics and provide a window on science in the making to illustrate science inquiry. To enable students to gather, organize, and display information, technology can combine visualization, modeling, and real-time data collection with a full curriculum. Ideally science instruction encourages

students to build a more coherent understanding of science and to apply ideas from one domain to the next. Processed applications such as simulations depend on the curriculum and the teacher to emphasize connections. Whole curricula can support integrated understanding when well designed and complemented by a thoughtful teacher.

For example, Constructing Physics Understanding (CPU), a National Science Foundation-funded project, encourages robust physics understanding by connecting laboratory and computer-based materials to elicit students' ideas, guide students to modify ideas, and help students apply target ideas to new situations by using simulations.

The Virtual High School (VHS) allows teachers in a consortium to use online materials and collaborative tools to create specialty NetCourses online for students at other schools that belong to the consortium. VHS offers a wide range of courses, but science selections include ethnobotany, evolutionary genetics, paleontology, astronomy, and bioethics. VHS research helps teachers redesign courses and enhance inquiry by supporting inquiry-based teaching online.

### **Supporting Peer Learning**

Research shows benefits when students productively specialize and tutor their peers. To support peer learning, software offers some group and individual activities, specifies how groups should work together, and accommodates the contributions of individuals to the group.

For example, software can support geographically separated students in sharing quantitative and qualitative data that are location dependent and/or time-sensitive, including weather, astronomical, or water quality data. Synchronized collaborative programs provide the tools and curricula to organize students over large distances. Synchronized collaborative programs range from days to weeks to a semester, and work best when several classrooms use them simultaneously and share findings. The programs use communication technologies including e-mail and discussion forums to coordinate activity and discussion. For example, in One Sky Many Voices students serve as "resident experts" and communicate with other sites to compare local environments. Participation encourages scientific discussion and debate, asking questions, and presenting evidence to students in distant classrooms.

Several programs use software, including electronic probes to facilitate group data collection and analysis. For example, the Global Learning and Observations to Benefit the Environment (GLOBE) project has three major goals: “to enhance the environmental awareness of individuals throughout the world; to contribute to scientific understanding of the earth; and to help all students reach higher levels of achievement in science and mathematics” (GLOBE Teacher’s Guide, Program Overview). Through GLOBE, elementary to high school students around the world investigate earth science, including atmosphere, hydrosphere, land use, and soil. Scientists and students partner to collect and use data to gain a better understanding of global environmental processes. Providing online tools and materials, GLOBE uses high quality satellite photos and graphical representations of temperature, climate, and land use data. Students add findings to the Student Data Archive and use an Internet-based forum called GLOBEMail to communicate with schools and scientists. GLOBE is effective in improving student achievement in key mathematics, science, and geography skills. Students and teachers also report more interest and awareness of environmental issues and believe their data contributes to scientific research.

### **Recognizing Relevant Experiences, Diverse Contributions to Science, and Autonomy**

Effective instruction should connect students’ complex and varied ideas from prior observation and instruction, and introduce new scientific ideas. Technology can help students make connections, test their ideas against normative ones, and sort out varied perspectives on a topic.

To promote independent inquiry, technology-enhanced environments can prompt students to reflect on their progress and critique solutions proposed by others. Effective software should invite diverse students to engage in science by providing a variety of ways to learn (discussion, projects, reading, designing, debating), and by using students’ views and experiences as a springboard to further learning. Software can support students in refining ideas, developing interest in new scientific topics, and carrying out sustained, complex projects.

In the early twenty-first century, learning environments are emerging to meet this challenging criteria. Computer-based learning environments combine curricula, classroom activities, and assess-

ments into packages designed to improve teacher effectiveness and to provide cognitive and social supports for students who are conducting inquiry projects. Learning environments incorporate results of cognitive research including hint giving, prompts for reflection, and connections to online discussions. They free teachers to tutor individuals, identify common theories, and monitor progress.

The Web-based Integrated Science Environment (WISE), a browser-based application, offers a library of middle school and high school activities that enable students to critique real-world “evidence” from the Internet, compare scientific arguments, and design solutions to scientific problems. WISE projects offer inquiry activities that are personally relevant to students. These activities present multifaceted, interdisciplinary scientific issues, introduce scientific methodology, and encourage students to gain lifelong learning skills, including the ability to critique websites and support conclusions with appropriate evidence. The WISE technology provides an organizational structure helping students to reflect upon their learning, take notes, sort evidence, and discuss arguments online with peers. Many WISE projects involve hands-on data collection, online modeling of observations, or design activities. WISE provides scientific evidence, differing points of view, and visualizations (e.g., images, diagrams, animations or models). Students perform all work collaboratively, and are assessed in terms of their notes, arguments, models, and designs. WISE draws upon extensive cognitive and educational research, summarized by Marcia Linn and Sherry Hsi, to explore how computer technology can guide and support students’ understanding.

### **Benefits**

There is widespread agreement that students benefit from learning with and about technology in science. Nevertheless, effective incorporation of information technologies into the curriculum has been controversial, difficult, and demanding. Finding ideal uses of technology in science instruction remains an active research area, and the technology itself is a “moving target,” as new projects emerge on a regular basis. The recommendations in this entry capture current practices and research findings, and require regular revision as new tools and new research results become available. The best gift science teachers can give this generation of students is to offer them courses and tools that enable them to become life-

long science learners and to add new technological resources regularly to their repertoire.

*See also:* MATHEMATICS LEARNING, *subentry on* LEARNING TOOLS; PEER RELATIONS AND LEARNING; READING, *subentry on* CONTENT AREAS; SCIENCE EDUCATION; SCIENCE LEARNING *subentry on* STANDARDS; TECHNOLOGY EDUCATION; TECHNOLOGY IN EDUCATION, *subentry on* CURRENT TRENDS.

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## SEA GRANT PROGRAM

The sea is an integral part of American heritage. Historically, marine commerce, seafood products, and the productivity of coastal communities have been essential to the U.S. economy. However, the marine sciences did not enjoy a prominent role in the early development of the country's science enterprise. This began to change during the post-*Sputnik* years, spurred by U.S. President John F. Kennedy's statement in 1961 that "knowledge and understanding of the oceans promise to assume greater importance in the future." By 1963 the Federal Council for Science and Technology published a long-range plan for oceanography that marked a greater federal commitment to the field.

Unlike the ocean sciences, engineering and agricultural research flourished during the late nine-

teenth century and throughout the twentieth century. This was made possible by the land-grant program, perhaps America's greatest contribution to university education. The Morrill Act, in 1862, and subsequent legislation established in every state a unique university-based, federally funded system that combined programs of research and education—and the extension of that knowledge to practical application. The land grant experiment has been an enormously successful model for federal-state partnerships.

The land grant concept provided the model that Athelstan Spilhaus, then a dean at the University of Minnesota, referred to in September 1963 when he remarked, "Why do we not do what wise men have done for the better cultivation of the land a century ago, why not have Sea Grant Colleges?" Thus originated the idea of a National Sea Grant College Program. Given the importance placed on the oceans during the 1960s, the Spilhaus concept rapidly became reality. With support from the academic community, led by Spilhaus and John Knauss, then dean of the University of Rhode Island's Graduate School of Oceanography, the Sea Grant idea attracted the attention of Congress. Under the leadership of Senator Claiborne Pell of Rhode Island and Congressman Paul G. Rogers of Florida, the National Sea Grant College and Program Act (Pub. L. 89-688) was signed into law by President Lyndon Johnson on October 15, 1966.

The fledgling Sea Grant Program was initially housed at the National Science Foundation, and the first grants were awarded in 1968. With the formation of the National Oceanic and Atmospheric Administration (NOAA), Sea Grant was moved to that agency in the early 1970s. By 1974 grants had been made to twenty-three institutional programs in coastal and Great Lakes states.

### **Operating Concepts**

The National Sea Grant College Program operates under authorization of the Sea Grant Act, which is consistent in concept and intent with the original 1966 law. Sea Grant grew out of a desire to achieve preeminence in oceanography and to support education and research in the marine sciences. The current version of the act explicitly states that the objective is to "increase understanding, utilization, and conservation of the Nation's ocean, coastal and Great Lakes resources by providing assistance to promote a strong educational base, responsive re-

search and training activities, and broad and prompt dissemination of knowledge and techniques, assessment, development, and multi-disciplinary approaches to environmental problems." Sea Grant's mission is to engage the nation's research universities in management-critical issues relating to coastal and ocean resources. The mechanism used is federal sponsorship of grants to universities for education, research, and information transfer to users through an extension service.

Eligibility, qualifications, and responsibilities for sea grant programs are set forth in the act and the Federal Register (Vol. 44, No. 244). A sea-grant program is a university-based program administered by an academic institution or consortia. Responsibility for designation of sea-grant colleges rests with the U.S. Secretary of Commerce. Sea-grant colleges receive funds through federal grants that require matching funds from nonfederal sources at 50 percent of the federal portion. Special provisions in the act also allow NOAA to make grants to sea-grant institutions by "passing through" funds from other federal agencies on a nonmatching basis.

### **Magnitude and Scope**

In 2001 Sea Grant managed about \$100 million in funds annually from federal and matching sources. Approximately 75 percent of those funds are invested in grants for the core operations of the thirty designated sea grant institutional programs. Most of the remainder is distributed through a national competitive process open to all programs. Each of these institutions is responsible for developing an integrated program for addressing management-critical issues important to the state, region, and nation. This is done through merit-reviewed research, education, and outreach projects. Emphasis is placed on engaging users and stakeholders, including federal, state, and local agencies.

Sea Grant programs draw upon academic talent not only at the sponsoring institution but also through a wider network of more than three hundred participating universities. Annually, more than 800 individual projects are funded, 300 extension specialists engaged, and about 500 graduate fellowships supported nationally. In the three-year period between 1997 and 1999, more than 2,500 journal articles and publications were produced. Overall, about 60 percent of available funds are expended on merit-based research, 27 percent on outreach, and 5 percent on precollege training programs.

Sea Grant programs focus on three broad portfolios: economic leadership, coastal ecosystem health and public safety, and education and human resources. A broad range of multidisciplinary topics are addressed, including aquaculture, aquatic nuisance species, coastal community development, estuarine research, fisheries habitats and management, coastal hazards, marine biotechnology, marine engineering, seafood safety, and water quality. Educational efforts involve targeting K–12 teachers and their students, mentoring college and graduate students conducting research projects, and transferring useful technology to coastal residents and businesses.

While Sea Grant has yet to gain the stature and resources its founders envisioned, it has been a highly productive investment of public funds and has made significant contributions through its science, education, and extension programs. With the enormous growth in, and the economic importance of, the nation's coasts and associated habitats, the demand for Sea Grant's services continues to increase dramatically.

Athelstan Spilhaus's brainchild promises to increase its contributions to building the United States' capacity to manage its coastal resources in the future. The establishment of a Sea Grant Program in Korea portends an international dimension as well.

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## SECONDARY EDUCATION

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Donald B. Holsinger

### HISTORY OF

In the mid- to late nineteenth century, the United States became the first country to open secondary education to the general public. In the early twenty-first century, secondary education follows a common elementary school experience, typically beginning at age twelve and continuing through age seventeen or eighteen. Elementary education deals with the rudimentary skills of reading, writing, and computation, as well as social goals deemed important by curriculum developers. Secondary education, however, extends beyond the elementary curriculum and addresses a combination of the personal, intellectual, vocational, and social needs of adolescents in society. Educators and policymakers have engaged in ongoing debate over what should be included in the secondary curriculum. In fact, the emphases of the secondary curriculum have shifted according to local and national goals; the historical, philosophical, and intellectual context; and societal beliefs about the role of youth in society, as well as other factors.

### The Beginnings of Secondary Education

Public secondary schools began to proliferate throughout the United States in the mid- to late nineteenth century. Before then, private endeavors provided a variety of educational experiences. Throughout the seventeenth and eighteenth centuries, private academies and tutors prepared wealthy boys for college. Academies, controlled by an independent board, required tuition and were distinguished from one another by regional and local needs. As a result, the curriculum and religious orientation were not the same at each school. The college preparatory curriculum was classical in nature, focusing on Greek and Latin. Boston Latin Grammar School epitomizes an example of such an academy. Opened in 1635 with some public funding and control, Boston Latin was designed to give boys from elite families the education they needed in order to attend college and take their place in society.

As the merchant and craftsmen class grew, private academies began to cater to the sons of the middle class in order to prepare these young men to succeed in commerce. These academies, called English academies, offered classes in modern languages, literature, mathematics, natural science, history, and geography, rather than Latin and Greek. Both English and Latin academies offered admission through examination. The differences in these academy curricula foreshadowed what would become the continuing debate over what should constitute the secondary curriculum—a question that has been addressed throughout the history of American high schools.

### The First Public High Schools

The first public high school opened in Boston in 1821. What became known as English High School was established as an alternative to private academies that offered a college preparatory curriculum. Boys who passed the entrance examination participated in a three-year English curriculum. High schools became more common in Massachusetts after an 1827 law required towns to provide a free public high school. Other early high schools could be found across the United States, although the biggest growth came in urban areas. Many early high schools did not admit girls and minorities. Boston opened a High School for Girls in 1826 that closed within two years. It was not until Boston Girls High and Normal School opened in 1857 that young women had the opportunity to attend a public secondary school. In

the late eighteenth and nineteenth century, it was not uncommon for urban schools to include a *normal* curriculum at the secondary level. Normal schools trained young women to teach in local elementary schools.

### Growth of Public High Schools

The public high school movement gained momentum following the Civil War (1861–1865). Only 300 high schools existed in the United States prior to the war; by 1900 there were more than 6,000 high schools annually graduating 6 percent of American seventeen-year-olds. Public high schools, however, had their detractors as well as supporters. Advocates argued that high schools completed the public school system, could attract businesses by providing competent labor, and increased the value of land. Opponents viewed the taxes that supported high schools as a burden. In many cases, families could not afford to send their children to school. Family economic stability was needed for high school attendance, and some families did not have this luxury. In other cases, families might choose to send their children to private schools and not get the direct benefit of the public high school. The tax question was resolved in 1872 when the Michigan Supreme Court (in what became known as the Kalamazoo Case) heard arguments for and against using taxes for secondary schools. The ruling favored tax support of public high schools, which subsequently became common practice throughout the United States.

### Curriculum Standardization

As the number of public high schools grew, the variety among curricula increased. No standards existed concerning curriculum or organization. Curriculum decisions made by local school boards hampered the links between colleges and high schools. Entrance to college was usually determined by examinations that had specific, individual requirements, making it difficult to anticipate the necessary preparation. To provide more standardization in the curriculum and help untangle the college admission process, the National Education Association sponsored the Committee of Ten in 1892. Ten influential educators, mostly from colleges and universities, debated the appropriate role of secondary schools. The report of this committee examined a central question in the ongoing curriculum debate—what constitutes a good secondary education?

The Committee of Ten recommended a rigorous academic curriculum for all students, regardless of their future plans, and elucidated the pursuit of knowledge and training of the intellect as the mission of secondary schools. High schools held the responsibility for designing courses of study that focused on the nine core subjects: Latin, Greek, English, modern languages, mathematics, sciences, natural history, history (including economics and government), and geography. College admission would follow for interested students who successfully completed this course of study. But the desire to attend college was not the only reason to partake of these classes. The committee argued that in order for students to be educated, college bound or not, an academic curriculum was necessary. Criticisms of the report abounded. Many academicians believed that there was too little rigor; others commented that the courses were too impractical.

Curriculum standardization was not the only approach to articulating the secondary school-college divide. As noted, in the late nineteenth century admission to most colleges was determined by an entrance examination. High school and state educators wanted to use a diploma admission requirement rather than have to prepare students for the wide range of college admissions tests. The University of Michigan began diploma admission as early as 1871, but this practice did not become common until accreditation became popular.

The New England Association of Schools and Colleges was founded in 1885 and is the oldest of the six regional accrediting agencies servicing the United States in the early twenty-first century. These accreditation agencies helped to cement the distinctions between colleges and universities and standardize the evaluation of high school programs. Accreditation continues to be voluntary and involves parents, teachers, students, and community members. A school self-study that is based on regional standards and is tied to state standards is the basis of the accreditation evaluation. In another regulatory push, the College Entrance Examination Board came into existence in 1899 with the goal of providing uniform examinations for college admission.

The Carnegie unit also played a role in the standardization of high schools in the early part of the twentieth century. Again, the issue was how to report high school experiences to colleges. The Carnegie Foundation for the Advancement of Teaching, a nonprofit corporation founded in 1906, developed

the Carnegie unit as a measure of the amount of time a student had studied a subject. One Carnegie unit was equivalent to 120 hours of contact time, and fourteen units was established as the minimum for an academic high school course of study.

### Curriculum Differentiation

Early in the twentieth century the population of secondary schools increased dramatically. In 1910, 8.8 percent of seventeen-year-olds were in high school; by 1930 this figure rose to almost 30 percent. Progressive educators took note of both this increase and that many of the students in secondary schools would not be attending college. They believed schools needed to expand the rigorous academic curriculum to include more practical subjects and in this way create more equitable schools. Rather than focusing solely on intellectual training, high schools began to emphasize social and vocational skills that prepared students for later life. Social skills were necessary to assimilate the large wave of immigrants and to promote democratic ideals so that new Americans could function in society.

The term *curriculum differentiation* means different courses of study for different students. The comprehensive high school attempts to meet the needs of a variety of students in one location. Curriculum differentiation was championed in another National Education Association report, the *Cardinal Principles of Education*. This report, released in 1918 and authored by the NEA's Committee on the Reorganization of Secondary Education, did not emphasize intellectual skills or the standard school subjects. Rather, the committee recommended that secondary education focus on health, the command of fundamental processes, worthy home membership, vocation, citizenship, worthy use of leisure time, and ethical character. As high school education became universal, comprehensive high schools, the committee argued, should meet the needs of the widely diverse student population. These needs could be met through varied curriculum options relevant to the lives of current students. Guidance departments would help students make appropriate selections from the available choices by determining the students' strengths and weaknesses. IQ tests would be used to determine student placement. The committee emphasized that offering a wide variety of relevant choices for students was the only way universal secondary education could provide equal educational opportunity and allow all students to succeed.

Using the high school curriculum to solve social problems was compatible with the relevant curriculum choices in the Cardinal Principles. This trend has continued in high schools as seen in the substance abuse programs, family life education, and driver's education courses at the beginning of the twenty-first century.

### Secondary School Structures

The development of secondary schools led to a number of different structural arrangements. During the late nineteenth and early twentieth centuries the prevalent pattern was eight years of graded elementary school followed by four years of high school. The first junior high schools, grades seven through nine, were established in California and Ohio around 1910. This organization allowed for greater flexibility in the curriculum and slowly assimilated students into the world of high school subjects, classes, and teaching styles. The junior high school pattern typically includes six years of elementary school, three years of junior high school, and three years of senior high school. There were more than 7,000 junior high schools by the 1960s.

Middle schools evolved in the 1960s with a new pattern—five years of elementary, three years of middle school, and four years of high school. Middle schools were designed to meet the intellectual, social, and physical needs of young adolescents rather than to help these students get ready for high school. The structural and curricular changes in middle schools included advisories (long-term student groups that meet with one faculty member over a period of time), team planning and teaching, exploratory classes, and adequate health and physical education classes. Middle schools are currently the predominant mode of organization in grades six through eight.

### Minorities in Public High Schools

The idea of a public high school education had taken hold in the white, middle-class population by the late 1800s. High schools were mostly coeducational and, in fact, girls made up the majority of the high school population by the late 1800s. The education of blacks and Native Americans, however, took a different turn. During Reconstruction education was aimed at helping African Americans adjust to the prevailing political and social norms. The separate but equal doctrine elucidated in the U.S. Supreme Court case *Plessy v. Ferguson* in 1896 severely cur-

tailed the development of black high schools, yet the perennial high school curriculum debate was also relevant to the education of African Americans. The educators W. E. B. Du Bois and Booker T. Washington disagreed about the course that black education should take. Du Bois believed in an academic curriculum allowing talented students to excel, a curriculum promoting intellectual life, whereas Washington favored industrial and agricultural training, a curriculum promoting the worthiness of hard work.

This debate, centering on how African-American youth should be educated in high school, was a moot point for many years because most localities, particularly in the South, did not provide public high schools for blacks. In an 1899 decision (*Cummings v. School Board of Richmond County, Georgia*), the Supreme Court decided that school boards were not required to provide public secondary education for African Americans. This decision restrained the evolution of black secondary education. Only a few black public high schools managed to struggle into existence. In general, these high schools focused on a college preparatory curriculum. Nevertheless, once the population of African-American youth in urban areas increased, local officials, and later northern philanthropists, promoted black secondary schools focusing on industrial education. Many believed that this curriculum would train students for the kinds of employment then available. Black leaders, however, often argued for a curriculum that would prepare students for college, not work.

In *Brown v. Board of Education of Topeka, Kansas*, the Supreme Court unanimously struck down the *Plessy v. Ferguson* separate but equal ruling, arguing that the separation of children in public schools by race violates the Fourteenth Amendment. This 1954 ruling sent shock waves through the state of Kansas and several other states that had segregated school systems. The *Brown* decision did not solve all of the problems associated with black education. Desegregation did not come easily, and only a year later the Supreme Court needed to create procedures for school boards to integrate schools “with deliberate speed.” In 1957 federal troops had to be called into Little Rock, Arkansas, so that nine black students could attend the previously all-white Central High School. Although high school graduation rates for African-American students have improved since the *Brown* decision, the historic exclusion of black youth from secondary schools continues to be reflected in

the discrepancies in the dropout rates and standardized test scores of white and black adolescents.

The Bureau of Indian Affairs (BIA) in Washington, D.C., was in charge of the education of American Indian youth and developed an official policy of detribalization. Many Native Americans were sent away from their families to boarding schools to be immersed in white culture and values. For example, the curriculum of the Carlisle Indian Industrial School, established in 1879 and closed in 1918, was designed with the intention of transforming Native American children by focusing on the vocational skills that Booker T. Washington was promoting for the education of African Americans. After the U.S. government granted citizenship to Native Americans following World War I (1914–1918), local schools replaced boarding schools.

In the early twenty-first century, Native American schools on reservations are still controlled by the BIA, and Native American students are the least successful students in the public school system. Poverty, low attendance rates, and the lack of exposure to a rigorous academic curriculum directly contribute to high failure rates among Native American students. Almost 50 percent of Native American students drop out of high school, and only 17 percent continue on to college.

### Education and the Economy

The economy directly influenced secondary schools from the time such schools were created. Access to transportation and family economic stability influenced high school enrollment rates, but as jobs required more education, a higher number of students stayed in high school. In the late 1920s youth unemployment emerged as a contentious political and social issue. Politicians and educators wanted students to remain in high school in order to reduce increased delinquency, crime, and political radicalization. With millions of youth unemployed during the Great Depression of the 1930s, every attempt was made to keep more students in school. At the same time, budgets were reduced, putting a major strain on most schools. During the 1920s and 1930s the school curriculum became more custodial in nature in order to meet the immediate needs of youth. Consequently, emphasis shifted from academic courses to consumer-oriented classes, and life skills were emphasized.

In the 1940s and 1950s the common form of secondary education was a comprehensive high

school with differentiated curriculum tracks. During World War II (1939–1945), enrollment in secondary schools dipped, but the curricular trends of making courses relevant to the lives of students continued to be important. In 1944 the Educational Policies Commission released *Education for All American Youth*, a report calling for a highly practical curriculum similar to that described in the Cardinal Principles. Many feared that the economic difficulties that occurred before the war would continue after the war, so the push continued to keep students in school. American youth would not be competing for jobs with returning servicemen.

The economy continued to influence educational decisions in the 1950s, 1960s, and 1970s, but clearly played a central role in the 1980s. *A Nation at Risk*, a report from the National Commission on Excellence in Education, published in 1983, directly tied the quality of American schooling to the strength and position of the American economy in the global marketplace. Alarmed by the economic advances made by Japan and other countries, the commission argued that schools in the United States were declining, which presented an immediate threat to the country's well-being and economic strength.

### Education and the National Defense

The cold war of the 1950s and 1960s brought further challenges to the schools. Many people called for strengthening academics in secondary schools by removing the popular but less rigorous life-adjustment classes. The launching of *Sputnik* by the Soviet Union in 1957 instigated loud cries for educational reform. As a result, the National Defense Education Act that was passed in 1958 provided financial aid to states for the improvement of the teaching of science, mathematics, and foreign languages.

As a result of the cold war, the debate over the public high school curriculum shifted to how the educational system could ensure the survival of the United States and its democratic ideals. Many asserted that American youth could be protected from the ideas of communism and fascism through universal secondary education that emphasized equality of educational opportunity. A central question emerged: Is educational opportunity best served through curriculum differentiation and good guidance services or through a rigorous academic curriculum? The educator James B. Conant studied American high schools and concluded that the solution was universal enrollment in a comprehensive high school that

met the needs of all students by providing the opportunity to succeed. He noted that the comprehensive high school also allowed for student interaction among academic tracks, which facilitated the development of the social skills that are necessary in productive citizens. Conant also suggested that authorities strengthen the differentiation in secondary schools with an increased focus on the gifted. He believed talented students must be exposed to advanced classes in mathematics and science. To this end, there were a number of curricular reform efforts that found their way into secondary schools, several sponsored by the National Science Foundation. Most of these reforms failed because the science and mathematics programs were designed by academicians who paid little attention to the day-to-day realities of schools.

### Standards

The argument between high academic standards and life skills as the central focus of the American high school curriculum continued in the last three decades of the twentieth century. This debate also occurred internationally. Great Britain readjusted its system of examinations that put eleven-year-olds into specific secondary schools and replaced it with comprehensive schools similar to those in the United States. *A Nation at Risk* galvanized the United States into forming higher academic standards. Great Britain did the same with a national curriculum instituted in 1988.

The recommendations from the report *A Nation at Risk* were similar to those discussed by the Committee of Ten a century before. The report called for higher graduation requirements, including rigorous academic study for all students regardless of whether they were college bound. Curricular tracking, the report stated, had led to mediocrity. In response, the standards movement was born. By the end of the twentieth century, forty-nine of the fifty states had adopted academic standards based on the work of national organizations in the major subject areas. States began to hold students, teachers, and schools accountable to these standards through examinations. The reauthorization of the national Elementary and Secondary Education Act, known as the No Child Left Behind Act of 2001, reconfirmed this push for accountability by requiring states to develop annual testing programs for students in grades three through eight in reading and mathematics. School districts must be able to show that all stu-

dents reach proficiency or will be subject to corrective procedures.

### Secondary Education Elsewhere

Many other countries have been faced with similar issues to the United States in terms of secondary education. Discussions about the purpose of secondary schools and the content and focus of the curriculum occur throughout the world. In some countries, vocational and technical programs run parallel to upper secondary education. For example, the Russian Federation and other former Soviet nations provide an eight-year general education program and then funnel qualified students to academic, vocational, or technical schools. At seventeen or eighteen, students are selected for higher education. Only 20 percent of graduates from secondary schools continue to college, whereas in the United States more than 60 percent of high school graduates go on to college.

Several European countries are also invested in secondary school curriculum reform with a stress on national standards. Throughout most of Europe, secondary education is compulsory up to the eighth grade. A large increase in secondary enrollment in the mid-twentieth century led schools to attempt to craft curricula that balanced cognitive, affective, and psychomotor needs of a diverse student population. The European nations also offered secondary options that include comprehensive high schools, parallel schools, and full- or part-time programs. Vocational education programs tend to lag behind general education programs in most countries.

The Republic of China also has a nine-year compulsory education program. The National Ministry of China controls the school curriculum, although there is diversity in secondary school options. Forty-five percent of Chinese secondary students attend the general secondary schools that are the gateway to higher education. Unlike the United States and many European countries, China does not have comprehensive secondary schools. There are vocational schools, teacher-training schools, and craftsmen schools, along with the general academic high schools. Examinations are used to categorize students into the appropriate educational track. After their junior year, secondary school students must pass an examination to go to the next level. The national higher education examination is given only once per year and is highly competitive.

### Trends in Secondary Education

Secondary school reform represents a vitally important topic. In the early twenty-first century, the major goal is helping all students reach high academic standards. This has yielded a number of innovative programs that attempt to balance students' personal and academic needs. Effective curricula include core learning in discrete academic subjects, increased foreign languages, interdisciplinary courses, and alternative assessment approaches. The foundational skills of reading and writing are garnering more attention at the secondary level in all content area classes.

Along with high standards, public schools must meet the needs of all students and provide an appropriate education for students with many diverse needs. Inclusion of students with disabilities requires schools to rethink the way classes are tracked and how services are provided to students who have difficulty in the school environment. Coteaching arrangements, which allow subject area specialists to work with trained special educators in the same classroom, constitute one approach to meeting diverse needs.

Some research indicates that smaller high schools are better settings for meeting adolescent needs and helping students reach their full academic potential. In an attempt to break down large comprehensive high schools, a number of options are being tried. Small school alternatives include schools-within-schools and parallel schools sharing the same physical space with distinct missions and programs. Some large high schools separate students by grade level into separate wings.

Flexible scheduling is used so that students and teachers can have enough time for a variety of instructional strategies and more personalized interactions. Block scheduling, one form of flexible scheduling, has increased class time. These larger blocks allow teachers to use a variety of teaching strategies and provide time for differentiating instruction to meet specific student needs. In addition to academic gains, evidence shows a decrease in behavior problems when block scheduling is used.

Crime and violence in secondary schools garner extensive media attention. Many schools are attempting to circumvent alienated youth through social and emotional intelligence programs, organizational structures, and increased surveillance.

Where schooling takes place is also changing. In some areas, state-supported academies for gifted

students have been established. Charter schools attempt to meet the needs of a diverse group of students by forming a specific vision and plan outside of the ordinary. Technology may also play a role in the place and mode of secondary instruction as distance learning becomes more popular. Secondary schools continue to experiment with a variety of ways to meet the social, intellectual, personal, and vocational needs of students.

*See also:* CURRICULUM, SCHOOL; INTERNATIONAL BACCALAUREATE DIPLOMA; MIDDLE SCHOOLS; SCHOOL FACILITIES; SUMMER SCHOOL; YEAR-ROUND EDUCATION.

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## CURRENT TRENDS

The term *secondary school* refers to the levels of schooling that follow elementary school and conclude with high school graduation. Typically, these include middle schools or junior high schools, the most common configuration of which is grades six through eight, and high schools, the most common configuration of which is grades nine through twelve. The 1983 release of the National Commission on Excellence in Education document *A Nation at Risk* focused national attention on the need for school reform. This reform movement took clearer shape in the late 1980s and early 1990s with the introduction, by the first Bush administration, of America 2000, a list of goals for U.S. education to be achieved by 2000. America 2000 was later refined and renamed Goals 2000 by the Clinton administration. So began the standards movement, which evolved throughout the 1990s and was ultimately codified by President George W. Bush and the 107th Congress in the No Child Left Behind Act of 2001. This act sharpened the teeth of the standards movement with accountability measures in the form of "high-stakes" standardized tests that all students must take at various points in their education. It is against this backdrop of the standards, assessment, and accountability movements that secondary schools craft their reform efforts.

### Standards

By the late 1990s nearly every state had developed standards for student achievement in most content areas. Greatest attention has been focused on "core" subjects, typically English/language arts, mathematics, science, and social studies, but "elective" courses—foreign languages, music, and visual arts, for instance—have standards as well that drive the curriculum and instruction in those subject areas. The quantity and quality of content standards vary widely from state to state, though many content-area professional organizations have developed their own

national standards to provide a benchmark for rigor and appropriateness of content-area standards. Many see the standards movement as the great contemporary revolution in U.S. education: No longer is middle level or high school credit granted solely on the basis of attendance. In theory, students would not be promoted or graduated until the standards were achieved.

### Assessment

To assess standards achievement, most states had begun to develop standardized tests by the start of the twenty-first century. These efforts were spurred by the No Child Left Behind Act, which requires states to test every student periodically in certain secondary content areas. Like the standards themselves, the quality of assessments varies widely from state to state, and the implementation of mandatory standardized assessments has introduced several dilemmas and controversies:

- How do schools accommodate students with special needs and English language learners in the administration and reporting of test scores? These students are not exempt from tests, and principals and teachers struggle to find the most equitable way to honor their needs while not violating the integrity of the testing process and the value of the final results.
- Do standardized tests truly address the content standards? Many standards speak to higher-order thinking skills, and educators disagree on the capacity of paper-and-pencil multiple-choice tests—where one answer and only one answer is correct—to adequately gauge problem solving and critical thinking.
- How will test scores be used? Ideally, tests will provide a wealth of data that informs the instructional program of individual students and schools. Questions remain about the capacity of the assessment instruments to provide these data and about the professional capacity of school personnel to interpret the data for instructional decision-making.

### Accountability

With standards and tests in place, most states have begun to implement or develop plans to implement accountability measures for performance on standardized tests. In most cases, students who do not achieve a required score on certain tests—usually in

the core subjects of English/language arts, mathematics, science, and social studies, though some states include foreign language and other elective courses—will not be promoted to the next grade. The accountability issue casts a brighter light on the above questions and introduces other issues:

- Retention versus promotion. Educators do not agree on the placement of a student who does not achieve a required score on standardized tests. Advocates of both student retention and student “social” promotion speak with the backing of practice and research, and the argument remains unsettled in education circles.
- Teaching to the test. With principals’ and teachers’ jobs on the line, many educators perceive a temptation to focus on test-taking skills and test preparation rather than to teach the curriculum the mastery of which the test is intended to assess. This controversy speaks to the perception of the quality of the assessment instruments many states use. If the tests were genuinely aligned with the standards, many educators believe, teaching to the test would not be an issue.

Many states also report each school’s aggregate scores and encourage low-performing schools to develop improvement plans. School accountability was codified in the No Child Left Behind Act, which calls for schools to demonstrate “adequate yearly progress,” as determined by disaggregated test scores in mathematics, reading, and science. Schools that fail to show adequate yearly progress must take required steps to improve, or they will eventually be subject to corrective procedures.

National, state, and local education reforms have produced many positive changes, but in middle level and high schools, reform is still lagging. Although secondary student achievement has increased in some subjects for some groups, progress has been spottier and success more elusive than at the elementary level. The nation still has a way to go to ensure that all students are graduated from high school with the knowledge and skills to compete in a global economy—a challenge that will become even greater as enrollments swell.

Powerful recommendations for transforming secondary schools have come from the National Association of Secondary School Principals, in their 1996 groundbreaking report on the twenty-first-century U.S. high school, titled *Breaking Ranks: Changing an American Institution*; the Carnegie

Foundation in their 1989 and 2000 *Turning Points* reports on middle-level reform; and other groups. But the renaissance has not yet happened. The majority of high schools “seem to be caught in a time warp,” noted U.S. Secretary of Education Richard Riley in his 1999 back-to-school address, which he devoted entirely to high school reform.

The problem is not a lack of understanding about what needs to be done. Across the country, secondary schools are demonstrating what a difference it makes when effective strategies are combined with strong commitment and adequate resources. But, regrettably, secondary school improvement has not been a high priority of the U.S. Congress or the states. Secondary schools are far less likely than elementary schools to receive funds under the Title I program, the largest source of federal K–12 aid. Seventy-seven percent of Title I funds go to the elementary level. When secondary schools are funded, they receive smaller Title I allocations per low-income pupil than elementary schools. Several members of Congress have introduced or endorsed legislation to meet the urgent educational and infrastructure needs of secondary schools.

States have raised student performance standards and are revising secondary curriculum and instruction. The public also supports school improvement: 71 percent of respondents to the 1999 Phi Delta Kappa/Gallup Poll felt that reforming the existing public school system, rather than finding an alternative system, should be the priority for education. Yet, the legislation dedicates disproportionate attention to elementary education at the expense of secondary education. Policymakers often choose to target resources on the early years to promote child development and address learning problems before they become too severe. But early intervention does not necessarily “inoculate” children from later difficulties, and many students need continuing services to cope with the more demanding middle and high school curricula and to avoid falling further behind.

### **Trends That Inform a Reform Initiative for Secondary Schools**

Trends in achievement, demographics, leadership, and funding are among the major reasons secondary schools require additional attention and support.

**Graduation rates.** To succeed in the workplace, further education, and adult life, all students should obtain at least a high school diploma and have a solid

base of knowledge and skills. The percentage of young people completing high school rose during the 1970s and early 1980s and has hovered around 86 percent since then. But too many students—more than 380,000 students in grades ten through twelve—continue to drop out each year. As states raise their requirements for graduation, the challenge of keeping students in school and educating them to high levels will become more daunting.

**Achievement.** The average scores of secondary school students on the National Assessment of Educational Progress (NAEP)—the only national measure of trends in student achievement—increased in science and mathematics during the 1990s but showed mixed results or declines in reading and writing. To assess how much academic growth students made between elementary school and the end of middle school, the Educational Testing Service (ETS) analyzed average gains in students' NAEP scores between the fourth and eighth grades. By this measure, ETS concluded, academic growth from the mid-1970s to the late 1990s was flat in science, reading, and writing and went down in mathematics. Regardless of whether one views the NAEP data with optimism or concern, it seems clear that further improvements in student achievement are necessary.

**International comparisons.** In the 1999 Third International Mathematics and Science Study, which compared achievement in more than twenty nations, U.S. secondary students performed at lower levels for their grades than U.S. elementary students and were outperformed by students from a number of other countries. In science, U.S. fourth graders scored in the very top tier of nations and U.S. eighth graders achieved above the international average, but U.S. twelfth graders performed below the international average. In mathematics, U.S. fourth graders achieved above the international average, whereas U.S. eighth graders performed below average and U.S. twelfth graders scored among the lowest tier of nations.

**The baby boom echo.** Between 1999 and 2009, U.S. secondary school enrollments were expected to grow by 9 percent, or about 1.3 million students. Minority students and children from different language backgrounds will constitute a greater share of enrollments. The nation will need many more well-trained teachers to educate this diverse and growing population.

**Inadequate facilities.** A 1999 report by the Campaign to Rebuild America's Schools revealed that

about 14 million children attend severely dilapidated public schools with leaky roofs, inferior heating, broken plumbing, and other threats to health and safety. Schools in many communities are overcrowded, a problem that will worsen with rising enrollments. The nation will need a projected 6,000 new schools to keep pace with a decade of enrollment growth; this will require substantial resources, as well as creative approaches for using existing facilities.

**Teacher needs.** Federal and state actions during the 1990s to strengthen teacher supply and quality are promising. But it will take more concerted and continuing efforts to fill the demand for well-prepared teachers in secondary schools, where shortages of teachers for particular disciplines are serious and where teachers must be prepared to teach advanced courses, integrate technology, and inspire young people to do their best. More than the supply of new teachers, research shows that teacher retention remains a critical issue in schools, as many teachers leave within their first five years on the job. The problem is exacerbated in secondary schools by the problem of out-of-field teaching—which is most pronounced in urban and rural areas. Again, with the passage of the No Child Left Behind Act, which calls for a “highly qualified teacher” in every classroom, there is a renewed focus on providing all teachers, new and veteran, the support and professional development they need to do their jobs well, as well as salaries commensurate with the value of their work.

**Leadership shortages.** Urban, suburban, and rural districts in every region of the country are experiencing shortages of qualified candidates for principals' jobs, yet this issue has met with near silence. While the responsibilities of the principalship have escalated considerably, there has been no comparable increase in incentives (not the least of which is a commensurate salary) to attract highly qualified candidates. Few school districts have structured recruitment or training programs to find the best candidates or groom their own, or to encourage minorities and women to enter leadership positions. Promising candidates are dissuaded from applying for principals' positions by such factors as mounting job stresses, inadequate school funding, and reluctance to give up their tenure as teachers.

**Secondary school programs.** Federal programs of special importance to secondary schools are significantly underfunded. These include: the Carl D. Per-

kins Vocational and Technical Education Act of 1998, which prepares students for the workforce by integrating academic and technical education; the Individuals with Disabilities Education Act Amendments of 1997, which requires school districts to provide a free and appropriate education to children with disabilities up through age twenty-one, but which covers only a small portion of the costs; and the GEAR UP program (Gaining Early Awareness and Readiness for Undergraduate Programs), which encourages disadvantaged middle school students to prepare for college.

### Elements of Secondary School Reform

Secondary schools throughout the country are achieving positive results through a combination of research-based strategies, committed teachers and leaders, and sufficient resources. National support and momentum could expand these successful efforts into many more schools. Research and practice have shown the following elements to be especially important: academic rigor, individualized attention, and leadership development.

**Academic rigor.** All secondary school students, whether headed for the workforce or postsecondary education, should be held to high expectations and take a challenging academic course of study. The rigor of the academic course work that a student takes in high school is a better predictor than test scores, grade point average, or class rank of whether that student will be graduated from college. This correlation is even stronger for African-American and Latino students and is very significant for low-income students. Taking courses such as algebra and geometry in middle school is an essential step, because it prepares students for the higher-level mathematics courses that correlate highly with college success. Unfortunately, some high schools do not offer advanced courses in mathematics, science, and foreign languages.

**Individualized attention.** To achieve in academic courses, many students will need varied instructional strategies, a different pace, extra help with reading, or intensive interventions, such as tutoring or after-school or summer programs. Students also do better when teachers and other adults take a close, personal interest in their academic progress, but these kinds of connections can be hard to forge in large secondary schools. Educators in some districts are developing individual plans for students, organizing big schools into smaller academic houses, or using other

strategies to create more personalized learning environments.

**Leadership development.** Effective schools research has long recognized that well-trained, capable leaders are the individuals best situated to spur school-wide reform. Although the role of the teacher is essential, an excellent leader can bring about improvements on a wider scale and in a shorter time than is possible with teacher-by-teacher implementation. Yet the needs of principals have been somewhat neglected. Secondary school reform must include support for administrators' professional development as an ongoing, integral part of their responsibilities. In addition, current postsecondary education and training programs should be audited to determine how effectively they are training future principals.

### Making an Investment: A Secondary Schools Achievement Act

The United States must step up its investment in middle and high schools to ensure that all such schools are high achieving, housed in adequate facilities, and staffed and led by well-qualified educators. Toward this end, the National Association of Secondary School Principals (NASSP) has proposed federal legislation with the following two critical components.

First, the NASSP has advocated a "Secondary Schools Achievement Act" to help secondary schools implement or expand promising reforms. This act would provide federal support:

- To ensure that all middle schools offer algebra and some geometry instruction
- To increase attention to reading instruction from the early grades through high school
- To make Advanced Placement, international baccalaureate, foreign language, and other advanced courses available in all high schools and expand opportunities for students to take them
- For technology integration and training
- To create an individualized development plan for all students who are having difficulty in core subject areas
- For intensive and sustained professional development for each principal and teacher
- To improve and modernize facilities and infrastructure
- To improve evaluation systems so that states can measure the results of these new initiatives

All elements of this plan should be funded to ensure that all secondary school students truly meet high standards.

Second, the NASSP has contended that federal legislation to improve secondary schools must include a major national effort to train a sufficient cadre of qualified school principals for the next century. As a nation, the need for leadership development programs for business leaders has been recognized, and the nation has long supported a network of service academies to train outstanding young men and women for military leadership. Preparing the leaders who will guide the educational development of the nation's children should be just as high a priority. The United States needs to do all it can to develop strong, effective leaders who will give vision, focus, and direction to the nation's schools. Qualified leaders will set the course for meeting the challenges of the new century, and their needs must not be overlooked.

### Conclusion

Secondary school reform remains an unfulfilled promise with an incomplete agenda. If all schools are going to improve and if all children are going to reach high standards, the "missing link" must be filled in: National and state leaders must focus attention and support on the secondary level. It is time to stop neglecting the institutions that have played such a formative role in U.S. history and individual citizens' lives.

*See also:* ASSESSMENT, *subentry on* NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS; CURRICULUM, SCHOOL; EDUCATIONAL LEADERSHIP; MIDDLE SCHOOLS; NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS; STANDARDS MOVEMENT IN AMERICAN EDUCATION; SCHOOL REFORM; SECONDARY EDUCATION, *subentry on* HISTORY OF.

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## INTERNATIONAL ISSUES

Secondary education has increasingly become a central policy concern of developing countries, particularly among those that have made rapid progress in universalizing primary education and among those in which the demographic trend has shifted in favor of adolescents. The majority of countries in Latin America and the Caribbean, East Asia, and the Middle East, as well as some African countries, are grappling with the questions of how to provide skills and knowledge that enable adolescents to move to tertiary education and how to ensure a smooth transition to work for students whose education will end with secondary schooling.

Secondary education also addresses problems unique in human development. Without requisite education to guide their development, not only would young people be ill prepared for tertiary education or for the workplace, but they would also be susceptible to juvenile delinquency and teen pregnancy, thereby exacting a high social cost. Hence the challenge for secondary education is enormous. It represents an unfinished agenda that all countries will face as they develop.

### Secondary Education in Europe and the United States

In Europe, higher education, including secondary education, began with training in religion and philosophy. Its purpose was to prepare leaders—especially religious leaders—and its curriculum reflected this purpose. As time passed, general topics for more applied professions were added as part of secondary and higher education curricula, and the curriculum was broadened accordingly. As these general topics were gradually added to the curriculum, they remained philosophical or theoretical in orientation. They were not studied as systems of empirical data, and proofs and validation of knowledge were theoretical rather than experimental.

The earliest secondary schools were based on Renaissance models, with the role of Latin and Greek being paramount. In 1599 the Jesuits implemented the first clear and complete specification of subjects and content as part of the Counterreforma-

tion. This curriculum was called the *Ration Studiorum* (plan of studies), and it was initially implemented at the University of Salamanca in Spain. These early European secondary schools were almost exclusively for males, focusing on intellectual training in its narrow sense and preparation for leadership roles in all sectors of social and economic life.

The Enlightenment of the eighteenth century and the Industrial Revolution of the late eighteenth and early nineteenth centuries brought a new emphasis on scientific and technology studies and on empirical studies in general. Moreover, formal government involvement in secondary education grew, with concomitant involvement in curriculum. The first public high school in the United States was established in Boston in 1821.

From the nineteenth century to World War II, the curriculum at the secondary level began to encompass more subjects and became more specific, detailing the content to be covered and the time allotted for doing so. During this period, emphasis on philosophy, divinity, classical languages, and ancient history began to wane and was replaced with modern languages and literature, modern history, and scientific and technological subjects. At this time, most governments decided to educate a broader segment of their secondary-school-age population and included females for the first time. Secondary education became less elitist and more universal and its curriculum more inclusive, or diverse. Although the curriculum was dominated by the needs of the socially and economically privileged rather than by the needs of the masses, there began, nevertheless, an irreversible process of change that acknowledged a growing diversity of student backgrounds and postsecondary options.

### A Broader and More Universal Curriculum

In the two decades before World War II, the influence of John Dewey and the Progressive movement, though targeted at the primary education level, had a major influence on secondary-level education. The progressives helped increase curricular emphasis on the practicality and social usefulness of schooling and on “learning by doing.” Moreover, separate lower and junior secondary schools were established to cater to the growing number of students entering the secondary level.

The trend to broaden the curriculum began earliest and went farthest in the United States. In the

twentieth century, it was responsible for introducing many new practical and vocational subjects. In the second half of the century, courses in driver education, family living, consumer economics, and mathematics for everyday life appeared for the first time. As students with a greater range of abilities, interests, and motivation entered the secondary level, “streaming” and “homogeneous grouping” became more prevalent. Academic secondary schools became more comprehensive and diversified. Courses and even course sequences in such vocational areas as graphic design, hair care and styling, automotive repair, carpentry and machine shop, and home economics began to appear. The launching of *Sputnik* by the Soviet Union in 1957 was a powerful impetus behind the increase in the amount of scientific topics taught in the Western secondary curriculum, the rigor with which they were taught, and the care taken in their organization and presentation.

In general, the trend in the post–World War II period has been to divide students into streams, to make a single comprehensive secondary school serve a wider variety of interests and abilities, to provide access to a wide range of higher education through alternative curricula, and to broaden the secondary curriculum to include more subjects. Great Britain is a partial exception to this trend, as students tend to study only three subjects for their A-level examinations.

### Secondary Education in Developing Countries

Colonial powers in the eighteenth, nineteenth, and early twentieth centuries educated only a very small portion of colonized peoples, and they educated this portion only at a basic level. In general, their interest was to produce complacent workers. Little education was necessary for this purpose; indeed, education could be seen as antithetical to it. Colonial policy for those few individuals educated beyond the primary school tended to emphasize the production of middle-level clerical and administrative personnel. Hence, the curriculum stressed correct language, arithmetic and accounting abilities, and an adequate fund of general knowledge—as distinct from scientific, aesthetic, or vocational subjects. Great importance was placed on the authority of the teacher and of the spoken and written word.

The independence of colonial countries in the two decades after World War II brought a near universal recognition of the importance of education at all levels for a greatly increased proportion of local

populations. After independence, former colonial countries kept old colonial curriculums for a surprisingly long time—indeed, some have been maintained intact into the early twenty-first century.

### Some Problems of Definition

The secondary subsector presents some problems of definition in the sense that it falls between primary and tertiary levels and there is no universal agreement as to where primary ends and tertiary begins. The duration of (or the number of grades covered in) secondary education varies from three years in El Salvador to eight years in such countries as Yugoslavia and Kuwait. Similarly, when secondary education begins is highly variable (ranging from grade five to grade nine). The usual duration, however, is grades seven to twelve.

Most countries (the Latin American and Caribbean region is an exception) divide the secondary level of education into a first or lower segment and a second or higher segment. These may be denoted by different names, with a particularly varied set of names for the lower segment: middle, intermediate, lower secondary, junior high, upper elementary, and so on. In different countries these labels may encompass different grades, student ages, curriculum, and objectives, and may be related to the educational levels above and below them in a variety of ways. The higher or upper secondary level is usually labeled simply in these terms or may be called senior high school in areas influenced by American nomenclature. It is also sometimes referred to as the pre-university level.

There is a worldwide trend to establish the concept of *basic education*, which is understood to mean a minimum standard of schooling for everyone in a given society. This is frequently done by adding to the primary grades the first part of the secondary cycle (typically called the lower or junior secondary cycle). The combination of primary and lower secondary grades then becomes “basic education,” which is usually administered separately from secondary education.

An additional complexity of the secondary subsector is the wide range of types of educational institutions falling under this heading. Attempts to define types by organization, curricular emphasis, or outcome objectives almost always reveal substantial overlap among categories. Exceptions to any classification, including this one, are plentiful. The most

common classification includes three overlapping types: (1) general/academic schools, (2) vocational and technical schools, and (3) diversified or comprehensive schools, which are multipurpose institutions that try to combine under one roof the objectives of an academic course of study and one or more vocational fields.

It is clear that these three broad categories of secondary schools are arranged along a continuum of specialization in their dominant instructional objectives. At one end the schools are single-purpose institutions with an intensely academic curriculum. At the other end they are similarly specialized but with a vocational/technical curriculum. Secondary schools lying in the middle of the continuum are multipurpose institutions combining elements of both ends of the spectrum into their instructional program.

Stated outcomes and long-term social objectives of the different types of secondary schools often overlap. Almost all statements of the goals or objectives of all types of secondary education include items such as preparing students for the world of work and making students smoothly functioning members of society.

### **Differentiating National Curricula as a Response to Increased Coverage**

While a traditional academic curriculum may be appropriate for upper level secondary education in a developing country with a relatively low upper secondary school enrollment ratio (for example, 20%), the path toward very much higher enrollment ratios (in excess of 50%) will require much greater curriculum diversity to meet the differing educational needs of different groups. It may well be that vocational education does not have a significant role here; but if not vocational schooling, then what other forms of secondary schooling (either existing or to be developed) would be appropriate? Indeed, for many lower secondary education completers, nonschooling programs, such as apprenticeship, may be more appropriate than continued secondary schooling at the upper level.

The key ideas in secondary education practice can be divided into three categories: organization and subject content, vocationalization, and control. These categories overlap and several ideas could be placed logically in more than one category. Developing countries and development agency projects have dealt with most of these ideas at one time or another.

**Organization and subject content.** A single nationally set curriculum consistently delivered is a successful educational procedure at the primary level. Where flexibility and student choice are present there is widespread consensus that this should begin after primary school, although whether or not flexibility should begin in lower secondary, where it exists, is still debated. The decision as to whether a curriculum should prepare specialist or generalist knowledge and skills is often decided on the basis of whether a particular level is seen as preparatory or terminal. The trend appears to be one in which the mandated curriculum of the lower secondary grades, or their equivalent by whatever name, is a linear extrapolation of primary school.

Primary schools are almost always general-purpose institutions with considerable social and political consensus surrounding their mission, which is, simply put, to prepare all children for competent adulthood by giving them basic literacy and numeracy skills and, in many countries, an explicit set of moral values. The situation at the secondary level is vastly more complex. Nevertheless, a growing number of countries, often for political and economic reasons rather than pedagogical, put together in a single, all-purpose school, students from different backgrounds, with different needs, abilities, and interests. The question most often asked by policymakers is: Do the financial economies and the social integration hoped for by this "comprehensive" arrangement outweigh the problems created by attempting to handle such diversity in a single place?

In the majority of poor countries there appears to exist growing recognition that science education is an important element in the national primary and secondary curricula. This is due to both the now commonly recognized relationship between quality research and development in science and technology and stable economic growth, and also the need to begin to prepare students more effectively for future scientific and technological employment. Agriculture, health, nutrition, population control, environmental management, and industrial development are a few of the areas that benefit directly from a wider understanding of science and technology.

Science education is therefore in a position of privilege and peril. It is privileged because decision makers recognize the relationship between good science and economic development. In many developing countries this recognition has resulted in additional support for science education. Moreover,

in the majority of poor countries there appears to exist growing recognition that science education is an important element in the national secondary curriculum. "Science for all" is a frequently voiced rallying cry. At the same time, science education is imperiled by: (1) unrealistic expectations for quick results, (2) improper and inadequate teacher training, (3) a lifeless, exam-driven curriculum, and (4) expensive and outdated reliance on traditional classroom methods and laboratory equipment.

#### **Vocationalization of the secondary curriculum.**

The issue of education for all versus elite preparation is more than simply a question of coverage. Most countries have based their education curricula on the needs of their elites rather than on the needs of their masses. Yet as coverage expands, the questions of vocational relevance and quality invariably arise. This is so because the single-purpose elite preparation that characterized the curriculum when enrollments were small is not suitable for the needs of the diverse majority.

The debate over the desired degree of vocationalization of the school curriculum is shifting grounds as the nature of the market for schooled labor changes. This debate is worldwide and intense. At the heart of the new debate is a redefinition of the school courses that are vocationally relevant. Science, mathematics, and English, all traditionally viewed as academic in the sense of college preparatory, are increasingly demanded for their vocational relevance. The case for a "new vocational curriculum" can be stated in these terms. At the close of World War II, people in industrialized countries expected to have a single career throughout their productive lifetime. Moreover, skills useful at the start of their careers were expected to remain so throughout their job tenure with only minimal retraining and updating required. Under these conditions specific job-skills training was valued for its immediate and long-term relevance to occupational requirements. But the workplace changed. Jobs were lost from heavy industry and agriculture to service and high-technology sectors. Even the remaining agriculture, equipment repair, and manufacturing jobs began to require higher levels of communication (reading and writing) and mathematics abilities. Market changes have seen massive redeployment of workers across sectors. Lifetime job security in a single sector gave way to needs for a flexibly trained and rapidly redeployable labor force, and with these changes came a redefinition of certain fundamental

education requirements. Suddenly the general curriculum was vocationally relevant for a much larger share of the school-age population, including those not college bound.

**Control.** Who should control the structure and content of curriculum? Politicians? University professors? Teachers? Parent associations? When teachers are in control, the curriculum tends to emphasize individual needs and classroom realities. Teacher control can imply highly trained teachers, a condition difficult to meet in developing countries. When university professors are in control, the latest knowledge may be included but it is often academic—meaning abstract and overloaded with content—which is usually too difficult for the students at the grade level indicated. When politicians are in control, the needs of nationalism and social and economic development may be served, but factors relevant to successful learning may be ignored.

*See also:* CURRICULUM, INTERNATIONAL; INTERNATIONAL ASSESSMENTS; VOCATIONAL AND TECHNICAL EDUCATION, *subentry on* INTERNATIONAL CONTEXT.

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## SEGREGATION, LEGAL ASPECTS

Segregation in education is a systemic practice or policy of establishing and maintaining racially separate educational facilities, services, and activities. Historically, racial segregation in education includes assigning African-American and white students to separate school facilities because of race, and assigning only African-American teachers, staff, and administrators to schools established for African-American students while assigning only white teachers, staff, and administrators to schools established for white students. Racial segregation also involves the use of separate buses for African-American and white students and racially separate extracurricular activities, such as athletic programs. Segregation in education also includes widespread discrimination in the educational process against groups other than African Americans, such as Asian Americans, Native Americans, and Hispanics. The practice of segregation in education involves all levels of the educational process: elementary, secondary, undergraduate, graduate, and professional schools.

The American legal system has played a major role in the creation, maintenance, and elimination of segregation in public education. In the American legal system the courts generally are responsible for the interpretation of laws, and major court decisions constitute a framework of reference for discussion of the legal aspects of segregation in education. There are fifty-one legal systems in the United States: one for each of the fifty states and a separate federal legal system created by the Constitution of the United States. Although each state legal system has some responsibility for resolving legal issues about segregation in education, it is the federal legal system, and particularly the Supreme Court of the United States, that has the major role in deciding legal issues involving segregation in public education.

Any meaningful discussion of the legal aspects of segregation in education inevitably centers on the national commitment to equality that has been read into the Constitution of the United States. America did not formally commit itself to equality until after the Civil War when it abolished slavery in the Thirteenth Amendment (1865), provided individuals equal protection of the law in the Fourteenth Amendment (1868), and guaranteed individuals the right to vote in the Fifteenth Amendment (1870). An important provision of the Constitution that em-

braces the national commitment to equality is the Fourteenth Amendment which provides that “[n]o State shall . . . deny any persons within its jurisdiction the equal protection of the laws.” A primary reason for the national commitment to equality is to eliminate racial discrimination against African-Americans in all aspects of governmental (or public) activities. Congress has a role in implementing the equality policy and carries out this role when it enacts laws, including laws to eliminate segregation in education. In the final analysis the federal courts, and particularly the Supreme Court, have final authority to interpret the meaning of equality. Over time the federal courts have adopted different meanings of equality.

### History

No provision in the Constitution of the United States requires governments to provide an education for any person. Rather the equal protection clause of the Fourteenth Amendment requires only that if a state provides public education it must make it available to all of its individuals without regards to race. All states provide a system of public education at all levels: elementary, secondary, and college-level. Racial segregation in education in the United States has its genesis in the institution of slavery. The dominant social philosophy during slavery was that African Americans were inferior to whites. The Supreme Court legalized slavery’s social philosophy in 1857 in *Dred Scott v. Sanford*. The Court held, in *Dred Scott*, that even emancipated African Americans who had been free for many years were to be “regarded as beings of an inferior order” who were “altogether unfit to associate with the white race,” and were “so far inferior that they [had] no rights which the white man was bound to respect.” Laws prohibited education of slaves prior to the abolition of slavery in slave-holding states.

In some nonslave-holding states, public schools were desegregated when they first appeared in the United States, but eventually some African-American parents took steps to set up privately funded separate schools for their children because of their dissatisfaction with the quality of education their children received in racially integrated schools. Later, some of these African-Americans students sought admission to publicly funded schools, but public school committees instead set up racially separate schools for them.

As early as 1849 a Massachusetts state court, in *Roberts v. City of Boston*, upheld the segregation of African-American and white students in public schools. The plaintiff in *Roberts* was a five-year-old African-American student who challenged the Boston, Massachusetts, school committee's refusal to admit her to an all-white primary school. Rejecting the plaintiff's argument that segregation of students in public schools because of race violated the state's constitutional mandate of equality, the court held that the school committee's decision represented a reasonable and nondiscriminatory exercise of its power. The court held also that if racial segregation generated feelings of prejudice in black students, then law probably could not change those feelings. *Roberts* was one of the first cases to adopt the separate-but-equal theory of equality. The separate-but-equal theory of equality, like the *Dred Scott* philosophy, was motivated by racism; thus it did not make it lawful for school boards to establish racially segregated schools. The Supreme Court relied on the *Roberts* case in its 1886 decision in *Plessy v. Ferguson* to hold that racial segregation of African Americans and whites was lawful and therefore did not violate the equality policy in the federal constitution. A few state courts rejected the *Roberts* case's separate-but-equal doctrine by holding that racially segregated schools violate the rights of African-American students to equality.

Almost immediately after the Civil War and the adoption of the Thirteenth Amendment, southern states enacted laws called "black codes." These codes were enacted to try to retain as much as possible the *Dred Scott* philosophy by codifying almost every aspect of the lives of former slaves, including circumstances under which they could be educated. Legally mandated racial segregation was not confined to public schools, nor was it confined to the south. Many border and northern states maintained some form of segregation, including public schools, until the end of World War II.

### From *Plessy* to *Brown*

In *Plessy v. Ferguson*, the Supreme Court held that a Louisiana law requiring racial segregation of passengers in railway coaches was not prohibited by the equal protection clause of the Fourteenth Amendment. The Louisiana law required "separate railway carriages for the white and colored races" on all passenger railways within Louisiana. In upholding the Louisiana law, the Court legally sanctioned the sepa-

rate-but-equal theory of equality. The separate-but-equal doctrine holds that the equality does not require racial integration if a state provides separate accommodations or services for blacks that are equal to those provided to whites. The *Roberts* decision, rather than its subsequent repeal by the Massachusetts legislature, was a major legal precedent on which the Supreme Court relied in its *Plessy* decision. In *Cumming v. Richmond Board of Education*, the Court suggested that the constitutionality of segregation in the field of education had not yet been decided. But in *Gong Lum v. Rice*, decided in 1927, the Court relied upon both the *Plessy* and *Roberts* cases to reject a claim by a Chinese-American student who claimed that she had been denied equal protection because she had been assigned to a public school for African-American students. Despite the ambivalence in the Supreme Court cases on whether the *Plessy* separate-but-equal theory of equality applied to public education, the courts, including the Supreme Court, accepted the view that the *Plessy* case stated a legal rule that applied equally to public education (*Briggs v. Elliot*).

The separate-but-equal theory of equality provided the legal foundations for racial segregation in education (and all other state supported activities) until the Supreme Court decided the landmark case of *Brown v. Board of Education (Brown I)* in 1954. *Brown I* was the result of a litigation strategy that relied upon a series of test cases to try to convince the Supreme Court to reject the separate-but-equal theory of equality. In a series of "equalization" cases before *Brown I*, major civil rights organizations claimed that state-funded graduate and professional schools for African Americans, although racially "separate," did not provide African-American students an education opportunity "equal" to educational opportunities available to white students in schools reserved for whites. Thurgood Marshall, who later became the first African-American justice of the Supreme Court, played a major role in the legal campaign to overturn the separate-but-equal doctrine. *Brown I* involved legal challenges to segregated elementary and secondary public schools in Kansas, South Carolina, Delaware, Maryland, and the District of Columbia.

The Supreme Court rejected the separate-but-equal doctrine in *Brown I*. The legal issue in *Brown I* was whether state-supported racial segregation in public elementary and secondary schools was lawful under the equal protection clause of the federal con-

stitution even though the physical facilities and other tangible factors may be equal. In specifically addressing this issue, the Court held that “[i]n the field of public education the doctrine of ‘separate but equal’ has no place” because “[s]eparate educational facilities are inherently unequal.” The Court, in *Brown I*, left undecided the issue of what states had to do to eliminate racially segregated schools, but it addressed that issue about year later in *Brown II*. In *Brown II*, the Court ordered lower federal courts to require school authorities to “make a prompt and reasonable start toward full compliance” with *Brown I*, and to admit students to public schools on a “racially nondiscriminatory basis with all deliberate speed.”

### From *Brown* to *Freeman*

The southern states engaged in massive resistance to the *Brown* decisions. “Massive resistance” is a term that was coined in the era after *Brown* to describe southern states’ efforts to evade and avoid the legal mandate of *Brown I*. Massive resistance took many forms. Some southern communities, for example, closed their schools rather than allow African-American and white students to attend the same schools. President Dwight D. Eisenhower had to use the National Guard to help integrate white schools in Arkansas. Other school districts adopted “pupil placement” plans, “minority to majority” transfer plans, or “freedom of choice” schemes, all of which were adopted to avoid compliance with *Brown I*; and most of these tactics succeeded in maintaining racially segregated state-supported school systems for more than a decade. The various massive resistance schemes required African-Americans parents and students to initiate legal action against many school districts in an effort to compel compliance with *Brown I*.

The massive resistance to *Brown I* produced minimal desegregation of schools by the time the Court decided *Green v. School Board of New Kent County* in 1968. In *Green*, the Court held, for the first time, that *Brown I* imposed an affirmative obligation on school districts to convert segregated, dual-school school systems to unitary school systems in which racial discrimination would be eliminated “root and branch.” A unitary school system is one that has fully complied with the mandate of *Brown I*. *Green* also enunciated at least six criteria that lower federal courts should consider in determining whether a school system has achieved a unitary sta-

tus. Those criteria focus on student assignments, faculty assignments, staff assignments, transportation (busing), extracurricular activities, and school facilities. A year later, the Court, in *Alexander v. Holmes County Board of Education*, held that the *Brown II* “‘deliberate speed’ for desegregation is no longer constitutionally permissible.” The federal courts have developed a substantial body of case law on remedies to determine whether dual school systems are progressing toward a unitary, nonsegregated system. These remedies include busing, magnet schools, and the location of new schools in geographical areas to maximize racial integration.

In school desegregation litigation, the Supreme Court has made an important distinction between de jure and de facto racial discrimination. De jure segregation is intentional racial discrimination that is affirmatively required by state law, custom, or usage. De facto segregation is racial separateness that occurs without the sanction of law. *Brown I* generally is inapplicable to de facto segregation. There has been no effort by the Supreme Court to address the constitutionality of de facto segregation since 1973 when the Supreme Court refused in *Keyes v. School District No. 1* to abandon the distinction between de jure and de facto segregation.

During the years following World War II, there developed an exodus of white families who relocated to suburbia. This exodus has been described as “white flight.” In the school desegregation cases, white flight is the mass migration of whites from urban communities to suburban communities to avoid enrolling their children in racially integrated inner-city schools. One of the results of white flight has been that African Americans and other persons of color have largely populated many inner cities. As a result, there are many school districts throughout the United States with a significant number of schools with no or very little racial integration.

Many school districts have been under the supervision of federal courts since 1954 when the Court decided *Brown I*. The Supreme Court has held that federal supervision of school desegregation programs was intended to be a temporary measure, and not to operate in perpetuity. Local control of education comes from the Constitution. The power to control education has not been delegated to the federal government; rather it is the responsibility of the various states. In several cases, the Supreme Court has provided illustrations of circumstances under which school boards should be released from federal

courts supervision of desegregation orders. In *Board of Education of Oklahoma City Public Schools v. Dowel*, the Court held that a formerly segregated school districts may be released from court-ordered busing as long as all “practicable” steps to eliminate the vestiges of past de jure segregation have been taken. In *Freeman v. Pits*, the Court made clear that racial isolation of schools brought on by white flight that was not the fault of school districts is not subject to the mandate of *Brown I* and its progeny. In *Freeman*, the Court held that federal courts are justified in relinquishing supervision over school districts subject to desegregation in piecemeal fashion before full compliance with the *Green* criteria has been achieved. And in *Missouri v. Jenkins*, the Court held that a lower federal district court funding order, which relied upon creating and maintaining “desegregative attractiveness” in order to deal with white flight, was outside of the authority of the federal courts under *Brown I*.

### Segregation in Higher Education

The Supreme Court has held that the rule it announced in *Brown I* is applicable to segregation in higher education, but made a distinction between the obligation of states to remedy segregation in higher education and elementary and secondary education. In *United States v. Fordice*, the Court addressed the issue whether, under *Brown I*, states that have engaged in de jure discrimination in higher education are obligated to take steps beyond adopting race-neutral admission policies to desegregate these educational institutions. In response to this question, the Court held that states have an affirmative legal obligation to remedy the remnants of prior de jure segregation. The standard the Court adopted for higher education was that states have an obligation to eliminate all policies and practices that continue to have a discriminatory effect and that are traceable to the prior de jure system.

### Sex-Based Segregated Schools

*United States v. Virginia* is an important Supreme Court case involving sex discrimination in higher education. The case involved the Virginia Military Institute (VMI), an educational institution established by Virginia. VMI excluded females because of their gender. The Court held that the equal protection clause of the Fourteenth amendment applies to sex segregation, but applied a different standard than is applicable to race discrimination. The legal

rule for determining the legality of publicly supported separate schools based on gender is a more differential standard than the legal rule that is applied to racially segregated schools. Even under the differential standard used in sex discrimination cases, the Supreme Court held that VMI’s policy of excluding women because of their gender was unconstitutional under the equal protection clause.

*See also:* AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; RACE, ETHNICITY, AND CULTURE, *subentries on* CULTURAL EXPECTATIONS AND STUDENT LEARNING, RACIAL AND ETHNIC MINORITY STUDENTS IN HIGHER EDUCATION; SINGLE-SEX INSTITUTIONS; SUPREME COURT OF THE UNITED STATES AND EDUCATION.

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ROBERT BELTON

## SELF-EFFICACY AND SELF-CONCEPT

*See:* AFFECT AND EMOTIONAL DEVELOPMENT.

## SERVICE LEARNING

SCHOOL  
Richard J. Kraft  
HIGHER EDUCATION  
Janet Eyler

## SCHOOL

While the origins of the service-learning movement can be found in volunteerism, community service, citizenship training, character education, youth service, and experiential learning, it is safe to say that the words *service learning* have come into common usage only since the 1980s in the United States, and even later internationally. The Commission on National and Community Service (1993) provides perhaps the most widely accepted definition, and includes the following components.

- the need for active participation
- thoughtful organization
- the meeting of actual community needs
- collaboration between school and community
- integration with the students' academic curriculum
- structured time for reflection
- opportunities to use newly acquired skills in real-life situations
- extension of learning beyond the classroom
- the fostering a sense of caring for others

The typology in Table 1 is based on Robert Sigmon's work that differentiates the types of service learning based on the emphasis given the service or learning in a given program. Although experts in the movement would like to limit it to the fourth type, in which service and learning are given equal weight, the reality varies greatly in schools and colleges implementing programs.

### Involvement of Students

The most comprehensive attempt at discovering the extent of community service and service-learning programs in the schools was conducted by the National Center for Education Statistics (NCES) of the U.S. Department of Education (1999). According to that survey, more than 64 percent of all public schools and 83 percent of all public high schools organized some form of community service for their students. The percentage of high schools involved in some form of community service rose from 27 percent in 1984 to 83 percent in 1999. Nearly a third of the schools and half of the public high schools provide service-learning programs in which service is linked to the curriculum. This translates into 14,063,000 students involved in community service with 57 percent of those students involved in some

**TABLE 1**

<b>Emphases of service-learning programs</b>	
service-LEARNING	Learning goals primary; service outcomes secondary
SERVICE-learning	Service outcomes primary; learning goals secondary
service learning	Service and learning goals separate
SERVICE-LEARNING	Service and learning goals of equal weight; each enhances the other for all participants

SOURCE: Based on Sigmon, Robert. 1996. "The Problem of Definition in Service-Learning." In *The Journey to Service-Learning*, ed. Robert Sigmon et al. Washington, DC: Council of Independent Colleges.

form of service learning. Due in large part to the influence of the national Campus Compact, an association of college presidents, and the student led Campus Outreach Opportunity League (COOL), community service and service learning can now be found on a large majority of college campuses throughout the United States, involving thousands of classes in all disciplines, and hundreds of thousands of postsecondary students.

The NCES survey found that students in grades eleven and twelve were more likely to be involved in some type of community service or service learning than younger students, girls more likely than boys, and white students more likely than black or Hispanic students. The survey also found that community service is positively correlated to parents' highest level of education and to ethnicity (white), but that these factors were inversely correlated to service learning. It appears from the data that schools with larger numbers of black and Hispanic young people are more likely to require and arrange service-learning programs than is true for schools that are predominantly white. Given the historical commitments of many religious groups to volunteerism and service, it is not surprising that the survey found that 72 percent of students in private schools report participation in community service, compared to 50 percent in public schools.

### As a Requirement for Graduation

The issue of requiring community service for graduation or service learning as a course requirement is a contentious one that has led to more than one lawsuit in the United States. Proponents claim that service learning is a pedagogical tool to enhance student learning, while opponents claim it is a form

of “mandatory volunteerism.” Given the separation of the schools from their communities and the traditional academic nature of most schooling, it is likely that this will continue to be an issue in the future. There appears, however, to be strong community support for service learning. A Roper Starch survey (2000) found that while 61 percent of Americans were unfamiliar with the term *service learning*, over 90 percent endorse the concept when it is explained to them. Americans see it is a teaching strategy that will help students transform their academic learning into success after graduation.

### Effect on Student Participants

Most research on the effects of service-learning programs at both the K–12 and higher education levels has only been conducted in the 1990s, and thus there are few, if any, long-term follow up studies. Janet Eyler, Dwight Giles, and Charlene Gray state that the effects of service learning on students can be divided into personal, social, learning outcomes, and career development. On a personal level it appears to have a positive effect on students’ personal efficacy, personal identity, spiritual growth, moral development, interpersonal development, the ability to work well with others, leadership, and communication skills. Lillian Stephens found that students involved in service-learning programs appear to have reduced levels of alienation and behavioral problems, while Allan Melchior found them less likely to engage in behaviors that lead to pregnancy or arrest. Melchior and other researchers have also found a greater acceptance of cultural diversity by service-learning students.

Learning outcomes research indicates that service-learning has a positive impact on students’ academic learning, improves their ability to apply what they have learned in the “real world,” may positively affect academic learning as measured by grades or GPA, and impacts such academic outcomes as demonstrated complexity of understanding, problem analysis, critical thinking, and cognitive development. Daniel Weiler and colleagues found that students in more than half of the high quality service-learning schools studied showed moderate to strong positive gains on student achievement tests in language arts or reading, engagement in school, sense of accomplishment, and homework completion. Other researchers have found an association of service learning with higher scores on state basic skills tests and with higher grades. According to Frank

O’Bannon school attendance appears to be positively correlated with schools sponsoring service-learning programs.

Service-learning programs have recently been linked to the School-to-Work/Career programs in many districts and schools. Career and communication skills, career exploration awareness, and knowledge were increased through service-learning programs, according to Thomas Berkas. This connection to the world of work has been an important factor in increasing support for the movement on the part of legislators, school board members, the business community, and the non-profit sector.

There are literally thousands of adaptations across the curriculum of service learning as practiced in the schools and colleges of the United States. The most widely used service-learning activity is peer and cross-age tutoring, with positive effects found on both the tutor and the tutee. Children, young people, and college students also find environmentally related activities in hundreds of schools and colleges, with water monitoring programs in streams, rivers, and lakes by biology and chemistry classes, tree-planting programs for biology and science classes, and thousands of recycling programs. Many language programs have students teaching English in exchange for learning Spanish or another language from native speakers. Students in social studies and the social sciences explore issues of race, culture, and class through joint projects with persons of other cultural groups and through working at homeless shelters and soup kitchens. Medical, dental, business, and law students conduct free clinics for persons unable to afford assistance, while engineering students design technological assistance for persons with disabilities. The adaptations of service learning are only limited by the creativity of its practitioners, and there are numerous books available on its theory, practice, and evaluation.

### The Voice of the Client

An important critique of the movement is made by those who believe that it is too focused on doing things to people, rather than with them, that it emphasizes the value and benefit to the service provider, while all too often ignoring those served, and that it thus perpetuates societal injustices. Given the growing body of research on the positive effects of service learning on the provider and near complete lack of research on positive or negative effects on “clients,” such a critique is warranted. The voices of

recipients are too often missing in the current service-learning literature. Service and giving must go beyond meeting the short-term needs of recipients, and move towards the removal of societal barriers that keep too many on the margins of American society. As the movement matures and goes beyond its “evangelistic” phase, it is rapidly deepening its intellectual and philosophical roots, and looking more into root causes of societal inequalities and injustice. It is also moving beyond the words service provider and service recipient or client and into the use of term partners in service.

### Future Directions

Service learning appears to have the potential to be an important contributor to bringing about a more just and caring society. It has also been called the “Trojan Horse” of school reform, and has become a mechanism which many schools and colleges are using to bring the school and community closer together and to provide a more active learning environment for students. Government and business are increasingly looking to service-learning as a promising mechanism for preparing children and young people for citizenship and the world of work.

*See also:* COMMUNITY EDUCATION; ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; EXPERIENTIAL EDUCATION; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS; VOLUNTEER WORK.

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RICHARD J. KRAFT

## HIGHER EDUCATION

Service learning in higher education is an experiential learning pedagogy that balances the needs of student and community members involved, links the service and learning through reflective processes, and if skillfully managed leads to positive student personal, social or citizenship, career, and intellectual development.

### Programs

The central claim of service learning is that both the quality of student learning and the quality of service to the community are enhanced when the two are combined. Although there are literally dozens of definitions of the term, the characteristics identified in the 1990 National and Community Service Act are central to most of them; this act describes service learning as an instructional method that accomplishes the following objectives.

- Students learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs and that are coordinated in collaboration with the school and the community.

- Student's academic curriculum provides structured time for a student to think, talk, or write about what the student did and saw during the actual service activity.
- Students are given opportunities to use newly acquired skills and knowledge in real-life situations in their own communities.
- Enhancement of what is taught in school is accomplished by extending student learning beyond the classroom and into the community and fostering of the development of a sense of caring for others.

While most service-learning programs are part of the school or college curriculum, cocurricular programs in which there are intentional goals for student learning and in which efforts are made to assist students in reflecting on their experience also qualify. The term, however, is also commonly applied to a variety of activities that do not meet these standards. Perhaps because of the growing popularity of community service for young people and because *service learning* sounds more important than *volunteerism*, the term is often applied to volunteer programs where there is very little formal attempt to facilitate learning through reflection. Service learning is also sometimes confused with traditional field-based instructional programs such as clinical experiences for those studying to be nurses, social workers, teachers, or other human services professionals. In an attempt to sort out the many programs that involve students in the community and draw a distinction between service learning and related activities like volunteer service and internships, Andrew Furco (1996) has suggested an approach to assigning programs to categories along two dimensions: the balance between goals (i.e., of service or learning) and the primary intended beneficiary (service recipients or students).

Service-learning programs are designed to equally benefit both the provider and recipient of service and to focus on both the quality of the service and the learning. This is most often accomplished when the service learning is part of an academic course. It is easier to achieve this balance if service is a required part of the class, and all students participate in projects where the service is closely tied to the subject matter goals for the course. For example, a course on program evaluation in which students develop an evaluation plan for a local nonprofit agency program is easily designed to benefit both students and the agency. Discussion and analysis of

the class service project can serve as a central part of the course. Other examples of tight subject matter/service links include the following: (1) courses in women's studies where students work with victims of domestic violence; (2) Spanish courses where students assist new immigrants in learning to negotiate the community; (3) sociology classes where students conduct needs-assessment activities for a mayor's office that is considering new services for the homeless; or (4) a botany class where students classify and remove invasive non-native species from a park.

Many service-learning classes do not integrate the service program into the regular course of study, but make service an option for extra credit or a substitute for a research paper or other assignment; some provide an additional course credit for those choosing that option. Unless the professor plans carefully to incorporate the service work of these students into class discussion and activities, and plans for continuous individual reflection activities for students choosing service, these classes often fail to maximize either the service or the learning. Without reflective integration with the substance of the course, add-on service options become simply classes plus volunteerism. Since some resistance to service learning comes from people who feel that providing course credit for volunteerism is inappropriate, it is important to draw a distinction between volunteerism and service-learning experience, which has an academic focus and yields measurable learning outcomes. And it is important to reserve the label *service learning* for experiences in which intentional efforts are made to link the two through discussion, assignments or other forms of reflective activity.

Of course, students may also learn from volunteer service and community service programs. These are valuable experiences for students and may contribute to their personal development and commitment to active involvement in the community. The primary focus is on service, not learning, and the primary intended beneficiaries are the service recipients, not the students. Some students who have a naturally reflective bent may be motivated to explore questions that arise from their service, but the programs themselves provide little or no challenge to make that happen. Many colleges and universities have volunteer service centers that develop opportunities for students to serve, and hundreds of thousands of hours of community service are donated each year by these students.

A popular program is the Alternative Spring Break (ASB) where college students travel in student-led teams to international and domestic sites to undertake a week of community service. Break Away, founded in 1991 at Vanderbilt University, is the national organization that provides technical assistance to college and university ASB programs; they estimate that in the spring of 2001, 30,000 American college students spent their spring break in an organized service project. College community service programs like ASB do often devote some attention to providing guidance to programs leaders on how to develop reflection sessions for students, and occasionally such programs become service-learning opportunities by being integrated into an academic course or what has been called a curriculum-based alternative break. Most of these programs are probably best placed in the community service rather than service learning category.

Field-based study, clinical practice, and internships all provide useful service to communities, but have as their primary purpose student learning. Student teachers spend time in the classroom to master instructional skills. Student nurses may spend time in clinics giving vaccinations, conducting well baby examinations to master nursing skills. Many students spend a semester in a business internship to develop skills and contacts necessary to move their career forward. All these students also provide a service, but the intended beneficiary of such programs is the student, who develops professional skills.

### **Benefits of Service Learning in Higher Education**

Service learning is a form of experiential learning and is built on the assumption that learning occurs through active engagement and application of academic subject matter to real world problems and vice versa. Many of its founders were followers of John Dewey who believed that for an experience to be educative, it needed to engage students in significant worthwhile activity that leads to curiosity and sustained inquiry. Service learning is thought to enhance learning partly because students become highly motivated to learn when they work with people in the community and see how their efforts can make a difference. Cognitive psychologists are discovering that learning that is absorbed and can be transferred to new settings is best developed through repeated engagement in complex realistic situations.) Community projects used in service-learning programs offer this opportunity.

The dramatic increase in interest in service learning in higher education in the late 1980s and into the twenty-first century may have occurred because it is an approach to learning that seems to answer many criticisms of higher education. The experiential, interdisciplinary, and community-based nature of service learning addresses criticisms that American colleges and universities have created compartmentalized, sterile bodies of knowledge that students have difficulty integrating or applying in their lives in the community. It is also responsive to concerns that the academy is divorced from society and has abdicated its traditional role of service and community citizenship. Concern with these issues led both college leaders and the federal government to create institutions to support development of community service and service-learning programs.

Service learning was first identified as a type of instruction in the mid-1960s but has become visible and grown dramatically since the founding of Campus Compact in the mid-1980s. Campus Compact is a national coalition with more than 750 colleges and universities as members that has provided visibility and support for the development of community service and service-learning programs on campuses.

The goals participating faculty have identified as most important include promoting active engaged learning, developing citizenship skills and responsibility, developing critical thinking capabilities, addressing campus responsibility to community, taking social action, providing opportunities for career development, exposing students to diversity, and promoting moral and religious development.

Service-learning classes are most likely to be in education or the social sciences but there are many examples of courses being developed in the sciences, engineering, the humanities and business as well. The passage of the National and Community Service Act in 1990 and the National and Community Service Trust Act in 1993 and the subsequent creation of the Corporation for National Service provided additional resources to train faculty, support startup costs for new programs, and provide an infrastructure to disseminate information on best practices for these programs.

### **Impact of Service Learning on Students**

An analysis of research conducted by Eyler, Giles, Stenson, and Gray during the 1990s identified more

than 100 higher education studies completed during this period that provide considerable support for the power of service learning. While most of this research has involved evaluation studies or programs in single institutions, there have been several that were national in scope. Most have focused on student outcomes with a lesser number exploring institutional or community impact.

These studies provide evidence of growing presence of service learning on campuses, student endorsement of this pedagogy, and of general satisfaction of community agencies with student contributions. Studies of student impact have consistently shown small but significant effects on personal and social or citizenship development; evidence of academic or cognitive impact is less consistent.

Given the very wide range of experiences labeled *service learning*, it is not surprising that the quality of the program also makes a difference in its impact on students. High quality community placements, in which students are challenged, have opportunities to interact with members of the community and engage in interesting work lead to positive outcomes. Other measures of quality include the quantity and quality of reflective activity (such as discussion and written analysis of the service), application (i.e., the degree to which the service and course of study are related), the duration and intensity of the experience, diversity (i.e., the opportunity to interact with people from different ethnic, racial, or social groups), and community voice (i.e., participation of the community partners in shaping the nature of the service). Some of what is known about the effects of service learning on students including effects of quality is summarized below.

**Students like service learning.** Service learning is popular with college students. Students report that they have good community experiences, they learn more, and are more interested and motivated to work hard in these classes than in their traditional classes. Not surprisingly, service learning that includes strong community placements and is well integrated into coursework through reflection and application is more highly regarded than experiences of lower quality.

**Stronger connections to college or university.** College students tend to do better academically and graduate when they are engaged in college social and academic life, and when they have close personal ties

to faculty members. There is evidence that students who are active in community service during college are more likely to persist to graduation, but this has not yet been established for academic service learning. There is a growing body of evidence however, that suggests that service learning contributes to engagement with college life and satisfaction with the college experience. Students who participate in service learning report closer ties to faculty than those who do not. Closeness to faculty and the amount of time spent in interaction with faculty members are also affected by the quality of the service-learning experience. Courses that involve strong community placements and include a lot of discussion about the service experience and its relationship to the course of study are more likely to build close relationships with faculty members. Service learning can be a powerful tool for creating conditions that enhance college impact on students.

**Personal development.** The college years are an important time for the development of personal identity and the skills needed to function effectively in social groups. Service learning has long been valued because the personal connection students make with diverse others in the community is thought to contribute to personal development, motivation to learn, and commitment to do something about social problems. The research suggests that both community service and service learning lead to increased personal confidence and sense of efficacy; students develop a stronger sense of personal identity, and increased cultural understanding and empathy. Some students report that service learning also leads to their spiritual development. There is also evidence that participation in service learning increases interpersonal and leadership skills.

The quality of service learning may enhance the impact of service on personal development. The two most important factors for increasing personal outcomes are the quality of the placement itself and the degree to which the service is relevant to the subject matter being studied. When students have the chance to work with people from different ethnic groups than their own, they are also likely to show an increase in cultural understanding, identity development, and spiritual growth.

**Career development.** Students who participate in service learning report a greater confidence in their choice of major and in their career choice. They also indicate that they feel better prepared for work than do their peers who do not participate. Alumni also

report that their community service during college has increased the likelihood of incorporating service into their career development.

**Academic or cognitive development.** Students who are engaged in community service during college are likely to get higher grades than those who are not. Faculty and students who participate in service learning report that students learn more from the experience than they do in traditional classes, but research on the impact of service learning on achievement as measured by grades is mixed. Some experimental studies have shown that service-learning students achieve at a higher level; others show no real difference on these traditional academic measures.

Grades might not be the best measure of the intellectual impact of service learning, however, because they are often not based on the outcomes-measures that service learning is best designed to affect. Studies that have analyzed student essays before and after service or that have used taped and transcribed problem-solving interviews have shown that highly reflective service learning, especially when the problems assessed and the service are closely related, has a positive impact on the quality of student understanding of complicated social problems. Similar in-depth analysis of changes in student thinking over the course of a semester shows increases in cognitive development (i.e., the ability of students to use critical thinking to analyze issues that don't have clear answers).

**Citizenship and social responsibility.** Advocates for service learning are convinced that it improves the quality of the college or university's citizenship within its community and that it also helps students develop the skills and commitments necessary for effective community engagement. Participation in service learning increases the sense of social responsibility felt by students and their commitment to community service. It also enhances their sense of engagement in their community and their confidence that community members can solve problems. Many studies show students active in service learning report that they intend to participate in future service. Growing evidence in studies of alumni shows that these students are in fact more likely to become actively engaged in their community after graduation.

Values and commitment—for example, the belief that one ought to and will become involved in

the community—is not sufficient, however, for effective citizenship. In fact all outcomes of service learning summarized previously contribute to effectiveness. Confidence that one can make a difference, personal efficacy, knowing how to work with others on community tasks, understanding complex social issues, and having the critical thinking skills to make good decisions all form part of the contribution of service learning to preparing students for active citizenship. Students who have had service-learning experiences are more likely to feel that they ought to participate in their communities, know how to participate, and understand issues so that they can participate in intelligent ways.

*See also:* CIVICS AND CITIZENSHIP EDUCATION; COMMUNITY EDUCATION; MULTICULTURALISM IN HIGHER EDUCATION; SERVICE LEARNING, *subentry on* SCHOOL; VOLUNTEER WORK.

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JANET EYLER

## SEVERE AND MULTIPLE DISABILITIES, EDUCATION OF INDIVIDUALS WITH

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Individuals with severe disabilities and multiple disabilities are highly diverse in both their abilities and disabilities. What they share is a capacity to learn and a lifelong need for support.

### Definition and Types of Severe and Multiple Disabilities

Persons with *severe disabilities* are: "individuals of all ages who require extensive ongoing support in more than one major life activity in order to participate in integrated community settings and to enjoy a quality of life that is available to citizens with fewer or no disabilities" (TASH, p. 19). Mental retardation is regarded as a characteristic common to those with severe disabilities. Most severely disabled individuals are limited in their ability to communicate, though these skills can become functional with appropriate intervention. In addition, these individuals often have medical conditions or physical limitations that affect their movement, vision, or hearing.

Persons with *multiple disabilities* have a combination of two or more serious disabilities (e.g., cognitive, movement, sensory), such as mental retardation with cerebral palsy. The U.S. federal government definition includes those who have more than one impairment, "the combination of which

causes such severe educational needs that they cannot be accommodated in special education programs solely for one of the impairments" (Code of Federal Regulations, 1999, Vol. 34 Sec. 300.7, [c][7]). (Dual sensory impairment, or deaf-blindness, is defined as a separate disability group.) Multiple disabilities have interactional, rather than additive, effects, making instruction and learning complex.

In 1996 Fred Orelove and Dick Sobsey defined this group as individuals with mental retardation who require extensive or pervasive supports and who also possess one or more significant motor or sensory impairments and/or special health care needs. These physical and medical problems result in the presence of two or more of the following characteristics: restriction of movement, skeletal deformities, sensory disorders, seizure disorders, lung and breathing control, or other medical problems related to these characteristics, such as skin breakdown or bladder infections.

The two groups overlap somewhat in definition. *Multiple disabilities*, depending upon the definition used, may or may not include mental retardation as one disability, while *severe disabilities* requires mental retardation but does not require an additional disability. Some movement disabilities are associated with mental retardation; for example, 60 to 70 percent of those with cerebral palsy have some degree of mental retardation. However, a child with cerebral palsy who does not meet the cognitive requirements of mental retardation might fit the federal definition of multiple disabilities, due to having movement and communication disabilities, but not the definition of severe disabilities. Most individuals who have multiple disabilities also fit the criteria for severe disabilities, while not all with severe disabilities have multiple disabilities.

The primary measures used to diagnose these individuals are individual intelligence tests and tests of adaptive behavior. Early assessment of movement limitations, muscle tone and flexibility, seizure activity, breathing control, sucking and swallowing, vision and hearing, and genetic makeup are also, and prenatal assessment of genetic material or physical identification of deformities via sonograms may be conducted. Accurate psychological testing of these individuals is challenging due to their frequent limitations in controlled movement, vision, hearing, communication, or cooperative behavior. Thus, interviews with family members and educators regard-

ing the person's adaptive behavior skills (i.e., communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure, and work) may be more informative and reliable than a norm-based IQ or achievement score.

Definitions of this highly variable group with both severe and multiple disabilities are less precise than some other disability groups, making an estimate of their prevalence difficult. Prevalence ranges from less than .25 percent to .50 percent of the population; and is considered relatively uniform across socioeconomic classes.

Persons with severe and multiple disabilities may carry a variety of diagnostic labels, including: (1) severe or profound levels of mental retardation (IQ scores below 40); (2) mental retardation that requires extensive or pervasive supports for an extended time; (3) autism, childhood disintegrative disorder, or Rett syndrome (several types of autism spectrum disorders); and (4) various genetic disorders accompanied by extensive mental retardation (e.g., Tay-Sachs disease, untreated phenylketonuria, tuberous sclerosis, Lesch-Nyhan syndrome). Individuals with several autism spectrum disorders, by definition, have significant developmental delays in communication and social interaction, and may exhibit extensive limitations in many adaptive skills. Thus, their disability may be extensive enough to fit the definition for mental retardation and severe disabilities, though this is not true for all persons identified with autism (e.g., Asperger's syndrome).

### **A Brief History of Education of People with Disabilities**

In the United States individuals with severe and multiple disabilities are legally entitled to education and other support services; however, these groups do not have the same rights in much of the world. Those with severe and multiple disabilities are identified early in life by their noticeable delays in development or by their physical abnormalities. Many require medical interventions not available until recently; thus, earlier in history (and still today in less-developed countries), many with severe disabilities did not live long. Historically, in many cultures, the presence of severe physical abnormalities at birth has been associated with stigma and shame. Current technology has enabled interventions that extend both the length and quality of life of these persons.

Historical reports of individuals with severe and multiple disabilities who survived indicate that they were subjected to the same poor treatment experienced by persons with milder forms of mental retardation. They suffered greatly prior to the 1700s; but from 1700 to the late 1800s there was an optimistic period, due to education methods that were "discovered" by Jean-Marc-Gaspard Itard (1775–1838) and Edouard Seguin (1812–1880) in France and spread to other Western countries. This period was followed by disillusionment with the nonuniform results of these education practices. From the late 1800s through the 1960s there was widespread building of institutions to house these individuals, and then, starting in the 1970s, the institutional population in the United States was gradually reduced, due primarily to a reduction in admissions. Many former residents were relocated to smaller community-based settings, while others remained in their own homes with services and supports provided to their families. Of those now remaining in state institutions, persons over forty who have profound mental retardation and multiple disabilities dominate the population.

### **Implications of Educational Legislation**

Legislation in the early 1970s addressed the right to education and other habilitation services for all individuals with disabilities. In 1975 the Education for All Handicapped Children Act (known since 1990 as the Individuals with Disabilities Education Act, or IDEA) formed the legal basis for public education for all children, including those with severe and multiple disabilities. IDEA added requirements that are especially valuable for these individuals, including: (1) early intervention starting at birth or whenever a disability is suspected; (2) related services such as physical, occupation, and speech and language therapy, including augmentative and alternative communication (AAC) methods; (3) the requirement for a plan and services to facilitate transition to work and adulthood; and (4) a value placed on inclusion in general education with nondisabled peers. Most states provide services to these students until age twenty-two or beyond, focusing upon functional skill development.

Prior to the 1975 law mandating public education for all children, students with severe and multiple disabilities, if educated, received services in institutions or settings operated by parent groups or state mental health departments. When laws enacted

in the mid-1970s required publicly funded special education, most schools established programs for these students but continued to isolate them from their nondisabled peers in separate buildings or self-contained classrooms in elementary schools. Currently in many states, the “least restrictive environment” for most of these students is the age-appropriate school setting alongside nondisabled peers, though not necessarily in the general education classroom. Currently, a majority of these students are served in separate classrooms for most of the school day.

Since 1975 U.S. courts have defined specific portions of special education law. For those with severe and multiple disabilities, several legal battles have resulted in: (1) summer educational programs being required in many states to lessen or prevent skill regression; (2) interventions that enable students to stay at school (e.g., providing catheterization for those unable to urinate voluntarily); (3) related services and technology to assist with movement, positioning, speech, and alternate forms of communication; (4) the mandate to educate all students with disabilities, and not limit services based on an assessment of educational potential; and (5) the provision of regular opportunities for interaction with nondisabled peers and inclusion in general education classrooms—or justification for not providing these opportunities. While all states are required to provide a free and appropriate education for these students, there are many differences in how localities implement the law and thus in the actual quality of educational services for these students.

### **Educating Students with Severe and Multiple Disabilities**

When compared to their peers, most students with severe and multiple disabilities learn more slowly, forget more readily, and experience problems generalizing skills from situation to situation. These characteristics are best addressed when educators follow accepted practices. First, the public education of these students must start early and continue at some level throughout life. Second, all students typically need speech and language intervention, while many others will need physical and occupational therapy. Students with sensory impairments may need interpreters and mobility trainers, while some with medical needs may require nursing services or supervision. Third, because the educational teams of students are often large, close collaboration between

members is essential if their expertise is to result in improved student functioning. The benefits of integrating therapy into natural activities is widely accepted over the traditional practice of isolated, or pull-out, therapy.

Fourth, curriculum for these students tends to be functional in nature, reflecting skills needed in everyday life across domestic, leisure, school, community, and vocational domains. Students are taught to make choices, communicate in functional ways (which may include AAC methods such as signing, use of pictures, etc.), develop useful skills that reduce their dependence on others, and learn social skills suited to their chronological age. Fifth, when skills are taught in multiple, normalized settings, generalization problems are lessened. Thus, communication and social skills are most effectively taught in the context of interactions with typical classmates, while job and community skills are best taught during community-based instruction.

### **Trends and Controversies**

Several important trends, some considered controversial because they advocate the inclusion of these students in general education with the necessary supports, reflect improvements in the lives of these students. First, through advancements in medicine and technology these individuals not only experience longer lives, but also have better options in mobility, communication, sensory augmentation, and other areas. Second, starting in the 1960s, there has been gradual improvement in societal attitudes toward people with significant disabilities. This has led to legal protections, special education, community living alternatives, supported employment, and an increase in relevant supports. Third, with the Timothy W. decision (*Timothy W. v. Rochester, New Hampshire, School District*, 1989), “free and appropriate education for all” was reaffirmed, schools were required to keep current with best practices for educating those with significant disabilities, and the procedure of selecting who can and cannot learn was declared illegal.

The current trend to include individuals with severe or multiple disabilities in classrooms and community activities with their nondisabled peers has been particularly controversial. Special education placement data show gradual growth of students with disabilities who are placed in a general education setting, but much slower growth for students with severe and multiple disabilities. Schools

have complained that they are not able to include these students or provide the necessary supports and services to achieve a meaningful education for all involved. Some general education teachers have communicated an unwillingness to have these students in their classrooms, even with support, and they also may lack the required skills necessary to teach these children in a general education classroom. However, there are numerous examples of schools meaningfully including these students in ways that promote social and educational participation, as well as evidence to support the benefits of inclusion for both students with severe disabilities and typical classmates. More research, the dissemination of information on inclusion, and improvements in teacher training are needed.

*See also:* ADAPTED PHYSICAL EDUCATION; ASSISTIVE TECHNOLOGY; AUTISM, EDUCATION OF INDIVIDUALS WITH; COUNCIL FOR EXCEPTIONAL CHILDREN; MENTAL RETARDATION, EDUCATION OF INDIVIDUALS WITH; PHYSICAL DISABILITIES, EDUCATION OF INDIVIDUALS WITH; SPECIAL EDUCATION; SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH.

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MARTHA E. SNELL

## SEXUALITY EDUCATION

At the turn of the twenty-first century the rate of sexual intercourse among U.S. teenagers has declined; teen contraception rates, particularly condom use, have increased; and, as a result, teen birthrates declined during most of the 1990s.

Support for sexuality education also seems to be at an all-time high. A poll jointly conducted in 1999 by the Sexuality Information and Education Council of the United States (SIECUS) and Advocates for Youth showed that 93 percent of adults supported teaching sexuality education in high school and 84 percent supported teaching sexuality education in middle school/junior high school. And although most Americans believe abstinence should be a topic in sexuality education, the poll indicates that they reject abstinence-only-until-marriage education that denies young people information about contraception and condoms. The poll and subsequent focus groups demonstrate that many American parents do not see a conflict between providing information about abstinence and providing information about contraception in sexuality education programs. For

these parents, it is not a matter of either/or—they want both.

### The Basics of Sexuality Education

Human sexuality encompasses the sexual knowledge, beliefs, attitudes, values, and behaviors of individuals. Its various dimensions include the anatomy, physiology, and biochemistry of the sexual response system; identity, orientation, roles, and personality; and thoughts, feelings, and relationships. The expression of sexuality is influenced by ethical, spiritual, cultural, and moral concerns.

Sexuality education is a lifelong process that begins at birth. Parents, family, peers, partners, schools, religion, and the media influence the messages people receive about sexuality at all stages of life. These messages can be conflicting, incomplete, and inaccurate. SIECUS, along with many other national organizations, believes that all people have the right to comprehensive sexuality education that addresses the biological, sociocultural, psychological, and spiritual dimensions of sexuality from the cognitive domain (information); the affective domain (feelings, values, and attitudes); and the behavioral domain (communication, decision-making, and other relevant personal skills).

Comprehensive school-based sexuality education that is appropriate to students' age, developmental level, and cultural background should be an important part of the education program at every grade. A comprehensive sexuality education program will respect the diversity of values and beliefs represented in the community and will complement and augment the sexuality education children receive from their families, religious and community groups, and health care professionals.

SIECUS's *Guidelines for Comprehensive Sexuality Education: Kindergarten–Twelfth Grade* provide an organizational framework for the knowledge of human sexuality and family living within four development levels. The *Guidelines* are organized into six key concepts that represent the most general knowledge and encompass the components of the broad definition of sexuality. These six key concepts are human development, relationships, personal skills, sexual behavior, sexual health, and society and culture. Each key concept has associated life behaviors, topics, subconcepts, and age-appropriate developmental messages.

The primary goal of sexuality education is the promotion of sexual health. In 1975 the World

Health Organization defined sexual health as “the integration of the physical, emotional, intellectual, and social aspects of sexual being in ways that are positively enriching, and that enhance personality, communication, and love. . . . Every person has a right to receive sexual information and to consider accepting sexual relationships for pleasure as well as for procreation.”

There is public and professional consensus about what is sexually unhealthy for teenagers. Professionals, politicians, and parents across the political spectrum share a deep concern about unplanned adolescent pregnancy; out-of-wedlock childbearing; sexually transmitted diseases, including HIV/AIDS; sexual abuse; date rape; and the potential negative emotional consequences of premature sexual behaviors.

There is, however, little public, professional, or political consensus about what is sexually healthy for teenagers. The public debate about adolescent sexuality has often focused on which sexual behaviors are appropriate for adolescents and has ignored the complex dimensions of sexuality.

Becoming a sexually healthy adult is a key developmental task of adolescence. Achieving sexual health requires the integration of psychological, physical, societal, cultural, educational, economic, and spiritual factors. Sexual health encompasses sexual development and reproductive health, and such characteristics as the ability to develop and maintain meaningful interpersonal relationships; appreciate one's own body; interact with both genders in respectful and appropriate ways; and express affection, love, and intimacy in ways consistent with one's own values.

Adults can encourage adolescent sexual health by providing accurate information and education about sexuality, fostering responsible decision-making skills, offering young people support and guidance to explore and affirm their own values, and modeling healthy sexual attitudes and behaviors. Society can enhance adolescent sexual health by providing access to: comprehensive sexuality education; affordable, sensitive, and confidential reproductive health care services; and education and employment opportunities.

Most scholars and activists argue that adolescents should be encouraged to delay sexual behaviors until they are ready physically, cognitively, and emotionally for mature sexual relationships and

their consequences. This support should include education about intimacy; sexual limit setting; resisting social, media, peer, and partner pressure; the benefits of abstinence from intercourse; and the prevention of pregnancy and sexually transmitted diseases.

### Ongoing Challenges

In spite of recent declines, the birthrates among African-American and Hispanic young women aged fifteen to nineteen are still significantly higher than the overall birthrate in this age group. The rates of intercourse, pregnancy, and sexually transmitted diseases (STDs) are still much higher in the United States than in other industrialized countries.

Adults, whether they agree with young people's actions or not, cannot ignore the fact that millions of America's teenagers are engaging in a range of sexual behaviors. From a public-health perspective, some of these behaviors are less risky in terms of pregnancy or sexually transmitted disease transmission, whereas others carry greater risks. Because of these realities, *all* young people in the United States need the information, skills, and access to services to make and carry out informed, responsible decisions about their sexuality—both at the present time in their lives and in the future.

Americans hold both confused and contradictory attitudes about sexuality. While being generally relaxed enough to participate in sexual behaviors, Americans are not accepting enough of these behaviors to avoid guilt or shame. And Americans often have no commitment to pregnancy and disease prevention. This cultural confusion about sexuality is especially profound considering that adults must deal not only with their own sexuality-related issues but also with adolescent sexuality and sexual behaviors.

In American society, many adults do not model sexual health for young people. In fact, teenagers often behave more responsibly than adults. For example, 75 percent of unintended pregnancies in the United States occur to adult women. Never-married teens use birth control more consistently than never-married young adults in their twenties, and adolescents are much more likely to use condoms than older couples. Nearly all sexually transmitted HIV infection among both female and male teens and 60 percent of all teen births are the result of sexual intercourse with adult males.

Discussions about adolescent sexuality and sexuality education often revolve around adults' per-

ceptions of how “things should be” rather than a realistic understanding or appreciation of the dynamics of adolescents' lives. Adolescence is the time when young people develop the knowledge, attitudes, and skills that become the foundation for their healthy adulthood. Recognizing that nearly all Americans eventually become sexually active, an effective sexuality education program would ensure that young people have the information and skills they need to make responsible decisions about their sexuality—whether they make those decisions as adolescents or adults.

### Supporting Parents in Their Roles as Sexuality Educators

Parents and families play a major role in ensuring adolescent sexual health. Parents are the primary sexuality educators of their children. They educate both by what they say (and do not say) as well as by how they behave. Research indicates that young people who are able to talk to their parents about sexuality often behave more responsibly.

With open communication, young people are more likely to turn to their parents for help and support. Some parents have difficulty communicating with their children about sexuality, particularly because many of *their* parents also had difficulty with this issue. In order to overcome this difficulty, the education community can provide parents with information about sexuality and show them how to provide this education and information to their children. Educational programs may also provide parents with the help and encouragement they need to express their values about sexuality to their children and to provide accurate, honest, and developmentally appropriate sexuality information.

Parents and other trusted adult family members play an important role in encouraging and supporting adolescent sexual health. Parents and adults can assure that young people have access to accurate information and education about sexuality issues through direct communication and by providing books, pamphlets, and videos. Parents and other adults need to foster responsible sexual decision-making skills and need to model healthy sexual attitudes and responsible behaviors in their own lives.

### Training Teachers

Comprehensive sexuality education is an important component of formal schooling. Yet often teachers do not have the skills, knowledge, or inclination to

teach such courses. Few have received training in sexuality education, and even fewer have received certification as sexuality educators. A 1995 SIECUS study revealed that the nation's elementary and secondary school teachers are not adequately prepared at the pre-service level to provide sexuality education, including the teaching of HIV prevention, to their students. Because sexuality issues touch on so many developmental issues relating to children and youth, SIECUS has, since 1965, urged that all pre-kindergarten through twelfth grade pre-service teachers receive at least one course in human sexuality.

Research shows that one of the characteristics that effective sexuality education programs share is that they are taught by teachers and leaders who believe in the program and are trained to deliver it. Trained teachers can complement the education provided by families as well as that provided by religious and community groups. Yet studies reveal that teachers do not feel adequately trained to teach sexuality education. Teachers report concern about their ability to teach personal skills, about their knowledge of HIV/AIDS, and about their knowledge of STDs. Most of those teaching sexuality education report receiving their training in short workshops or seminars.

Training for teachers on how to teach sexuality education is critical to the success of programs and to the health of American children. Teachers responsible for sexuality education must receive specialized training in human sexuality that includes basic information on sexuality topics and a special focus on the philosophy and methodology of teaching sexuality education. Teachers should, ideally, receive this training as pre-service teachers in academic courses or programs in schools of higher education that provide them with time-intensive and rich training. This training can be complemented by extensive in-service courses, continuing education classes, or intensive seminars.

Few states have either training or certification requirements for teachers who deliver sexuality or HIV-prevention lessons. Although the vast majority of states require or recommend teaching about sexuality or HIV/AIDS, a 1995 study found that only twelve states, the District of Columbia, and Puerto Rico required any licensure for teachers of sexuality education and only twelve states and the District of Columbia required licensure for teachers of HIV-prevention education. Only six states and Puerto

Rico required teacher training for sexuality educators, and nine states, the District of Columbia, and Puerto Rico required training for teachers of HIV-prevention education. States should develop requirements that integrate expertise in the methodology and pedagogy of sexuality education into existing health education licensure requirements. Current licensing and accreditation bodies should also integrate these criteria into their requirements for health educators.

### **Building Support Networks for Sexuality Education**

A wide range of organizations support comprehensive sexuality education—including those representing health care professionals, businesses, the media, and faith communities—and are willing to advocate on its behalf. On the national level, the National Coalition to Support Sexuality Education includes more than 130 national organizations that support comprehensive sexuality education such as the American Association of School Administrators, the American Medical Association, the National School Boards Association, the National Association of School Psychologists, the National Education Association Health Information Network, the Religious Institute for Sexual Morality, Justice, and Healing, and the United States Conference of Mayors. Many of these organizations have affiliates at the state and community levels.

Education professionals can also become actively involved in supporting sexuality education programs in their communities. Professionals have an important role to play as outspoken advocates by writing letters to editors, voting in school board elections, writing supportive letters to teachers and administrators, and serving on community advisory committees. This involvement will help assure that young people have access to effective programs.

### **Reaching People outside of School**

While an important component of efforts toward ensuring a sexually healthy society focuses on sexuality education in schools, these efforts need to be broadened beyond schools. Out-of-school adolescents are more likely to report having had sexual intercourse and to having had four or more sexual partners.

One of the challenges for the education and health community is to develop innovative, accessible approaches that meet the sexual health needs of

adolescents who are not in school. Community-based organizations, youth-serving agencies, health agencies, families, and faith communities often have contact with young people who may not be engaged in school, and these entities can be important sources of sexuality information and programming. Agencies need to be encouraged and supported in their efforts to work together to establish and strengthen partnerships for ensuring the sexual health of all young people, particularly those at most risk.

In addition, the Internet and other technologies are making sexuality information more accessible for many young people, both inside school and out. Many Internet sites provide age-appropriate, unbiased sexuality information for teens.

### Conclusion

The debate continues in the United States over the focus and content of sexuality education programs. The prevailing political climate makes it difficult for people to publicly advocate for much beyond abstinence for young people. In spite of this there is much parental and scientific support for a more comprehensive approach to sexuality education. The challenge for the education community is to ensure that school policies and programming provide *all* young people with the information, services, and support they need to grow up to become sexually healthy adults.

*See also:* HEALTH EDUCATION, SCHOOL; RISK BEHAVIORS, *subentries on* HIV/AIDS AND ITS IMPACT ON ADOLESCENTS, SEXUAL ACTIVITY AMONG TEENS AND TEEN PREGNANCY TRENDS, SEXUALLY TRANSMITTED DISEASES, TEEN PREGNANCY.

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MONICA RODRIGUEZ

## SEXUAL ORIENTATION

Because adolescence is a time of transition from childhood into adulthood, adolescents are “journey people”—neither adults nor children, but traveling somewhere in between. Their identities on all levels are dynamic and convoluted. They are changing rapidly and often unevenly on physical, emotional, intellectual, moral, and spiritual levels.

The sexual identity of an adolescent is also being formed, and it cuts across all categories of human development. Sexual orientation, or the primary di-

rection of one’s romantic, relational, and psychological desires, is in flux for many adolescents. Sexual orientation and the personal, communal, societal, and educational issues surrounding it are instrumental in the lives of all adolescents, especially those who find themselves experiencing attractions to those of the same sex or in the case of transgendered youth, those who are unable or unwilling to adhere to traditional gender roles (behavior that is traditionally understood to be associated with women or men).

While the inclusion of transgendered issues in the lesbian, gay, and bisexual movement is controversial to some, gender and sexual orientation intersect in inseparable ways. For example, many students are harassed in school because they are *perceived* to be lesbian or gay, not because they actually are lesbian or gay. Some individuals do not or cannot adhere to traditional gender roles in the way they look, dress, behave, or speak—for example, when a boy has many feminine mannerisms, or when a girl appears traditionally masculine in dress or behavior. A fear of being labeled gay or lesbian based on gender assumptions can affect students in many different ways, as when boys are reticent to participate in school choir or when girls become ambivalent about academic achievement. Therefore, this discussion of sexual orientation includes transgender issues. Also included are those who are questioning their sexual orientation or gender identity.

### The Problem with Definition

It is important to note that the desire to measure, define, and keep statistics on sexual orientation and gender is a relatively new phenomenon in human history. The terms homosexual, heterosexual, and transgender did not exist until early in the twentieth century with the advent of modern psychology. In ancient times, same sex erotic behaviors and romantic love for those of the same sex existed as part of normal and everyday life. Some researchers and theorists believe that society has created categories for sexual orientation and gender to control sexual behavior and to create a catalogue of sexual deviancies. Society’s need to classify sexual orientation and gender and attitudes toward people who are lesbian, gay, bisexual, transgendered, or questioning (i.e. sexual minorities) reflect society’s assumptions about what is normal and who is welcomed and excluded. Educators should approach the labeling and classifying of sexual orientation of adolescents with great cau-

tion due to its potential for exclusion. James Brundage asserts that people are continuing to live with codes of sexual conduct established in Medieval Europe, and he calls for new reflections on an understanding of people as sexual beings in modern times. Living in a world, however, of what Thomas Popkewitz calls “population reasoning” that seeks to define children as members of groups with certain characteristics requires that people, however hesitantly, must acquiesce.

### Sexual Orientation Hesitantly Defined

When a compass is moved, the needle fluctuates for a bit before settling on true north. Similarly, a significant number of adolescents will find themselves confused about their sexual orientation and gender before settling into their sexual identity. Many will engage in sexual behaviors with others of the same sex. For most, these behaviors are experimental as young people make their way to a heterosexual orientation. But, for others, the attractions to those of the same sex remain consistent as they continue to personally develop and become more experienced in relationships. Many psychologists theorize that one’s sexual orientation is found on a continuum, that no person is 100 percent heterosexual or homosexual, and that some are right in between. Research is suggesting that gender identity can also be understood along a continuum.

Sexual orientation is also understood to be more than just genital-sexual behaviors and includes emotional preference as well as intensity of spiritual connection with another person. Those who fall on the continuum closer to being attracted to those of the opposite sex, which accounts for the majority, are commonly known as straight or heterosexual. Those in the middle (studies show this to be anywhere from 2% to 5%) are considered bisexual. When a person is physically, emotionally, and spiritually attracted primarily to members of the same sex, they are considered to be lesbian, if female, and gay, if male. Studies show these numbers to be anywhere from 5 percent to 10 percent of the general population.

It is difficult to design studies that accurately reveal the proportion of straight and sexual minorities in the adolescent population. Even if a survey is anonymous, those with minority orientations may be denying their attractions to themselves as well as others because of the societal expectation that the only acceptable and normal orientation is heterosex-

ual (i.e. *heteronormativity*). Some adolescents may have sexual attractions to either gender but would not categorize themselves in the same way as the survey instrument would. Others may know that they are members of a sexual minority, but because sexual orientation is invisible, many force themselves to live as heterosexuals, thus feeling one way on the inside, but living another way on the outside.

### The Impact of Invisibility and the Sense of Self

Although evidence shows that more and more individuals are *coming out* (divulging one’s sexual orientation to others), minority adolescents are especially susceptible to the tendency of keeping their orientation invisible and silent. Instead, they choose to emulate their straight peers. This contradiction between a minority adolescent’s developing internal sense of sexual identity and external actions and words exacts a great toll on their emotional and spiritual well-being. This disintegration (lack of ability to integrate invisible identity with visible identity) of the adolescent plays itself out through a higher than average rate of drug and alcohol abuse, depression, misbehavior, and suicide rate among sexual minority adolescents. Some reports show that up to one-third of teen suicides are committed by sexual minority youth. Spiritually, many adolescents find themselves alienated from their faith communities (either internally, externally, or both) and their family’s spiritual traditions. Where do sexual minority youth develop a sense of needing to keep their identities invisible? How do they come to understand the world as a place that is hostile to their sexual desires?

### Sexual Socialization of Adolescents

Heterosexual people often have difficulty understanding the trials of sexual minority individuals. Since the majority of people in the world are heterosexual (including the parents of most minority youth), most persons in the mainstream culture spend little time reflecting on their sexual orientation. However, if one were to imagine what it would be like to be a young person beginning to develop an internal sense of a minority sexual identity, one could quickly notice how modern society is hostile to and nonrepresentative of minority sexual orientations. The comments family members and friends make when sexual orientation issues are discussed, television shows, popular songs, books, movies, billboards, magazines, the content of laws and policies, and people’s assumptions and expectations all teach

children from a very early age that it is best to be heterosexual.

Debbie Epstein and Richard Johnson's work in elementary schools shows that heteronormative sexual roles are rehearsed and reinforced both in the classroom and on the playground. Children play games that celebrate heterosexual pairings, read stories with exclusively straight characters, absorb assumptions about people based on gender behaviors, and are asked questions by teachers and classmates that assume a future heterosexual orientation. In short, from the first day of kindergarten, sexual minority youth are sexually socialized to think and feel in a straight way. When these youth reach adolescence and discover that they cannot fulfill the prepared sexual script, school becomes a place that both explicitly and subtly makes them feel abnormal and deviant.

### High Schools and Sexual Minority Adolescents

Citing a Massachusetts Governor's Task Force report, the Gay Lesbian Straight Education Network (GLSEN) reports that about two-thirds of sexual minority students said they have been verbally, physically, or sexually harassed at school. GLSEN seeks to make schools safer through education about orientation issues. It also provides logistical support for teachers, administrators, and students who want to help make their schools more welcoming to and accepting of sexual minority students. In some schools, lesbian, gay, bisexual, transgender, and questioning students, as well as their straight peers, meet (often in groups called Gay/Straight Alliances or GSAs) to discuss the problems faced by sexual minority students and share ideas about how to cultivate a tolerant atmosphere. The 1984 Federal Equal Access Act permits the formation of such groups anywhere that student clubs of any kind exist. This law, originally heavily promoted by conservative Christian groups to allow students to organize religious clubs in public secondary schools, applies only to public school settings where the administration has been found to have established a policy of making their facilities available to after-school groups. Sexual minority students in smaller or conservative communities are often more isolated, since the topic rarely, if ever, becomes part of the public discourse of the school. Advocates say the presence of GSAs makes sexual minority students feel safer. Opponents argue that GSAs encourage impressionable teens to experiment with homosexuality and a lifestyle that leads to un-

happiness and death. Often, religious language is evoked to explain why homosexuality is unfavorable.

Even if sexual minority students are ready to talk about their sexual orientation (and many are not and just continue pretending to be like their straight peers), the level of support from and comfort level of the adults in the school can vary widely. Even counselors and social workers are often not prepared to discuss issues of sexual orientation with adolescents. Sometimes faculty who want to teach about the contributions of sexual minority individuals throughout history or want to support students individually are prevented from doing so by administrators and school boards. Parental pressure and perceived public opinion often keep school leaders from supporting sexual minority youth. In other places, however, teachers and staff display "safe zone" symbols (a symbol designed as a sign of support to students) and feel comfortable talking about sexual orientation as it comes up in classroom conversation or individual conversations with students.

### The Controversy and Conclusion

In terms of attitudes and actions towards sexual minority issues and students, there is little uniformity across American schools. The majority of schools, however, are not dealing with the issues, and minority students continue to suffer in silence and denial of their own sexual orientation.

The sexual orientation issue in education is at the intersection of societal sexual, psychological, and religious norms with the school. While the legal system tends to defend the rights of lesbian, gay, bisexual, transgender, and questioning students to be free from harassment and to start GSAs, it has not held schools accountable for proactively creating more welcoming and supportive environments for sexual minority youth.

Ultimately, administrators, school boards, and citizens decide on the curriculum and policies of the school. Though the American Psychological Association (APA) removed homosexuality from their list of mental disorders in the 1970s, many still do not consider a minority sexual orientation to be normal or acceptable. Some religious groups such as Focus on the Family contend that adolescents can be converted to heterosexuality using a process known as reparative therapy. While mainstream psychological (e.g., the APA) and religious groups reject such therapies (e.g., see *2000 Religious Declaration of Sexuali-*

ty, *Morality, Justice, and Healing*, written by the Sexuality Information and Education Council of the United States), their level of support for open discourse and action in schools varies widely. The school is simply the crossroads of a much wider societal debate. Sexual minority adolescents challenge educators to think about the tension between pleasing majority publics and serving all students. The presence of minority adolescents can encourage reflection, conversation, and changes in policy and practices that many educators are not ready for and yet which sexual minority adolescents cannot survive without.

See also: GAY AND LESBIAN STUDIES.

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### SHANKER, ALBERT (1928–1997)

President of the American Federation of Teachers (AFT), the nation's second largest teachers' union, Albert Shanker was born in New York City in 1928 to Russian working-class immigrant parents. He grew up during the depression on the Lower East Side of New York, his father a newspaper deliveryman, his mother a sewing machine operator. Shanker was reared in a union home where, he said, "Unions were just below God" (Swerdlow and Weiner Internet site). When he began school, he spoke no English and endured beatings and anti-Semitic taunts in his mostly non-Jewish neighborhood.

Shanker excelled academically. After completing high school he earned a bachelor's degree in philosophy from the University of Illinois, Champaign-Urbana, and, in 1949, entered the Ph.D. program at Columbia University. Having completed all requirements but a dissertation, Shanker began teaching elementary and junior high school mathematics in New York City in 1952.

He left teaching in 1959 to become a full-time organizer for the Teachers Guild, New York City's

AFT affiliate. The guild was just one of 106 small New York City teacher organizations. Founded in 1917 with John Dewey as a charter member, the guild was the only New York City teacher organization to support collective bargaining, in which teachers elect a single organization to represent them in contract negotiations with their employer. In 1960 the Teachers Guild merged with New York City's High School Teachers Association to form the United Federation of Teachers. Shanker was elected president in 1964.

In the early 1960s Shanker helped New York City teachers gain collective bargaining rights and achieve the first contract in any major city in the United States. A supporter of the civil rights movement (Shanker marched in nearly every major demonstration in the country), his tenure as UFT president was partially defined by the Oceanhill-Brownsville events of 1968.

The city had divided the school district into multiple subdistricts, each with a community-based governing board. Oceanhill-Brownsville was a predominantly African-American district staffed by a largely white, largely Jewish teaching population. In 1968 the district superintendent, Rhody McCoy, removed the white teachers from the black community schools and Shanker called a strike. Before matters were settled (the teachers were returned to their jobs), there would be three strikes, all illegal under New York State's collective bargaining law, and Shanker would spend fifteen days in jail. Even when the issue seemed to be put to rest, critics continued to label Shanker a racist.

Shanker was concerned that Oceanhill-Brownsville would label him for life. He wanted educators and New Yorkers in general to better understand his principles and ideas, even if they did not always agree with him. Unable to get op-ed pieces placed in New York newspapers, he bought a paid ad in the December 13, 1970 edition of the Sunday *New York Times*. That ad would become his "Where We Stand" column, a weekly opportunity for Shanker to put forth his ideas about education, the union, and social and political issues to a large public audience. He would write the column for twenty-seven years.

Shanker continued to gather supporters and critics. Under his leadership, the New York City teacher union grew into a large and politically powerful organization, which in 1975 pulled New York

City back from the brink of bankruptcy when Shanker placed teacher pension funds in city bonds. Although he was approached to run for mayor (he declined), there were those who believed he wielded too much power. In Woody Allen's 1973 movie, *Sleeper*, Allen's character, frozen, awakens in the year 2173 and is asked how civilization was destroyed. "A man named Al Shanker got the bomb," he replies.

In 1974 Shanker became president of the American Federation of Teachers (AFT), a post to which he was re-elected every two years until his death. He remained president of the AFT and UFT for twelve years, relinquishing the UFT presidency in 1986.

When Shanker became AFT president, the organization was relatively small, particularly in comparison to its national rival, the National Education Association (NEA). The AFT, founded in Chicago in the early 1900s, was a union, a member of the AFL-CIO, and an adherent to trade union principles. Shanker had an unshakable faith in unionism, but in the early 1980s, he would set the AFT on a different, and unexpected, path.

In 1983 the National Commission on Excellence in Education released its landmark education reform report, *A Nation at Risk*. Shanker expected that this report, like its predecessors, would not support teachers and the AFT would need to oppose it. On reading the report, Shanker concluded that it provided an opportunity for his union to begin to tackle many important issues. A supporter of public schools, Shanker was nonetheless realistic about the problems, particularly unacceptably low levels of student achievement.

Shanker used the 1983 report as a springboard to change the conversation about and within his union and to catapult him to a prominent role in the education reform debate. He acknowledged his members' nervousness about new directions in July 1985 when he told a large AFT gathering in Washington, DC, "It's dangerous to let a lot of ideas out of the bag, some of which may be wrong. But there's something more dangerous and that's not having any new ideas at all at a time when the world is closing in on you."

Shanker had many ideas. In 1985 he called for the creation of the National Board for Professional Teaching Standards. In 1988 he publicly made a case for charter schools. Throughout the 1980s and 1990s, Shanker was a vocal advocate for high academic standards for all students, accountability for

results (and consequences for failure to achieve them), peer review (in which teachers judge the quality of their colleagues' work), and minimum competency testing of new teachers. He told his members, "It is as much your duty to preserve public education as it is to negotiate a good contract." He argued that preserving public schools meant improving them.

During Shanker's AFT tenure, the American labor movement continued to shrink in size, but the AFT grew to an organization of more than a million members, including teachers, teacher aides, health care workers, and public employees, the last two categories of which Shanker added to the AFT's rolls during his presidency.

A focus on professional issues—improved academic standards for students and improved teacher quality—became hallmarks of the union under Shanker's leadership. He never abandoned collective bargaining, continuing to believe that the system was essential to secure basic rights and employment conditions for teachers. He broadened the interests of the union and in so doing, reshaped the organization. By the time of his death, attendance at the AFT's semiannual professional issues conference (called the QuEST conference for Quality Educational Standards in Teaching) outstripped attendance at AFT policymaking conventions.

Shanker was called a radical, a liberal, and a conservative—sometimes all at the same time. Never afraid of a controversial view or an unorthodox idea, Shanker would take a position and then, if someone or something convinced him otherwise, would just as quickly reverse course. Shanker's counsel was sought by Republicans and Democrats alike, and by presidents Jimmy Carter, Ronald Reagan, and Bill Clinton. A member of the AFL-CIO Executive Committee, Shanker was founding president of Education International, a worldwide federation of teacher unions.

Although Shanker accomplished much of his agenda, he was never able to secure a merger between the AFT and NEA. Shanker argued that the dollars that the two teacher unions were spending on internecine organizational warfare could be better spent fighting the enemies of public education.

When he died of bladder cancer at age sixty-nine in 1997, the president of the NEA, Bob Chase summed it up: "American public education has . . . lost one of its most eloquent and effective

advocates. A true leader, Al Shanker was always one bold step ahead of us all."

*See also:* AMERICAN FEDERATION OF TEACHERS; TEACHER UNIONS.

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### SHELDON, EDWARD (1823–1897)

Edward Austin Sheldon was instrumental in bringing object training to the United States. As president of the Oswego Training School in Oswego, New York, from 1861 until his death, Sheldon worked to fulfill his commitment to make education accessible to all children, both in practice through free schools and in theory through a Pestalozzian teaching style.

Born in Perry Center in Genesee County, New York, Edward Sheldon grew up on the family farm. After completing a college-preparatory course of education, Sheldon fulfilled family expectations by leaving home at age twenty-one for Hamilton College in Clinton, New York. Sheldon originally intended to pursue a law career but a bout with pleurisy in his second year at Hamilton forced him to take a leave of absence, during which he returned to the family farm and dabbled in horticulture. His interest in this field—coupled with his fond memories of life on the farm—inspired him to leave college in 1847, after his junior year, to invest with a partner

in a nursery in Oswego, New York. Within a year, financial mismanagement by Sheldon's partner caused the nursery to fail. However, struck by the poverty he observed in Oswego, Sheldon already was immersed in his new life: spearheading and organizing an educational system in Oswego that would serve all children.

Sheldon solicited the support of a committee of prominent community members to open the Orphan and Free School in Oswego in 1848. Although it was not his intention to take charge of the "ragged school," at least one of the most influential backers of the committee said she would pull her support without Sheldon as the teacher. Thus, Sheldon reluctantly began his short stint as a teacher. He reflected, "Nothing could ever have been farther from my thoughts than the idea of teaching school; nothing for which I considered myself so poorly adapted" (Barnes, p. 78). Sheldon struggled through this stressful year, teaching upwards of one hundred pupils at a time and witnessing the depraved conditions in which they lived when he visited their homes on Saturdays. The high point of the year was his marriage in May 1849, to Frances A. B. Stiles, whose own educational attainment enabled her to serve as a helpful partner for forty-six years as Sheldon worked to realize his vision of an educational system to serve all children. Their five children kept the Sheldon household busy.

Financial support for the school waned, and after one year Sheldon accepted a position at a private school in Oswego. But, for Sheldon, the idea of a unified educational system to serve all children lingered. After a brief time at the private school and one year as superintendent of public schools in Syracuse, New York, Sheldon returned to Oswego in 1853 and settled into his life work of reforming education, especially instruction. As secretary of the board of education (essentially, superintendent) in Oswego, Sheldon reorganized the Oswego public schools into a unified system, enacting such reforms as assigning students to schools and grades according to age and requiring all teachers to pass certification exams.

By the mid-1850s the Oswego schools were flourishing, serving as exemplars for education reformers, and Sheldon became well known in education circles. He soon realized, however, that this smooth-running system was "a machine found wanting" because the instructional methods "lacked vitality," and intensified his study of educational reforms in other school systems (Barnes, p. 116). In

1859 Sheldon was inspired to invest three hundred dollars in materials from the Home and Colonial Institute of London, in the hopes of duplicating the innovative practices he observed in classrooms in Toronto, Canada. There, teachers based lessons not on recitation and memorization, but on pictures, charts, and other objects, a teaching technique credited to Swiss educator, Johann Pestalozzi (1746–1827). Many people saw shades of Pestalozzi himself in Sheldon's life and work—both loved children, worked for the benefit of the poor, and maintained the courage of their convictions in reforming education. Pestalozzi developed object training out of necessity; he used field trips and actual objects as teaching tools because his students were poor and his school was inadequately funded. This active learning style was child-centered and engaged total sensory learning. Pestalozzi's belief in nurturing the natural and orderly development of the mind struck Sheldon so strongly that "he became a Pestalozzian overnight" (Snyder, p. 231).

Following his enlightening exposure to Pestalozzianism, Sheldon began, in his capacity as secretary of the board of education, to prepare teachers in this systematic objective style of teaching. He was soon frustrated, however, as he found that these teachers left for better-paying jobs in other districts. Recognizing the demand for teachers who were familiar with object training, he convinced the school board to establish a teacher training school and sought to find an appropriate teacher for the school. Because the method of teaching he had been emulating was based on the Home and Colonial Institute of London, he hired Pestalozzian expert Margaret E. M. Jones of the institute for the inaugural year of the Oswego Training School. Classes began in 1861 and Sheldon was a regular attendee during Jones's tenure. In 1865 New York made Sheldon's institution its second state-supported normal school. In 1869 Sheldon resigned as secretary of the board of education to devote himself full-time to the Oswego State Normal and Training School, which gained national attention for what rapidly became known as the *Oswego method* of object training. Sheldon remained as president of the school until his death in 1897.

The impact of the Oswego (Normal) Training School cannot be overstated. Teachers trained at Oswego fanned out across the country, beginning a revolution in classroom instruction. The majority of Oswego's early graduates taught in elementary and even normal schools outside of the state of New

York, often in the growing pioneer West. An Oswego graduate, Sheldon's daughter Mary followed in her father's footsteps; she became a professor of history at Stanford University and was well-known for her work in developing historical teaching methods. Mary and other Oswego-trained teachers helped to transform not only the subject matter and the methods of formal education, but also the spirit of education. Sheldon's graduates took his object-training vision across the country and around the world. Oswego State Normal and Training School became synonymous with object training; many normal schools taught the Oswego method for years to come.

*See also:* PESTALOZZI, JOHANN; TEACHER EDUCATION, *subentry on* HISTORICAL OVERVIEW.

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## SINGLE-SEX INSTITUTIONS

At the beginning of the twenty-first century there are only two men's colleges in the United States—Wabash College in Indiana and Deep Springs in California, although there are approximately eighty women's colleges. For all intents and purposes, men's colleges seem to have outlived their function, although women's colleges continue to offer women

students a worthwhile postsecondary option. Following a brief history of single-sex education for men and women, this entry explores the characteristics of women's colleges and the outcomes associated with attending these colleges. Given the small numbers of men's colleges, similar research has not been conducted on these institutions.

### Historical Contribution

Single-sex colleges and universities have a long and storied history in American higher education. The original colleges in the United States, including Harvard (1636), William and Mary (1693), Yale College (1716), and the College of New Jersey at Princeton (1746), were founded to educate men only. During this era, formal educational options for women were nonexistent. It was widely believed that women were intellectually inferior to men and that educating women might lead to health problems. Because higher education in the colonial period was aimed at preparing men for the clergy and for leadership, there was no real impetus to provide higher education for women.

In the early 1800s several seminaries for women only were founded to provide girls with a liberal education, equivalent to a high school education. Graduates of these seminaries were prepared to be mothers, wives, and teachers. Women's seminaries were not immediately classified as colleges, although schools such as that founded by Emma Willard (established in 1821) modeled their curriculum, in large part, after that offered at the most prestigious men's colleges of the day. Other women-only institutions, such as those founded by Catherine Beecher and Mary Lyon, became prototypes for modern women's colleges.

There are several women-only institutions that claim to be the first "college." Georgia Female College was chartered by the state legislature in 1836; its curriculum, however, was more similar to a high school than a college. In 1853 Mary Sharp College in Tennessee was founded; its curriculum looked very similar to the four-year degree program offered at the men's colleges. Similarly, Elmira Female College in New York, chartered in 1855, offered a true collegiate course. In the early days of women's access to higher education, single-sex institutions were the norm for both men and women. By 1860 there were approximately 100 women's colleges in existence, about half of which offered a collegiate-level curricu-

lum. Approximately 67 percent of the existing colleges and universities at this time were for men only.

By 1850 several institutions, including Oberlin, began experimenting with coeducation. The passage of the Morrill Land Grant Act after the Civil War led to the creation of land-grant institutions, all of which were coeducational. The original colonial colleges continued to operate for men only. By 1870 there were 582 colleges in the United States, of which 343 were for men only, 70 were for women only, and 169 were coeducational. By 1890 the number of men's colleges reached its peak—400 institutions. At this time, there were 465 coeducational colleges and 217 women's colleges. The bulk of the single-sex institutions for both men and women were founded in the South and Northeast. In the Midwest and West, coeducation was the norm during this era. The women's colleges in the South were widely perceived as “finishing schools” and were not taken seriously by many in higher education.

After the Civil War, the women's colleges of the Northeast, especially the Seven Sisters (Barnard, Bryn Mawr, Mount Holyoke, Smith, Wellesley, Vassar, and Radcliffe), wished to demonstrate that women were as capable of achieving advanced education as were men. These institutions replicated the classical curriculum of the most elite men's colleges also located in the Northeast. Indeed, compared to other educational options for women through normal schools and coeducational institutions, the curriculum at these women's colleges focused on liberal education rather than on pre-professional programs. These women's colleges not only replicated the curriculum of the men's colleges, they also required students to meet the admission standards of the men's schools. This created enrollment problems, as few women had the necessary background in Greek and Latin. Finding qualified faculty willing to teach at these women's colleges was also a significant problem in the early days. One solution to these dilemmas was the founding of *coordinate colleges*, institutions that shared the faculty and curriculum of men's colleges but operated as separate institutions. These coordinate colleges, including Radcliffe, Pembroke, and Barnard, were considered women's colleges because the male and female students did not take classes together and because the institutions had different administrators. The Seven Sisters served as an enduring model of high-quality education for women.

Between 1890 and 1910 enrollment at women's colleges increased by 348 percent, while the gain of female students at coeducational colleges was 438 percent. Over a similar period, male student attendance in college increased by 214 percent. By the turn of the century, coeducation had become the norm for both men and women, although the most elite institutions in the country continued to be available only to men. Among the arguments in favor of coeducation were that separate education was economically wasteful, that women were equal to men and should therefore be educated together, that single-sex institutions were unnatural, and that coeducation would be helpful in taming the spirits of young men. By 1920 women students represented 47 percent of the student body in colleges and universities. Indeed, the 1920s were a high point in women's education, and in many cases women outnumbered men in colleges. During this era, 74 percent of the colleges and universities were coeducational and the vast majority of women in higher education attended these institutions. Women's colleges, however, continued to attract sufficient numbers of students.

The 1930s through 1950s were marked by a return to a more traditional view about the role of women in society, a view that emphasized women in the home and family. In the 1950s there were 228 men's colleges, 267 women's colleges, and 1,313 coeducational institutions. Indeed, by 1950 the percentage of women in higher education dropped to a low of 30 percent, and enrollment at many of the single-sex institutions—both men's and women's colleges—began to decline precipitously.

The 1960s and 1970s saw a more pronounced shift away from single-sex institutions toward coeducation. During this period, the most prestigious exclusively male colleges and universities began to admit women and many women's colleges also became coeducational. Many of the women's colleges that decided not to admit men closed due to financial exigency during this period. Indeed, many small, private liberal arts colleges, both coeducational and single-sex, closed during this era. To many, the replacement of single-sex education with coeducation was seen as part of women's attainment of parity with men. In fact, many believe that the shift away from single-sex institutions to coeducational ones served both sexes better. Some argued that if one believed that women should attend women's colleges, it somehow implied that women are different or in-

ferior to men. Others argued that women who attend single-sex institutions do not learn to deal with men and are therefore less ready to compete and function in the “real world.” As a result, the number of men’s colleges declined to only two institutions while the number of women’s colleges declined to fewer than eighty institutions. The women’s colleges that survived the decline in the 1970s transformed themselves from women’s colleges to “colleges for women.” The difference between a women’s college and a college for women is subtle; but essentially, in order to survive, women’s colleges rededicated themselves and their missions to serve women and their unique needs. As colleges for women, these institutions were more purposeful in regard to the needs of their women students as opposed to operating in the same manner as a coeducational institution without the men. The Women’s College Coalition, founded in 1972, was created to support these institutions and to increase the visibility and acceptability of women’s colleges.

### **Characteristics of Contemporary Women’s Colleges**

Women’s colleges educate fewer than 1 percent of all women attending postsecondary institutions and award 1 percent of all degrees conferred—25,000 degrees in 1998. Estimates are that fewer than 5 percent of college-going high school seniors will even apply to attend a women’s college. Women’s colleges tend to be small, ranging in size from 94 full-time students to 5,000 full-time students. Although all women’s colleges are private institutions, more than half of the existing women’s colleges have a religious affiliation, most often with the Roman Catholic Church (33%). In terms of geographic location, almost half of the women’s colleges are located in the northeastern United States, while 33 percent are located in the South. There are three women’s colleges in California, and the rest are scattered around the country.

Although the most selective women’s colleges, those known as the Seven Sisters, receive the most attention in the media and in the research literature, women’s colleges represent a diverse array of institutions. The Seven Sisters are the oldest, most selective, and most well endowed of the women’s colleges, although two of the sisters, Vassar and Radcliffe, are no longer women’s colleges. There are also two historically black four-year women’s colleges, and six two-year women’s colleges. In addition, seventeen

women’s colleges grant master’s degrees, while forty-seven grant bachelor’s degrees. Women’s colleges range in selectivity from very selective to nonselective. From a resource perspective, the women’s colleges also vary greatly—from those with healthy endowments (including the Seven Sisters) to those institutions that are entirely dependent on tuition revenue to cover operating expenses.

Though women’s colleges do not represent a single mold, they do share some common traits. For example, they serve women of color and nontraditional-aged women in higher proportions than comparable coeducational institutions. The explanation for this is twofold. First, serving women, in all their diversity, is a major component of the mission of many women’s colleges. Second, in order for the existing women’s colleges to survive with their original missions still intact, many had to be creative in attracting and retaining women students. As fewer than 5 percent of high school women will even consider applying to a women’s college, this means that many women’s colleges have had to focus their attention on attracting older women, part-time students, and transfer students. Women’s colleges are also more likely than their coeducational counterparts to grant undergraduate degrees to women in the more male-dominated fields as compared to similar coeducational institutions.

### **Contemporary Importance of Women’s Colleges**

The contemporary importance of women’s colleges outweighs their number and size. A wide array of research projects, using both quantitative and qualitative data, have demonstrated that women’s colleges are among the most accessible and promoting environments wherein women are taken seriously and ultimately experience success. Specifically, research suggests that women’s colleges have a direct, positive impact on their students. Compared to women at coeducational institutions, for example, students at women’s colleges are more satisfied with their overall college experience, are more likely to major in nontraditional fields, and express higher levels of self-esteem and leadership skills. Researchers have also found that students who have attended women’s colleges are more likely than their coeducational counterparts to graduate, to have high expectations of themselves, to attend graduate school, and to be successful in their adult lives.

There are some critics who have questioned the results of individual studies, especially those studies

that focus on the impact of attending a women's college on career and postgraduate outcomes. These critics focus on those studies that use institutions rather than individuals as the unit of analysis and the fact that the studies cannot adequately control for individual student background characteristics. In addition, some critics suggest that the relative success of graduates of women's college may be a dated phenomenon. In other words, when women students began to have access to prestigious men's colleges did claims about women's colleges remain true? This question assumes that the success of women's colleges is because the "best" women students couldn't attend the "best" schools in the country. It also assumes that studies of women's colleges focus on the most elite of these institutions. A third critique about the research on women's colleges is that it fails to account for the self-selection of students. In other words, some suggest that women who choose to attend women's colleges are predestined to be successful and that one cannot credit the institutions at all for the outcomes produced.

Proponents of women's colleges counter such critiques by examining the literature on women's colleges in its totality rather than looking at one study at a time. They contend that research is most powerful when conclusions are drawn from a wide variety of studies using different methods, sources of data, and time periods. In reviewing the literature the majority of studies on women's colleges, including those that control for both institutional and individual characteristics of students, come to the same conclusion. As such, although it is impossible to randomly assign students to attend either a women's college or coeducational college, advocates of women-only institutions maintain that the self-selection argument appears specious. According to these researchers, it is not only dated studies that make claim to the outcomes associated with women's colleges, as studies using contemporary college attendees also come to the same conclusions. Given the totality of the research on women's colleges, proponents conclude that despite differences between methodologies and approach, the extent of overlap, the consistency, and the corroboration in the research findings are so great as to warrant the conclusion that a woman attending an all-women's college, compared with her coeducational counterpart, is more likely to achieve positive outcomes, such as having higher educational aspirations, at-

taining a graduate degree, entering a sex-atypical career, and achieving prominence in her field.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentries on* HISTORICAL DEVELOPMENT, SYSTEM.

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LISA WOLF-WENDEL

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#### SKINNER, B. F. (1904–1990)

Burrhus Frederick Skinner pioneered the science of behavioral analysis and positive reinforcement as an educational tool. Skinner grew up in Susquehanna, Pennsylvania, a small railroad town thirty miles from the New York state line. His father was an ambitious lawyer for the Erie railroad; his mother, a civic-minded woman that continually reminded Frederick to be aware of "what other people think." Despite his mother's strictures, young Skinner enjoyed his Susquehanna boyhood, roamed the countryside, built ingenious gadgets, and did well in school. In 1922 he was valedictorian of his high school class, having gained a reputation for debating intellectual matters with his teachers. That year he enrolled in Hamilton College, just outside Utica,

New York, where he spent a miserable first year as he lacked athletic ability and connections with Hamilton alumni. In his second year, however, he entered a social circle at Hamilton that appreciated intellectual and artistic life. He began writing short stories; one was praised by poet Robert Frost.

Graduating in 1926, Skinner, against the advice of his parents, decided to spend the next year becoming a writer. He moved into their house in Scranton where his father had taken a position as general counsel for a coal company. It was Skinner's "dark year" as he discovered he had "nothing to say" as a writer. But he was drawn toward behavioral psychology, having read philosopher Bertram Russell's favorable review of John B. Watson's *Behaviorism* (1928). After a short fling with bohemian life in Greenwich Village, Skinner enrolled in graduate school at Harvard University in the psychology department.

### Behavioral Analysis

Skinner, however, was not attracted to psychology at Harvard so much as to the physiology of Professor William Crozier, a student of German physiologist Jacques Loeb. Loeb and Crozier insisted that real science depended on controlling experimental results rather than mere observation of the phenomena being studied. For Skinner the foundation of behavioral analysis became the control of experimental variables. By 1930 he had devised an apparatus to control a specific behavior of a rat. Starting with a runway resembling a rat maze, Skinner gradually fashioned a box with a lever that delivered a food pellet when the rat pushed it. He also invented the *cumulative recorder*, a kymograph-like device that marked a paper every time the rat pressed the lever. He allowed the rat (only one to a box) to be fed a pellet only after it pressed a certain number of times, a behavior control known as *schedules of reinforcement*. He was able to shape lever-pressing behavior so that every time a rat was put on a particular schedule of reinforcement the rate of lever pressing remained constant. The measured behavior was as regular as a pulse beat and marked the beginning of the science of behavioral analysis.

Skinner took great pains to distinguish his science from the stimulus-response conditioning of Ivan Pavlov. The latter conditioned surgically altered dogs. He measured the increase in saliva flow (the response) when a bell was rung (the stimulus) before feeding. Skinner, on the other hand, always used in-

tact organisms (either rats or pigeons), and was only concerned with lever-pressing behavior, never glandular secretion. He acknowledged Pavlov's pioneering work in reinforcement and conditioning but insisted that the science of behavioral analysis involved *operant conditioning*. By 1933 he admitted that there were a multitude of rat behaviors that were not conditioned in what became known as the *Skinner Box*. The rat ran about, stood on hind legs, sniffed, and so forth. But the operation (operant) of lever-pushing was controlled by the schedule of reinforcement—not immediately by the food itself but by the sound of the magazine as it dropped the pellet. Hence although stimulus and response could not always be identified, let alone controlled, the operant or behavior of lever-pressing could be. The rat was not conditioned, only one class of rat behavior was.

*The Behavior of Organisms* (1938) clearly established operant behavioral analysis as a new science. Had he only been exclusively concerned with the behavior of rats and pigeons, Skinner would have already secured a significant place in the history of science. But he became a social inventor whose creations (both mechanical and literary) made him one of the most controversial scientists of the twentieth century. *The Behavior of Organisms* announced Skinner's vision for the future of behavioral analysis: "The importance of a science of behavior derives largely from the possibility of an extension to human affairs" (pp. 441-42). Ultimately this extension would impact American education.

### Social Service

Upon leaving Harvard in 1936 (he received his doctorate in 1933 but continued as a junior fellow) Skinner married Yvonne (Eve) Blue after accepting a position at the University of Minnesota. There he began to transfer operant science to social service. During World War II Skinner and a team of students developed a guidance system for bomb-carrying missiles. A pigeon was conditioned through positive reinforcement to peck the aiming device. But the army deemed "Project Pigeon" unfeasible for wartime use. Disappointed but not discouraged, Skinner moved more directly into a career as a social inventor. He turned his attention to building a *baby-tender*, later trademarked the *aircrib*, for his youngest daughter, Deborah.

The contraption was a carefully designed enclosed space, thermostatically controlled to allow the infant to move freely without constraining clothes.

The child could be removed from the baby-tender at any time. It also freed the mother from constant vigilance over the baby because the infant was much more secure than in a conventional crib. Skinner did not do operant experiments on Deborah in the baby-tender; rather, it was designed to improve the quality of life for both mother and child. After an article in *Life* magazine, the baby-tender was immediately criticized as another Skinner Box, one that imprisoned the child and destroyed the intimate mother-child relationship. For the first time Skinner's fascination with social invention had thrust him into national limelight and controversy.

Thereafter Skinner became evermore controversial as he moved aggressively into the possibilities for using operant science to build a better world. *Walden Two* (1948) envisioned a planned environment that shaped the behaviors of a community using operant techniques of positive reinforcement. Community cooperation and welfare were seemingly naturally conditioned and destructive competition disappeared. The novel met fierce critical commentary as many Americans thought it a grotesque distortion of Henry David Thoreau's *Walden*. Nonetheless by the late 1960s the book became a best-seller and several actual communities were established modeled after the fictional *Walden Two*.

### Educational Reform

Leaving the University of Minnesota in 1945, Skinner spent three years at Indiana University before returning to Harvard in 1948. In November 1953 he visited a Cambridge school where Deborah was a student and was appalled by the mathematics instruction. Students were given problems to solve while the teacher walked up and down the aisles, helping some but ignoring others. Some students finished quickly and fidgeted; others struggled. Graded papers were returned days later. Skinner thought there must be a better way and immediately fashioned a crude teaching machine by cutting up manila folders. The manila folder effort evolved into a slider machine used mostly for arithmetic and spelling. Math problems, for example, were printed on cards that students placed in the machine. The right answer caused a light to appear in a hole in the card. Later he made a device that allowed students to compose answers to questions on a tape that emerged from the machine. Later still, students could compose answers on cardboard disks. A lever was moved that covered the student's answer with

a Plexiglas plate—an innovation that prevented altering the answer and also revealed the correct one. Students mostly answered correctly because questions were designed sequentially from simple to complex. This “programmed instruction” was engineered with positive reinforcement coming from correctly answering the questions. With few mistakes the student progressed rapidly toward mastering arithmetic and spelling. Hence, learning behaviors were shaped by immediate positive reinforcement.

Skinner did not invent the first teaching machine and gave full credit to Sidney Pressey of Ohio State University who had developed a revolving drum device in 1926. Pressey's machine allowed students to press one of four buttons that revealed the correct or incorrect answer—in effect a multiple choice test. Skinner's machines, however, facilitated programmed instruction designed as sequential positive reinforcement. The teaching machine simply transferred immediate positive reinforcement to the mastery of subject matter. One teacher could not possibly immediately reinforce twenty or thirty students in a classroom. What was needed in American education was a technology that incorporated operant conditioning to shaping the learning behavior of each individual student. Skinner assembled a group of former students and colleagues to produce programmed instruction across of full spectrum of subject matter. He convinced companies such as IBM and Rheem to develop prototype teaching machines that could be mass produced. He hoped for a revolution in American education that he described in *Technology of Teaching* (1968).

But the companies refused to aggressively market the machines and educational leaders, most notably former Harvard President James Bryant Conant, though initially enthusiastic, lost interest. IBM and Rheem could make more money on safer investments, while Conant believed the machines and programmed instruction had not proved their viability to educational experts in each subject area. Then, too, the fears of school administrators and teachers over losing control of a traditionally structured classroom, and perhaps also their jobs, dampened enthusiasm for the teaching machine and programmed instruction. The failure of his teaching machine to become as common as automobiles and televisions was Skinner's most bitter disappointment as a social inventor. He fervently believed that the survival of American culture depended upon a revo-

lution in education. With population growth threatening to overwhelm the ability of people to avoid catastrophic wars and ecological disasters, only a technology of teaching incorporating behavioral science could properly educate a citizenry capable of effectively coping with an enveloping ominous world.

*Beyond Freedom and Dignity* (1971) was Skinner's last and most controversial social statement. He attacked what he believed were the fictions of individual freedom and autonomous man. Every person was under the control of his or her evolutionary, cultural, and immediate operant or behavioral contingencies. What was needed was not only a frank admission of this reality, but the application of the science of behavioral analysis to social problems—most importantly to the obvious failure of U.S. schools. But the critics and the public read the word *beyond* in the book title as *in place of* and were enraged. Skinner made the cover of *Time* with the inscription, “B. F. Skinner Says We Can't Afford Freedom.” He was bewildered by the firestorm of criticism and spent his remaining years answering critics and defending behavioral analysis. He never quite understood the historical entrenchment of treasured American values such as freedom and autonomy. Nonetheless, the alternative road for American schools that Skinner, a great and provocative thinker-inventor, devised remains an important contribution to the field of education.

**See also:** DEVELOPMENTAL THEORY, *subentry on* HISTORICAL OVERVIEW; HARVARD UNIVERSITY; LEARNING THEORY, *subentry on* HISTORICAL OVERVIEW; PRESSEY, SIDNEY L.

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DANIEL BJORK

## SLEEP AND CHILDREN'S PHYSICAL HEALTH

Sleep is not a passive extravagance that people allow themselves to indulge in. On the contrary, sleep is a highly regulated, active state of being that engages many aspects of one's physiology in a complex manner. It is essential to life. While the purpose of sleep remains a complicated mystery, depriving one's self of sleep has serious consequences for one's health and waking functions. Nevertheless, sleep continues to be encroached upon by daily activities. Of particular concern are accounts of inadequate sleep and daytime sleepiness among school-age children and adolescents, and the potential impact these conditions may have on development and learning.

### Biological Factors That Affect Sleep

Sleepiness refers to the tendency for a waking person to fall asleep. This tendency may be strong or weak, and is determined by both *homeostatic* and *circadian* influences. Homeostatic determinants include the amount of time since a child last slept and the amount of *sleep debt* (i.e., previously poor or inadequate sleep over one or more nights) that the child is carrying. Sleep debts can only be paid back with sleep, and increasing homeostatic pressure to sleep cannot, ultimately, be denied. The circadian system influences daytime sleepiness through *clock-dependent alerting*. Clock-dependent alerting refers to the function of people's circadian system to promote wakefulness at certain times of their biological clock—namely, at the beginning and just before the end of their biological “day”—thereby helping them wake from sleep in the morning and stay awake in the latter part of the day when homeostatic pressure increases. Clock-dependent alerting is lowest in the early afternoon, which helps to explain why an adolescent or young adult may find it easier to fall asleep in the early afternoon than in the early evening.

While sleepiness is primarily determined by homeostatic and circadian influences, environmental and time-of-day factors influence the immediate effects of sleepiness on daytime functioning. Arousing elements of one's external environment and/or internal state can temporarily *mask* sleep tendency. Someone out late at a nightclub after working all day has an increased tendency to fall asleep, but this can be masked temporarily by arousing environmental elements (e.g., music), the physical exercise of dancing, and possibly by consuming psychostimulants, such as caffeinated beverages, nicotine, or certain illicit drugs. But sleepiness that is masked is not diminished and could quickly be *unmasked* after leaving the nightclub. Depending on the time of night and the amount of homeostatic pressure, the person could experience *microsleeps* during the drive home. Microsleeps are brief, involuntary sleep attacks of a second or more that can occur outside of awareness. They are more likely to occur when excessive sleepiness is unmasked at a time of low clock-dependent alerting, such as during one's biological "night."

Daytime sleep tendency also appears to be affected by age or, more specifically, pubertal development. Mary Carskadon and colleagues examined sleep and sleepiness in children studied annually from age ten to age sixteen or seventeen. Study participants were allowed a sleep opportunity (i.e., bedtime to risetime) of ten hours per night at each assessment, and daytime sleep tendency was measured the following day using the Multiple Sleep Latency Test (MSLT), a series of objective tests measuring the time it takes to fall asleep under optimal "nap" conditions. Results across years showed virtually no change in the average amount of sleep (9.2 hours) recorded from bedtime to risetime. Thus, the need for sleep at night did not appear to decrease across puberty. However, when children reached midpuberty their midday sleep tendency on the MSLT appeared to increase relative to their prepubertal levels, even though participants were sleeping the same amount at night. These results demonstrate that pubertal development is associated with an increase in daytime sleepiness, suggesting that postpubertal adolescents may actually need *more sleep* to maximize daytime alertness.

### Societal Factors

For the average middle and high school student, getting 9.2 hours of sleep or more on school nights may

seem impossible and not worth the sacrifices required to maintain such a schedule. This is not surprising. The twenty-four-hour society of the United States makes ever-increasing demands on the time available for studying, working, and exercising, and offers ever-increasing opportunities for socializing and recreating. As a result, students are easily drawn into a pattern of pursuing daily activities at the expense of a good night's sleep.

In addition, role models for marginalizing the importance of sleep are plentiful. Physicians, lawyers, stockbrokers, and even political operatives are portrayed on television as heroically pushing their physical limits and rising above their lack of sleep. Closer to home, parents often fail to convince children to "do as I say not as I do" with regard to obtaining a good night's sleep, as they often allow their own commitments to encroach on sleep. Thus, from the beginning of primary school to the end of secondary school the average amount of time students spend sleeping on school nights gradually diminishes at the rate of one hour every three years, mostly through postponing bedtime. By the end of high school students average just over seven hours of sleep each school night, close to the adult work-night average of just under seven hours. These trends in school-night sleep time have been described in industrialized countries around the world.

While societal and familial factors influence these trends, at least one biological process may also be involved. As children move through puberty they often begin to prefer activities occurring later in the day. This shift toward evening preference may be expressed biologically as a shift in the timing of the body's readiness for sleep and wake, also referred to as *circadian timing of sleep phase*. A shift toward evening preference accompanied by a biological tendency to delay sleep phase may make it easier for adolescents to stay up later. Sleeping later in the morning would offset this tendency and allow students to be more consistent in the sleep they obtain on school nights, but this conflicts with trends for the average school day, which usually starts and ends earlier as children move from primary to middle to secondary school.

The direct consequence of these social, behavioral, and biological trends is that older children and adolescents often do not obtain enough sleep on school nights to optimize daytime alertness and, they therefore carry a burgeoning sleep debt into the weekend. The typical solution is to wake up later on

weekends. In adolescence, weekend sleep amounts average approximately nine hours per night, which might allow students to “pay back” the sleep debt accumulated across the week—if that debt was not so large. Given the amount of sleep determined to optimize alertness (approximately nine hours) and the fact that school-night sleep amounts average below 7.5 hours for adolescents, the average adolescent accumulates seven or more hours of sleep debt per school week. In addition to failing to pay back the sleep debt, going to bed later and sleeping substantially later in the morning on weekends can possibly exacerbate evening preference and delay the circadian timing of sleep phase, thus making sleep less likely to occur at a student's normal bedtime on Sunday.

### Effects of Insufficient Sleep

The consequences of insufficient sleep and chronic daytime sleepiness in the lives of school-age children and adolescents are difficult to characterize at this time due to the limited number of scientific studies with this age range. Available data suggests that behavior, health, learning, and mood are likely to be impaired by excessive sleepiness among pediatric groups, but causal connections have not been proven and any relation between amount of sleep loss and amount of subsequent impairment (a dose-response relationship), has yet to be described.

**Behavior.** Children who show increased sleepiness or who have a disorder that compromises the quality and/or quantity of sleep appear to be at greater risk for daytime behavioral problems. Decreased behavioral difficulties have been associated with successful treatment of sleep disorders.

**Health.** Correlations have been shown between poor quantity and/or quality of sleep and the following: increased days sick from school, increased physical complaints, risk for accidents or injuries, and adoption of health-risk behaviors such as increased consumption of alcohol, nicotine, and caffeine. Of particular note for older adolescents, drivers age twenty-five or younger were shown to be responsible for a majority of fall-asleep automobile crashes in one region of the country.

**Performance and learning.** Tests of cognitive performance administered to students with sleep disorders or to healthy students experimentally sleep-restricted have generally failed to produce consistent results, but data suggest that students process infor-

mation and react more slowly following inadequate sleep, and may be more prone to errors with so-called higher cognitive functions that involve abstract problem solving, creativity, or rule-governed behavior. Survey studies consistently demonstrate that students with later school-night bedtimes, more irregular bedtimes, less sleep on school nights, sleep problems, and increased complaints of daytime sleepiness have lower academic achievement than children with earlier, more regular bedtimes, more sleep, no sleep problems, and fewer complaints of sleepiness. Improved performance and academic achievement have been reported following treatment for sleep disorders.

**Mood.** Preliminary results from experimental and correlational studies provide consistent support for an association between inadequate quantity and quality of sleep among children and diminished happiness and/or increased depressed mood.

In conclusion, there is a need to learn more about the life-enhancing benefits of increasing sleep and the high cost of failing to protect it among children and adolescents. Determining the optimal quantity and timing of nocturnal sleep is likely to vary among individuals but existing trends suggest that many students should consider expanding school-night sleep opportunities, especially in the second decade. Students need to be more consistent with bedtimes and risetimes on school and non-school nights to avoid confusing the biological clock. Students also need to avoid caffeinated beverages and nicotine, as these substances can mask sleepiness and lead to difficulty falling asleep if taken later in the day. A brief afternoon nap is a much healthier alternative. Parents need to work with their children to create sleep-friendly family routines that make it easier for children (and adults) to protect sleep. Finally, more work is needed in communities to create sleep-friendly school schedules and work guidelines for minors, and to raise awareness about the risks associated with drowsy driving.

*See also:* HEALTH AND EDUCATION; OUT-OF-SCHOOL INFLUENCES AND ACADEMIC SUCCESS; PARENTING.

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bility, isolation, and high costs of administration. These problems have implications for education as well as for other domains.

On the economic side, most small nations are dependent on international forces over which they have almost no control. Some small countries have become wealthy from tourism or tax-free trading, but these activities are sensitive to international exchange rates and the economies of other countries. Also, few small nations have sufficiently convenient geographic positions to enable them to earn money in this way. Many are also highly dependent on cash crops, and are unable to diversify. Economic fluctuations can create crises for educational budgets. Also, dependence on external forces may require small nations to match their education systems to those of larger countries.

Many small nations, particularly island ones, also suffer from isolation. This may be geographic, political, and/or cultural. The people of Seychelles, for example, suffer from geographic isolation because they are 1,500 kilometers from any other country. It is costly to import and export goods, and it is expensive both to send local people abroad and to bring specialists from outside.

Small nations are also generally unable to achieve the economies of scale of their larger counterparts, for the machinery of government requires a basic number of administrators whatever the population size. Every country needs a head of state, for example, whether the person serves a large or a small population, and similar points may be made at all other administrative levels. Costs may be lowered if one person does two jobs, but this only reduces the problem and does not remove it. Personnel in ministries of education must be much more multifunctional than their counterparts in larger states.

### **Benefits Gained by Small Nations**

On the other side of the coin are various benefits gained by small nations. Particularly worth highlighting are national identity, transparency, sensitivity to administrative changes, and interpersonal relations.

One of the greatest benefits for small nations arises from the fact that they are countries, even if they are small ones. The 8,000 people of Tuvalu, for example, receive more prominence than comparable groups of 8,000 in the suburbs of Los Angeles, Calcutta, or Mexico City. Likewise the island of Domi-

nica receives much more prominence than islands of similar size off the coasts of Canada, Scotland, or Chile. Even if the individual votes of small state governments do not carry so much weight in some international forums as do the votes of large state governments, the small governments do at least have votes. Partly because of national visibility, small nations generally have much higher levels of per capita foreign aid than do medium-sized and large states.

Small nations may also benefit from transparency, because it is often easier to identify and diagnose problems. Moreover, once bottlenecks have been identified, it may be relatively easy to remedy them. Particularly in compact states, communications are usually good. It may be possible, for example, to call a meeting of all primary school principals—a task that would be impossible in a large country. Also, individual officers can have a big impact on the system. The education systems of small nations may be much more sensitive to reform initiatives.

Allied to these points are features of interpersonal relations. In countries with small populations, daily life is usually more personal than in those with large populations. Of course, this may cut both ways, for interpersonal relations can cause considerable difficulties. However, knowledge of other people's backgrounds and personalities can greatly facilitate the processes of planning and coordination.

### **The Range of Provision**

Many small nations, including prosperous ones, encounter limits in the range of education which they can provide for their citizens. For example, the smallest of the small cannot operate universities; and the states that do operate universities can only have institutions with a restricted range of specialties.

The responses to these limits vary. Some small nations simply send their students abroad. Others group together to form regional universities. Particularly striking are the University of the West Indies, which was founded by fifteen member states in 1948, and the University of the South Pacific, which was founded by eleven member states in 1968. Other countries form partnerships with external institutions for particular courses and/or for distance education.

Each of these strategies has merits and problems. Sending students abroad and/or making arrangements with external institutions often makes more economic sense than trying to do everything

domestically. Such arrangements also give planners flexibility to choose from a wide range of countries and institutions. However, external institutions are often perceived to be less relevant to local needs, and national pride often requires at least some domestic higher education provision. Regional institutions may be a compromise, but often suffer severe political strains.

### Small Is Complex

An officer in the Ministry of Education of Maldives has pointed out the following:

Educational planning in small countries is sometimes thought to be less of a challenge than in large countries. The experience in Maldives and in other small countries indicates otherwise . . . . Small but complex societies have their unique problems in the planning and management of education. These include remoteness and isolation of small communities, no economies of scale, greater transparency, closely knit social organizations, heavy dependence on external assistance, and critical shortage of essential manpower. (quoted in Bray, p. 112)

Many planners in other small nations would echo these points. Planners have to find careful balances between the demands of small-state nationalism and the realities of economics and international dependence. The nature of the balances naturally varies in different situations; but the growing literature on this topic has shown a considerable range of tools that can be deployed.

In some ways, new technologies have reduced the challenges faced by small nations. The Internet, for example, has reduced the problems arising from the lack of specialist libraries in small nations by providing access to a variety of information electronically. The Internet also facilitates distance learning, and allows personnel in small nations to gain specialist assistance without going abroad.

At the same time, the new technologies and other forces have increased the challenges for small nations. Small nations have become more fully integrated into a globalized world, which has intensified questions of identity on the periphery of decision making. These factors have had major implications for curricula, examination systems, and even media of instruction.

Small nations should not be treated as merely scaled-down versions of larger countries. They have

distinctive characteristics and ecologies of their own, which must be taken into consideration during analysis and planning of education systems.

*See also:* DECISION-MAKING IN DEVELOPING NATIONS, APPLYING ECONOMIC ANALYSIS TO; EDUCATION DEVELOPMENT PROJECTS.

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MARK BRAY

### SMITH, DAVID EUGENE (1860–1944)

Professor of mathematics at Teachers College, Columbia University, David Eugene Smith is consid-

ered one of the founders of the field of mathematics education. Smith was born in Cortland, New York, to Abram P. Smith, attorney and surrogate judge, and Mary Elizabeth Bronson, who taught her young son Latin and Greek. Smith studied at Syracuse University, earning a B.Ph. (1881), M.Ph. (1884), and Ph.D. (1887) with a concentration in aesthetics and the history of fine arts.

In 1881 Smith began to practice law in his father's office, but welcomed a chance opportunity in 1884 to teach mathematics at the local normal school, where he had studied as a boy, embarking upon what would become a forty-two-year career in academia. He left Cortland Normal School in 1891 to head the mathematics department at Michigan State Normal School (later Eastern Michigan University) in Ypsilanti. From 1898 to 1901 Smith served as principal of Brockport (New York) Normal School. In 1901 he accepted the chair in mathematics at Teachers College, Columbia University, where he remained until his retirement in 1926.

During the 1890s and early 1900s, as enrollments in American high schools increased, national committees convened to examine education recommended curricular reform. For mathematics, the curriculum was to decrease emphasis on rule-based learning and "mental discipline" and move toward a more inductive approach, with practical applications that would better prepare students for college. To be effective, this approach would require teachers well-prepared in mathematics and knowledgeable in its instruction.

Smith was a leader in developing programs that combined the study of mathematics and teaching. At Michigan State Normal School he offered one of the earliest courses in methods for teaching algebra and geometry in secondary school. He also offered a course in the history of mathematics—unique at the time—that examined how the subject developed and how it had been taught in the past. Smith's interest in history continued throughout his career, and he made it a hallmark of his programs. In 1900 Smith published *The Teaching of Elementary Mathematics*, a handbook for teachers that would become a seminal work in the field of mathematics education.

At Teachers College Smith developed graduate programs for secondary and postsecondary teachers that included a two-year or three-year sequence of course work in the history of mathematics. In 1906, two of Smith's students were awarded the first

American doctorates in mathematics education. All Smith's programs, whether undergraduate or graduate, shared three distinguishing characteristics: They encouraged teachers to take an active role in determining the mathematics curriculum and classroom pedagogy, to gain a historical perspective on teaching their subject, and to consider international viewpoints on education.

From 1908 to 1912 Smith took to the international stage, seeking to establish mathematics education as a field worthy of special study, separate from mathematics or general education alone. He conceived of the International Commission on the Teaching of Mathematics (ICTM), convinced the eminent mathematician Felix Klein to accept the presidency of the commission, and was primarily responsible for the organization of an extensive network of national committees that prepared detailed reports on mathematics instruction in their respective countries. The American commission, with Smith as chair, identified its country's greatest need as the improved preparation of teachers. With the 1912 presentation of the series of ICTM reports to the International Congress of Mathematicians and the decade-long support of Eliakim Hastings Moore, Jacob William Albert Young, and George Myers at the University of Chicago, mathematics education emerged as a distinct field of study. Smith served as ICTM vice president (1908–1920) and later as president (1928–1932).

Smith's concern for history grew out of long-cultivated interests. From boyhood, Smith enjoyed travel and became an avid collector. When he began to teach mathematics, he turned his attention to mathematical artifacts. By the time Smith donated his collection to Columbia in the 1930s, he had gathered more than 3,000 portraits and autographed letters of famous mathematicians, and approximately 300 rare astronomical instruments and ancient counting devices.

Smith enjoyed collecting not only for himself, he also delighted in sharing his broad knowledge and insight with others. Beginning in 1901, Smith advised George A. Plimpton, head of the New York office of the publishing house Ginn and Company, on acquisitions for his mathematical textbook collection. By 1908, Plimpton had assembled the most complete library of arithmetics printed before 1601. Since Plimpton generously permitted Smith's graduate students access to his collection, they had the rare opportunity to study valuable primary sources. To

make the collection more widely known, Smith prepared a richly illustrated catalogue, *Rara Arithmetica* (1908).

As a highly regarded historian of mathematics, Smith contributed numerous books, articles, translations of and commentaries on the subject, most notably his two-volume *History of Mathematics* (1923, 1925). In 1924 Smith joined with others to found the History of Science Society, and, subsequently, served as its president (1927). In 1932 he founded the journal *Scripta Mathematica* with Jekuthiel Ginsburg. Smith also took on the role of mathematics editor for a number of encyclopedias, including *Cyclopedia of Education* (1911–1913) and *Encyclopedia Britannica* (1927).

Smith made other significant contributions to the professional mathematics community. From 1902 to 1920 he served as librarian of the American Mathematical Society (AMS) and associate editor of its *Bulletin*. He became a charter member of the Mathematical Association of America (MAA) when it was organized in 1916, served as associate editor for its publication, *The American Mathematical Monthly*, and was elected president for the term 1920 to 1921.

A significant portion of Smith's writings dealt with issues relating to the newly developing field of mathematics education. *The Teaching of Arithmetic* appeared in 1909, followed by *The Teaching of Geometry* in 1911. These works were complemented by Smith's prodigious production of textbooks, often in collaboration with others. Smith-Wentworth textbooks in arithmetic, algebra, and geometry were dominant during the 1910s. Smith also helped to organize associations for mathematics teachers. In 1903, together with Thomas Fiske, a Columbia mathematics professor who had founded AMS in 1888, Smith convened an organizational meeting for the Association of Teachers of Mathematics in the Middle States and Maryland and was elected its first president.

Major national committees concerned with educational reform invited Smith to join their ranks. The National Committee of Fifteen on the Geometry Syllabus, appointed by the National Educational Association, included Smith as a member. It issued its report in 1911. In 1920 the MAA appointed Smith to the National Committee on Mathematical Requirements, which issued its influential report in 1923.

Smith combined his interests in teaching, mathematics, history, travel, and collecting to support the development of new programs to prepare mathematics teachers for the nation's schools. His vision, efforts, and accomplishments left a rich legacy to mathematics education, a field of study he pioneered in the early twentieth century.

*See also:* MATHEMATICS EDUCATION, PREPARATION OF TEACHERS; PROGRESSIVE EDUCATION.

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EILEEN F. DONOGHUE

## SMITHSONIAN INSTITUTION, EDUCATION PROGRAMS

The Smithsonian Institution, an independent trust instrumentality of the United States, is a center for research dedicated to public education, national service, and scholarship in the arts, science, and history. Its collections hold more than 140 million artifacts and specimens. The Smithsonian was established in

1846 with funds bequeathed to the United States by James Smithson, a British scientist. This bequest to establish in Washington, D.C., an institution for the increase and diffusion of knowledge is responsible for establishing the world's largest museum complex. The U.S. Congress provided that the institution be administered by a board of regents—consisting of the vice president of the United States, the chief justice of the Supreme Court, three congressmen, three senators, and six private citizens chosen by Congress—and a secretary.

The Smithsonian is composed of sixteen museums and galleries, the National Zoological Park, and research facilities in the United States and abroad. Nine Smithsonian museums are located on the National Mall between the Washington Monument and the Capitol. Five other museums and the zoo are elsewhere in Washington, D.C.; the Cooper-Hewitt National Design Museum and the National Museum of the American Indian Heye Center are in New York City. Smithsonian education programs in these facilities demonstrate how museums can be powerful learning environments. Smithsonian research and outreach units also provide significant educational programming. These units include the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts; the Smithsonian Tropical Research Institute in Panama; the National Science Resource Center; the Smithsonian Center for Education and Museum Studies; and The Smithsonian Associates (TSA). More information on Smithsonian museums, research, and outreach units can be found at the institution's website.

The Smithsonian is committed to serving as the most extensive provider of authoritative experiences that connect the American people to their history and their cultural and scientific heritages. A major objective of the institution is to bring Smithsonian education resources to the nation through a comprehensive education program that focuses on the kindergarten through college student population, teachers at all levels, and lifelong learners. A wide variety of educational offerings take place every day and many evenings throughout the institution to meet this objective. These include formal programs for elementary and secondary students both in the galleries of Smithsonian museums and over the World Wide Web; internships and fellowships open to qualified undergraduate, graduate, and postgraduate students; and programming for the general public, in the galleries during the day and in evening

and weekend courses, lectures, and study tours. Smithsonian staff members teach courses at nearby institutions and around the country, conduct seminars and lectures, and act as supervisors and mentors for undergraduate and graduate students and visiting associates. Each year the breadth and scope of Smithsonian education programs has an impact on millions of students and learners of all ages.

### **Elementary and Secondary Education Programs**

Each Smithsonian museum, research, and outreach unit has an education department with responsibility for planning and implementing programs for students. These programs are interactive and encourage students to use analytical and deductive reasoning skills as they experience exhibitions, demonstrations, and other activities. All museums offer previsit materials such as activity sheets, museum guides, and teachers' guides that provide hands-on lessons for use in the classroom and at home. The museums also offer curriculum packets developed by classroom educators working with museum curators and scientists, which provide multidisciplinary activities. Teaching materials include reproductions of objects, specimens, or artwork; lesson plans with examples of student work; resource lists; and reference information. The Smithsonian Early Enrichment Center introduces preschool-age children to the arts and sciences through objects and exhibits in Smithsonian museums. The center has developed a comprehensive, theoretical framework regarding museum-based education for the youngest audience of museum visitors and communicates these concepts in training seminars for teachers around the country.

More than 6.5 million school children visit the institution each year. Smithsonian education is not, however, limited by physical space or geographic location. The institution is working to dramatically enlarge its audiences and its degrees of engagement with the public throughout the country. Millions more students nationwide can access a wealth of online resources made available by all Smithsonian units and can attend the many programs and exhibitions that the Smithsonian's Office of National Programs sponsors in local museums and schools across the country. Smithsonian museums create comprehensive educational websites with activities for families, teachers, and students. Many of these sites offer interdisciplinary lesson plans that emphasize inquiry-based learning with primary sources and museum

collections. Provided are photographs of objects, guidelines for working with them, and links to other online resources. The Smithsonian's central education website lists standards in science, U.S. history, world history, and visual arts, and it identifies specific collections and online resources from Smithsonian museums that can be used to help address those standards. Initiatives from the Office of National Programs include traveling exhibitions, Scholar in the School programs, teacher development programs, and affiliations with other museums throughout the United States.

### Higher Education Programs

The Smithsonian Institution offers a variety of internship and fellowship programs for undergraduate, graduate, and postgraduate students. An internship at the Smithsonian Institution is a prearranged, structured learning experience scheduled within a specific time frame. The experience must be relevant to the intern's academic and professional goals and to research and museum activities of the institution. An internship is performed under the direct supervision of Smithsonian staff. Internships are arranged by contacting the appropriate internship coordinator at a Smithsonian museum, office, or research institute, or through the Internship Central Referral Service offered by the Smithsonian Center for Education and Museum Studies. Stipends are available to qualified students for several of the institution's internship programs.

Pre- and postdoctoral fellowships at the Smithsonian Institution provide students and scholars with opportunities to pursue independent research projects in association with members of the Smithsonian professional research staff. The Office of Fellowships has the central management and administrative responsibility for the institution's programs of research grants, fellowships, and other scholarly appointments. One of its primary objectives is the facilitation of the Smithsonian's scholarly interactions with students and scholars at universities, museums, and other research institutions around the world. The office administers institution-wide research support programs, and encourages and assists other Smithsonian museums, research institutes, and research offices in the development of additional fellowships and visiting appointments. Applicants are evaluated on their academic standing, scholarly qualifications, experiences, the quality of the research project or study

proposed, and its suitability to Smithsonian collections, facilities, and programs. Stipends and additional allowances are available for most appointments. Scholars and students with outside sources of funding are also encouraged to use the institution's resources and facilities. The Office of Fellowships can facilitate visiting appointments in such cases provided that the investigator obtains approval from the staff member with whom he or she would consult.

### Professional Development

The Smithsonian works with teachers in the Washington, D.C., metropolitan area and throughout the nation. Through special events, for-credit courses, and long-term partnerships, teachers discover innovative ways to meet their teaching objectives using museum resources. These programs support local and national standards and many are approved for in-service credit or recertification points in the District of Columbia, Maryland, and Virginia. The institution also collaborates or partners with various educational, professional, and service organizations, such as the College Board, the International Literacy Network, the National Writers Project, and the U.S. Department of Education to establish models that demonstrate how the use of museum resources and research methodologies can strengthen teaching and instruction at the elementary, secondary, and college level. The Smithsonian is also a leader in providing professional development opportunities for museum professionals in the United States and abroad. The institution sponsors an annual series of training programs in collections care, museum management, and education topics in Washington, D.C., and in museums around the country.

### Family and Continuing Education Programs

Lifelong learning takes many shapes at the Smithsonian. Visitors, whether individuals or with family and friends, can participate in educational programming on most weekends at every Smithsonian museum and, in the summer, at special evening events at the institution's international art museums. The Center for Folklife and Cultural Heritage organizes the annual Smithsonian Folklife Festival on the National Mall each summer, featuring demonstrations, storytelling, and narrative sessions for discussing cultural issues. The Smithsonian Associates (TSA) offers programming for lifelong learners that highlights and complements the work done across the

Smithsonian. TSA's Resident Associate program offers more than 120 programs each month in the Washington D.C., area and also provides educational and cultural programs to audiences outside the Washington, D.C., area, through the Scholar in the School and Smithsonian Voices of Discovery programs, and the Study Tour program, which organizes more than 300 trips each year to locations around the world.

#### INTERNET RESOURCE

SMITHSONIAN INSTITUTION. 2002. <www.si.edu.>

BRUCE C. CRAIG

## SMOKING

*See:* FAMILY COMPOSITION AND CIRCUMSTANCE, *subentry on* ALCOHOL, TOBACCO, AND OTHER DRUGS; RISK BEHAVIORS, *subentry on* SMOKING AND ITS EFFECT ON CHILDREN'S HEALTH.

## SNEDDEN, DAVID (1868–1951)

One of the most prominent educators of the Progressive era, David Samuel Snedden was probably the most articulate advocate of *social efficiency*—a term popularized by Benjamin Kidd in *Social Evolution* (1894) and taken up by Snedden for his approach to design an educational program that reconciled the demands of industrial society with the capabilities and interests of children.

Born on a farm in Kivilah, California, and educated by his mother, Snedden attended St. Vincent's College in Los Angeles, taking the B.A. (1890) and the M.A. (1892). He received his second B.A. from Stanford University (1897) and another M.A. (1901) degree from Teachers College, Columbia University. For ten years he served as teacher, principal, and superintendent at California's schools, then he taught as assistant professor at Stanford (1901–1905), and as adjunct professor at Teachers College, Columbia University (1905–1909). In his dissertation, "Administration and Educational Work of American Juvenile Reform Schools" (1907), he presented the practical and useful education of reform schools as a model for the improvement of the public school system. With Samuel T. Dutton, he coauthored the

first school administration textbook, *The Administration of Public Education in the United States* (1908), in which he pled for a legislative reform that safeguarded the democratic rights of the people, but took school government from politicians, placing it in the hands of experts.

From 1909 to 1916 Snedden served as the first State Commissioner of Education in Massachusetts with Charles A. Prosser as deputy for vocational education and Clarence Kingsley as assistant for secondary education. In 1906, the Massachusetts (Douglas) Commission on Industrial and Technical Education had found that the public schools—including manual training and household arts—did not furnish the skills and industrial intelligence that "students needed to participate effectively in industry and life." As adherent of Herbert Spencer and Edward A. Ross, Snedden shared the commission's view that the American school system was "inefficient" and "undemocratic" since it answered the needs of the small band of theoretically inclined students bound for college, but neglected the interests of the great majority of practically minded youth, who in the United States—contrary to "autocratic" Germany—had no chance of preparing themselves early and thoroughly for their life's work. To deliver industry, commerce, and agriculture the skilled and intelligent workers they needed, Snedden advocated the spread of the project method of teaching and the expansion of the common school system by establishing, besides the traditional high schools for "officers," new vocational schools for the "rank and file." In fact, he institutionalized a wide range of specialized schools and courses in Massachusetts, which taught the skills and techniques of specific callings and reflected their students' intellectual capabilities, vocational interests, and future careers. Like Charles Prosser and Georg Kerschensteiner, Snedden propagated part-time and full-time industrial education and practical project work nationwide as means to secure, through differentiation and learning by doing, equality of opportunity for the individual and economic and social progress for the community.

During his second term at Teachers College as professor of educational sociology (1916–1935) Snedden elaborated his concept of social efficiency and applied it to curriculum construction, civic education, and character building. In *Sociological Determination of Objectives in Education* (1921), Snedden argued that production, as the ability to do, and consumption, as the ability to appreciate, were the two

main components of adult life; but to make the liberal and vocational elements of life effectively teachable, social life had to be divided by empirical analysis into thousands of minute objectives, called “peths,” which were to be organized into “strands” and the more complex “performance practices.” Here, Snedden adopted the concept of scientific management originally developed by Frederick W. Taylor for the raise of industrial productivity, and transferred to school and teaching by Franklin Bobbitt. Like Bobbitt and W. W. Charters, Snedden believed that scientific curriculum-making took school education out of the stone age into the industrial present. It supplied teachers with lists and catalogs enumerating in detail the abilities, attitudes, habits, and forms of knowledge that would increase their students’ social efficiency and would help them to survive and advance in the struggle of life. His book *Educational Sociology* (1922) became a standard in the field; it promoted the idea that each subject—history as well as Latin and mathematics—had to meet the test of social usefulness and that the efficient society resembled a winning “team group” with above-average people as leaders and the rest as followers: each group was trained for its specific role and fulfilled its proper function. Like all Progressive educators, Snedden opposed the traditional ways of abstract, unreal, and bookish instruction; at the same time, he criticized his colleagues for an over-emphasis on growth, creativity, and self-realization. His debates with John Dewey, Boyd H. Bode, and H. Gordon Hullfish about liberal education, democracy, and social predestination demonstrate his belief in the value of specific instruction, expert knowledge, and scientific inquiry.

*See also:* VOCATIONAL AND TECHNICAL EDUCATION, *subentry on* HISTORY OF.

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MICHAEL KNOLL

## SOCIAL CAPITAL AND EDUCATION

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Social capital refers to the intangible resources embedded within interpersonal relationships or social institutions. Social capital can exist in three major forms: as obligations and expectations, as information channels, and as social norms. Obligations and expectations can be conceived of as a “credit slip” that people hold, and that can be cashed when necessary. Information channels provide appropriate information as an important basis for action. Social norms provide the criteria for rewarding or sanctioning individual actions.

In the context of education, social capital in the forms of parental expectations, obligations, and social networks that exist within the family, school, and community are important for student success. These variations in academic success can be attrib-

uted to parents' expectations and obligations for educating their children; to the network and connections between families whom the school serves; to the disciplinary and academic climate at school; and to the cultural norms and values that promote student efforts. The concept of social capital is a useful theoretical construct for explaining the disparities in students' educational performance among different nations.

In the 1980s James Coleman developed the concept of social capital to conceptualize social patterns and processes that contribute to the ethnic disparities of student achievement. He argued that the educational expectation, norms, and obligations that exist within a family or a community are important social capital that can influence the level of parental involvement and investment, which in turn affect academic success.

At the family level, parents' cultural capital and financial capital become available to the child only if the social connection between the child and the parents is sufficiently strong. Youths from single-parent families or with larger numbers of siblings are more likely to drop out of high school because of the eroded social capital associated with the nontraditional family structure. As new structures of the household in modern society become more prevalent, many linkages and activities that provided social capital for the next generation are no longer present, and their absence may be detrimental to children's learning.

At the institutional level, disciplinary climate and academic norms established by the school community and the mutual trust between home and school are major forms of social capital. These forms of social capital are found to contribute to student learning outcomes in East Asian countries such as Singapore, Korea, and Hong Kong. They have been shown to have a significant impact, not only on creating a learning and caring school climate, but also on improving the quality of schooling and reducing inequality of learning outcomes between social-class groups.

In summation, the concept of *social capital* is a useful tool for understanding differences among student learning outcomes. Nations with high stocks of social capital are more likely to produce students with better academic performance than nations with low stocks. However, studies by Pamela Paxton, and Michael Woolcock and Deepa Narayan, have noted

that high levels of social capital could restrict individual growth and societal development. Further analysis is needed to identify the potential negative impact of high social capital.

*See also:* COMMUNITY EDUCATION; FAMILY, SCHOOL, AND COMMUNITY CONNECTIONS; PARENTAL INVOLVEMENT IN EDUCATION; SOCIAL COHESION AND EDUCATION.

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SUI CHU ESTHER HO

## SOCIAL COHESION AND EDUCATION

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Social cohesion is said to be high when nearly all members of a society voluntarily "play by the rules

of the game,” and when tolerance for differences is demonstrated in the day-to-day interactions across social groups within that society. But how does social cohesion occur?

### **Background: Social Cohesion and Development**

One principal lesson of history is so obvious that it is sometimes ignored. Economic development is made possible through human cooperation. Cooperation offers the possibility for individuals and nations to accumulate or maximize economic gains that have resulted from creative enterprise and the trade that that enterprise engenders. Because of the complexities of measurement, this branch of economics, institutional economics, is not the most well known, but basically concerns the study of these mechanisms for human cooperation and how they work.

Two elements seem to make cooperation possible. First are the institutional rules that guide all types of organizations. Second are the stabilizing traditions within the organizations themselves.

Institutional rules include codes for public conduct, norms for private behavior, manifest statutes, common law, and contracts among individuals and organizations. An organization consists of groups of individuals bound together for a common purpose. Stabilizing traditions within each organization differ from one another. There are many types of organizations, but, in general, they can be reduced to four basic categories: (1) political organizations (the honesty and transparency of courts, legislatures, and the executive branches of government); (2) social organizations (shared moral principles of church groups and voluntary associations); (3) economic organizations (the quality of corporate governance, the adherence to legal procedures when acquiring and promoting employees); and (4) educational organizations, schools, and universities).

Each type of organization makes its own contribution to social cohesion. Political organizations arrange the debate and establish the means for public policy. Economic organizations arrange entrepreneurial endeavors and generate income. Social organizations sponsor altruistic endeavors that bind people to moral norms. A discussion follows regarding the social function of schools and why nations invest in schools.

### **Social Functions of Education**

Some, such as Robert Bates, suggest that the inability of societies to develop low-cost and effective self-regulating mechanisms for enforcement of social contracts prevents economic development.

**The social contract.** The concept of a social contract is broader than a legal contract. A social contract includes for instance, a willingness to pay taxes and fulfill other public obligations; it may include the willingness to participate in public affairs, maintain cleanliness of one's property, act responsibly, or be a good citizen. In instances where a society's general philosophy, such as racial tolerance for one's fellow citizens, conflicts with one's private opinion, the social contract of racial tolerance is expected to take precedence, particularly in public forums. Countries that lack economic development are often associated with an environment in which contracts are not enforceable by any mechanism, and most certainly are not self-regulating.

People are more likely to adhere to social contracts under certain conditions. They are more likely to adhere to contracts when they do not consider each other as cultural “strangers”; that is, when they have more understanding of each other as people, as citizens of the same country or as citizens of a “similar” country where it is believed that the same norms and expectations govern social contracts. People are more likely to adhere to social contracts when they have a greater understanding of the reasons for those contracts, and are more knowledgeable about the sanctions that may be expected in the event of non-compliance. The most common mechanism for achieving compliance is through the state, particularly through the state's authority to sanction. But states can become tyrannical. In a tyranny, those who run the state may force compliance in their own interest at the expense of the rest of society. The challenge then is to achieve compliance without tyranny.

The most effective check against tyranny is a public consensus on the definition of tyranny; on the rights of those who believe they are the objects of tyranny; and on the obligations and responsibilities of those who use coercive power. Such a consensus makes it more difficult for tyranny to occur because it can be more easily identified and controlled. How can this public consensus come about, and more importantly, how can it be passed to the young?

**The mechanisms of education's social functions.** Education should contribute to social cohesion in

four ways. First, schools ought to teach the rules of the game: those that govern interpersonal and political action. They consist of the social and legal principles underpinning good citizenship, obligations of political leaders, behavior expected of citizens, and consequences for not adhering to these principles. Schools can also facilitate a student's appreciation for the complexity of issues related to historical and global current events and, in so doing, may increase the likelihood that a student will see a point of view other than his or her own. By teaching the rules of the game in this manner, schools foster tolerance and lay the groundwork for voluntary behavior consistent with social norms.

Second, schools are also expected to provide an experience roughly consistent with those citizenship principles, in effect, decreasing the "distance" between individuals of different origins. The educational experience derives from a wide variety of activities, whether in the classroom, the hallway, schoolyard, playing field, or bus. The degree to which a school may do this well depends on its ability to design the formal curriculum, its culture, and the social capital of its surrounding community. The purpose for providing experiences that are consistent with the principles of citizenship is clear. Both formal and informal social contracts require elements of trust among strangers—to the extent that the socialization of citizens from different social origins allows them to acknowledge and respect each other; that is, decreasing the "distance." If the educational task is done effectively, this allows political institutions to adjudicate differences and economic institutions to operate efficiently.

Third, school systems are expected to provide an equality of opportunity for all students. If the public perceives that the school system is biased and unfair, then the trust that citizens place in various other public institutions is compromised. For instance, the willingness of adults to play by the rules of the game may be compromised if fairness in the system appears suspect.

Fourth, public schools are expected to incorporate the interests and objectives of many different groups and at the same time attempt to provide a common underpinning for citizenship. Often there are disagreements over the balance between these objectives. These disagreements must be adjudicated. Adjudication can be accomplished through many mechanisms—public school boards, professional councils, parent-teacher associations. The

success of a school system is based in part on its ability to garner public support and consensus, and hence its ability to adjudicate differences over educational objectives.

Adjudication is not an easy task. Schools vary in the manner by which different groups' interests are accommodated. This is particularly the case when teaching local history. Some teachers avoid areas where problems are likely; some address sensitive areas more fully; others proactively seek out opinions and views to ensure that consensus is reached over what and how to teach. Schools differ also in the success of these efforts. For example, while it is true that the Alamo constitutes an important juncture for Texas and U.S. history, it is also true that motives—on both sides—were multiple and conflicting. And while it is true that civil rights in the American South can be characterized as a struggle for minority inclusion, it is also true that courage on that issue could be found among whites as well as minorities. This ingredient of education's contribution to social cohesion concerns the degree to which schools help students understand and weigh alternative explanations and incorporate the lessons of multiple points of view without losing a common moral rudder.

These four mechanisms constitute the manner by which education might contribute to social cohesion. But given that education is but one of four categories of social organizations that can make a social cohesion contribution, the degree to which education makes a larger or lesser contribution than political, social, or economic institutions has not been calculated. What is known is that social cohesion itself is quite important for the future stability of nations, and the more research available to quantify the constructive mechanisms necessary to effect it, the more likely it is that citizens can live in a harmonious environment.

## **Education and Social Cohesion in the U.S.**

### **Context**

Thomas Jefferson first argued for a literate citizenry in America's fledgling democracy: democracies require that citizens understand political institutions and evaluate the claims of politicians—capacities that would protect the democracy from various forms of demagoguery. By the mid-nineteenth century, however, the role of education had expanded. As immigrants began arriving from non-Protestant countries, educator Horace Mann's advocacy for the

common school was one among several efforts to build a system of public schools that could create one nation from many peoples—peoples who differed not only in class origins, but also in their ethnic and racial origins, and religious commitments.

In the early twenty-first century, however, the foundations for social cohesion have shifted. Well into the twentieth century, Americans understood social cohesion as the outcome of assimilating peoples of diverse religions, ethnicities, and social groups into a nation with common values and language. That perception has changed. The use of Spanish by both presidential candidates in the year 2000 campaign confirms a new understanding of social cohesion—taking shape since the 1970s—that fosters accommodation, not simply assimilation, of diverse groups. The number of Hispanic and Asian persons in this nation has, according to the most recent U.S. Census, increased by more than 50 percent. Diversity in ethnicity and religion is pervasive in small towns as well as large urban areas. Social cohesion must be built among these increasingly diverse populations: a cohesion that constitutes a pervasive commitment to voluntary compliance to broadly constituted social norms and to active tolerance for differences among social groups.

Paradoxically, American concern with the apparent breakdown of social cohesion is not a simple extension of the growing diversity. Rather, the focus of concern and debate is within schools that on the surface have considerable racial and social homogeneity, but reveal many social fractures that presumably lead to antisocial behavior. Although national statistics show school violence has decreased, its distribution and causes appear different; namely, more suburban and rural incidents occur that are unrelated to gang activity. School violence in Colorado, California, and Arkansas, to name a few states, led to considerable debate in the media regarding the relative effects of school organization, American culture, and parenting practices on the behavior of adolescents. In the early twenty-first century, lawmakers in Colorado, Washington, and Oregon have legislation pending that would require each school district to have a policy directed at student bullying. Similar legislation has already passed in Georgia, New Hampshire, Arkansas, and Delaware. Some states require mediation, others give new powers to schools to discipline students.

Yet antisocial behavior, such as bullying, is not new. It is an ancient phenomenon, and it provided

a classic character in much of children's literature. What has changed, though, is the institutional character accorded to schools in the United States. The discretion in 1932, for instance, that Willard Waller's teachers had to inculcate roles and responsibilities of citizenship has been greatly attenuated by court decisions and the often-adversarial role assumed by parents as documented by Gerald Grant in 1988. The links between community and school have been weakened through different catchment areas for schools and dual-income families. Even the framework for providing welfare benefits has affected how families can be involved in their children's schooling. Other scholars emphasize (usually with different rank orderings) weak parenting skills, fractured school cultures, anomic communities, technological access to hate-group propaganda (such as the Internet), and easy access to weapons. Yet, the level of social cohesion in schools is not manifest simply by presence or absence of antisocial behavior, it is also manifest in positive actions of civility, reflecting trust and tolerance across social groupings of students.

Social cohesion is a desired outcome of schooling, but its significance extends beyond that. Social cohesion can also affect the academic achievement vulnerable students—those whose commitment to schooling is weak and is further compromised by schools with weak social cohesion.

Educators and commentators have argued that schools contribute more to the well-being of children and the larger society than academic achievement, yet the introduction of massive systems of accountability have diminished the value of other contributions. This work will create a measure of social cohesion outcomes, and therefore may broaden the discussion over the contributions of schooling, allowing the national debate, for the first time, to include the other important outcomes, which the public expects from its education system.

International analyses of citizenship in emerging democracies provide a greater appreciation of the role of schooling in building social cohesion. A growing consensus has emerged globally on the nature of the civics education curriculum. With many new nations aspiring to become stable democracies, the varying conditions that challenge social cohesion are more apparent. Thus, the educational contribution to social cohesion and the measure of social cohesion performance must be culturally specific to the challenge at hand. In the United States, heteroge-

neity, geographic mobility, and impersonal social relations present relatively unique challenges to social cohesion.

### New Challenges

In the early twenty-first century school systems face social cohesion challenges that have little historical precedent. Expectations for what students should know and be able to do are not determined simply by economic needs, but also by what it takes to perform the responsibilities of citizenship adequately. Participating in political discourse in the eighteenth century did not require as much understanding of science or statistics. In the twenty-first century citizens need to make judgments about issues with strong statistical underpinnings—the evaluation of competing claims over health and the environmental risk, the use of genetically altered foods, choice of sexual behavior. In essence the citizenship standards for literacy and numeracy have risen.

Also, the foundations for social cohesion have shifted. Well into the twentieth century, social cohesion was understood to be the outcome of assimilating peoples of diverse religions, ethnicities, and social groups into a nation with a common language and values. That has changed. A new understanding of social cohesion fosters accommodation, not simply assimilation. It often requires compromise and redefinition of the “typical citizen” from many sides, including by the majority as well as minority population.

In some parts of the world, challenges to social cohesion are not a simple extension of growing social diversity. Street violence in Rio de Janeiro, corruption in public service in Asia, the provision of social services by drug lords in South America and by mafia figures in Italy and Russia, the egocentric consumerism among suburban youth—these trends pose problems of a different sort. In these instances, the task of the public schools is much broader than forging ethnic harmony.

The twenty-first-century challenge of education in eastern and central Europe and the former Soviet Union might be analogous to that faced by education in Europe and North America in the early nineteenth and twentieth centuries. New nations must be forged, at peace within themselves and tolerant of their often divergent neighbors. But so far the record of success is mixed.

In fact school systems are neutral as to the direction of their influence. They are like a sharp tool—a

knife or a saw. School systems can fashion views, which lead to social cohesion, or they can do the opposite. In the case of Sri Lanka, pedagogical materials as early as the 1950s led to the opposite situation. The dominant historical image portrayed in textbooks was that of a glorious but embattled Sinhalese nation repeatedly having to defend itself and its Buddhist traditions against the ravages of Tamil invaders. Tamils were portrayed as historical enemies. National heroes were chosen whose reputations included having vanquished Tamils in ethnic-based wars. Segregated in their own schools, Tamil textbooks emphasized historical figures whose reputations included accommodation and compromise with the Sinhalese. In neither the Tamil nor the Sinhalese texts were there positive illustrations drawn from the other ethnic group. There were few attempts to teach about the contribution of Tamil kings to Buddhist tradition, or the links between Sinhalese kingdoms and Buddhist centers in India. Language texts were largely monocultural with few positive references to other ethnic groups.

Because texts were culturally inflammatory and because there was no effective effort to balance the prejudice stemming from outside the classroom with more positive experiences, the Sri Lankan schools can be said to have achieved the opposite of the intention of good public systems. Instead of laying a foundation for national cooperation and harmony, they helped lay the intellectual foundations for social conflict and civil war.

The former Yugoslavia provides a more recent illustration. Here is a 1994 civics textbook intended for twelve-year-olds in Bosnia:

Horrible crimes committed against the non-Serb population of Bosnia and Herzegovina by Serb-Montenegrin aggressors and domestic chetniks were aimed at creating an ethnically cleansed area where exclusively Serb people would live. In order to carry out this monstrous idea of theirs, they planned to kill or expel hundreds of thousands of Bosniaks and Croats . . . . The criminals began to carry out their plans in the most ferocious way. Horror swept through villages and cities . . . . Looting, raping, and slaughters . . . screams and outcries of the people being exposed to such horrendous plights . . . Europe and the rest of the world did nothing to prevent the criminals from ravaging and slaughtering

innocent people. (Bosnia and Herzegovina, Ministry of Education, Science and Culture, 1994)

Whether the events occurred or not is an issue separate from whether the text is appropriate. The public school experience is intended to mold desired behavior of future citizens; therefore citizens of all different groups must feel comfortable about the content. If one group is uncomfortable then the school system has abrogated its public function. This is an example of where that abrogation of public responsibility occurred.

The lessons could hardly be clearer. Many organizations have taken an interest in the problems of social studies and civics education out of professional concern about the possible implications of interethnic and national tension. These organizations include the United Nations Development Programme (UNDP), United Nations Educational, Scientific and Cultural Organization (UNESCO), the European Union, the Council of Europe, United Nations Children's Fund (UNICEF), the Soros Foundations, and many others.

So sensitive have been the threats to peace and stability that military organizations have developed a new concern over education on the premise that interethnic tensions expressed through education could well constitute a risk to peace in the region. The Organization for Security and Cooperation in Europe (OSCE) for instance, established a High Commissioner on National Minorities, based in The Hague. The High Commissioner has already issued recommendations pertaining to the education of the Greek minority population in Albania, the Albanian population in Macedonia; the Slovak population in Hungary, the Hungarian population in Slovakia, and the Hungarian population in Romania. In 1996, the High Commissioner requested assistance from the Foundation on Inter-Ethnic Relations to work on a possible set of guidelines governing the education rights of national minorities. After considerable discussion and consultation, these guidelines, known as The Hague Recommendations, were published in 1997 and can be added to the many other international conventions and regulations that attempt to identify and to protect the educational rights of children and various subpopulations. These include the Polish Minorities Treaty of 1919; the UN Universal Declaration of Human Rights in 1948; the UNESCO Convention against Discrimination in Education in 1960; the UN Declaration on the Rights of the Child

in 1959; the subsequent UN Convention on the Rights of the Child in 1989; the European Convention on Human Rights and Fundamental Freedoms in 1950; the Council of Europe's Framework Convention for the Protection of National Minorities in 1995; the UN Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities in 1992; the Council of Europe Charter on Regional or Minority Languages in 1992; the UNESCO Declaration on Race and Racial Prejudice in 1978; the Copenhagen Declaration of the Conference of the Human Dimension in 1990; and the UN Universal Declaration of the Rights of Indigenous Peoples in 1993.

In general these covenants and conventions pertain to the problems of populations that may be subjected to discrimination and prejudice. They concern the right to be educated in one's native tongue, the right of fair access to more selective training in higher and vocational education, freedom from discrimination, cultural bias, and the like. Although these issues are indeed important, effectively they address only one-half of the problem.

The other half of the problem pertains to the rights of the majority or the rights of the national community. Their educational interests are no less compelling: the Kazakhs in Kazakhstan; the Latvians in Latvia; the Romanians in Romania, and so forth. What protects the national community from extremist versions of history as portrayed by curricula designed by minority populations? What are the rights of the national community for having a sense of compromise and historical dignity ascribed to their national culture by minority populations in their own country? What protection does the national community have against the possibility that a minority community within the same country may encourage loyalty to another nation where their ethnic group is more numerous? The problem of civics education has multiple sources, and therefore must involve multiple solutions. Not all solutions can be incorporated under the auspices of the "rights of minorities." None of these conventions address this other side of the equation.

### Final Thoughts

Although the notion of public schooling was established in seventeenth century, it is not true to suggest that the educational challenge in modern era is analogous. The fledgling nation-states of the seventeenth century required social cohesion, but they often used

a central authoritarian system to achieve it. The techniques of nation-building in Africa, Latin America, and eastern Europe and the former Soviet Union today are not uniform, but for the most part they have emerged from an era of extreme authoritarianism into one more tolerant of divergence and local opinion. This complicates matters considerably. Not only are nations in the early twenty-first century faced with achieving cohesion, they are faced with the difficulties of achieving it, for better or worse, through widespread participation in the rules of engagement and flexibility as to its direction.

*See also:* CIVICS AND CITIZENSHIP EDUCATION; INTERNATIONAL ASSESSMENTS; MORAL EDUCATION; SOCIAL ORGANIZATION OF SCHOOLS; VIOLENCE, CHILDREN'S EXPOSURE TO.

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## SOCIAL FRATERNITIES AND SORORITIES

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The American college Greek-letter societies, consisting of fraternities and sororities, remain a popular form of association for students on college campuses in the early twenty-first century. Known as the oldest form of student self-governance in the American system of higher education and called perhaps the clearest example of a student subculture, fraternities and sororities have been a force on college campuses since 1825. The fraternity or sorority ideal cherishes and embraces all of the characteristics of a campus subculture: residential proximity through the chapter house, transmission of norms and values to the membership in a concrete and systematic way, a history of longevity, and social control for conformity. Artifacts, symbols, rituals, and shared assumptions and beliefs add significantly to the shared initiatives of scholarship, leadership development, service to others, and fellowship among members.

### History

The American fraternity traces its genesis to the emergence of literary societies in the late eighteenth century. Debating and literary societies, whose names evoked memories of ancient Greece, emerged as purveyors of forensics, but their main contribution was that they were primary social clubs contrasting with the bleak campus dormitories. The elaborate lounges and private libraries they maintained outstripped those operated by colleges. As quickly as the literary societies filled the curriculum

vacuum of the early college student, the fraternity emerged to fill the social needs of the more independent college students.

The need for a distinct counterpart for women became evident early on college campuses, especially in women's colleges. For many years, societies for young women bearing Greek and classical names were common at women's colleges and academies and were organized similar to fraternities. The first fraternity for women was Alpha Delta Pi, founded as the Adelphean Society in 1851. Sororities were chartered as women's fraternities because no better word existed. In 1882 Gamma Phi Beta was the first to be named a sorority.

From the beginning, the norms and values of fraternities were independent of the college environment. Since the founding of Kappa Alpha at Union College (in Schenectady, New York) in 1825 as the oldest secret brotherhood of a social nature, fraternities developed with different personalities and histories on each campus. The trappings of an idealized ancient Greece were added to those of Freemasonry to create secret societies dedicated to bringing together young men who were seeking conviviality. Members historically met weekly in a student dormitory room or rented facility for social and intellectual fellowship. To fight the monotony of mid-nineteenth-century colleges, fraternities institutionalized various escapes of a social nature.

In the 1890s the chapter-owned house became a reality and gave a physical presence to the fraternity movement. Supported by prosperous and influential fraternity alumni, the chapter house relieved the need for housing on many campuses. The popular German university model of detachment from the student replaced the English model of providing room and board. Colleges and universities began to shape college life rather than oppose it, and the institutions reluctantly began accepting the fraternity system.

As more and more fraternities occupied their own houses, their interest shifted from intellectual issues to that of running and sustaining a chapter house. The chapter house had great influence upon fraternity chapters. The increasing prominence of the chapter house in the 1920s illustrates the power of this social movement on most colleges and universities. The total number of fraternity houses in the nation increased from 774 in 1920 to 1,874 in 1929, and the subculture was strengthened at state

universities, where half of the students belonged to a fraternity by 1930.

To keep the chapter house full, current members instituted a recruiting method to secure new groups or classes of new members. New students were "rushed" or recruited to become new initiates, commonly called "pledges." Once affiliated, the new pledges were soon put to work doing menial chores and running errands for upperclassmen. This was the beginning of the most troubling and reviled custom, hazing. Old-fashioned hazing generally was punishment for household jobs not done; it was left to later generations to introduce road trips, asinine public stunts and practical jokes, and forms of psychological and physical discomfort.

After surviving the Great Depression and World War II, fraternities returned to campuses in full and more diverse force. As American higher education became more democratic, the fraternity movement confronted the discriminatory nature of its membership policies. Slowly, Greek organizations began to admit members more reflective of the college-attending population. Fraternities and sororities saw great growth during the time between World War II and the Vietnam War. The war in Vietnam and the cultural changes that followed had a negative effect on fraternities. Their traditional and historic loyalty to the college was in direct contrast to social movements of the time. As in the past, fraternity and sorority membership rebounded. During the period between 1977 and 1991 students joined at a greater rate than at any time in the system's history.

The name of fraternities and sororities is usually composed of two or three Greek letters, such as Sigma Pi, Delta Zeta, or Phi Kappa Theta. These letters represent a motto, known only to the members, that briefly states the aims and purposes of the organization. The affiliated branches of the Greek organizations at other colleges are called chapters; they are organized by states or regions and often are designated by a Greek letter, such as Zeta Chapter of Sigma Pi. These chapters are organized under the banner of the national or international organization and are governed through an assembly of delegates and managed through a central office. Incipient chapters are called colonies until they reach full chapter status on new campuses. Almost all Greek organizations publish a journal and maintain close contact with alumni. Many have their own educational foundations.

### Characteristics of Fraternities and Sororities

Fraternity and sorority leaders prefer to use the term *general fraternity* when describing what are commonly called “social” fraternities. General fraternities and sororities can best be described by the umbrella group or coordinating association to which they belong. These organizations are the National Interfraternity Conference (NIC), which represents sixty-six men’s groups, and the National Panhellenic Conference (NPC), which represents twenty-six women’s groups. There still remain many local fraternities and sororities on college campuses that boast of long traditions and have never affiliated nationally. Professional, recognition, and honor societies that use Greek names are organized separately and can include general fraternity members.

It is estimated that more than 10 percent of all college students are members of a Greek-letter society. After hitting a record of more than 400,000 undergraduates in 1990, fraternity membership in the year 2000 in sixty-six national fraternities was estimated at 370,000 and is slowly increasing. In the early twenty-first century, there are more than 5,500 chapters on 800 campuses throughout the United States and Canada. National data suggests that women’s sororities are healthy, with membership in the twenty-six national sororities exceeding 300,000 and the size of the average chapter on the increase. There are 2,913 chapters on more than 630 college and university campuses. Membership in local fraternities and sororities adds significantly to this total, and there are more than 10 million alumni members of Greek-letter societies.

Men’s general college fraternities are mutually exclusive, self-perpetuating groups, which provide organized social life for their members in colleges and universities as a contributing aspect of their educational experience. They draw their members from the undergraduate student body. Women’s general college sororities are primary groups of women at colleges and universities, which, in addition to their individual purposes, are committed to cooperation with college administrators to maintain high social and academic standards and do not limit their membership to any one academic field. Both fraternities and sororities provide unusually rich out-of-class learning and personal development opportunities for undergraduates.

Fraternities and sororities offer an organized and varied schedule of activities, including intramu-

ral sports, community service projects, dances, formal, and parties. The NIC and NPC make convincing arguments that Greek organizations benefit the sponsoring campus, stipulating that students who affiliate with a fraternity are more likely to remain in school and that alumni affiliated with a fraternity make significantly higher donations to the school. There is strong research to back up these claims. Affiliating with a fraternity or sorority enhances the development of mature interpersonal relationships, facilitates the development of leadership skills, teaches teamwork, fosters interchange of ideas, promotes values clarification, and can facilitate the development of sense of autonomy and personal identity. On isolated campuses, Greek organizations may provide the only social life.

Underlying the whole experience is the ritual that is exclusive to each fraternity or sorority. While often incorrectly associated with illegal and immoral hazing activities, a fraternity or sorority ritual is the solemn and historic rationale for an organization’s existence. The ritual is often presented to new members during a serious churchlike ceremony where new members learn the underlying meaning of their respective organizations. Because of the esoteric nature of most Greek-letter societies, usually only members attend these ceremonies. The conflict between these stated ideals and the behavior of undergraduate members on campuses have caused confusion and lack of support for the fraternity system. From the 1980s into the twenty-first century, both constructive and destructive relationships have brought mixed results for fraternities on a number of campuses.

### Reforms and Renewal

Many college administrators have sought to limit the role fraternities play within the social life and have taken a hard stand against illegal hazing and the use of alcohol among Greek members. Sororities have escaped most of the criticism because of their more adamant commitment to scholarship and service, stronger alumni intervention, and encouragement of campus oversight. A variety of concerns have been raised about fraternities, including that they encourage narrow social and academic experiences for members, have restrictive membership policies, practice hazing, discriminate on the basis of sex, perpetuate stereotypes about women, and wield too much power over social life. Also, there are allegations that racism, violence, and discrimination still

exist. Most unfortunately, alcohol- and hazing-related deaths have occurred at fraternity events.

Reforms of the Greek system on college campuses, especially concerning fraternities, range from the complete abolition of fraternities and sororities to investing new personnel and increased resources into improving and enhancing Greek life. Attempts to make fraternities and sororities coeducational have not been successful, and even the U.S. Congress has expressed the belief that colleges should not act to prevent students from exercising their freedom of association, especially off-campus and on their own time. Some colleges have allowed fraternities to remain as approved student organizations but have forced them to separate from and close the chapter house.

Fraternity and sorority administrators agree that the abuse of alcohol is a contributing factor to hazing and is usually the cause of other destructive Greek problems. They have joined college and university trustees and administrators in taking a strong stand against hazing outrages. National fraternities and sororities are spending thousands of dollars educating and developing alternative programs. Hazing is one of the biggest problems facing fraternities and some sororities, who in the past never considered mistreating their pledges. Now every fraternity and sorority has stringent prohibitions against the practice. Members have been expelled and chapters have been closed when charges have been substantiated. Most states have antihazing legislation, and some make it a felony to practice dangerous or degrading activities against pledges or members.

For Greek organizations, especially fraternities, to survive and prosper, undergraduates must take the bans on hazing and alcohol excesses to heart. National officers and students continue to clash over efforts to transform fraternity culture, and many resist any changes that threaten the social aspects of Greek life that originally attracted students to affiliate. At the same time, much has been accomplished. Sororities are addressing eating disorders, such as anorexia and bulimia, and several fraternities have devised pledging programs that emphasize academic development, leadership, and community service while de-emphasizing hazing and alcohol.

Altering Greek life obligates colleges to provide attractive alternatives for housing, dining, and social functions. Many campuses are increasing Greek life budgets and taking an active role in supporting

Greek life and the cultural changes that are necessary to strengthen the experience. Fraternities and sororities, quintessentially American student organizations, remain a positive social option for college and university students in the early twenty-first century.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE AND ITS EFFECT ON STUDENTS; COLLEGE EXTRACURRICULAR ACTIVITIES; COLLEGE STUDENT RETENTION; DRUG AND ALCOHOL ABUSE, *subentry on* COLLEGE.

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MICHAEL A. GRANDILLO

## SOCIAL MOBILITY OF UNDERPRIVILEGED GROUPS

*See:* INTERNATIONAL ISSUES OF SOCIAL MOBILITY OF UNDERPRIVILEGED GROUPS.

## SOCIAL ORGANIZATION OF SCHOOLS

Understanding contemporary schools requires examining their purposes, evolution, structure, and political dynamics. Ordinary ideas of how schools operate are clouded by a number of misconceptions and assumptions. People often think that schools only teach skills and content, such as reading, writ-

ing, and math; or history, English, and social studies. They also think about extracurricular activities, such as football, proms, and childhood peer groups. When visualizing schools, people think of buildings like the elementary, secondary, or tertiary ones they attended. Further, given how politicians talk about their “education agendas,” people assume that most control and funding of schools comes from the state or national government. However, schools do much more than just teach content, and encompass more than individual buildings. Regardless of their size or complexity, schools fulfill a wide range of overt and less obvious functions.

Schools are embedded within districts established by communities to provide both educational and extracurricular activities for young people and a center for social, political, and cultural community events. Moreover, in the United States, schools are preeminently local, not national. They are controlled by locally elected officials and their appointed superintendents, and are largely funded by local property taxes. Thus, what is described here is only typical of schools and districts in the United States, where pressures for *democratic localism* conduce to an almost radical decentralization—at least compared to schools in other countries.

### American Public Schools in Context

In most other countries, a national ministry or office controls curricula, instructional methods, teacher qualifications and salaries, and individual school budgets. In the United States, however, the Constitution specifies that education must be provided by the individual states, which in turn have delegated responsibility for schooling to local communities. While funding for and control over schools in other countries is often shared by the national government and the established church, the U.S. Constitution mandates a marked separation between secular and religious affairs—a mandate with which public schools comply. While strong systems of parochial schools exist in some communities—particularly ones with large Catholic populations—and while private schools, semi-private charter schools, and home-schooling have become increasingly popular, these enroll only a small minority of U.S. children.

Local control—a response to both constitutional silence and to deep-seated cultural aversion in the United States to centralization—is one of the most unique characteristics of American public schools. Nowhere else are public schools so explicitly run by

locally elected school boards. This means that those most active in educational affairs are often business and professional persons, since they are more likely than working and middle-class individuals to have the time and money to run for elected office. The United States also differs from other countries in that more than half of all revenue for schools comes from the local community. The federal government, in fact, contributes only about 7 percent of all educational revenues, and only for specific programs such as school lunches; vocational training; impact aid to districts located on military bases or Indian reservations, which generate no property taxes; entitlement programs to educate disabled and language minority students; and compensatory educational programs for children in economically disadvantaged communities. These patterns of governance and funding make U.S. schools extremely vulnerable to influences from interest groups, taxpayers (particularly property owners), upper- and middle-class residents, and business interests.

Schools and school districts must be understood and analyzed on many academic and organizational levels and in terms of often conflicting demands for their services. Contradictions of goals, purposes, control, and functioning complicate a clear understanding of how schools, broadly defined, really work—in general, and in different communities. Differences in demographic characteristics; economic resource bases; proximity to urban centers; specific constituencies such as labor unions, religious groups, and industries; and historical factors make each school district, and each school within districts, unique.

### The Purposes of Schooling

Schools have multiple purposes, and each of these purposes has its own constituency or advocacy group, and each affects the goals and organization of schools. Since the goals of advocacy groups may contradict one another, schools face important dilemmas that can complicate their organizational structure and goals. As will become clear, schools are called upon to provide solutions to a variety of social problems, including poverty, disability, and illness of students, and the fraying of civic culture.

**Academic competencies: basic skills or college preparatory?** American society asks schools simultaneously to provide job training for children who will not go to college and college preparatory training for those who will. Historically, these two types of train-

ing were provided in separate institutions. Public schools initially were established in the mid-nineteenth century to provide primary school training in reading, writing, computation, and, sometimes, citizenship to the children of poor and working-class families who could not, or would not, educate their children themselves. Public elementary schools supplanted earlier programs of apprenticeship, in which poor and working-class children were apprenticed out to learn a trade, and the masters they worked for were required to teach them basic literacy skills.

Children of the wealthy learned their “three R’s” at home from parents, governesses, or tutors, while secondary academic schooling was provided by private academies with a classical liberal arts and college preparatory curriculum program—and was usually limited to males. Maintaining public elementary training for the lower classes and private secondary academic training for the wealthy reinforced the social class structure, even though private academies offered scholarships to some deserving and needy children. This system gave working-class children sufficient literacy for citizenship and the labor market, and provided advantaged children the academic training, cultural knowledge, and contacts needed to assume positions of leadership in society. The comprehensive public high school that evolved to eliminate this dichotomy has not resolved the tension between these two types of schooling.

David P. Resnick and Lauren B. Resnick (1985) argue that by the beginning of the twentieth century the labor market demanded higher levels of literacy and numeracy for greater numbers of people. However, private academies were too expensive for the masses and insufficient in number to fulfill an increased demand for more schooling. It was for this reason that the American comprehensive high school developed—to provide free secondary education to all children. This “poor man’s academy” was lauded by labor unions and business people because it provided a terminal vocational education for working people, but it was not enthusiastically received by families and communities desirous of distinguishing their children academically, occupationally, and socially from those in vocational training. The result has been an uneasy—and often invidious—system of *streaming*, or *tracking*, in which the same school offers vocational, and often remedial, training; a terminal general education; and an elite college prep program. Since each stream

often serves quite different groups of children, the effect is to house separate institutions within the same building.

**Citizenship: for diversity or uniformity?** American schools are asked to inculcate in children the attitudes, values, and habits needed for good citizenship because, since the family is suited best for developing individual personality, institutions such as schools must provide the overall civic training needed to create allegiance to a uniform set of cultural values and to the society’s political system. This purpose is unambiguous in a homogenous society, but difficult in the polyglot, multicultural United States. Initially, public elementary schools were given the task of *Americanizing* or assimilating immigrant children to the English language, a northwestern European cultural heritage, and the desirable habits of industry, hygiene, thrift, and obedience to the laws.

As *moral* or *civic* education evolved into *social studies* in high schools, its focus changed somewhat to emphasize studies of the American government and economic system and appropriate ways for citizens to vote and participate in legitimate political activity. The overall purpose, however, remains: To create a culturally uniform, English-speaking, and law-abiding citizenry—an increasingly problematic task as the United States has become more culturally, linguistically, religiously, and ethnically diverse. Schools in the early twenty-first century must serve children with mental, physical, and emotional disabilities; children who do not speak or write English; children whose parents are nontraditional, absent, poor, working so many jobs that they cannot participate in their children’s education, or who are themselves disabled, not working, non-English speaking, and poorly educated. Ensuring academic success for such children has required the establishment of a variety of support services, including bus transportation, meals at school, health screenings, counseling, medical care, language training, sex and drivers’ education, and free clothing. This *support service* sector has added many more levels of organization to schools.

Some ethnic groups resist being assimilated to what they perceive to be a white, western European, Christian, middle-class culture, arguing that schools should equally celebrate their own origins, experiences, and heritage. These goals pose a dilemma: Do schools continue to promote assimilation to a uniform version of American life, or do they promote diversity and multiculturalism? If diversity is to be

promoted, how is it to be done? What impact would it have on school structures, curricula, and instruction? Parents of ethnic and language minority children and parents of disabled children form one of the strongest and most vocal advocacy groups in the educational system. Their claims are backed up by constitutional guarantees for “equal protection” and “equal access” under the law. These federal guarantees, however, are left to the individual states and local communities to enforce. These claims, and the services they require, complicate the goals of schools and add yet more departments and staff members to them.

**Schools as centers for social life.** Academic instruction aside, friendship groups and the social activities they participate in are a significant aspect of school life for children. In part, schools must teach children to maintain healthy social relationships. They also have created a wide range of extracurricular activities to motivate students who otherwise underachieve academically. School activities such as drama, music, and competitive athletics also entertain the entire community, while adding departments and sometimes diverting resources from instruction. Athletics in particular is a significant consumer of school space, time, money, and staff energy.

### Defining Organizations and Bureaucracies

Schools are usually described as organizations or bureaucracies. These terms have technical meanings that often conflict with popular understandings. Social scientists define *organizations* as social structures that (a) possess a distinct set of goals agreed upon by their members, (b) operate under uniform rules and stable patterns of interaction, (c) are governed by a system of authority, (d) recruit members and resources to implement their purposes, and (e) maintain autonomy in decision-making.

Bureaucracies, or complex organizations, have goals and operations large and complex enough to require a staff division of labor or specialization, and to create rational and standardized sets of procedures for employees to do their work. These procedures include standards—such as job descriptions—for carrying out specific tasks or occupying specific positions. Authority and decision making in bureaucracies is hierarchical, governed with each staff member held accountable to those in higher positions. Superiors hold their positions because they have demonstrated that they are competent to do so. Bureaucracies resemble a typical hierarchical organi-

zational chart, and most businesses, government agencies, social services agencies and schools are bureaucratized.

**Unrealistic assumptions: schools as bureaucratic hierarchies.** The bureaucratic model assumes clear-cut and unambiguous goals and authority structures, consistent systems of accountability, operations based on exercise of professional judgment and rational logic, clear and fair operating rules, and the capacity to generate sufficient resources to carry out necessary tasks. If a superior gives orders, it is assumed the subordinate will follow them or risk sanctions. If funds are needed to operate, they can be generated and controlled. While these assumptions may well characterize most businesses, they do not typify schools. This is problematic, since the business people who often are key players on school boards may have difficulty discerning differences between how schools and the businesses with which they are more familiar operate. This causes strain between expectations for, and assumptions about, what schools should do and what they can actually deliver.

In addition, American culture values business-like models more over diffuse structures such as those in schools—so much so that many systems in schools, including supervisory patterns, age-grading, fifty-minute periods, systems of accountability, and ergonomic desks, all derive from the Scientific Management movement of the 1920s. This movement, which revolutionized industrial practice, was enthusiastically applied to educational institutions as well.

### Organization and Funding of Schools and Districts

School districts generally encompass the elementary grades, which include kindergarten through grades 5 or 6; middle (grades 6 through 8) or junior high schools (grades 7 through 9), and high schools (grades 9 or 10 through 12). Some districts also include preschools and a two-year community college. Elementary schools are relatively small (300 to 1,000 students) and located in relatively homogenous neighborhoods. Middle schools and junior high schools are larger, and usually include the enrollments of several elementary schools. High schools are larger still; many communities have only one.

Schools also group within grade levels by ability for ease of instruction. Most elementary classrooms divide children into high-, middle-, and low-ability

groups for basic subjects such as reading and math. Tracking begins in middle school or high school as students are grouped by ability and occupational destinations into college preparatory, general, and vocational curricula. These tracks tend to divide the academically able students from those who are not. Because vocational training does not prepare students for college (and vice versa), it becomes more and more difficult to change tracks as a student progresses further in school. Thus, early tracking has serious consequences for children, as small initial differences in skills learned are magnified with each successive year.

Instructional functions are carried out in the individual school buildings, each of which is administered by a principal. Middle schools and high schools also have several assistant principals and secretarial staff. The central office, under the leadership of the appointed superintendent, provides overall supervision of the individual schools, coordination of all instructional and support services, and staff development for teachers and administrators. The central office also houses offices for school board members; legal, personnel, and financial departments—and departments for research, evaluation, testing, and accountability; grants development; and enumeration and monitoring of student attendance. Central office staff are geographically located at some distance from individual schools, which can make close surveillance of activities in them difficult.

**The structure of schools.** Schools are divided into levels according to the age of students. Elementary teachers generally teach all subjects to one group of students in the same classroom year-round. They usually are assisted by resource teachers for disabled and language minority children, and, where resources allow, by special teachers for instruction in physical education, art, music, and computers. Middle schools and junior high schools are departmentalized or specialized—teachers teach only in their areas of specialization, and students move periodically from room to room for each content area. In the sixth and seventh grade, students may be grouped so they attend classes together with the same four or five teachers; however, by eighth or ninth grade, the *high school model* prevails. Here, students are scheduled according to the availability of the classes they choose to take. In middle and high schools, teachers are departmentalized by subject area—such as English, French, Spanish, biology,

business practice, social studies, mathematics, and physical education.

Larger schools can offer more subjects, and they have more departments. Large size, then, can be an advantage, but it creates social costs in terms of alienation and isolation for students and teachers, who cannot know all their classmates or students. Although team teaching and sharing classrooms exists; these innovative practices are rare. Most teachers teach by themselves; only elementary school teachers and teachers with severely handicapped children generally have aides. This isolation can impede collegiality, opportunities for teachers to learn from each other, and their capacity to organize; however, the *autonomy of the closed door*, as Dan Lortie calls it, also serves to insulate teachers from excessive supervision by their principals.

**Coupling and control.** Patterns of what Lortie calls *variable zoning* ensure that overall control is fragmented in schools. Individual offices or personnel in schools have jurisdiction only over specific activities. Teachers control delivery of instruction, though the type of instruction and assessment may be imposed upon them by principals, the central office, or state mandates. Teachers also control management and discipline of students and how time is organized within the class period or day. School-level administrators handle overall coordination; disbursing the budget; assigning and scheduling teachers and students to classes; hiring and firing building staff; maintaining relationships with other schools, the central office, parents, and the wider community; and providing an overall instructional and managerial vision for school operation.

Within buildings, principals seldom can supervise the day-to-day activities of teachers; likewise, teachers' choices of materials and activities are limited by priorities established by the principal, central office, and community. Central office staff are responsible for carrying out the dictates of the school board, mediated by professional judgments about the best way to educate children and operate schools. They oversee overall planning, staff development, administration, public relations, fundraising and financial planning, hiring, accountability, and research and evaluation, and they coordinate all service and support activities.

Dispersion of physical units within school districts, as well as the discreteness of individual classrooms, also fragments control because it creates,

according to Karl E. Weick, *loose coupling*, or difficulty in assuring that directives from supervisors are carried out by subordinates. Neither school boards, nor superintendents, nor principals can assume that orders given will always be carried out as desired. Some scholars, such as John W. Meyer and Brian Rowan describe American schools as “decoupled,” while Cora Marrett (1990) argues that inner-city schools actually are “uncoupled”—following no upper-level directives at all. This poses dilemmas for educators. Fairness and the need for teachers to build on what children have learned previously requires that all children at each grade level be provided the same quality, type, and quantity of instruction. However, despite the responsibility of principals and central office staff for enforcing some degree of uniformity in instructional practice and policy, individual neighborhoods can exercise considerable leverage to distinguish the instruction their children receive from that in other neighborhoods. Further, individual districts can resist policies mandated by states or the federal government. Some mandates, such as desegregation of schools and services to students with disabilities and language minority students, have been ignored by states and districts for decades.

Even when districts try to implement specific policies regarding instruction, individual teachers can avoid compliance by simply neglecting to follow guidelines unless they are observed by supervisors. Further, in transferring some aspects of decision-making authority to school principals, some popular organizational reforms, such as shared decision-making and site-based management, can complicate district attempts to institute overall reform, since principals in *site-based* districts argue that they alone have responsibility in their buildings. Nevertheless, current reforms, which include state-mandated accountability systems, require schools to meet uniform academic standards for test performance or face consequences such as loss of funds and accreditation, or wholesale firing of administrators and staff.

**Budgets and funding.** Looseness in organizational structure is paralleled by looseness in budgeting and fund-raising. The public often fails to understand why schools cannot simply buy the materials and teachers they need. However, school budgets are based on school board priorities and superintendent decisions. Since individual principals usually receive their allotment of funds, and even the individual cat-

egories of expenditure, yearly, the degree of control exercised over expenditures at the building level may be very small. District level constraints also exist. The majority of school district revenues come from local real-estate taxes. Although a few communities have given their school boards—within limits—the authority to establish tax rates, rates usually are controlled by voters, who periodically must approve requests both for school tax levies and the bond issues used for major capital expenditures such as construction of new buildings. Districts that experience emergencies—such as a sudden influx of needy immigrant students, destruction of a building by fire or its sudden obsolescence because of new earthquake codes, or radical increases in enrollment because of explosive population growth in the community—cannot quickly raise funds to meet their needs. School personnel and their supporters cannot compel, they can only argue persuasively for, additional funds. Further, they must await the usual political cycle to request increased funds from the voters, who can vent their displeasure over taxes in general by disapproving the only taxes they directly control.

Similarly, districts have little control over revenue received from state foundational funds, called *ADA* because they are calculated on the *average daily attendance* of all students in the district. States raise educational funds from a variety of sources, including gasoline taxes, lotteries, and sales taxes. They give each district a certain amount for each child enrolled in mid-October; these funds are intended to “equalize” educational provisions across districts. However *ADA* is the same for children in all communities. Since communities vary widely in the value of their real property, and since they are not limited in the amount—above foundational funding—they can generate locally, wide inequities exist in educational services. Not only can rich communities generate more money than poor ones, their residents pay fewer taxes, proportionately, than those in poor communities with decaying housing and little industry. Poor communities often struggle to cover the cost of minimal educational services.

Politicians, including school board officials, often are elected on the basis of promises to reform or redirect educational policies and practices. In fact, their ability to do so is severely curtailed by their inability to affect already established budgets and revenues. Over the years, few attempts to change the local nature of school funding have been successful. States that have tried *equalization*—giving a larger

share of foundational funding to poor districts and correspondingly less to rich ones—have met strong opposition from well-funded communities reluctant to lose their privileged economic position. Federal funds cannot make up the difference, as they are earmarked for specific programs and constitute only a minuscule proportion of overall educational cost.

### **Reform Issues: Recurring Problems and Proposed Solutions**

While parents usually say that they are satisfied with the schools their own children attend, their support has been dropping since 1983. A significant segment of the public in the United States has always been dissatisfied with the education system. This is understandable, given that many segments of the population hold expectations for schools that either cannot be met or are contradictory. David Berliner and Bruce Biddle also suggest that the declining confidence in American schooling is a crisis “manufactured” by political conservatives to usher in the privatization of public schools.

Typical solutions proposed for real or imagined school failure often involve instituting changes in the organizational structure and patterns of control in schools and districts. Reforms proposed since the 1970s are discussed below. These reforms have attempted to improve student performance by changing power balances in schools and districts; raising standards; increasing assessment; creating smaller organizational units; changing on-the-job training for teachers; increasing local control of schools; giving public-education funds to parents, semi-private, and private schools; and devolving more autonomy to teachers and principals.

**Decentralizing pathological bureaucracies.** Believing that “bigger is better,” Americans consolidated their school districts, reducing the total number of school districts by more than 80 percent from 1930 to the 1970s. Consolidation created larger funding bases and greater variety in course and curriculum offerings, but it also required districts to provide transportation for students who could no longer walk to nearby schools, weakened immediate neighborhood and community control of schools, and increased bureaucratization of educational administration.

However, by the 1970s, public disaffection with district size; excessive diversion of revenue to administration at the expense of instruction; lack of re-

sponsiveness to the needs of local neighborhoods, particularly minority communities; and, at times, administrative mismanagement and corruption led to the decentralization movement. Decentralization created subdistricts within larger ones. The superintendent’s office retained overall coordination and fund-raising responsibility, but many other functions were delegated to subdistrict offices. Decentralization reformed “pathological” school bureaucracies unable to reduce corruption and operate effectively and made schools more responsive to immediate communities.

**Localism: giving control to schools and communities.** While decentralization dismantled and reduced the authority of central school-district administrations, localism went further. Three approaches dominated: site-based management, shared decision-making, and creating school-based school boards. All of these approaches weakened the central administration’s ability to direct and coordinate overall district policy. Site-based management devolves decision-making powers in specific areas such as curriculum, hiring and firing of teachers, instructional methods, and even disbursement of budgets to school principals. They, in turn, can make all such decisions themselves, or engage teachers, staff, and sometimes parents in shared decision-making. School Improvement Teams (SIT teams) consisting of parents and teachers are popular; their responsibilities can include everything from fund-raising and volunteer services to actual policy decisions. While parents often participate enthusiastically, recruiting effective parent groups that include working-class and minority parents can be difficult. Shared decision-making not only dilutes the power of the principal, but can cause work overload for teachers, who argue that they do not have time to both teach and run the school.

**A Nation at Risk: assessment and standards.** While decentralization and localism addressed school responsiveness to constituencies, it did not affect student achievement. In the early 1980s conservative political forces commissioned *A Nation at Risk: The Imperative for Educational Reform* (1983), a report calling for improving school quality by raising standards. The authors of this report argued that higher expectations for students would produce greater achievement. In response, states and districts increased the number of courses needed for graduation from high school, instituted state-wide and district-level basic skills and content area standard-

ized tests to measure pupil achievement, and raised the test scores students needed to pass from one grade to the next. While these changes did little to change overall school organization, they did dilute district, school, and teacher control over what was taught, since teachers were forced to teach to the tests for their students to do well.

**Improving instructional quality: testing teachers.**

The second attack on educational quality addressed the competence of teachers. The argument was that simply raising standards for students would not improve performance if teachers could not provide instruction commensurate with the level of the tests. In response, national and state-level minimum competency tests were created for beginning and experienced teachers. While the reforms initially required firing teachers who could not pass these tests, in practice, the passing levels for the tests were rather low. Many opportunities for remediation were offered, and few teachers were either found to be so poorly prepared that they could not pass. The testing programs did remove some district control over who could be hired and retained. Testing programs also took a heavy toll on teacher and student morale.

**Privatization.** In the 1990s disaffection with schools led to innovations in school funding and control, including privatization, charter schools, and vouchers. *Privatization* involves turning over to for-profit or nonprofit corporations and groups the operation of individual schools or districts deemed to be failures because of the low achievement of their students. These corporations receive funds from districts or the state that are normally allocated to those students enrolled in the privatized school or district; and the corporation then promises to do a better job than the public schools of educating children.

*Charter schools*, while still public, are run by parent or secular nonprofit special interest groups. Often using facilities owned by the public school district, they too are allocated ADA and local funds for the pupils they can enroll. Both privatization and chartering exempt the schools from a number of regulations—including the requirement that the schools serve all students (including language minority, poorly performing, and handicapped students) and specific guidelines regarding teacher qualifications, student teacher ratios, curricula and assessment. This effectively dilutes district and state capacity both to control what occurs in schools and to create consistent and coordinated educational policies and practices.

*Vouchers*, perhaps the most popular fiscal reform, involve giving to parents a sum equivalent to the local funds that would be expended for their child's education, and allowing them to use those funds to enroll the child wherever they wish, including private or parochial schools. Vouchers are popular with conservatives, who seek to dilute the influence of public schools by diverting public funds to private schools, which more often are attended by wealthier persons. By contrast, politicians of the left support strengthening the public schools to promote equality of educational opportunity for all children.

**Open enrollment.** Larger school districts historically have been divided into *zones* for attendance—students attended the school to which they were *zoned*, usually the one closest to their home. However, as parents have grown dissatisfied with the education offered at neighborhood schools, they have looked to enroll them in other schools—often those with special programs—within their district. Open enrollment policies dismantle attendance zones, allowing children to attend anywhere they choose, given available space or specific qualifications established by the receiving schools. They also disrupt patterns of school-level budgetary control, because funds earmarked for open-enrolling students go with them to the receiving schools, impoverishing the sending schools.

## Conclusions

Schools are asked to assume a myriad of responsibilities quite separate from simply teaching social and academic skills. Each of these has transformed organizational structures and patterns of control and funding in schools. The question remains whether public schools, with their original mission of educating children of all backgrounds, will survive; or whether the public schools, like those in many countries, will become the last resort for disadvantaged and poor children while more affluent segments of the population send their children to private institutions.

*See also:* GIFTED AND TALENTED EDUCATION; PUBLIC SCHOOL BUDGETING, ACCOUNTING, AND AUDITING; SCHOOL-BASED DECISION-MAKING; SCHOOL CLIMATE; SCHOOL REFORM; STANDARDS MOVEMENT IN AMERICAN EDUCATION; STUDENT ACTIVITIES; SUPERVISION OF INSTRUCTION; TEACHER EVALUATION.

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## SOCIAL PROMOTION

Social promotion is the most common name for the policy of promoting students to the next grade level despite poor achievement at their current grade level. It is motivated by a desire to protect the social adjustment and school motivation of struggling students, as well as a belief that these students will get more from exposure to new content at the next grade than they would from repeating their current grade.

### In Comparison to Grade Retention

Social promotion is usually studied and discussed in comparison to its opposite: grade retention. A grade retention policy calls for requiring students who have failed to achieve satisfactorily to repeat their current grade the following year, instead of moving on to the next grade. This policy is motivated by the belief that an extra year in the grade will give struggling students an opportunity to master content that they failed to master the first year, and consequently leave them better prepared to succeed in higher grades in the future. Those who favor grade retention policies also tend to believe that it is important for schools to maintain high standards, and that social promotion policies fail to do this and instead send students the message that little is expected of them.

Grade retention and social promotion occur because many students fail to achieve at desired levels. If assessed using norm-referenced tests that yield grade-level equivalence scores, almost half of all students necessarily will score "below grade level" (although with considerable variation across schools and districts). More students will pass the criterion-referenced minimum competency tests used by many states, but even here, significant percentages of students will fail to meet standards. This forces schools to choose between socially promoting these students and retaining them in the grade for another year.

Retention in grade is common, with about a third of all students retained at least once before high school. Students retained in a grade are more likely than other students to be small in stature or youngest in the grade, to be from lower socioeconomic status or minority backgrounds, to have parents with lower educational attainment, to be boys rather than girls, and to have moved or been absent frequently. Presumably these same generalizations also would

be true of socially promoted students, simply because these categories of students are represented more heavily among low achievers. It is not possible to collect social promotion statistics the way it is possible to collect grade retention statistics because school districts usually do not distinguish in their records between regular promotions and social promotions.

At any given time, both grade retention and social promotion have their adherents, probably because each policy is based on an appealing rationale. Attitudes toward the two policies tend to flow in cycles, with first one and then the other gaining ascendancy for a decade or so, and the same essential arguments repeated on both sides. Grade retention was ascendant in the 1990s and early 2000s, with U.S. Presidents Bill Clinton and George W. Bush, many state governors, and many state- and district-level policymakers calling for eliminating social promotion as part of their plan for reforming schools. These policymakers tend to believe that unless poorly achieving students are faced with the prospect of flunking and being forced to repeat the grade, they will have little incentive to apply themselves to their studies. Most teachers also favor grade retention as a potential option for occasional use, especially in the early grades. Teachers tend to view it less as a motivational stick with which to threaten underachieving students, however, than as a way to enable them to catch up and begin to achieve more successfully. Barring information to the contrary, it is reasonable to believe that the threat of grade retention might motivate students who do not apply themselves to invest more effort in their studies, and that an extra year to catch up might benefit students whose low achievement is due to limited maturity or readiness.

However, a great deal of information to the contrary exists. Research comparing retained students with similar students who were socially promoted repeatedly shows that most students do not catch up when held back; that even if they do better at first, they fall behind again in later grades; that they are more likely to become alienated from school and eventually drop out; and that these findings hold just as much for kindergarten and first-grade students held back because they were presumed to lack maturity or readiness as they do for older students. By itself, retention provides either no achievement advantage or only short-lived advantages relative to social promotion, and it imposes costs on the re-

tained students, their teachers, and the school system.

What typically happens is that administrators announce a “no social promotions” policy with a great deal of fanfare, then over the next couple of years call attention to any data that appear to suggest that the policy is working. Later, however, when it becomes clear that too many students are being retained (some repeatedly) and the administrators are confronted with angry parents, frustrated teachers, upset students, and rising costs, they quietly begin to back off by lowering standards (i.e., the test scores that will be required to earn promotion to the next grade) and by exempting certain categories of students from the policy (e.g., those who are learning English as their second language or have been assigned a special education diagnosis). Eventually they or the administrators who succeed them quietly drop the policy (without, of course, admitting that all of the problems that it created could have been foreseen if attention had been paid to the relevant research literature).

### **Advantages and Disadvantages**

Costs to the retained students include the shame and embarrassment of being held back and the separation from age mates in the short run, as well as alienation from schooling as an institution and a much greater propensity to drop out prior to graduation in the longer run. Costs to teachers include increases in the student motivation and classroom management challenges that are involved in teaching classes that include a significant number of retained students, as well as the problems that ensue in junior high and high school when physically more mature older students are in the same classes with less developed younger students. For school districts, there are costs in both expense (grade retentions translate into higher class sizes and related logistical problems) and effort (increased administrative responsibilities for establishing and maintaining mechanisms to implement grade retention policies and for defending them when students or their families challenge them).

Occasionally, research, such as that of C. Thomas Holmes in 1989, appears to suggest that grade retention is helpful, at least to some students. Usually these data are confined to short-term findings that the retained students showed higher achievement during the year that they repeated the grade than they had the year before. Longitudinal data, howev-

er, typically show that grade retention is not helpful. For example, in 1995 Karl Alexander and colleagues reported findings from Baltimore indicating that retainees did somewhat better after retention than they had before (although with diminishing advantage over time) and even displayed positive attitudes toward self and school. This study was frequently cited by proponents of grade retention as evidence that newer studies were beginning to show a different pattern of findings from the conventional wisdom. However, an update six years later indicated that the earlier reported advantages to grade retention had washed out and that the retained students proved to be much more likely to drop out of school than the socially promoted students. Reports from Chicago, another district that had made a high-profile commitment to grade retention policies, also indicated that initially mixed findings had turned negative within three years, according to Melissa Roderick and colleagues in 2000. More generally, a meta-analysis that focused on studies published between 1990 and 1999 once again proved unfavorable to grade retention, refuting the claim that newer studies were showing a different pattern of findings.

In 1989 Holmes completed a meta-analysis of sixty-three comparisons of grade retention with social promotion. He reported that fifty-four of the sixty-three studies yielded overall negative effects for grade retention but nine showed positive effects. The latter studies involved suburban settings and middle-class families, and usually not retention alone but also efforts by the school to identify struggling students early, involve the parents, and provide special assistance such as placement in classes with low student-teacher ratios. Even so, the advances made by the retained students during their repetition year tended to diminish over time.

### **Different Perspectives**

In 1998 Richard Rothstein put social promotion, grade retention, and related issues into perspective by noting that the dilemma of what to do with students who don't progress “normally” is endemic to compulsory education. As long as all students are required to stay in school until they reach a certain age (e.g., sixteen), the decision on what to do with those who are less advanced will remain. Research throughout the twentieth century repeatedly indicated that, on the whole, age is a better grouping principle than academic achievement.

Researchers and reviewers who have focused on grade retention and social promotion typically conclude that neither policy is an effective treatment for unsatisfactory achievement, but if one must choose between them, social promotion is preferable. This is because grade retention imposes too many social and motivational costs, and students appear to get more out of a year spent in the next grade than they do out of a year spent repeating a grade, even though they are likely to continue to achieve less successfully than their classmates. However, social promotion does not help low achievers to begin to catch up with their age peers. Therefore, better than either social promotion or grade retention are policies that mobilize schools to identify struggling students early and provide them with special forms of assistance that might allow them to achieve more satisfactorily (placement in smaller classes, provision of tutoring or other special assistance, enrollment in after-school or summer school programs, and so on). Organizations such as the International Reading Association and the National Association of School Psychologists have published policy statements advocating this approach to students who are not achieving satisfactorily. Some ideas about intervention alternatives to both grade retention and social promotion mentioned by McCay (2001) and U.S. Department of Education (1999) include setting clear performance standards at key grades, emphasizing early childhood literacy, providing high-quality curriculum and instruction and professional development, reducing class sizes in the primary grades, keeping students and teachers together for more than one year, and using effective student grouping practices.

*See also:* ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; NONGRADED SCHOOLS; SECONDARY EDUCATION, *subentry on* CURRENT TRENDS.

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## SOCIAL STUDIES EDUCATION

### OVERVIEW

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### PREPARATION OF TEACHERS

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### OVERVIEW

The contemporary social studies curriculum has its roots in the Progressive education movement of the early twentieth century. With its emphasis on the nature of the individual learner and on the process of learning itself, the movement challenged the assumptions of subject-centered curricula. Until this time, the social studies curriculum was composed of discrete subject areas, with a primary emphasis on history. To a slightly lesser degree, geography and civics were also featured, completing the triumvirate.

There were indications that change was coming when the 1893 *Report of the Committee of Ten on Secondary School Studies* advocated an interdisciplinary approach in the social studies. By 1916 the National Education Association (NEA)'s Committee on the Social Studies was urging that an interdisciplinary course of instruction be created based on the social sciences. When the NEA 1916 report established *social studies* as the name of the content area, it presented the scope and sequence that is still in use at the start of the twenty-first century. Social studies received further support when the 1918 *Cardinal Prin-*

*ciples of Secondary Education* called for the unified study of subject areas heretofore taught in isolation. This course, called social studies, would have as its main goal the cultivation of good citizens.

The emphasis on citizenship development was understandable. At the time, because of increased immigration from non-English speaking countries, educators were given the task of teaching English and "the American way of life" in addition to their content areas. As World War I raged in Europe, social studies courses were viewed as a means of developing patriotism among the new foreign-born citizens.

Indeed, citizenship education was one of the main missions of the National Council for the Social Studies (NCSS) when it was formed in 1921. What began as a service organization intending to close the gap between social scientists and secondary school teachers soon advanced an integrated study of the social studies and a broader conception of social studies education.

### The Role of Social Studies in the Curriculum of U.S. Schools

The terms *social studies education* and *social science education* are often used interchangeably and are, at times, a source of confusion. *Social studies* is the preferred term in part because it is more inclusive. Although *social science* typically refers only to academic disciplines such as anthropology, sociology, psychology, geography, economics, and political science, the term *social studies* includes the aforementioned social sciences as well as humanities disciplines like history, American studies, and philosophy.

At the elementary grade level, social studies is typically organized and taught in an integrative and interdisciplinary fashion, but by the high-school-level social studies teaching and learning are organized by courses in the academic disciplines. At all levels, however, the goals of social studies have been characterized by Peter Martorella (1985) as: (1) transmission of the cultural heritage; (2) methods of inquiry; (3) reflective inquiry; (4) informed social criticism; and (5) personal development. Personal development has traditionally received the greatest emphasis at the elementary level; at the high school level, methods of inquiry have received more emphasis. As phrased in the curriculum guidelines released by the NCSS (1979), "the basic goal of social studies education is to prepare young people to be

humane, rational, participating citizens in a world that is becoming increasingly interdependent” (p. 262).

**Elementary social studies.** In the early 1940s, Paul Hanna articulated the Expanding Communities approach as the vehicle in elementary education by which teachers could best present social studies knowledge. For the most part, Hanna’s model has been characterized as organizing the content as a series of concentric circles starting with the self at the center and progressing to the family, school, neighborhood, until reaching the international community. It also provided a thematic approach to the content: protecting and conserving; creating, governing, producing resources, transporting, expressing, educating, recreating, and communicating. The content approach still dominates elementary education, but the thematic approach has largely disappeared.

Eric D. Hirsch’s (1987) concept of *core knowledge* has gained some footing as an alternative to the Hanna model. Hirsch proposes a core of information that every American should know. The core knowledge approach relies heavily on world (some would characterize this as primarily European) and U.S. history and culture, democratic ideology, geography, and literature that amplify the human experience; the content is organized to introduce students to subject matter at all grades but at different degrees of intensity.

**Secondary social studies.** The 1960s brought significant changes to the middle school and high school curricula with the introduction of the elective system. Courses in subjects like anthropology, economics, sociology, and psychology were added to a curriculum that had formally been primarily limited to world history, world geography, government, and U.S. history. Advanced Placement courses were also introduced.

In 1994 NCSS published *Expectations of Excellence: Curriculum Standards for Social Studies*. Citing the need to promote civic ideals and principles for life in the twenty-first century, the standards consisted of ten interdisciplinary thematic strands as a guide for developing social studies curriculum.

### The National Council for the Social Studies

The National Council for the Social Studies was founded in 1921, and is the largest organization in the United States to focus exclusively on social

studies education. Historically, the organization was established as a coordinating entity and clearinghouse. It evolved at a time when social studies was immersed in disagreement on scope and sequence. Dissent ensued among teacher educators and content specialists, and certification requirements in the social studies were nonexistent. The founders, comprised of professors from Teachers College at Columbia University, envisioned NCSS as the unifying organization that could merge the social studies disciplines with education.

At the start of the twenty-first century NCSS plays a leadership role in promoting an integrated study of the social studies and offers support and services to its members. The membership includes K–12 teachers, curriculum specialists, content supervisors, college and university faculty, students, and education leaders in the social studies. The organization has members in all fifty states, the District of Columbia, and numerous foreign countries. It draws on multidisciplinary studies and emphasizes a civic-based approach.

The council has articulated a framework to foster academic and civic competence by integrating national standards across disciplines. These NCSS standards are published in *Expectations of Excellence: Curriculum Standards for Social Studies*, and serve as a guide for decision-making by social studies educators. They have integrated approaches from the social sciences, behavioral sciences, and humanities to aid in structuring a comprehensive and effective social studies program. Ten themes are highlighted in the framework, which include culture; people, places and environments; individuals, groups, and institutions; production, distribution, and consumption; global connections; time, continuity, and change; individual development and identity; power, authority, and governance; science, technology, and society; and civic ideals and practices. The council also has developed position statements to guide the profession on critical areas of education, such as ability grouping, character education, ethics, information literacy, multicultural and global education, religion, and testing.

### Teaching Social Studies in Other Countries

The term *social studies* appears in the literature and the names of professional associations and organizations, academic institutions, and curriculum projects and centers throughout the world. Its meaning, however, is as varied as the contexts in which it ap-

pears, and may have little to do with the way content is organized or delivered. Three types of content organization predominate.

Social studies in its most interdisciplinary form combines the integrated study of humanities and the social sciences. This integrated focus appears in relatively few nations, such as the United States and Canada, where both instructional materials and curriculum objectives focus on interdisciplinary learning. In other nations, the mandate for such a system is somewhat more direct. Australia's Adelaide Declaration (DETYA) calls upon schools to prepare students to "exercise judgment and responsibility in matters of morality, ethics and social justice, and the capacity to make sense of their world, to think about how things got to be the way they are" and to "be active and informed citizens" committed to democratic principles and ideals. Recent changes in Japanese national educational policy and law require all students to study integrated courses such as "Human Beings and Industrial Society." The Constitution of the Republic of China (Taiwan) requires education for citizenship that "shall aim at the development among the citizens of the national spirit, the spirit of self-government, national morality, good physique, scientific knowledge and the ability to earn a living" (Article 158). And, while no "social studies" course is mandated per se, the South African Ministry of Education requires that the "values of human rights, civic responsibility and respect for the environment [be] infused throughout the curriculum."

The more common use of the term *social studies* is as an organizing term for the social science disciplines in faculties, schools, and professional interest groups. In Ghana, for example, social studies faculties in the local secondary schools and university are composed of historians, anthropologists, sociologists, and other social scientists. Similar organizations are found in Zimbabwe, New Zealand, the Czech Republic, the United Kingdom, Hong Kong, and other nations throughout Asia and Europe.

The organizational patterns noted above exist in a minority of nations in the world community. The large majority of educational institutions, including schools, universities, ministries of education and culture, and local educational agencies organize the social studies into separate, distinct disciplines: history, economics, anthropology, political science, and other traditional social sciences. Indeed, the university entrance examinations or secondary school exit

exams in nations such as the United Kingdom, France, Germany, Saudi Arabia, Indonesia, and Russia, for example, focus on specific social science disciplines, notably history and geography. Even in nations with emerging integrated curriculum standards such as Japan and the Republic of China, however, examination programs tend to follow traditional social science academic disciplines.

### Issues and Controversies

Since its very inception, social studies education has weathered a number of controversies and challenges. The core idea of an integrated field of study has been under scrutiny since its earliest days. The field's eclectic nature not only draws on a wide range of disciplines, but also attracts continuing debate and conflict.

One of the most publicized controversies in the United States was triggered by the curriculum "Man: A Course of Study" (MACOS) during the 1960s. Developed with a National Science Foundation grant, the mixed media curriculum was designed to stimulate the learner's curiosity, promote scientific literacy, and help children learn to think like social scientists. Almost immediately, the program was at the center of a backlash from the "Back to Basics Movement." Central to the MACOS controversy was its focus on inquiry and discovery rather than content. Among other things, critics charged that students were not developing basic skills, that the curriculum promoted cultural relativism, and that it was a threat to democracy. Not surprisingly, the curriculum was eventually phased out.

Conflicts regarding new teaching and learning strategies still abound. For example, role-playing and simulations, guided imagery, cooperative learning, and technology-based learning have all received their share of criticism and opposition.

The content of the social studies curriculum has also been the source of debate and disagreement. When the National Center for History in the Schools published *National Standards for World History: Exploring Paths to the Present* in 1994, some educators charged that the standards were too inclusive; others claimed that certain groups were omitted altogether. Other controversies center on the plausibility of a national curriculum and the ongoing development of state-level standards, mandates, and high-stakes testing.

Debates surrounding culture continue in the teaching of history, geography, ethnic studies, and

multicultural education. While many educators support a cultural relativist position, many others argue that “the mission of public schools is to instill in children our shared, not our separate, cultures” (Ravitch, p. 8). These “culture wars” (as termed by Nash, Crabtree, and Dunn) have resulted in a rich, intellectual, and academic debate that will hopefully illuminate the field. Global education and international studies have also been criticized for their emphases on issues and events outside the United States’ borders. Critics charge that global studies advance cultural relativism, minimize patriotism, and emphasize skills at the expense of content. Advocates point out, however, that national borders are becoming less relevant in the face of technology, international politics, and environmental issues.

### The Future Role of Technology in the Social Studies

Technology has gained prominence as a tool within the social studies with the potential to enhance current pedagogic practice. Although an increasing body of research suggests that technology can improve academic achievement, changes in social studies instruction based on these findings have been tempered by the following: (1) questions about the efficiency and effectiveness of computer technology applications in the classroom; (2) the role of teacher education institutions and school settings in facilitating or hindering computer-based activities; (3) the unrealized potential of technology; and (4) the overlooked consequences of technological development on children and youth with regard to their social functioning, interpersonal interactions, and global understanding. Various technologies such as Internet and web-based resources, hypermedia, data instruments, digital video, and tele-collaborative teaching represent emerging resources implemented in social studies instruction.

Technology, however, is more than just a tool of instruction, and these resources have effects on the political, social, and economic functioning of American society. Technology’s impact on society is exemplified in the phenomenon of the digital divide that separates those who are information rich through their access to telecommunications, computers, and the Internet from the information and technologically poor. Within the social studies educators focus on the differential impact of privileged access to these resources in the early stages of development and consider the potential ongoing conse-

quences of this separation of haves and have-nots on economic success, civic influence, and personal advancement.

Social studies education will continue to evolve as it is affected by events and trends in the United States and abroad. These include the globalization of the media and the economy, advancements in technology, shifts in schools and school demographics, teacher accreditation standards, student testing mandates, changes in the American family, and swings of the political pendulum. These forces will certainly impact ideological perspectives and influence the direction of the social studies in the future.

*See also:* CIVICS AND CITIZENSHIP EDUCATION; CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; GEOGRAPHY, TEACHING OF; HISTORY, *subentry on* TEACHING OF; NATIONAL COUNCIL FOR THE SOCIAL STUDIES; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; TECHNOLOGY IN EDUCATION, *subentry on* SCHOOL.

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## PREPARATION OF TEACHERS

The development of the education of social studies teachers mirrors, in large part, the history and changes of teacher education generally. Social studies teacher preparation has moved from teachers' institutes and normal schools begun in the nineteenth century to teacher colleges and university-based teacher preparation in the twentieth century. But the education of social studies teachers has also had to take into account the unique definitions and issues connected to the teaching of social studies.

### Defining Social Studies

Social studies is remembered by many who have gone through schools in the United States as a series of names, dates, and state capitals. In fact, both the definition and content of the field have been a matter of controversy since the early twentieth century. Social studies can be seen both as an umbrella term for a broad field of studies encompassing history and the social sciences and as an integrated field of study in its own right. But whatever the definition, the objectives of social studies education are highly contested. Values such as patriotism, an appreciation of free enterprise, respect for diverse cultures and nations, and knowledge of the structures and functions of American government are each seen by some group as the major goal of social studies teaching. The National Council for the Social Studies (NCSS) defines the field as "the integrated study of the social sciences and humanities to promote civic competence" (NCSS webiste). Because the NCSS standards for the education of social studies teachers (1997)

are widely accepted by teacher preparation programs, the goal of enabling learners to acquire knowledge, skills, and dispositions necessary to citizen participation helps to provide a focus for both the social studies curriculum and the preparation of social studies teachers.

### Structure and Organization

What most distinguishes the preparation of social studies teachers from the preparation of other secondary and middle school teachers are the course requirements in their teaching content field and the special methods course. There is a good deal of variation of requirements across the fifty states. Since social studies is an interdisciplinary field, a major concern regarding content requirements is that of depth versus breadth across the various disciplines. How much content knowledge in each of the disciplines making up social studies is enough? How can prospective social studies teachers be prepared both broadly and deeply in all the areas they are expected to teach? In some programs, pre-service teachers major in social studies and take a broad array of courses across history and the social sciences. In other programs, they major in one field and take one or more courses in each of the other social studies disciplines. In some states teachers are certified in "social studies," while in others they may receive certification in a particular discipline such as history or geography.

The social studies methods class is the cornerstone of the professional course work taken by prospective social studies teachers. In this course teachers are expected to learn how to transform content into curriculum and to select and implement appropriate teaching strategies. Through the social studies methods course, combined with related field experiences, pre-service social studies teachers must learn ways to bridge the gap between the experiences of learners and content knowledge. However, although the methods course is a key component of the pre-service education of social studies teachers, there is not general agreement on a number of issues concerning this course: What should be the depth versus breadth of methods taught? How much emphasis should be given in this class to the needs of diverse learners? How much time should be spent preparing pre-service teachers to work with state-mandated assessments? What emphasis should be placed in the methods course on developing a sufficient background in the social science disciplines?

The question of subject field content is complemented by the related ontological question, often dealt with in the social studies methods class: What is the nature of knowledge? How teachers conceive of knowledge determines, to a large extent, how they will teach. Is knowledge transmitted by experts or is it constructed by each learner? In teaching methods classes, pre-service teachers may be asked to consider whether history, for example, is largely basic facts of what happened, a method of inquiry, or broad concepts and ideas that enable learners to understand today's world. Generally, the answers teachers develop to these questions are based on the beliefs and expectations pre-service teachers bring to the teacher education program. They bring their already developed conceptions of the content as well as what it means to teach and they make sense of their teacher education experience through the screen of these preconceived ideas. For this reason, the study of pre-service teachers' perspectives and the influences on forming and changing these perspectives has been an important focus for research.

The issues raised by a consideration of the social studies methods class are confounded by the fact that in some programs the instructor of that course may not be a specialist in social studies; indeed, that individual may not be well acquainted with the field itself. Thus questions about the nature and goals of the field may be dealt with only superficially or not at all.

### In-Service and Staff Development

Professional development occurs in both formal and informal ways. Informally, students, the school culture, collegial interactions, administrative interaction, and support all work in powerful ways to shape the development of teachers. Formal mechanisms explicitly aimed at guiding teacher development are in place as well. Increasingly, schools and school districts have begun to create and implement teacher induction programs. These programs are intended to provide support for beginning teachers as they deal with day-to-day challenges. Often, a beginning teacher is paired with an experienced teacher who serves as an advisor, guide, and sounding board. The goal of teacher induction programs is to both assist and retain novice teachers and revitalize mentor teachers. But little is known about the making of effective mentors and mentor programs.

Another professional development opportunity routinely provided by school districts is the school-

or district-developed in-service program. Once again, there is no common program model. Such programs may be one-day presentations or yearlong sustained efforts. They may be built around the idea of teachers working together to improve their teaching or they may rely on outside experts who make an occasional appearance. Teachers may see these programs as meeting their needs or as completely irrelevant.

There is the expectation, in many states and school districts, that teachers will continue to do graduate work in their teaching field or in professional education. While teachers in such programs are expected to find useful ways to apply what they learn to their teaching practice, there is generally little support in the classroom for these efforts. Some teachers find that membership in professional associations, such as the National Council for the Social Studies, is a meaningful form of professional development. Reading journals, attending conferences and workshops, and working with other teachers in one's own field are important benefits of getting involved with professional associations. However, not all schools and school districts are supportive of teacher involvement in professional associations. Districts often expect membership in professional associations to be at the teacher's own cost and on the teacher's own time. Some districts will discourage teachers from taking time from their teaching to attend professional association meetings and conferences, while others support such efforts as a form of professional renewal.

Certification by the National Board for Professional Teaching Standards is a challenging form of professional development voluntarily undertaken by experienced teachers. National board certification in social studies, as in other fields, is based on a demonstration of a teacher's practice as measured against high and rigorous standards. Yet, states and school districts differ in the support they give to teachers seeking board certification and in the ways in which they recognize those who achieve certification through this rigorous process.

### Major Trends and Issues

Important trends in the education of social studies teachers are similar to those in teacher education as a whole, but they are often manifest in distinct ways. The growing interest in accountability for both teachers and students, for example, is a major issue in the early twenty-first century. The work of teach-

ing and teacher education has come to focus increasingly on helping students to meet state standards. In addition, many states require teachers to pass some form of content knowledge test to receive certification. In social studies, both student content standards and teacher testing may be highly political rather than professional. Decisions about what knowledge should be taught are often very controversial. Decision-making often involves politicians, content experts with divergent points of view, and the general public, as well as professional educators. Consensus among and within various groups may be difficult to attain; those with the most powerful voices often become the decision-makers.

Another challenge for teaching and teacher education is the appropriate use of technology both in teacher education programs and in K–12 classrooms. Research suggests that social studies preservice teacher motivation is increased by online dialogue, facilitated (but not controlled) by the instructor. Additional research suggests great potential for improved learning of social studies through the use of technology, such as using the Library of Congress website to bring primary sources into the classroom. However, at the start of the twenty-first century, teacher educators are only beginning to use technology in sophisticated ways in their own teaching and only just developing ways to prepare teachers for high-power uses of technology.

Teacher education faces the challenge of preparing teachers to effectively teach culturally and linguistically diverse students. In social studies, issues of diversity go to the heart of the field. The concept of citizenship on which social studies is based must be a dynamic one that considers the many different cultural and national identities of learners. It must also take into account that citizenship in an interdependent world must have a global, as well as a national, component. Making the social studies curriculum meaningful and significant for learners and for society remains the greatest challenge of social studies teaching and teacher education.

*See also:* ELEMENTARY EDUCATION, *subentry on* PREPARATION OF TEACHERS; TEACHER EDUCATION.

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## SOUTH ASIA

Writing about education in South Asian region means writing about one-fourth of the world's population. South Asia comprises seven contiguous countries: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. The region is geographically knit together and is homogenous in terms of sociocultural, political, historical, economic, and educational factors. The people of this area are heirs to a heritage of common culture and civilization steeped in history. At the beginning of the twenty-first century, however, it is one of the most backward regions of the world, both educationally and economically. It is the poorest region economically in the world, with an average per capita income of about US\$350. Most of the countries in the region rank fairly poorly in terms of the human development index, a crude summary statistic of development compiled by the United Nations Development Program (UNDP). All the countries of the region, except Sri Lanka, are classified as *low human development* countries.

This is a historically rich region, with one of the most ancient civilizations of the world. The ancient scriptures associated with the region placed education and knowledge on a high pedestal, regarding it as the most important treasure one could have. Even in the early twenty-first century, many in the region value education very highly. Some of these countries were once very rich, industrially advanced, and materially prosperous. "The fame of their wealth earned for this region the appellation of the 'gorgeous East,' and inspired the quest which led to the discovery of the New World and created the preconditions for

the Industrial Revolution in Europe” (Huq, p. 5). The countries of the region, except for Nepal and Bhutan, experienced various short and long phases of colonial rule and became independent in the middle of the twentieth century. The devastating colonial impact can be noted on the development of education in the region. The long colonial rule uprooted the *beautiful tree* in the undivided India and transformed an advanced intermediate society of India into an illiterate society, besides converting it into a raw material appendage on the economic front.

At the start of the twenty-first century, with the exception of Sri Lanka, South Asia is one of the most backward regions of the world in terms of educational development. The region has been described as “the poorest region,” “the most illiterate region,” “the least gender-sensitive region,” and “the region with the highest human deprivation” (Haq and Haq 1997, pp. 2–3). It has emerged as an “anti-education society in the midst of a pro-education Asian culture” (Haq and Haq 1998, p. 42). In sheer numbers, the South Asian subcontinent poses the most serious challenges in education: nearly half the adult illiterates of the world live in the subcontinent, the rate of participation in schooling is low, and the quality of education is poor.

### Education Development after Independence

The importance of education is increasingly realized by every nation in the region. The human investment revolution in economic thought initiated by Theodore Schultz in an address to the American Economic Association had its own impact on public policy regarding educational development. The critical role of education in social, economic, and political development—as a means of development as well as a measure of development—is widely recognized. As a result, there has been an education explosion during the second half the twentieth century in most developing countries. Countries in the South Asian region also experienced an explosion in the number of people attending school. Between 1950 and 1997, enrollments in schools in South Asia increased six-fold, from 44 million to 262 million. The total teaching staff increased from 1.4 million to 7.2 million during this period. Enrollment ratios increased from 20 percent (net) in 1960 to 52 percent (gross) in 2000. (Gross enrollment ratios refer to the total enrollments as a proportion of the relevant age group population, while net enrollment ratio refers to en-

**TABLE 1**

<b>Educational progress in South Asia</b>		
<b>Rate of illiteracy (%)</b>	<b>1960</b>	<b>2000</b>
	72.0	45.8
<b>Net enrollment ratios (%)</b>	<b>1960</b>	<b>1997*</b>
Primary	45.0	95.4
Secondary	19.2	45.3
Higher	1.9	7.2
All levels	20.4	52.0
<b>Enrollments (in millions)</b>	<b>1950</b>	<b>2000</b>
Primary	38.2	157.7
Secondary	4.7	94.6
Higher	0.6	9.3
All levels	43.5	261.6
<b>Number of teachers (in millions)</b>		
Primary	1.1	3.5
Secondary	0.2	3.2
Higher	0.03	0.6
All levels	1.4	7.2
*Gross enrollment ratio		
SOURCE: Based on United Nations Educational, Scientific and Cultural Organization. 1969; 1999. <i>Statistical Yearbook</i> . Paris: United Nations Educational, Scientific and Cultural Organization.		

rollment in the relevant age group as a proportion of the population of the relevant age group.) The rate of adult illiteracy declined from 72 percent in 1960 to 46 percent in 2000 (see Table 1). These are no mean achievements, given the poor economic conditions of the newly independent countries of the region and their high rates of population growth.

Along with quantitative progress, however, the education system in the several countries of the region is characterized by conspicuous failures on many fronts. While the rate of illiteracy has decreased, the number of adult illiterates increased from 299 million in 1970 to 429 million in 2000, and the current adult illiteracy rate is quite high. Adult literacy campaigns—an important strategy adopted by the South Asian countries to improve literacy rates—have not met with great success. Sixty percent of the adults in Nepal and Bangladesh, and about 55 percent in Pakistan and Bhutan, are illiterate (see Table 2). Further, a large majority of the literate population have had little more than primary education, and very few have gone on to higher education institutions. For example, only 7 percent of adults age twenty-five and older in India have graduated from postsecondary institutions; the corresponding

TABLE 2

	Adult (15+) literacy (percent)	Youth (15–24) literacy (percent)	Number illiterate* (in millions)
Bangladesh	40.8	50.2	49.6
Bhutan	47.3	N/A	0.6
Nepal	40.4	58.5	8.3
Pakistan	45.0	62.7	51.7
India	56.5	71.8	299.3
Sri Lanka	91.4	96.7	1.2
Maldives	96.2	99.1	6.0

\*estimate (2000); N/A: not available

SOURCE: Based on United Nations Development Program. 2001. *Human Development Report*. New York: Oxford University Press; United Nations Educational, Scientific and Cultural Organization. 1999. *Statistical Yearbook*. Paris: United Nations Educational, Scientific and Cultural Organization.

figure is 2.5 percent in Pakistan; 1.1 percent in Sri Lanka; and 0.6 percent in Nepal. About 50 million children in the primary-school age group were estimated to be out of school in 1995.

As of 2001, the gross enrollment ratio in primary education in the region as a whole was impressive (about 95%). But this is only the gross enrollment ratio. The net enrollment ratio in Pakistan, for example, was only 49 percent in 2001. Universal primary education is still a distant dream for many countries in the region, except for Sri Lanka and Maldives (see Table 3). Similarly, though the number of teachers has increased at all levels, the pace of growth has not kept up with the increase in enrollments. According to the latest statistics available, the number of pupils per teacher in primary schools is as high as fifty-nine in Bangladesh, forty-nine in Pakistan, and forty-eight in India—and the situation has worsened in many countries over the years. The situation is similar in terms of internal efficiency in primary education, as measured by rates of survival of children in school (the converse of dropout rates) and promotion rates.

Dropout and repetition rates are also high. In fact, the completion rates in primary education in South Asia are the lowest in the world. Quality of education, reflected in levels of achievement of children in primary schools, has been found to be unsatisfactory in several countries of the region. The regional, social, and economic inequalities that are a glaring feature of the societies of South Asia are re-

flected in the education systems, with the poor and socially backward areas suffering a severe degree of exclusion from education. In addition to religious and cultural prejudices, gender prejudices are also strong, keeping girls out of schools.

Enrollment ratios in secondary and higher education are also low in South Asia compared to many other regions of the world. Many countries in South Asia (e.g., India, Pakistan, Sri Lanka) have emphasized vocational training in their secondary education plans, but have not succeeded. As Mahbub ul Haq and Khadija Haq have estimated, barely 1.5 percent of the enrollments in secondary education in South Asia were enrolled in vocational programs in the early 1990s, compared to six times that level in East Asia and fifteen times that level in Latin America. Secondary education has failed to provide any job-relevant skills, and as a result has served only as a transitory phase toward higher education and is not viable terminal level of education in these nations. In addition, gender disparities in secondary education are the largest in the world.

It is felt by some that higher education has expanded too fast in South Asian countries. Acute unemployment rates among the educated and high rates of emigration to the West are cited as testifying to this phenomenon. But higher education is, in fact, very much restricted in South Asia. Higher education is practically nonexistent in Maldives and Bhutan, and barely 3 percent of the relevant population is enrolled in higher education in Pakistan—with 4 percent enrollment in Bangladesh, 5 percent in Sri Lanka and Nepal, and 7 percent in India (see Table 4). This is in sharp contrast to most economically advanced countries, where the enrollment ratio is generally above 20 percent. Additionally, all South Asian countries compare very poorly with countries in East Asia, Latin America, and many other areas of the world with respect to scientific and technical manpower.

While the region as a whole is educationally backward, there are one or two important exceptions. In terms of numbers, India has one of the largest education systems in the world—its student population exceeds the total population of some of the countries of the world. This, however, does not place India ahead of others in educational development. While India could build the third largest reservoir of scientific and technical manpower in the world, this was found to inadequate to meet the

challenges of growth in the rapidly globalizing and competitive world.

Sri Lanka and the tiny Maldives are far ahead of other countries in the region in literacy and basic education. More than 90 percent of the population in these two countries is literate. Basic education is nearly universal and enrollment ratios in secondary education are high, although Maldives does not have any higher education institution.

The problems of dropouts and grade repetition are also not so important in Sri Lanka as in other countries. With its emphasis on school education, Sri Lanka could improve the level of human development, as measured by the human development index, but it still continues to be economically backward. However, internal civil war and political unrest have had a serious adverse impact on educational development in Sri Lanka.

One of the important factors responsible for the unsatisfactory development of education in the region is the low level of public investment in education. The present levels of public investment in education in South Asia have been found to be of the lowest order, even less than those in sub-Saharan Africa. For instance, Bangladesh invested 2.2 percent of its gross national product (GNP) in education between 1995 and 1997 (the corresponding investment during this period was 2.7 percent in Pakistan; and 3.2 percent in Nepal and India). It is only in the relatively rich country of Maldives that the proportion is reasonably high (6.4 percent). As a proportion of the total government expenditure, education receives a small portion in countries like Bhutan and Pakistan (see Table 5). Particularly during the 1990s, after economic reform policies were introduced, public expenditures on education decreased—not only in relative proportions but also in absolute total and per student amounts—in real prices and sometimes even in nominal prices. In addition, political instability and the compulsion to allocate substantial resources for defense and internal security have also constrained India, Pakistan, Sri Lanka, Nepal, and Bangladesh in raising their levels of spending on education.

Though sound finances are not a sufficient condition for educational development, they are a critically necessary condition for development. For instance, high historical investments made in education helped Sri Lanka march ahead of others in literacy and school education. Education systems in

**TABLE 3****Progress in primary education in South Asia in the 1990s**

	Gross enrollment ratio (percent)		Net enrollment ratio (percent)	
	1990–1991	1998	1990–1991	1998
Bangladesh	75.6	96.5	60.5	82.0
Bhutan	67.0	72.0	67.5**	69.6*
India	100.1	90.3	N/A	71.1
Maldives	125.5 <sup>†</sup>	123.4	90.1	92.7
Nepal	106.0	122.1	67.5**	69.6*
Pakistan	64.0	83.6	N/A	49.2
Sri Lanka	112.0	101.8	89.0	94.9

\*1996; \*\*1995; <sup>†</sup>1997; N/A: not available

SOURCE: Based on Tilak, Jandhyala B. G. 2000. *Education for All in South and West Asia: A Decade After Jomtien: An Assessment*. New Delhi, India: United Nations Educational, Scientific and Cultural Organization/South and West Asia Regional Technical Advisory Group.

most countries of the region are starved of scarce financial resources. A low level of economic development is generally believed to be the reason for a low level of public investment, but that is not necessarily true. With political and social will, some relatively poor societies could spend more on education than some relatively rich economies, even in South Asia.

### Recent Policies and Approaches

Most countries of South Asia have recognized the vital role of education and the need to accord high priority to education in development efforts, and they have begun paying serious attention to education—particularly to basic education—as a part of the global program of Education for All (EFA). Several strategies have been adopted, some of which are not necessarily sound, and many of which are controversial. Along with strengthening formal schools with increased levels of physical and human infrastructure facilities (in India, for example, where a national program of improvement in school infrastructure on a massive scale was launched in 1986), all the countries in the region also place undue emphasis on nonformal education for universalizing basic education. Though started with good intentions, nonformal education is favored by the educational planners in the region primarily due to its low cost. It is also cheap in quality, however, with poor physical infrastructure facilities, inadequately trained teachers, and inadequate teaching and learning material. As a result, it did not take off well. Fur-

**TABLE 4****Gross enrollment ratios in secondary and higher education in South Asia, by percentage**

	Year	Secondary	Higher	All levels*
Bangladesh	1990	19	4	35
India	1996	49	7	55
Maldives	1997	69	—	—
Nepal	1996	42	5	59
Pakistan	1991	26	3	34
Sri Lanka	1995	75	5	67

\*includes primary level

SOURCE: Based on United Nations Educational, Scientific and Cultural Organization. 1999. *Statistical Yearbook*. Paris: United Nations Educational, Scientific and Cultural Organization.

ther, no links exist between nonformal and formal education, and the graduates of nonformal education often tend to relapse back into educational poverty.

Effective compulsory basic education is still nonexistent in many countries of the region. Efforts to promulgate compulsory education laws have only recently been initiated in Sri Lanka, and India. However, even if enacted, such laws will not necessarily provide free education. Families incur huge expenditures in acquiring even basic education for their children, both in terms of payments to school and the cost of other necessary expenditures, such as for books, uniforms, and transportation. The high cost of schooling incurred by families is an important factor constraining the participation of the poor in schooling.

Decentralization has been regarded as “the key to improvement in education in South Asia” (Haq and Haq 1998, p. 82). Decentralization has become an important issue not only in large countries such as India and Pakistan, but also in relatively small countries like Nepal. Many responsibilities of schooling are being decentralized to the local level. The mechanisms envisaged would not only increase the role of local bodies, but would also ensure an increased level of participation by local communities. As a corollary to all this, however, it is feared that the role of the central government and of provincial governments may get minimized.

Private education is another important issue of concern, particularly in postprimary education. Though private education is not a new phenomenon in South Asia, public policies only recently began fa-

voring the rapid growth of private schools. Along with private education, public policies are also being formulated for improved mechanisms of cost recovery in education. This will be accomplished through the introduction or increase of fees in schools, as well as through various efforts of mobilization of nongovernmental resources. These measures are advocated not only because resources are scarce, but also because it is believed that they can improve the efficiency of the school system. However, according to some, the effects of such measures on equity may be very serious—not only on the education system but also on the society at large.

Given the scarcity of domestic resources, almost all the countries in the region have resorted to international aid for education, particularly since the World Conference on Education for All was held in Jomtien, Thailand, in 1990. While this has relaxed the constraints on resources to some extent, it has also led to an increased level of donor dependency, with every new educational program being dependent upon international aid. In addition, public policies are affected, as aid from some international organizations comes with severe policy conditions attached. On the whole, international aid for basic education has been increasing in South Asian countries, though positive and sustainable effects of this aid on educational development have yet to be noted.

One of the unintended effects of Education for All and an increased emphasis on basic education has been the neglect of secondary and higher education. While concentrating their efforts on EFA, countries in South Asia tend to ignore secondary and higher education altogether, based on the presumption that EFA goals could be realized only at the cost of growth of secondary and higher education. Therefore, public resources and policy initiatives have primarily been confined to basic education and adult literacy. This may lead to serious imbalances in the development of education, causing irreparable damage to secondary and higher education. Some countries, such as Sri Lanka and India, have already realized, with the rapid expansion of primary education, the need to expand secondary education. Further, these nations realize that higher education is not only important for economic growth and development, but also that quality higher education is important if these societies are to succeed in an increasingly globalized world.

## Conclusion

The present education system in South Asia is marked by low access; poor quality and low standards; gender, social, and economic inequities; and low levels of public investment. The region is caught “in a vicious circle of low enrollment, low levels of literacy, low levels of educated labor force, lower rates of economic growth, and lower levels of living” (Tilak 2001, p. 233). The low level of educational development in South Asia has constrained “the immediate potential for human resource led development,” and it has also “stunted the future prospects for rapid human development in the region” (Haq and Haq 1998, p. 34). Some countries have realized the importance of education and taken several new policy initiatives, but not all of these initiatives are necessarily conducive for the development of sustainable education systems of high quality. The most important factors responsible for the poor education status of South Asian countries are the lack of political commitment to education and the lack social will to exert pressures on the political elite. Political activism is completely lacking, though social will is slowly being built, providing a ray of hope for the betterment of education in South Asia.

*See also:* DECENTRALIZATION AND EDUCATION; EAST ASIA AND THE PACIFIC; EASTERN EUROPE AND CENTRAL ASIA; GENDER ISSUES, INTERNATIONAL; INTERNATIONAL EDUCATION.

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**TABLE 5**

### Public spending on education in South Asia

	Percentage of GNP		Percentage of total government expenditure	
	1960	1995–1997	1965	1995–1997
Bangladesh	0.6	2.2	13.6 <sup>†</sup>	13.8
Bhutan	3.6 <sup>**</sup>	4.1	14.0	7.0
Nepal	0.5	3.2	8.2	13.5
Pakistan	1.1	2.7	7.4	7.1
India	2.3	3.2	17.5	11.6
Sri Lanka	2.3	3.4	11.7 <sup>*</sup>	8.9
Maldives	2.3 <sup>*</sup>	6.4	8.5 <sup>**</sup>	10.5

\*1970; \*\* 1974; †1975; \*\*1985–1987

SOURCE: Based on Tilak, Jandhyala B. G. 1988. *Educational Finances in South Asia*. Nagoya, Japan: United Nations Centre for Regional Development; United Nations Development Program. 2001. *Human Development Report*. New York: Oxford University Press.

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## SPECIAL EDUCATION

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### HISTORY OF

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## HISTORY OF

Special education, as its name suggests, is a specialized branch of education. Claiming lineage to such persons as Jean-Marc-Gaspard Itard (1775–1838), the physician who “tamed” the “wild boy of Aveyron,” and Anne Sullivan Macy (1866–1936), the teacher who “worked miracles” with Helen Keller, special educators teach those students who have physical, cognitive, language, learning, sensory, and/or emotional abilities that deviate from those of the general population. Special educators provide instruction specifically tailored to meet individualized needs, making education available to students who otherwise would have limited access to education. In 2001, special education in the United States was serving over five million students.

Although federally mandated special education is relatively new in the United States, students with disabilities have been present in every era and in every society. Historical records have consistently documented the most severe disabilities—those that transcend task and setting. Itard’s description of the wild boy of Aveyron documents a variety of behaviors consistent with both mental retardation and behavioral disorders. Nineteenth-century reports of deviant behavior describe conditions that could easily be interpreted as severe mental retardation, autism, or schizophrenia. Milder forms of disability became apparent only after the advent of universal public education. When literacy became a goal for all children, teachers began observing disabilities specific to task and setting—that is, less severe disabilities. After decades of research and legislation, special education now provides services to students with varying degrees and forms of disabilities, in-

cluding mental retardation, emotional disturbance, learning disabilities, speech-language (communication) disabilities, impaired hearing and deafness, low vision and blindness, autism, traumatic brain injury, other health impairments, and severe and multiple disabilities.

## Development of the Field of Special Education

At its inception in the early nineteenth century, leaders of social change set out to cure many ills of society. Physicians and clergy, including Itard, Edouard O. Seguin (1812–1880), Samuel Gridley Howe (1801–1876), and Thomas Hopkins Gallaudet (1787–1851), wanted to ameliorate the neglectful, often abusive treatment of individuals with disabilities. A rich literature describes the treatment provided to individuals with disabilities in the 1800s: They were often confined in jails and almshouses without decent food, clothing, personal hygiene, and exercise. During much of the nineteenth century, and early in the twentieth, professionals believed individuals with disabilities were best treated in residential facilities in rural environments. Advocates of these institutions argued that environmental conditions such as urban poverty and vices induced behavioral problems. Reformers such as Dorothea Dix (1802–1887) prevailed upon state governments to provide funds for bigger and more specialized institutions. These facilities focused more on a particular disability, such as mental retardation, then known as “feeble-mindedness” or “idiocy”; mental illness, then labeled “insanity” or “madness”; sensory impairment such as deafness or blindness; and behavioral disorders such as criminality and juvenile delinquency. Children who were judged to be delinquent or aggressive, but not insane, were sent to *houses of refuge* or *reform schools*, whereas children and adults judged to be “mad” were admitted to psychiatric hospitals. Dix and her followers believed that institutionalization of individuals with disabilities would end their abuse (confinement without treatment in jails and poorhouses) and provide effective treatment. Moral treatment was the dominant approach of the early nineteenth century in psychiatric hospitals, the aim being cure. Moral treatment employed methods analogous to today’s occupational therapy, systematic instruction, and positive reinforcement. Evidence suggests this approach was humane and effective in some cases, but the treatment was generally abandoned by the late nineteenth century, due largely to the failure of moral therapists to train oth-

ers in their techniques and the rise of the belief that mental illness was always a result of brain disease.

By the end of the nineteenth century, pessimism about cure and emphasis on physiological causes led to a change in orientation that would later bring about the “warehouse-like” institutions that have become a symbol for abuse and neglect of society’s most vulnerable citizens. The practice of moral treatment was replaced by the belief that most disabilities were incurable. This led to keeping individuals with disabilities in institutions both for their own protection and for the betterment of society. Although the transformation took many years, by the end of the nineteenth century the size of institutions had increased so dramatically that the goal of rehabilitation was no longer possible. Institutions became instruments for permanent segregation. Many special education professionals became critics of institutions. Howe, one of the first to argue for institutions for people with disabilities, began advocating *placing out* residents into families. Unfortunately this practice became a logistical and pragmatic problem before it could become a viable alternative to institutionalization.

At the close of the nineteenth century, state governments established juvenile courts and social welfare programs, including foster homes, for children and adolescents. The child study movement became prominent in the early twentieth century. Using the approach pioneered by G. Stanley Hall (1844–1924; considered the founder of child psychology), researchers attempted to study child development scientifically in relation to education and in so doing established a place for psychology within public schools. In 1931, the Bradley Home, the first psychiatric hospital for children in the United States, was established in East Providence, Rhode Island. The treatment offered in this hospital, as well as most of the other hospitals of the early twentieth century, was psychodynamic. Psychodynamic ideas fanned interest in the diagnosis and classification of disabilities. In 1951 the first institution for research on exceptional children opened at the University of Illinois and began what was to become the newest focus of the field of special education: the *slow learner* and, eventually, what we know today as learning disability.

## The Development of Special Education in Institutions and Schools

Although Itard failed to normalize Victor, the wild boy of Aveyron, he did produce dramatic changes in Victor’s behavior through education. Modern special education practices can be traced to Itard, and his work marks the beginning of widespread attempts to instruct students with disabilities. In 1817 the first special education school in the United States, the American Asylum for the Education and Instruction of the Deaf and Dumb (now called the American School for the Deaf), was established in Hartford, Connecticut, by Gallaudet. By the middle of the nineteenth century, special educational programs were being provided in many asylums. Education was a prominent part of moral therapy. By the close of the nineteenth century, special classes within regular public schools had been launched in major cities. These special classes were initially established for immigrant students who were not proficient in English and students who had mild mental retardation or behavioral disorders. Descriptions of these children included terms such as *steamer children*, *backward*, *truant*, and *incorrigible*. Procedures for identifying “defectives” were included in the World’s Fair of 1904. By the 1920s special classes for students judged unsuitable for regular classes had become common in major cities.

In 1840 Rhode Island passed a law mandating compulsory education for children, but not all states had compulsory education until 1918. With compulsory schooling and the swelling tide of anti-institution sentiment in the twentieth century, many children with disabilities were moved out of institutional settings and into public schools. However, by the mid-twentieth century children with disabilities were still often excluded from public schools and kept at home if not institutionalized. In order to respond to the new population of students with special needs entering schools, school officials created still more special classes in public schools.

The number of special classes and complementary support services (assistance given to teachers in managing behavior and learning problems) increased dramatically after World War II. During the early 1900s there was also an increased attention to mental health and a consequent interest in establishing child guidance clinics. By 1930 child guidance clinics and counseling services were relatively common features of major cities, and by 1950 special education had become an identifiable part of urban

public education in nearly every school district. By 1960 special educators were instructing their students in a continuum of settings that included hospital schools for those with the most severe disabilities, specialized day schools for students with severe disabilities who were able to live at home, and special classes in regular public schools for students whose disabilities could be managed in small groups. During this period special educators also began to take on the role of consultant, assisting other teachers in instructing students with disabilities. Thus, by 1970 the field of special education was offering a variety of educational placements to students with varying disabilities and needs; however, public schools were not yet required to educate all students regardless of their disabilities.

During the middle decades of the twentieth century, instruction of children with disabilities often was based on process training—which involves attempts to improve children’s academic performance by teaching them cognitive or motor processes, such as perceptual-motor skills, visual memory, auditory memory, or auditory-vocal processing. These are ancient ideas that found twentieth-century proponents. Process training enthusiasts taught children various perceptual skills (e.g., identifying different sounds or objects by touch) or perceptual motor skills (e.g., balancing) with the notion that fluency in these skills would generalize to reading, writing, arithmetic, and other basic academic tasks. After many years of research, however, such training was shown not to be effective in improving academic skills. Many of these same ideas were recycled in the late twentieth century as *learning styles*, *multiple intelligences*, and other notions that the underlying process of learning varies with gender, ethnicity, or other physiological differences. None of these theories has found much support in reliable research, although direct instruction, mnemonic (memory) devices, and a few other instructional strategies have been supported reliably by research.

### The History of Legislation in Special Education

Although many contend that special education was born with the passage of the Education for All Handicapped Children Act (EAHCA) in 1975, it is clear that special educators were beginning to respond to the needs of children with disabilities in public schools nearly a century earlier. It is also clear that EAHCA did not spring from a vacuum. This landmark law naturally evolved from events in both spe-

cial education and the larger society and came about in large part due to the work of grass roots organizations composed of both parents and professionals. These groups dated back to the 1870s, when the American Association of Instructors of the Blind and the American Association on Mental Deficiency (the latter is now the American Association on Mental Retardation) were formed. In 1922 the Council for Exceptional Children, now the major professional organization of special educators, was organized. In the 1930s and 1940s parent groups began to band together on a national level. These groups worked to make changes in their own communities and, consequently, set the stage for changes on a national level. Two of the most influential parent advocacy groups were the National Association for Retarded Citizens (now ARC/USA), organized in 1950, and the Association for Children with Learning Disabilities, organized in 1963.

Throughout the first half of the twentieth century, advocacy groups were securing local ordinances that would protect and serve individuals with disabilities in their communities. For example, in 1930, in Peoria, Illinois, the first *white cane ordinance* gave individuals with blindness the right-of-way when crossing the street. By mid-century all states had legislation providing for education of students with disabilities. However, legislation was still noncompulsory. In the late 1950s federal money was allocated for educating children with disabilities and for the training of special educators. Thus the federal government became formally involved in research and in training special education professionals, but limited its involvement to these functions until the 1970s. In 1971, this support was reinforced and extended to the state level when the Pennsylvania Association for Retarded Children (PARC) filed a class action suit against their Commonwealth. This suit, resolved by consent agreement, specified that all children age six through twenty-one were to be provided free public education in the *least restrictive alternative* (LRA, which would later become the *least restrictive environment* [LRE] clause in EAHCA). In 1973 the Rehabilitation Act prohibited discriminatory practices in programs receiving federal financial assistance but imposed no affirmative obligations with respect to special education.

In 1975 the legal action begun under the Kennedy and Johnson administrations resulted in EAHCA, which was signed into law by President Gerald Ford. EAHCA reached full implementation in 1977 and

required school districts to provide free and appropriate education to all of their students with disabilities. In return for federal funding, each state was to ensure that students with disabilities received non-discriminatory testing, evaluation, and placement; the right to due process; education in the least restrictive environment; and a free and appropriate education. The centerpiece of this public law (known since 1990 as the Individuals with Disabilities Education Act, or IDEA) was, and is, a free appropriate public education (FAPE). To ensure FAPE, the law mandated that each student receiving special education receive an Individualized Education Program (IEP). Under EAHCA, students with identified disabilities were to receive FAPE and an IEP that included relevant instructional goals and objectives, specifications as to length of school year, determination of the most appropriate educational placement, and descriptions of criteria to be used in evaluation and measurement. The IEP was designed to ensure that all students with disabilities received educational programs specific to their “unique” needs. Thus, the education of students with disabilities became federally controlled. In the 1982 case of *Board of Education of the Hendrick Hudson Central School District v. Rowley*, the U.S. Supreme Court clarified the level of services to be afforded students with special needs and ruled that special education services need only provide some “educational benefit” to students—public schools were not required to maximize the educational progress of students with disabilities. In so doing the Supreme Court further defined what was meant by a free and appropriate education. In 1990 EAHCA was amended to include a change to person-first language, replacing the term *handicapped student* with *student with disabilities*. The 1990 amendments also added new classification categories for students with autism and traumatic brain injury and transition plans within IEPs for students age fourteen or older. In 1997, IDEA was reauthorized under President Clinton and amended to require the inclusion of students with disabilities in statewide and districtwide assessments, measurable IEP goals and objectives, and functional behavioral assessment and behavior intervention plans for students with emotional or behavioral needs. Because IDEA is amended and reauthorized every few years, it is impossible to predict the future of this law. It is possible that it will be repealed or altered dramatically by a future Congress. The special education story, both past and future, can be written in many different ways.

## Trends in Special Education

Researchers have conceptualized the history of special education in stages that highlight the various trends that the field has experienced. Although some of these conceptualizations focus on changes involving instructional interventions for students with disabilities, others focus on the place of interventions. The focus on placement reflects the controversy in which the field of special education has found itself throughout history. Samuel G. Howe was one of the first to assert—in the nineteenth century—that instructional settings had inherent qualities that alone insured effective interventions. Belief in the essential curative powers of place spurred the late nineteenth century crusade for bigger and better institutions, as well as the mid-twentieth-century movement for deinstitutionalization. Exclusive focus on the importance of place distracted many professionals and prevented them from recognizing that dramatic changes in philosophy were accompanying the movement for deinstitutionalization. In the late nineteenth century, social Darwinism replaced environmentalism as the primary causal explanation for those individuals with abilities who deviated from those of the general population, opening the door to the eugenics movement of the early twentieth century, and leading to the segregation and sterilization of individuals with mental retardation. At the beginning of the twentieth century, the debate had suddenly shifted from *whether* the disadvantaged should be helped to *where* these individuals should be served. As the institutionalization versus deinstitutionalization debate raged, many individuals were given custodial treatment, which is contrary to the mission of special education.

Almost a century after the placement debate began, special educators still focused on the importance of place. Many were calling upon the field to create not one perfect setting for the delivery of services, but a continuum of placement options that would address the needs of all students with disabilities. The civil rights movement had reconceptualized special education as a case of access of minorities to the educational privileges of the majority, and the least restrictive environment clause of EAHCA/IDEA prompted advocates for people with disabilities to call for *mainstreaming*—the return of students with disabilities to the regular classroom whenever and wherever possible. In the 1980s the Regular Education Initiative (REI) was an attempt to return responsibility for the education of students with

disabilities to neighborhood schools and regular classroom teachers. In the 1990s the full inclusion movement called for educating all students with disabilities in the regular classroom with a single, unified and responsive education system. Advocates for full inclusion, following in the footsteps of Howe, argued for appropriate instruction in a single, ubiquitous place, contrary to the mandate of IDEA.

### Controversial Issues in Special Education

Special education has been the target of criticism throughout history. Some of the criticism has been justified, some unjustified. Some criticisms brought to light ineffective practices, such as the inefficacy and inhumanity of relegating all persons with disabilities to institutions. Other criticisms were distractions with disastrous repercussions, such as the singular focus on the importance of place while ignoring other inappropriate practices. The beginning of the twenty-first century found new criticisms being launched at special education. Some argue that the use of diagnostic labels is potentially stigmatizing to students, others that minority students are overrepresented in some disability categories, and still others that education of students with disabilities in special classes and schools, even pulling students out for instruction in resource classes, is akin to race-based segregation. Some of these criticisms may expose ineffective practices, others may only distract educators from the effort of finding and implementing effective instructional practices. Professionals must develop the ability to learn from history and differentiate between unimportant criticisms and those with merit.

One valid criticism repeatedly launched against special education involves the implementation of ineffective educational interventions. Although great concern about the *where* of instruction was expressed in the 1980s and 1990s, little attention was given to the *what* of instruction. Throughout the twentieth century the field of special education repeatedly adopted instructional strategies of questionable efficacy—interventions that have little to no empirical basis. Additionally, special educators have adopted, with “bandwagon” fervor, many practices that have been proven ineffective and have thereby repeated the mistakes of history. If special education is to progress, professionals will need to address and remedy the instructional practices used with students with disabilities.

Special education has also been validly criticized for the way in which students with disabilities are identified. In the early nineteenth century, physicians and educators had difficulty making reliable distinctions between different disability categories. In fact, the categories of mental retardation and behavioral disorders are inseparably intertwined. Many of the disability categories overlap to the extent that it is hard to differentiate one from the other. Additionally, some of the categories—learning disabilities and behavioral disorders, for example—are defined by the exclusion of other contributing disabilities. Thus, at the beginning of the twenty-first century, much work remains on the identification of students with disabilities.

Perhaps the largest, most pervasive issue in special education is its relationship to general education. The relationship of special to general education has been controversial since the beginning of universal public schooling. However, in the late twentieth and early twenty-first centuries, the question of whether special education should retain a separate identity or be fused with general education such that it has no separate identity (e.g., budget, personnel) was made prominent by proponents of a radical restructuring of special education. Proponents of radical restructuring and fusion argue that such integration is necessary to provide appropriate education for all students regardless of their disabilities and without stigma or discrimination. In their view, special education suffers primarily from structural problems, and the integration of two separate systems will result in a flexible, supple, responsive single system that will meet the needs of all students without “separating out” any. All teachers, according to this line of thinking, should be prepared to teach all students, including those with special needs.

Opponents of radical restructuring argue that special education’s problems are primarily the lack of implementation of best practices, not structural. Moreover, they suggest, special education will not survive to serve the special needs of exceptional students if it loses its identity, including special budget allocations and personnel preparation. It is not feasible nor is it desirable, they contend, to prepare all teachers to teach all children; special training is required to teach students who are educationally exceptional. Arguments about the structure of education (special and general), who (if anyone) should receive special treatment, how they should be

taught, and where special services should be provided are perpetual issues in special education. These issues will likely continue to be debated throughout the twenty-first century.

In the late twentieth and early twenty-first centuries, another issue became the basis for conceptual or theoretical bases for special education practices. Postmodern and antiscientific philosophies have been put forward in both general and special education. These ideas have been challenged by others who have noted the importance of the scientific method in discriminating among ideas and assertions. Likely, postmodern ideas and attempts to apply them to or refute them will be perpetual.

More than two hundred years after Itard began his work on the education of the wild boy of Aveyron, special educators are being asked to make decisions concerning such issues as placement and delivery of services. The inclusion debate, although important, has the potential to distract the field of special education away from issues of greater import—issues such as the efficacy of intervention and the accurate identification of students with disabilities. If special educators are to avoid the mistakes of the past, they will need to make future decisions based upon reliable data, evaluating the efficacy of differing options. Since the inception of what is now known as IDEA, significant progress has been made in applying scientific research to the problems of special education. In the twenty-first century, special education need not remain a field of good intentions, but can fully employ the scientific child-study techniques begun in the late eighteenth century to provide free and appropriate educations to all children with disabilities.

*See also:* ADAPTED PHYSICAL EDUCATION; ASSISTIVE TECHNOLOGY; ATTENTION DEFICIT HYPERACTIVITY DISORDER; COUNCIL FOR EXCEPTIONAL CHILDREN; EMOTIONALLY DISTURBED, EDUCATION OF; HEARING IMPAIRMENT; LEARNING DISABILITIES, EDUCATION OF INDIVIDUALS WITH; MENTAL RETARDATION, EDUCATION OF INDIVIDUALS WITH; SEVERE AND MULTIPLE DISABILITIES, EDUCATION OF INDIVIDUALS WITH; SPECIAL EDUCATION, *subentry on* CURRENT TRENDS; SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH; VISUAL IMPAIRMENTS, EDUCATION OF INDIVIDUALS WITH.

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## CURRENT TRENDS

The adage "there are two sides to every story" applies to special education. In the early years of special education, there was one clearly defined goal—an appropriate education for students with disabilities. Parents, professionals, and students with disabilities

rallied together to attain this right. Having secured this goal, the allies splintered into numerous advocacy groups, each fighting for different issues in special education. Issues such as school reform, full inclusion, standards assessment, and disability classification can be viewed not only from at least two perspectives, but from many variations or degrees of each.

### Special Education in the Context of School Reform

School reform has been a buzzword since the early 1980s, but special education was not often included in discussions of reform until about the turn of the twentieth century. In the early years of the twenty-first century, two of the most prominent school reform agendas having significant effects on special education were standards-based education and school choice.

**Standards-based education.** Standards-based reforms aim to improve school performance and use accountability systems to enforce the standards. Historically, schools have not included students with disabilities in accountability systems. By amending the Individuals with Disabilities Education Act (IDEA) in 1997, the federal government mandated that students with disabilities be included in district and state assessments. Local schools can face severe sanctions for inadequate test scores, including loss of accreditation and funding. Schools thus resist including lower scores that may bring down a school's average. Opponents argue that including students with disabilities on standards-based assessments creates an overemphasis on academic skills, when vocational or functional skills might better prepare the student for postsecondary school options other than higher education. Proponents believe that inclusion of students with disabilities on high-stakes tests increases school accountability and ensures access for students with disabilities to the general curriculum.

**School-choice reform.** School-choice reform focuses on the freedom of students to choose from a variety of alternatives to general public education. One trend is charter schools, which are publicly funded but follow a charter constructed by the school rather than by local government. Another form of school choice allows students to choose any public school within their designated district or cross district lines to attend another school. Choice may also involve magnet schools that offer special programs or con-

centrations, such as science and technology or performing arts. Open enrollment allows students to attend any public school in the state. Vouchers provide students with a designated amount of money to spend in any way on education, including private schools or home schooling. Other school choice alternatives are second-chance options (students may enter an alternative school or program) and workplace training (students learn a skilled trade through an apprenticeship).

School choice affects special education when restrictions are placed on entry into particular schools. For example, should a student with mental retardation be allowed to attend a science and technology magnet school? Should a student with severe emotional and behavioral disabilities be allowed to attend a charter school emphasizing visual and performing arts? If not, then school choice might be said to be an exclusionary and elitist system in which students with disabilities are denied an equal education.

School-choice proponents argue that no single educational program works for all students, thus it benefits children, including students with disabilities, to be able to choose the school that best meets their needs. Also, school choice provides options for students who might otherwise drop out of the public system and helps address issues such as racial and socioeconomic balance in schools.

### Placement

The debate about *where* a student with disabilities is best served is one of the most volatile issues in special education. The controversy is whether full inclusion or a continuum of alternative placements is better.

**Full inclusion.** In full inclusion, all students—regardless of disability, health needs, academic ability, service needs, and, often, preference of parent or student—are educated full-time in a general education class in their neighborhood school (the school they would attend had they no disability). In this model, the child receives special education support services in the general education classroom. Full inclusion requires either a team-teaching approach or consultation of the regular classroom teacher with a special educator. In team teaching, a classroom will have both a general education teacher and a special education teacher equally sharing the responsibility to teach the whole class. In consultation, a special

education teacher works with many general education teachers, meeting with them and answering questions as needed or on a regular schedule.

Proponents of full inclusion believe that pulling a child out of the classroom to provide special education services or placing the child in a self-contained classroom or special school is inherently unequal and inferior and, therefore, immoral. They also argue that both the student with disabilities and his or her peers benefit from full inclusion, an argument that often places greater emphasis on social interaction than academic achievement.

**Full continuum of placements.** Proponents of a full continuum of alternative placements, required by IDEA, note that since 1975 the law has mandated a continuum of placements including placement: (1) full-time in a general education classroom; (2) part-time in a special education resource room; (3) full-time in a special education self-contained classroom; (4) in a separate special education school; (5) at a residential facility; and (6) homebound or in a hospital. They agree that full-time placement in general education is appropriate for some students, but not for every student with disabilities. Proponents argue that in accordance with IDEA each student should be assessed and placed individually. Many students with disabilities commonly need a more structured and clearly defined environment, either academically or behaviorally, than a general education classroom can provide. Also, students with severe emotional or behavioral disabilities can infringe on other students' education in a general education classroom by either monopolizing a teacher's attention or by placing peers and teachers in physical danger. While believing that students should be educated in the least restrictive environment with nondisabled peers to the maximum extent appropriate, proponents of the continuum also believe that it is immoral and illegal to place every student in the exact same placement regardless of individual needs.

### The Name Game

Controversies surrounding labels and categories of disabilities are a major concern to parents and professionals. One issue is whether students should be labeled at all. Proponents of labels such as *learning disabled*, *deaf*, or *autistic* believe that these labels provide a common ground for professionals, researchers, and parents to discuss practices and share knowledge about particular disabilities. Labels help teachers and administrators prepare for and provide

a student with an appropriate education. Schools can better manage their budgets if they can quantify and describe the students needing additional funds and services.

Opponents of labels argue that labels permanently stigmatize the student. They believe that teachers and administrators lower their expectations of a labeled student, creating a vicious cycle in which the student is given fewer and fewer challenges and falls further behind grade level.

An extension of the labeling issue is categorical versus noncategorical labeling. Categorical labeling specifies a disability based on categories in IDEA. Noncategorical labeling tags a student as disabled or developmentally delayed without specifying the precise disability. Nondescript labels can provide educators and parents additional time to observe and evaluate the child before making a decision on disability type. Though this can help avoid mislabeling, the benefits of categorical labeling are lost.

### Disability Classifications

Some disabilities can be measured and defined objectively, and thus are easily identifiable. If a child is classified as blind, there is usually agreement about what blindness means and whether the child qualifies for special education or other services. However, many disabilities are not easy to identify and label. Judgmental categories such as learning disability, mental retardation, emotional disturbance, autism, and giftedness require professional judgment and subjective analysis. Severe and multiple disabilities, though often easier to identify, also create controversies because judgment is required to distinguish the level of disability (mild, moderate, or severe).

**Learning disability.** The majority of students categorically labeled have learning disabilities (LD). This is ironic because LD is one of the most difficult disabilities to define. Some individuals believe that LD is simply a social construct for those students who have not had adequate instruction. Another concern is that the IDEA definition describes what LD is not, rather than what it is, leaving localities with the task of finding a workable definition. Most localities define LD using a discrepancy between the student's actual achievement and the student's presumed ability or IQ. The problem is that not all localities use the same discrepancy standard or the same tests to measure achievement and ability and discrepancy scores have inherent limitations.

**Mental retardation.** Mental retardation (MR) is identified by below average intellectual ability and poor adaptive behavior that is pervasive in all areas of life. Intellectual ability and adaptive behavior can both be ambiguous, as different tests yield different intelligence quotients and assessment of adaptive behavior requires subjective judgment. A disproportionately large number of children from minority populations and low socioeconomic status are identified as having mental retardation, giving rise to the argument that identification of mental retardation is biased (too many African-American and Latino students and too many poor students are identified, but too few children of Asian descent are identified).

**Emotional disturbance.** Emotional disturbance refers to severe and protracted difficulties in relationships with other people. Controversies abound regarding who should be included in the category of emotional disturbance (ED). IDEA excludes from ED students who are socially maladjusted but not emotionally disturbed, but it does not define social maladjustment. Confounding the problem is another clause describing ED as “an inability to build or maintain satisfactory relationships with peers and teachers,” which can be interpreted to mean social maladjustment. Thus the language of the law seems self-contradictory. Another issue in ED is disagreement on the actual number of students with this disorder. Many estimates based on prevalence studies range from 6 to 25 percent of the student population, but less than 1 percent of the school population has been identified as having ED for special education purposes.

**Autism.** Autism is a pervasive developmental disability affecting approximately one in 500 children. Its onset is noted before the age of three years. Professionals find it hard to agree on a definition. One of the main controversies in definition involves the closely related syndromes of Asperger’s and Pervasive Developmental Disorder (PDD). There is great confusion and disagreement as to whether these are separate disabilities or different levels of severity of autism. Causes as well as the best treatments are also disputed for each.

**Attention deficit disorder and attention deficit hyperactivity disorder.** Attention deficit disorder (ADD) and attention deficit hyperactivity disorder (ADHD) have always been controversial. One reason for this is that the characteristics of ADD/ADHD, including careless mistakes on school work, forgetting daily activities, fidgeting with hands or

feet, or talking excessively, can describe an average child. What makes a diagnosis of ADD/ADHD difficult is determining whether these characteristics are beyond normal for the student’s age and have become a disability. In fact, some professionals argue that ADD/ADHD does not exist and that the label is used haphazardly on students who simply exhibit inappropriate behavior and a lack of discipline. Furthermore, IDEA does not acknowledge ADD/ADHD as a separate category but includes it under “other health impaired” (OHI). There is also a growing concern that too many children are being medicated for ADD/ADHD.

**Gifts and talents.** Gifts and talents are the opposite of disabilities, but some, if not all, of the same issues discussed previously apply (e.g., stigma of identification, judgment in assessment). Opponents of special programs for gifted and talented students argue that separating them from their nongifted classmates is elitist and that *all* students should be exposed to a superior, highly challenging education. A disproportionately high number of Caucasian and Asian students are identified as gifted, while a disproportionately low number of African-American and Hispanic students are found eligible for gifted programs. Proponents of special education for gifted students believe that these students need a special curriculum. Gifted students who are asked to work below their ability level or tutor their less gifted peers become bored and lose motivation. Identifying gifted students is also difficult because there is not one universally accepted definition, nor is gifted a category acknowledged under IDEA. The decision to provide gifted education and to determine what qualifies a student as gifted is often a local responsibility.

**Severe and multiple disabilities.** Compared to other conditions, there is less uncertainty in the identification of students with severe and multiple disabilities (SMD). Increased numbers of children identified as having SMD, however, is a fairly new trend in special education. Advances in medicine and technology are helping more children than ever before survive serious medical emergencies and severe injuries. This increase has spurred changes in special education and has placed new demands on personnel and the physical environment. These children often need assistive and medical technology in the classroom, as well as personnel knowledgeable about this equipment. Some of these students need

continuous support from a classroom assistant, especially when included in general education.

### Trends in the Classroom

Three trends in special education have especially significant influence on the classroom environment: (1) early intervention and prevention, (2) technology, and (3) transition plans.

**Early intervention and prevention.** Early intervention and prevention of disabilities are not new ideas, but they have experienced increasing emphasis. Schools are realizing that early intervention and prevention not only benefit children in the long run but save money as well by reducing the later need for costly services. Two significant issues are the appropriate role for the family of the child and whether the intervention should be child-centered or teacher-directed. In addition, obstacles to early intervention and prevention are still being addressed.

**Technology.** Technology permeates our society with increasing intensity and reaches into classrooms. It helps students overcome limitations previously placed on them by a disability. Computer programs allow keyboarding and navigation of the Internet by eye movements. Cochlear implants allow deaf students to hear, and new prosthetics (artificial body parts) provide greater mobility and participation in education and society.

**Transition.** The 1997 amendments to IDEA added two mandates related to transition from one school setting to another or from school to work. The first amendment requires transition-planning conferences for children exiting early intervention programs, the second is a statement of needed services for the transition from high school to higher education or work in the Individualized Education Plan (IEP) for students age fourteen or older. Other forms of transition planning, such as from middle school to high school or from a self-contained or restrictive environment to a less restrictive environment, are also becoming common.

### Special Education Teachers

There is a critical teacher shortage in special education in all areas of licensure. Reasons include a shortage of people going through teacher training programs in special education and entering the field, and alarmingly high exit rates for special education teachers. For example, in the *20th Annual Report to Congress on the Implementation of the IDEA* (1998),

statistics from 1993–1994 show that the total demand for special education teachers was 335,000, yet there were only 18,250 special education degree graduates, covering a mere 5.4 percent of the demand. Because of this gross need, alternative licensure programs have evolved: army personnel are being trained for a second career in teaching and drastically intensified and accelerated summer programs are replacing four-year licensure programs. While these programs can help place more teachers in the classroom, some professionals question the quality of both the teacher education programs and the newly licensed teachers. Also, some districts fill special education positions with teachers having either no prior education experience or with only general education experience and provide provisional or conditional licensure to these newly hired teachers. Due to these difficulties, teacher retention has also become a critical issue.

Debate also exists over categorical or noncategorical licensure. Proponents of categorical licensure argue that each disability category is substantially different from others and that teachers should be highly specialized in that area. Proponents of noncategorical licensure argue that teachers should be prepared to teach all children and should have the expertise to address differing abilities and disabilities.

A closely related issue is a trend in higher education to merge the special education teacher program into the general education program, doing away with special education altogether. The arguments for and against this teacher education structure are similar to those for categorical versus noncategorical licensure.

### Funding Issues

Funding issues and controversies beset all areas of education, including special education. Because special education requires services above those specified in the general education curriculum, additional funding is critical. When IDEA was first enacted in 1975, the federal government acknowledged this additional need by promising to supplement 40 percent of the excess costs incurred in implementing the act's mandates. Unfortunately, the federal government has never come close to fulfilling this promise. Over the years, however, there has been a greater effort to provide these funds to the states.

Other issues persist at the local level. One common controversy stems from a belief that because

the law requires special education services, these programs are funded first, utilizing the money that would otherwise be spent on general education. Another disputed issue is program consolidation—the blending of categorical programs such as special education, English as a second language, or other separately funded programs. Proponents believe that by pooling resources, all children can benefit and can be educated more effectively. Opponents of program consolidation believe it will diminish both the rights of children in these programs as well as the quality of special services provided.

### Conclusion

These controversies and issues, although the most widespread and disputed issues facing special education, represent only a small fraction of the numerous issues permeating special education today. School reform, labeling and classification, inclusion, teacher shortage, and special education funding can often be seen in the headlines of newspapers nationwide. Even though every story has two sides, more work is needed to ensure that every student's story will have a happy ending.

*See also:* ADAPTED PHYSICAL EDUCATION; ASSISTIVE TECHNOLOGY; ATTENTION DEFICIT HYPERACTIVITY DISORDER; COUNCIL FOR EXCEPTIONAL CHILDREN; EMOTIONALLY DISTURBED, EDUCATION OF; HEARING IMPAIRMENT; LEARNING DISABILITIES, EDUCATION OF INDIVIDUALS WITH; MENTAL RETARDATION, EDUCATION OF INDIVIDUALS WITH; SCHOOL REFORM; SPECIAL EDUCATION, *subentry on* HISTORY OF; SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH; VISUAL IMPAIRMENTS, EDUCATION OF INDIVIDUALS WITH.

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## PREPARATION OF TEACHERS

Special education is a complex enterprise. Students are classified by disability categories and placed in settings that range from classrooms and resource rooms to self-contained classes and separate schools. Special education teacher education also is complex. Teachers are prepared in specialized programs and often licensed to teach students with a particular disability. Licensure structures are complex and vary dramatically from state to state. Furthermore, how students with disabilities are served in schools has changed dramatically since the early 1980s, with implications for teachers' roles and teacher preparation.

### Special Education Students and Teachers

According to the U.S. Department of Education (DoE), in 1998–1999 about 5.7 million school-aged children were provided special education in the United States. Schools employed about 360,000 special education teachers, 90 percent of whom were fully qualified. Teacher preparation is also a substantial enterprise. The approximately 800 special education programs in the United States awarded more than 22,000 bachelor's and master's degrees in 1996–1997. Although such productivity would seem sufficient to address demand, many master's recipients are practicing teachers, and many newly graduated teachers decline to enter the work force.

The federal government has played an influential role in special education teacher education. Through the Individuals with Disabilities Education

Act (IDEA), the DoE has invested tens of millions of dollars annually on the preparation of special education teachers. The department has leveraged these funds to promote program development, most notably in early childhood and secondary special education. The government also has taken an active role in support of programs for teachers of students with low-incidence disabilities—severe disabilities and visual and hearing impairments, to name a few. In many states, the number of students with low-incidence disabilities is so small as to make teacher preparation costly and inefficient. For example, only thirty programs nationally prepare teachers in the area of visual impairments, and sixteen states have no programs for teachers of the hearing impaired. Because it is inefficient for individual states to prepare teachers in low-incidence areas, by the early twenty-first century the DoE had come to consider program support a federal responsibility.

### History of Special Education Teacher Education

The development of special education was bolstered in 1975 by the passage of the Education for All Handicapped Children Act (EAHCA), which was amended in 1997 by the IDEA. With the emergence and diversification of special education services in schools came demand for specially trained teachers and programs to prepare them. Although special education teacher education programs existed before the passage of the EAHCA, its passage spurred growth. By the beginning of the twenty-first century, 871 colleges and universities in the United States prepared teachers in at least one special education field.

In spite of its complexity and distinctive character, special education teacher education has evolved in the same way that general teacher education has evolved. Once guided by causal models that related precisely defined teacher actions to specific student outcomes, teacher educators' conceptions of teaching and learning have broadened to include teacher thinking and decision-making. This shift is most evident in the Interstate New Teacher Assessment and Support Consortium (INTASC) standards for beginning teachers, which use general education practice as the foundation for special education practice, and the realignment of the Council for Exceptional Children's professional standards with those provided by INTASC.

### Issues in Special Education Teacher Education

For decades, the overriding issue in special education teacher education has been the shortage of fully qualified practitioners. The IDEA requires that students with disabilities be provided a free and appropriate public education (FAPE), a promise that presumes a qualified teacher in every special education classroom. In 1998–1999, 10 percent of special education teachers were not fully qualified for their work. These 36,511 teachers worked with more than 570,000 students, who arguably may have been denied FAPE.

Shortages also are related to licensure area, geographical location, and diversity of the work force. Perhaps more invidious than overall shortages or variability in licensure areas are shortages of teachers in urban and rural areas—or, perhaps more precisely, in low-income schools in cities and rural areas. Also critical is the shortage of culturally and linguistically diverse (CLD) special education teachers, an issue that has plagued the general teacher work force as well. It is especially important in special education because of overrepresentation of CLD students, particularly African Americans, on special education rosters.

High attrition rates in special education contribute significantly to chronic teacher shortages. Some researchers have argued that attrition is the primary reason for continued shortages, particularly in high poverty schools. Attrition from special education classrooms is consistently higher than in general education. Analyses of the 1993–1994 Schools and Staffing Survey data suggest that, in a given year, more teachers leave the special education work force than enter. Consequently, the number of teachers entering the field each year is never sufficient to replace the demand for teachers created by attrition and growth, creating a chronic need for new teachers. In large-scale studies conducted since the early 1990s, researchers have identified specific teacher and workplace characteristics that contribute to attrition. Less experienced special education teachers are a greater attrition risk than more experienced counterparts, and unlicensed teachers are more likely to leave the classroom than their licensed counterparts. Moreover, studies of teacher induction indicate that high-quality programs may increase beginning teachers' intentions to remain in special education.

The chronic undersupply of teachers has spawned alternative special education training pro-

grams, many of which attempt to tap nontraditional pools of teacher candidates, such as retired military personnel and midlife career changers. Although many of these programs are quite rigorous in terms of the courses and field experiences required, not all are. Research on special education alternative programs has shown graduates of some programs to be capable teachers, often as competent and motivated as graduates of traditional programs. Moreover, their competence is associated with the length and intensity of their training. Longer and more rigorous programs have been shown to prepare better teachers than shortcut programs.

Amid concerns for preparing greater numbers of teachers are increasing pressures to improve their competence. Inclusion advocates believe that separate preparation of special and general education teachers does little to help teachers develop the knowledge and skills necessary for implementing inclusive classroom practices. Thus, there has been an increasing movement toward the unified preparation of classroom and special education teachers—at least those special education teachers who work with students with mild disabilities. Although some type of collaborative program was present at nearly 200 institutions by the beginning of the twenty-first century, critics worry that preparation for the distinctive work that special education teachers perform will be lost through unification.

Finally, researchers and teacher educators are concerned about the persistent gap between what is known about effective classroom practices and what teachers actually do. In special education, significant advances in behavior management, technology applications, and teaching reading have brought this issue into the spotlight. Both novice and practicing teachers are more likely to rely on traditional practices, perhaps learned through observation in K–12 education. Although the professional literature has provided substantial information about how best to help teachers improve their practice, state policymakers are reluctant to support professional development adequately. Moreover, there is limited research in general education and no research in special education delineating the characteristics of preparation programs that enable novice teachers to master and apply research-based practices in the classroom.

## Conclusions

Shortages of special education teachers have proven intractable, in spite of the substantial capacity for preparing teachers in the United States and a sustained federal investment in it. Solutions have been sought through studies of attrition, in which factors influencing teachers' decisions to leave the field have been identified, and in programs to attract nontraditional teacher candidates. Special education teacher education faces two additional challenges: preparing classroom teachers for the work they do with students with disabilities and bridging the research-to-practice gap for novice and veteran teachers. Although improving workplace conditions, establishing high-quality teacher induction programs, and providing effective professional development may ameliorate attrition and help resolve teacher shortages, the gap between what is known about supporting teachers professionally and what is done in the public schools persists. There is much to learn about effective practices in the initial preparation of teachers. In spite of these challenges, the special education teacher education enterprise annually produces more than 20,000 bachelor's and master's degree graduates and has sustained a fully qualified work force of more than 300,000 teachers—remarkable accomplishments in and of themselves.

*See also:* SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; TEACHER EDUCATION.

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## INTERNATIONAL CONTEXT

A goal of the United Nations is to make education available for all the world's students, including those who are disabled and have special needs. Doing so, however, raises many questions:

- What children need special education?
- What is the nature of education for children with disabilities?
- What philosophies form the basis for education for children with special needs and their families?

Access to education for students with special education needs is a global phenomenon. The underlying assumptions, educational strategies, and authorization of legislation governing special education differ across nations, and are inextricably linked to local context, societal values, and beliefs about pedagogy and disability.

### Education Philosophies

Three major philosophies have governed how a nation identifies and educates children with special needs. Historically, the medical model is the most widespread and has been used in both diagnosis and educational treatment of children with disabilities. Children receive a medical diagnosis based on psychological and physical impairments across selected domains and both strengths and weakness are identified for education and training. Children with similar diagnoses and functional levels are grouped together for instructional purposes. Standardized

testing is often used to provide a diagnostic name for a disability. According to Thomas Oakland and Sherman Hu, the accuracy of diagnoses is questionable as standardized tests are often not suitably normed, and reliability and validity estimates are often not available, making international comparisons difficult.

In the environmental model, disabilities are experienced as a function of the interaction between the person and the environment. Environments can be defined in terms of psychological and social environments as well as physical environments. Environmental impediments include architectural barriers, lack of assistive technology, and/or limited transportation. Instructional techniques and learning opportunities can be structured to compensate for environmental deficiencies to ensure that children learn and achieve skills of adaptive living. The role of the environment has been recognized in a World Health Organization classification scheme for individuals with disabilities.

The inclusion model incorporates aspects of the environmental model and views children as having a right to education with and alongside their nondisabled peers. Schools are organized to ensure that each student, disabled or nondisabled, receives age-appropriate, individualized attention, accommodations, and supports to provide access to the general education curriculum. Assistive technology often facilitates inclusive schooling practice for both teacher and student.

### Classification

Attempts to make meaningful international comparisons among students and the instructional supports and programs for children with disabilities are exceedingly difficult, given the differing definitions and eligibility criteria. For example, the Organisation for Economic Co-operation and Development (OECD) reports a range between 1 percent to 35 percent of the primary and lower secondary education population across twenty developed nations receiving special needs additional resources, including special teachers, assistive technology, classroom adaptations, and specialized teaching materials. Additional resources are typically provided to a higher proportion of males than females (averaging 63% to 37%, respectively).

The OECD also investigated how nations addressed the needs of students requiring support in

the general-education curriculum and expanded their indicators designed to compare the proportions of students with disabilities, learning difficulties, and social and economic disadvantages. Three categories emerged. Category A refers to students who have diagnosed disabilities about which there is substantial international agreement (e.g., blind/partially sighted, deaf/hard of hearing, autism, cognitive disabilities, or multiple disabilities). Category B is an intermediary classification and refers to students who have difficulty learning and are not easily categorized in either Category A or C. Category C refers to students who have difficulty learning because of socioeconomic, cultural, and/or linguistic factors.

The OECD reported striking differences in educational placement for students with special education needs. Some nations serve virtually no disabled students in special segregated schools (e.g., Italy), while others serve more than two-thirds in segregated schools (e.g., Finland, France, Greece, and the Netherlands). Despite the increasing inclusion of students with disabilities (Category A) in the mainstream of general education, inclusion is an issue that continues to be debated.

### Approaches

Cecil R. Reynolds and Elaine Fletcher-Janzen provide brief descriptions of existing special education approaches that are available for more than thirty nations or regions of the world. More detailed information, data and case studies are also available for nineteen developed nations in the OECD's 1995 report *Integrating Students with Special Needs into Mainstream Schools*. Another collection of comparative studies by Kas Mazurek and Margaret A. Winzer includes nations with limited special education (South Africa, Papua New Guinea, Senegal, and the West Bank and Gaza Strip), emerging special education (Nigeria, Iran, Brazil, Indonesia, Egypt, Pakistan, China, India, and Uruguay), segregated special education (Japan, Taiwan, Russia, Czechoslovakia, and Hong Kong), approaching integration (Israel, Poland, Australia, and Canada), and integrated special education (Scandinavia, New Zealand, the United States, and England and Wales).

An examination of special education philosophies and approaches reveals the following:

- Special education often consists of national and local governmental involvement in funding and service provision that is supplemented by the

work of nongovernmental service organizations. Oversight of these programs by governments varies widely.

- The medical model is the predominant philosophy in developing countries and in many developed countries. Environmental and inclusive models are emerging and are in varying stages of planning and implementation, primarily in the western developed nations.
- There are no coordinating international agencies monitoring global progress in special education, but the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Children's Fund (UNICEF) have developed teacher education materials in an effort to broaden the "Education for All" initiative to include children with disabilities.
- International funding sources for education (e.g., World Bank, Inter-American Development Bank, etc.), are proposing more inclusive approaches to special needs education.
- All nations recognize a need for improved teacher education, particularly in teaching children with special needs in regular classrooms.
- Nations with great needs for special education, usually the developing countries, are attempting to develop family or village-centered programs called *community-based special education*. These programs have been shown to be successful.
- A movement toward school-university partnerships shows promise in grounding teacher preparation in the practice of schooling.

Educating children with special needs is a humanitarian effort that is both a science and an art in some nations and an act of charity in others. In every nation, education for all has social, economic, and moral benefits.

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**See also:** INTERNATIONAL DEVELOPMENT AGENCIES AND EDUCATION; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF, PREPARATION OF TEACHERS.

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## SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH

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Communication skills are the foundation of academic and social performance. The ability to partici-

pate in active and interactive communication with peers and adults in the educational setting is essential for student success in school. Problems with speech or language development can lead to difficulties learning to listen, speak, read, or write. As a result, children with communication disorders may perform at a poor or insufficient academic level, struggle with reading, have difficulty understanding and expressing language, misunderstand social cues, avoid attending school, show poor judgment, or have difficulty with tests. Speech and language services can help children become effective communicators, problem solvers, and decision makers, allowing them to benefit from a more successful and satisfying educational experience as well as improved peer relationships.

**The History of Speech and Language Services**

Since their inception in the early twentieth century, speech and language services in the schools have undergone profound fundamental changes in scope and focus. Initially, *speech correctionists*, *speech specialists*, or *speech teachers* worked primarily with elementary school children who had mild to moderate speech impairments in the areas of articulation, fluency, and voice. Children with more severe disabilities were placed in private schools or institutions, or were not provided services at all. That is no longer the case, however, due to a number of social, political, and professional influences.

During the 1960s a number of state and federal laws were passed addressing the responsibility of public schools to provide an education to children with disabilities. Although a vast number of children with disabilities remained unidentified or inadequately educated according to Taylor, these laws served as the foundation, both legally and philosophically, for legislation passed in the 1970s that brought about profound and widespread changes in the responsibility that schools must accept in educating children with disabilities.

The Rehabilitation Act of 1973 was civil rights legislation that prohibited discrimination on the basis of disability in public or private programs and activities receiving federal financial assistance, including public education. This was followed in 1975 by the Education for All Handicapped Children Act (Pub. L. 94-142), requiring that all children with disabilities have available to them a free appropriate public education that emphasizes special education and related services designed to meet their unique

needs. The act was amended in 1986 to ensure services for children from birth through age two, and to place that responsibility with public agencies. This expansion of special education services was accompanied by the Regular Education Initiative calling for a partnership between general and special education to eliminate barriers between disabled and non-disabled children.

In 1990 the act was reauthorized once again, this time as the Individuals with Disabilities Education Act (IDEA), with a renewed focus on free appropriate public education in the least restrictive environment. In the same year, the Americans with Disabilities Act was passed, mandating reasonable accommodations for disabilities across all public and private settings, including private and public schools.

The IDEA Amendments of 1997 (IDEA 1997) is designed to retain the basic rights and protections that have been in the law since 1975 while strengthening the focus on improving results for children with disabilities. The primary focus of IDEA 1997 is to establish an educational process that promotes meaningful access to the general curriculum for each student with a disability.

While landmark legislative initiatives were being enacted during the 1970s, an equally significant shift occurred in the professional domain with the expansion of scholarship in all language-related fields. This stimulated increased attention to disordered language as well as normal language acquisition, with a concomitant shift in the relative proportion of students receiving special services in the schools for language problems, as differentiated from speech problems. At the same time, there was an increase in awareness of the central role that language plays in academic achievement. The expanding learning disability movement had a significant impact on language services in schools, as a large proportion of services to students with learning disabilities focused on strengthening language skills. This was typically viewed as being within the purview of the speech-language clinician who was based in the school.

During the 1990s there was an increased awareness of the relationship between language and literacy (i.e., reading and writing). Language problems are both a cause and a consequence of literacy problems in children and adolescents. Spoken and written language have a reciprocal relationship—each builds on the other to result in general language and literacy

competence, starting early and continuing through childhood into adulthood. Because of this, speech-language clinicians play important roles in ensuring that children gain access to appropriate instruction in reading, writing, and spelling. These roles include early identification and assessment, intervention, and development of literacy programs.

U.S. demographics have undergone rapid changes since the 1970s. It is now estimated that nearly one of every three Americans is African American, Hispanic, Asian American or Native American. In addition, according to the American Speech-Hearing Association's 1999 study, the limited-English-proficient population is the fastest growing population in America. This increase has resulted in a student population that is culturally and linguistically more diverse than ever before, and requires attention to such issues as nonbiased assessment and intervention considerations related to this diverse population.

Changes in the medical arena have also affected our nation's demographics. Medical advancements have led to more children surviving neonatal and early childhood traumas and illnesses, yet those who survive are often physically or medically challenged. Additionally, with health-care reform, many patients are released earlier from hospitals or rehabilitation centers; those who are school age may enter or re-enter public schools requiring intensive speech-language services.

### **Programs in the Twenty-First Century**

More than 1 million children receive services for speech or language disorders in public schools as of 2001, representing a 10.5 percent increase from the previous decade. In fact, speech-language intervention is the most common service provided for school children with disabilities. Caseloads include a wide range of disorders such as learning disabilities, autism, attention deficit disorder, stuttering, hearing loss, traumatic brain injury, specific language impairment, and cerebral palsy. Some children are medically fragile, have rare syndromes, or experience feeding and swallowing difficulties. In addition, children with speech or language disorders represent many racial and ethnic groups. The focus of intervention may include any or several components of speaking, listening, reading, or writing—language, voice, fluency, articulation, and/or swallowing.

Speech-language services are provided in the schools by approximately 35,000 speech-language

clinicians. The credentials required of these professionals vary across states. These credentials may be teacher permits, teaching certificates, teacher licenses, or clinical service credentials. Also, credentials required for schools may differ from a state license that is required to practice speech-language pathology in nonschool settings. In addition, many school-based speech-language clinicians choose to obtain the certificate of clinical competence granted by the American Speech-Language-Hearing Association. Some states allow the use of speech-language pathology assistants under the supervision of fully qualified speech-language clinicians.

School-based clinicians have a range of roles and responsibilities. Although the majority of their time is spent providing direct intervention services to children, they must also conduct screenings and diagnostic evaluations, write reports and documentation, plan and prepare sessions, meet and/or consult with teachers and parents, and conduct classroom observations of students. The scope of their responsibilities includes prevention of communication disorders as well as assessment and intervention.

Speech and language services involve cooperative efforts with others, including parents, audiologists, psychologists, social workers, special education teachers, classroom teachers, guidance counselors, physicians, dentists, and nurses. Speech-language clinicians work with teams to provide comprehensive language and speech assessments, and to develop and implement intervention plans. Intervention services may be provided in individual or small group sessions, in classrooms, in teams with teachers, or in a consultative model with teachers and parents. To be effective, communication goals should be educationally relevant, that is, integrated with academic and social activities. The ultimate outcome is to help children overcome their disabilities, achieve pride and self-esteem, participate fully in major life activities, and find meaningful roles in their lives.

*See also:* HEARING IMPAIRMENT, *subentries on* SCHOOL PROGRAMS, TEACHING METHODS; LANGUAGE AND EDUCATION; SPECIAL EDUCATION, *subentry on* CURRENT TRENDS.

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## SPEECH AND THEATER EDUCATION

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Speech communication education in the secondary schools is of critical importance in preparing students for their roles in a global society. Since the early 1970s, employers and college admissions personnel have identified speaking, listening, and critical thinking as skills and knowledge crucial to success. These three skills are the basis for most oral

communication or speech classes in the schools. Despite the increased emphasis on speech communication education on the part of academics and employers, most elementary schools do not offer speech communication classes, and many secondary schools do not offer a full complement of classes in speech communication. On the other hand, many schools offer at least some opportunities for students to gain speaking, listening, and critical thinking experiences. In a 2002 publication, Sherwyn Morreale, associate director of the National Communication Association (NCA), wrote, "The need for communication education in grades K–12 is a crucial national concern that cannot and should not be ignored. Competence in oral communication—speaking, listening, and media literacy—is prerequisite to students' personal and academic success in life" (p. v).

Speech communication focuses on how people use messages to generate meaning within and across various contexts, cultures, channels, and media. Teachers in the field of speech communication promote the effective and ethical practice of human communication. The National Education Goals Panel set forth six broad targets for educational improvements, which became part of the Goals 2000: Educate America Act of 1994. One of the objectives within the goals identified communication as an important knowledge and skill base for every American.

### Functions

The functions of secondary school speech communication education are based on the premise that such instruction should provide for the need of all students—those who are deficient, those who are gifted, and those who are normal in basic oral communication abilities.

The needs of the student who has a speech defect cannot be ignored. Students who stutter, have a cleft palate, or have a severe hearing disorder cry out for special speech instruction. U.S. Census Bureau data from 1997 indicated that 2,270,000 people aged fifteen years and over had "difficulty with speech" (493,000 of those had severe problems). Another 7,966,000 had "difficulty hearing conversation," with 832,000 noted as having severe problems. Most school districts have access to specially educated speech and hearing therapists. The school therapist in the early twenty-first century is expected to have knowledge of the cultural and genetic aspects of speech and language development; the physical

bases of speech, hearing, and language; the principles used in diagnosing speech, hearing, and language disorders; and the methods of treating disorders of speech, hearing, and language. Thus, such remedial instruction is considered outside the province of the classroom teaching of speech.

Speech communication education also seeks to provide learning experiences for students with special interests and abilities in speech. The needs of gifted students are often met by cocurricular activities. Forensics contests, intrascholastic and interscholastic debate, school theatrical productions, radio and television clubs, and school variety programs are established parts of the secondary school curriculum through speech courses. Such courses are often electives and are available only in schools where the speech teacher's time, interests, and education make them available.

Speech communication educators urge an emphasis on programs that provide the best education for the greatest number. As justification for their claim that speech instruction should be a required part of the secondary school curriculum for all students, speech educators note that oral communication is an extraordinarily pervasive element of social life. In a 1980 article, Larry Barker and colleagues reported that college students spend from 42 to 53 percent of their time in listening and 30 to 32 percent of their time in speaking, and only 11 to 14 percent in writing and 15 to 17 percent of their time in reading. Earlier research suggested similar and even higher percentages of speaking and listening for K–12 students. And Robert Bohlken suggested in 1999 that all students are expected to listen 50 percent of the time despite few opportunities for listening instruction. Because of the importance of oral communication in social relations, systematic instruction for all students in the nature, principles, and skills of oral communication is considered the primary objective of contemporary secondary speech education.

### Incidence of Speech Instruction

Some states have mandated speech communication education. Texas students are required to take a course that covers communication fundamentals, speaking, and listening. California, Maryland, and North Carolina have passed legislation mandating oral communication. In addition, the National Council of Teachers of Mathematics and the National Council for Accreditation of Teacher Education

have published guidelines and standards that include oral communication. The National Council of Teachers of English (NCTE)/International Reading Association (IRA) *Standards for the English Language Arts* include attention to oral literacy and communication skills. Standard 4 states, “Students adjust their use of spoken, written, and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes” (NCTE/IRA, p. 33).

While these guidelines are given, speech communication educators feel that all students need to receive systematic and in-depth direct instruction in speech communication in specifically designated courses. For example, English teachers may use one formal speaking event such as an oral book report or a formal oral report as the sole measure of a student’s speaking competence. Listening instruction is often only a request for students to “listen carefully”; at best, it may involve an activity where students must follow directions or summarize a story. While group work is common in classrooms, there is little instruction on how and why groups work.

Because of the need to provide speech communication instruction and the paucity of such courses in the schools, the National Communication Association developed a series of publications to address the issue of what to teach. *The Speaking, Listening, and Media Literacy Standards and Competency Statements for K–12 Education* provides a list of twenty standards for what should be taught in elementary and secondary schools in the United States. Each standard has a list of competencies addressing knowledge, behavior, and attitudes. While this list of standards and competencies is not intended to be prescriptive, it offers a beginning point for teachers, school districts, and states who want to know what professionals at all levels in the speech communication discipline deem “what K–12 students need to know and be able to do.”

### Nature of Instruction

The field of speech communication consists of a rich amalgam of studies having to do with the act and art of oral communication. In university speech departments there are courses of study in rhetoric and public address; interpersonal, group, organizational, political, intercultural, and nonverbal communication; listening; speech science; theater, oral interpretation, or performance studies; and radio, television, and film. Scholars may approach the study of speech

communication from physiological, acoustic, linguistic, aesthetic, psychological, sociological, and humanistic vantage points.

Speech instruction has traditionally been the sort that seeks to help students develop their personal skills in oral communication. Thus, units and courses of instruction in speech attempt to improve the students’ fundamental communication, speaking, listening, and media literacy skills. The first, and often the only, secondary school course in speech usually consists of bits and pieces from the various areas of public communication. Each student makes speeches, takes part in debate, reads a poem, listens effectively, and uses media in an appropriate way. In addition to the basic introductory course, advanced elective courses are often made available for students with special speech interests. Table 1 shows the NCA K–12 Standards from 1998 suggesting twenty areas in which students should be allowed the opportunity to gain skills.

### Cocurricular Speech Programs

In many high schools forensics, debate, and theater activities are as natural to the cocurricular program as band concerts, football games, and junior proms. The purpose of these activities is to give students with special aptitude an opportunity for more intensive and extended experience than is possible in the classroom. While the speech communication curriculum has moved away from total student performances, cocurricular speech programs will undoubtedly continue to make such experiences possible for interested and gifted students.

**Forensics.** The structure of forensic activities in high schools in the United States varies greatly from state to state. Some states have a well-defined and carefully organized system of forensic contests; others do not. Most states have a central agency responsible for the direction and control of forensic activities. In states with well-established forensic programs, a number of levels of contest activities exist. Most states offer some forms of impromptu and extemporaneous speaking, humorous interpretation, dramatic interpretation, original oratory, and poetry reading or literary programs. A number of states offer other events such as group acting, prose reading, radio and television speaking, after-dinner speaking, oratorical analysis, storytelling, pantomime, choral reading, student congress, informative speech, duet acting, expository speaking, and book reviewing.

TABLE 1

### Fundamentals of effective communication

#### Competent communicators demonstrate knowledge and understanding of . . .

1. The relationships among the components of the communication process.
2. The influence of the individual, relationship, and situation on communication.
3. The role of communication in the development and maintenance of personal relationships.
4. The role of communication in creating meaning, influencing thought, and making decisions.

#### Competent communicators demonstrate the ability to . . .

5. Show sensitivity to diversity when communicating.
6. Enhance relationships and resolve conflict using appropriate and effective communication strategies.
7. Evaluate communication styles, strategies, and content based on their aesthetic and functional worth.
8. Show sensitivity to the ethical issues associated with communication in a democratic society.

#### Competent speakers demonstrate . . .

9. Knowledge and understanding of the speaking process.
10. The ability to adapt communication strategies appropriately and effectively according to the needs of the situation and setting.
11. The ability to use language that clarifies, persuades, and/or inspires while respecting differences in listeners' backgrounds.
12. The ability to manage or overcome communication anxiety.

#### Competent listeners demonstrate . . .

13. Knowledge and understanding of the listening process.
14. The ability to use appropriate and effective listening skills for a given communication situation and setting.
15. The ability to identify and manage barriers to listening.

#### Media literate communicators demonstrate . . .

16. Knowledge and understanding of the ways people use media in their personal and private lives.
17. Knowledge and understanding of the complex relationships among audiences and media content.
18. Knowledge and understanding that media content is produced within social and cultural contexts.
19. Knowledge and understanding of the commercial nature of media.
20. The ability to use media to communicate to specific audiences.

SOURCE: National Communication Association. 1998. *The Speaking, Listening and Media Literacy Standards and Competency Statements for K-12 Education*. Washington, DC: National Communication Association.

The number of activities offered is also subject to great variation from state to state. Two national organizations sponsor contests for member schools. The National Forensic League offers contests in extemporaneous speaking, original oratory, humorous and dramatic interpretation, prose and poetry interpretation, student congress, and debate, with the latter including policy debate, Lincoln-Douglas debate, and Barbara Jordan debate (which concerns urban issues). The league has more than 1,000 chapters in the United States and a membership of approximately 240,000. The National Catholic Forensic League sponsors contests in extemporaneous speak-

ing, original oratory, interpretation events, and Lincoln-Douglas and policy debate for its more than 500 member schools.

**Debate.** Debate is often listed as one of the forensic activities and is usually sponsored by the same state agency sponsoring the other forensic activities. Debate is frequently handled apart from the other school forensic activities, however; thus it may be considered separately.

Because debate is an intellectually rigorous activity, it is most appropriate for students who are above average in intelligence and possess strong interest in problems of social concern. Debate is credited with developing such skills as the ability to collect and organize ideas, the ability to subordinate ideas, the ability to evaluate evidence, the ability to see logical connections, the ability to speak convincingly, the ability to adapt, and the ability to think and speak in outline terms.

Because interscholastic debating activities must focus on common topics, a central national coordinating agency is necessary. The National Federation of High School Activities serves this important coordinating function with the help of an advisory council made up of a representative from each state with a speech league or similar organization, a representative from the National Forensic League, and a representative from the National Catholic Forensic League. At an annual meeting the advisory committee considers the various problem areas that are recommended for consideration as debate topics and selects three of these areas for possible adoption; the final selection is made by means of a national referendum. Because three alternative debate propositions are provided for the national topic area, each state must decide which of the three propositions within the national topic area selected it will use as a debate topic.

Once a state agency has determined the particular proposition to be debated, the state conducts a series of tournaments in which that proposition is debated. Most states sponsor a state tournament, and many offer district and regional elimination tournaments as well. In addition to state-sanctioned tournaments, individual schools and cooperating universities and colleges sponsor invitational tournaments. Near the end of the season, member schools of the National Forensic League engage in league-sponsored tournaments in which the national proposition is debated. Teams that win a district

tournament are eligible to compete in the National Forensic League National Tournament. The National Catholic Forensic League sponsors a similar national tournament.

**Theater.** The vast majority of high schools in the United States have some form of cocurricular theater program. The quality and quantity of cocurricular dramatic activities differ a great deal from school to school. Some schools still limit dramatic activities to class plays, which are directed by teachers with limited experience and directorial talent. Other schools have active and balanced theater programs consisting of several full-length productions of various types, one-act play productions, play readings, theater trips, and formal and informal meetings, workshops, and discussion sessions. High school theater, both curricular and cocurricular, has strong national leadership through the International Thespian Society and the American Educational Theatre Association.

### Teacher Preparation

Nationally, a standards-based evaluation is used to measure how well teacher candidates meet quality indicators and competencies. According to a 2000 NCA document, *Communication Teacher Education Preparation Standards and Guidelines*, there are six quality standards used to assess the speech communication teacher preparation program: (1) structure of the program, (2) general studies component, (3) knowledge of communication, (4) professional education and pedagogical studies, (5) professional collaboration and growth, and (6) field-based experiences for communication.

**See also:** ENGLISH EDUCATION, *subentries on* PREPARATION OF TEACHERS, TEACHING OF; JOURNALISM, TEACHING OF; LANGUAGE ARTS, TEACHING OF; SECONDARY EDUCATION; SPEECH AND LANGUAGE IMPAIRMENT, EDUCATION OF INDIVIDUALS WITH.

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## SPELLING, TEACHING OF

Spelling has traditionally been considered to be a component of the English/language arts curriculum. Among most educators and the public, *spelling* retains its traditional definition: "the knowledge and application of the conventional written representation of words in the process of writing, and the instruction necessary to develop this knowledge." During the last few years of the twentieth century, however, many psychologists and educators extended this definition to include spelling knowledge, meaning an understanding of how the written form of words corresponds to their spoken counterparts and underlies the ability to decode words during the process of reading and to encode words during the process of writing. Because of this insight into the role of spelling knowledge in reading as well as in writing, spelling research and instruction were generating considerable interest and focus in the field of literacy at the beginning of the twenty-first century.

### The Nature of the Spelling System

English spelling balances a demand to spell units of sounds consistently from word to word with a demand to spell units of meaning consistently from word to word. In a large proportion of the words encountered in print beginning in the intermediate school years, however, the balance tilts most often toward consistent representation of meaning—"visual identity of word parts takes precedence over letter-sound simplicity" (Venezky, p. 197). Spellings that appear to be anomalous at the level of spelling-to-sound correspondences are usually logical when considered from the perspective of spelling-to-meaning correspondences in which the spelling visually retains the meaning relationships among words—*crumb* has a silent *b* to preserve its visual identity with *crumble*, in which the *b* is pronounced; the second syllable in *mental* is spelled *-al* rather than *-le*, *-el*, or *-ile* in order to retain its identity with the related word *mentality*, in which the spelling of the second syllable is clear and unambiguous; and *autumn* is spelled with a final silent *n* to preserve its visual identity with *autumnal*, in which the *n* is pronounced. "Words that are related in meaning are often related in spelling as well, despite changes in sound" (Templeton, p. 194).

Though the visual preservation of meaning is the most striking feature of English spelling, the manner in which sound is represented is more logi-

cal than often assumed, particularly when the position of a sound within a syllable is considered. For example, the sound /ch/ is always spelled with the letters *ch* at the beginning of a word, never *tch*. At the end of words, on the other hand, both spellings occur—usually determined by the sound that they follow. After a long vowel sound, /ch/ is usually spelled *ch* (*poach, beach*); after a short vowel sound, /ch/ is usually spelled *tch* (*match, pitch*). In two-syllable words, this logic occurs between syllables as well: A short vowel sound followed by a single consonant requires the consonant to be doubled before another syllable beginning with a vowel (*sitting, happy*) while a long vowel sound followed by a single consonant does not require this doubling (*siting, pilot*). Exceptions do exist, of course (consider *rich, much* and *habit, cabin*) but these are few in relation to the consistency with which the patterns apply. As learners progress, they may learn that these exceptions become considerably fewer because they are explained in terms of the history of the word (the language from which it came), and by the tendency for visual preservation of meaning to override a consistent representation of sound.

### A Brief History of Spelling Instruction in the United States

From colonial times in America and continuing well into the nineteenth century, the teaching of beginning reading and the teaching of spelling were unified. Spelling was in fact the way in which beginning reading was taught. Instruction began with students learning the order and names of the letters of the alphabet; then individual sounds were blended to form simple syllables of the consonant-vowel and vowel-consonant forms; and finally words for reading were learned by spelling each word orally and then pronouncing it. The spelling books of Noah Webster (1758–1843), though not the first to be published in the United States, were the first that emphasized American pronunciation and spelling (most of which was determined by Webster himself, who would also publish the first dictionary of American English). Part I of Webster's *Grammatical Institute of the English Language* (1783) addressed spelling (Parts II and III addressed grammar and reading, respectively); immortalized ever after as the "old blue-backed speller," it was reissued as *The American Spelling Book* (1788), revised (1803), and revised again and retitled *The Elementary Spelling Book* (1829). Webster's lasting influence was the pre-

sentation of words in lessons according to frequency of occurrence in spoken and written language, as well as by type of spelling pattern.

By the 1840s the role of spelling books narrowed from that of ushering children into reading to that of focusing only on spelling (orthography) and pronunciation (orthoepy). Throughout the remainder of the nineteenth century, and well into the twentieth, spelling retained a separate niche in the language arts curriculum, embodied in separate spelling textbooks, or basals. Although the manner in which spelling was taught was criticized over the years, and on occasion the very necessity of teaching spelling as a separate subject was questioned, most classroom teachers embraced the necessity of a formal emphasis on spelling.

Though spelling basals continued to be published throughout the latter part of the twentieth century, the move towards integrating the reading and language arts curriculum resulted in the inclusion of spelling as a component in reading basal programs. The amount of time and emphasis on spelling as a subject decreased. To the degree that spelling was directly addressed, spelling words were pulled from reading selections with little or no emphasis on common patterns; often, these words were also new vocabulary words as well. Within the context of a *whole language* philosophy, spelling was often addressed during writing instruction—at point of need, on an incidental basis. Though some educational publishers offered new spelling programs during the 1980s, these programs did not enjoy a wide popularity until the late 1990s. Most of these basal programs organized their content in a scope and sequence that followed a developmental sequence, while, in notable contrast with series in previous years, some added explicit treatment of the spelling/meaning connection. During the 1990s a considerable number of resource books intended for classroom teachers were published focusing on the teaching of spelling or word study (e.g. Bear et al. 1996; Pinnel and Fountas 1998).

### Spelling Development: Learning and Instruction

Research investigating the development of spelling knowledge has shown that knowledge about the nature and function of spelling begins to develop with the learning of the alphabet and may continue into college, though spelling instruction seldom extends into the middle grades and beyond. Young children's explicit understanding of how the spelling

system works is based on the expectation that letters represent sounds in a spatial/temporal left-to-right match-up. Later, knowledge of the interactive relationship between sound and position is acquired, and later still, knowledge of the role that meaning plays. Most English/language arts educators concur with research that supports the importance of engaging students in as much reading and writing as possible and in encouraging young children to apply their knowledge of the alphabet and of letter/sound relationships in their writing. There is lack of agreement, however, concerning the degree and the nature of attention allocated to spelling instruction apart from ongoing reading and writing activities. Traditionally, the two common perceptions regarding how students may learn to spell have been either (1) rote memorization through repetitive practice or (2) acquisition through more natural engagements with reading and writing. In this latter conception, the need for the skill should be apparent to learners, therefore they will be motivated to acquire knowledge of conventional spellings. Most studies that have addressed this issue, however, support the need for students to examine words apart from the more natural contexts of reading and writing. In contrast with repetitive, low-level activities, however, this examination should include reading and writing the words in contexts that involve students in comparing and contrasting words in an active search for patterns. Although both the act of reading and the act of proofreading one's own writing for spelling errors involve the learner in the application of spelling knowledge, neither act—individually or in concert—appears to engage the learner in the types of explicit attention and thinking necessary for the abstraction of the logical patterns in the spelling system. For most older students (as well as adults), the role of meaning in the spelling system does not become apparent simply through reading and writing.

Advances in the assessment of spelling knowledge allow teachers to determine more effectively and efficiently the range of spelling ability among the students in their classroom, and thus to plan instruction accordingly. Such assessment may include spelling inventories and analysis of students' writing. Selection and organization of words for examination should be based on the developmental appropriateness of the words, the type(s) of spelling pattern they represent, and their familiarity in reading. In the primary grades, exploration will be directed towards the discovery of commonalities at the alphabetic,

within-syllable pattern, and later between-syllable patterns and morphological level (i.e., simple affixes and base words). For example, younger students who are moving from the beginning to the transitional phase of literacy development may compare and contrast words with a short vowel pattern, such as *grin* and *trim*, with words with a long vowel pattern, such as *line* and *time*. In the intermediate grades and beyond, exploration will be directed primarily towards extending between-syllable pattern knowledge, and then toward developing spelling knowledge in the context of more advanced morphological, or meaning, relationships. Older students may thus examine the spelling/meaning relationships in the known words *muscle* and *muscular* (thus remembering that *muscle* has a *c* in it because they hear the *c* pronounced in the related word *muscular*) and apply this knowledge to the unfamiliar word *muscularity* (because of the similar spelling they realize it is related in meaning to *muscle* and *muscular*; it also provides a clue to the spelling of the /er/ sound in *muscular*).

In the first edition of the *Encyclopedia of Education* (1971) Ralph M. Williams discussed the logical nature of the role of English spelling, noting the role of pattern, morphology (meaning), and etymology (word history). He noted the value of encouraging an inductive approach to instruction. The field has seen Williams's conclusions supported in the subsequent three decades and has added these additional insights:

1. Developmental research has provided a stronger foundation for crafting a scope and sequence for spelling instruction; there is a better understanding of when to teach which particular aspects of the spelling system.
2. Spelling knowledge plays a larger role in literacy than previously thought; it is the foundation for decoding words in reading as well as for encoding words in writing.
3. From an instructional standpoint, there is a clearer understanding of how the relationship between spelling and meaning at the intermediate grades and beyond can be developed and extended so that the areas of spelling and vocabulary—traditionally separate in the language arts curriculum—can be effectively blended.

These insights lead to the conclusion that spelling, as a topic, is no longer limited to being simply a skill

in the writing process or an aspect of attention to the conventions of print. Rather, the range and focus of spelling instruction now impacts a broader terrain than it has in the past.

In order for students at all levels to arrive at the understanding of the role of pattern and meaning in the spelling system, their teachers must be knowledgeable about this system. In this regard, Hughes and Searle observed in 1997: “If we teachers do not believe that spelling has logical, negotiable patterns, how can we hope to help children develop that insight?” (p. 133). At the beginning of the twenty-first century, therefore, there is a renewed emphasis on developing teachers’ knowledge base about the nature and structure of spoken and written language—and the relationships between the two. Such a foundation may help teachers in turn develop in their students a conscious attitude and habit of search that reflect the expectation that, most of the time, the nature and occurrence of sound and meaning patterns in spelling are logical and negotiable.

**See also:** ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; HANDWRITING, TEACHING OF; LANGUAGE ARTS, TEACHING OF; READING, *subentry on* TEACHING OF; WRITING, TEACHING OF; WEBSTER, NOAH.

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SHANE TEMPLETON

## SPORTS, SCHOOL

### OVERVIEW

Robert M. Malina

### ROLE IN STUDENT'S SOCIAL AND EMOTIONAL DEVELOPMENT

Sharon Shields

Elizabeth Gilbert

### OVERVIEW

School sports refer to athletic programs in the context of the school setting. They refer most often to interschool competition at the middle/junior high school and high school levels in the United States. Interschool programs at the elementary level vary among communities. School sports also include intramural competition, but such programs are very rare. In the mid-1990s, intramural sports involved only about 450,000 middle, junior, and senior high school students, or 3 percent of the high school-aged population.

### Purposes of School Sports

The objective of school sports is the enrichment of the high school experiences of students within the context of the educational mission of schools. As such, school sports should be educational and contribute to the overall education of all students, not

athletes only. Other objectives of school sports logically follow from the educational mission: citizenship, sportsmanship, fair play, teamwork, respect, and health and welfare of all students not only during the school years but continuing into adulthood.

### Origins of School Sports

Two major forces were involved in the development of interscholastic sports in the United States: the school program, specifically physical education, and students. The initial focus was almost exclusively on boys. Within the school program, Luther Gulick established the New York Public Schools Athletic League (PSAL) in 1903, and similar leagues were organized in 177 cities by 1915. The purpose was to encourage a healthy, strong body and mind through competitive exercises. The PSAL initially conducted “class athletics” in grades five through eight at specific times each year, not interschool competition as it is known today. Class athletics included seasonal track and field events (fall, standing long jump; winter, chinning the bar; spring, running sprints). PSALs also emphasized swimming, popular sports of the times (baseball, football, basketball), and several minor games.

Interscholastic high school sports for boys had their origins in student organizations in the 1880s. They were motivated in part by intercollegiate sports, especially football, baseball, and track and field. Activities of sports clubs attracted the attention of administrators and faculty, who had major reservations about the time and energy devoted to sports and effects on the schools, including the small number of boys involved, quality of coaching (clubs often hired their own coaches), unsportsmanlike conduct, use of “ringers” (nonstudents, professionals), out-of-town travel, length of schedule, interference with school work, lack of carry-over value, injury (especially in football), and emphasis on winning, among others. Although the welfare of high school athletes was a major issue, more important, perhaps, was concern of faculty and administrators for the reputations of the schools and the perceived need for adult control. These factors contributed to the formation of state high school athletic associations, such as those in Michigan (started in 1895) and Indiana (1903). State associations in Illinois, Indiana, Iowa, Michigan, and Wisconsin formed the Midwest Federation of State High School Athletic Associations in 1921, which became the National Federation of State High School Athletic Associations in 1923. The

name was subsequently changed to the National Federation of State High School Associations in the 1970s when the fine arts were established as a program area.

Two important factors in the acceptance, or perhaps tolerance, of interscholastic sports by administrators and faculty were the scholastic performance of boys and school retention. Boys did not do as well as girls in school, dropped out more often than girls did, and were commonly behind in grade level. Between 1890 and 1920, the majority of public school students (56%–58%) and graduates (61%–65%) were girls. Child labor and compulsory schooling laws, which were passed early in the twentieth century, contributed to increased school attendance.

A related factor was the emergence of progressive education and how it addressed the needs and problems of boys in a coeducational setting. The percentage of women teachers in high schools increased (65% in 1920), and an important role was attributed to interscholastic sports in meeting the needs of boys in this context. Educators “sought to instill a more masculine tone and temper in the schools, in part by co-opting the informal interscholastic athletics that the boys themselves had created” (Tyack and Hansot, p. 166).

Interscholastic sports spread rapidly from the 1930s through the 1950s, at a time when the medical and physical education communities were opposed to competitive sports for elementary and junior high, and occasionally high school, students. Sport opportunities for females also increased, but school sports were largely the domain of males. Title IX of the Education Amendments of 1972, which was implemented in 1975, increased sport opportunities for girls.

### Participation

The estimated number of participants in high school sports from 1971 to 2000 is illustrated in Figure 1. While the number of students enrolled in high school declined from the late 1970s to 1990, the number of athletes was rather stable after a slight decrease, 3.3 to 3.5 million males and 1.7 to 1.9 million females. Since 1990, numbers of high school students and athletes increased, but the increase in athletes was somewhat less in males (3.4 to 3.9 million) than in females (1.9 to 2.7 million). The larger increase in females reflected implementation of Title IX legislation and increased interest in sports for girls.

As a percentage of total students in grades nine through twelve, the number of male athletes was, with few exceptions, rather stable between 24 percent and 26 percent from 1971 to 2000 (see Figure 2). The percentage of female athletes increased from 2 percent in 1971 to 10 percent in 1975 and then more gradually from 12 percent in 1978 to 18 percent in 1999–2000. As a percentage of male athletes, the number of female athletes increased from 8 percent in 1971 to 53 percent in 1980 and then more gradually to 69 percent in 1999–2000.

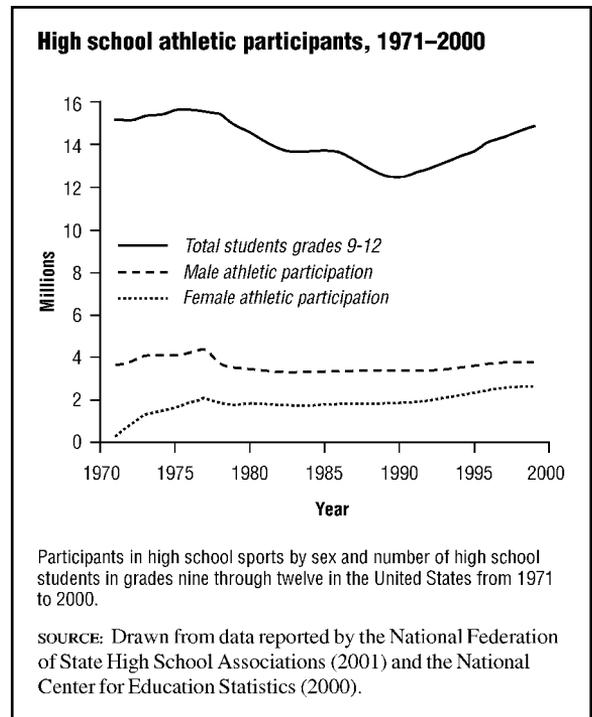
Reported participation in high school sports in the Youth Risk Behavior Survey (YRBS) is consistent with trends in Figure 2. Weighted percentages of youth reporting participation in high school sports only in 1997 were 24.0 percent for males and 23.9 percent for females (see Table 1). Relatively more white males and females reported participating in school sports only than Hispanic and black males and females, and relatively more Hispanic students reported participating in school sports than black students. The YRBS also included nonschool sports. More males than females reported participation in both school and nonschool sports and the ethnic difference between black and white males was reversed. Participation in both school and nonschool sports is an issue among state high school associations, largely in terms of the time demands on youth as well as increasing demands and pressures from nonschool sport organizations for year-round participation in a single sport.

Corresponding estimates for other countries are not available. Intramural and to a lesser extent interschool sports competition are offered in some countries, but highly developed interscholastic sports programs as in the United States are not available. Most sports are organized in the context of specific clubs independent of the schools.

### Popular Sports

The ten most popular sports for boys and girls based on numbers of schools offering the sports in 1999–2000 are summarized in Table 2. Data for 1989–1990 are included for comparison. The most popular sport offerings have changed little. Competitive spirit squads replaced indoor track and field for girls. Soccer showed the largest gains over ten years, 99 percent in girls and 42 percent in boys. The same pattern was apparent for golf, 75 percent in girls and 26 percent in boys. With the exception of football

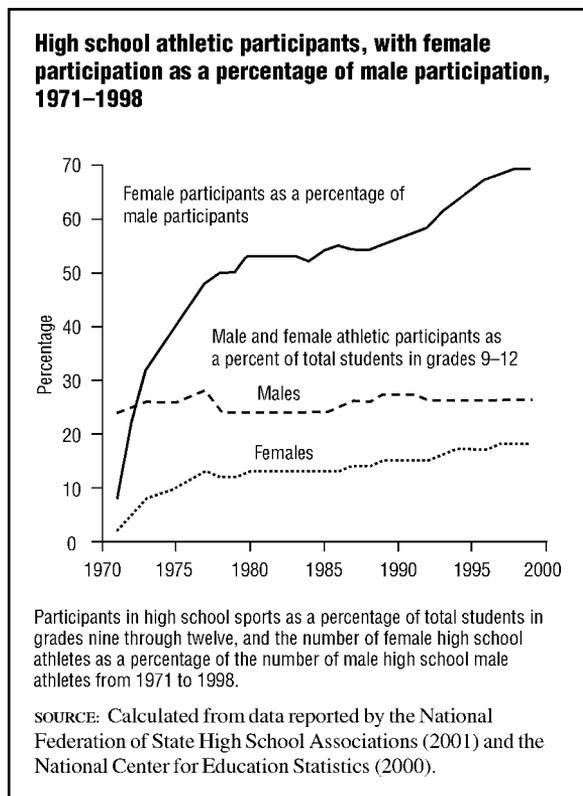
**FIGURE 1**



(down 5%), all sports showed an increase in offerings over ten years.

Corresponding statistics for the ten most popular sports for boys and girls based on numbers of participants are summarized in Table 3. Football had the largest number of participants among boys, followed by basketball. Over the ten year interval, the number of participants in the top ten sports for boys increased and several sports changed rank. Baseball and wrestling declined, while track and field and soccer gained. The number of boys participating in soccer increased by about 50 percent in ten years. Other sports for boys that showed significant gains were golf (35%), outdoor track and field (18%) and cross country (17%).

Among girls, the number of participants in competitive spirit squads replaced golf in the top ten. The ranking of the top four sports (basketball, track and field, volleyball, and softball) did not change, while soccer moved to fifth. The number of participants in soccer increased by 142 percent, followed by fast pitch softball (67%), swimming and diving (63%), and cross country (47%). Overall and within the same or similar sports, relative increases in female participants were greater than corresponding increases in males.

**FIGURE 2**

### Issues in School Sports

Although interscholastic sport programs are popular, they are not without problems. Some are inherent to sports (such as injuries), whereas others span a range of issues.

**Safety and injuries.** Concern for the health and welfare of high school athletes is a primary objective of interscholastic programs. Nevertheless, risk of injury is inherent to sports. Comparison of injury rates for five sports in males (baseball, basketball, football, soccer, wrestling) and five sports in females (basketball, field hockey, soccer, softball, volleyball) during the 1995–1997 school years indicated the following trends (see Table 4). Football had the highest and baseball the lowest injury rates among the five sports for boys, whereas soccer had the highest and volleyball the lowest rates of injuries among the five sports for girls. Except for volleyball, injury rates were higher during games than practices in both genders. Sprains and strains, general trauma (including concussions), and fractures accounted for most of the injuries. About 90 percent of all reported injuries were new.

Estimated injury rates (per 100 athletes) in similar or the same sports were higher in girls than in boys for softball/baseball and soccer, but virtually identical for basketball. Rates of knee injuries were higher in female basketball and soccer players compared to male athletes in these sports, but only slightly more common in softball than in baseball players. Knee injuries required surgery more often in females than in males, and anterior cruciate ligament (ACL) surgery was especially more common in female basketball and soccer players than in male participants in these sports. The higher incidence of ACL injuries in adolescent and adult female athletes is well documented, and the issue of predisposing factors is an area of current study.

Among inherent risks in sport is the risk of death. Although deaths in sport are rare at young ages, they receive considerable media attention. Estimated rates for nontraumatic sport deaths in high school and college athletes thirteen to twenty-three years of age are less than one per 100,000 participants per year, but the ratio of males to females is about ten to one. Rates are higher among college than high school male athletes. Nontraumatic deaths in sport are due primarily to cardiovascular causes, but several noncardiovascular causes are also involved, including hyperthermia, electrocution due to lightning, and complications of asthma. These are preventable conditions. Corresponding data for traumatic deaths in high school athletes are less than one per 100,000 participants.

**Carry-over.** Benefits of participation in interscholastic sports should presumably carry over to other aspects of life during adolescence. Data from the YRBS indicate associations between sports participation and positive health behaviors related to physical activity, diet, cigarette smoking, illegal drug use, and reduced sexual intercourse (females). Associations were strongest for white and less consistent for black and Hispanic high school students. Other data indicate positive associations between sports participation and educational (higher grades, lower drop-out rates) and social (leadership roles, self-assurance) behaviors. Data relating high school sports participation to adult behaviors are generally lacking. Consequences of sport injuries for health in adulthood also need study.

**Coaches and coach education.** Qualifications for coaches vary among states and school districts. Many states and districts require coaches to have a teaching certificate, but there apparently is a lack of

teachers with either an interest in coaching or the necessary credentials. As a result, an increasing number of coaches are not teachers and do not have faculty status. Nonteacher coaches are commonly required to complete a coach education program that includes principles of growth and development, coaching (theory, methods, psychology), and training (conditioning, nutrition); injury prevention, management and care; CPR and sports first aid; and risk management. Available courses vary in depth of content and mode of delivery. Coach education is required for nonteachers in 35 states and the District of Columbia and for all coaches in 15 states, but is not required in 15 states.

There is a lack of uniform standards for coaches education, although a comprehensive set has been recommended by the National Association for Sport and Physical Education. Professional coach education programs analogous to the systematic preparation and certification of teachers are not available in the United States.

**Programmatic issues.** School sport programs are currently affected by a number of issues, including schools that focus on a single sport (“rogue schools,” “factories”); emphasis on “nationally ranked programs,” which implies national travel during the school year; recruiting, especially for summer basketball; increasing numbers of international students; and threats to amateurism. International students are often concentrated in rogue schools for basketball and reported ages are commonly questioned. The United States Olympic Committee (USOC) has already foregone the rules of amateurism, and the National Collegiate Athletic Association (NCAA) may be moving in this direction.

High school programs generally emphasize competition and program success rather than developing skills for the next level of athletic competition. In contrast, many national sport governing bodies emphasize talent identification, development, and medals, and prefer that talented youth be passed along to a higher level of coaching and training than at the high school level. Talent identification programs in many sports are not consistent with objectives of school sports.

**College scholarships.** Unrealistic expectations for sport success beyond high school plague many programs and college scholarships are a major issue. The probability of receiving a college athletic scholarship is small. Of approximately three million

**TABLE 1**

**Weighted percentages of participation in high school sports and nonschool sports by gender and ethnicity, 1997**

	High school sports only	Nonschool sports only	Both school and nonschool sports
<b>Male</b>	23.3	12.8	33.8
White	24.1	12.1	34.6
African American	19.3	14.4	37.3
Hispanic	21.9	15.5	25.0
<b>Female</b>	21.6	8.7	23.1
White	23.9	9.0	25.5
African American	15.2	7.5	17.7
Hispanic	16.7	8.5	15.6

SOURCE: Adapted from Pate, Russell R.; Trost, Stewart G.; Levin, Sarah; and Dowda, Marsha. 2000. “Sports Participation and Health-Related Behaviors Among U.S. Youth.” *Archives of Pediatric and Adolescent Medicine* 154:904–911.

eighth graders in 1988, only about 5 percent later reported participation in intercollegiate sports and only about 2 percent were in Division I schools. The number was further reduced when only those who received athletic financial aid was considered. Only 48 percent of all NCAA Division I athletes received athletic aid (scholarships) in 1992–1993.

The lure of college scholarships, especially for basketball and football, has resulted in widespread scouting at the middle or junior high school levels and commercially sponsored prep school football combines analogous to the National Football League. In the context of competition with professional leagues, the NCAA is also discussing a mentoring program for elite athletes as young as 12 years, specifically for basketball. One can question whose interests are best being served by such programs and their consistency with educational objectives of high school sports. Probability of success in sport beyond college is even more remote.

**Violence.** Violence at sporting events involving participants, coaches, and spectators is increasingly reported. The violence reflects interactions among several factors, including overemphasis on winning, lack of administrative supervision, lack of respect for authority, inconsistent officiating, social inequities in schools, and perhaps parental and community overinvolvement. Violence is also routinely tolerated and sanctioned in several highly popular sports, specifically ice hockey and football, and occasionally basketball and soccer (e.g., “professional fouls”). Re-

TABLE 2

**Ten most popular interscholastic sports for boys and girls based on number of schools participating in the respective sports, 1989–1990 and 1999–2000**

Boys		1999–2000		Percent change
1989–1990				
Basketball	16,710	Basketball	16,852	0.9
Track and field (outdoor)	14,270	Track and field (outdoor)	14,664	2.8
Football	13,986	Baseball	14,610	7.2
Baseball	13,629	Football (eleven-player)	13,313	-4.8 <sup>1</sup>
Cross country	10,311	Golf	12,391	26.3
Golf	9,773	Cross country	11,891	15.3
Tennis	8,941	Tennis	9,603	7.4
Wrestling	8,416	Soccer	9,330	42.2
Soccer	6,561	Wrestling	9,046	7.5
Swimming and diving	4,306	Swimming and diving	5,324	23.6
Girls		1999–2000		Percent change
1989–1990				
Basketball	16,188	Basketball	16,526	2.1
Track and field	13,982	Track and field	14,587	4.3
Volleyball	11,996	Volleyball	13,426	11.9
Cross country	9,272	Softball (fast pitch)	13,009	49.7
Softball (fast pitch)	8,688	Cross country	11,277	21.6
Tennis	8,550	Tennis	9,468	10.7
Swimming and diving	4,227	Soccer	8,218	99.1
Soccer	4,128	Golf	7,090	75.0
Golf	4,052	Swimming and diving	5,536	31.0
Track and field (indoor)	1,936	Competitive spirit squads	3,497	N/A

<sup>1</sup>The earlier survey probably included schools offering six- and eight-player football programs.

SOURCE: Based on information from the National Federation of State High School Associations.

spect for opponents and sport and sportsmanship need stronger emphasis if the educational objectives of sport are to be attained.

Sport was allegedly a focus of attention in the violence that occurred in Littleton, Colorado, in the spring of 1999. The perpetrators of the violence allegedly identified athletes as targets and were described as being on the fringe of the high school social circles. These events raise important issues related to the preferential position and treatment of varsity athletes and the marginalization of some students by the social structure of high schools. Varsity sport is exclusive and schools offer few, if any, opportunities for youth who are not sufficiently skilled or who lack the size required for some sports. Schools and communities often indulge in varsity athletes in major sports and rank them among the socially elite. Administrators and coaches often tolerate unacceptable behaviors of athletes (physical, verbal, and social bullying; criminal activities), giving athletes a different status compared to other students. “Trash talk” and the “in-your-face” demeanor of many sports, which are essentially forms of non-physical violence, are commonly treat-

ed by coaches, administrators, and commentators as a form of strategy or “sport smarts.” Does such verbal abuse contribute to poor sportsmanship, lack of respect for opponents and the sport, and physical violence? The data are suggestive.

**Nonschool sports.** Programs for talented young athletes (and by extension some coaches) to participate in a sport after the school season, but during the school year and in the summer, have expanded recently. High school eligibility can be compromised and young athletes face the risk of overtraining, injury, and exploitation. Some programs also compete directly with school sports. This is perhaps most apparent in elite youth soccer clubs that call for year-round training in the sport following the professional model. Further, professional soccer teams in the United States (in contrast to other professional sports) have signed players still in high school, a practice that is common in soccer and other sports throughout the world.

**Students with disabilities.** Most public schools practice inclusion of students with a disability in intramural and interscholastic sports programs according to the provisions of the Americans with

TABLE 3

**Ten most popular interscholastic sports for boys and girls based on number of participants in the respective sports, 1989–1990 and 1999–2000**

Boys		1999–2000		Percent change
1989–1990				
Football	947,757	Football (eleven-player)	1,002,734	5.8
Basketball	517,271	Basketball	541,130	4.6
Baseball	413,581	Track and field (outdoor)	480,791	18.5
Track and field (outdoor)	405,684	Baseball	451,701	9.1
Wrestling	233,856	Soccer	330,044	49.5
Soccer	220,777	Wrestling	239,105	2.2
Cross country	155,806	Cross country	183,139	17.5
Tennis	136,939	Golf	165,857	34.9
Golf	122,998	Tennis	139,507	1.9
Swimming and diving	85,112	Swimming and diving	86,640	1.8
Girls		1999–2000		Percent change
1989–1990				
Basketball	389,668	Basketball	451,600	15.9
Track and field (outdoor)	308,810	Track and field (outdoor)	405,305	31.3
Volleyball	293,688	Volleyball	382,755	30.3
Softball (fast pitch)	205,040	Softball (fast pitch)	343,001	67.3
Tennis	128,076	Soccer	270,273	141.9
Soccer	111,711	Tennis	159,740	24.7
Cross country	104,876	Cross country	154,021	46.9
Swimming and diving	84,760	Swimming and diving	138,475	63.4
Field hockey	50,237	Competitive spirit squads	64,319	N/A
Golf	40,418	Field hockey	58,372	16.2

SOURCE: Based on information from the National Federation of State High School Associations.

Disabilities Act (ADA) and the Individuals with Disabilities Education Act (IDEA). Disability accommodations depend upon the individual needs of the student.

*See also:* COLLEGE ATHLETICS; PHYSICAL EDUCATION; TITLE IX.

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TABLE 4

**Injury rates (per 1,000 athlete exposures) in selected sports among high school boys and girls in the National Athletic Trainers' Association surveillance study**

Boys	Baseball	Basketball	Football	Soccer	Wrestling
Overall	2.8	4.8	8.1	4.6	5.6
Practices	1.8	3.4	5.3	2.5	4.8
Games	5.6	7.1	26.4	10.2	8.2
Girls	Basketball	Field hockey	Softball	Soccer	Volleyball
Overall	4.4	3.7	3.5	5.3	1.7
Practices	3.2	3.2	2.7	3.1	2.8
Games	7.9	4.9	5.9	11.4	1.2

SOURCE: Adapted from Powell, John W., and Barber-Foss, Kim D. 1999. "Injury Patterns in Selected High School Sports: A Review of the 1995–1997 Seasons." *Journal of Athletic Training* 34:277–284.

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#### ROLE IN STUDENT'S SOCIAL AND EMOTIONAL DEVELOPMENT

The role of sport in society, and more particularly in schools, has been debated for many decades.

There are divergent viewpoints on the value of sport, with proponents on one end of the continuum hailing sport as having the same goals and objectives as all of education and on the other end those who purport that sport is an entertainment enterprise that should be separated from education altogether.

### **A Brief Historical Perspective**

The development of organized sports and games in the United States has had an interesting history. Early settlers in the United States brought some games with them, but there was a minimal amount of organized athletics in communities and none in the schools until near the middle of the nineteenth century. Very little is known about the early history of sport development, but most authorities agree on the historical evolution of the major American sports that were developed in the eighteenth century. The first organized baseball team was founded in 1845, and the first college game was played between Amherst and Williams in 1859. The game of American football originated from soccer and rugby; the first game is claimed to have occurred in 1869 between Rutgers and Princeton. James Naismith created the game of basketball in 1891 to fill a need for play and sport during long winter months. Sports received mixed reviews, as the activities were usually conducted by citizens on a volunteer basis or by unsupervised high school and university students. By 1879 a need arose for systemization of sport and for a governing agent to oversee sports in the United States, which resulted in the formation of the Amateur Athletic Union in 1888. In 1906 the National Collegiate Athletic Association (NCAA) was founded as an outgrowth of meetings held by twenty-eight of the nation's colleges.

The NCAA and AAU have remained powerful governance boards in regulating college and all other amateur sports in America. As girls and women entered the sport arena, the formation of the National Association of Girls and Women in Sport in 1899 was instrumental in providing sound sport opportunities for all girls and women in a variety of sports at the elementary, high school, and collegiate levels. In 1971, with the impending passage of Title IX, representatives from 278 colleges and universities formed the Association of Intercollegiate Athletics for Women (AIAW), which governed women's intercollegiate sports until a takeover by the NCAA in 1981. The AIAW began to level the playing field for girls and women in sport. For the first time in Amer-

ican history, women's sports began to rival men's programs in the number of contests held, which increased the amount of publicity given to women's sports. When the NCAA took over as the governing body of women's intercollegiate athletics, it inherited a new era in women's participation. In 1971, only 31,000 women were engaged in varsity sports; a decade later there were 70,000, and the numbers have continued to escalate significantly.

In the United States, participation in organized sports has become a common rite of childhood. At the beginning of the twentieth century, agencies and schools provided sport opportunities as a means of providing wholesome leisure time activities for children and youth. Prior to 1954, most of these experiences occurred in Boys and Girls Clubs, Young Men's Christian Associations (YMCA), Young Women's Christian Associations (YWCA), Boy Scouts, and Girl Scouts. With the inception of Little League Baseball in 1954, sport for youth moved from social agencies and activities organized by youth themselves to adult-organized sport programs. In the early twenty-first century, schools have organized teams primarily for the "athletically elite," often to the exclusion of the majority of students. Opportunities for youth to engage in sport remain unequal across genders and social class.

The debate continues as to the value of sport in education. Sport is ingrained in society as both an educational fixture and an entertainment enterprise. The argument continues as to whether or not sport holds valued benefits for its youth and young adult participants and therefore warrants a prominent place in the educational system.

### **Benefits of Sports to a Child's Development**

A wide spectrum of outcomes has been attributed to modern-day sports and play. Critics have condemned sport for fostering excessive violence, an overemphasis on competition and winning, and the exploitation of individuals. Sport proponents have extolled the value of sport as a contributor to health, personal fulfillment, and community integration.

It is important to look at how sport has the potential for producing positive outcomes in educational and noneducational settings for children and youth. Mihaly Csikszentmihalyi has proposed a model for systematically assessing the potential positive outcomes of sports and the conditions necessary to produce them. The Csikszentmihalyi model is

based on the premise that four main types of consequences are of importance when examining and/or evaluating any sport activity. Two of these consequences are present at the individual level: personal enjoyment and personal growth; and two are at the community level: social harmony/integration and social growth/change. In relation to this model, an ideal sport activity is one that contributes in significant ways to all four types of outcomes.

Leonard Wankel and Philip Kreisel have identified five factors that should be present for a child or youth to experience the benefit of personal enjoyment in sport: personal accomplishment, excitement of the sport, improving one's sports skills, testing one's skills against others, and just performing the skills. These factors are thought to contribute most to the enjoyment of sport.

Personal growth includes a variety of physical and psychological factors. Physical health can be maintained and improved through sport participation by enhancing the cardiovascular system; improving blood pressure and cholesterol levels; increasing muscular strength; improving muscular endurance, flexibility, and bone density; and weight management. Because sports are a major type of activity in which children and youth are involved, it is considered a viable method of promoting good health. Lifetime sports, such as golf, tennis, swimming, and cycling, are especially beneficial in meeting nationally established health objectives. Early childhood participation in sport can minimize the emphasis on competition and focus on skill instruction. However, sports may not be a sufficient substitute for physical education programs in the schools. Quality physical education curriculums that have developmentally appropriate physical activities which provide the necessary foundations in motor skill, movement acquisition, and behavioral development can enable children and youth to become successful participants in organized sport.

Numerous studies support the positive relationship that exists between psychological well-being and regular involvement in physical activity, especially in the areas of reduction of anxiety and depression. Conditions to maximize such outcomes are usually associated with individual preferences related to activity type; environmental factors; level of competition or intensity of activity; and individual versus group format.

Sport has also been shown to serve as a mechanism for the transmission of values, knowledge, and

norms in creating social harmony. The specific values conveyed may be those of the dominant society, or they could be those of a subgroup. Therefore, sport could contribute to either differentiation and stratification or to integration into the overall society. Evidence indicates that different sports appeal to different social stratifications in the society and may reinforce cultural or societal differences. Sport also may serve to transmit general societal values, which leads many sport authorities to believe that sport has positive value for the participants in building character, discipline, a strong work ethic, and the ability to work in teams. The research literature supports the importance of de-emphasizing winning and competition and thereby moving young people into positive and enjoyable experiences. Unfortunately, the trend has been toward a more competitive, "win-oriented" framework, which has created increased aggression and violent behaviors among spectators and youth participants. This has led to many national forums at the high school, collegiate, and community levels to reassess the sport culture.

Positive outcomes related to socialization and social integration are also dependent upon appropriate leadership, as well as the creation of a climate for this to occur within the sport experience. Changes within sport and change in the general society have a symbiotic relationship—general societal changes affect sport, and changes in sport can also affect society.

## Conclusion

Youth sports participation can have many benefits for the individual and for society. However, it is evident that sports can produce negative consequences if quality programs are not developed. Schools and communities can strive for the highest standards by educating and training coaches, deterring the professionalization of youth sports programs, and abiding by the guidelines established by national sport governing bodies, so that sports programs have optimal benefit for all youth, regardless of age, gender, ethnicity, or ability.

*See also:* PHYSICAL EDUCATION.

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## STANDARDS FOR STUDENT LEARNING

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*Standards*, as they are used in education, are verbal statements of goals or desired classes of outcomes. They describe *what* the goals of the system are. Standards-based educational reform has the intention of having most or all students reach identified standards and of organizing educational services, including teacher preparation and instructional interventions, to address such standards. The rhetorical linchpin of such a system is the standards themselves.

### Definitions and Descriptions

Standards differ according to function and have fallen into at least three overlapping classifications. *Content standards* are intended to describe domain-specific topics, for example, student performance in areas of mathematics, such as measurement or probability, or in physics, such as force and motion. National professional groups, such as the National Council of Teachers of Mathematics, the American Association for the Advancement of Science, and the American Historical Association, for example, have reached professional consensus about such standards. States have also put into place panels intended to recommend such standards for adoption to their state boards of education. School districts may choose to augment, focus, or redefine content standards adopted by their state. Content standards are often arrayed in a continuum of development, specifying, for instance, particular standards for eighth-grade students or for beginning readers or those standards thought to be necessary to meet high school graduation requirements. *Skill standards* are explications of either a fundamental skill, such as reading, or job-performance standards, such as the ability to work in teams. Skill standards are often, although not always, independent of a particular content domain.

*Performance standards*, unfortunately, is a term used to denote two very different concepts, and users often fail to be explicit about their interpretation. Some educators use performance standards as a means to describe the "what" of education further or to give examples of tasks that fit particular content standards. Performance standards of this type are intended to communicate more clearly the intention of general content or skill standards. Good performance standards should link up to the design of assessments intended to measure the standards, although they are usually at some distance from that process. For example, the content standard "to understand the causes of major historical events in American history" might be illustrated by a description that says "The student will be given primary source documents related to an important historical era, such as the American Revolution or the Great Depression, and be asked to identify alternative explanations for the causes offered by different historical writers." The student will evaluate these arguments and use source material to explain in an essay which perspectives are most reasonable. These performance standards might then be augmented

with a sample task and scoring scheme for a set of such essays.

The second type of performance standard delimits the degree of proficiency, or the “how much” part, of performance. These performance standards are invoked following the development of assessments designed or selected to measure student performance of the standards. Frequently, these performance standards are described in terms intended to give a rough scale of competence, such as *basic*, *proficient*, or *advanced*. The operational definition of these standards is usually based on a cut-score—the dividing score between classifications—for example, “above 75 points.” The underlying theory of standards-based reform is that it is criterion referenced. This means that performance of the system is judged in the light of attainment of the standards as measured by particular tests and assessments. Because the inferences drawn about educational improvement strongly depend on the validity of these achievement levels, or performance standards, they are of critical importance.

### Historical Context

In the United States the 1990s were the decade of educational policy on standards and assessments. Following on the educational reforms in Great Britain in the late 1980s, the movement in the United States was propelled by a connected and unprecedented set of events: the meeting of state governors at Charlottesville, Virginia, in 1989 establishing national educational goals; the release that same year of the National Council of Teachers of Mathematics standards, describing expectations for an integrated and applied form of mathematics learning; the 1992 report of the deliberations of the National Council on Education Standards and Testing; and the enactment of the Improving America’s Schools Act of 1994, tying compensatory education resources to evaluations of progress toward standards.

The focus on educational standards as the basis for targeting and evaluating student learning seems the product of the 1990s but has, in fact, a venerable educational history. To understand the idea of standards for student learning, it is instructive to consider how the concepts of standards and assessments developed. The conception of standards and assessments can be traced to the 1951 writings of Ralph W. Tyler on curriculum and instruction in the “garden-variety schools.” Tyler constructed the problem of improving education with admirable logic. In his

view, schools should organize themselves as entities seeking to produce learning and achievement. Outcome measures of learning and achievement should be considered the proximal ends of education. These ends, in order to be pursued in a reasonable way, required deliberate decisions made by educators and other interested parties. Tyler addressed the task of determining educational objectives in a systematic way. He described three potential sources for generating learning objectives: the subject matter discipline, the society, and the needs of learners. Because this process was sure to generate too many objectives, candidate objectives were to be filtered by using screens of two types. The first screen was the psychology of learning, to answer through the application of theory and empirical knowledge the question of feasibility. The set was to be winnowed by the question “Can the objectives be taught and learned?” The second screen to reduce and make coherent standards was to articulate and apply a simple but integrated philosophy of education. This philosophical screen was to answer questions of priority and coherence as well as value: “What goals are important and matter most?”

The remainder of Tyler’s argument, called his *rationale*, focused on a systematic plan for teaching and learning and addressed criteria for the selection of learning opportunities, the creation of measures of achievement and other outcomes to match the objectives, and ways to involve feedback to improve the quality of education over time. Although there was considerable excess in the 1960s and 1970s in the focus on operational, behaviorally oriented objectives, there was some evidence that the system worked. The Tyler rationale was an object of study in the 1960s and the 1970s but is no longer in the working memory of many educators, who believe that the standards-based reform movement is a newly minted concept and revolutionary in its systemic focus.

### Comparing Past and Present

**Academic disciplines.** Two principal sources provided standards in the 1990s. The first was the academic disciplines, led by professional organizations, such as the National Council of Teachers of Mathematics in 1989, the joint effort of the International Reading Association/National Council of Teachers of English in 1994, the Mathematical Sciences Education Board of the National Research Council in 1995, and the National Council of Teachers of En-

lish in 1996. These groups either took on or were assigned the leadership position on the generation of standards (goals) for schools in their subject matters. The overwhelming use of this source made great sense because the rhetoric around standards pointed to the use of “new and challenging” standards intended to support the learning of all children. In the public’s mind, challenging standards equaled academic- or discipline-based learning. The experts, as they had in the curriculum reforms in the late 1960s and 1970s, once again weighed in on what students should learn in school. Perhaps in response to behaviorism in goal statements, these statements of standards are often global and subject to multiple interpretations.

**Society.** The second source for the generation of standards was the society. This source was narrowed to standards that were regarded as important in the workplace. Reports of needed skills from the state of Michigan, from national research studies, from analyses of labor markets, and from the work of the U.S. Department of Labor Secretary’s Commission on Achieving Necessary Skills devoted attention to requirements for success in employment. The argument for these sets of skills was tied to the importance of U.S. economic competition, and the sense, at the beginning of the 1990s, that the United States might be permanently eclipsed on the one hand by the economic dynamism in the Far East and on the other by the power of the emerging European community. This specter was bolstered by the reports of international comparisons of educational achievement showing that U.S. student performance was far lower than had been imagined and hovered in the not-so-good to truly miserable ranges. Consequently, societal sources of objectives took on four different varieties. The first was a set of new tasks, heretofore not emphasized in the academic side of schools; a good example was teamwork. In teamwork the emphasis was on roles and functions of team members rather than on “spirit.” Second were fundamental skills, such as reading and computation, skills lacking in entry-level employees. Third, there was a new emphasis on applied problem solving, both the inventive type and the application or modifications of algorithms necessary for key procedures. The fourth category of standards was in the general affective area and involved responsibility, leadership, and service orientation. For the most part, these four strands of tasks were not reconciled.

**Students’ needs.** A third source of Tyler’s goals, the student’s individual needs, found its way into standards through the focus on cognitive psychology, where the fundamentals of reading comprehension or mathematics problem solving, or the explanation of subject-matter content, and meta-cognition emphasized cognitive processes needed to display deep understanding. The promise of this approach was increased transfer. Such approaches often targeted integrative or project learning, but usually without addressing the transfer issue. For the most part, however, this source of objectives played out more directly in the application of the psychology screen and in the construction of assessments.

**Changing expectations.** A cynic might argue that the entire reform is explained by the psychological measure of paired associates, and that all that has been done is to substitute the term *standards* for goals and objectives, and the softer sounding *assessment* for the term *test*. Yet, the expectations for education have changed dramatically from the 1930s and 1940s. Education has become regarded as a right by society for a far greater proportion of learners than ever before. Society has changed scale and comprises greater numbers of individuals with different cultural, language, and economic backgrounds. Many differ substantially in their views of their own goals and prospects, the degree to which they embrace traditional American values, and the value they place on alternative ways to attain their own goals. It is clear that development of educational systems does not happen linearly on a cycle that supports achieving high levels of quality in one component (standards, for example) before attacking the next (e.g., the development of instruction). Paradoxically, it is probably best to act as if a logical, step-by-step process could guide the decisions about present or future practice, or at least as if superimposing a staged process were important. Without a framework as a guide for actions and understanding, it is difficult to think about such a complex system, in which institutions and organizations must respond to market pressures, to teacher-capacity variations, to economic shifts, technical advances, and the competitive strut of contending policy perspectives.

### Potential for Success

Will these standards work to improve education? Standards will be useful as a communication device to rally educators and the public. The system will fail

programmatically and substantively, however, unless serious effort is taken to connect measures systematically to the standards, to set realistic priorities about what standards can be achieved (as opposed to the enormous numbers typically adopted by states and localities), and to emphasize the essential acts of teaching and learning in the system. Arbitrary standards for achievement are set, and are used to judge a school or system and to assign sanctions based on putative standards-based performance. This strategy attempts to assign uniformity to schools and systems that are inherently different—in governance, in capacity, and in development. For the system to succeed in the context of democratic educational institutions, policymakers will need to take steps to assure that growth in performance on measures is attributable to teaching and learning rather than to practices intended simply to raise test scores artificially. They will need to understand more systematically and procedurally what they mean when they claim a system is “aligned,” and they will need to address forthrightly what requirements there may be to ensure the rising performance of all students.

*See also:* ASSESSMENT, *subentry on* PERFORMANCE ASSESSMENT; SCIENCE LEARNING, *subentry on* STANDARDS; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

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## STANDARDS MOVEMENT IN AMERICAN EDUCATION

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The origins of the standards movement in American education are largely economic. For much of the twentieth century, most jobs in the United States could be done by people with an eighth-grade level of literacy. Only a minority of people needed more than that, and fewer still needed the kinds of knowledge and skill associated with the work of professionals and managers.

Then, in the late 1970s and early 1980s, everything changed. American business was assaulted by firms, mainly from Asia, that were making enormous inroads into American markets for goods and services at home and abroad. American business leaders discovered that many of these firms were paying 1/10 to 1/100 of the wages that they had to pay for people with a seventh- or eighth-grade level of literacy in the United States. Hundreds of thou-

sands of jobs requiring relatively low literacy levels began moving offshore, never to return. The only way that firms could afford to continue to pay the prevailing wages in industrialized countries was if the people to whom those wages were paid could do the kind of highly skilled work that only highly educated people could do. In this new situation, eighth-grade levels of literacy would become a ticket to a life of economic struggle in the developed world.

### **Governors Take the Initiative**

State governors became very concerned about the jobs that were being lost to low-wage countries, and business leaders began to realize that skilled and educated people were vital to their future. All through the 1980s and 1990s, pressure grew to do something about this situation. The governors took the initiative. In a very unusual departure from prior practice, they devoted the 1986 meeting of the National Governors Association in Hilton Head, South Carolina, solely to education, declaring to professional educators, in effect, “We will give up regulating inputs and give you more flexibility and control over resources, in return for your commitment to be held more accountable for results.”

### **Standards-Driven Reform Models**

#### **The business model of standards-driven reform.**

The governors thus established the language of the new management revolution in business. The general approach that emerged was, roughly speaking: get your goals clear; communicate them clearly to everyone in the organization; create accurate measures of progress toward those goals; push decisions as to how to reach those goals as far down toward the people who make the product or render the service as you can; slice out most of the middle management in between; give the people on the front line the tools and training they need to do the job; and when all this is done, reward those who produce measured gains toward the stated goals and provide consequences for those who do not.

This model would have a powerful influence on the standards movement in education. Two other models came from analyses of the systems used in other nations that appeared to have more success than the United States in producing consistently high levels of achievement among the mass of their students: the accountability model and the ministry model. The accountability model came in two variants. The distinctions between them were subtle and terribly important.

**The educators’ accountability model.** One emerging point of view held that American achievement could be greatly improved by adopting clear academic standards, and then mandating tests that closely matched these standards. Based on the European and Asian experience, the advocates of this view maintained that the annual release of school-by-school performance data would by itself create irresistible pressure on the schools to find effective curriculum materials, implement effective instructional strategies, and do the other things needed to raise student performance. The educators who came to this view typically advocated standards and assessments that would support a *thinking curriculum* that went far beyond the requirements of basic literacy to emphasize autonomous, thoughtful, informed, and reasoned behavior.

**The political accountability model.** This formulation resonated with many people in positions of political leadership, who were persuaded that the main challenge was to find a set of incentives to make professional educators do what they should have been doing all along. Many were furious that, all through the 1980s, large investments in elementary and secondary education had produced very little achievement gain for students. For many of these people, the content of the standards and assessments was much less important than the ability to use standards to call educators to account. In this model, all that was really important was to have standards, assessments, and a system of rewards and consequences that would provide strong incentives to the educators to raise dramatically the performance of public educators. Unlike those who embraced the educators accountability model, the people who held this view cared little about the specific character of either the standards or the assessments.

**The ministry of education model.** Some people who examined countries with highly successful education systems came to a different conclusion about the sources of their effectiveness. This perspective was put forth in a report of the National Center on Education and the Economy titled *America’s Choice: High Skills or Low Wages!* (1990) and the report of the Third International Mathematics and Science Study (TIMSS) affirmed their view.

The researchers for the *America’s Choice* study noted that high-performing countries had a common set of structural elements including: high and explicit standards that are the same for all students, as least through the age of fourteen; national exami-

nations set to the standards; curriculum frameworks that specify the topics to be studied at each grade in the core subjects in the curriculum; and instruction and curriculum materials matched to the standards. The TIMSS researchers observed that, in contrast to the most successful nations, the curriculum they found in the United States was “a mile wide and an inch deep,” a function of the fact that the states, and the nation as a whole, lacked formal curriculum frameworks specifying what topics are to be studied at each grade level in the core subjects of the curriculum.

The result has been that textbook publishers, given the need to sell their products to an unorganized market, cram many different topics into their texts, treating each one very superficially and leaving out much of the conceptual material that is needed for students to understand the subject. By this analysis, the fact that no level of government in the United States plays the role typically played by ministries of education in other countries in assuring the alignment of the whole instructional system to standards makes it impossible to have a truly standards-based system of education. In this conception of the standards movement, what lies at the core is a highly aligned instructional system, each component of which will support the development of the kind of high-level skills and knowledge needed in the high-wage economies.

### **The Rise of the Standards Movement**

In the three years following the governors’ meeting at Hilton Head, events moved rapidly. By 1989, the National Council of Teachers of Mathematics (NCTM) had published *Curriculum and Evaluation Standards for School Mathematics*. In the same year, the chairman of the National Governors Association asked Governor Bill Clinton of Arkansas and Governor Carroll Campbell of South Carolina to co-chair a task force on educational goals. That fall, President George Bush asked the governors to join him in Charlottesville, Virginia in a meeting devoted solely to a discussion of educational goals.

When, in the following year, the White House announced a set of education goals for the nation, the governors responded once again with a call to establish a National Education Goals Panel, made up of governors and very senior representatives from the administration, to monitor the nation’s progress toward the goals.

### **The Politics of Standards**

The story of the 1990s is the story of the ascendancy of the political accountability wing of the standards movement. As the decade began, the conversation about goals became a conversation about standards, and many people started looking for some way to establish a national entity to become the focal point for creating some sort of national system of standards and assessments. Republican and Democratic presidents took turns at various formulations of ways in which the federal government could take the lead, if not in setting national standards and requiring national exams, then at least in creating some mechanism by which the federal government could fund the development by the states of standards and exams, and then monitor and review the quality of what they produced. They wanted to assure the public that some sort of system of standards was being established that would enable the United States to compete in world commerce, and to graduate students with an education comparable to that offered by any nation in the world. As of 2001, however, all initiatives to create national exams or tests, to reference state tests to national tests, and to review state standards and tests at the national level had failed.

Political conservatives fear that entrusting these functions to the federal government could lead to the imposition of a national curriculum. Liberals, on the other hand, fear that the inevitable consequence of a system of national standards will be to deny graduation and other forms of opportunity to poor and minority students who could not meet the standards because of the inequitable distribution of resources in the American education system.

What the electorate was prepared to entrust to the federal government, during the first Bush administration, was the granting of funds to teachers’ subject-matter associations to develop their own standards, following the example of the NCTM. Later, during the Clinton administration, there was a move to require the states to hold low-income students receiving federal funds to standards no lower than the standards to which all other students were held, which was tantamount to requiring all states to develop their own state standards.

### **The Pivotal Role of the States**

The most intense pressure to do something to use standards to raise educational achievement was falling, in any case, not on federal officials, but on top

state officials. Many of these officials joined the New Standards Consortium, a gathering of twenty-two states, half a dozen cities, a university, and a not-for-profit organization, in an effort to develop standards and assessments of the kind and quality that many of the state leaders knew would be required. The New Standards Consortium did, in fact, produce performance standards and reference examinations that were later used as a quality benchmark by many states, and the ideas that emerged from it proved influential, but it did not become the nucleus of a national system of standards and examinations, as some of its originators had hoped.

Instead, each state went its own way. In the mid-1990s, as the state commissioners of education, sometimes in league with their governors, were leading the effort to establish state standards, they found themselves in a war zone. Despite the strong pressure from the business community, officials of general government, and the public at large to do something about establishing state standards, these state officials found themselves under heavy attack from conservative groups and liberal educators, for reasons such as those cited above. The only way they could survive these assaults was to appoint broad-based groups from within each state to create that state's standards. Even a hint that the standards had come from outside the state would have doomed them. In some states, the battle over the standards quickly became very heated, adding the phrases *math wars* and *reading wars* to the educators' vocabulary. These state-developed standards were rarely benchmarked to any standards outside the state. Some were tightly focused on narrow skills, most were very vague, and few provided the kind of guidance that would be required to construct a curriculum.

None of these standards included examples of the kind of student work that would meet the standard, the hallmark of the performance standards that had been created by the New Standards Consortium. This omission was important because it is virtually impossible to construct an instructional program to get students to the standard if neither the student nor the teacher know what sort of student work will meet the standard.

The state standards drew, in varying degrees, on the standards that had been developed by the teacher's disciplinary associations. But some of these standards had also drawn heavy fire. The social studies standards were assaulted on the grounds that they

virtually ignored figures like George Washington and Robert E. Lee and gave much more space to women and minorities, whose role in the life of the nation was arguably less pivotal. Federal government support was withdrawn from the standards project of the English teachers because of its alleged failure to place sufficient weight on the conventions of English grammar, spelling, and other skills.

As the 1990s progressed, all but one of the states developed their own unique statewide standards, and most either bought off-the-shelf tests for statewide use or, in the majority of cases, worked with commercial testing companies to produce custom tests, frequently of much the same design as the most popular off-the-shelf tests. In the main, the tests satisfied the needs of the accountability wing of the standards movement for an instrument that could be used to hold teachers accountable, but fell far short of the kind of assessment tool that would provide incentives to create a thinking curriculum in the schools.

### **The Accountability Model Prevails**

Professional educators experienced this both as a greatly increased burden of testing and, even more importantly, as the sharpest edge of a burgeoning accountability movement. State after state was using the tests mandated at three or more grade levels as the basis for publishing scores comparing schools within the states. As the twentieth century came to a close, the accountability movement came to dominate the standards movement in most states. As state after state devised different methods to construct *league tables* showing how schools compared to one another and to the state standards on the state tests, school districts everywhere began to find themselves under enormous pressure to improve student performance, as measured by the tests. This pressure was, of course, passed down to the schools.

### **The Backlash**

The pressure to improve performance produced predictable results. Teachers, either of their own volition or with the active encouragement of their principals, prepared their students for the tests by teaching them how to answer the general form of the questions they would get. A few, leaving nothing to chance, opened the tests before they were to be administered, and told their students the answers, and a few corrected wrong answers given by the students on the test after they took it.

Many of the state tests were narrowly focused on facts and skills, rather than on a real understanding of the subject or an ability to apply complex knowledge and skills to problems unlike those the students had practiced on. Because of this, teachers who focused almost wholly on test preparation ended up greatly narrowing the curriculum. Researchers found that this actually depressed the achievement of many students who would have achieved at higher levels if there had been no accountability system. This in turn produced a revolt among middle-class and upper-middle-class parents and the teachers of their children. The teachers felt that the new tests and the accountability system that went with them were destroying good teaching, and the parents felt that the accountability movement was responsible for “dumbing down” a rich curriculum and making it less, rather than more, likely that their children would be able to get into the selective colleges they would otherwise be destined for.

Though test makers claimed that their tests were closely aligned with the state standards, and makers of instructional materials claimed that their products were closely aligned with the tests and the standards of particular states, independent analysts repeatedly found otherwise. The instructional power that researchers associated with the highly aligned systems in other countries was therefore only rarely being exploited in the actual implementation of the system in the United States.

### The Future of the Standards Movement

The political accountability model, as mentioned previously, includes only three elements of the more complex business, ministry of education, and educational accountability models: the standards, the measures, and the accountability system (meaning the rewards for those who produced improved student performance and consequences for those who did not). Missing from this model, but part of the other models, was: (1) high standards that incorporate a “thinking curriculum,” (2) assessments that teachers would like to teach to, (3) granting the school principals and others who will bear the burden of accountability the authority they need to do the job, (4) creating clear curriculum frameworks that would make it possible to build fully aligned instructional systems, and (5) making the heavy investments in the tools and training the school people would need to do the job.

The economic forces that have pushed American education toward explicit standards, the benchmarking of those standards against the standards in other countries, and the construction of league tables of school performance against common measures are unlikely to grow weaker in the foreseeable future. But the growing backlash among professional educators and suburban parents against the accountability version of the movement seems likely to grow, absent more thoughtful standards, tests that teachers feel comfortable teaching to, instructional materials closely aligned to standards that really support a thinking curriculum, and inclusion in the model of the missing elements of the business and ministry models of standards-driven education reform.

There are straws in the wind suggesting that this might happen. The national movement toward comprehensive school reform is beginning to produce organizations with the drive and resources to provide the training and technical assistance that schools need to bring students from many different backgrounds to high standards. Achieve (the organization founded by the governors and the business community to advance the cause of the standards movement in the United States) and the Southern Regional Education Board are working to assemble coalitions of states committed to the use of common examinations. Various organizations are working to develop instructional materials closely aligned to these frameworks that could become the basis for a thoughtful curriculum that good teachers will be pleased to teach. But there are other elements of the business and ministry models that are not much in evidence yet in the United States. The jury, therefore, is still out.

*See also:* BUSINESS INVOLVEMENT IN EDUCATION; CURRICULUM, SCHOOL; SCHOOL REFORM; STANDARDS FOR STUDENT LEARNING; STATES AND EDUCATION.

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## STATE DEPARTMENTS OF EDUCATION

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### ROLE AND FUNCTION

In the United States, education has been established as a state function. Each state exercises this function completely or in part through a state department of education, within which there are varying degrees of responsibility. The state educational authority (usually known as the state department of education and personified by the state board of education and the chief state school officer and his or her staff) gains its powers and responsibilities specifically from the

state's constitution and statutes. Much of its influence and authority, however, has developed as local school units, state governments, the federal government, and the courts have progressively looked to the state educational office as a source of professional advice and information.

In general, the growth and the specific roles of state departments of education have resulted from the state legislatures' responsibility to provide an adequate educational system; state education departments serve not only to interpret and facilitate the development of educational legislation, but also to observe its effect and to implement legislative mandates relating to education. The departments observe the school systems in operation and advise the legislatures of desirable changes and regulations. Moreover, there is a need for a central agent sufficiently knowledgeable about education to serve in a judicial capacity in controversies arising between school districts and local or regional educational agents and agencies of the state. State departments of education are needed to provide both voluntary services and services mandated by the legislatures to educational agents and state agencies. In general, the departments developed from the need to exercise leadership through both local government and the legislative and executive branches of state government and from the need to encourage positive improvement by uniting the educational forces within each state.

### Development

The concept of education as a state function is firmly rooted in the past, particularly in colonial laws that foreshadowed state laws and in ordinances regulating the territories that later became states. After the United States was formed, the concept of education as a state function was expanded through the general reservation of power to the states in the federal Constitution, through state constitutions, and through state statutory practice and judicial law.

**1812–1890.** State departments of education emerged and became firmly established during the period from 1812 to 1890. Although the first responsibilities of these departments during this period were advisory, statistical, and exhortatory, state departments of education began to come into their own with the swift expansion of public education following the Civil War. In these early days the extent of positive leadership exerted by the state agency depended a great deal on the quality of leadership exerted by the

chief school officer. Some of the first state superintendents, such as Horace Mann of Massachusetts, Henry Barnard of Connecticut, John D. Pierce of Michigan, Calvin Wiley of North Carolina, Caleb Mills of Indiana, John Swett of California, Gideon Hawley of New York, and Robert Breckenridge of Kentucky, set the pattern for the development of modern state educational systems. In their respective states they consolidated the forces for education into movements that did not stop until free common school education became a reality.

These superintendents exerted a broad influence through dynamic leadership. They studied the weaknesses and strengths of the schools and interpreted the social forces that influenced education, and they kept the people and the legislators informed about education, becoming spokespersons not only for the teachers, but for all educational forces. These pioneering state superintendents, however, were aided by both social and economic movements and a growing democracy. Most important, there were individuals, groups, and organizations eager for a crusading leader who could present their ideas on education to the public.

**1890–1932.** The regulatory function of the state departments of education was expanded with the general acceptance of compulsory education, for it became apparent that only a state department of education could determine that compulsory attendance requirements were being enforced. The maintenance and operational functions of the state department of education were strengthened during the period from 1918 to 1932. Although compulsory attendance laws became universal and local school units stronger, it was apparent that local units varied greatly in their ability to provide education, in their educational burdens, and in their leadership—all of which resulted in startling inequities in educational offerings. This development demonstrated the need for a stronger state educational agency that could determine that minimum standards were being met. In some cases, it was the state that actively operated certain schools (e.g., schools for the blind, deaf, and similarly handicapped individuals; vocational-technical schools; and teacher-training institutions) as well as programs for the entire state.

**1932–1953.** The years from 1932 to 1953 saw the expansion of the service and support functions of the state department of education and the emergence of its leadership role. The rapid expansion of public education as a result of compulsory attendance and the

demand for equal education for all students increased the demands upon the states to provide greater support. Whereas city schools could supply and service a great variety of educational programs, rural schools could not. Therefore, numerous divisions and subunits within state departments of education were developed to provide instructional and professional assistance to rural schools. As states attempted to offset inequalities, it became apparent that a solution lay in the reorganization of rural schools into districts large enough to provide services. In fact, in most states the first significant leadership activities, which were aimed essentially at rural America, can be traced to statewide reorganization efforts. To a certain extent this rural emphasis precipitated the statewide neglect in urban education that became so apparent in the 1960s. During this period there was also an accelerating demand for new patterns of state financing that would provide a guaranteed minimum educational program to all children in all districts. The percentage of state support for public elementary and secondary education doubled from slightly more than 20 percent in 1930 to approximately 40 percent in 1950.

The influence of the federal government increased during this period, as World War II forced it to rapidly supply people trained in various fields. As a result of the national need, state departments of education directed, and in many cases operated, technical training programs during the war. After the war, when industrial expansion and the rapid increase, relocation, and migration of the population created massive school building problems, the federal government joined with state governments in stimulating long-range planning to provide adequate school buildings. It was also during the postwar period that the Council of Chief State School Officers (CCSSO), founded in 1928, achieved national influence and recognition. The council established the Study Commission of the Chief State School Officers, which took a leadership role in studying the major problems that were facing state departments of education.

**1953–1983.** Between 1953 and 1983 the federal influence on education increased, and state departments of education were strengthened through the federal-state partnership concept. This phase marked the beginning of the modern federal aid program for education. Social, economic, and demographic changes after World War II placed excessive demands on local school districts. In too many cases,

states were unable to provide the help needed. Because there was such variation in the competency of the state departments of education, many people advocated abandoning the idea that the state department of education should maintain the balance of power between local and federal government, suggesting that the federal government assume leadership and control. In many ways federal involvement was encouraged by the National Defense Education Act (NDEA) of 1958, through which the federal government dealt directly with local school districts, colleges, and universities.

The NDEA, enacted after the launching of *Sputnik I* in 1957, actually resulted in an upheaval in the structure of state departments of education rather than in stability. An infusion of federal funds enabled a few states to move out of their former passive roles, but the most notable effect was an imbalance within the organization of the departments. By 1950 half of the professional staff members of state departments of education were assigned to federally subsidized programs. By 1960 that percentage had risen to more than 56 percent and in thirteen states to more than 70 percent. It was inevitable that personnel growth would take place in areas supported by federal funds. For example, in 1958 there were only fifteen state supervisors in mathematics, the sciences, and foreign languages in all the states combined. For English and social studies, there were twenty state supervisors in all the states. Title III of the NDEA offered financial assistance for strengthening science, mathematics, and modern foreign-language instruction. Thus, by 1963, five years after the act was passed, the number of state supervisors in those subjects had risen to 173, an increase of more than 1,100 percent. Because there was no federal support for English or social studies, the number of state supervisors in these subjects rose only slightly, to thirty-two for all states. In 1958 there were only three specialists in preschool education in all the states, and in 1963 there were still only three.

In spite of the massive increase in federal aid under the NDEA, state departments of education actually began to lose some of their strength and prestige. In 1963 the Advisory Council on State Departments of Education pointed out that most departments could not fully perform the duties expressly delegated to them by state legislation because of personnel shortages. Thus, when state education agencies were most needed, they were least prepared

to give the kind of statewide leadership necessary for improvement.

At the continued and insistent demands of educational, social, and political leaders, Title V of the Elementary and Secondary Education Act of 1965 included a five-year program of grants calculated to strengthen the capacity of state departments of education to meet their growing responsibilities. Three programs were established for this purpose. Section 503 provided basic grants to state educational agencies to develop, improve, or expand professional leadership activities. Section 505 supplied special project grants to support experimental programs and to develop special services to help solve problems common to several states. Section 507 provided for an interchange of professional personnel to develop and share leadership skills in both federal and state educational agencies. Though the percentage of the full-time staff in state departments of education paid entirely or in part by federal funds continued to rise, there was, nevertheless, greater balance in department staffs because general strength had been developed, rather than strength in specific subject areas.

**1983–2000.** The 1983 release of the landmark report of the National Commission on Excellence in Education, entitled *A Nation at Risk*, ushered in a period of sustained and intensive scrutiny of the quality of public schooling in the United States. The release of this federal document coincided with similar reports and commissions in many states. State departments, for the most part, were not the source of the thrust for reform. However, the renewed focus on academic achievement has had an extremely important impact on state departments. For example, state departments have been assigned much of the policy and program development work related to school reform. They have been charged by federal and state policymakers with responsibility for articulating the rationale, implementing the policies, and developing, overseeing, and monitoring state programs for school reform. These responsibilities have strengthened the importance of state departments while significantly challenging their capacity for overseeing school reform.

The implications of these responsibilities for the structure, personnel, and organizational behavior of state departments of education have been profound. Departmental units of testing and public information have increased in number and in size, and many departments have established offices of policy analy-

sis and research. However, as pointed out by Susan Lusi in her 1997 study of the state departments of Vermont and Kentucky, state departments were not traditionally structured or staffed to engage in the complex work of instructional improvement, nor in the policy analysis or program development that has characterized school reform. Almost every state has developed statewide curricular standards, most states have developed tests for them, and a number of states have attached consequences to varying performance.

Such tasks, assigned to state departments by state legislatures, the courts, and the federal government, have drawn state departments into technically challenging and politically controversial roles. The state court in Kentucky abolished the state education department, requiring the legislature to re-establish it. In the early 1990s, the California Department of Education was the target of heated criticism for how it developed and informed the public about its state assessments. The governor subsequently vetoed the assessment program. Even more recently, state assumption of responsibility when local systems fail has put state departments in highly problematic relations with the local school districts: they are called up to implement sanctions; enforce school choice programs among local districts—and between local districts and private schools; take over failing schools or school districts; and interpret judicial pronouncements about what constitutes adequate and inadequate schooling. Nineteen states mandate that low-performing schools receive state assistance and thirteen of those states specify the assignment of a state staff person.

State education departments have also seen their roles challenged and their budgets vulnerable to other governmental reforms. Their authority and competence have been challenged by state oversight offices, which often have closer ties to governors and legislatures. State departments have suffered from attempts to downsize government and from budget-reduction exercises as proponents of smaller government have had success in legislative and gubernatorial races. A survey by *Education Week* found that at least 27 state education agencies had fewer employees in 1998 than they did in 1980. State departments have also been responsible for developing management information systems to support the new accountability systems, which has placed a large technical demand on the agencies. State departments are trying to respond to these new demands by in-

corporating new management styles and processes. For example, the Texas Department of Education increasingly has turned to privately contracted regional assistance centers for technical assistance duties.

### The Situation in the Early Twenty-First Century

Although there is still a great variation in the organization, operation, structure, staff, and influence of state departments of education, enough basic similarities exist so that one can generalize about their accepted roles and functions. In general, each state department of education has four major roles: regulation, operation, administration of special services, and leadership of the state program.

**Regulation.** The regulatory role consists of: (1) determining that basic administrative duties have been performed by local schools in compliance with state and local laws; (2) ascertaining that public school funds are employed properly; (3) enforcing health and safety rules for construction and maintenance of buildings; (4) enforcing and determining the proper qualifications and licensing of teachers and educational personnel; (5) ensuring that minimum educational opportunities are provided for all children through enforcement of compulsory school laws and child labor laws, and through pupil personnel services; (6) ensuring and monitoring the development of state educational standards and student performance measures and ascertaining that required procedures are used; and (7) ensuring that schools are organized according to the law. The regulatory function of all state departments of education is based on the acceptance of the fact that education is a state function and that local school districts have limited authority to act, except as state laws permit.

**Operation.** Operational roles of state education departments vary greatly from state to state. There is a general trend away from having the state department of education conduct direct operational functions.

Historically, states have accepted responsibility for the operation of educational agencies and services when no other agency could provide the necessary statewide direction, especially during the developmental stages of a particular program or enterprise. A state education department may operate teachers colleges, schools and services for students with disabilities, trade and correspondence schools, and agencies or institutions of a cultural nature (e.g., state libraries, museums, archives, historical agen-

cies). It may also offer programs that other institutions are unwilling to offer, such as trade classes and programs for migrant workers.

**Administration of special services.** The state's role in the administration of special services developed in response to a need for statewide uniformity and efficiency in educational services. The state offers centralized services that improve education in general (e.g., teacher placement and retirement programs), and it provides services that, because of their scope, technical nature, or expense, can better be offered on a statewide basis (e.g., library services, centralized insurance, financial services, control of interscholastic athletics, statewide testing). The state also provides local school districts, the legislature, the executive office, and the general public with basic information about the status of education, such as comparative studies and statistical information and clarification of all statutes, rules, and regulations on education. As in the case of operational services, the state maintains administrative services only if they are not available through another institution or agency.

**Leadership.** According to the Council of Chief State School Officers, the important leadership functions of a state department of education include conducting long-range studies for planning the state program of education, studying ways of improving education, providing consultant services and advice in all areas of education, encouraging cooperation and promoting the proper balance among all units of the educational system, informing the public of educational needs and progress and encouraging public support and participation, and providing in-service education for all persons in the state engaged in educational work.

While all states have state departments of education, these departments differ in structure, organization, function, and size. All states have some type of state board of education, but there is a great variation in the amount of control exerted by the board on the department and on the overall state educational system. All states have a state school officer responsible for the department, but, again, the responsibilities of this officer vary among the states: some are political leaders and others are educational leaders; some are appointed and others are elected; some are regarded as the chief educational officer of the state; and others are one of many in the educational hierarchy who have state educational responsibilities.

At first, the chief state school officer discharged routine educational functions, sometimes with the help of a secretary. General office workers could easily carry out such tasks as compiling information pertaining to education, making annual and biennial reports, publishing school laws, and apportioning state financial aid.

In the early twenty-first century, the leadership function of the staff is not so easily determined, and there are a great variety of opinions as to how much leadership should be exerted by the state department of education. Compliance and regulatory functions remain important and substantial. The main objective remains to ensure that local school districts attain the minimum level of achievement required by the state. However, the goals of leadership and public aspirations for ever-increasing student achievement go above and beyond. The role of state department has expanded to incorporate increasing performance for all students and their function has evolved from monitoring compliance with state and federal laws and regulations to supporting school districts in pursuing this goal. As the new century begins, state departments face the daunting task of inspiring and stimulating local school systems to strive for the highest educational quality.

*See also:* FINANCIAL SUPPORT OF SCHOOLS, *subentry on* STATE SUPPORT; STATES AND EDUCATION; STATE EDUCATIONAL SYSTEMS.

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## VOCATIONAL EDUCATION

Vocational education is a field in transition, undergoing changes prompted by an upward shift in the skill requirements for the workforce and by the call for increased standards and accountability in the education reform movement of the 1980s and 1990s. Vocational education programs are offered in comprehensive high schools, vocational schools or career centers, adult education centers, community and technical colleges, and proprietary schools.

In 1999 the national organization that represents vocational educators, the American Vocational Association, changed its name to the American Association for Career and Technical Education. Most

states have also renamed their divisions and programs to career and technical education, or in some states, career and technology education.

### Purpose

Although the mission of vocational education remains to prepare people to prepare for work, historically the focus was on preparation for entry-level jobs in occupations requiring less than a baccalaureate degree. That mission has changed to a broadened purpose of preparing for work and continued education. Educational reformers and vocational education legislation both called for vocational education programs to maintain college entry as a viable option for students enrolled in career and technical education. The 1998 vocational education legislation explicitly stated that vocational education should contribute to students’ academic and technical achievement.

The National Association of State Directors of Career Technical Education Consortium defined five key principles of career technical education.

1. To draw its curricula, standards, and organizing principles from the workplace.
2. To be a critical and integral component of the total educational system, offering career-oriented benefits for all students.
3. To be a critical and integral component of the workforce development system, providing the essential foundation for a thriving economy.
4. To maintain high levels of excellence supported through identification of academic and workplace standards, measurement of performance (accountability), and high expectations for participant success.
5. To remain robust and flexible enough to respond to the needs of the multiple educational environments, customers, and levels of specialization.

### Issues

Issues that are debated in vocational education include: (1) its role in secondary education; (2) the degree of specificity versus generality of occupational focus, that is, whether its focus should be education or training; and (3) whether it is intended for all students, as in career education, or for a subset of students who do not intend to pursue further education.

## Legislative Authority

The federal government has supported vocational education programs since 1917 when the Smith-Hughes Act was passed to help schools train workers for the country's rapidly growing economy. The Vocational Education Act of 1963 expanded the role of vocational education and funding was substantially increased. The Vocational Amendments in 1968 addressed the nation's social and economic problems and continued funding for students who were at risk or with disabilities.

The Carl D. Perkins Vocational Education Act of 1984 continued a focus on access for special populations, including women, minorities, and special needs, and added a focus on program improvement. The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II) called for the integration of academic and technical instruction and introduced Tech Prep. The Carl D. Perkins Vocational and Technical Education Act of 1998 (Perkins III) continued the emphasis on academics in career and technical education and added a strong accountability requirement. The purpose of the act is to "develop more fully the academic, vocational, and technical skills of secondary students and postsecondary students who elect to enroll in vocational and technical education programs." Perkins III reflects major policy shifts from the set-asides and line items in earlier legislation that were prescriptive of how funds were to be spent, particularly for special populations and students at risk, to flexibility with increased accountability for results.

Two other legislative acts in the 1990s that influenced vocational education were the School-to-Work Opportunities Act in 1994 (STWOA) and the Workforce Investment Act (WIA) in 1998. The STWOA supplied funding to states to connect education and careers for all students. States could apply for five-year grants. The WIA provided a framework for a national workforce preparation and employment system designed to meet the needs of employers, first-time job seekers, and those looking to further their careers.

## Performance Standards

Historically, the primary measure of a program's performance was employment. The Carl D. Perkins Vocational and Technical Education Act of 1998 required states to meet four core indicators of performance: (1) student attainment of challenging state-

established academic and vocational/technical skill proficiencies; (2) student attainment of a secondary school diploma or its recognized equivalent, a proficiency credential in conjunction with a secondary school diploma, or a postsecondary degree or credential; (3) placement in, retention in, and completion of postsecondary education or advanced training, placement in military service, or placement or retention in employment; and (4) student participation in and completion of vocational and technical education programs that lead to nontraditional training and employment. The act required each state to identify levels of performance for each indicator and report annually on its progress. States also develop additional state measures of performance.

## Magnitude of Vocational Education

Almost all high school graduates still complete at least one vocational course. More than half (58%) of public high school graduates take at least three vocational education courses, and virtually all (97%) take at least one vocational education course, according to figures obtained by the National Center for Education Statistics in 2000. Sixteen percent of all public high school credits are earned in vocational education. Forty-nine percent of all students seeking sub-baccalaureate degrees major in vocational fields. More than half (55%) of the public high school graduates who take concentrated vocational coursework enroll in a postsecondary institution within two years of high school graduation, according to the National Center for Education Statistics in 2000.

Between 1982 and 1994, there was a ninefold increase in the percentage of students completing both a vocational concentration and a college preparatory curriculum (from 2% to 18%). This trend suggests that students are increasingly integrating vocational and academic learning and that students in the high-tech fields of technology/communications and business are particularly likely to follow the broader course of study envisioned by recent federal legislation.

The postsecondary enrollment rates of public high school graduates showed a marked increase between 1982 and 1992. Among all sub-baccalaureate students, about one-half majored in a vocational program area in 1996.

## State Role in Vocational Education

State constitutions assign to each state its specific responsibility and legal authority for public education.

The state department of education coordinates activities among local school districts and between the federal government and local schools. State departments have shifted from an emphasis on compliance and monitoring of regulations to one of technical assistance to school districts.

Each state has a state board for vocational education. The organization and administration of vocational education varies in states. Thirty-six state directors of career-technical education are located in state departments of education or public instruction. Seven are located with higher education boards, and seven either have their own separate boards or are located with the state's workforce development board, according to Joanna Kister. State directors develop the state plan for vocational education that is approved by the U.S. Department of Education for distribution of federal funds. Local education agencies and postsecondary institutions are eligible recipients for subgrants. In addition, most state directors have responsibility for (1) policy (standards, budget); (2) program design and standards (including labor market data analysis); (3) curriculum frameworks and assessment; (4) professional/staff development and teacher education; (5) evaluation, accountability, and reporting; (6) strategic planning; (7) program and fiscal monitoring; (8) budget and personnel management; and (9) student organizations.

### **Funding**

Each year approximately \$13 billion (federal, state, and local combined) is spent to support the vocational education system. Federal funding constitutes approximately seven percent of state vocational education spending. The relative cost for vocational education is estimated to be 20 percent to 40 percent greater than that of academic instruction, varying considerably by program area and content level. Most states provide some type of categorical funding for career-technical education. A national survey identified four broad categories for funding vocational education: (1) state foundation grants that are intended to ensure that all students in a state receive a minimum level of basic education services (states in this category do not budget additional supplemental funding for vocational education); (2) unit cost funding in which methods for determining funding formulas are based on unit cost by student participation, instructional unit, or cost reimbursement; (3) weighted funding per student; and (4) performance funding.

### **Effectiveness of Vocational Education**

There is strong evidence that the generic technical skills and occupationally specific skills provided in vocational education increase worker productivity, skill transfer, job access, and job stability when vocational graduates find training-related jobs. Large scale studies show that graduates who took a coherent sequence of vocational courses in high school (and did not enroll in postsecondary education) are likely to obtain more regular employment and higher wages than other non-college-going graduates, provided they are working in the field for which they were trained. Students with both a vocational concentration and a college preparatory curriculum outperformed vocational concentrators only. Performance of students who completed a college preparatory curriculum only was statistically indistinguishable from those with the combined vocational concentration and college preparation.

### **Contemporary Role and Priorities**

The principles for the contemporary career-technical education called for in legislation and by education reformers are reflected in the educational priorities in states. State directors of career and technical education reported the following as their priorities for change.

1. Integration of career-technical education in the total mission of education and education reform
2. Building a strong work force, economic development, and education partnership
3. Integration of academic and technical education through new delivery strategies, such as career academies, career pathway high schools, magnet schools, and linking of academic with technical curriculum
4. Development of business/industry certifications for all career-technical programs, at both secondary and postsecondary institutions
5. Implementation of a reliable and valid accountability system
6. Expansion of tech prep through secondary/postsecondary articulation
7. Expansion of career-technical education by providing access to all students
8. Increase of funding for career-technical education
9. Increase of use of technology

10. Addressing issues of teacher and administrator quality
11. Implementation of quality initiatives
12. Improvement of the image of career-technical education

State directors of career technical education are responsible for strengthening the relationship between education and work. They connect career and technical education to the larger high school reform movement, participate actively in both policy and practice realms in state workforce development systems, and ultimately contribute to economic development.

*See also:* VOCATIONAL AND TECHNICAL EDUCATION.

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JOANNA KISTER

## STATE EDUCATIONAL SYSTEMS

The American system of public schooling is unusual for a modern state, as most nations rely upon education systems operated by the national government. The education system in the United States is actually a set of state-based systems. There is, however, a federal government role in education, and national education organizations and activities exist. But the ultimate authority—what is called *plenary* authority—for schooling in the United States resides with the individual states.

### The Legal Basis for State Control of Education

The U.S. Constitution omits any consideration of education or schooling—in fact, the words *education* and *schooling* do not appear in the document. James Madison's diary of the Constitutional Convention suggests that education was not even a topic of consideration at the Philadelphia deliberations. The only education topic of serious concern was whether or not to form a national university, which the delegates decided against.

The absence of any specific mention of education, coupled with the Constitution's Tenth Amendment, renders education a state function. The Tenth Amendment states that "The powers not delegated to the United States by the Constitution . . . are reserved to the States respectively, or to the people." This was a new and unique system, and it could be said that prior to formation of the United States, charters of liberty were granted by those with power, while in the United States, charters of power were now granted by those with liberty. The constitutions of all fifty states assume specific responsibility for education. Hence, the U.S. education system, by default, is a set of systems, not a single national system.

### School Organization Models

At the time of the nation's founding, transportation and communication were primitive by twenty-first-

century standards. Consequently, states generally saw fit to delegate authority for school operation to local school districts. The United States has two major models for local school districts.

**The New England model of school organization.**

The Massachusetts Commonwealth General Assembly enacted the Old Deluder Satan Act in 1647. This statute established township school districts. These were notable for three reasons: (1) schools were to be local or municipal, (2) the school boards that operated them were presumed to be made up of laypersons, and (3) these locally school boards were considered a form of “special” government, meaning that their authority was restricted to education. This New England model came to characterize most of the nation’s educational systems. It spread west with the Northwest Ordinance, and eventually found its way into most of the states resulting from the Louisiana Purchase.

**The Southern model of school organization.**

The Middle Atlantic and southern colonies existed under the sphere of influence of the Church of England. This body organized its operation into *parishes*, and parish lines were eventually transformed into county lines. Southern states came to rely far more heavily than the remainder of the nation upon county government, and in the twenty-first century many southern states continue to maintain county school districts or combinations of county and local school districts.

**The School District Consolidation Movement**

The early twentieth century saw a wave of education efficiency efforts, as American education began to be viewed as ineffective due to its heavy reliance upon small local school districts. A coalition of academic and business leaders began to crusade in state after state for the elimination of small and rurally dominated school boards. The reform effort, which has come to be known as the *school district consolidate movement*, was reinforced by various other efficiency and good-government efforts. States sometimes simply eliminated districts, but more often they offered financial inducements for districts to combine into larger units.

By 1930, at the height of school district expansion, the United States had more than 125,000 local districts. School board members were then the nation’s largest single segment of government officials. By 2000, the district consolidation movement had

been dramatically effective, and the number of districts had been reduced to 14,000. Twenty percent of these were in only five states (California, New York, Illinois, Nebraska, and Texas), while the remaining forty-five states had fewer than 10,000 school districts. Some states, such as Maryland (24 districts), Florida (67 districts), Nevada (17 districts), and Delaware (7 districts), had very few.

School district consolidation has been effective in increasing the size of American school districts. By 2000, 25 percent of the nation’s students went to school in only 1 percent of its districts, and 50 percent attended school in only 5 percent of the districts. The combination of district consolidation, population expansion, and urbanization has created some huge school districts, such as New York City (more than one million students), Chicago, Los Angeles, and Dade County (Miami), Florida.

The school district consolidation movement was premised upon a belief that larger districts were more efficient to operate economically and that they produced better education for students than rural districts. Neither premise has been proved. It could well be that there are substantial diseconomies of scale in these large districts, and the consolidation movement may in fact have done more harm than good. Whatever its outcome for students, it dramatically reduced the number of school board members. There was at one time a board member for every 250 citizens; in 2002 the ratio of representatives to citizens was twenty times that.

**The Modern Era of Big State Education Systems**

In the period after World War II, states began to assume greater responsibility for education. They relied less upon local school districts, which had historically run the schools. This happened as small districts became larger and as communication and transportation rendered more direct state control possible. It was also a result of court decisions. Cases regarding racial desegregation, special education, and education finance, as well as school accountability and testing legislation, vested greater and greater authority in the states. By the turn of the twenty-first century, courts were beginning to take state constitutional statements regarding education literally, and they were holding state governments, not local school district officials, responsible for school quality.

In order to meet their legal and operational responsibilities for education, states rely upon several

fundamental structural arrangements. All states have an executive, legislative, and judicial branch, paralleling the structure of the federal government. In addition, however, states also have education departments. These are generally bureaus reporting to the governor. In some instances, a state may have a state board of education that oversees the state education department. State structure is rendered more complicated by the position of chief state school officer, sometimes known as the superintendent of public instruction. In some states, the governor appoints a person to this office, in some states it is an elected office, and in a few instances the state board of education makes the appointment. If the chief state school officer is elected or appointed by an actor or agency other than the governor, he or she may have a statewide power base from which political opposition to the governor is possible.

The complicated nature of education governance hampers accountability. If a chief state school officer is not appointed by a state's governor, it is difficult to know who should be blamed or credited for results—the governor, the legislature, the chief state school officer, the state board of education, the state education department, local school boards, local school superintendents, or some other entity.

### **State Education Department Structure**

Each state has an education department among its executive branch bureaus. Some of these, such as in California and New York, are quite large, employing literally thousands of professional and staff members, while in a less populated state, such as Nevada, there may be fewer than a hundred employees. Regardless of size, one will usually encounter the following functions being undertaken. There will be an office of the superintendent with immediate staff and advisers, such as political liaison and public information specialists. There will be a budget office responsible for developing the state education department budget as a planning document. (The governor, often in cooperation with the chief state school officer, and the legislature will undertake the actual education budget and eventual appropriations of public revenues for education.) A budget office may also take responsibility for overseeing management of the department's own operating budget.

Other subunits will specialize in teacher certification, state testing, accountability, private school regulation, finance distribution, fiscal and perfor-

mance audits, facilities construction, transportation, food service, preschool, accreditation of private and proprietary schools, and possibly higher education.

### **Higher Education**

States have historically relied upon a separate agency or structure to oversee public higher education. However, Florida and, to a slightly lesser degree, New York, provide models by which higher education is in many ways integrated into the larger education picture.

A conventional model is for a state to have a board of higher education, a board of regents, or both. Many states have two higher-education systems. One set of colleges reports to a state board of higher education, while the other is usually a more elite, usually research-oriented, system, comprised of one or multiple flagship campuses. When a state operates two systems of higher education, then invariably it will also have some kind of coordinating body that oversees the two or at least attempts to coordinate their budgets and facility construction efforts. Such coordinating mechanisms seldom prove effective. Colleges and universities often have such powerful alumni (and prestige to distribute) that they can evolve their own special relationships with governors and members of the state legislature.

Community colleges have evolved into a major component of American higher education, accounting for more than half of the nation's postsecondary enrollments. Increasingly, states have merged community college governance with that of their colleges and universities.

Private and religious colleges and universities have tended to be left unregulated by state government. The exception is when states utilize public funds for the tuition subsidy of private college students. Under such circumstances states may exercise a modicum of regulatory influence to protect the public's funds and interests.

As the United States has moved toward mass, rather than elite, higher education, the trend has been to treat colleges (particularly community colleges) and universities more and more like other education institutions and to try to integrate their management with that of K–12 education.

### **The Role of the Federal Government**

In the eighteenth and nineteenth centuries, the federal government assumed virtually no responsibility

for overseeing or funding education. After the Civil War, Congress enacted the Morrill Acts, providing federal financial incentives for formation of state agricultural, mining, engineering, and military colleges. In 1946, Congress enacted the Lanham Act, which evolved into the Federal Impact Aid program, through which the federal government subsidizes local school districts in which there is a large federal presence (such as a military base).

In the post–World War II period, particularly during the 1960s, Congress enacted many education acts, the most important of which were the Elementary and Secondary Education Act (ESEA) of 1967 and the Higher Education Acts of 1965 and 1972. In the ESEA, the national government assumed added responsibility for providing local districts with monies for economically disadvantaged students, disabled students, and for student financial aid for higher education.

While the federal government does not have a large operational presence in education, there are still many national influences on American education. For example, there are literally hundreds of national education organizations, representing diverse groups and points of view (e.g., teachers, parents,

textbook publishers, test manufacturers), all of which have a national presence and nationwide influence.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; FINANCIAL SUPPORT OF SCHOOLS, *subentry on* STATE SUPPORT; STATES AND EDUCATION.

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CONTINUED

## STATES AND EDUCATION

LEGAL BASIS OF STATE RELATIONS TO NONPUBLIC SCHOOLS

Kent M. Weeks

STATE ADMINISTRATIVE SERVICES IN EDUCATION

Stephen B. Lawton

STATE BOARDS OF EDUCATION

Michael D. Usdan

STATE GOVERNMENTS IN HIGHER EDUCATION

Houston D. Davis

### LEGAL BASIS OF STATE RELATIONS TO NONPUBLIC SCHOOLS

In the United States' federal system, states carry out the function of providing for the education of their citizens. The U.S. Constitution does not specifically identify education as a federal obligation and the Tenth Amendment to the Constitution reserves to the states those areas not specifically delegated to the federal government. Historically, since the early nineteenth century, towns and villages provided education and this practice continues in the early twenty-first century with local governance by school boards and similar entities.

In the early twenty-first century, states provide for compulsory education of children, typically through age sixteen. State governing boards make policy and promulgate regulations for public and nonpublic schools within a framework established by state law and state and federal constitutional requirements.

#### State Regulation and Parental Choice

Although states gradually assumed more responsibility for providing public education, nonpublic

schools also formed in order to carry out the particular areas of emphasis. In the twentieth century, as the country strove to assimilate diverse populations, states sought to impose restrictions upon nonpublic schools. A series of court decisions provided the legal framework for the right of parents to choose schools appropriate for their own children.

Robert Meyer, a teacher in a nonpublic parochial school challenged his conviction in 1920 under a Nebraska statute that prohibited the teaching of German to elementary school age children until they had passed the eighth grade. The purpose of the statute was to "Americanize" Nebraska's increasingly diverse population. In *Meyer v. State of Nebraska* (1923), the United States Supreme Court ruled the statute unconstitutional since it effectively deprived the parents of a liberty right—the right to choose their children's school—in violation of the U.S. Constitution Fourteenth Amendment due process clause. The Court affirmed the right of states to regulate education even to the point of requiring that the instruction be carried on in English: "The power of the state to compel attendance at some school and to make reasonable regulations for all schools, including a requirement that they shall give instructions in English, is not questioned." The Court also ruled, however, that there was no adequate foundation for the statute: "No emergency has arisen which renders knowledge by a child of some language other than English so clearly harmful as to justify its inhibition with the consequent infringement of rights long freely enjoyed. We are constrained to conclude that the statute as applied is arbitrary and without reasonable relation to any end within the competency of the state." The Court opinion was grounded on the constitutionally protected liberty interests of the

parents and the teacher. "His right thus to teach and the right of parents to engage him so to instruct their children, we think, are within the liberty of the amendment."

When the state of Oregon enforced a statute compelling every child between the ages of eight to sixteen years of age to attend public schools, the U.S. Supreme Court affirmed the right of parents to chose nonpublic schools. In 1924 in *Pierce v. Society of Sisters*, the court upheld the right of the Society of Sisters and another private school challenger to operate their schools and affirmed the right of the state to regulate nonpublic schools. The court again reaffirmed the right of the state to regulate private schools.

No question is raised concerning the power of the State reasonably to regulate all schools, to inspect, supervise, and examine them, their teachers and pupils; to require that all children of proper age attend some school, that teachers shall be of good moral character and patriotic disposition, that certain studies plainly essential to good citizenship must be taught, and that nothing be taught which is manifestly inimical to the public welfare.

Parents, however, have rights.

The fundamental theory of liberty upon which all governments in this Union repose excludes any general power of the State to standardize its children by forcing them to accept instruction from public teachers only. The child is not the mere creature of the State; those who nurture him and direct his destiny have the right, coupled with the high duty, to recognize and prepare him for additional obligations.

Several years later, parents challenged a Hawaiian statute that prohibited attendance at foreign language schools until after the second grade and limited attendance to such schools to six hours per week and specified the curriculum. The schools were regulated in order that the Americanism of the pupils may be promoted. In *Farrington v. Tokushige*, 1927, the U.S. Supreme Court held the law was unconstitutional because its enforcement according to the court "would deprive parents of fair opportunity to procure for their children instruction which they think important and we cannot say is harmful."

## Types of Nonpublic Schools

Most states recognize three types of nonpublic schools: private schools without religious affiliation, religiously affiliated private schools, and home schools. According to the U.S. Department of Education, the total nonpublic school student population in 1999 was about 5.2 million and represented about 10 percent of the total U.S. elementary and secondary school population, a percentage that had not changed significantly in the preceding years. Religious schools represented about 80 percent of the total nonpublic schools. Home schools represented a new and rapidly growing option although they did not educate a significant percent of the total school population. Estimates suggest that the home school population is growing about 10 percent to 15 percent per year.

## State Regulation

States can regulate nonpublic schools under their police powers relating to health and safety. Further, because education is compulsory, states possess the authority to promulgate requirements concerning areas such as teacher qualifications, time spent in class, and curriculum. A balance is involved. States may encounter legal challenges if their regulatory activities are determined to be so intrusive as to obliterate the mission of the nonpublic schools, if the regulation is found to be arbitrary, or if the regulation represents an unconstitutional intrusion into religion. Challenges to state regulation of nonpublic schools are typically based on the principles of parental choice, free speech, or religious freedom.

*Wisconsin v. Yoder* (1972) is a classic case in which Amish parents objected to a state requirement that their children must attend school until they were sixteen, a requirement in conflict with Amish parents' tradition of training their own children after the eighth grade. The U.S. Supreme Court ruled that given the particular nature of the Amish religion and its documented record of beliefs, this regulation violated the free exercise rights of the Amish. The Court, however, again reaffirmed the right of the states to regulate education: "There is no doubt as to the power of a State, having a high responsibility for education of its citizens, to impose reasonable regulations for the control and duration of basic education."

In *State v. Whisner* (1976), Tabernacle Christian School, a school affiliated with a fundamentalist

Christian church, objected to certain minimum standards required for Ohio schools that included, as the Ohio Supreme Court found, “the content of the curriculum, the manner in which it is taught, the persons who teach it, the physical layout of the buildings, the hours of instruction, and the educational policies intended to be achieved.” The Court particularly examined the rule requiring that four-fifths of the total instructional time per week must be devoted to language arts, mathematics, social studies, health, citizenship, and optional foreign language, and one fifth to physical education, music, art, special activities and optional applied arts. The school argued that these requirements precluded the teaching of other subjects such as additional instruction in religion.

The court reasoned that First Amendment free exercise protections and that parental rights placed a burden on the state that only could be met if the state could demonstrate a compelling need for the regulation. The state must demonstrate that the regulation is the only way the state could achieve its objective of providing a “general education of high quality.”

The court ruled Ohio failed to meet this burden when it concluded that the standards were “so pervasive and all-encompassing that total compliance with each and every standard by a non-public school would effectively eradicate the distinction between public and non-public education,” and therefore would deprive the parents of their “traditional interest as parents to direct the upbringing and education of their children.”

States have broad jurisdiction in regulating nonpublic schools, leading to a wide variation in regulation and therefore the regulations of these schools varies among the states. States may not prohibit teaching certain subjects but they may prescribe a core curriculum. States often require instruction in the U.S. Constitution and the history of the United States. Some states require that nonpublic schools teach “patriotism” or “good citizenship.”

State regulation of nonpublic schools can cover the following areas: record keeping, length of school year and day, teacher certification, curriculum, health, evidence of immunization, and safety, including fire prevention, guns prohibition, and child abuse reporting.

During the early years of the country’s history most schooling occurred in the home. Over time,

many states adopted legislation prohibiting home schooling. Since there is not any federal constitutional basis for claiming a right to home school a child, parents’ efforts focused on obtaining enabling legislation at the state level. Currently, states permit home schools and state regulation is minimal, generally covering such areas as training of parents, hours and days of attendance, and required tests. There have been legal challenges to state regulation such as requirements that home-school teachers be certified, requirements that home-schooled students take nationally standardized achievement tests, and regulations regarding fire and health codes. An area of continuing litigation relates to efforts by home-schooled children to select certain benefits from the public school system such as participating in extracurricular activities, like athletics and music programs. Few state courts have sustained claims by home-schooled children to a right to participate in extracurricular activities.

### **Public Funding of Nonpublic Schools**

Although many nonpublic schools eschew state regulation, some seek federal or state financing of certain educational components of their schools. The controversies arise when the aid is available to a sectarian school, or students in that school, raising issues related to the First Amendment establishment clause prohibition against government aid of religion and similar state constitutional prohibitions.

The U.S. Supreme Court approved public support of school bus transportation for both public and nonpublic students as early as 1947. Subsequently, the Court developed a three-part test to measure the constitutionality of public funding. In *Lemon v. Kurtzman* (1971), the court ruled that government action must satisfy the following requirements: (1) have a secular legislative purpose; (2) have a primary effect that neither advances nor impedes religion; and (3) avoid excessive government entanglement with religion. The decision led to a series of conflicting decisions that prohibited use of public school teachers in parochial schools to teach remedial education, sustained tax deductions from the state income tax for school expenses paid to a public or a nonpublic school, and allowed regular textbooks to be loaned to students who attended a nonpublic school.

Eventually, the U.S. Supreme Court moved away from the *Lemon* test and toward a “neutrality” principle that appears to sanction more government

accommodation toward religion. The result is reflected in the overruling of some precedents and permitting a closer connection between public funds and religious schools and their activities. The court, in 1993, sanctioned public funds to employ a public school teacher to interpret for a hearing impaired student in a parochial school. In 1997, the court sustained use of public funds to pay for public school teachers to provide remedial education to disadvantaged children on the premises of parochial schools.

The constitutional battles will continue since the stakes are high for nonpublic schools and for the states as they try to steer through the constitutional maze of what is and what is not permissible under the religion clauses proscriptions.

### The Public Nature of Nonpublic Schools

Although some nonpublic schools seek funding for various programs, others voluntarily submit to minimum state regulation in order to have their programs approved by the state. Benefits from such approval include the acceptance of courses and credits when students transfer to a public school, and teacher accrual of teaching experience for purposes of placement on the public school salary scale if they become employed by a public school. Such voluntary state regulation must not be intrusive or arbitrary and must be accomplished within constitutional proscriptions.

New challenges to state regulation may arise as states increase their accountability efforts by developing “high-stakes” end-of-course tests that students must pass in order to graduate. If states require nonpublic students to take these tests, challengers may argue that the state is effectively establishing curriculum and is intruding on the right of the nonpublic school to certify its graduates.

Other new areas of government policy will contribute to a further blurring of the line between public and nonpublic schools. For example, public models similar to some nonpublic schools may be established through choice programs that permit the establishment of public charter schools with more latitude in decision-making and resource allocation. If state voucher programs expand, recipients of voucher funds may be required to comply with additional state requirements that could contribute to a blurring of the distinction between public and nonpublic schools.

Through the litigation and legislative initiatives, states seem to have developed accommodations in

regulating nonpublic schools by balancing the need to ensure that children receive adequate educational opportunities with the need to recognize legitimate religious claims and parental rights.

*See also:* CONSTITUTIONAL REQUIREMENTS GOVERNING AMERICAN EDUCATION; HOME SCHOOLING; PRIVATE SCHOOLING.

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## STATE ADMINISTRATIVE SERVICES IN EDUCATION

Power to administer school and college programs is shared among state bodies and the governing boards of school districts, community colleges, public universities, and private entities. Since the U.S. Constitution does not refer to education, jurisdiction over education is left to the states and the people, although states may not, in their actions, violate the Constitution. Forty-nine of the fifty state constitutions call for “uniform,” “thorough,” or “efficient” educational systems that make schooling available to all. In accord of these constitutions and court rulings, states have enacted legislative statutes to establish school districts, colleges, universities, and separate schools for special purposes. To each has been given a significant degree of autonomy to make many of the crucial decisions by which education is shaped. Chief responsibility for operating education has been placed on their shoulders, while both external accrediting bodies and state agencies hold them accountable for their performance. In the mid-twentieth century, education could fairly have been termed a local matter, since state frameworks established early in the century made it so; that era has passed. Hawaii has been the exception as it entered the Union without local school districts for elementary and secondary education.

Elements of state governments—including state boards of education, state superintendents, state de-

partments and boards for higher educational institutions—perform a number of crucial roles in each state’s education system. Constitutions and statutes assign them significant powers as overseers, as formulators, and as enforcement officers to propose, draft, and carry out legislation. They serve as auditors of local unit performance and as reporters on what is transpiring, or what should transpire, with respect to education in the state. In addition, each state has at least one state-level agency charged with providing services—as distinguished from regulatory actions—to local units in order to assist them in developing the capacity to deliver effective educational services.

Thus, the people of the states have established and are continuously modifying a statutory division of power and accountability between local units and state government administrative agencies. In this system, a state administrative agency is not directly in charge of educational performance in the state (with the exception of Hawaii). It usually discharges its administrative function by influencing local units that use a variety financial and regulatory means. In many states, this influence has grown dramatically since the mid-1960s when the federal government took on as a goal the strengthening of state educational agencies. Reflecting this growth in the state role, by 2001 twenty-three states had adopted legislation allowing direct administrative control of local unit by the state in order to address unresolved fiscal and educational problems, including “academic bankruptcy,” that is, chronically poor performance by students. Also, between 1991 and 1999 thirty-six states passed legislation allowing the creation of new local units—charter schools—to offer publicly funded competition to existing local school districts.

### State Administrative Agencies

Most states have multiple administrative agencies for education. All have a state educational agency, typically titled the *state department of education* or *state department of public instruction*, that handles administrative concerns for early childhood, elementary, secondary, and vocational programs. In some states this same agency also is responsible for adult education, vocational rehabilitation, and higher education. The majority of states, however, have a separate agency that provides administrative coordination for state-supported colleges and universities.

It would be misleading to imply that state administrative services to local units are always so neatly packaged. These two types of agencies usually have duties and powers extending beyond the confines of their primary concerns. State education agencies may preside over the state’s program for vocational rehabilitation or operate certain colleges, special schools, or custodial institutions. Most are involved in higher education through their power to approve college programs for the preparation of teachers. Similarly, coordinating state agencies for higher education may serve as administrators of student loan programs or may affect high school programs by establishing uniform entrance requirements for all state-supported colleges. As an added complication, voluntary accrediting associations of schools, colleges, and professional programs have concurrent jurisdiction over many of the same matters as the state agencies.

In addition, state government structure is typically pluralistic in designating agencies to perform state-level administration of education-related matters. For example, a separate state building authority may administer a large program of capital outlay for building construction; as well, the purchase and equipment of school buses may be under the jurisdiction of a state purchasing authority. Assessment of K–12 students, required by forty-eight states in 2001, is often the responsibility of a distinctive unit or agency.

In nearly all states, the requests for legislative appropriations by public institutions of higher education are screened by at least one state budgeting agency in addition to the coordinating agency established for higher education. The power to audit and report publicly on expenditures, a significant administrative control, typically resides in a state auditor’s office, which acts independently of the education agencies. Surplus agricultural commodities, crucial to school lunch programs, are often handled by a separate administrative agency, as are state building codes for school and college structures. The total list of such dispersed responsibilities has increased as units linked to federal categorical grants have developed their own identity and serve to link the federal government to the management of specific local programs. Although the dispersal of authority may not constitute a negative factor affecting the ability to provide good government, they do compound the complexity of state administrative services to local education units.

Also complicating administrative services is their commingling with leadership services. For example, the state education agency usually has the power to promulgate a set of curriculum standards for all schools of the state. This administrative service, however, is used as a vehicle to promote and develop local unit capacity and willingness to provide good instruction—a leadership service. For example, if “authentic assessment” is used as a part of standards-based testing of students, the state will typically offer professional development programs to inform teachers how to instruct students to perform effectively. Although state education agency functions normally are classified either as regulatory (administrative) or leadership (developmental), the line between these functions is largely obscured in practice.

### Revenue Services

Revenue available to local units is largely controlled by state law and legislative appropriations rather than by state administrative agencies (which often act more as lobbies than disinterested civil agencies). A common feature of state law is the requirement that local school districts make an effort to derive revenues from local taxes, usually the property tax, before they can become eligible for state transfer payments. In many states, a state administrative agency (usually not the state education agency) determines the valuation of property upon which a district’s require effort should be based.

Distribution of state-collected taxes to local school districts is preponderantly by formula; the state agency applies the formula, verifying the base figures, and processes the distribution with few judgmental actions. Some state education agencies, however, are influential with legislatures in changing the amounts of revenue to be distributed from state-collected taxes and in establishing the statutory formulas for distributing state aid. All states distribute some state-level revenue among local districts on an approved-program or approved-need basis, with a state agency as the approving authority. For example, special aid for special needs students is frequently allotted only after a state agency has determined the need and has been satisfied that the agency’s criteria for an adequate program has been met. This type of judgmental revenue distribution is typical for vocational education and new categorically funded programs that address particular issues. Reflecting concern that too much is spent “outside the class-

room,” restrictions on the proportion of funds that may be spent on noninstructional purposes have become common, as have expenditure and tax rate limitations, the latter dating back to California’s Proposition 13 and the “property tax revolt” of the late 1970s.

Revenue for capital outlay purposes is preponderantly within the jurisdiction of local units. In a few states, however, a state building authority may issue bonds against the credit of the whole state and use the proceeds to finance construction within local units. This device, adopted for example in Arizona as the result of a court case that found local funding of school buildings to be unconstitutional, results in considerable state agency control of most facets of school housing even as it benefits those districts that could not afford adequate school accommodations on their own. In other states an annual distribution of current state revenue is made on a formula basis to local units, which are accorded the privilege of issuing debentures against future receipts for the construction of their physical plant. This approach is closely regulated by the state. State agencies in several states have a variety of approval functions with respect to local bond issues to ensure that excessive debt is not undertaken or that debt is incurred for spurious purposes. Also significant is the availability of advisory and consultative services in state education agencies for use by local units—chiefly small ones—in handling bond issues and sales. In higher education state agencies are active in determining what revenue shall be available for construction at individual colleges and universities as the “echo” to the baby boom enters its postsecondary phase.

State-supported colleges and universities depend heavily upon legislative appropriations for operating revenue, although in the early twenty-first century tuition, federal, and private funding make up more than half the revenue of many nominally public institutions. In some states, state-collected taxes are a significant revenue source for the private sector of higher education as well. A state’s coordinating board for higher education typically exercises considerable authority in determining the distribution of appropriations among eligible institutions. Usually that agency develops distribution formulas; sometimes it sits in judgment on each institution’s request before the legislature acts. At least one other state agency conducts similar reviews in states with coordinating boards, and all states have at least one agency, such as the executive department budget of-

fice, empowered to advise the legislature on higher education appropriations.

In states that authorize state contracts with private institutions for educational services, an administrative agency usually has considerable ministerial power in awarding contracts. In the late 1990s, actual appropriations to individual state-supported institutions were largely determined in the majority of states by transactions between the legislature and the state's higher education governing board (twenty-two states), coordinating body (twenty-one states) or planning agency and individual institutional boards. Consolidated governing boards exercise the most authority, including that for personnel, programs and budgets; coordinating bodies typically control programs and/or budgets or are advisory; planning agencies are advisory only. During the 1990s, there was a decisive shift toward the provision of greater power to oversight bodies, with an increase in the number of governing boards and in coordinating bodies, which exercised authority over both program and budgets.

With the advent of large federal government supports for education in the 1960s, state administrative agencies assumed expanded roles in the allocation of revenues to local units. Grants to school districts, private institutions, and state-supported colleges and universities are usually made in response to applications filed by those units. Under several pieces of federal legislation, a state agency reviews those applications and, in practical effects, makes or withholds awards. For example, the No Child Left Behind Act of 2001 is the most recent reauthorization of the Elementary and Secondary Education Act (ESEA), an act originally adopted in 1965 as part of President Lyndon Johnson's "Great Society" initiative. The current act includes nine sections or "titles" that detail numerous programs for areas such as technology, improvement of teaching, English language learning, and dropout prevention that are administered by the states, generally require formal application for funds, and may entail competition among applicants. In some cases consortia including higher education institutions are required. Currently, most federal funds assisting higher educational institutions do so by aiding students or research. State higher education agencies may be involved in administration with these programs as with the 529 college savings plans created under Sec. 529—Qualified State Tuition Programs of federal income tax legislation.

Accompanying the allocation of funds may be state-provided advisory services to enhance the capacity of local units in developing and operating projects. Agencies may develop master plans for developing program areas targeted by the federal government. State agencies have been actively involved in the administration of federal programs for more than a century, dating from the first vocational education legislation. The federal government tries to balance its own role, which now emphasizes accountability, with support for state agencies and local units. The No Child Left Behind Act requires all states to conduct annual academic assessments for grades three through eight and produce annual report cards describing school and statewide progress. Statewide reports must disaggregate data according to race, gender, and other criteria to provide evidence of closing the achievement gap between disadvantaged students and other groups of students. At the same time, to reduce federal red tape and enhance local control, it cuts the overall number of ESEA programs from fifty-five to forty-five and for the first time offers most local school districts the freedom to transfer up to 50 percent of the federal dollars that they receive among several education programs without separate approval.

Permanent state administrative agencies influence operating revenues of local units in a number of ways. State agencies usually accredit elementary and secondary schools. To meet accreditation standards, local taxing units may have to increase the funds they make available. Or, by offering state funds to support part of a given program and thereby reducing the tax price of education, they may stimulate the local taxpayers to provide additional support. As of January 2002, of the twenty-three states that were implementing high school graduate exit exams, twelve provided state funds for remediation. The reports and recommendations of state-level administrative agencies affect the state's allocation of general revenue for education, as have numerous court decisions concerned with the equity and adequacy of funds for both operating and capital expenses. As with the federal government, states have adopted competitive bidding for grants requiring applications, sometime termed *challenge grants*, thereby extending the influence of the funds allocated. The permanent state administrative agencies for education, however, have been relatively unsuccessful in securing revenue to support their own activities, particularly those directed toward capacity

building in local units. In 1992 to 1993, states averaged \$46 per pupil in state-level K–12 administration funding, with a ratio of 1,496 students per state staff member. Approximately 27 percent of the funding of \$2 billion for came from the federal government and the number of staff ranged from 25 in Wyoming to 2,565 in New York and averaged about 575.

In the majority of states, the most dramatic influences upon educational revenue since the 1960s have come from outside the permanent administrative agency structure. Political influence has been brought to bear through both through all branches of government—executive, legislative and judicial. One mechanism has been the use education commissions and committees: temporary quasi-agencies created to appraise current provisions for and effectiveness of K–12 or higher education. The 1983 report of the National Commission on Excellence in Education, titled *A Nation at Risk*, stimulated the creation of more than 300 commissions and committees across the United States. Usually chartered by legislatures and/or governors, composed of lay citizens as well as legislators and educators and financed by government funds, these committees marshaled public opinion and legislative action to support large-scale school reform initiatives affecting programs (e.g., state curriculum and assessment), administrative arrangements (e.g., charter schools and mayoralty appointment of school boards in large cities), and state revenue structures (e.g., new standards of adequacy and a shift from the local property tax to earmarked state funds). Free to use resources of talent and publicity typically denied to administrative agencies, these committees often effectively supplement established government structures for supervising education. During the 1980s and 1990s, governors came to play an unprecedented role in educational policy as did the courts, which overturned dozens of state funding mechanisms as being inconsistent with state constitutions.

### Expenditure Services

State control of the monies expended by local units for education is provided chiefly by two devices: legislative earmarking of funds to restrict the purposes for which they shall be spent and the requirement that local agencies submit annual operating budget. Increasingly, the latter task is accomplished over the Internet, with forms downloaded and uploaded using state-agency-designed forms or spreadsheets that conform to state-mandated codes of account.

### Legislative Earmarking

State administrative agencies are usually charged with presiding over the sanctity of statutory or appropriation directives regarding the purposes for which state funds shall be spent. This responsibility involves educating local officials on the intricacies of the law and establishing guidelines and interpretations regarding legal stipulations. It also entails auditing local unit performance and may require withholding funds or other sanctions, including state takeover, to secure compliance. A large number of states have statutory stipulations that a certain portion of state funds shall be expended only for teaching salaries and that a state-adopted minimum teaching salary schedules shall be met. A state administrative agency administers this requirement, defining who is a teacher, checking on salaries actually paid, and preventing application of teaching-salary money to other objects of expenditure. Some states, concerned about the deterioration of buildings, increasing class sizes, or other shortcomings, have put restrictions of the amount of funds that may be used for functions such as administration.

When stipulations are programmatic (e.g., that state funds that should be used to improve literacy) the state administrative agency may function in advisory and developmental capacities more than in a regulatory capacity. Few state education agencies are staffed sufficiently to provide such services state-wide, however. As a result, they tend to concentrate their efforts on smaller, weaker local units or those that have been identified as failing to meet state standards. Some state agencies actively collaborate with urban school districts to improve results from activities funded through earmarked state and federal funds. Greater federal accountability threatens the removal or reallocation of funds if improvements cannot be demonstrated.

### Budgets

The Progressive movement of the early part of the twentieth century helped to establish a formal state role in funding education more equitably. At the same time, the state assumed a key role in establishing annual budgets for local units, a practice that has become universally taken for granted. As a result of the property tax revolt of the 1970s and 80s, commencing with California's Proposition 13, and court cases calling for more equitable funding, a number of states have moved to effectively fund education at the state level, implying that local budgets are set by

these states. State education agencies advise local school districts on budget planning and may disseminate comparative data on budgeted items as a service to local school officials. In the typical state, state agencies lack the authority to modify local budgets when regulations are followed, but some states with strong agencies influence budgets through advice, persuasion, comparative reports, accrediting regulations, and public promotion. Sanctions adopted in the 1990s, such as state takeovers of fiscally and academically troubled districts, help to ensure that the agency's voice is heard.

The expenditure-control power of the state agency is also considerable in federally financed programs administered by the state. Reports on expenditures submitted to the state by local units are generally made public, sometimes on the Internet as a part of school and school district "report cards," ensuring that local units and the public at large has access to norms and averages. Records of expenditures also provide information that is useful for planning and for undertaking cost-effectiveness studies, although a tradition of local control has often undermined their use for systematic planning. "Every-student" databases that are being developed in a number of states, in part to ensure that students are not counted multiple times for state aid purposes, along with state and federal assessment data, are beginning to change this situation. The National Center for Educational Statistics (NCES), a federal agency that is part of the Department of Education, plays a central role in developing uniform methods of collecting and reporting fiscal, enrollment, program, and other data. It also helps to build the capacity of state agencies to mount more sophisticated information systems.

### Local Unit Reorganization

Local unit reorganization affects both higher education and local school districts.

**Higher education.** The exponential postwar expansion in postsecondary education, much of it in state-supported state colleges and universities, slowed in the early 1970s as the "baby bust" replaced the "baby boom." Still, with higher rates of participation in higher education, especially for women, enrollment in degree-granting postsecondary institutions (including two-year colleges) increased by 16 percent between 1978 and 1988. From 1988 to 1998, enrollment increased another 11 percent from 13.1 million to 14.5 million, about three-quarters of which was

in public institutions. In 1998 to 1999 there were 613 public degree-granting institutions with four-year programs and 1,730 degree-granting private institutions with four-year programs; total enrollment in these institutions with four-year programs was 9,034,062 of which one-third was private. Of those students in private institutions, according to the National Center for Education Statistics, about 10 percent were enrolled in for-profit institutions (Table 171). Each state legislature has the final authority for establishing new four-year colleges, universities, and professional schools. In a majority of states, governing or coordinating bodies have key responsibilities and powers, including making public recommendations as to the establishment of new institutions or campuses. Indeed, legislatures often will not act without such a recommendation, although such a recommendation does not guarantee action. Governing and coordinating bodies also define the role and scope of each institution, provide the legislature with a master plan for higher education, and sometimes establish enrollment limits for existing institutions.

Community colleges, formerly referred to as junior colleges, absorbed much of the growth in higher education during the boom years and experienced an expansion of their mission when the decline in the age-cohort for transfer programs made the provision of career and vocationally oriented programs advantageous. According to the National Center for Education Statistics, in 1998 to 1999 there were 1075 two-year public institutions and 652 two-year private colleges (Table 246). Total enrollment was 5,687,742, of which only 5 percent was private. More than 70 percent of the students in private institutions were enrolled in for-profit colleges. Local initiative is still the dominant force in the creation and expansion of community colleges and technical institutes; although in most cases state administrative agencies or coordinating bodies approve new plans and serve to link the institutions into a statewide network. Increasingly, at the behest of legislatures, governing boards and coordinating bodies for state colleges and universities have worked closely with their peer group for community colleges to improve the articulation between the two levels of high education. In some states, community college courses used for transfer purposes are specified explicitly and must be accepted by state universities so that students can plan their academic careers.

**Local school districts.** Reorganization of local school district structures, long a preoccupation of states, shifted direction in the 1990s from a focus on consolidation to the creation of a new form of local unit, the charter school. Looking back, between 1946 and 1966, thirty-eight states carried out major consolidation of school districts, a number made more impressive by noting that most Southern states have always operated on a county or parish basis. Between 1961 and 1968 alone, the number of districts declined from 37,000 to 22,860, the latter figure including 15,824 districts that enrolled fewer than 1800 pupils. The rate of decline has slowed: between 1989 to 1990 and 1997 to 1998, the number of districts declined from 15,367 to 14,805 including 10,508 with fewer than 2,500 enrollees. Although the number of districts with fewer than 2,500 decreased during the decade, the number of districts with more than 2500 students increased. Those having more than 25,000 students climbed in number from 179 to 230, according to National Center for Education Statistics (Table 88). Rapid urbanization brought structural problems at both ends of the scale: metropolitan areas outgrew the traditional districting principle—a sophisticated urban center surrounded by more traditional rural areas—as suburban district enrollment grew and both rural and urban centers declined, with the latter districts often inheriting the responsibility for a minority population that has never enjoyed adequate educational opportunities.

The creation of charter schools as an alternative to traditional local educational units began in Minnesota in 1991. California followed suit in 1992. By 1999 thirty-six states, Puerto Rico, and the District of Columbia had passed charter legislation. Since 1994 the federal Department of Education has provided grants to support states' charter school efforts, from \$6 million in fiscal year 1995, to \$100 million in fiscal year 1999, when more than 1,700 charter schools were in operation. Of these, 58 percent were elementary schools, 20 percent secondary schools, and 22 percent included grades at both levels. Arizona, with more than 300, has the largest number of charters, followed by California (234), Michigan (more than 175), Texas (more than 150), and Florida (112).

Charter schools vary from state to state and are significantly influenced by legislation.

The laws cover seven areas: charter development—who may propose a charter, how charters are granted, the number of charter

schools allowed, and related issues; school status—how the school is legally defined and related governance, operations, and liability issues; fiscal—the level and types of funding provided and the amount of fiscal independence and autonomy; students—how schools are to address admissions, non-discrimination, special education, etc.; staffing and labor relations—whether the school may act as an employer, which labor relations laws apply, and other staff rights and privileges; instruction—the degree of control a school has over the development of its instructional goals and practices; accountability—whether the charter serves as a performance-based contract, how assessment methods are selected, and charter revocation and renewal issues (uscharter-schools.org).

In spite of quite radical actions by the states in the 1990s embodied in charter schools and district takeover legislation, state education agencies are not executive agents for reforming local district structures. The United States has held strongly to a tradition of local determination. When mandates are issued, they flow chiefly from legislative enactments. Laws fostering consolidation usually offer incentives to districts. On occasion, independent state commissions have been created to propose redistricting in a given territory but then accept locally originated counterproposals. Charter school laws typically require local initiatives to launch a school, thus reflecting the American tradition of local determination.

Redistricting is, in short, a political process and state education agencies move within limitations imposed by this fact, particularly because they represent the state while existing districts represent local control. Nevertheless, state education agencies exert influence over district structure, the amount of such influence varying between states. In many states, the agencies are supported by statutory discretionary power in applying those criteria. On occasion, they must enforce (that is, work out) new legislative mandates or are instructed, in effect, to promote the inducements to consolidate. State agencies may take the initiative and foster local action by using consultation and public advocacy or turn to de facto sanctions by strict application of state accreditation standards that are difficult for very small units to satisfy. A few state education agencies may undertake, usually upon request, surveys of district structure in

a given territory and make recommendations based on these surveys to local authorities or interested citizens' groups. The greatest source of state agency influence lies in the reports and recommendations provided to state legislatures, study commissions, and other groups.

### Curriculum and Instruction

State administrative agency influence on curriculum and instruction, including vocational education, is substantial at the elementary and secondary level and notable in some program areas in higher education.

**Elementary, secondary, and vocational.** In elementary and secondary education, including vocational education, state education agencies have statutory power to significantly influence what is taught in local school districts. Typically, the agencies are empowered to prescribe minimal course offerings and outline course content. They also establish standards for accrediting schools; many of these standards deal with the quality of curriculum and the results of teaching as measured by state-administered criterion-referenced tests. In 2000 to 2001, all but three states (Iowa, Montana, and Wisconsin) used such assessments aligned to state standards in English/language arts and mathematics; about half of the states also examined science and social studies/history. Although no state limits the offerings of local schools to those approved by the state education agency, prevailing practice is to await state outlines for new high school courses before they are introduced widely. Experiments with online education by private and public suppliers to public school student, charter school students, and those being home schooled are challenging agencies to develop new guidelines about what constitutes instruction for both academic and financial purposes.

In vocational education, state practices usually require state agency approval of the details of each offering before it becomes eligible for reimbursement from state and federal funds. In some cases, the state education agency may prescribe or approve uniform tests linked to certification, which can have an important influence on curricula. Through its administration of federal programs, the state agency becomes involved in program control. State education agencies also may have statutory authority over the adoption of textbooks, content of instructional broadcasts, and the selection of audiovisual and technological resources, including software, pur-

chased with state funds. Upgrading school and school district communication and computing capacity both for administrative and instructional purposes is a focal point in most states.

The milieu in which state education agencies operate exerts pressure to reduce regulatory implementation of statutes to a minimal level. Constructive influence arises chiefly from their advisory, leadership, and developmental services for curriculum, instruction, and assessment. The extent and quality of these services distinguish strong from weak education agencies. In the 1960s, before the Great Society initiative, state education agencies were primarily concerned with assisting small and high-need districts. Between 1965 and the *Nation at Risk* report in 1983, state agencies created developmental services to build local capacity across their states. Since 1983, pushed by governors, state legislatures, and the federal government, they have assumed a central role in translating national aspirations into effective programs at the local level.

Capacity building services include in-service education for teachers, statewide curriculum improvement studies and implementation, demonstration projects, and the compilation and provision of curriculum and methodological guides. Some agencies undertake vigorous promotion of certain curriculum reforms, enlisting the services of colleges, universities, and private providers. The power of the agency to specify curriculum may be used to create committees of expert teachers to formulate course guides. Several states have initiated Internet-based curriculum guides with linked resources and are experimenting with online testing in the classroom using central databanks of test items. Major information system and textbook companies play an active role in both testing programs and development of online capabilities.

These examples illustrate an important generalization: the role of the state education agency in the instructional realm is primarily that of persuader. The local school district, in most cases, is the final arbiter of the quality of instruction. In only exceptional cases will the state agency turn from persuading its way into the local district toward dictating to a district that which will be done. For assessments, however, they have been given the authority by both state and federal law to insist that districts measure and report on the progress of students.

**Higher education.** For institutions of higher education, no state administrative agencies carry out cur-

riculum and instruction functions comparable to those that state education agencies perform for K–12 schooling. Some coordinating agencies have the authority to approve or disapprove specializations offered for degrees and have veto powers over new courses. These powers are aimed primarily at diminishing the proliferation of courses and the overlap of programs among institutions rather than developing course content, although in attempts to increase articulation between community colleges and universities some states have become quite directive. Statutes in coordinating-board (vs. governing board) states normally allow persuasive approaches including setting criteria and insisting on accountability. Indeed, state legislatures during the 1990s bolstered their power to do so.

### Local Unit Personnel

Selection, retention, advancement, and dismissal of personnel are jealously guarded prerogatives of the local units. Yet these crucial decisions are constrained by statutory prescriptions and by ministerial actions of state administrative agencies. Statutes and legislative appropriations have much to do with the salaries that local units can offer and hence with these units' ability to attract recruits. Statutes frequently govern the contract provisions regarding teachers: conditions of tenure, fringe benefits including pensions, and the status of collective bargaining between employee organizations and governing boards particularly as they relate to working conditions (i.e., class size, hours of instruction, etc.). Statutes and court rulings limit the pupil-disciplinary actions of school officials, sometimes leading to employee dissatisfaction. Inadequate district revenue, sometimes caused by state funding regulations, and difficult social environments can result in school conditions that make it almost impossible to staff particular schools with certificated professionals. All states require state-issued licenses for teachers and other professional workers in the school systems. To implement and enforce these statutes, all states delegate some authority to state education agencies; some states delegate this authority to commissions that maintain records and adjudicate problems related to licensure.

State licensure is rare in higher education, applicable in a few instances to community college personnel. Tenure is seldom a subject of specific state statutes, although administrative law and court rulings sustain the necessity for due process in dismiss-

als. A state-coordinating agency for higher education may suggest uniform guarantees of academic freedom and tenure. In some cases, state labor legislation may facilitate collective bargaining by faculty in public postsecondary institutions. Coordinating agencies may also specify average salary levels in state-supported institutions and earned-degree status expected of faculty members. Most personnel matters, however, are within the jurisdiction of institutional (or multiunit system) governing boards.

### Licensure Requirements

State education agencies exercise the greatest influence over local school district personnel through licensure of professional workers. States vary widely in the amount of discretionary leeway that is accorded to state education agencies. Some are very specific and others merely authorize the state education agency to design and implement a suitable certification framework. Most states fall between these two extremes although the trend during the 1990s was toward greater specification and concern about quality. The NASDTEC Manual on the Preparation and Certification of Educational Personnel for the Year 2000, published by the National Association of State Directors of Teacher Education and Certification, classifies state requirements in seven areas: broad academic study; assessment; ancillary and special education; general education; professional preparation; student teaching; and subject matter endorsement. All states mandate a bachelor's degree, subject matter study, and pedagogical study for entry-level teachers. Most states require examinations of basic skills, subject matter knowledge, and teaching knowledge examination for initial licensure. About one-third also require an assessment of teaching performance. All states have emergency routes through which districts can employ persons not qualified for standard certification and alternative preparation programs to expedite the entry of new teachers to the profession. State officials have considerable autonomy in establishing standard patterns for educational qualifications, but they also interpret whether standards are actually met. To local unit officials, some state agencies appear bound to the letter of the regulations while others are quite liberal in their interpretations, focusing on the broad intent of the regulations. In most cases, what is being licensed is a college transcript, not an individual; licensure is a mass-production enterprise. An alternative approach, developed by the National Board for

Professional Teaching Standards, certifies individual teachers; the board reports that forty-seven states offer inducements for individual teachers who already hold state licensure to gain National Board Certification.

State education agencies' licensure of teachers requires effective working relationships with the state colleges and universities that provide teacher education programs. The universal approach taken is the approval of institutions by a state agency based on one or more sets of standards. The state education agency establishes criteria for the approval of institutions offering programs for educators and for the approval of each program designed to qualify students for a given type of certificate or license. Advisory groups of nonagency personnel often formulate criteria. More than two-thirds of the states have formally or informally adopted one or more of regional accrediting standards or standards promulgated by the National Council for Accreditation of Teacher Education (NCATE) or by NASDTEC. Standards have become increasingly performance based. NCATE standards emphasize six areas: candidate knowledge, skills, and dispositions; assessment system and unit evaluation; field experiences and clinical practice; diversity; faculty qualifications, performance, and development; and unit governance and resources. Once an institution and its curricula are approved—typically for a five-year period—the institution merely certifies to the state agency that a given individual has satisfactorily completed an approved program and is recommended by the institution for licensure. The legal credential is then issued by the state education agency, usually for a given term subject to recertification requirements such as the completion of additional approved professional development courses.

The institutional approval process places the state education agency in at least a semi-accreditation role with respect to colleges and universities, private as well as public, and make for a degree of uniformity among teacher preparation programs. In the past, critics contended this approach placed too much faith in the integrity of individual colleges to prepare teachers properly, by making higher education institutions—not school systems and professional practitioners—the arbiters of personnel qualifications for teachers. Overreliance on course work was also faulted. The emergence of performance testing as part of the qualification process and more formal standards managed by

national bodies, often with the support of federal funds, reflect credence given to these critics. Although there is growing accountability for teaching certification to and the direction to agencies outside of state education agencies, state agencies nevertheless maintain a legal monopoly on the function.

### **Administration in Local Units**

Decisions and executive actions made within local units form the administrative core of American education, despite the steady trend toward nationalization of the educational endeavor. States direct local units to make many decisions through statutory law and traditions and yet influence those decisions and actions through the behavior of their state administrative agencies. Federal funding regulations, court decisions, and collective agreements similarly affect local choices by proscribing and prescribing available options. Although waivers may be available to promote or permit local experimentation and charter schools allow an alternative to traditional public schools, these initiatives operate at the margin.

Within institutions of higher education, state administrative agencies offer minimal levels of consultation and personal advice to influence decisions or executive actions of administrators. Nevertheless, recommendations made by such agencies may have considerable influence, as in the case of the prescribed form and content for fiscal appropriation requests that can affect policies on teaching loads or the emphasis accorded research activities. Reports, especially comparative ones, also influence local policies and procedures. Comparative analyses of institutions across a state or of comparable institutions in other states are standard instruments to argue for the need of additional resources, new programs, and the like. Concern about a potential shortage of qualified teachers between 2000 and 2010 as teachers from the baby boom generation retire and as enrollments increase has encouraged states to advise their colleges and universities to respond accordingly.

State agency regulations also influence administrative decisions by local school districts. As well, the agencies operate an array of consultative and instructional services in such areas as school transportation, fiscal accounting, school law, purchasing procedures, school-plant planning and construction, and information system development and operation. When new issues arise or new programs are introduced, agencies will often initiate systematic dissemination projects, often in partnership with

professional associations or postsecondary institutions, to assist local units in responding appropriately. Management services and policy advice, however, are in most cases minimal.

Appeals of administrative decisions within local school districts may be made to the commissioner of education in most states. Quasi-judicial hearings are conducted on such matters as the dismissal of an employee, boundaries of school attendance areas, and allegations of impropriety in the award of contracts. Aggrieved parties also have access to the courts, although until established routes of appeal within the educational system have been exhausted, courts generally will not accept pleas. They may also turn to the state attorney general on debatable points of law, although they must first seek resolution through the office of the commissioner of education. In a number of states, issues related to collective bargaining legislation for teachers are the responsibility of a special agency that may invoke various means of dispute resolution.

### **Informing and Planning**

State education agencies and coordinating bodies for higher education can be treated together as far as informing and planning is concerned. Statutes typically empower these agencies to collect and interpret data to monitor the operations of the total state educational system. Data are used to inform the public, school officials, and governmental authorities about a variety of inputs, processes and outputs. According to statutes, information collected should be used to appraise the results of education, the effectiveness of present arrangements, and the effects of legislative and educational strategies. Simultaneously, research conducted or commissioned by the agencies is used to suggest alternative educational means and to identify emerging demands upon and new challenges to the state's system. Ultimately, agencies propose recommendations for immediate and long-term plans to improved educational arrangements throughout the state.

Measured against such expectations, few state agencies perform adequately, in part because of scarce resources and political complexity. Data collection and statistical reporting, rather than elaborate master plans substantiated by sound research, are their forte. More often, a government commission or task force operating with adequate funds and substantial political capital will fill the breach, al-

though federal planning grants also stimulate development of strategic initiatives.

### **Private Institutions**

Some state administrative agencies charter privately incorporated institutions for education although the requirements to receive a charter vary widely in prescriptiveness. Private institutions need not seek accreditation, but most secondary and postsecondary institutions do so, thereby subjecting themselves to the same state agency influences as public institutions. The same situation pertains to approvals for teacher education and certification. State agencies also subject private institutions to enforcement of fire and other safety statutes. To benefit from many federal programs, private institutions accept the influence of those agencies with respect to fiscal accountability and program performance.

As private elementary and secondary institutions enter into agreements for cooperative instruction with public schools, state education agencies become more important in their affairs. The provision of vouchers that allow students in low-performing public schools to transfer to private schools may also bring involvement of a state agency. A number of states have statutes and appropriations permitting the state to purchase educational services from private colleges and universities; the state agency administering such provisions quite naturally exerts considerable influence upon the recipients. State-provided scholarships to students attending private institutions can also result in a state monitoring, if not supervising. Thus, private institutions are rarely as independent of the state as popularly believed.

### **Intermediate Units**

Between the state and the individual school district are administrative units, which incorporate a number of school districts. Although county boards of education have provided this function in some states, in others regional services agencies have been created. During the late 1960s and early 1970s, for example, Texas created Educational Service Centers for each of twenty regions, Pennsylvania created Intermediate Units, and New York formed Boards of Cooperative Educational Services (BOCES). These entities have as their primary purpose the support of local school districts and the reduction of service redundancy to take advantage of economies of scale. Intermediate unit employees are simultaneously

vendors, service providers, grant writers, financial and management specialists, researchers, advisers, advocates, and facilitators. Typical programs and service offered include adult education, cooperative projects, curriculum services, educational technology and media, psychological services, and the operation of regional special education and vocational schools.

These units are not, strictly speaking, branches of the state education agencies, but neither are they agents of local districts. Typically, they stand as district-controlled but state-allied agencies for connecting local districts with changing approaches to education. As an alternative to school district consolidation, they appear to have become established as a permanent fixture in many states. Although some speculated that they might evolve into the major planning units for educational services and gain strong financial support and ministerial authority, this has not been the case.

### Context of State Agency Actions

To understand state administrative agency influence upon educational practice, at least four features of the context in which they operate should be noted.

First, in most states, state education agencies do not establish policy or develop procedures to be followed. Both of these critical functions come about through extensive participation of non-agency persons—local district employees, college and university personnel, citizen panels, outside consultants, and political staff in the executive and legislative branches. Non-agency committees frequently possess almost autonomous jurisdiction over certain matters—selection of state-approved textbooks or approval of new school construction, for example. Committees, sometimes including several hundred individuals, write state curriculum guides. Until the 1980s and 1990s, with the push to align state standards with assessment and teacher preparation, there were few administrative regulations that did not bear the imprint of local unit administrators serving as advisers.

Moreover, vast networks of influential groups and individuals surround state administrative agencies, just as they do state legislatures. Professional organizations, parent associations, special-interest groups, combinations of local units seeking fair treatment, legislators speaking on behalf of constituents, and private enterprises with a stake in decisions

and regulations all lobby to obtain their goals. To conclude that the involvement of so many viewpoints and competing influences weakens the quality of state administrative agency decisions would be erroneous, however. Simply put, state agencies are not clusters of individuals concocting directives and plans in Olympian fashion to be imposed on the state educational system.

Second, state statutes reflect, to a marked degree, the principle of plaguing power with power. In very few domains is there a clear distinction between the authority of state agencies and the authority of local units. Statutory delegations are typically broad and vague; often, both parties can justly claim primary jurisdiction. For example, the question might arise as to whether the state agency has the right to determine who can serve as a counselor in a high school. The local unit can cite jurisdiction over student affairs; the state agency can say its power to accredit implies the power to specify who does what in a school. Or, the power of the governing board of a postsecondary institution to adopt an operating budget and the power of a state agency for higher education to approve budgets can conflict over an attempt to expand a local department of engineering to include optical engineering if the state agency does not think this content should be offered by that institution. It is a truism of administrative science that any agency tends to increase its field of jurisdiction and, in so doing, comes into conflict with the jurisdictions claimed by other agencies. Evaluating the work of state administrative agencies for education must take this constant tension into account.

Third, state administrative agencies develop reputations over long periods of time. Prevailing images of them vary tremendously from state to state. One agency may be viewed as competent, judicious, flexible, and the source of constructive influence; another may be seen as a regulatory body interested only in bureaucratic formalities; and a third as a minor bureau concerned with minutiae and processing paper. Deserved or not, these images persist and largely determine whether the state's political actions will be favorable toward the education agency, thereby affecting the roles of state agencies in relation to local units. Although history indicates that image transformations tend to occur very slowly, on occasion some states have dramatically transformed state education agencies almost overnight, reorganizing them and changing mandates in order to pursue state goals more effectively.

Fourth, the size and quality of staff in state administrative agencies have more to do with the agencies' influence than perhaps any other factor. Highly qualified staff with significant professional attainment, if placed in strategic positions to formulate policy, plan, and help to build local capacity, succeed where others would fail. With few exceptions, states do not provide attractive positions with the appropriate remuneration required to attract the best educational talent. Local units provide higher salaries, better fringe benefits, and the like, making it possible for them to lure promising individuals away from state agencies. State civil service classification systems often thwart efforts to obtain specialists and limit opportunities for advancement. Although federal funds and the increased attention paid to education by governors and legislatures have infused new talent into state education agencies, this talent often is clustered in special units dedicated to a particular programmatic activity, fragmenting rather than unifying the agency. Nevertheless, because of their role in assessment and quality improvement initiatives, most state education agencies are far more central to the unfolding drama of public education in 2002 than they were in 1965, in large part due to national aspirations fostered by federal initiatives.

*See also:* FINANCIAL SUPPORT OF SCHOOLS, *subentry on* STATE SUPPORT; SCHOOL BOARDS; STATE DEPARTMENTS OF EDUCATION; STATE EDUCATIONAL SYSTEMS; TESTING, *subentry on* STATEWIDE TESTING PROGRAMS.

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STEPHEN B. LAWTON

#### STATE BOARDS OF EDUCATION

Education is legally a responsibility of state government in the United States. The Tenth Amendment to the U.S. Constitution states that "the powers not delegated to the United States by the Constitution nor prohibited by it to the states are reserved to the states respectively or to the people." Because the Constitution does not specifically mention education, this amendment serves as the legal basis for the historical evolution of education as a state function.

## The New Context

For most of the nation's history, the states have exercised these responsibilities gingerly and have been a weak link in the federal system. It was not until the late twentieth century that the states have begun to proactively exercise their powerful legal responsibilities and great reservoir of unused power in the field of education. Most states, in congruence with the historical norms of local control of education, have traditionally delegated much of the operational responsibility for schools to local boards of education.

This pattern of unaggressive state leadership changed dramatically in the last quarter of the twentieth century. Public education without question has become the nation's most salient domestic public policy issue. The country's influential business and political leadership (on a bipartisan basis) have become engaged in unprecedented ways in implementing their commitment to improved public education. Presidents, governors, corporate CEOs, and state and federal legislators all proclaim the need for high standards and academic achievement for all children. This laser-like concern for and focus upon education has elicited escalating public demands and political pressure for the states to focus and discharge their legal responsibilities to improve the quality of education.

## The Role of State Boards

State boards of education along with governors, legislatures, and state education agencies are integral components of the state policy system. State boards, which exist in all but two states (Minnesota and Wisconsin are the exceptions), are agencies with major general responsibilities for the development and management of public education within each state. Typically, the state board of education governs the state education department or agency. Although state boards have only recently become influential entities in a number of states, the aforementioned pressures to improve education will inevitably make them more visible and significant players in all jurisdictions.

## Membership

There is enormous variety among the forty-eight states that have approximately 500 citizens serving on state boards of education. As Table 1 indicates, the states have numerous and wide variations in the manner in which members are selected, the size of their boards, and the length of terms of office.

Thirty state boards are appointed by governors subject to legislative approval in six states. Ten states elect their state boards: six on partisan and four on nonpartisan ballots. State boards are appointed by the legislature in three states (New York, Pennsylvania, and South Carolina). In four states (Louisiana, Mississippi, New Mexico, and Ohio) the state boards comprise both elected and appointed members. In Washington State, the state board consists of nine members elected by local school board members and one member elected by private schools.

The number of voting state board members also varies from a low of seven (in nine states) to twenty-one in Pennsylvania. There are thirty-eight states with seven to eleven members serving. Twelve states have a nine-member board, ten states have an eleven-member board, and nine states have seven member boards. These seven-, nine-, and eleven-member boards are the most prevalent in the nation.

The length of term of office for state board members likewise varies across the country. The term of office ranges from three years to nine years, the most common term by far being four years (in twenty-two states) and six years (in eleven states). The overwhelming number of states have statutes that require overlapping terms. Special provisions or unique features of state boards abound from state to state with infinite variety. For example, in Alabama the governor presides as president of the board. In Delaware, two of the seven state board members must have experience as local board members. In Indiana, four of the eleven members must be professional educators. In New Jersey, three of the thirteen members must be women. In Washington State, the chief state school officer can vote only to break ties. More generic or common provisions mandate residency requirements for board members and the exclusion of educators from board service in a number of states.

In the late twentieth century there was a trend toward more student participation on state boards. As Table 1 reflects, five states have students as voting members of the board and an additional five states have students as nonvoting members. This reflects the growing voice of students as testing and related policy issues come to the forefront. Table 1 also reinforces the wide structural and operational diversity that characterizes state boards with forty-eight boards having "unique features" and thirty-eight earning "special notes" to distinguish them from their counterparts.

TABLE 1

## State education governance, 2001

State	Method of selection of state board members	Number of voting state board members	Length of term (years)	Method of selection of chief state school officer (CSSO)	Official role of chief state school officer on state board	Unique feature of state board	Special notes
Alabama	Partisan ballot	8 elected and governor	4	Appointed by state board of education	Secretary and executive officer	Governor sits as president of board	Four members elected in 1998 received two-year terms so that four members will run for election every other year
Alaska	Appointed by governor	7	5	Appointed by state board of education with approval by governor	Executive officer	Board appoints one non-voting student adviser and one non-voting military adviser	CSSO must have five years experience in education; three in administration
Arizona	Appointed by governor; confirmed by senate	9	4	Partisan ballot	Executive officer	Sits as vocational and technical education board	Requires three lay members
Arkansas	Appointed by governor	10	6	Appointed by state board of education	Agent ex officio	The CSSO serves at the pleasure of the governor	CSSO must have ten years experience as a teacher, including five in administration or supervision, and hold Arkansas teacher's certificate
California	Appointed by governor	11 including student member	4 (1 year for student)	Non-partisan ballot	Secretary and executive officer	Voting student member who has full participation rights	
Colorado	Partisan ballot	7	6	Appointed by state board of education	Secretary		
Connecticut	Appointed by governor, approved by house and senate	9	4	Appointed by state board of education	Secretary	The commissioner of higher education serves as an ex officio, non-voting member of the board	Beginning in 1998, two student members (non-voting) serve one-year terms on the board
Delaware	Appointed by governor, approved by senate. President serves at the pleasure of the governor	7	6	Appointed by governor	Executive secretary	Two state board of education members must have local board experience; must be a resident for five years in order to sit on board	Change from state board-appointed CSSO to governor-appointed CSSO occurred in 1997
Florida	Partisan ballot	7	4	Elected statewide	Secretary and executive officer	State board of education consists of seven elected cabinet members: governor, CSSO, secretary of state, treasurer/insurance commissioner, comptroller, attorney general, commissioner of agriculture	Has jurisdiction over the board of regents of the state university system and state board of community colleges

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## State education governance, 2001

State	Method of selection of state board members	Number of voting state board members	Length of term (years)	Method of selection of chief state school officer (CSSO)	Official role of chief state school officer on state board	Unique feature of state board	Special notes
Georgia	Appointed by governor	11	7	Elected statewide	Executive secretary	Must be a resident for five years to sit on board	CSSO must have three years teaching experience
Hawaii	Non-partisan ballot	13	4	Appointed by state board of education	Executive officer	Non-voting student member selected by the state student council	
Idaho	Appointed by governor	8	5	Non-partisan ballot	Executive secretary and voting ex officio member of the board	Must be a resident for three years in order to sit on board; members are also regents of the University of Idaho	
Illinois	Appointed by governor	9	6	Appointed by state board of education	Chief executive officer	Requirements for regional and political balance on board	Chair is appointed by governor
Indiana	Ten appointed by governor and elected chief	11	4	Partisan ballot	Chairman and voting member	Four members must be educators; political balance is required	\$2,000 per year for state board members
Iowa	Appointed by governor	9	6	Appointed by governor	Executive officer		
Kansas	Partisan ballot	10	4	Appointed by state board of education	Executive officer		
Kentucky	Appointed by governor	11	4	Appointed by state board of education	Executive secretary, executive administrator	President of council on postsecondary education is non-voting ex officio member; board members must be resident for three years, be at least thirty years old, and hold a two-year associate degree	Governor appoints secretary of education, arts, and humanities
Louisiana	Eight elected, three appointed by governor	11	4	Appointed by state board of education	Ex officio secretary		
Maine	Appointed by governor	9	5	Appointed by governor	None		
Maryland	Appointed by governor	12 including student member	4	Appointed by state board of education	Chief executive/ secretary treasurer	Voting high school student, which is a one-year appointment by the governor	CSSO must have seven years teaching experience and administration experience
Massachusetts	Appointed by governor	9 including student member	5	Appointed by state board of education	Board secretary and chief executive officer	Chancellor of higher education board is voting member; voting student elected by the state student advisory council	Board reduced from 15 to 9 members in August, 1996; current terms vary in length to provide transition period
Michigan	Partisan ballot	8	8	Appointed by state board of education	Chairman	Constitutional board with defined responsibility for K-12 education and more limited role in postsecondary	

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TABLE 1 [CONTINUED]

## State education governance, 2001

State	Method of selection of state board members	Number of voting state board members	Length of term (years)	Method of selection of chief state school officer (CSSO)	Official role of chief state school officer on state board	Unique feature of state board	Special notes
Minnesota	None			Appointed by governor			State board ended operations as of December 31, 1999; most board authority was transferred to the commissioner of children, families, and learning
Mississippi	Five appointed by governor; four appointed by legislature	9	9	Appointed by state board of education	Executive secretary	Lieutenant governor and speaker of the house each appoint two members	CSSO must have five years administrative experience
Missouri	Appointed by governor with consent of senate	8	8	Appointed by state board of education	Chief administrative officer	Authority over university and community college system teacher education programs	
Montana	Appointed by governor	7	7	Partisan ballot	Ex officio member	Non-voting student member; governor is ex officio member	
Nebraska	Non-partisan ballot	8	4	Appointed by state board of education	Executive officer	Constitutional board	Teachers, state officials or candidates, and nonresidents are not eligible for board membership
Nevada	Non-partisan ballot	11	4	Appointed by state board of education	Secretary	Non-voting student member	
New Hampshire	Appointed by governor	7	5	Appointed by state board of education	None	Governor and council appoint state board of education	
New Jersey	Appointed by governor	13	6	Appointed by governor	Secretary	Three members of state board of education must be women	Resident for five years to sit on board
New Mexico	Ten elected/five appointed by governor	15	4	Appointed by state board of education	Chief administrative officer	Three appointed members are of same affiliation as governor who appointed them	
New York	Appointed by legislature	16	5	Appointed by state board of education	Chief executive officer	Responsible for higher education, cultural institutions, and licensed professions	
North Carolina	Appointed by governor	11	8	Partisan ballot	Secretary and chief administrative officer	Two teacher of the year advisers; two student advisers	Separate higher education board, separate community colleges board
North Dakota	Appointed by governor	7	6	Non-partisan ballot	Executive director and secretary		

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## State education governance, 2001

State	Method of selection of state board members	Number of voting state board members	Length of term (years)	Method of selection of chief state school officer (CSSO)	Official role of chief state school officer on state board	Unique feature of state board	Special notes
Ohio	Eleven elected by non-partisan ballot; eight appointed by governor	19	4	Appointed by state board of education	Secretary and administrative officer	Separate board for higher education	Two ex officio members (non-voting)
Oklahoma	Appointed by governor	7	6	Partisan ballot	Chairperson of both state board and state board of vocational and technical education	State board members are ex officio voting members of the state board of vocational and technical education	New board member must take new board member training established by the state department during the first year of membership to remain on board
Oregon	Appointed by governor	7	4	Non-partisan ballot	Administrative officer	K-12 and community college authority	
Pennsylvania	Appointed by governor, confirmed by Senate	21	6	Appointed by governor	Chief executive officer	Statutory responsibility for postsecondary education	Also sits as state board for vocational education; four ex officio legislative members
Rhode Island	Appointed by governor	11	3	Appointed by state board of education	Chief executive officer	One member is appointed from house; one member is appointed from senate	Separate higher education board
South Carolina	Appointed by legislature	17	4	Partisan ballot	Secretary and administrative officer	Legislative delegations elect sixteen state board education members; governor appoints one state board of education member	
South Dakota	Appointed by governor	9	4	Appointed by governor	Executive officer		
Tennessee	Appointed by governor, confirmed by general assembly	10 including student member	9	Appointed by governor	Required to be present at state board of education meetings	Voting student member (one-year term), board selects executive director; serves as state board for vocational education	The board maintains its own staff apart from the department of education; executive director of higher education commission is ex officio, non-voting member of state board of education
Texas	Partisan ballot	15	4	Appointed by governor	Executive secretary	The state board of education is also the state board for vocational education	
Utah	Non-partisan ballot	15	4	Appointed by state board of education	Executive officer	The state board of education is also the state board for career and technology education	\$3,000 per year for state board of education members

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TABLE 1 [CONTINUED]

## State education governance, 2001

State	Method of selection of state board members	Number of voting state board members	Length of term (years)	Method of selection of chief state school officer (CSSO)	Official role of chief state school officer on state board	Unique feature of state board	Special notes
Vermont	Appointed by governor and approved by senate	9 including student member	6	Appointed by state board of education and approved by governor	Chief executive officer and secretary	Chair is elected by the board for two-year term	Two student members: one is appointed each year for a two-year term; student does not vote during first year of term, has full voting rights during second
Virginia	Appointed by governor	9	4	Appointed by governor	Secretary		Secretary of education is a cabinet member
Washington	Nine elected by local school board members, one elected by private schools	11	4	Non-partisan statewide ballot	Chief executive officer and ex officio member	CSSO votes only to break ties; private school representative votes only on issues affecting private schools; non-voting students and governor's representatives	
West Virginia	Appointed by governor	9	9	Appointed by state board of education	Chief executive officer		
Wisconsin	None			Non-partisan ballot			
Wyoming	Appointed by governor	11	6	Partisan ballot	Ex officio member	Meets quarterly; reviews all school accreditation compliance for approval or disapproval	Deputy CSSO is ex officio member and parliamentarian
District of Columbia	Five by non-partisan ballot; four appointed by mayor	9	4	Appointed by state board of education	Ex officio member	Board president elected at-large	Newly reconfigured board took office in January 2001
Guam	No central board; four district boards elected by voters in each district			Appointed by governor, confirmed by legislature	Chief executive officer		The CSSO (director of education) has policymaking authority for state-level functions
Northern Marianas	Elected	5	4			Serves as both the state and local school board	
Puerto Rico	Appointed by governor	7	5	Appointed by governor	None	General council on education is a state agency for licensing and accreditation of public and private schools from pre-school to postsecondary—not university level	

SOURCE: National Association of State Boards of Education website.

### Basic Responsibilities

Although state legislatures have the ultimate legal authority for determining educational policy, a number of specific legal responsibilities have been delegated to state boards and are commonly shared. State boards generally serve as representatives of the larger public in conceptualizing and formulating the mission of the schools, and exercising overall leadership responsibility in the following areas:

- Standards setting
- Accreditation of state education programs
- Teacher and administrator certification
- Review of state education department budgets
- Promulgation of graduation requirements
- Development and implementation of state testing and assessment programs

The historical role of most state boards had been the articulation of rules and regulations that mandated only minimum standards with regard to matters such as subjects to be included in the curriculum, school construction, and school bus safety. This relatively passive role of state boards has changed with the advent of the standards movement.

The power state boards have to appoint the chief state school officers in twenty-five states (gubernatorial approval is required in two jurisdictions) may represent their most important responsibility. It is the state education agency that customarily staffs state boards. The chief thus is in a pivotal position to control the staff, agenda setting, and information flow through his or her authority as the line leader of the state education agency. As a full-time educator with the requisite professional standing and expertise, the chief is in the best position to determine whether state board policies are successfully designed and implemented.

### State Boards and the New Politics of Education

As the nation's influential business and political leaders have asserted leadership in the education reform movement, the former, relatively closed, system of decision-making dominated by education groups has been opened to new players at all governmental levels. At the state level, governors, corporate leaders, legislators and governors' education aides, for example, frequently have become the drivers of policy changes preempting the traditional prerogatives of chief state school officers, and state education agencies as well as state boards.

This "new politics of education" and its attendant focus upon education reform have made state boards somewhat more visible or (at least) less invisible. As education has become a more significant policy concern at the state level, more attention is being paid to the caliber and influence of state board members. A governor appointing a state board member in the current environment is less likely to view the selection process as a midlevel patronage matter. The trend is toward designating influential higher status appointees who can move the governor's substantive agenda on increasingly visible and politically important education issues such as testing and accountability. In the past, governors would rarely interfere with the deliberations of their appointees and commonly took a "hands-off" posture on the relatively mundane issues that were on the agendas of the state board. This has changed dramatically at the start of the twenty-first century as the political stakes have escalated on education issues and growing numbers of state board members have moved into the mainstream of state politics.

These developments have been a mixed blessing for appointed state board members. The visibility and increased status of board members has certainly been a very positive development; on the other hand, board members are often less politically independent and not infrequently are viewed as being not civic leaders promoting education improvement but political agents of the governor.

As the standards movement has emerged as the often-controversial cornerstone of education reform, state board members have become much more publicly visible and engaged in highly volatile and complex issues such as testing and accountability. They have been far less insulated from state politics and in many cases have become influential participants in the ongoing policy debates about standards, assessments, and accountability. Many state board members likewise have become less parochial and currently are involved in national discussions as well as issues in their own states. There is, for example, keen interest among state board members in the possible fiscal and political implications of President George W. Bush's federal educational program on state powers and responsibilities.

In jurisdictions that elect their state board members the political dynamics are, of course, quite different. Elected officials understandably depend upon various special interest groups whose political power and financial resources can swing elections. State

board elections, like their counterparts at the local level, do not customarily attract large voter turnouts. Indeed, candidates for state boards commonly are little known to the public. This provides organized interest groups with inordinate influence in state board elections. In other words, small core groups readily can control the composition of boards in elective states that provide very fertile ground for organized special interest groups to dominate the election process.

### Changing Dynamics

The changing state politics of education has caused new sets of relationships among the several components of the state policy system. The new transcendence of education and the opening up of the once relatively closed policymaking system to business and political leaders has changed the relationship of state board members to other participants in the state policymaking process in significant ways. As school issues have become more embroiled in the political mainstream, chief state school officers, for example, have become more pleased to have influential state board members serve as buffers. In essence, many politically well-connected board members currently are positioned to provide valuable political cover for pressured appointed chiefs. On the other hand, in states in which chiefs are elected and have their own independent political base they can be more dismissive of their boards and in some cases even totally ignore them.

The recent visibility and political involvement of state board members have created new forms of pressure upon these formerly relatively obscure state officials. Early-twenty-first-century appointees are more likely to be very busy high-powered successful business and civic leaders who do not have the time to serve extended terms on state boards. As a result of growing turnover, the National Association of State Boards of Education (NASBE) estimates that the average tenure of its members has decreased from twelve to six years. Highly volatile struggles over the testing issue in states like Virginia and Massachusetts and the bitter struggle over evolution in Kansas reflect only a few examples of the conflicts that have engulfed board members in states where members are both appointed and elected. These highly controversial issues, not surprisingly, have attracted escalating media interest. The saliency of school issues at the state level has triggered the growth of coverage of state boards by a much more sophisticated and knowledgeable media corps.

### Pivotal Role of Governors

The nation's governors see education as a "hot" issue, and as a result, all want to be viewed as "Education Governors." Whether they are Republican or Democrat or liberal or conservative, all governors are cognizant of the political rewards of being viewed as a proponent or supporter of education reform and improvement. These chief executives, of course, are the pivotal players in determining education policy in the states. State boards have not only been profoundly affected by the quality of gubernatorial appointments but they also have been influenced in states (where board members are elected as well as appointed) by more vigorous efforts of their governors to consolidate their power to determine and shape educational policy.

In their efforts to build a more diverse base of support for their policies, governors in many states have appointed broadly based influential commissions, roundtables, and/or advisory bodies to make recommendations about complex, controversial state-policy issues such as finance, teacher quality, standards, governance, and accountability. Issues such as these logically should be within the purview of the policymaking responsibilities of state boards. In essence, these gubernatorial or, on occasion, legislatively appointed entities are making recommendations that legally should be promulgated under the aegis of state boards. This not uncommon utilization of commissions and analogous groups certainly clouds and dilutes the authority of state boards. Governors, of course, view such entities as a means through which they can not only broaden support for desired policies but also buffer themselves from state boards that because of overlapping terms or turnover may not be politically responsive to their programs and not as controllable as time-limited commissions.

The recent increase in gubernatorial authority has been paralleled quite logically by the escalating influence of governors' aides in the state education policymaking process. These aides, while often young and not particularly experienced in education issues, usually are politically savvy and well connected. Many have served as campaign aides to their governors and "have their ear" in special or unique ways. Their influence, while often unacknowledged, can hardly be underestimated as loyal and trusted confidants to the chief executives.

## The Future

In the early twenty-first century, one can predict with much confidence that state boards will continue their climb out of obscurity in the years ahead. State board members will be increasingly visible and more influential public figures. Governors and the electorate will seek to have more business or private sector types serve on these bodies because they bring different and needed knowledge and understanding of budgets, management, and the changing demographics that are so profoundly reshaping U.S. society. The demographic revolution increasingly will reconfigure the composition of state boards with the inevitable designation of many more Hispanic Americans and citizens of color to serve.

State boards will continue to be under pressure to assume a more aggressive leadership role. They will be expected to provide guidance and advocacy in this enlarged leadership role. They must be more effective and “out front” mobilizers of public and community support for the school enterprise. They also must reach out as lay leaders in the mobilization of the coalitions that will be essential in the more participatory and complicated state educational politics of the future.

*See also:* SCHOOL BOARDS; STATES AND EDUCATION, *subentry on* STATE GOVERNMENTS IN HIGHER EDUCATION; STATE DEPARTMENTS OF EDUCATION; STATE EDUCATIONAL SYSTEMS.

MICHAEL D. USDAN

## STATE GOVERNMENTS IN HIGHER EDUCATION

As Paul E. Peterson states, studying higher education as an organization is challenging because the locus of control has changed. Higher education institutions have for most of their histories been governed by a sense of internal control with authority largely falling to the faculty and administration of the single institution. These institutions represent professional bureaucracies in which faculty seek control of their work and also solicit a voice in the decisions affecting their lives. In comparison to the more common machine bureaucracy form of business and industry, these professional networks are based upon mutual respect and dedication to the community. This rare form of organizational structure and control causes particular stress to elected officials accustomed to looking to profits for measures of success.

## History of Local Control

Defining autonomy as “the power to govern without outside controls” and accountability as “the requirement to demonstrate responsible actions,” Robert Berdahl posits that each side should realize that a balance is ideal (p. 38). Paula Sabloff characterizes the struggle between autonomy and accountability as inevitable and as a future force in higher education concerns. She argues that the relationship between state government and the institutions has always been involved in a debate between autonomy versus accountability. Throughout the last half of the twentieth century, regulations increased that inevitably stripped away institutional rights to govern themselves. Legislative members have increased their staff numbers and devoted themselves to much more of a year-round schedule of activities. The establishment of legislative standing committees has combined with governing and coordinating boards to create a constant regulatory environment for the individual campuses. Though higher education may not get caught up in partisan politics to the extent that other areas of government have, it is constantly part of a political process.

## Higher Education and the Economy

In the 1980s economic development strategies shifted from the issues of labor, land, and taxes to a focus on investments in human resources and research. Economic and social viability is increasingly linked to “what you know” as much as they are to “what you do.” In a 1998 report released by the American Association of State Colleges and Universities, the national job market was predicted to grow by 18.6 million positions between 1996 and 2006. Service industries were predicted to outpace the growth of goods-producing industries as a more knowledge-based economy replaces a skill dependent system. For the early twenty-first century, the report forecasts that jobs in professional specialties, such as business and health care, will supplant manufacturing and production in driving economic growth. Because of this new focus on human capital, public and private spending on education and training must be viewed as investments rather than consumptive costs, and a premium must be placed on lifelong learning.

Social scientists, such as Manuel Justiz in 1994, have pointed out that the radical demographic shifts being faced in America are prompting change more dramatically than government policy has ever done.

The importance of access to and diversity of participation in higher education is acknowledged because of the rapid developments in technology and changing workforce needs. In a report developed by the Institute for Higher Education Policy, the public and private benefits of going to college were distilled into four categories: (1) individual economic benefits; (2) public economic benefits; (3) individual social benefits; and (4) public social benefits.

State legislatures are much more specialized and informed at the beginning of the twenty-first century than they have been in the past and they continue to increase their involvement in higher education planning. Because of the myriad of benefits to be gained through a high quality higher education system, the stakes have been raised regarding cooperation between business interests, state government, and campus expertise. The public and private benefits associated with an increase in educational participation and attainment support the argument that a greater emphasis must be placed on an educated citizenry. As the global economy has put a premium on knowledge capital rather than manufacturing skills, employers and government officials are demanding a higher education of the work force than ever before.

### Shift in Control

The postwar baby boom and explosion of higher education the 1960s led to the increased desire of state leaders to acquire more control of higher education matters. During that time of growth, states created many of the coordinating and governing boards that exist in the early twenty-first century. Although originally created to bring order and accountability to higher education, in some instances the boards have been allowed by the states to “become the centerpiece of top-level patronage politics and public score settling” (Graham, p. 93). Modeled primarily after the boards of trustees that have traditionally led private institutions, governing and coordinating boards have become permanent fixtures on the higher education map. Approximately 65 percent of students attend postsecondary schools that are a part of a multicampus system. As of 2000, state higher education structures basically fell into three categories: consolidated governing board systems, coordinating board systems, and planning agency systems. Under consolidated governing board systems, governance is centralized in one or two governing boards. Twenty-four states operate under this model. Coordinat-

ing board systems are also found in twenty-four states and provide for a liaison board between state government and the governing boards of individual institutions. Planning agency structures are only found in Delaware and Michigan. These agencies coordinate communication and planning with little direct authority over the institutions or their governing boards.

According to Peterson, around the mid-1970s institutions became much more aware of the growing external forces that were less controlled and much less understood by the general campus community. It was at this time that governing boards and publicly elected officials began exercising greater authority in the name of accountability. In the 1980s governors and legislators began seeking even more control over institutions through quality initiatives. Governors and legislators began expecting these higher education boards to exercise firm control of the institutions rather than working as advocates for them. As a result of giving new responsibilities and authority to the governing and coordinating boards, more opportunities for friction with the campus were created. Until this shift, faculty had a much more successful role in academic governance because local leadership largely shaped the control and mission of campuses. In order for shared governance to exist on a campus, it must be based on some level of commitment to coordination between faculty desires, campus interests and state-level concerns.

Higher education is one of many sectors of state government vying for increased funding during a time when more is expected of many areas of government. As far back as the early 1970s, higher education was predicted to fall in line with other divisions of state government in having to fight for their piece of dwindling state resources. Governing and coordinating boards grew out of state government’s desire for a rational system of postsecondary education delivery. Set up to deal with the interests of the day, those interests have shifted over time, and the struggle between centralization and decentralization has grown.

Increases in demand for public services fueled the growth in state expenditures in the last quarter of the twentieth century. Charles Bonser, Eugene McGregor, and Clinton Oster stated in 1996 that some of the reasons for the increase in demands on state coffers are demographic changes, growing populations, income growth, income redistribution, and risk aversion. Michael Mills pointed to rapid pace of

change faced by higher education in such areas as information technology, restricted funding, expansions in the economy, and multiple stakeholders as the driving forces behind challenges facing higher education and other public sectors.

### State Finance

State governments currently fund higher education through combinations of three principal budget tools—incremental funding, formula funding, and performance funding. Incremental funding assumes that services in one year will continue to the next year and as a result a previous year's budget will be used for the following year. Currently, forty of the fifty states and the District of Columbia use incremental funding as their primary method of funding. Formula funding uses quantitative factors to determine the needs of each institution. Currently ten states use formula funding as their principle model. Incidentally, sixteen of the forty states using incremental models rely upon some version of formula funding to inform their budget decisions. Performance funding relies upon incentives to tie accountability and performance to state allocations.

During the 1980s and 1990s there was a shift nationwide in the sources of support for higher education. According to the National Center for Education Statistics, the public higher education revenue attributed to state government funds increased by 125 percent from 1980 to 1996. During this time period tuition and fees increased by 318 percent. Increasing at three times the rate of state appropriations, tuition and fees have become the primary mechanism for meeting higher education's need for improvement dollars. Between 1980 and 1996, institutions looked to private sources and endowment returns for budget balancing mechanisms. Revenue attributed to private sources increased 363 percent from 1980 to 1996, and endowment income increased by 236 percent.

The Illinois State University's Grapevine Database of state higher educational funding data stated that higher education was given nearly \$61 billion by state governments in fiscal year 2000 through 2001. The state with the largest appropriation was California at just over \$9 billion; the lowest was Vermont at just under \$68 million. Of course adjustments must be made for population in comparing the effort of each state toward higher education expenses. On a per capita basis, Mississippi ranked first in appropriations of tax funds to higher education (\$313

per capita) and New Hampshire ranked fiftieth (\$81 per capita).

As mentioned earlier, states increasingly relied upon tuition and fees to provide necessary improvement dollars to universities and colleges in the 1990s. Nationally, states increased resident undergraduate tuition and required fees by 19 percent between the years of 1997 and 2001 alone, according to the Washington State Higher Education Board. States vary in terms of total required fees per resident participating in higher education. For flagship universities, New Hampshire charged the highest of any state in 2000 (\$7,395) and Nevada charged the lowest (\$2,220). For comprehensive colleges and universities, New Jersey led the nation (\$5,328) and California charged the least (\$1,859). Community colleges also vary in terms of fees as New Hampshire charged almost double that of any other state (\$4,114) while California charged the least (\$330).

The large increases in tuition and fees during the 1990s have been tempered with sizable commitments to state-level grant and aid programs. Annual need- and merit-based aid increased from a national average of \$45 million in 1992 through 1993 to \$67 million in 1998 through 1999, according to the National Association of State Student Grant and Aid Programs. Nationally, aid dollars per resident aged 18 to 24 stood at \$118 and aid per undergraduate full-time equivalency (FTE) stood at \$397.

### Governance Issues

As noted earlier, higher education governance has undergone a dynamic shift in its locus of control since the mid-twentieth century. Once governed locally by faculty and ceremonially by governing boards, many campuses now find themselves subject to heightened scrutiny at the state-level and in many cases under direct control by state government bodies. Governing and coordinating boards are now found in all fifty states, as governments have found it necessary to establish professional bodies to direct and shape the growing systems of higher education. The relationships between these boards and the institutions have been further strained by the increasing involvement of elected officials in daily activities of the campuses. Elected officials have looked to the boards as a vehicle for delegated powers with intervention always an option if lawmakers deem it necessary. The pressure has then fallen to the campuses as presidents feel torn between the business perspective of board members and the established faculty

culture, and the educational planning process is continually influenced by partisan politics.

An Association of Governing Boards study revealed in 1999 that most political leaders wanted strong and effective boards, but felt that intervention was needed. Most governing board members take their responsibilities seriously, but too many political obstacles stand in their way. Among legislative leaders there is strong support for governance by lay board members, but concerns abound for the current performance of these groups. Key findings noted by the Association of Governing Boards were placed into three categories: serving public interest, negotiation of the political environment, and increasing board responsiveness. In another study of governance developments, Frank Bowen and colleagues found that state boards that are both part of higher education and part of state government are more successful at balancing public interests and institutional concerns than solely institutional governing boards.

Aims McGuinness spoke further in 1997 of this critical role between postsecondary structures and overall governmental and economic system demands. He cited instability of state leadership, ambiguous missions, and growing political controls as the factors hindering optimum effectiveness. With massive turnover in federal and state government elections in 1994, the instability of leadership in state government had a great impact on the turnover of commission members and trustees in the late 1990s. Sabloff also discussed the political transformation that state governments have gone through since the 1980s. She pointed to year-round activities, increased staff, career politicians, increasing education levels of officials, and standing committees as evidence of a changing system of governance over all state programs and services. State government is experiencing what has been called at the federal level *a professionalization of the legislative body*. Higher education officials and scholars have been forced to adjust to the increasing activities and involvement. As noted in Lawrence Marcus's 1997 study of higher education governance restructuring, when relationships between government and higher education systems become more strained, the likelihood of government becoming more involved increases.

A proliferation of state-level advisory commissions established to study the issue of higher education governance and policy reform has occurred in the last decade. Since 1990 an estimated twenty-one

states have established state-level governmental advisory groups with similar charges of improving higher education. Whether as a sensible policy development tool or as the latest fad in government, these commissions—drawn primarily from elected leaders, top higher education officials, and politically-connected citizens—shaped much of the public policy debate surrounding higher education in the 1990s.

Though executive advisory councils or “blue-ribbon commissions” are nothing new to state higher education policymaking, the 1990s saw an unusually high number of such bodies. In his descriptive study of the activities of twenty-one states, Mills defines these higher education policy entities as “specially constituted groups with a majority of its members from outside the higher education system and a broad charge allowing them to take a comprehensive look at the structure and operation of all public higher education in the state” (p. 3). Though these entities are not the only planning mechanisms in higher education, they do “claim an atmosphere where independent citizens can work along with higher education and government representatives to deal with problems and policy issues” (p. 3).

Mills found concerns about higher education's role in the state economy and desires for more accountability to be the dominant problems addressed in the reports of twenty-one states' executive advisory commissions. It is no surprise to find that the concerns revolve around structural and economic recommendations, since competitiveness, efficiency, and specialization are dominant themes of the corporate and rational models of planning used by most elected officials and business leaders. In nearly every report Mills found recommendations concerning overhaul or strengthening of coordination and governance of higher education systems.

McGuinness charged that the most perplexing issue facing lawmakers is how to position the higher education system to take on the changes brought by a more market-driven economy. Wrestling with concerns for issues such as mission clarity, technology infrastructure, and increasing political control is becoming commonplace in state-level higher education planning across the country. In their seminal piece on the campus and state policy environment, Malcolm Moos and Francis Rourke stated in 1959 that properly positioning the public higher education system within the overall system of government

has always been a problem. Roger Benjamin and Stephen Carroll conducted a survey in 1996 that found that governance structures commonly were not able to tie resource allocation to the mission. Instead of being able to focus scarce resources to areas of weakness or strengths, funding was spread uniformly to all disciplines, programs, and institutions within a system.

In the last quarter of the twentieth century, nearly every state reevaluated its higher education system in terms of quality, accountability, and efficiency. Conflicting desires surface as elected officials expect governing boards to meet public interests and set direction for higher education while the institutions desire the governing boards to be advocates for funding and keep the politics at a minimum.

*See also:* AMERICAN ASSOCIATION OF STATE COLLEGES AND UNIVERSITIES; FINANCE, HIGHER EDUCATION; GOVERNANCE AND DECISION-MAKING IN COLLEGES AND UNIVERSITIES; STATES AND EDUCATION, *subentry on* STATE BOARDS OF EDUCATION.

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HOUSTON D. DAVIS

## STATEWIDE TESTING

See: TESTING, *subentry on* STATEWIDE TESTING PROGRAMS.

## STATISTICS

See: INTERNATIONAL EDUCATION STATISTICS; NATIONAL CENTER FOR EDUCATION STATISTICS.

## STEINER, RUDOLF (1861–1925)

Educator, philosopher, artist, and scientist, Rudolf Steiner founded the Freie Waldorfschule (Independent Waldorf School) in Stuttgart, Germany, in 1919; its establishment led to the Waldorf educational movement with more than 800 schools worldwide in the early twenty-first century. Steiner's spiritual–scientific research is known as anthroposophy.

Rudolf Steiner was born in Kraljevec, Austria-Hungary (now Croatia). His father was stationmaster on the Southern Austrian Railroad. Rudolf Steiner first attended the Volksschule, then the scientific Realschule in Wiener Neustadt, and graduated from the Technical University in Vienna in 1884. In 1882 he was offered the editorship of Goethe's natural scientific writings for the Kürschner edition of German national literature. Steiner was called to Weimar, Germany, as collaborator at the Goethe-Schiller Archives in 1890, and remained there until 1897. His principal publications during the Weimar period were *Wahrheit und Wissenschaft* (Truth and science) in 1892; *Philosophie der Freiheit* (Philosophy of freedom) in 1894; and *Goethes Weltanschauung* (Goethe's world conception) in 1897. Moving to Berlin in 1897, Steiner became the editor of the weekly *Magazin für Literatur*. He taught history at the Berlin Workers' School from 1899 to 1905.

In 1900 he was asked by leaders of the Theosophical Society to speak on his own spiritual–scientific research. This led, in 1902, to his being asked to head the newly established German section of the International Theosophical Society. By 1912 it had become clear that the insights derived from Steiner's spiritual–scientific research led in a different direction than those represented by the Theosophical Society. Early in 1913, those members who wished to follow the path described by Rudolf Steiner established the Anthroposophical Society. Steiner served as the new society's adviser and mentor. His principal publications during this period were *Theosophie* (Theosophy) in 1904; *Wie erlangt man Erkenntnisse der höheren Welten* (How to attain

knowledge of higher worlds) in 1904/1905; and *Die Geheimwissenschaft im Umriss* (An outline of occult science) in 1909.

During the years from 1910 to 1913, Steiner wrote and directed four dramas portraying the destinies of a community of spiritually seeking individuals. Plans developed for a festival center in Munich that, in fact, led to construction of a festival and study/research/teaching center in Dornach, Switzerland. The original building, designed by Steiner, came to be known as the *Goetheanum*. Under construction from 1913 to 1920; the *Goetheanum* burned to the ground on New Year's Eve 1922/1923. It was replaced by the present building of reinforced concrete, according to Steiner's sculptured model, created in 1924.

In 1917 Steiner completed thirty years of research on the threefold nature of the human being. These findings became the basis for his later work in education, medicine, social science, and the arts and sciences. Rudolf Steiner died in Dornach, Switzerland. His written and published works total more than thirty volumes and some 6,000 lectures, many published in book form.

### Steiner's Pedagogical Approach

The distinguishing feature in Steiner's educational philosophy is that it is based on a perception of the human being as threefold, comprising body, soul, and spirit. In Steiner's view, the human bodily organism, in the mature adult, is built up of four interactive members, of which only the physical/mineral body is directly perceptible to the physical senses. The three supersensible members manifest in and through the physical organism and are directly perceptible to spiritual perception and cognition. Sustaining the life and growth of the physical body is the human "etheric" or "life" body, a characteristic held in common with the plant kingdom. Penetrating the physical and etheric bodies is the "astral" body, instrument of consciousness and emotion, which is shared with the animal kingdom. Penetrating physical, etheric, and astral organisms is the human ego, unique to the human species. The human soul, which mediates between the human spirit and the bodily organism, is endowed with the capacities of thinking, feeling, and will. It is the task of education, from birth to adulthood, to exercise and nurture the human bodily instruments and the soul, to become as responsive, as flexible, and as readily available to the individual human ego as possible. The true fruits

of education in childhood come to full expression in the later years of human life.

The developmental process underlying Steiner's education is the result of the unfolding of the three supersensible members from birth to the "coming of age" at twenty-one. This process proceeds in three stages of approximately seven years each. During the first phase, from birth to about the seventh year, the etheric or life body gradually penetrates the physical organism, culminating in the change of teeth. The astral, or "soul" body, penetrates the physical/etheric organism approximately from seven to fourteen years, culminating in the reproductive, sexual changes at puberty. And the ego gradually penetrates the physical, etheric, and astral organisms at about twenty-one. Psychologically, this latter culmination manifests in the individual's ability, not only to know, but to know that she/he knows. Consciousness is transformed into self-consciousness.

The educational insights arising through this developmental process are characterized in Steiner's pedagogy in the following way: During the first phase (0–7) the child's basic cognitive faculty is imitation. With the change of teeth, a significant portion of the etheric-formative forces that have shaped the child's organism are released and become available to the child as the awakening faculty of imagination. With the physical changes at puberty, a significant portion of the astral forces is freed from the organism and is now available as intellectual cognition and emotional response. During adolescence, the "personality" gradually yields to the "individuality." Language reflects this. *Per-sonare* means to "sound through." As in Greek drama, in which the god speaks through the mask, personality is the "mask" through which the individual sounds. The individuality is that in the human being which cannot be further divided, is "indivisible."

This developmental picture gives rise to Steiner's pedagogical approach in practice. The key to preschool education is imitation, not intellectualization. In these years it is primarily through the imitative will that education occurs. The key to elementary education is learning through imagination—through story, myth, art, narrative, and biography—and doing. In these years, human feeling is the primary focus. And the time to exercise and challenge the intellectual intelligence, human thinking, is primarily in adolescence.

The original Waldorf School in Stuttgart began with 253 children in eight grades. It soon grew to be

the largest private school in Germany, with more than 1,000 students, through high school. When Hitler came to power in 1933, there were seven Waldorf Schools in Germany, all of which were closed by the National-Socialist government. The Stuttgart school reopened in 1945 under the auspices of the American Occupation Forces in southern Germany. In the early twenty-first century, there are more than 180 Waldorf schools in Germany. The first school in the English-speaking world opened in England in 1925. In 1928, the Rudolf Steiner School opened in New York City. There are 152 Waldorf schools in the United States, Canada, and Mexico, and there are 11 Waldorf teacher training centers. They are represented by the Association of Waldorf Schools of North America (AWSNA).

*See also:* INTERNATIONAL EDUCATION; PHILOSOPHY OF EDUCATION.

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HENRY BARNES

## ST. JOHN'S COLLEGE

St. John's College, with campus sites in Annapolis, Maryland, and Santa Fe, New Mexico, is the most

enduring example of the Great Books program of study in American liberal education. The four-year program at St. John's is aimed at producing "liberally educated human beings" who acquire "a lifelong commitment to the pursuit of fundamental knowledge and to the search for unifying ideas" (St. John's College, p. 6). Approximately 450 students on each campus attend seminars, tutorials, laboratory sessions, and lectures, which support their reading and discussion of ancient and modern classical texts in science, mathematics, literature, philosophy, history, economics, psychology, political science, theology, languages, and music.

Founded as King William's School in 1696, the St. John's Annapolis campus is among the oldest continuing American institutions of higher education. It was chartered as St. John's, a nondenominational school, in 1784. The buildings on the thirty-six-acre site in downtown Annapolis include a number of eighteenth-century homes now used as classroom and office space. The school was nearly bankrupt in 1937 when the trustees invited noted educators Stringfellow Barr and Scott Buchanan to come from the University of Chicago and oversee a wholly new curriculum at St. John's. Buchanan had earlier pioneered a Great Books lecture series at the People's Institute outreach program in New York City. He and Barr first met when both were Rhodes scholars at Oxford University and renewed their friendship as faculty colleagues at the University of Virginia. There they tried unsuccessfully to spark interest in a liberal arts curriculum based on classical texts, and in 1935 they joined University of Chicago President Robert Maynard Hutchins in his determination to design an undergraduate liberal education program around the classical texts of Western literature.

With Barr as president and Buchanan as dean, St. John's quickly became widely known for its commitment to the liberal arts, to student-faculty community, and to classical texts featuring Greek and Roman philosophers. Proponents of its curriculum inspired debate about the nature of the liberal arts at a time of expanding vocational and professional higher education and about the place of lockstep course requirements at a time of widespread regard for individuality in subject selection and learning pace. Other college experiments of the time (e.g., Black Mountain, Bennington, and Bard) garnered attention for the progressive nature of curriculums that encouraged students to design customized

courses of study. St. John's, however, held fast to the notion that the essence of liberal education occurred when community-wide dialogue, largely supported by Socratic teaching, inspired diverse individual meanings from the enduring ideas offered in classical texts.

Committed to the idea of a community of scholars, St. John's administrators decided to create a second campus rather than expand the Annapolis campus beyond 450 students. The New Mexico campus opened in 1964 with new buildings erected on 250 acres just outside downtown Santa Fe. Although student athletics, newspapers, literary magazines, concerts, and other extracurricular activities vary on the two campuses, the academic program remains the same. The two campuses share a common curriculum and a single governing board. The required readings of the freshman and sophomore year emphasize classical texts from those of the Greek poet Homer and the Greek playwright Sophocles to the English dramatist and poet William Shakespeare and the French mathematician and philosopher René Descartes, as well as the musical works of notable composers. By the senior year, required reading includes works by the American authors William Faulkner, Flannery O'Connor, Booker T. Washington, W. E. B. DuBois, and William James. All students study ancient Greek, French, and English composition, and graduates earn a bachelor of arts in liberal education. Seniors write a final essay and successfully complete an oral examination before graduating.

The liberal arts curriculum and community of dialogue inherent in the St. John's approach to undergraduate education is, according to the 2000 *Statement of the St. John's Program*, aimed at encouraging students to examine assumptions they hold and to "acquire a new perspective which enables them to recognize both the sameness of a recurrent problem and the variety of its historical manifestations." The long-term objective is "to help the students make reasonable decisions in whatever circumstances they face" (St. John's College, p. 7).

*See also:* GENERAL EDUCATION IN HIGHER EDUCATION; HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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KATHERINE C. REYNOLDS

## STRATEGIC AND LONG-RANGE PLANNING IN HIGHER EDUCATION

The major test of a modern U.S. university, according to Clark Kerr, President Emeritus and former Chancellor at the University of California, is how wisely and how quickly it is able to adjust to important new possibilities. As its popularity and presence has grown on college campuses, planning has become the process-oriented means to pass the test of change referred to by Kerr. Planning has been defined by Marvin Peterson as the "conscious process by which an institution assesses its current state and the likely future condition of its environment, identifies possible future states for itself, and then develops organizational strategies, policies and procedures for selecting and getting to one or more of them" (Peterson, p. 12).

Planning became a necessary component of higher-education administration after World War II, due to the rapid expansion and growth of federal policies regarding access to, and financial support of, higher education. Soon thereafter came the surge of baby boomers into colleges, and in the 1990s institutions prepared for and responded to the echo boom of college-age students on campuses across the United States. In addition, colleges have become increasingly heterogeneous as more diverse populations have been admitted, resulting in the need for planning regarding financial aid, student services, remedial education, vocational education, and more.

Furthermore, various types of postsecondary knowledge providers have emerged, such as private

companies offering degrees via the Internet, corporations providing their own internal education and training, and traditional institutions collaborating with industry. Simultaneously, the knowledge industry has become quite consumer driven. The convenience and affordability of postsecondary education has caused students, employers, and institutions themselves to rethink the very core of the institutional mission, and to plan for the future much differently than ever before. Globalization has broadened the institutional view of the regions served, as well as placement of students in internships, exchange programs, and careers. All these factors have produced an approach to planning that includes much more than simple short-term budgeting. Rather, planning encompasses short- and long-range plans connecting budget, capital outlay, programming, enrollment, and every element of a college or university.

### Long-Range Planning

Following World War II and through the 1960s, the purpose of long-range planning was to justify resources. Use of long-range planning presupposes that the environment is fairly stable and predictable, and that resources are certain. This use of long-range terminology has been trivialized because it often was, in effect, the university budgeting process. The idea that planning was tied to a dollar amount meant that the planning process actually represented how to spend resources. The popularity of this method declined in the latter part of the 1970s, because it did not account for certain environmental aspects that became critical.

### Strategic Planning

As long-range planning began to seem limited, *strategic planning* became the buzz phrase in both business and in higher education. Frequently advocated in the late 1970s and 1980s, strategic planning's primary purpose is to cultivate adaptation in a rapidly changing environment by designing a plan and corresponding strategies for the future. The institutional situation is assessed for opportunities and threats via scanning the regional, national, and global external environments, the most distinctive feature of this form of planning. Also, internal strengths and weaknesses are defined for needed strategies for survival and enhancements. Strategy implies that the approach is more short-term, and possibly reactive to a current situation. This process assumes that some

aspects of the organization do not require intervention and seeks to find the problem areas that need improvement. Often this occurs when the environment is unstable and relatively unpredictable.

### Contextual Planning

Whereas long-range planning is typically responsive in nature, and strategic planning is adaptive, contextual planning is proactive. Particularly in the 1990s, planning progressively became connected to fundraising as federal and state financial subsidies declined. Needing to compensate for the loss of funding, institutions were forced to seek funding support from private sources. Combined with the impact of technology, globalization, and the increasing presence of nontraditional-age learners to the collegiate environment, institutions have sought new and different ways to plan for the realities of uncertainty.

Emergent virtual universities have caused leaders to move away from thinking about planning at a traditional physical campus and toward being more perceptive about planning for other possibilities. Existing as part of an increasingly complex organization with little stability, new and different planning models are constantly implemented, based on political demands, business models, or internal leadership. This method of planning assumes uncertain financial resources, an ever more competitive environment, and a critical public.

### Cooperation and Leadership in Planning

The higher-education mantra since the 1990s has called for improved access for students, increased quality, enhanced accountability of expenditures, and more and better use of technology. While these promote positive change, the irony is that there is no easy solution to achieve change, and the solution is different for each institution. In order to progress toward goals, it has become necessary for strategic planning to be linked to major programs, such as institutional research, institutional advancement (also known as development or fundraising), and data management (also known as data warehousing).

Planning has spurred more and different kinds of analytic studies in order to make internal and external comparisons, both historical and contemporary. These studies are used not only to plan for programmatic and curricular transformation, but also to identify competing institutions and potential students and donors. This information is critical to raising the private funds that have become necessary for many institutions.

Due to the constantly changing environment of higher education, research has shown that planning should be an ongoing, rather than occasional, process, done in collaboration with institutional research and assessment. There already exists a massive amount of data related to planning. As higher education continues to search for ways to manage this information, data support and knowledge-management systems will become increasingly crucial to effective planning.

The thoughtful and effective leaders of change have resisted the idea of planning as a formal process. An effective planning process should be a broad-based balance of deliberate and emergent strategies, and should involve the participation of middle managers. Fundamental to this idea is that planning should not be bogged down in specific strategy; but should create broad visions. Additionally, a positive relationship between managers and planners or administration is critical to successful implementation of plans. This requires strong leadership that will include hands-on contributions by frontline managers and faculty. A pragmatic consideration that can assist in bolstering internal political relationships at institutions is frequent and thorough information dissemination. These considerations will allow for participation at many levels, and will make good communication a cornerstone of the process. Essentially, planning at the institutional level is connected to planning at the division level, which is integrated with individual plans and includes leadership and vision at every echelon.

### Conclusion

As the paradigm of higher education continues to shift, it is clear that the institutions that resist change are predestined to decline, and possibly fail. Effective leaders realize that reasonable risks must be taken in order to attend to the demands of a changing and competitive environment. "A lack of thoughtful change could lead to inept adaptation and undermine the quality of our universities" (Rowley et al., p. 19). While the approach and methods vary, it is clear that planning is a vital component of successful contemporary higher education.

*See also:* INSTITUTIONAL ADVANCEMENT IN HIGHER EDUCATION; RESOURCE ALLOCATION IN HIGHER EDUCATION.

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## STRATEMEYER, FLORENCE (1900–1980)

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Faculty member at Teachers College, Columbia University, from 1930 through 1965, Florence Barbara Stratemeyer was a founding figure in the field of teacher education and curriculum.

Stratemeyer was born in Detroit and from 1917 through 1919 attended the Western State Teachers College in Kalamazoo, Michigan, where she earned a diploma and license in elementary teaching. She spent 1920 through 1921 teaching at the Detroit Teachers College. In 1921 to 1922 she taught in the Brady Elementary School in Detroit. She then came to Teachers College, Columbia University, and in 1923 earned a bachelor of science degree; in 1927 she completed the master of arts degree and the Ph.D in 1931. Her dissertation title was "The Effective Use of Curriculum Materials: A Study of Units Relating to the Curriculum to Be Included in the Professional Preparation of Elementary Teachers." This was a compendium of the curriculum and the critical questions future elementary teachers should deal with in their programs of teacher preparation. From 1929 to 1930 she was an associate in the Teachers College teacher education program, and from 1924 to 1929 she served as a research associate in the

Teachers College Bureau of Curriculum Research. Stratemeyer became assistant professor in Curriculum and Teaching at Teachers College in 1930, was promoted to associate professor in 1936, and to full professor in 1942. In the early 1930s she was part of a group of faculty who developed a nontraditional approach to teacher education based on direct experience and more active forms of learning. This model was called New College.

The idea was that if future teachers participated in active problem solving during their teacher preparation, this would ensure that they would be likely to pursue this method with children in their future teaching. The students in New College therefore did not simply read about problems and issues but sought to become directly involved. If they were studying strikes they went to Pittsburgh and interviewed management and labor. They did not simply read about communism but traveled to Russia to observe and experience it. In 1934 Stratemeyer spent the summer in Nazi Germany with students from New College.

From these early efforts it is possible to see how Stratemeyer was beginning to evolve in her approach to curriculum study and teacher preparation. The method used was the project method and the learning approach was based on connecting the interests of the learner with direct experiences. The curriculum was organized around the basic life functions performed by all individuals in any form of social order.

Stratemeyer contributed several important books to the field of curriculum. With H. B. Brunner she coauthored *Rating Elementary School Courses of Study* (1926). There can be no question that her major book was *Developing a Curriculum for Modern Living* (1947), with coauthors Hamden L. Forkner and Margaret McKim. In 1948 she wrote *School and Community Laboratory Experiences in Teacher Education*.

Stratemeyer's influence in teacher education far exceeded that of anyone in the United States during her service as a faculty member in the Department of Curriculum and Teaching at Teachers College, Columbia University. There were essentially three reasons for her great influence. First was the power of her theory of persistent life problems faced by all learners of all ages in all societies. Stratemeyer believed that the subjects and disciplines taught in schools and universities were not there because of

intrinsic validity but because the learner needed this basic knowledge as an cornerstone for trying to deal with persistent life problems effectively.

In *Developing a Curriculum for Modern Living*, she argued that the persistent problems of living were related to health, intellectual power, moral choices, aesthetics, interpersonal relations, group relations, dealing with the physical world, technology, and economic and political structures. In this scheme the subject matters (e.g. mathematics, science, art, and so forth) are regarded as instrumentalities that provide students at all levels with a way to deal with the essential problems of living that they will face at all stages of their development. This theory resonated with professional teacher educators, who knew that future teachers needed more than the discrete required courses, but were unsure of just why future teachers should study these things and how such knowledge might apply to the curriculum being offered children and youth.

Stratemeyer's work legitimized the offering of general education and specialization (i.e., college majors) to future teachers. Although few colleges of liberal arts have used her theory and still generally offer future teachers only a list of required courses and the compilation of such coursework into traditional majors or areas of specialization, her theory of persistent life problems became a fundamental part of all doctoral students' preparation for becoming teacher educators. Various abbreviated versions of persistent life problems have been widely adopted in elementary schools.

The second reason for her great influence over the field of curriculum in teacher education were the number and quality of her doctoral students, who were scattered across America and became well-known teacher educators and school of education deans. One of her earliest doctoral students was Margaret Lindsey, who then joined her in the Department of Curriculum and Teaching at Teachers College. Together Stratemeyer and Lindsey turned out several hundred doctoral students who had an impact on teacher education that is hard to overestimate.

Stratemeyer helped to create a specialized audience for her work. From 1940 to 1965 schools of education were either expanding rapidly or starting up. Stratemeyer's influence over these institutions resulted from her being able to stock them with teacher education faculty who were generalists rather than

specialized teacher educators, limited by narrow definitions of content (e.g., teacher educator of secondary science, teacher educator in reading, and so forth). Stratemeyer's work then influenced curriculum in teacher education on three levels: (1) as a way of conceiving teacher education for grander purposes than the mastery of traditional college courses; (2) as a way of placing doctoral students who shared her views into critically important positions; and (3) as a way for helping deans and leaders of teacher education explain why there should be schools of education and what people needed to learn and do with children that could best be taught in such places.

*See also:* TEACHER EDUCATION, *subentry on* HISTORICAL OVERVIEW.

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MARTIN HABERMAN

## STRESS AND DEPRESSION

Children's success in their educational endeavors and their general socioemotional adjustment are influenced by a variety of personal characteristics and environmental experiences. One of the most powerful determinants of children's developmental course is the social context in which they live. In particular, experiencing a stable and supportive environment during childhood is likely to foster healthy cognitive,

social, and emotional development, whereas experiencing a disruptive or stressful environment has been linked to a wide range of adverse mental health outcomes, including depression. Stress and the accompanying emotional distress may then interfere with some of the major tasks of childhood, such as academic achievement and fulfillment of educational goals.

### The Role of Stress in Depression

Theory and empirical research have implicated stress as a critical risk factor for depression during childhood and adolescence. Stress may take the form of an accumulation of minor daily hassles, more severe chronic strains, or specific negative life events. Each of these types of stress has been linked to depression. Stress also may arise from normative developmental transitions, such as entrance into middle school or moving away from home for the first time. For example, research has shown that school transitions, which often are characterized by many social and academic stressors, have negative effects on academic motivation, performance, and school engagement, as well as on emotional well-being. In particular, Karen Rudolph and colleagues demonstrated in 2001 that the experience of school-related stress (such as poor academic performance, negative feedback from parents and teachers about school work, and daily hassles in the school environment) leads to increases in depression in the context of a transition into middle school.

An important question that has not yet been fully answered concerns how stressful life events and circumstances heighten vulnerability to depression. Stress may contribute to depression through many different pathways. Unpredictable or disruptive environments may undermine children's sense of control and mastery, leading to a sense of helplessness or hopelessness that acts as a precursor to depression. For example, Rudolph and colleagues demonstrated in 2001 that family disruption, as well as exposure to chronic stressful circumstances within the family, peer, and school settings, predicted decreases in perceptions of control and increases in helpless behavior in academic and social situations. These maladaptive beliefs and behavior were in turn associated with depression. Exposure to stress and failure also are likely to influence adversely children's perceptions of their competence. For instance, David Cole and colleagues suggested in 1991 that negative environmental feedback is internalized

by children in the form of negative self-perceptions and low self-esteem, which then heighten depressive symptoms. Stress within the school environment may exert specific influences on children's academic-related beliefs, self-perceptions, and goals, and, consequently, on emotional well-being at school. As reviewed by Robert Roeser and Jacquelynne Eccles in 2000, classroom-level and school-level stressors involving instructional practices, emotional climate, and teachers' goals and behavior influence children's subjective perceptions of school, which then determine academic and emotional adjustment.

### **The Impact on Academic Functioning and Educational Progress**

Stressful life experiences as well as acute or chronic periods of depression may interrupt the normative progression of developmental milestones. Given the prominent role that schools play in children's lives, the school setting represents a salient context for development and mental health. Stressful experiences and emotional difficulties are therefore likely to undermine a variety of school-related competencies, including academic motivation and school engagement, goal orientation, scholastic performance, and school conduct.

### **Educational Implications of Stress**

Stressful life circumstances may influence school adjustment in many ways. First, dealing with stress in other areas of their lives may interfere directly with children's performance at school by depleting the amount of time, energy, and focused attention available for academic tasks and school involvement, such as completing homework or engaging in after-school activities. Second, exposure to high levels of stress may divert coping resources away from efforts to deal with the challenges of school. This lack of resources may lead adolescents to feel overwhelmed, and create a sense of helplessness that results in disengagement from school. Third, stressful circumstances outside of school may lead children to place less of a priority on educational goals, thereby undermining school investment. Finally, if stress originates within the family setting, it is likely that family members have less availability and lower levels of school involvement, which would diminish emotional and instrumental support necessary for educational success.

### **Educational Implications of Depression**

Depression has been linked to a range of negative school-related outcomes, including poor grades, a lack of persistence in the face of academic challenges, and decreased classroom participation. These effects may range from short-term declines in academic performance to long-term problematic school outcomes. For example, depressive symptoms as early as first grade predict school difficulties many years later, including increased use of special education services, grade retention, and poor grades.

Less is known, however, about how and why depression interferes with school adjustment. The symptoms and accompanying features of depression themselves may have a negative impact on academic achievement and motivation. For example, concentration difficulties, a lack of interest and energy, and withdrawal are likely to undermine performance and engagement at school. Depressive behaviors also may elicit negative reactions from teachers and peers, leading to social isolation and alienation from the school setting. In fact, teachers may feel overwhelmed by the emotional difficulties of their students, leading to low levels of perceived self-efficacy and less than optimal teaching performance. Finally, depression may induce negative beliefs about one's competence and a sense of helplessness, leading to a lack of persistence in academic tasks. Indeed, Carol Dweck and colleagues described in 1988 a profile of "learned helplessness" in achievement contexts, characterized by an avoidance of challenge, lack of persistence in the face of failure, excessive concerns about competence, ineffective learning strategies, maladaptive attributions about failure, and negative emotions. Additional research is needed to determine if in fact this profile characterizes depressed children in the school context.

### **Remaining Issues**

Whether it is most common for academic difficulties to precede depression or for depression to precede academic difficulties has not yet been clearly determined. It also is possible, of course, that the presence of significant academic difficulties in depressed children reflects a common third influence. For example, both depression and academic impairment are linked to behavior problems and attentional deficits. In fact, research has suggested that depression may be most strongly associated with academic stress, failure, and school conduct problems when it co-

occurs with acting-out behavior or attentional deficits.

Another important question is why some children who experience high levels of stress or depression show resilience in their school adjustment: A subgroup of high-risk children does show academic success and educational investment in the face of adversity. Many factors may promote such resilience, including personal characteristics of children as well as positive school climates, but additional research is needed to examine this process in more depth.

### School-Based Prevention and Intervention Programs

In light of theory and research linking stress and depression with school-related impairment, there has been a call for a new generation of school-based prevention and intervention programs that address the joint issues of academic difficulties and mental health problems. Such programs may range from child-level approaches implemented within the school setting to schoolwide or districtwide approaches directed at systems-level changes.

Several child-level programs have been created to address issues of stress and depression within the school setting. One representative program, developed by Martin Seligman and colleagues, was designed to prevent severe depression in at-risk children—that is, children with elevated levels of depressive symptoms and exposure to family stress—as well as to remediate performance deficits in these children, such as lowered academic achievement and behavior problems. The program emphasized teaching children strategies to cope with stressful events and negative emotions, enhancing children's sense of mastery and competence, and modifying distortions in the ways that children viewed themselves and their surroundings. An extensive evaluation revealed that the program successfully decreased children's level of depressive symptoms and behavior problems. Several similar programs have targeted coping with stress and depression in the school context. These programs tend to yield positive results in terms of decreasing levels of depression, although assessments have not always been conducted to determine why these improvements occur. Less commonly used have been systems-level school-based mental health programs. Such programs focus on promoting change in more distal environmental influences, such as the classroom climate or broader school ecology. Undoubtedly, effectively addressing

the complex links among stress, depression, and school adjustment will require an integrated approach that considers both personal resources of children as well as the broader contexts in which they live.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; AGGRESSIVE BEHAVIOR GUIDANCE AND COUNSELING, SCHOOL; MENTAL HEALTH SERVICES AND CHILDREN.

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KAREN D. RUDOLPH

## STUDENT ACTIVITIES

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### OVERVIEW

Roger E. Jones

### FINANCING

Ron Bennett

John Gray

### OVERVIEW

Student activities are an integral part of the school program. Qualified students must be able to participate in any activity without regard to race, religion, national origin, disability, or sex. Generally approved by the principal and under the direct supervision of the staff, activities should contribute to the educational objectives of the school and should avoid interrupting the instructional program.

### Purpose

One purpose of student activities is to provide opportunities for students to be involved in the life of the school. Students experience leadership opportunities that help them grow into well-rounded adults. Activities expand interactions among students, who are likely to interact with others who are different from them. Thus, opportunities to experience diversity are enhanced.

Schools organize student activities in different ways. Some principals believe that student activities should be an integral part of the school day and that all students should participate in one or more activities. As a result, meetings occur during the school day at a prescribed time. For example, club day may be the first and third Tuesday of every month from 9 A.M. to 10 A.M. All students are expected to participate in at least one activity. Other principals believe that activities should be extracurricular and should meet outside of the instructional day.

### Types of Student Activities

Common activities include student government, honor societies, service clubs, arts organizations (band, choral, theater), academic (forensics, debate, academic competition), and literary publications (newspaper, yearbook, literary magazine). Most schools will have a variety of clubs. Some clubs will be similar among schools, for example, foreign language clubs, science clubs, and art clubs, and others will be affiliated with national organizations such as Vocational Industrial Clubs of America (VICA), Future Business Leaders of America (FBLA), and Future Farmers of America (FFA). Some clubs will be unique to an individual school.

Student government is an integral part of most secondary schools. It may have different names (student council association or student government association), but the purpose is to involve all students in the life of the school. Each student is considered a member of the organization with a right to vote for its officers and representatives. Developing leadership and citizenship are fundamental goals of most student government organizations.

Most schools have honor societies, although such societies may differ from school to school. The purpose of most honor societies is to promote and encourage scholarship, service, leadership, and character. The two largest honor societies with a national reputation are the National Honor Society (NHS)

and the National Beta Club. In both organizations, membership is by selection and invitation. Thus, honor societies are set apart from other activities. These national groups are governed by a national constitution so they are similar nationwide. Some schools will develop their own local honor societies to promote excellence in specific areas. For example, one school may have a mathematics honors club while another may have a vocational honors club. In all honor societies, there will be established criteria for selection and invitation.

Service clubs are found in most secondary schools. These clubs have open membership. Some are affiliated with national organizations. For example, the Key Club is supported by the Kiwanis Club, and the Rotary Interact Club is supported by Rotary International. Some service clubs are school specific. Service clubs are generally involved in community service projects, such as canned food drives, working with Special Olympics, peer counseling, or tutoring.

Activities associated with the arts are found in most secondary schools. Concert or symphonic band is generally offered as a class for academic credit, but marching band is generally an extracurricular activity. Marching bands play at football games and generally participate in competition during the year. Other band opportunities may include a jazz band or a pep band. Most secondary schools have choral groups. These groups often perform in the community as well as compete in state and/or national competitions. Many schools have an orchestra. Theater activities are important in most high schools. While theater or drama may be a high school course, most theater productions require open auditions. The number of theater performances offered annually differs from school to school.

Academic activities include a range of experiences; for example, many schools participate in academic competitions. These may include quiz bowls and academic decathlons. Forensics, or public speaking, offers students a variety of experiences, including extemporaneous speaking, original oratory, spelling, and prose and poetry reading. Students are often involved in local and state competitions. Debate activities can take many forms, including Four-Person, Switch-Side, and Lincoln-Douglas. Students participate in local and state debate tournaments.

Most schools have one or more literary activities. The most popular are the yearbook, newspaper, and literary magazine. In some cases, students may

be enrolled in an academic class and get academic credit to work on these activities. In other cases, the work is done outside regular school hours.

Clubs are an important part of student activities. As noted earlier, some clubs are tied to national organizations, such as FFA, VICA, and FBLA. These clubs must follow national constitutions and bylaws. Some school clubs are connected to the curriculum, such as Spanish club, French club, and science club. Other clubs may have no direct relationship to the curriculum and are driven by student interest. These clubs will vary from school to school. For example, various high schools around the country support the following clubs: the martial arts club (Killingly, Connecticut), Asian-American club (Carlmont, California), and the Native American student union (Ken Valley, California). In Hall, Arkansas, there is a Political Animals club, garden club, and Teachers of Tomorrow club.

Some student activities are governed by the state high school league. In most cases, the high school league is an organization of high schools that join together with the approval of their local school boards. The leagues encourage student participation in school activities by supporting interscholastic programs. They establish eligibility criteria for activities. Students participating in league activities should be familiar with the league handbook. Extracurricular activities involving athletics and some literary, dramatic, and forensic activities must follow eligibility requirements established by the appropriate high school league.

Some student-initiated clubs may fall under the Equal Access Act. This act, passed by Congress in 1984, prohibits secondary schools that receive federal funds from preventing voluntary student groups, including religious ones, from using school facilities for meetings if the school allows any noncurriculum-related activities to meet on school grounds. Secondary public schools must treat all student-initiated clubs equally, regardless of the religious, political, or philosophical orientation of the club. The act includes the following guidelines.

- The club must be voluntary and student-initiated.
- There is no sponsorship by the school or its employees.
- School employees are present only in a nonparticipatory manner. (The principal can require the club to find a faculty member to be present

during the meetings even though the faculty member should not participate.)

- The club does not interfere with the orderly conduct of educational activities within the school.
- Meetings cannot be directly conducted, controlled, or regularly attended by nonschool persons.

Student activities serve an important role in helping secondary schools develop well-rounded students.

*See also:* CLUBS; SPORTS, SCHOOL.

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ROTARY INTERNATIONAL: INTERACT. 2002. <[www.rotary.org/programs/interact/](http://www.rotary.org/programs/interact/)>.

ROGER E. JONES

## FINANCING

Student body funds do not represent a significant portion of the school district budget, and they are not available for discretionary spending by the administration or board of education. Student body funds do represent one of the most visible and likely areas for breaches of internal control.

Depending on the size and location of the school, student body funds can range in size from hundreds of dollars to hundreds of thousands of dollars. Laws and rules govern how student body funds can be used and accounted for; these vary from state to state, but most contain detailed rules and procedures that are to be followed for collecting, accounting, and distributing student body funds. Although student body funds are for the purpose of conducting activities on behalf of students, they are still considered school district funds under the su-

pervision of the local board of education. Student body organizations acquire their purpose, power, and privileges from the rights conferred upon them by the local governing board and the applicable state law.

To avert potential problems regarding the handling of funds, certain principles—a type of “student Bill of Rights”—are suggested here. Students have a right to expect that these principles will be respected in the handling of their funds.

### Student Bill of Rights

Student funds shall be segregated from district and other appropriated funds, and shall be accounted for separately. This is an important element of internal control that is easily lost if funds are comingled. Many schools take advantage of the laws that govern student body funds by incorporating their implementation into a learning experience for their students. For instance, a formal constitution that states the name and purpose of the organization is usually required. The constitution presents the framework within which the organization will operate. Students and advisors are heavily involved in creating and maintaining their constitution. The constitution outlines the titles and duties of officers, election of officers, terms of office, and the requirements for eligibility to hold office. At a minimum, the elected officers include a president and treasurer. The constitution also includes rules governing financial activities including budgets, reporting requirements, and authorization of disbursements.

For most secondary schools detailed minutes of meetings are also kept. The minutes contain details of proceedings, including financial matters pertaining to the budget, approval of fund-raising venture, and expenditure authorizations. These study body functions of fund governance often are incorporated into the schools’ leadership classes as a learning tool for public governance.

### Accountability

There are occurrences of “disappearing” student money that can adversely effect a school’s reputation or the reputation of its employees. Most disappearances involve cash where proper internal controls were not in place. Stories of missing game gate receipts or student store money are not uncommon.

To maintain the public’s trust and safeguard the student funds, it is important that the funds be ac-

counted for in a responsible manner. Uniform systems to insure adequate accounting procedures, supervision, segregation of duties, and auditing are necessary. As part of the annual audit of a school district, auditors routinely audit a sample of student body funds within the district. The auditors review for proper accounting procedures, compliance with the law, and for solvency. In addition, unlike many other types of audits, they check to see that reserves are not excessive—the reason being that typically, funds raised in a school year should be spent on those students doing the fundraising and not for future students.

Student body funds also have to comply with state and federal regulations that affect all types of businesses. As an example, student body payments often are made to independent contractors to perform services such as catering, concessions, performances, and so forth. Like everyone else, they have to comply with the Internal Revenue Service's guidelines. Amounts exceeding \$600 in one calendar year must be reported on form 1099MISC. This task can be overwhelming and complex. As a result, many school districts require that contractor payments be made through the centralized business office.

Sometimes employees are funded through student body funds to provide help for extracurricular activities. Because student bodies typically do not have the expertise or technology to be employers, most districts run student-body-funded salary payments through their district payroll office. There are several other issues such as use tax and sales tax that also apply to student body funds. Using existing payroll and human resource systems for positions funded by student body funds is a good idea because it allows all of the applicable taxes, employee deductions, and fringe benefits processing to be automated and compliant with the law.

### **Fund-raising**

Fund-raisers involving students and parents are the biggest source of income for student body funds. Car washes, candy sales, and carnivals bring in millions of dollars to student body funds each year. This money pays for computers, playground equipment, field trips, and many other athletic and enrichment programs.

To best ascertain which fund-raisers are the most profitable or worthwhile, revenue and cost projections need to be done prior to conducting

fund-raising activity. For example if the cost of the item being sold is \$1 and the selling price is \$3, and the plan is to sell 1,000 of the items, the projected costs should be \$1,000 and projected revenues should be \$3,000 for a profit of \$2,000. At the conclusion of the fund-raiser, a reconciliation should be completed to account for actual monies raised as compared to the projection. Any differences should be reviewed and accounted for with remaining items not sold. Since many students and parents often have an emotional investment in the fund-raiser, being able to account for the profitability is critical.

The tenets above represent a minimum level of care in the handling of student body funds and are meant to serve as a guide. The fiduciary duty school personnel have with regard to student funds is clear. The standards and practices observed by schools and school districts set the tone for trust levels held by the community.

RON BENNETT  
JOHN GRAY

## **STUDENT AID**

*See:* COLLEGE FINANCIAL AID.

## **STUDENT ASSEMBLIES**

*See:* ASSEMBLIES, STUDENT.

## **STUDENT ENROLLMENT, HIGHER EDUCATION**

*See:* ENROLLMENT MANAGEMENT IN HIGHER EDUCATION.

## **STUDENT LOANS IN AN INTERNATIONAL CONTEXT**

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Student loans are increasingly used to provide financial assistance for students in higher education, in both industrialized and developing countries. The need for financial assistance to enable students from low-income families to meet direct and indirect costs of education (tuition fees, books, and living expenses) is widely recognized, and the case for student support programs to ensure equality of opportunity, equity, and social justice is rarely ques-

tioned. What is a matter of dispute however, is whether financial support should be provided by governments, private agencies, employers, or institutions, and whether it should be in the form of scholarships, bursaries, grants—either available to all students or means-tested (i.e., targeted by financial need)—or repayable loans. Fierce controversy has surrounded the idea of student loan programs since their inception.

National student loan programs were first established in the 1950s in countries as diverse as Colombia, Denmark, Norway, Sweden, Japan, and the United States. The following decades saw a steady expansion of student loan programs, through the introduction of student loans in new countries and expansion in the number of loans available and their average size. In response to higher education expansion, combined with increasing financial stringency and concern for equity, there was a surge of interest in student loans in the late 1980s and 1990s, with new programs introduced in Australia, New Zealand, and the United Kingdom; several countries in eastern Europe and the former Soviet Union, including Hungary and Russia, considering introducing student loans for the first time; and some developing countries in Asia, Africa, and Latin America establishing or expanding student loan programs. Yet student loans remain controversial, and advantages and disadvantages of loans continue to be widely debated. Debate also surrounds the question of how student loans should be administered: in particular, eligibility and terms of repayment of loans, appropriate rates of interest, and mechanisms to target disadvantaged students while minimizing default. This entry summarizes the recent growth of student loan programs, reviews the literature analyzing the international experience of student loans, both in developed and developing countries, and examines some implications of the growth of student loans for student and labor mobility.

### Development of Student Loan Programs

Early examples of national student loan programs included the National Defense Student Loan (NDSL) program, introduced in the United States in 1958; state loan funds for students established in Denmark, Norway, and Sweden in the early 1950s; and a small-scale program introduced in Colombia in 1953, the *Instituto Colombiano de Credito Educativo y Estudios Tecnicos en el Exterior* (ICETEX). During the 1960s and 1970s student loan programs

were set up in many countries, including Canada (the Canada Student Loan Program began in 1964), several Latin American countries (by 1980 student loan programs existed in at least fifteen countries in Latin America and the Caribbean), and a few developing countries in Africa and Asia (including Ghana and India). But many programs were either small-scale, as in many Latin American countries, or short-lived—the loan program in Ghana lasted only a few years.

During the 1980s there was continued growth in student loan programs and many countries, including Japan, Scandinavian countries, and the United States, began to rely increasingly on loans as a means of student support. Many countries, particularly in Europe, still offer student support through a combination of grants and loans, but there has been a marked shift towards greater use of loans. In the United States, the College Board noted in 1999 that “Over the past quarter century, federal student aid has drifted from a grant-based to a loan-based system, producing a sea change in the way many students and families finance post-secondary education” (p. 4). In the United Kingdom the first student loan program was set up in 1989 to provide “top-up” loans to supplement maintenance grants for students’ living expenses. However, since the introduction of tuition fees in 1998, loans have been the main form of student support, with the abolition of grants for all but a minority of financially needy students in England and Wales; a different scheme has operated in Scotland since 2000. In Australia, the Higher Education Contribution Scheme (HECS) was introduced in 1989, with students able to opt for deferred payment through income-contingent loans with payments collected by the tax authorities, and support for living expenses in Australia is now also in the form of income-contingent loans.

There has also been renewed interest in student loans in developing countries, partly due to growing recognition of the need to increase cost recovery in secondary and higher education. The World Bank’s 1994 policy paper on higher education recommended: “Cost-sharing coupled with student financial assistance is an efficient strategy for achieving expanded coverage and better quality in higher education . . . while protecting equity of access. . . . Given that in every developing country students attending higher education represent an elite group, with income-earning potential significantly higher than that of their peers, it is appropri-

ate that the major form of student financial assistance offered be government-guaranteed student loans rather than grants” (p. 50). In the 1990s new student loan programs were set up in several African countries, including Kenya, Nigeria, and South Africa, and in the Asian countries of China, Malaysia, Thailand, and Vietnam.

### Characteristics of Student Loans

The basic characteristic of all student loan schemes is that students are offered the chance to borrow money to help them finance tuition costs or living expenses. After completing their studies, graduates must repay the amount borrowed, with or without interest. Although all loan schemes share this basic characteristic, there are important differences in the way different programs are administered, particularly in terms of (1) whether loan programs are operated by the government, independent agencies, banks, or higher education institutions; (2) the level of interest charged, and whether this is subsidized (i.e., lower than commercial or market interest rates); and (3) the way in which repayments are collected—in particular whether loan repayments are fixed over a specific time period (often described as *mortgage-type* loans), or whether graduates must repay a fixed proportion of their income each year until the loan is repaid (usually described as *income-contingent* loans).

### Evaluation of International Experience

Increased popularity of student loans since the 1960s has stimulated research on both theoretical and empirical issues. As wide variations exist between programs, comparative studies of international experience—which highlight significant differences, examine economic or social effects of alternative systems, and identify strengths and weaknesses—can be particularly valuable. A 1986 comparative study of student support in the United States and four European countries (France, Germany, Sweden, and the United Kingdom) by Bruce Johnstone argued that “it was a major premise of this study, borne out by the research, that these and other countries must balance very similar public policy goals in apportioning the costs [of higher education] . . . and that each country can benefit . . . by understanding what countries with similar higher educational systems and public policy objectives are doing” (p. 1).

Since this and a few other comparative studies were published in the 1980s there has been growing

interest in learning from international experience. Reforms of student aid policies and systems taking place between 1989 and 1999 in Australia, Sweden, and the United Kingdom drew upon lessons from experience in other countries. In Sweden, the government changed the national system in 1989 by reducing the level of interest subsidy offered on student loans, but introducing income-contingent repayment, linking the amount of graduates’ loan repayments with their level of income. This reflected Johnstone’s comparative analysis of student loan schemes that showed that under the previous scheme Swedish students enjoyed far higher “implicit grants” because of the interest subsidy than American students. A major policy shift also occurred in the United Kingdom with the introduction of student loans in 1989, and the British government drew heavily on international experience in justifying loans as a means of student support. More recently the experience of Australia and Sweden in introducing and implementing income-contingent loans has been widely quoted as offering important lessons for the design of student loan schemes. Nicholas Barr described income-contingent student loans as “an idea whose time has come” (1991, p. 155), and praised Australia for having introduced a “highly effective income-contingent loan scheme” (1998, p. 186).

Other reviews of international experience have focused on developing countries, where the effectiveness of student loans has often proved disappointing. In the early 1990s a series of international forums on student loans organized by the International Institute for Educational Planning (IIEP) analyzed experiences in the United States, Europe, and in developing countries. An evaluation of student loan experience in developing countries was summarized with the conclusion that “student loans can make a contribution to relieving the financial pressures facing higher education, provided that loan programmes are properly designed, effectively managed and a high rate of recovery is achieved” (Woodhall 1992, p. 355). Requirements for success include:

- sound financial management, including appropriate interest rates to maintain the capital value of the loan fund and cover administrative costs;
- a sound legal framework to ensure that loan recovery is legally enforceable;
- effective machinery for targeting financial support and selecting recipients of subsidies on

grounds of financial need or manpower priorities;

- effective machinery for loan recovery, to minimize default;
- publicity campaigns to ensure widespread understanding and acceptance of the principles of student loans and the importance of the obligation to repay.

These broad conclusions on feasibility and scope for use of student loans in developing countries were echoed in a 1995 comparative study for the World Bank by Adrian Ziderman and Douglas Albrecht, who concluded that: “student loans have received much attention both in the literature and in practice. While they have not always worked well . . . suitably reformed, they can constitute a productive, though limited mechanism for cost recovery” (p. 371).

### International Issues

The first student loan schemes were mainly concerned with enhancing higher education participation in a domestic context, but implications for international student mobility were quickly recognized. An important feature of student loan schemes is that they provide financial assistance and subsidies to individual students, rather than to institutions. In principle, loans should be portable from one institution to another, and even across national boundaries. The first student loan program in Latin America, ICETEX in Colombia, was initially set up to provide financial assistance for students intending to study abroad. This remains one of the main purposes of ICETEX, although growing cost differentials between higher education in Colombia and in the United States or other developed countries mean that it now provides loans for many more students who study in Colombia than for students studying abroad. Some other national schemes offer loans for study abroad as well as for those studying in national higher education institutions, but a number of issues limit the use of student loans to finance study abroad. These include the cost differentials already mentioned, and the difficulties of enforcing loan repayments if graduates choose to work abroad after completing their studies.

Programs designed to increase student mobility, such as the Erasmus and Tempus programs set up to promote student exchange and mobility in the European Union (EU), are mainly concerned with

facilitating student mobility between member countries (for example by harmonizing entry requirements for study programs in different countries and establishing credit transfer arrangements) rather than with setting up a system of financial support transportable across national boundaries. Students’ own governments are generally expected to finance the costs of study abroad—whether by grants, student loans, or other means—but the need for greater harmonization of rules determining levels of tuition fees and student support in different countries is increasingly emphasized, as student mobility and opportunities for study abroad increase.

Another important issue now recognized in several countries, as skilled labor becomes increasingly mobile, is the need to design mechanisms for collecting loan repayments from graduates working abroad. Implications for student loans of what is variously described as international labor mobility or “brain drain” have received limited attention, although potential losses from graduates who choose to work abroad and then default on loan repayments have been emphasized by critics of student loans. Barr argues that income-contingent loans could be collected by the tax authorities in any country where a graduate subsequently works, and the revenue transferred to the country that originally provided a student loan: “With such an arrangement loan repayments are transparent with respect to international boundaries” (2001, p. 234). Barr further proposes that that “it would be possible for the EU or the World Bank to establish an International Learning Bank from which students in poor countries would borrow to finance their tertiary education—both those who subsequently stay at home and those who emigrate” (2001, p. 234). Such possibilities, and their implications for the finance of higher education and for labor mobility, remain to be explored.

*See also:* COLLEGE FINANCIAL AID; HIGHER EDUCATION, INTERNATIONAL ISSUES.

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MAUREEN WOODHALL

## STUDENT MOBILITY

Student mobility is the practice of students changing schools other than when they are promoted from one school level to the other, such as when students are promoted from elementary school to middle school or middle school to high school. Mobile students can change schools in between school years, such as during the summer, or during the school year. But no matter when it occurs, student mobility not only can harm the students who change schools, it can also harm the classrooms and schools they attend.

### The Extent of Student Mobility

Student mobility is widespread in the United States. According to the 1998 National Assessment of Educational Progress (NEAP), one-third of fourth graders, 19 percent of eighth graders, and 10 percent of twelfth graders changed schools at least once in the previous two years. Student mobility was even more widespread among poor and minority students. The incidence of student mobility is also higher when viewed over a student's entire elementary and secondary career. Based on data from a national longitudinal study of a cohort of eighth graders in the United States, more students made non-promotional school changes during their elementary and secondary school careers than remained in a stable pattern of attending a single elementary, middle, and high school. School changes were more common during elementary school than during secondary school. In fact, mobility is the norm during elementary school, while it is the exception during high school.

Student mobility not only varies widely among students, but also among schools. It is especially high within large, predominantly minority, urban school districts. In the Chicago public schools, for example, an average of 80 percent of students in the district remained in the same school from September 1993 to September 1994 and only 47 percent remained in the same school over a four-year period. Fifteen percent of the schools lost at least 30 percent of their students in only one year.

### The Impact of Mobility on Students

Existing research finds that students can suffer psychologically, socially, and academically from mobility. Mobile students face the psychological challenge of coping with a new school environment. Mobile

students also face the social adjustment to new peers and social expectations. Research has demonstrated that mobility is related to misbehavior and youth violence—it is easier to commit crimes against strangers. Studies have also found that mobile high school students are less likely to participate in extracurricular activities.

Mobility can hurt students academically. Several studies have examined the impact of mobility at the elementary level. Studies that do not control for the background characteristics of students consistently find that mobile students have lower achievement than non-mobile or stable students. Yet studies that do account for background differences find that mobility may be more of a symptom than a cause of poor school performance. In other words, mobile students came from poorer families and had lower academic performance before they were mobile, a finding supported by other studies.

At the secondary level, several additional studies have examined the impact of mobility on two indicators of student performance—test scores and high school graduation. The impact of mobility of secondary test scores appears to be mixed. Two studies of middle school students, one by Carolyn Hofstetter and the other by Valerie Lee and Julia Smith, found that mobile students had significantly lower test scores after controlling for other student and classroom characteristics. Several studies, based on the same national longitudinal survey of eighth graders who were tracked for six years, found that the impact of mobility was sometimes negative and sometimes positive. These studies suggest that the timing of mobility matters during high school, which is supported by a California study of mobility in which some students made “strategic” school moves to improve their educational prospects, while other students made “reactive” school moves to get out of poor or dangerous situations.

The strongest impact of mobility is on high school graduation. There is overwhelming evidence that mobility during high school diminishes the prospects for graduation. Yet one study found that early school changes as well as changing residences between grades eight and ten and between grades ten and twelve increased the odds of dropping out at twelfth grade, but that early school changes decreased the odds of dropping out at twelfth grade among tenth graders who had not already left school. This suggests that mobility has a negative im-

act on some students, but may have a positive impact on others.

Although a substantial body of research shows that students can suffer psychologically, socially, and academically from changing schools, the impact of mobility depends on such factors as the number of school changes, when they occur, the reason for the changes, and the student’s personal and family situation. Some mobility can actually be beneficial if the reason and timing represent a “strategic” move to a better educational placement. Yet most mobility is not beneficial. What accounts for the generally negative impact of mobility on achievement and why, in some cases, does mobility not impact achievement or even improve it? The answer depends, in part, on the reasons students change schools.

### **Causes of Mobility**

The leading cause of student mobility is residential mobility. A national study by Russell Rumberger and Katherine Larson found that 70 percent of all school changes between grades eight and twelve were accompanied by a change of residences. But there are many reasons students change schools. In one study parents of twelfth grade students who changed schools over the previous four years reported three types of reasons for changing schools. The most frequent reason was the family moving (58%). But almost half of the reasons were because students asked to change schools, often to take advantage of a specific educational program, or asked to be transferred to a public, private, or magnet school. The least frequent reason was because the school asked the adolescent to transfer either because of disciplinary or academic problems.

Research has identified some specific factors that predict student mobility. Interestingly, mobility does not seem to be strongly related to family income and socioeconomic status, but it does appear to be related to family structure: families without both biological parents have higher incidence of residential moves and higher rates of school moves. Several student-related factors have also been identified. Low school performance (grade point average), behavior problems, absenteeism, and low educational expectations all predicted school changes during high school after controlling for family factors. School-related factors also predict student mobility: Schools with high concentrations of at-risk and minority students have lower mobility rates even after controlling for differences in student factors, while

schools with higher teacher salaries and better teachers have lower mobility than other schools.

Current literature suggests two ways that schools affect student mobility (as well as school dropout rates). One way is indirectly, through general policies and practices that are designed to promote the overall effectiveness of the school. These policies and practices, along with other characteristics of the school (student composition, size, etc.), may contribute to voluntary student turnover by affecting conditions that keep students engaged in school. This perspective is consistent with several existing theories of school dropout and departure that view student engagement as the precursor to withdrawal. The other way is directly, through explicit policies and conscious decisions that cause students to *involuntarily* withdraw from school. These rules may concern low grades, poor attendance, misbehavior, or being overage and can lead to suspensions, expulsions, or forced transfers. This form of withdrawal is school-initiated and contrasts with the student-initiated form mentioned above. This perspective considers a school's own agency, rather than just that of the student, in producing dropouts and transfers. One metaphor that has been used to characterize this process is discharge: "students *drop out* of school, schools *discharge* students (Riehl, 1999, p. 231). Finally, additional conditions found in large, urban and high minority schools that could contribute to student turnover include open enrollments and overcrowding. Open enrollment allows students to readily change schools if they can find one with sufficient space, while overcrowding prompts schools to transfer students even if they wanted to enroll them.

There are several reasons why mobility may negatively impact student achievement. Mobile students must adjust to new academic standards and expected classroom behaviors. Mobile students sometimes get placed in classes that do not contribute to high school completion or they get placed in classes where the curriculum differs from their previous school—a condition referred to as "curricular incoherence."

But why do some students seem to be adversely affected by changing schools and others do not? The answer may depend, in part, on the reasons students change schools. In one study, students who made "strategic" school changes to seek a better educational placement, in general, reported positive academic impacts, while students who made "reactive"

school changes due to intolerable social or academic situations were more likely to report negative academic impacts from changing schools. The idea of strategic school changes is consistent with the finding that changes early in a student's high school career may not be harmful or can even be beneficial, while changes late in a student's high school career are generally harmful. On the other hand, mobility due to misbehavior or involuntary transfers are more likely to be harmful, especially if the change of schools fails to address the underlying problem that led to the transfer in the first place.

### The Impact of Mobility on Schools

Mobility not only impacts students who change schools, it impacts classrooms and schools who must deal with mobile students. It can also adversely impact non-mobile students. In one Rumberger study of mobility in California (1999), school personnel characterized the overall effects of student mobility at the school level as a "chaos" factor that affects classroom learning activities, teacher morale, and administrative burdens—all of which can influence the learning and achievement of all students in the school. Teachers were very adamant about how disruptive and difficult it is to teach in classrooms with constant student turnover. Similarly, a Chicago study by Julia Smith, BetsAnn Smith, and Anthony Byrk found that the pace of instruction was slower in schools with high rates of student mobility. School administrators reported how time-consuming it is to simply process students when they enter and exit a school. Beyond the administrative costs, school personnel also identified other impacts, such as the fiscal impacts that result from mobile students failing to turn in textbooks, and impacts on school climate.

### Conclusions

Student mobility is a common feature of American schooling. Although mobility is largely initiated by students and parents due to changing residences, some mobility results from the policies and actions of schools and districts—such as open enrollment, overcrowded schools, and zero-tolerance policies—that can lead to voluntary or involuntary school transfers. Consequently, schools and districts can help reduce the incidence of "needless" mobility and help to mitigate its potentially damaging effects. School reform efforts can help reduce mobility by making schools more attractive to students and par-

ents. Schools can also initiate a number of strategies to help transfer students adjust to their new school setting and to quickly provide the educational and support services that transfer students may require.

With increasing pressure on schools to adopt reforms and raise test scores, addressing the issue of mobility may not seem a high priority for schools. But failing to do so could easily undermine those efforts as well as hurt the students and families the schools are charged to serve.

*See also:* SCHOOL DROPOUTS.

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## STUDENT ORIENTATION PROGRAMS

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Starting college can cause much anxiety in the heart of a new college student because of all the unknowns—“What should my major be? Will I make any friends? How will I find all of my classes? Whom do I ask if I have a question?” New student orientation programs are designed to guide students in answering all of these questions. Prior to the beginning of classes, students are given an overview of the complete realm of university life, from academics to social activities, through a period of days referred to as orientation. Typically, a staff member or team coordinates the orientation programs within the university and provides the leadership to bring the entire university together. Depending on the size and mission of the institution, the format of orientation will vary from a one-day program to a week-long event. However, regardless of the nature of the program, three objectives should be present in all orientation programs: 1) introducing students to college life; 2) acclimating students to their new surroundings; and 3) providing an opportunity for the university to meet the newest members of the community. It is the duty of the coordinator of orientation to design a program that will bring these three goals together.

### Introduction to College Life

Introducing students to college life requires presenting as full a view as possible of all the university has to offer. Therefore, academics as well as extracurricular activities should be presented. During orientation, students should be made aware of opportunities to be socially integrated into the college culture. If students do not become socially integrated within the first few weeks of their arrival, they are less likely to stay at that institution. Social activities can include parties, games, concerts, icebreakers, and “hang-out” time. Students also can learn about the various student organizations in which they can be involved. However, orientation programs should not be purely fun and games, for college is more than just fun and games. While the social aspect does play a significant role in one’s collegiate experience,

the importance of academics should not be overlooked. While a student may focus on one more than the other, both work together in forming the college experience.

Orientation programs begin before classes start; therefore students usually will need to register for classes during orientation. Because new students need some direction and guidance in enrolling for classes, faculty members should have an opportunity to provide academic advising at orientation. An academic component to orientation will give the new students the advantage they will need in making the transition from high school to college. By giving a strong overview of academic expectations, students will be better prepared to meet the challenges of collegiate academics. Therefore, in order to give the most accurate view of an institution, there must be both an academic and social component to the orientation program.

### **Becoming Familiar with the New Environment**

The second aspect of the role of orientation is acclimating students to their new environment. After moving into a new neighborhood, one would ideally like a few days to learn one's way around the new neighborhood. Likewise, orientation should allow students to get their bearings in their new home. For some students, going to college is their first time away from home, so orientation should give them time to become familiar with their new surroundings. New students should meet their roommates and find their classrooms. Through guided tours, campus maps, or even time to just wander, orientation provides a safe avenue for new students to find their way around campus. By moving on campus before classes starts, the new students are able to learn the ropes and not seem so green by the time the academic year begins. Students should become familiar with both physical locations and the workings of the environment during orientation.

### **Welcome to the Community!**

The university community should not only be involved in the preparation and implementation of orientation programs but also have an opportunity to meet the new students. Unlike some of the other programs within campus life, orientation requires the cooperation and the resources of the entire campus community including faculty, dining services, housing, facilities management, and student activities groups. Depending on the size of the institution,

the level of community involvement may vary. The administration of a small, liberal arts college may have more opportunities to meet and greet students than that of a large, public school. Whether through receptions, meetings, and even help on move-in day, the university community should be involved in welcoming the new students. For example, faculty may meet new students prior to the beginning of classes. By making a connection, this interaction with the community may in turn even strengthen the student's persistence in college.

Students, as well as faculty and staff, have an important role in orientation. Selecting a specific number of current students to be orientation leaders allows the new students to meet upperclassmen. The orientation leaders can give the new students the inside scoop on college life since they too have been in the new students' shoes. Many institutions use orientation leaders to lead the new students through a series of workshops, campus tours, and social activities. New students may be more open to receive information from the orientation leaders than from a lecturer in a main auditorium. Orientation leaders can also explain some of the details of university life that some administrators would never think of telling them. For instance, orientation leaders can share things such as where to hang out between classes, where to find the best food in town, how to use the laundry room, and how to get involved in campus activities. Often new students have the most contact during orientation with the orientation leaders, so it is imperative that these leaders be properly trained. Therefore, planning orientation leader training should be just as important as planning the actual program. Leaders need to understand the vision of orientation so that it becomes their own and they can communicate that to the new trainees. When selecting orientation leaders, one should look for a good representation of the student body as well as for those who are willing to go the extra mile in helping new students. The readiness of the orientation leaders is the key to the implementation of a successful orientation program.

### **Conclusion**

When designing an orientation program, one must first understand the culture of the institution and the students. A good program for one university may not be conducive to the size or mission of another. In addition, some programs may work better than others depending on the type of student who attends

the institution. Even though most orientation programs are designed with the eighteen-year-old, first-time college student in mind, some institutions may have more transfer students or even nontraditional (older) students. Therefore, programs should be implemented to orient them into the academic community as well. Another factor to consider is the orientation of parents. Because parents can aid in the student's transition into college life, the university needs to inform parents as well as students about the structure of the university and where to find additional information.

Orientation programs serve as a foundation for college success. In many instances, orientation programs create a lasting impression for new students and their families. While it is not possible to tell new students everything they will need to know for their entire collegiate experience, orientation programs should create a framework in which students will know where to go, whether it be the tutoring center or health services, if they have additional questions. Orientation is the designated time for the entire university to say, "We welcome you, and we are glad that you are here!" Likewise, orientation is a time to show the new students why they made a good decision in their college choice.

Orientation is a much-needed program that when planned correctly can aid all participants—new students, parents, faculty, staff, administration, and current students. Orientation is designed to answer questions before they are asked and to provide solutions before problems occur. By planning appropriately and using all campus resources, orientation should relieve anxieties and prepare the new students for success.

*See also:* ACADEMIC ADVISING IN HIGHER EDUCATION; ADJUSTMENT TO COLLEGE; COLLEGE STUDENT RETENTION.

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## STUDENT SERVICES

### COLLEGES AND UNIVERSITIES

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### COMMUNITY COLLEGES

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## COLLEGES AND UNIVERSITIES

Student affairs professionals have always been concerned with the development of the "whole student" or a student's intellectual capacity and achievement, emotional make-up, physical condition, social relationships, vocational aptitudes and skills, moral and religious values, economic resources, and aesthetic appreciations. Although the activities of student affairs have changed over time, the basic tenets of helping students reach their full potential and attending to them as a human beings—not simply those in need of intellectual training—has remained constant.

### History

Several developments in higher education gave rise to student affairs. In colonial colleges, faculty were responsible for enforcing regulations on students. Colleges acted *in loco parentis* or in place of parents. By the mid-nineteenth century, extracurricular activities such as literary clubs, athletic teams, and eating clubs were founded by students in response to the classical course of study. The rise of research universities and the subsequent changes in the roles of

college presidents and faculty, and the increase in women's colleges and coeducation, led to the first appointments of student personnel workers—deans of men and deans of women—who among other duties, relieved college presidents of their role as disciplinarian and resolved student problems. The first dean, LeBaron Briggs, was appointed at Harvard University in 1891, and his duties also included personal counseling of students.

The *Student Personnel Point of View*, a report issued by the American Council on Education in 1937 and revised in 1949, serves as a foundation document for student affairs. It was developed on a philosophy stressing the importance of educating the whole student. It describes a number of services that are adapted according to the specific mission, aims, objectives, and student demographics of individual campuses. Also emphasized is the need to coordinate student personnel functions with other programs and services on campus.

In 1914 Columbia University's Teachers College awarded the first master's degree for "Adviser of Women." Esther Lloyd-Jones earned the first doctorate in the field in 1929 and men were admitted for the first time in 1932. As of 2002, eighty-four institutions are listed in the Directory of Graduate Preparation Programs and there are additional ones as well. Entry-level professional positions in student affairs typically require a master's degree in college student personnel or a related field, and advancement to senior management positions often requires a doctorate.

Professional organizations reflect the development of professional positions in student affairs. The National Association of Deans of Women began in 1916; became the National Association of Women Deans, Administrators, and Counselors in 1972; changed its name to the National Association for Women in Education in 1991; and folded in 2000. Founded in 1919, the National Association of Deans and Advisers of Men became the National Association of Student Personnel Administrators in 1951. The American College Personnel Association began in 1924 as the National Association of Appointment Secretaries, assisting in job placement for teachers and other college graduates. Other specialized organizations serve various functional areas (e.g., Association of College Unions International, Association of College and University Housing Officers—International, and National Orientation Directions

Association) and state and regional organizations serve members as well.

### Functions

On college and university campuses, the division of student affairs provides services to students and supports the educational mission of the institution. These services may include academic support services, academic advising, admissions, alcohol and drug education programs, career services, campus ministries, community service and service learning, counseling, financial aid, food services, fraternities and sororities, health centers, housing and residence life, multicultural programs, orientation, recreational sports, student activities, student discipline, and wellness programs.

All these programs and services have had to adapt to increasingly diverse student bodies. In the colonial era, higher education was for white males from well-to-do families. The establishment of women's colleges and historically black institutions in the late nineteenth century broadened the scope of higher education. Legislation including the Morrill Land Grant Act of 1862 and Servicemen's Readjustment Act of 1944 (G.I. Bill) allowed new populations access to higher education. Student affairs programs and services expanded accordingly.

At the beginning of the twenty-first century, the majority of undergraduates are more than twenty-one years old. More than 40 percent are enrolled part-time. Nearly 27 percent are people of color. About 65 percent of high school graduates attend college, although far fewer graduate. Furthermore, many students lack adequate preparation for college-level courses. Effective student affairs organizations are able to deliver programs and services to serve diverse populations and assist in the recruitment and retention of students.

### Trends

Like all departments on campus, student affairs has had to make critical decisions in the face of rising costs and reduced budgets. Fee-for-service arrangements can mitigate some expenses. Hence, students may have to pay for counseling, health, and other services sometimes covered in student activity fees. Privatization is another issue facing campuses. In an effort to control costs in the face of dwindling budgets, administrators are outsourcing various functions including health services, dining services, maintenance, housekeeping, and bookstores. Al-

though many question the move and raise concerns about job security, quality control, and incompatible operating philosophies, financial considerations are often compelling. Furthermore, private companies have increased competition with campus departments. For instance, off-campus apartment complexes attract students out of campus residence halls and into facilities that are often located close to campus. They may provide shuttle services, swimming pools, workout rooms, cable television, Internet access, laundry machines, and other attractive amenities at very competitive rates. Finally, to remain competitive and meet student demand, many campuses have increased board plan options for students and changed dining facilities and programs. Food courts (often offering popular fast-food chains), a la carte dining options, and expanded service hours now supplement traditional, all-you-can eat dining commons.

Contemporary efforts in student affairs have attempted to refocus student affairs on creating intentionally the conditions that enhance student learning and development, encouraging student commitment to educationally purposeful activities in and out of the classroom, and assessing those initiatives. Increasing the quality of student–faculty interactions and linking in-class and extracurricular activities through living-learning centers in residence halls are two strategies to promote student success. To be involved in the central missions of college and universities, student affairs must affirm its commitment to student learning and development.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE STUDENT RETENTION; COLLEGE STUDENTS WITH DISABILITIES, *subentry on* ACCOMMODATING; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS; STUDENT SERVICES, *subentry on* COMMUNITY COLLEGES.

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MAUREEN E. WILSON

## COMMUNITY COLLEGES

Institutions of higher education vary in composition and structure, as do the characteristics of the students they serve. Community colleges are but one type of institution that educates and trains students, though they constitute a diverse group of institutions, ranging from comprehensive two-year colleges to technical colleges. These types of colleges offer students certificates, associate of applied science, associate of science, and associate of arts degrees. In contrast, four-year institutions also provide training and education, but usually offer baccalaureate, graduate, and professional degrees.

The demographics of higher education institutions, both community colleges and universities, shifted during the last decade of the twentieth century. In particular, increasing numbers of minorities, different ethnic groups, a larger female population, older adult students, international students, and students of varying academic abilities began to make up a major percentage of postsecondary students.

### Overview of Student Service Organizational Structure

According to Robert Fenske (1989), the organizational foundations of student services can be found

in a desire to foster the intellectual, social, moral, and spiritual development of students. Based on the community college or university mission, the functions included in the area of student services may vary. Divisions within student services may be linked to the philosophy of the higher education institution, with some institutions stressing a more student-centered approach and others, particularly universities, focusing more on research. Smaller liberal arts colleges, which are also four-year institutions, may emphasize teaching the humanities and maintaining a small student population with a greater student-centered focus. However, it is unnecessary to compromise the needs of student services or a student-centered climate due to institutional missions.

The functions typically associated with student services, at both two-year and four-year institutions, include admissions and recruitment, retention, international student services, counseling, testing, orientation, career services, student activities, disability services, financial aid, and athletics. The most common administrative philosophy is to enhance and support students' experiences, from initial enrollment through graduation. Additionally, four-year institutions usually focus on student programming, such as speakers, symposia, and other student activities, to complement the learning experiences in the classroom.

Whether at a two-year institution or a university, there are several administrative offices that may or may not be a part of the division of student services, depending on the campus organizational structure. Campus security is one such office, and on some campuses security personnel are actually certified campus police, especially if the campus is an urban environment. The offices of admissions, recruitment, and retention also may report to either the student services department or the academic affairs department.

Athletics, though typically within the realm of student services, is a distinct entity—depending on institutional type, National Collegiate Athletic Association (NCAA) designation, and conference. Community colleges generally have fewer athletic programs and the emphasis is less competitive compared to Division I universities. The athletic recruiting process at two-year colleges is also less competitive—athletes may often walk on to a team. Additionally, because athletics at four-year institutions (particularly football and basketball) generate

large revenues and the recruitment of top athletic talent is fierce, university athletics may be within the general university administration, or the athletic director may report directly to the president of the university. It should be noted that revenue usually generated from athletics at four-year colleges and universities is much more significant than at community colleges. Additionally, civil rights laws such as Title IX have had a direct impact on both community college and university athletics by requiring equality in men's and women's sports and equity in payment of coaches and athletic facilities and equipment.

Common to two and four-year colleges and universities is the office of career services. Although this office may report to the academic affairs department, it facilitates students' movement into the workforce, and at most institutions it is still considered a student affairs function. Both community colleges and four-year institutions typically invite employers to interview students on campus. While four-year schools may hold career or employment fairs for teachers, engineers, or graduate programs such as nursing and law, the community colleges may put more emphasis on workforce retraining.

Judicial services can usually be found at both two- and four-year campus. These services deal with disciplinary issues and misconduct, which are generally governed by a student handbook outlining rules and regulations and an honor code that covers plagiarism, cheating, or other academic misconduct. Additionally, four-year institutions have an office of fraternity and sorority affairs, which primarily deals with Greek organizations. This is less common at two-year institutions, but some community colleges do have sororities and fraternities. Although these groups are a common source of bonding and service on both types of campuses, incidents of hazing, alcohol abuse, and Greek on-campus housing often present dilemmas that must be carefully monitored.

### **Recruitment, Retention, and Counseling Services**

Recruitment for community colleges is often different than that for four-year colleges and universities. "Because the community colleges try to serve as many members of the community as feasible, they have frequently engaged in extensive recruitment activities" (Cohen and Brawer, p. 193). Community colleges employ recruitment strategies such as partnering with surrounding community colleges to offer classes to high school seniors. Other strategies

include working with local businesses, state government, and the local chamber of commerce to develop specialized courses or training programs to meet the needs of industry, businesses, and the state's economy.

The recruitment and admissions function at four-year institutions usually involves admissions counselors working with area high schools and community agencies to recruit students. Additionally, many universities have a national draw, and there are national recruitment forums in urban areas and high schools in which representatives from four-year institutions nationwide assemble to meet and speak with prospective students and their parents.

Prospective four-year students must take the SAT or ACT Assessment, complete an application, write a personal statement, and submit a high school transcript and letters of recommendation. The ACT or SAT may be waived for nontraditional older students who have been in the workforce for a significant amount of time, but they may be required to take a basic standardized test administered by the university to assess their level of academic functioning in basic areas such as English, mathematics, writing, and reading.

In terms of the admissions process, graduate and professional programs at universities are usually even more competitive and also require standardized testing, and medical and law schools may require interviews. Similar recruitment tools may be used, such as online applications, recruitment forums, visiting local colleges, and use of alumni.

Retention is often difficult for two-year colleges compared to other institutional types. The diversification of the student population and commuter campuses both create obstacles to retention. Thus, students often spend less time together and with faculty at two-year colleges than students at four-year schools do. With changing demographics, retention can be difficult due to adults with children and child-care issues and four-year institutions reducing remedial and development programs. Additionally, although some two-year schools have on-campus housing and residential living, some students find it difficult to feel a sense of community. Typically, commuter students often work and have less time for student activities, which often increases a feeling of community and belonging on campus. In four-year schools with residence halls and students who often have more time for student organization, stu-

dents are usually easier to retain. Nevertheless, adjusting to college life, whether at a four-year or two-year institution, can be difficult. Unlike high school, there is usually much less oversight of absenteeism, and large students bodies make it difficult to assess changes in student behavior that may need intervention.

This does not mean that colleges and universities do not realize that adult students are undergoing many psychological and development changes as they enter college. On the contrary, campus counseling services are an integral part of student affairs. "The contention has been that community college students need help in moving into the college and out again into careers and/or transferring to other colleges, and that individualized instruction through counseling and other nonclassroom-based activities is essential" (Cohen and Brawer, p. 194). Since two-year college students possess varying academic abilities, the goal is to help students assess their abilities and limitations, and "community college counselors try to help students clarify their goals and values" (Cohen and Brawer, p. 195). Though four-year colleges and universities campus counseling services provide similar services, they tend to deal more with student socialization issues and, to a lesser degree, academic issues.

New student orientation is a major tool used to introduce students to campus life and to aid in their adjustment at both two- and four-year institutions. "In determining appropriate formats for these introductory sessions, staff members consider their college's mission statements, campus culture, and student population to tailor an appropriate orientation program for their newest students" (Cohen and Brawer, p. 199). Each college and university designs orientation to suit the populations they serve. This may mean several orientation sessions offered at a variety of times, and use of formats such as video or the Internet. Orientation is closely connected to retention and, as such, is carefully executed to ensure student satisfaction and academic persistence. Encouraging students to participate in orientation, however, can be problematic.

### **Disability Services**

All higher education institutions are required to provide reasonable accommodations for students with qualified disabilities under the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973. An office of disability services

works with students with disabilities, faculty, and campus officials who may need accommodations. Students are often required to provide medical documentation certifying their disability. They also have the option of voluntarily disclosing to the disability office whether or not they qualify for disability services. In order to receive accommodations and to develop an accommodation plan to meet an individual student's needs, however, documentation must be provided.

Students may qualify as students with disabilities due to learning disabilities or visual, hearing, or mobility impairments. These students may need note-takers, special equipment, translators, extended test time, computer-aided testing, and other accommodations to allow them to compete equally in the classroom and to participate equally in other campus activities.

### **Financial Aid**

All students who wish to apply for financial aid must complete the Free Application for Federal Student Aid (FAFSA), which can be completed online or via direct mail. Male students ages eighteen to twenty-five must also register for the Selective Service in order to qualify for any form of federal aid. Each institution may also have its own financial aid forms that must be completed. There are usually priority deadlines for financial aid eligibility.

It should be noted that the ability to pay ever-increasing tuition and fees makes financial aid vitally important to today's college students. Thus, to some, community colleges are the school of choice because of their affordability.

Students who meet certain economic qualifications may qualify for either federal or state grants to assist with college tuition at both two- and four-year colleges. These grants usually do not have to be paid back as long as a student is enrolled for the full academic term or semester. There are few federal and state grants to assist graduate and professional students at the university level.

Many students need to apply for student loans. Stafford Loans are the most common source of education loan funds available. Direct Stafford Loans are available through the William D. Ford Federal Direct Loan Program, and FFEL Stafford Loans are available through the Federal Family Education Loan (FFEL) Program. The major differences between the two are the source of the loan funds,

some aspects of the application process, and the available repayment plans. Under the Direct Loan Program, the student receives the loan directly from the U.S. government, while through the FFEL Program, the funds come from a bank, credit union, or other participating lender.

Perkins Loans may also assist students, but are limited in funds. A Federal Perkins Loan is a low-interest loan for an undergraduate or graduate student with exceptional financial need. The student's institution is the lender, and the loan is made with government funds plus a share contributed by the school. The student must repay a Perkins Loan to his or her educational institution.

Parents of undergraduate students may qualify for specific federal loan programs also, but they may be required to pay the interest immediately upon borrowing. Students should be aware that borrowing for their educational needs is very serious, and it is advisable only to borrow what is needed to fund one's education. Usually, there is a six-month grace period after graduation before repayment begins, but if a student withdraws before completing a degree, repayment may be required immediately. Students should be aware that there are often private loan vendors for both undergraduate and graduate programs. Additionally, student default increased somewhat in the closing years of the twentieth century, prompting credit checks to be used by some loan agencies. Following graduation, students may consider consolidating student loans to reduce payments.

Both two- and four-year students should seek out campus-based aid, such as college work-study, institutional loans, and need-based and merit-based scholarships. Scholarships may also be available for underrepresented groups in certain fields. Additionally, in order to remain eligible for any form of financial aid, students must remain in good academic standing.

### **Residential Life**

As previously stated, most two-year schools are basically commuter schools, though some have residential halls. Most four-year colleges and universities have some type of housing, including specialty housing such as faculty-in-residence, fraternity and sorority housing, and off-campus housing. Many residence halls provide food services and technology such as computer labs. Residential life, or special

event, programs organized by student and professional campus housing staff are designed to facilitate the growth of students in all aspects of their social development.

### Student Organizations and Activities

Community colleges and four-year colleges and universities offer a bevy of student organizations. Both two- and four-year colleges have organizations that are centered around a student's academic, religious, social, or political interests, including volunteer, community service, and cultural organizations. Student government associations, social-activity coordinating bodies, and campus publications are just a few examples. Typically, fraternities and sororities are relegated to four-year colleges and universities. Funding for student organizations usually comes from student fees, and at both public and private institutions student-fee usage has been an issue. Questions regarding the use of these student fees to fund certain politically affiliated or religious organizations—or other controversial groups—have become a source of sometimes heated debate.

### The Evolving Concept of Student Services Personnel

Over the years, student services have evolved at both community colleges and four-year higher education institutions. The concept of student services, or student affairs, as simply keeping watch over student behavior or nurturing parents has given way to the concept of an institutional life that is supportive of the growth of the “whole” student.

The *whole student* concept involves the development of a living and learning environment in which student services personnel work with faculty, administrators, students, staff, employers, and the community to integrate academic and student activities outside the classroom in order to prepare students to live in a complex world. Student events, activities, organizations, and departments under the umbrella of *student services* are designed to not only complement the learning environment, but also to allow students to develop intellectually, spiritually, physically, emotionally, and vocationally—and in their capacity to serve as leaders and bring about change.

### Future Trends in Student Services

With the increase in technological advances and distance education, student services at both the community college level and at four-year institutions

must be able to adapt quickly to change. Online programs, video courses, weekend courses, executive weekend programs, and off-site programs have a significant impact on the way student services are provided. Both community colleges and universities are beginning to rely more on websites, e-mail, chat-rooms, and online applications to attract and communicate with students in the technological age. Additionally, a student's ability to apply and monitor application decisions directly online and through Internet portals, which allow prospective students to converse in “real time” with admissions professionals, will greatly impact student services and students' expectations.

In addition, a diverse student body requires student services personnel to be equipped with new skills, including second-language proficiency and sensitivity to disabled, culturally different, and gay and lesbian students. Also, an increase in nontraditional adult students necessitates new approaches to student services, including services at alternative times to meet the needs of part-time and working adults.

Finally, shrinking resources, particularly in light of modern technology, will cause student services personnel to have to justify their place in higher education. Demands for fiscal accountability may one day require colleges and universities to discuss the elimination of certain student services.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE FINANCIAL AID; COLLEGE STUDENT RETENTION; COLLEGE STUDENTS WITH DISABILITIES, *subentry on* ACCOMMODATING; COMMUNITY COLLEGES; PERSONAL AND PSYCHOLOGICAL PROBLEMS OF COLLEGE STUDENTS; STUDENT SERVICES, *subentry on* COLLEGES AND UNIVERSITIES.

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## STUDENT TEACHING

*See:* EARLY CHILDHOOD EDUCATION, *subentry on* PREPARATION OF TEACHERS; ELEMENTARY EDUCATION, *subentry on* PREPARATION OF TEACHERS; TEACHER EDUCATION; TEACHING, *subentry on* LEARNING TO TEACH.

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## STUDY ABROAD

Until the 1970s, study abroad programs for American college students mostly followed the general ed-

ucation/liberal arts model that was pioneered in the 1920s by the University of Delaware, and later by Smith College. More recently, significant shifts in international involvements, in U.S. higher education, and in the characteristics and interests of college students have greatly altered the aims, programs, and clientele of study abroad. The model of sending students (mainly female) to western Europe, typically for an academic year and primarily for foreign language and culture learning, has largely been abandoned.

The multipolarity of the world today, by expanding the demand for cross-culturally competent professionals in an increasingly globalized economy, is influencing the new shapes and goals of study abroad. Learning a foreign language has eroded as an aim of study abroad as the United States has become more than 30 percent Hispanic, and as English has become the new *lingua franca* of the world. Moreover, a study abroad experience is no longer seen as mainly for private college students, but as an essential foundation for international careers—and most careers now are international in their contexts, content, or dimensions.

### Study Abroad Programs Today

Probably the main characteristic of the study abroad programs of U.S. colleges and universities is their diversity. There is no typical program. Students in an increasingly wide array of majors seek to study abroad and to pursue coursework while abroad that counts toward their major, whether business, sociology, environmental engineering, or nursing. Small wonder that the foci of study abroad programs are correspondingly diverse.

Driving this diversity, as well as contributing to it, are two additional and interrelated factors. First, the concern of students to enhance their professional qualifications for their future careers leads them to prefer short-term programs (a few weeks or a summer) over longer ones, such as an academic semester or year. Job concerns also make internships and work placements abroad attractive to American students, and programs with a thematic, rather than general education, emphasis, are preferred.

The second factor affecting diversity is the growing appreciation of the importance of cross-cultural skills (though not foreign language competence) in both the domestic and international arenas on the part of employers, students, and faculty. U.S. busi-

nesses operating across borders increasingly recognize the need for staff who can communicate, even if only in English, with people from other cultures and countries. Study abroad programs designed to enhance cross-cultural skills bring new goals and strategies to the experience. More programs are located in countries and regions other than the traditional western European ones; and more include experiential learning, immersion in the host culture, and community service as important vehicles for cross-cultural learning. These programs also tend to give more encouragement to independent study and to interdisciplinary and multidisciplinary studies than do the more traditional programs.

As already emphasized, there is no typical program of study among the study abroad programs of U.S. colleges and universities. This should be viewed as a plus rather than an inadequacy, reflecting as it does an important flexibility and pragmatism on the part of U.S. institutions. American universities have become more “user-friendly” to academic programs abroad taught in English, partly because the language has become a dominant factor in the globalization of the economy worldwide. In addition, countries seeking to attract more foreign students want to design programs geared to their needs and interests—whether it be English as a second language (ESL), shortened MBA programs, or post-degree job counseling and opportunities. The combination of more and more academic work offered in English, and the move worldwide towards an academic credit and transfer system comparable to the Educational Credit Transfer System (ECTS) of the European Community (EC) has attracted more U.S. study abroad students to nontraditional destinations.

Paralleling the widening of study abroad destinations has been a shortening of the time spent abroad: the percentage of students studying abroad for more than a semester dropped from 18 percent in 1985 to 10 percent in 1995. Whereas it is widely agreed that longer is better, the conflicting truism that something is better than nothing increasingly prevails. It is ironic that the shorter period that U.S. students spend studying abroad reflects a greater student and faculty appreciation of its importance as part of a quality undergraduate education. For students who must forgo part-time work to afford college or whose family situations or degree requirements (such as engineering majors) preclude more than a short time abroad, the increase in one- to

four-week study or intern options abroad provides an opportunity for foreign study that would not otherwise exist. A significant trend in U.S. study abroad is that more and more colleges and universities integrate the academic work students do abroad into their degree programs. This is fundamental to increasing participation and affirming the academic contribution of study abroad.

Some U.S. institutions are developing creative ways to enable students to have an international experience despite existing deterrents. Some universities offer study abroad opportunities in the sciences to second semester sophomores who cannot leave campus their junior year. A few institutions offer on-line coursework from the home campus to students studying abroad who require specific courses not available in their study abroad program. Another strategy, exemplified in a course (Cultural Codes in Communication) taught at the University of Massachusetts at Amherst involves the professor and a professor colleague at a university in Finland showing the same film clips on Finland and the U.S. to their respective students. This program does not involve study abroad in the sense of the geographic move, but does involve direct contact with people in another country, focusing on cultural differences and stimulating international learning. The vastly different reactions of the Finnish and American students illustrates how the culture of each nation shapes how they look at the clips. The lively Internet communication that ensues between the Finnish and U.S. students is an integral part of the cross-cultural learning experience.

While the study abroad programs of U.S. colleges and universities share many features, they do tend to be of two markedly different types. One wants its students to be as integrated as possible into a cooperating or “partner” institution abroad, and, with appropriate pre-departure preparation, to mostly fend for themselves. In this type of program, students pay little or no more than for the same period at their home institution. The second type of program tends to provide special academic advising for the U.S. students, extra excursions for them, supplementary assistance with their housing, and day-to-day mentoring on top of what is offered by the host institution abroad. The first program type is quite similar to the EC’s Socrates/Erasmus student exchange program in the goals of student integration into their host institutions abroad, little extra cost, and little special assistance by the sending institu-

tions. The second program type aims to respond to the concerns of the kinds of students—and their parents and home institutions—that enroll in them. To a large extent, private college students, their parents, and their sponsors tend to look for special assistance, going well beyond what local university students may receive.

### Study Abroad Curricula, Living Arrangements, and Locations

U.S. study abroad programs are increasingly diverse in their curricula, living arrangements, and locations. More and more programs offer a so-called full curricula that includes many of the traditional academic disciplines. Those that focus on language, culture, and social science subjects tend to be in foreign language countries, especially those of the less commonly taught languages in East Asia, North Africa, the Middle East, and eastern Europe. Living arrangements vary from residence halls, home stay, and apartments to such accommodation as the students arrange for themselves. Since 1990 U.S. students have more and more sought to make their own housing arrangements, usually helped by local staff.

The greatest diversification has been in study abroad program locations. Although the largest portion are still in western Europe, few countries are overlooked or left out, other than those with severe unrest or other conditions that may threaten students' safety. Shifts in international politics and economic conditions may significantly affect program locations. Thus, post-normalization China, post-Velvet Revolution Czechoslovakia, and post-cold war Africa have become more attractive U.S. study abroad destinations.

### Future Developments

At the beginning of the twenty-first century, there were developments underway internationally, especially in western Europe, that were likely to affect the priorities in curricula and country sites of U.S. study abroad programs. In the Bologna Declaration of June 1999, twenty-nine European countries pledged to reform the structures of their higher education system to include a common framework for degrees and a convergence of their systems, possibly with degrees similar to the U.S. system. These reforms should facilitate increased mobility and cooperation, not only among European higher education institutions, but also with institutions in the United States and other regions worldwide. Just as globalization

has created an increasingly borderless world, so this growing interchange can increase commonalities among higher education systems.

*See also:* ACADEMIC MAJOR, THE; CURRICULUM, HIGHER EDUCATION, *subentry on* NATIONAL REPORTS ON THE UNDERGRADUATE CURRICULUM; INTERNATIONAL STUDENTS.

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## SUB-SAHARAN AFRICA

Sub-Saharan Africa, referred to as "Africa" in this article, comprises the forty-two countries on the African continent south of the Sahara and the six island nations close to it. Africa's rich cultural and ethnic traditions reflect different heritages in all countries—an early Christian heritage in the Nile Basin, a strong Islamic influence in the north, and Christian influences dating from colonialism in many central and southern African countries.

Geographically and economically, Africa is diverse and fragmented. In 1999 the region's population was about 640 million. Six countries had fewer than 1 million people. Nigeria had 124 million people and Ethiopia 64 million. Within the continent, communications and travel are difficult. Gross national product (GNP) per capita averaged \$500 in 1999, ranging from less than \$200 in the Burundi, Ethiopia, Malawi, Niger, and Sierra Leone to more than \$3,200 in Botswana, Gabon, Mauritius, and South Africa. On the whole, the region's GNP growth and human development indicators lag behind those of other regions.

Poverty is pervasive across the region. More than 290 million people live on less than \$1 per day. With the region's rapidly growing population, 5 percent annual growth is needed to keep the number of poor from increasing. According to the World Bank, halving the incidence of poverty by 2015 would require annual per capita gross domestic product (GDP) growth rates of at least 7 percent. Unsustainable external indebtedness has diverted scarce resources away from priority social needs. Waste in the public sector and weak governance structures continue to act as major constraints to development in many countries.

## Overview

Education systems in the region reflect differences in geography, cultural heritage, colonial history, and economic development progress. The impact of French, English, and other countries' colonial policies toward education has had a lasting impact on the objectives, structure, management, and financing of education systems in the region. When African countries gained independence from colonial rule around 1960, the region lagged far behind other regions on nearly every education indicator. Dramatic progress—with large national variations—occurred in the 1960s and 1970s. Primary enrollments jumped from 11 million in 1960 to almost 53 million in 1980. Growth at the secondary and tertiary levels was even more dramatic, with secondary enrollments increasing by fifteen times and tertiary enrollments by twenty times.

The economic crisis of the 1980s severely affected education in Africa. Declining public resources and private economic hardship resulted in an erosion of quality and primary level participation rates. As of the early twenty-first century, these setbacks have not yet been reversed. At every level, education

facilities are too few, while those that exist are often in poor repair and inadequately equipped. Teachers are often underpaid and underqualified and rarely receive the support and supervision they need to do an effective job. The number of hours spent in the classroom by most African students is far lower than the international standard. Instructional materials are often in desperately short supply. Not surprisingly, learning achievement is almost always far below the instructional objectives specified in the curricula. While country experiences vary a great deal, the reality for too many Africans is one of education systems characterized by low quality and limited access.

Africa has the lowest enrollment rate at every level and is the only region where the number of out-of-school children continues to rise. The average African adult has fewer than three years of schooling, lower than the attainment level for any other region. Almost one in three males and one in two females is illiterate. Gender inequalities persist at all levels of schooling. Female enrollments are about 80 percent of male enrollments at the primary and secondary levels and less than 55 percent at the tertiary level.

As disturbing as the low levels of literacy and education attainment is the marked decline in the capacity of many African countries to generate knowledge as a resource for tertiary level instruction and for research and technology development. A 1992 study estimated that Africa had only 20,000 scientists and engineers, or 0.36 percent of the world's total. In 1996 Senegal had only 3 researchers engaged in research and development per million people, Burkina Faso had only 16 and Uganda had 20, compared with 149 in India and 350 in China. Few African researchers are integrated in the worldwide scientific knowledge networks. A continuing brain drain exacerbates these problems. Reasons vary from country to country but usually relate to a lack of employment opportunities in the modern sector, limited research budgets in universities, the lack of freedom of speech, and the fear of political repression in countries with authoritarian regimes. An estimated 30,000 Africans holding doctoral degrees live outside the continent, and 130,000 Africans study in tertiary institutions outside Africa.

Social and economic progress in Africa will depend to a large extent on the scope and effectiveness of investments in education. If living standards are to be raised, sustained efforts will be needed to narrow the gaps in educational attainment and scientific

knowledge between Africa and other regions and to bridge the digital divide. Decades of research and experience in Africa and elsewhere have shown the pivotal role of a well-educated population in initiating, sustaining, and accelerating social development and economic competitiveness. Numerous studies show that education, particularly primary education, has a significant positive impact on economic growth, earnings, and productivity.

But clearly, primary education cannot expand and African economies cannot grow without an education system that trains a large number of students beyond the basic cycle, including graduate students at universities. To be sustainable, educational development must be balanced. It must ensure that systems produce students at different levels with qualifications that respond to the demand of the labor market, providing a continuous supply of skilled workers, technicians, professionals, managers, and leaders.

Yet, lasting education development will take place only when the extensive armed conflicts come to an end and the HIV/AIDS pandemic stalls. Restoring peace and stability in the region is an urgent priority. At least one in five Africans lives in a country severely disrupted by war. Between 1990 and 1994 more than 1 million people died because of conflict. And in 2000, approximately 13.7 million people in Africa were refugees or internally displaced. Few opportunities for schooling exist in the African conflict zones.

Africa has been the region hardest hit by the HIV/AIDS pandemic, accounting for 23 million of the 33 million people affected worldwide. By killing people in their most productive years, the pandemic is destroying the social and economic fabric of the worst affected countries and reversing hard-won human development gains. Replacing education sector staff lost to AIDS-related illnesses while national resources are being diverted from education to the health sector and providing an education to children affected by AIDS are urgent ongoing challenges.

### **Stalled Progress in Primary Education**

Primary enrollment growth slowed in the 1980s. The gross enrollment rate (total number of children enrolled as a proportion of the number of children of the relevant age group) fell from 80 percent in 1980 to 75 percent in 1990, largely as a result of declining male participation rates, and by 1997 had recovered

to only 77 percent. Yet other coverage indicators showed considerable improvement (see Table 1). Net enrollment rates (number of children of the relevant age group enrolled as a proportion of the number of children of relevant age) increased from 54 percent in 1990 to 60 percent in 1998; apparent intake rates (total number of children admitted in grade 1 as a proportion of the total number of children of the school entry age) from 70 percent to 81 percent; and net intake rates (number of children of entry age admitted in grade 1 as a proportion of the total number of children of the school entry age) from 33 percent to 43 percent. Although not available for all countries, these data suggest that more school-age children are in school, the decline in boys' participation has reversed, and more children are enrolling in first grade. But many children still enroll late (only two-thirds of the new entrants in 1998 were the official age for school enrollment), the gap in girls' initial enrollment rate has increased, and more than 40 percent of school-age children are not in school.

Country experiences vary a great deal, however. Botswana, Cape Verde, Mauritius, Namibia, the Seychelles, Swaziland, and Zimbabwe sustained education progress. Uganda and Mauritania implemented policies that resulted in a sudden increase in primary enrollments and then began struggling to deal with the consequent challenges. Burkina Faso, Guinea, Mozambique, and Senegal opted for a gradual approach. Most other countries are formulating comprehensive long-term strategies for educational development, including universal primary education.

Nevertheless, access to primary education remains problematic. Of the forty-four countries with data for 1996, only ten (Botswana, Cape Verde, Congo, Malawi, Mauritius, Namibia, South Africa, Swaziland, Togo, and Zimbabwe) had a primary gross enrollment rate of 100 percent. Seven (Burkina Faso, Burundi, Ethiopia, Liberia, Mali, Niger, and Somalia) had a primary gross enrollment rate below 50 percent. And between 1985 and 1997 the primary gross enrollment rate actually declined in seventeen countries—Angola, Burundi, Cameroon, Central African Republic, Comoros, Côte d'Ivoire, the Democratic Republic of Congo, Kenya, Lesotho, Liberia, Madagascar, Mozambique, Nigeria, Sierra Leone, Somalia, Tanzania, and Zambia. Together, these seventeen countries include more than half of Africa's school-age population.

TABLE 1

## Primary school enrollment and intake rates, 1990, 1995, and 1998

	1990		1995		1998	
	Boys	Girls	Boys	Girls	Boys	Girls
Gross enrollment rate	81.9	67.6	83.8	69.4	84.1 <sup>b</sup>	69.4 <sup>b</sup>
Net enrollment rate	59.8	49.9	64.2	52.9	67.6	54.2
Apparent intake rate	75.7	65.3	83.4	70.0	88.3	73.5
Net intake rate <sup>a</sup>	34.7	31.9	41.4	40.6	44.5	41.6

<sup>a</sup> 1994 <sup>b</sup>1997.

SOURCE: Based on United Nations Educational, Scientific and Cultural Organization. 2000. *Education for All (2000): Report from the Sub-Saharan Africa Zone, Assessment of Basic Education in SSA*. Harare, Zimbabwe: United Nations Educational, Scientific and Cultural Organization.

The challenge is clear. In almost all countries, access has expanded far too slowly to achieve international education targets for gender equity and universal primary education. About 12 percent of the world's children aged six to eleven live in Africa, yet the region accounts for more than one-third of the world's out-of-school children. Unless these trends reverse, Africa will account for three-quarters of out-of-school children by 2015.

Participation problems are exacerbated by the absence of an environment for effective learning. Children are taught in overcrowded classrooms by underqualified and frequently unmotivated teachers who are often poorly and irregularly paid and receive little managerial support. Teacher absenteeism is widespread, disrupting learning and eroding public confidence in the value of public education. Shortages of learning materials further constrain learning. In ten of eleven countries surveyed by UNESCO (1998b), more than one-third of the students had no chalkboards in their classrooms. In eight countries, more than half of the students in the highest grade had no math books. Most African children spend roughly half the time in the classroom that children in other countries do.

Poverty-related deprivation further contributes to low educational attainment in Africa. Poor children spend more time than other children contributing to household work. As a result they are less likely to spend out-of-school hours on schoolwork, more likely to be absent from school during periods of peak labor demand, and more likely to be tired and ill-prepared for learning when they are in the classroom. More than 40 percent of children in Afri-

ca are stunted, while almost one-third are underweight. Primary school-age children are especially susceptible to illnesses that affect poor people, in particular gastrointestinal and respiratory problems. Malnourished and sick children are less likely than healthy children to learn in school and are more likely to be absent from lessons. And if private costs for education are substantial, parents in poor households are more likely to withdraw their children from school early in the school cycle. All these effects are exacerbated by the rapid spread of HIV/AIDS, which affects the attendance of teachers and students and strains household resources.

Unsurprisingly, students who complete primary school often have an unacceptably low level of learning. In 1990–1991 Botswana, Nigeria, and Zimbabwe participated in a thirty-one-country survey of ninth grade reading skills (described by Warwick B. Elley in 1992). Students in these three countries registered the lowest scores, performing considerably worse than students in the other four developing countries participating in the survey (the Philippines, Thailand, Trinidad and Tobago, and Venezuela). More recently, the Southern Africa Consortium for Monitoring Educational Quality assessed the reading skills of sixth grade students in Mauritius, Namibia, Zambia, and Zanzibar. The average percentage of correct answers ranged from 38 percent to 58 percent.

Poor learning often results in high repetition rates and low completion rates. In fifteen countries more than 20 percent of students are repeaters—in Côte d'Ivoire more than half of all primary students are repeating a grade at any time. More than one-

third of school entrants fail to reach the final grade. In the Central African Republic, Chad, Congo, Madagascar, and Mozambique, fewer than half the children who enroll in primary school complete five years. Many of the students drop out early in the primary cycle, before they acquire even rudimentary literacy and numeracy skills. In Chad, Ethiopia, and Madagascar more than one-third of the children who enter school never complete second grade.

Increased learning and participation will require a combination of policies, including:

- Increased funding for primary education
- Increased resource availability at the school level
- Allocation of resources to inputs that directly enhance learning
- Meaningful community participation in school development and management
- Increased responsibility of local education authorities for resource allocation, professional support, and personnel management decisions
- Explicit national responsibility for setting standards, monitoring of performance, and mobilizing adequate resources for the system

### **Beyond Primary Education**

Few African countries provide adequate opportunities for education and training needed by twelve- to seventeen-year-olds or for adults. The gross secondary enrollment rate in 1997 was 26 percent for Africa, compared with 52 percent for all developing countries. Many Africans are looking for opportunities to either continue formal schooling or acquire skills that will equip them to enter the world of work.

Education and training for youths is not only an economic imperative. In many countries young people's dissatisfaction and disillusionment with their prospects for education and work threaten social cohesion and stability. Reaching this age group through formal and nonformal education is also vital to the success of targeted interventions in such areas as HIV/AIDS and reproductive health education and of programs to raise awareness of civic rights and responsibilities. Yet only one-fourth of youths in this age group have access to secondary education, and only 6 percent are reached by vocational and nonformal education programs. Access to new communication, information, and computer technology is limited in secondary and public-sector training institutions in Africa. The lack of instruc-

tional equipment and materials further inhibits learning. Many publicly funded skills development programs—especially those teaching vocational subjects in secondary schools—are of poor quality, depend heavily on external financing, and carry high costs per student. Such programs often are also poorly attuned to labor market demand and fail to lead to income-earning opportunities. Skills-training programs typically are geared to formal sector employment at a time when the formal sector in most African countries absorbs only a small minority of labor market recruits. The balance of the evidence suggest that strategies need to:

- Ensure good quality primary and secondary programs as a basis for further education and skill development
- Ensure that investment in skill development programs is firmly grounded in economic and labor market analysis
- Encourage private-sector delivery by creating a favorable policy environment, strengthening employer training, and reducing regulation
- Improve publicly provided training by strengthening linkages with enterprises, improving responsiveness to market forces, increasing efficiency of resource utilization, and diversifying sources of funding beyond government subsidies

Education opportunities for adults remain equally limited. The mass literacy campaigns of the 1970s fell far short of their objectives. Only a few countries—Uganda and Ghana are examples—continue to support large-scale literacy programs. But in the late 1990s countries such as Senegal began to experiment with small-scale highly targeted programs, often implemented with the support of nongovernmental organizations. Skill development programs are delivered for the most part by private-sector institutions and sponsored by employers.

### **Unprecedented Expansion of Tertiary Education**

In 1960 Africa (excluding South Africa) had six universities with fewer than 30,000 students. In 1995 the region supported nearly 120 universities enrolling almost 2 million. Yet, tertiary enrollment, which reached 3.9 percent for Africa in 1997, is still far below the 10 percent average for all developing countries. In many African countries universities are the only national institutions with the skills, equipment, and mandate to generate new knowledge

through research and to adapt global knowledge to solve local problems. A few have long traditions and were world-class institutions through the 1970s. Yet many others are weak. Early curriculum links to religious studies and civil-service needs have often promoted the humanities and social sciences at the expense of the natural sciences, applied technology, business-related skills, and research capabilities. Inappropriate governing structures, misguided national policies, weak managerial capacity, political interference, and campus instability have further hampered effectiveness. The experience with subregional academic cooperation has been disappointing, although many institutions are too small and recruit from too small a national pool of talent to develop a high-level teaching and research capacity across a wide range of academic subjects.

Dwindling resources during a period of growing enrollments have caused a severe decline in the quality of education in many institutions. Among countries for which data are available for the years 1990 and 1996, expenditures per pupil at the tertiary level as a percentage of GNP per capita decreased in fifteen countries and increased in seven. Yet African higher education remains expensive by international standards. In 1992 public education spending per pupil as a percentage of per capita GNP was 15.1 percent at the preprimary and primary levels, 53.7 percent at the secondary level, and 507 percent at the tertiary level. This disparity makes the strategic management of higher-education resources a central concern of any educational development policy. Some universities are charging increased tuition and fees. Others have started income-generating activities. As an alternative to the traditional higher-education model of full-time study on residential campuses, several provide instruction through distance education programs and extended educational services—the University of South Africa, which enrolled 130,000 students in the mid-1990s, is actually the largest institution of this kind in the world. A number of universities are beginning to use Internet-based technologies. A consensus on reform strategies appears to be emerging, although in practice implementation has been slow and politically controversial. Key elements are:

- Encouraging differentiation of institutions and delivery modes, including the development of open and distance education universities, private institutions, and nonuniversity tertiary institutions
- Providing incentives for public institutions to diversify sources of funding, including cost sharing with students
- Targeting of social expenditures on the most needy students
- Improving the efficiency of resource utilization, with an increased share allocated to teaching and research
- Access to new technologies needed to connect universities to international scientific networks
- Increased institutional autonomy and strategic planning
- Introducing policies explicitly designed to give priority to quality and equity objectives

### Private Education

The private sector is an increasingly important provider of education in Africa. Most registered private schools in Africa are nonprofit community and religious schools. Several countries are also increasing the role of private providers in delivering support services such as textbook publishing, classroom construction, and university catering. The private sector plays a small—although an increasingly important—role at the primary level, but its share in meeting secondary, vocational, and tertiary education needs has increased significantly since the mid-1980s. In Côte d'Ivoire 36 percent of general secondary students and 65 percent of technical students are enrolled in private schools. In Zambia almost 90 percent of the students taking technical and vocational examinations were trained outside public institutions.

At the tertiary level the number of private institutions has increased rapidly. In the 1990s private institutions were established in countries such as Kenya, Mozambique, Senegal, Sudan, Uganda, and Zimbabwe. In South Africa alone there are probably more than 500 private tertiary institutions.

These institutions reduce the financial burden on governments, give parents more choice and control, and improve accountability. They help to meet some of the excess demand for education, provide special programs that the government is unable or unwilling to provide and reduce geographical imbalances in provision. Nevertheless, while many private training institutions have been successful, many others are of poor quality raising important issues of accreditation or other means of quality control.

Registration requirements usually call for the provision of basic infrastructure and staff. Kenya has established a Commission for Higher Education for the accreditation of tertiary institutions. In most other countries the ministry of education typically has this responsibility.

### Efficiency

The efficiency of resource use varies considerably within and between countries. In some countries, especially in the Sahel (the southern fringe of the Sahara), high teacher salaries make it difficult to mobilize the resources required to reach universal primary education in the foreseeable future. In other countries teacher salaries are so low that teachers are forced to take additional jobs. Teacher deployment often creates further inefficiencies when teachers are not deployed according to rational criteria such as the number of students. For example, in Niger the teacher-student ratio in primary schools of 200 students ranges from 1:100 to 1:20.

In 1999 Keith Lewin and Francoise Caillods argued that developing countries with low secondary enrollments, including most African countries, cannot finance substantially higher participation rates from domestic public resources with current cost structures. Secondary schooling is the most expensive level relative to GNP per capita in countries with the lowest enrollment rates. In Africa secondary schools use resources such as teachers and buildings much less efficiently than primary schools. One reason may be that in the poorest countries, secondary schools are still organized along traditional lines to educate a small elite.

Limited public resources and competing public spending priorities have prevented many governments from addressing the challenges of education development. Since the mid-1980s the share of GDP spent on education has decreased in eleven and increased in twelve African countries for which data are available. Perhaps more significant, this share is still less than 3 percent in ten countries for which data is available for 1996 or after. At a given level of education spending as a share of GDP, participation and attainment levels in Africa compare unfavorably with those in other low-income countries (see Table 2). Inefficient and inequitable use of scarce resources in a context of high population growth and demand for general public financing of education by politically powerful pressure groups adds to the fiscal challenge. Thus countries must set priorities for

public spending and identify possible efficiency gains from and opportunities for mobilizing additional public and private resources.

### Prospects

The imperative of accelerated education development in Africa is clear. Africa will not be able to sustain rapid growth without investing in the education of its people. Many lack the education to contribute to—and benefit from—high economic growth. Meeting this challenge will require a major effort by Africans and their development partners during a long period—a decade or more in many cases. Many governments will need to implement changes in the way education is financed and managed—changes that are often politically controversial. Partnership of governments, civil society, and external funding agencies will need to be established or reconfigured to ensure national ownership and sustainability of programs of reform and innovation.

Yet, at the start of the twenty-first century the opportunity to effectively address the often intractable problems of education was perhaps better than at any time in the 1980s and 1990s. The economic performance improved markedly beginning in 1995, with consecutive years of per capita growth in many countries for the first time since the 1970s. In several countries additional resources have or will become available through debt relief provided under the Highly Indebted Poor Countries (HIPC) initiative, the coordinated effort of the industrialized countries to bring down debtor developing countries' debt to sustainable levels. Information and communications technology offers new opportunities to overcome constraints of distance and time. Political commitment to education development is strong almost everywhere. At the World Education Forum in Dakar, Senegal, in April 2000, the 185 participating countries adopted a Framework for Action toward the 2015 goal of Education for All, which gives special attention to the needs of Sub-Saharan Africa. Promising reforms and innovations have been implemented. Many funding agencies are committed to increasing their support for education in Africa. New aid relationships are being piloted in the context of sectorwide development programs replacing the increasingly ineffective individual project approach.

But progress will be achieved and sustained only where efforts are underpinned by genuine commitment to a clear set of guiding principles. First, with-

TABLE 2

## Comparative indicators of education spending efficiency, 1993

Country	Education spending/GDP (percent)	Primary education spending/GDP (percent)	Gross enrollment ratio (percent)	Years of schooling per 1 percent of GDP	Primary teacher salary/GDP per capita
French-speaking Sub-Saharan African countries	3.48	1.45	63	1.42	6.3
English-speaking Sub-Saharan African countries	3.70	1.70	81	1.95	3.2
Non-African (GNP less than \$2,000 per capita)	3.50	1.70	94	2.47	2.7

SOURCE: Based on Mingat, Alain, and Suchet, Bruno. 1998. *Une analyse économique comparative des systèmes éducatifs Africains*. Dijon, France: Université de Bourgogne, Institut de Recherche sur l'Économie de l'Éducation.

out a relentless pursuit of quality, expanded education opportunities are unlikely to achieve their purpose—that is, the acquisition of useful knowledge, reasoning abilities, skills, and values. Second, an unwavering commitment to equity is vital to ensuring that disadvantaged groups—rural residents, the poor, and females—have equal access to learning opportunities at all levels. This will require explicitly targeted strategies for hard-to-reach groups and better analysis of the mechanisms by which people are excluded from education. Third, African countries will need to ensure education development strategies are financially sustainable. Setting spending priorities, spending the resources that have been allocated effectively, diversifying funding sources, and in many cases mobilizing additional funding from sources outside the public sector—especially for postprimary education beyond the basic level—are areas where tough decisions need to be made and then adhered to. Finally, an up-front emphasis on capacity building of institutions and of individuals is needed for accelerated education development to happen. Effective planning, implementation, and evaluation of reforms depend upon effective incentives, reasonable rules, efficient organizational structures, and competent staff. Without these, no strategy for education development can succeed.

*See also:* INTERNATIONAL EDUCATION; MIDDLE EAST AND NORTH AFRICA; POVERTY AND EDUCATION.

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## SUCCESS FOR ALL PROGRAMS

Almost all children, regardless of their home backgrounds, enter school bright, confident, hopeful, and highly motivated, certain that they will succeed in school. However, within just a few years, many of these children will be on a path toward failure. In particular, many students will be reading far below grade level. Research shows that disadvantaged third graders who have failed a grade or are reading well below grade level are extremely unlikely to ultimately graduate from high school. Both research and common sense dictate that prevention and early intervention make more sense than remediation and special education for these children. However, it is not enough to convince school staffs that it is important to ensure that all children start off with success; schools need proven, replicable models highly that are likely to work with at-risk children.

### **The Success for All Program**

The search for such methods led a group at Johns Hopkins University to develop a program called Success for All. Success for All began in the Baltimore City Public Schools in 1987 and (as of school year 2001–2002) exists in more than 1,800 schools in forty-eight states (Maine and New Hampshire are the exceptions). Adaptations of the program are currently in use in Britain, Canada, Mexico, Australia, and Israel. Most Success for All schools are in high-poverty urban and rural districts, but many less-impooverished schools also use the program. The idea behind Success for All is simple: focus resources, attention, and the best instructional methods known on the early grades to make certain that no child ever falls behind, especially in reading.

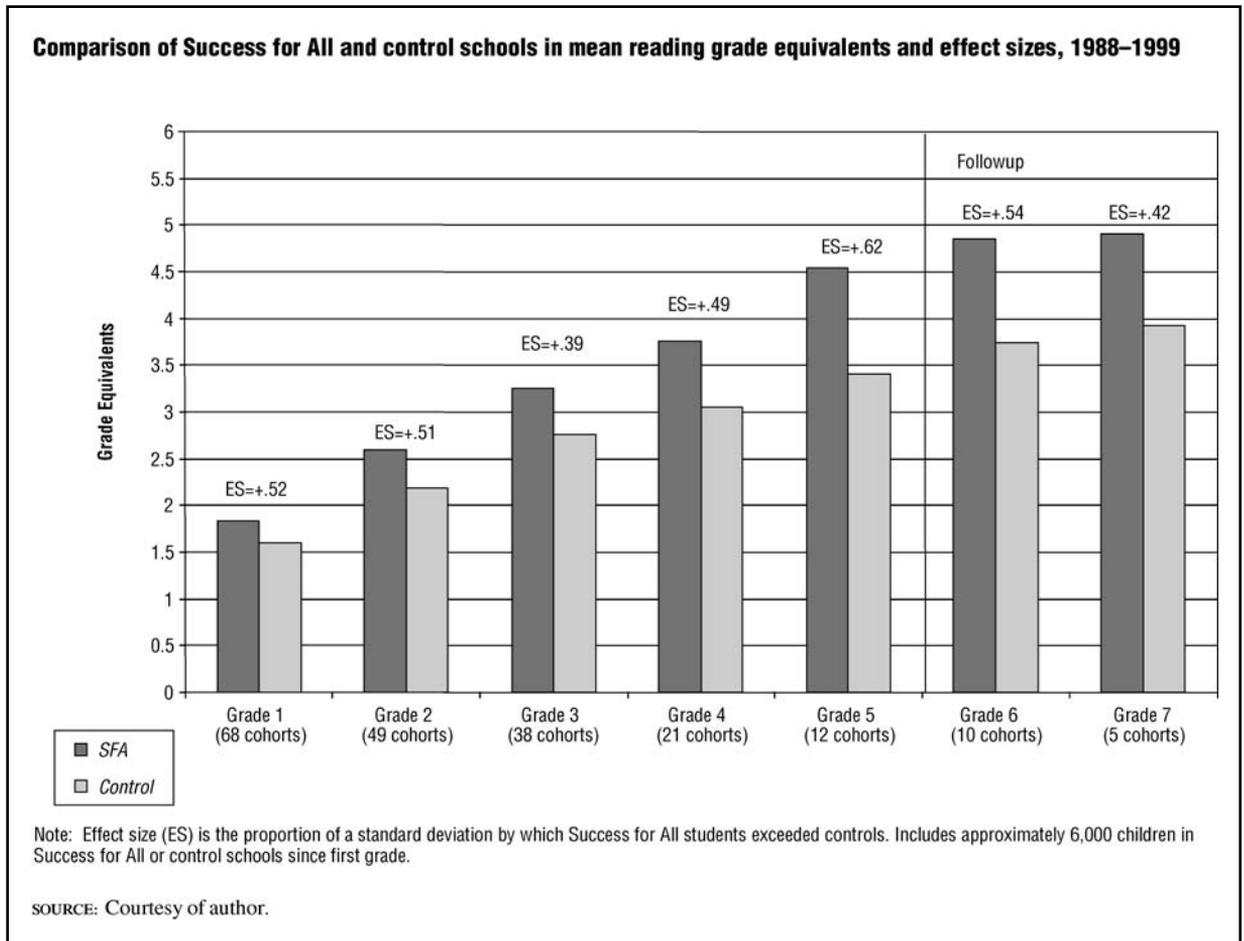
Students in Success for All schools start at the age of four or five with programs designed to build language, self-esteem, and pre-reading skills. In first grade they start a structured reading program that emphasizes systematic phonics in the context of meaningful, enjoyable stories. Students work in cooperation with each other on reading and writing activities. By the end of first grade almost all students are well on the way to successful reading, and they then move on to work with novels, short stories, and expository content in small groups, with programs emphasizing cooperative learning, through the sixth grade. Programs in math, science, and social studies are also used by many Success for All schools in grades K–6. Extensive professional development, follow-up, and coaching enable teachers to use the programs effectively.

### **Tutoring**

Quality early childhood programs and reading and writing instruction prevent most reading problems from arising, but not all. The next level of intervention is tutoring. Tutors are certified teachers or paraprofessionals who work one-on-one primarily with first graders who are having difficulties learning to read. The tutors work in close collaboration with classroom teachers—if a child is struggling with Lesson 37, the tutor works on that lesson so that the child will be ready for Lesson 38. The tutors teach a reading class during a common reading period, both to reduce class size and to make sure that tutors are thoroughly familiar with the reading program.

Family support is also a key element of Success for All. A family support team in each school works to involve parents in the education of their own children in a variety of ways and also deals with such issues as attendance, behavior problems, health problems, and connections with social agencies. A curriculum for solving social problems, *Getting Along Together*, is used in all schools.

One of the most important individuals in a Success for All school is the facilitator, a teacher who usually works full time to help other teachers implement the program. The facilitator visits classes to give feedback and support, organizes an eight-week assessment program to monitor the progress of every child, and makes sure that teachers, tutors, and family support staff are all communicating. There are several days of formal training and follow-up for teachers each year, but the facilitator sees to it that professional development occurs every day.

**FIGURE 1**

## Outcomes

Success for All has been evaluated over time in high-poverty Title I schools throughout the United States. In most evaluations, Success for All schools were compared to matched control schools on individually administered tests of reading. The results have been remarkable in their consistency, breadth, and power. In every district, students in Success for All schools have been found to be reading better than students in control schools. Figure 1 summarizes the average differences between Success for All and control students in reading performance across many studies. The “ES” at the top of each pair of bars refers to *effect size*, the proportion of a standard deviation separating experimental and control schools. The consistent effect size of more than a half standard deviation is considered very large in educational research.

In addition to consistent effects for English-speaking children, strong positive effects have been

found for a Spanish version of the program used in bilingual classes and for speakers of many languages learning English as a second language. Effects are especially strong for students who scored in the lowest 25 percent on pretests. Further, assignments to special education for learning disabilities have been cut in half, and retentions have been virtually eliminated.

In addition to the many studies involving individually administered reading measures, many evaluations have found that students in Success for All schools gain significantly more than other students on assessments used in state accountability programs. Based on these findings, an independent review by Rebecca Herman found Success for All to be one of only two comprehensive reform models to meet the highest standards of evaluation rigor, replication, and effectiveness.

*See also:* ELEMENTARY EDUCATION, *subentry on* CURRENT TRENDS; LANGUAGE ARTS, TEACHING OF; POVERTY AND EDUCATION; SCHOOL REFORM TUTORING, *subentry on* SCHOOL; URBAN EDUCATION.

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ROBERT E. SLAVIN

## SUICIDE

*See:* RISK BEHAVIORS, *subentry on* SUICIDE.

## SUMMER ENRICHMENT PROGRAMS

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American society operates on an underlying faith that everyone is "free to perform at the level of his

or her ability, motivation, and qualities of character and be rewarded accordingly" (Gardner, p. 22). In other words, individuals should have the opportunity to go where their talents take them. At the same time, Americans hold dear the belief that all people should have an equal opportunity to succeed. Therefore, various education programs (e.g., through Head Start, Title 1), have been established to foster equality, regardless of socioeconomic background. To develop excellence, educational opportunities are provided that are enriching and accelerating so that talented individuals are matched with an environment that draws out their potential. While some truly believe that talented students will make it on their own, research has shown that what is taught, and how it is taught, is important for all students, even the most gifted. High expectations, continuous challenges, and learning something new each day are important for academic success.

Most states and many school districts have developed specialized summer programs that bring together academically talented students and offer an educational experience geared to their high abilities. Such specialized summer enrichment programs have proliferated across the country because research has demonstrated that high-ability students develop higher expectations, feel better about themselves, and engage in higher-level processing or discourse when working with other students of similar abilities. Moreover, summer programs foster independence and good work habits in an intellectually challenging environment that also develops critical thinking skills and creativity.

### Types of Programs

Summer programs designed to meet the needs of these high-ability learners include governors' schools, various options developed by local school districts as part of their gifted and talented programming, and precollegiate programs sponsored by colleges and universities on their campuses or at satellite sites. In the past, when funding was available, the National Science Foundation also sponsored such programs through grants to various institutions. Programs can be residential or distanced in nature, and they span the arts, humanities, and sciences. While most are offered in a course format, several programs are devoted to providing research experiences or specialized internships. Most of the residential programs, however, are limited to the secondary grades.

These programs are intended to provide enrichment (and acceleration in some cases) and build motivation in students who are not fully served or are underrepresented by conventional programs. Admission to most summer enrichment programs is highly competitive and selective. While a variety of criteria are often utilized in selecting students (e.g., grades, recommendations, nominations), high demonstrated ability as measured by achievement or aptitude tests is a critical component of any selection system.

### Summer Programs: An Example

One of the first summer programs for secondary students was started in 1972 by the Study of Mathematically Precocious Youth (SMPY) at Johns Hopkins University. It became the model for many university-based programs. The Center for Talented Youth (CTY) at Johns Hopkins and other universities across the country (e.g., Duke, Iowa, Iowa State, Northwestern, Vanderbilt) continue this work, adopting and adapting this model for their settings. In such programs, seventh-grade students who have taken the SAT or ACT and whose scores exceed the mean of college-bound seniors are invited to enroll. They are often called Talent Search programs because most students are identified through a talent search. In these summer programs, students can assimilate a full high school course (e.g., chemistry, Latin, math) within three weeks or take a similarly fast-paced course on a topic not offered by their local school. The program's instruction is aimed at the very characteristics that make students so gifted: their ability to make connections among seemingly disparate ideas, to assimilate new information rapidly, and to be challenged by the subject matter. Thus, rather than feeling rushed, these students thrive in such learning environments, which are deeply enriching, and they tend to crave more. Many (as many as 40% in some cases) return the following year for additional learning opportunities developmentally tailored to their level and rate of growth.

### Program Success: Some Evaluative Data

While both gifted boys and girls evaluate these programs positively (even twenty years later), a reliable gender difference is characteristically found. Girls tend to report more positive effects. It appears that peer pressure on gifted girls in most schools is harsher than that for gifted boys. When talented girls are placed in an environment without any pressure

not to achieve, they not only enjoy the learning experience more fully, but they are especially relieved by the absence of negative peer pressure. Indeed, they often report finally being able to "be themselves." Of course, boys report the same phenomena. It is not known whether participants are more deeply affected academically or socially by these programs. Many highly gifted students feel alienated in a traditional classroom, but not at these programs, where they feel they finally find individuals who understand them.

The identification of intellectually able students and the long-term impact of various educational options upon their development are being studied by SMPY, which is a fifty-year longitudinal study that began in 1971 at Johns Hopkins and in the early twenty-first century is run by the Peabody College of Education and Human Development at Vanderbilt University. This work involves studying, throughout their lives, more than 5,000 mathematically and verbally precocious students. This longitudinal study provides data to not only evaluate but also to refine programs. It also provides information about the development, needs, and characteristics of precocious youth.

The data collected during SMPY's first three decades has shown that, while most SMPY students do achieve their potential for high academic success in high school, college, and even graduate school, intellectually talented students will not necessarily achieve to their full potential unless provided with appropriate educational opportunities, and some of the most satisfying experiences are the summer enrichment programs.

But what does it mean to say that these individuals are doing well, especially if the educational system has intervened in their lives? In the most able cohort of SMPY's longitudinal study, which included individuals who were in the top 1 in 10,000 in ability and who experienced an intensive intervention, individuals have earned doctorates at 50 times the base rate and at twice the rate of individuals in the top 1 percent in ability who received less intervention. One of these individuals became a full professor at a major research university before age twenty-five.

### Conclusion

Summer enrichment programs have focused on providing developmentally appropriate learning experi-

ences for talented students, identifying those students who have such needs, which often go undetected, and then providing supplemental educational opportunities that ensure that such students are challenged and that their passions and love for learning are kept alive, rather than extinguished by curricula that are too slow paced and not at the right level. While doing so, they provide an appropriate social experience that is often experienced as healing. It could be said that summer enrichment programs for gifted and talented students are about developing rare human capital.

*See also:* GIFTED AND TALENTED EDUCATION.

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CAMILLA BENBOW

## SUMMER JOBS

*See:* EMPLOYMENT, *subentry on* SUMMER.

## SUMMER SCHOOL

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Summer school programs, also known as extended-year programs, are designed to provide educational opportunities to students during the summer months when schools traditionally observe summer break or summer vacation. Summer school programs generally fit into one of three categories: (1) remediation, (2) enrichment, or (3) extended-year for students with special needs.

### Remediation

Remediation summer school programs serve students who have difficulty mastering required core content and skills. Often these students lack the required prerequisites and/or skills needed to graduate from one level to the next, or they lack the required credits to graduate from high school. They may also have failed one or more minimum competency skill examinations required by a local school district or the state.

Remediation programs are designed to deliver a specific curriculum in a condensed period of time, emphasizing the mastery of the student's individual

deficiency. These summer school classes are generally longer in length (two to three hours per day) and meet for a shorter duration of time (four to six weeks) than traditional classes, which often meet for forty-five to ninety minutes per day for eighteen weeks. Frequently, students concentrate on one or two areas of study during a typical summer school session.

### Enrichment

Summer school enrichment classes are offered in a variety of designs. Some programs follow the same format as remedial programs, only they are designed to assist a student in accelerating their learning during the condensed period of time. Other programs emphasize a particular curricular area, such as science, a second language, or a particular performing or visual art form. These programs are often offered in a camp-type format, and in many cases they are located at an actual camp.

Other enrichment programs are developed in cooperation between a local school system and a college or university. These programs are usually offered on the college or university campus and emphasize an area of strength for the individual student. In a large number of cases, the college or university curriculum is taught.

Private enterprises deliver other forms of summer enrichment programs. These programs generally provide students with accelerated or enriched opportunities to explore a variety of curricular areas. The programs emphasize learning as an enjoyable activity and provide each student with an experience that is designed to create a desire to learn for the sake of learning.

### Extended-Year for Students with Special Needs

Under the federal Individuals with Disabilities Education Act (IDEA), each student with special needs must have an Individualized Education Program (IEP). A team consisting of parents, school personnel, support personnel, and, usually, the student develops this plan. IEPs frequently call for an extended-year program to be implemented during the summer months. Because each IEP addresses individual goals for a particular student, each program is intended to be designed to meet the unique needs of that student.

Extended-year programs for students with special needs may take a variety of forms. The program

may emphasize the continuation of the overall specific goals established for the student; it may emphasize one or more areas where special attention is needed to meet a particular goal; it may serve as a transition from one setting to another; or it may serve a student who needs the continuity of a structured program to avoid the loss of skills and knowledge due to a prolonged break in attendance. An extended-year program may duplicate the design described earlier for students who need remediation in a particular area of study. In all cases, the program is designed to meet the individual needs of the student.

### The History of Summer School

The traditional school calendar in the United States was heavily influenced by the needs of an agrarian society. Since the late spring, summer, and early fall were critical for farming families, school was not in session during these months. As a result, the school calendar traditionally ran from late fall through early spring, when there was less work to do on the farms. This pattern set the groundwork for the development of summer school.

As the nation transformed from an agrarian society to an industrialized society, education changed in many ways, but the traditional nine- to ten-month calendar remained intact. There have been many attempts to alter the traditional agrarian-based calendar, most notably by the advocates of year-round education (YRE), but none have caused widespread national change. As a result, summer has remained a time for vacation, relaxation, and an occasional summer school session.

**Sputnik and the civil rights movement.** The role of summer school in American education is a history of changing expectations. As society has changed, so has the role of summer school. On October 4, 1957, the launch of *Sputnik I* by the Soviet Union changed the world, and American education, forever. A national panic ensued as the country came to grips with its first defeat in the great space race of the 1950s and 1960s. Mathematics and science education became a priority of policymakers and educators. Summer school began to have an increased role in this movement. Students were encouraged to strengthen their mathematics and science skills through increased study. Federal funding became available to create accelerated mathematics and science programs, many of which were delivered in summer school sessions.

As the country became fully involved in the space race, the civil rights movement of the 1960s had an increased impact on education. Schools were seen more and more as institutions to enact social change, and summer schools were expanded to meet this need.

The 1983 publication of *A Nation at Risk: The Imperative for Educational Reform* by the National Commission on Excellence in Education had a profound impact on education. This report contended that the American educational system was inadequate and needed repair. It called for a movement it labeled the *new basics*, meaning a return to traditional academic standards. As schools began to restructure in the wake of this report, more and more summer school programs were implemented to meet the new demand for a return to traditional learning.

During the 1990s there was an increased demand for school accountability. Student test scores were frequently used as the measure of the effectiveness of individual schools and school districts. Students who had substandard test scores were often encouraged, if not required, to attend summer school to make up their deficiencies.

### Funding

There are two basic methods of funding summer school. One is through public funding. Schools receive funds from a variety of other governmental taxation sources, such as property taxes, sales taxes, and state run lotteries. Summer school programs are provided funding through these revenues, either on a per-pupil basis or through a lump sum allocation. In either case, funding is usually supplemental and separate from the regular funding dollars. These programs, run by public schools, are a part of the free public education system.

In many other summer school programs the participants pay a fee to cover the costs of the program. These programs are generally operated by private enterprises; however, there are cases where public institutions assess a fee for a summer program that is considered supplemental.

### Trends, Issues, and Controversies

As stated earlier, the role of summer school has had a changing mission, depending on the current trends in society at any given time. Summer school has come to be seen as an excellent tool to deliver added

emphasis to popular movements. The 1950s and the 1980s saw summer school as an answer to low academic achievement; the 1960s saw summer school as an opportunity to solidify social change; and the 1990s saw summer school as a tool to implement accountability in students and schools.

Advocates of extended-year calendars and year-round education argue that the school calendar, based on the needs of an agrarian society, has outlived its usefulness. They advocate the elimination of the summer vacation, thus ending the need for summer school.

Other researchers have shown that students evidence a profound loss of retention over the summer months, especially those students who come from disadvantaged backgrounds. There is a school of thought, moreover, that questions the value of summer school programs and cites a lack of research showing positive student achievement as a result of participation in a summer school program.

Throughout the history of summer school there have been advocates for requiring low-achieving students to attend summer school. The controversy surrounding this issue runs deep and points to a deeper philosophical argument regarding the overall purpose of American schooling. As long as there is disagreement on this purpose, there will be disagreement on the purpose and role of summer school.

Summer school is as much an American institution as is American education itself. Its development has mirrored the development of an educational system that has struggled to keep pace with the changing demands of a changing society. Summer school has met a variety of needs and will continue to change with our changing society.

*See also:* ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; YEAR-ROUND EDUCATION.

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## SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS

The twenty-first century finds one-third of America's public school children attending one of ten large urban (large-city) school districts. By 2020 approximately one-half of public school enrollment will be clustered in twenty districts. The educational stewardship of a majority of the nation's youth rests uncomfortably on the shoulders of a very few large-city school superintendents. Their success and the success of their districts may very well determine the future of American democracy.

Urban districts are typically considered to be those located in the inner core of metropolitan areas having enrollments of more than 25,000 students. The research and literature about large-city school districts portray conditions of poverty, chronic academic underachievement, dropouts, crime, unstable school boards, reform policy churn, and high superintendent turnover.

The typical tenure of a superintendent in the largest large-city districts is two to three years. This brief tenure makes it unlikely a superintendent can

develop and implement reform programs that can result in higher academic achievement—let alone rebuild crumbling schools buildings, secure private sector assistance, and build a working relationship with the city’s political structure.

The large-city superintendency is a position defined by high expectations, intense stress, inadequate resources, and often a highly unstable politicized board of education.

### History of the Urban Superintendent

The first large-city superintendency was established in 1837 in Buffalo, New York. The number of appointed superintendencies grew in parallel with the growth of American cities. These early large-city superintendents were hired to relieve boards of education of managerial tasks and business affairs. The first superintendents generally acted as coordinators ensuring similar practices among schools for purchasing materials, insuring building maintenance, and keeping districts’ financial records.

As city school systems grew many quickly became “lighthouse” districts featuring innovative high-quality education programs and services. These district provided a uniform curriculum based upon standards and an extensive array of elective courses taught by specially trained teachers. This was generally an era of social, economic, and political reform and birthplace of the modern large-city superintendency.

The large-city superintendents who shouldered responsibility for educational programs quickly became the most visible and respected educators in the country. Nearly all were men, Protestants, and former schoolmasters of country schools. With assistance from industrial leaders they built the large urban school bureaucracies still in place in the early twenty-first century. An important component of these school bureaucracies was and still is the industrial management practice called *scientific management*, which emphasizes time management, employee specialization, and a top-down type of organization structure. The goal of scientific management was efficiency—a desirable objective for large city superintendents besieged by rapid enrollment growth, construction of new schools, and the management of public tax dollars.

A strong driving force for early large-city superintendents was the Americanization of large numbers of immigrants. This was achieved through a

uniform curriculum, compulsory attendance, teacher certification, testing, vocational education, and citizenship. These were the keystones to a “common” education for all children. Many large-city superintendents perceived themselves to be reformers as well as builders of the American dream. Their reforms were built upon practicality and meeting the educational needs of society and the workplace. The vision of schooling held by most of the superintendents was rooted in their experiences of growing up in rural and small-town America.

Despite the stress and strain of leading huge school organizations, the large-city superintendents generally enjoyed lengthy tenure. Their appointments were made by boards of education, themselves appointed by mayors and city councils. Board members were generally prominent doctors, lawyers, and businessmen. Only after the World War II did most large-city districts switch to elected boards.

The pyramid-shaped urban district structure provided the large-city superintendents with an immense amount of personal control. Through hard work they were generally successful in standardizing curriculum and testing procedures that were necessary to select and prepare students for the workforce, high school, and college.

The large-city superintendents not only pioneered the current public school program and organization, but also laid the foundation for a profession. Many superintendents were imposing personalities, adroit politicians, community development activists, and shrewd business executives.

### The Profession

Large-city superintendents after World War I were instrumental in creating training programs to identify and prepare their successors. The first of these higher education academic programs was at Teachers College (Columbia University) in New York. Many of the early professors of educational administration were former large-city superintendents.

Elwood Cubberly of Stanford University can perhaps be called the “dean” of the educational administration professorship. Perhaps his most important contribution was conducting large-city studies where he and colleagues studied in detail every operating aspect of a selected large-city school district. Out of these studies came compendiums of best practices on how to build and administer quality school districts. Importantly, Cubberly based his list

of best practices and necessary personal attributes on the work of large-city superintendents.

These lists of skills, content knowledge, practices, and leadership traits developed by former large-city superintendents in professorial roles continue to be utilized in the early twenty-first century. Certification standards in many states still reflect the content of the large-city studies. Textbooks about the superintendency were nearly all written by former city superintendents. The establishment of the American Association of School Administrators in 1937 was also due to the efforts of the large-city superintendents.

### School Boards

Nearly all large-city superintendents are appointed by elected boards of education. A typical contract length for a large-city superintendent is three or four years. About half of superintendents in the largest twenty-five districts are able complete a four-year contract. Boards of Education in large-city districts usually are comprised of more than nine members elected for four years. The same is true for a growing number of appointed boards found in cities such as Chicago, Cleveland, and Boston.

Large-city district-elected board positions are often contentious, with candidates spending substantial amounts to be elected to a virtually unpaid office. In some districts a modest stipend is paid to board members. Many large-city boards are very politicized, “churning over” both board members and superintendents on a regular basis. Continuity in leadership is a serious problem for many districts.

Most authorities cite the most important decision a board makes to be the selection of a superintendent. In the case of large-city districts it is often very difficult for a majority of board members to agree upon an appointment. Difficulty in choosing a superintendent is usually a harbinger of future intraboard conflict, indecision, and instability. An example is the Kansas City, Missouri, district, which hired nineteen superintendents in a thirty-year period.

Large-city board members often run on single-issue platforms: a typical example, to fire bad teachers and administrators whose incompetence is the reason for low test scores. Also, some board members feel a strong need to report to constituents about the progress they are making in “fixing” the district. These types of attitudes and actions often

lead to superintendent and board conflict. Valuable energy and time of boards and superintendents is often spent in endless arguments, intrigue, and political posturing for the media.

In large-city districts superintendent-board conflict seems inevitable due to political interests, attempts by boards to micromanage, and pressures by groups such as unions to pressure board members to discipline superintendents and administrators who do not make decisions to the special interest group’s liking.

### Characteristics of the Large-City Superintendent

The media often portray the large-city superintendency as an impossible job. At the very least, it is a job of great pain and modest financial gain. The applicant pool for large-city superintendencies has always been reported to be meager in high-quality candidates. Most large-city superintendencies are filled by candidates who reflect the ethnicity of students and community. Racial preferences have kept applicant pools thin because of lack of substantial numbers of qualified African Americans and Hispanics. Women are often found in the position of large-city superintendent.

When a large-city superintendent conflicts with a board the media often takes advantage of the situation. The well-publicized firings of large-city superintendents after tumultuous conflict with boards do not serve as a positive advertisement for large-city superintendencies.

Usually search firms are retained by large-city boards to find a group of qualified candidates. Often a majority of the qualified candidates found by search firms are superintendents in other urban districts. This scenario results in one large-city district making an offer to another districts’ superintendent. This creates a public image of the large-city superintendency being recycled.

Another source of large-city superintendents is the inside central office administrator. In large districts there are large number of deputy and assistant superintendents qualified to step up to the higher position. Board members sometimes shy away from inside candidates when those candidates wish to see reform initiatives implemented in the district. However, many of these inside candidates have a vast knowledge of the district, its history, problems, and resources. From experience they know how to get things done within the system. For board members,

hiring an inside candidate removes the possibility of possible incompatibility with the new superintendent.

The nontraditional (noneducator) applicant coming from a military or private sector background is infrequently hired by large-city boards permitted to do by state statute. Some large-city boards have hired noneducators to be chief executive officers who in turn hire an educator to lead the educational program. In appearances employing a chief executive officer implies a movement of district management to a corporate model.

A major problem facing the large-city superintendency is attracting a well-qualified applicant pool comprised of women and minorities. Unfortunately, many large-city superintendents are not as well qualified as potential applicants sitting on the sidelines. Many successful superintendents in smaller districts do not wish to take on the “impossibility” of the large-city superintendency.

### **The Impossibility and Implausibility of the Position**

The operational responsibilities of large-city superintendents can be extraordinary. Billion-dollar budgets, a half-million students and 50,000 employees require a chief executive officer capable a leading a large management team. The position is unique in that it also requires the chief executive to be the district’s leading educator possessing expert knowledge about teaching, curriculum, testing, special education, and school reform. In addition, due the nature of education financing, the superintendent must be a shrewd politician ensuring that the district receives its share of the public tax dollar.

The superintendent must also be a master communicator working with a political board, forming working relationships with public and private groups, and especially serving as the connecting link between community. In a nutshell this describes the near impossible and implausible role of the large-city superintendent.

The multiple responsibilities and expectations leave large-city superintendents with little choice than to choose a “key set of challenges” to focus their attention upon. The federal government’s 1983 report, *A Nation at Risk: The Imperative for Educational Reform*, sparked a national school reform movement and, in reaction, large-city superintendents began to shift from being expert managers to instructional reformers.

Superintendents, especially, in the large urban districts, are pressured for academic accountability. Many at the urging of boards yearly mount multiple reform initiatives promising better test scores. Boards often view reform initiatives as a public demonstration the district is responding to chronic underachievement by poor and minority children.

In response to national school reform efforts, large-city boards search for superintendents who espouse the belief that all children are capable of learning state-imposed standards and that test scores can be raised through improved instructional models. The public persona of many large-city superintendents has been more of a instructional leader rather than chief executive officer. Unfortunately, district-wide success stories of large-city superintendents leading their districts to substantive and lasting reform have been few.

There have been and are successful large-city superintendents. Some of these individuals have failed in one district and succeeded in another possessing more favorable conditions. The deciding factor between success and failure seems to be in mayoral support and board stability. Cities with records of some reform success are those where the mayor perceives the health of the school district to be integral to the city. In several cities, mayoral involvement in school reform has reached the point of mayor’s taking control the school board and district.

Perhaps the greatest failing of large-city superintendents is their inability to be political leaders. Large-city schools many times consume more than half of the tax dollars in the city, are a major employer, and provide a critical public service. Competitors for the public tax dollars, such as the city council and agencies, have elected officials with political constituencies with forceful lobbies. School districts boards are comprised of volunteer elected officials without a political power base. Infrequently, a large-city district can mount a strong political offensive that wrests away fiscal resources competitor groups.

The large-city superintendent has to be a keen political observer and be able to form alliances, and work quietly and effectively with the city political power structure. An examination of past and present successful large-city superintendents proves this to be the case. Behind-the-scenes political maneuvering can be more beneficial in obtaining badly needed resources than being a high-profile school reformer making frequent appearances at meetings, conferences and media events.

*See also:* EDUCATIONAL ACCOUNTABILITY; SCHOOL BOARD RELATIONS, *subentry on* RELATION OF SCHOOL BOARD TO SUPERINTENDENT; SUPERINTENDENT OF SCHOOLS; URBAN EDUCATION.

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## SUPERINTENDENT OF SCHOOLS

The superintendent of schools is a position of wide influence but one that is narrowly understood. This, in part, stems from its history. Rarely has a position of such centrality grown in such a tangled way. Consequently, there has not been much written or studied about the superintendency, and to this day, not much is known about how it functions and why some people do it well and others do not. Further, because of the tremendous pressure on public education in the twenty-first century, the superintendent's role is changing and moving toward an uncertain future.

The superintendency can be divided into three periods of history. The early period began shortly after the genesis of public education during the 1800s and extends to the early part of the twentieth century. The professional superintendent period covered the first half of the twentieth century and began to end in the 1960s. The modern superintendency is still in transition.

### History

The position of superintendent emerged a decade or so after the creation of public schools. Initially there were no superintendents of schools. First, state boards ran schools, and then local lay boards, both without the benefit of professional help.

Public education is the responsibility of the state. The Tenth Amendment to the United States Constitution states that “the powers not delegated to the United States by the Constitution, nor prohibited by it to the states, are reserved to the states respectively, or to the people.” Education was not mentioned in the Constitution, and when interest grew in providing education, the states assumed that accountability.

The state legislatures passed laws for public education and allocated small amounts of money to help local communities with their education needs. At the beginning of the nineteenth century, the lawmakers saw the need to have an accounting system for these funds and appointed volunteer committees to oversee the use of state funds. These committees eventually led to the formulation of state and local boards of education to carry out this function. In fact, Massachusetts, which is considered the home of public education because of the work of the educator Horace Mann, still calls its school boards “school committees.”

As the number of communities that received funds increased, the time required of the local committees became burdensome. A paid state officer was designated to handle the accounting activities of state education funds as well as an increasing number of other responsibilities. This led to a full-time job and New York is credited with appointing the first state superintendent in 1812. Other states soon planned for similar positions.

With few exceptions, the state superintendents were positions of data collecting and distribution of state funds and had little influence on educational issues. State departments of education evolved with similar functions—establishing and enforcing minimum standards and equalizing educational opportunities through the distribution of state funds.

Many small local school systems formed as the population grew and communities expanded to the west. The state officer was not able to visit, inspect, and oversee all the activities of the new schools, and these responsibilities were gradually delegated to local communities, again usually through county volunteer committees.

History repeated itself: the task of overseeing the daily operations became burdensome and led to the creation of paid county positions to conduct this work. Prior to the Civil War, more than a dozen states adopted the county form of educational supervision and had created county superintendents.

The actual creation of local boards of education dates back to Thomas Jefferson, who in 1779 introduced a proposal in the Virginia Assembly that the citizens of each county would elect three aldermen who would have general charge of the schools. The aldermen were to create an overseer for every ten school districts in the county. The duties included appointing and supervising teachers and examining pupils.

The local superintendency developed simultaneously with the state and county superintendencies. It was established by local initiative, not by constitution or statute, as state and county superintendents were. Some local superintendents supervised a single school district and others oversaw multiple schools.

Buffalo, New York, and Louisville, Kentucky, are credited with establishing in 1837 the first local superintendents. While the idea did not spread quickly, by 1870 there were more than thirty large cities with a superintendent. Until the 1870s local boards without legal authority to do so hired the su-

perintendents. It was felt that local boards had the authority to operate schools and by implication they had authority to hire an individual to administer them.

In 1865 the National Education Association created a Superintendent's Division to serve this growing profession. This later became the American Association of School Administrators, which serves superintendents in the twenty-first century.

### **Importance in Education**

The superintendency—a position that was created by local boards without statutory authority or support—emerged in the twentieth century as a central and powerful position in education. As the number of local districts grew and as the complexity increased, more districts hired superintendents. The high water mark came in the 1960s when there were more than 35,000 superintendents nationally.

Their power also increased and peaked at about the same time. During the first half of the century the superintendent became the most powerful individual in the school district and one of the most visible members of the local community. They were considered civic leaders who held their positions for many years and who wielded enormous authority over the daily life of the school system.

Lay boards were content to turn over the reins of power to these professional educators. The superintendent had little external interference in conducting the work of the school district and boards became secondary in the operations of the school districts. The role of the board of education was, in large part, to support and approve the work of the superintendent.

School districts became big businesses within their local communities, hiring hundreds and in the case of urban districts, thousands of employees and spending millions of tax dollars. Superintendents made most of the major decisions affecting the districts, and were normally supported by the local lay boards who saw their role as supporting this work. Acrimony and disagreements were rare.

By the 1960s the world started to change. The teacher associations, which previously had been considered professional organizations, became more militant and drifted towards the union movement. The advent of the civil rights movement spilled over into the schools with accompanying pressure for local districts to reflect a more “grass roots” quality;

the white-collar board members were replaced by more activist parents and community members. The courts and the federal government became more involved. The passage of the Elementary and Secondary Education Act (ESEA) in 1965 marked a much greater interest on the part of the federal government in education and a series of court cases curtailed the schools' role *in loco parentis* (in place of the parent), authority that had previously been the standard. The civil rights movement and the antiwar movement generated greater student militancy, and schools were faced with dealing with expanded student rights and campus disruptions. This situation led to a dispersal of authority that had once been held by the superintendent, and much greater involvement and scrutiny by the public became the norm. School leaders were no longer trusted to conduct the affairs of the schools without significant external observation and criticism.

### New Expectations

During the last quarter of the twentieth century, the country began to change its expectations for what the schools should deliver. For generations, the schools acted as a "sorting device" for society. The segmented society and economy demanded workers and managers, and schools divided their populations into the two groups. As the economy shifted from an industrial system to a more informational/high technology system, it required workers with higher skill sets. This challenge was compounded by federal legislation that placed the education of students with disabilities into the mainstream of schools. It was further exacerbated by the increased immigration of students from all over the world—many arrived without knowledge of English and, in many cases, without the benefit of formal education in their home country.

In 1983 the *Nation at Risk* report was issued by Secretary of Education Terrell Bell and released by President Reagan. The report indicated that the schools of America were caught in a "rising tide of mediocrity" and that serious reform was needed. Although the rising tide was really one of expectations that outstripped the schools' ability to deliver past their traditional role, the pressure on schools and subsequently school leaders became severe. This report was followed by a spate of others and by tremendous media attention that was given to the so-called crisis in schools.

This led to renewed political interest in schools. During the 1980s and 1990s states reasserted their role in education by setting state standards and assessment systems. Even the federal government, despite its lack of constitutional authority, became more aggressive to the point that candidates for president of the United States laid claim to the title "Education President."

This situation further undermined the authority of the superintendency, without alleviating the expectations for greater accountability from the role. At the beginning of the twenty-first century, the role was no longer seen as prestigious or one where power existed, leading to a shortage in the profession.

### An Evolving Role

Although it is not clear what the role will become in the future, it seems certain that uncertainty will be the hallmark of the job. That will require a different set of expectations for those entering the profession. The new imperative that "all children be taught" will call for greater educational leadership from the superintendent. Further, the uncertain political climate that now surrounds schools will require the superintendent to be proficient in politics and the art of persuasion. Much of the work will revolve around the ability to create and maintain relationships. The modern superintendent will not be a superintendent of schools whose job is to oversee and manage—he or she will be a superintendent of learning who will have to navigate an uncertain terrain with skill and finesse.

*See also:* EDUCATIONAL ACCOUNTABILITY; SCHOOL BOARD RELATIONS, *subentry on* RELATION OF SCHOOL BOARD TO SUPERINTENDENT; SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS.

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PAUL D. HOUSTON

## SUPERVISION OF INSTRUCTION

Supervision, as a field of educational practice with clearly delineated roles and responsibilities, did not fall from the sky fully formed. Rather, supervision emerged slowly as a distinct practice, always in relation to the institutional, academic, cultural, and professional dynamics that have historically generated the complex agenda of schooling.

### **The History of Supervision**

In colonial New England, supervision of instruction began as a process of external inspection: one or more local citizens were appointed to inspect both what the teachers were teaching and what the students were learning. The inspection theme was to remain firmly embedded in the practice of supervision.

The history of supervision as a formal activity exercised by educational administrators within a system of schools did not begin until the formation of the common school in the late 1830s. During the first half of the nineteenth century, population growth in the major cities of the United States necessitated the formation of city school systems. While superintendents initially inspected schools to see that teachers were following the prescribed curriculum and that students were able to recite their lessons, the multiplication of schools soon made this an impossible task for superintendents and the job was delegated to the school principal. In the early decades of the twentieth century, the movement toward scientific management in both industrial and public administration had an influence on schools. At much the same time, child-centered and experienced-based curriculum theories of European educators such as Friedrich Froebel, Johann Pestalozzi, and Johann Herbart, as well as the prominent American philosopher John Dewey, were also affecting the schools. Thus, school supervisors often found themselves caught between the demand to evaluate teachers scientifically and the simultaneous need to transform teaching from a mechanistic repetition of teaching protocols to a diverse repertory of instruc-

tional responses to students' natural curiosity and diverse levels of readiness. This tension between supervision as a uniform, scientific approach to teaching and supervision as a flexible, dialogic process between teacher and supervisor involving the shared, professional discretion of both was to continue throughout the century.

In the second half of the century the field of supervision became closely identified with various forms of clinical supervision. Initially developed by Harvard professors Morris Cogan and Robert Anderson and their graduate students, many of whom subsequently became professors of supervision in other universities, clinical supervision blended elements of "objective" and "scientific" classroom observation with aspects of collegial coaching, rational planning, and a flexible, inquiry-based concern with student learning. In 1969 Robert Goldhammer proposed the following five-stage process in clinical supervision: (1) a pre-observation conference between supervisor and teacher concerning elements of the lesson to be observed; (2) classroom observation; (3) a supervisor's analysis of notes from the observation, and planning for the post-observation conference; (4) a post-observation conference between supervisor and teacher; and (5) a supervisor's analysis of the post-observation conference. For many practitioners, these stages were reduced to three: the pre-observation conference, the observation, and the post-observation conference. Cogan insisted on a collegial relationship focused on the teacher's interest in improving student learning, and on a non-judgmental observation and inquiry process.

The initial practice of clinical supervision, however, soon had to accommodate perspectives coming out of the post-*Sputnik* curriculum reforms of the 1960s that focused on the structures of the academic disciplines. Shortly thereafter, perspectives generated by research on *effective schools* and *effective classrooms* that purported to have discovered the basic steps to effective teaching colonized the clinical supervision process. It was during this period that noted educator Madeline Hunter adapted research findings from the psychology of learning and introduced what was also to become a very popular, quasi-scientific approach to effective teaching in the 1970s and 1980s. These various understandings of curriculum and teaching were frequently superimposed on the three- to five-stage process of clinical supervision and became normative for supervisors' work with teachers. Nevertheless, in many academic

circles the original dialogic and reflective process of Cogan and Goldhammer continued as the preferred process of supervision. This original process of supervision has been subsequently embraced by advocates of peer supervision and collegial-teacher leadership through action research in classrooms. Despite the obvious appeal of clinical supervision in its various forms, it is time-consuming and labor-intensive, rendering it impossible to use on any regular basis given the large number of teachers that supervisors are expected to supervise (in addition to their other administrative responsibilities).

Recognizing the time restraints of practicing supervisors, and wanting to honor the need to promote the growth of teachers, Thomas Sergiovanni and Robert Starratt suggested, in 1998, the creation of a supervisory system with multiple processes of supervision, including summative evaluation. Such a system would not require the direct involvement of a formal supervisor for every teacher every year. The supervisory system might cycle teachers with professional status through a three- to five-year period, during which they would receive a formal evaluation once and a variety of other evaluative processes during the other years (e.g., self-evaluation, peer supervision, curriculum development, action research on new teaching strategies, involvement in a school renewal project). The once-a-cycle formal evaluation would require evidence of professional growth. Sergiovanni and Starratt also attempted to open the work of supervision to intentional involvement with the schoolwide renewal agenda, thus placing all stimuli toward professional growth—including the supervisory system—within that larger context.

### **Roles and Responsibilities of Supervisors**

Since supervision is an activity that is part of so many different roles, a few distinctions are in order. First, there are university-based supervisors of undergraduate students in teacher education programs who supervise the activities of novice teachers. Next, a principal or assistant principal may be said to conduct general supervision—as distinct from the more specific, subject-matter supervision conducted by a high school department chair. Other professional personnel involved in supervisory roles include cluster coordinators, lead teachers, mentors, peer coaches and peer supervisors, curriculum specialists, project directors, trainers, program evaluators, and district office administrators. Unfortunately, these professionals, more often than not, carry on their su-

perisory work without having any professional preparation for it, finding by trial and error what seems to work for them.

Principals not only supervise teachers, but also monitor the work of counselors, librarians, health personnel, secretaries, custodians, bus drivers, and other staff who work in or around the school. This work requires as much diplomacy, sensitivity, and humanity as the supervision of teachers, although it tends to be neglected entirely in the literature. In their everyday contact with students, all of these support personnel may teach multiple, important lessons about the integrity of various kinds of work, about civility and etiquette, and about basic social behavior.

Principals and assistant principals also supervise the work and the behavior of students in the school. As the relationships between students become more governed by legal restrictions—including definitions of racial, ethnic, and sexual harassment, of due process, of privacy and free speech rights—and as the incidents of physical violence, bullying, carrying of weapons to school, and the extreme cases of students killing other students increase, this aspect of supervision becomes increasingly complex. Many system and local school administrators have developed a comprehensive system of low visibility, and restrained, security-oriented supervision that anticipates various responses to inappropriate behavior. Unfortunately, many have not attended to the corresponding need to build a nurturing system of pastoral supervision that sets guidelines for the adults in the school in order for them to build sensitive relationships of trust, care, support, and compassion with the students. This more pastoral approach to student supervision will lessen, though not eliminate, the need for other security-conscious types of supervision.

Supervisors usually wear two or three other hats, but their specific responsibilities tend to include some or all of the following arranged in ascending order of scope or reach:

1. Mentoring or providing for mentoring of beginning teachers to facilitate a supportive induction into the profession.
2. Bringing individual teachers up to minimum standards of effective teaching (quality assurance and maintenance functions of supervision).
3. Improving individual teachers' competencies,

no matter how proficient they are deemed to be.

4. Working with groups of teachers in a collaborative effort to improve student learning.
5. Working with groups of teachers to adapt the local curriculum to the needs and abilities of diverse groups of students, while at the same time bringing the local curriculum in line with state and national standards.
6. Relating teachers' efforts to improve their teaching to the larger goals of schoolwide improvement in the service of quality learning for all children.

With the involvement of state departments of education in monitoring school improvement efforts, supervisory responsibilities have increasingly encompassed the tasks at the higher end of this list. In turn, these responsibilities involve supervisors in much more complex, collaborative, and developmental efforts with teachers, rather than with the more strictly inspectorial responsibilities of an earlier time.

### **Trends, Issues, and Controversies**

A variety of trends can be seen in the field of supervision, all of which mutually influence one another (both positively and negatively) in a dynamic school environment. One trend indicates that teachers will be "supervised" by test results. With teachers being held accountable for increasing their students' scores, the results of these tests are being scrutinized by district and in-house administrators and judgments being made about the competency of individual teachers—and, in the case of consistently low-performing schools, about all the teachers in the school. In some districts, these judgments have led to serious efforts at professional development. Unfortunately, in many districts test results have led to an almost vitriolic public blaming of teachers.

Another trend has been toward a significant involvement of teachers in peer supervision and program development. In the literature, these developments are often included in the larger theme of teacher leadership. Along with this trend comes an increasing differentiation in the available options by which teacher supervision may be conducted, thus leaving the more formal assessment for experienced teachers to once every four or five years. Whatever form supervision takes, it has been sub-

stantially influenced by the focus on student learning (and on the test performances that demonstrate this learning), and by the need to make sure that attention is given to the learning of all students. Thus, the supervisory episode tends to focus more on an analysis of teaching activity only in relation to, rather than independent of, evidence of student learning.

This focus on student learning in supervision is further influenced by the trend to highlight the learning of previously underserved students, namely those with special needs and consistently low-performing students. Supervisors and teachers are expected to take responsibility for high quality learning for all students, a responsibility that necessarily changes how they approach their work together. Finally, all of these trends are combined in the large trend of focusing on schoolwide renewal. This means attending not only to instructional and curriculum issues, but also to structural and cultural issues that impede student learning.

There are a variety of issues in the field of supervision that need resolution—or at least significant attention. To confront the large agenda of school renewal (in which schools are required to respond to state-imposed curriculum standards or guidelines), systems of supervision at the state level, the district level, and the school level need to coordinate goals and priorities. The politics of school renewal tend to lend a punitive, judgmental edge to supervision at the state level, and to some degree at the district level, and that impression poisons supervision at the school level. Test-driven accountability policies, and the one-dimensional rhetoric with which they are expressed, need to take into account the extraordinarily complex realities of classrooms and neighborhood communities, as well as the traditionally underresourced support systems that are needed to develop the in-school capacity to carry out the renewal agenda. If state and district policies call for quality learning for all students, then schools have to provide adequate opportunities for all students to learn the curriculum on which they will be tested. Supervisors are caught in a crossfire. On the one hand, parents and teachers complain that a variety of enriched learning opportunities for children who have not had an opportunity to learn the curriculum are not available; on the other, district and state administrators complain about poor achievement scores on high-stakes tests, while ignoring the resources needed to bring the schools into compliance with reform policies.

Another issue needing attention is the divide between those supervisors who accept a functionalist, decontextualized, and oversimplified realist view of knowledge as something to be delivered, and those who approach knowledge as something to be actively constructed and performed by learners in realistic contexts—and as something whose integrity implies a moral as well as a cognitive appropriation. Assumptions about the nature of knowledge and its appropriation, often unspoken, substantially affect how supervisors and teachers approach student learning and teaching protocols. This is an issue about which all players in the drama of schooling will only gradually reach some kind of consensus. A related issue concerns the degree to which schools and classrooms will accommodate cultural, class, gender, racial, and intellectual diversity. Supervisors cannot ignore the implications of these necessary accommodations for the work of teaching and curriculum development.

Perhaps the biggest controversy in the field is whether supervision as a field of professional and academic inquiry and of relatively unified normative principles will continue to exist as a discernable field. More than a few scholars and practitioners have suggested that supervisory roles and responsibilities should be subsumed under various other administrative and professional roles. For example, principals, acting as “instructional leaders,” could simply include a concern for quality learning and teaching under the rubric of instructional leadership and eliminate the use of the word *supervision* from their vocabulary. Similarly, teacher leaders could engage in collegial inquiry or action research focused on improving student learning and teaching strategies, and similarly eliminate the use of the word *supervision* from their vocabulary—terms like *mentoring*, *coaching*, *professional development*, and *curriculum development* could instead be used.

Many professors whose academic specialization has been devoted to research and publication in the field of supervision oppose this relinquishing of the concept of supervision, not only because of the vitality of its history, but also because of the fact that the legal and bureaucratic requirements for supervision will surely remain in place. Having a discernible, professional field of supervision, they contend, will prevent the bureaucratic and legal practice of supervision from becoming a formalistic, evaluative ritual. Keeping the professional growth and development aspect of supervision in dynamic tension with the

evaluative side of supervision can best be served, they maintain, by retaining a discernible and robust field of scholarship that attends to this balance.

These trends, issues, and controversies will likely keep the field of supervision in a state of dynamic development. However, a lack of attention to the implications of these issues will most certainly cause the field to atrophy and drift to the irrelevant fringes of the schooling enterprise.

*See also:* MENTORING; PRINCIPAL, SCHOOL; SCHOOL REFORM; TEACHER EVALUATION, *subentries on* METHODS, OVERVIEW.

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## SUPREME COURT OF THE UNITED STATES AND EDUCATION, THE

Prior to the twentieth century, the United States Supreme Court issued few important decisions concerning education, and virtually none dealing with schooling at the elementary and secondary levels. Schooling has always been considered primarily a state and local government function in America, and it was not until well into the twentieth century that the Court seriously imposed on the states provisions of the U.S. Constitution that have turned out to be importantly relevant to education.

By contrast, in the second half of the twentieth century, the Court became a major force in shaping

American education, interacting with most of the key educational policy issues confronting society during that era. Many of these issues have been extraordinarily controversial, both as education questions and as legal questions.

Especially from the mid-1950s through the mid-1970s, the Court largely allied itself with the views of "liberals" and thwarted state and local educational policies that were seen to run counter to "liberal" values. Starting in the late 1970s and continuing into the early twenty-first century, however, the Court has become more cautious about imposing Constitutional restraints on the educational process. The decisive, if changing, role of the Court in American education is illustrated by decisions in three major areas: religion, race, and the individual rights of students.

### Religion

Following World War I, nativist movements around the nation prompted some state legislatures to try to restrict, or even close, private schools. But in a series of decisions in the 1920s—most importantly *Meyer v. Nebraska* and *Pierce v. Society of Sisters*—the Court declared that parents have a federal Constitutional right to educate their children in private schools, subject to reasonable regulation of those schools by the state. This legal principle, based in the due process clause of the Fourteenth Amendment to the U.S. Constitution, has helped preserve the Catholic school system that grew up in the nineteenth century in response to Protestant domination of public schools and the insistence at the time on Protestant-based prayer and Bible reading in public schools. In 1972, in an even greater deference to religiously based parental claims, the Court decided in *Wisconsin v. Yoder* that Amish parents, given their long history of responsible other-worldliness, had a due process right to withhold their children from school once they reach age sixteen.

Starting in the 1960s, however, the Court's attention turned to cleansing the public schools of religion. For example, in *Engel v. Vitale* and *School District v. Schempp*, it prohibited government-sponsored school prayer and Bible reading, and in *Epperson v. Arkansas* it voided a ban on the teaching of evolution in public schools as violations of the First Amendment's prohibition against the "establishment" of religion.

At the same time the Court was insisting that the public schools must be secular, it also became leery

of direct public financial assistance of private elementary and secondary schools, which were, in the 1960s and 1970s, overwhelmingly Catholic. To be sure, in three earlier cases the Court upheld the public provision of bus rides in *Everson v. Board of Education* and regular textbooks in *Board of Education v. Allen* to children attending nonpublic schools and the exemption of religious schools from the property tax in *Walz v. Tax Commission*. Nevertheless, in the early 1970s the Court announced a series of decisions—most importantly *Lemon v. Kurtzman* and *Committee for Public Education v. Nyquist*—that invalidated financial aid to nonpublic schools and their users. These decisions were based primarily on the theory that the “primary effect” of this funding was the support of religion. Overall, then, by the mid-1970s the Court seemed committed to an interpretation of the First Amendment’s “establishment” clause that called for a “high wall of separation” between church and state.

In the last quarter of the twentieth century, the Court held fast to its opposition to prayer in the public schools. In *Wallace v. Jaffree* it extended the ban in 1985 to cover a religiously motivated, required “moment of silence,” with the *Lee v. Weisman* decision in 1992 to include invocations and benedictions at public school graduation ceremonies, and in 2000 to student-led prayers at high school football games in the *Santa Fe Independent School District v. Doe* decision. In the same vein, in *Edwards v. Aguillard* in 1987 it struck down as violating the “establishment clause” a law seeking to pair the teaching of evolution with creation science, and in 1994 it invalidated a public school district specially constructed for a group of Hasidic Jews in *Board of Education of Kiryas Joel v. Grumet*.

Yet the Court has also become much more deferential to policies designed to accommodate religious freedom inside schools. Concern for the rights of students to their First Amendment guaranteed “free exercise” of religion has led to the development of “equal access” policies: some adopted by educational institutions; others enacted by legislatures. The Court has upheld these arrangements, allowing student religious groups to use school facilities once that privilege has been accorded to other student groups, in 1981 in *Widmar v. Vincent* at the university level and in *Board of Education of Westside Community Schools v. Mergens* in 1990 at the secondary-school level. Moreover, in 1995, on “free speech” grounds, the Court held in *Rosen-*

*berger v. University of Virginia* that when college student fees were used to fund various student newspapers, religious student groups had to be included as beneficiaries.

Moreover, on the issue of the aid to private schools, starting in the 1980s the Court began to permit many more types of financial assistance. These have ranged from tax deductions for financial contributions made to private schools in *Mueller v. Allen*; to the provision of a sign language interpreter for a deaf student in a private school in *Zobrest v. Catalina Foothills School District*; reading specialists and similar assistance for low-income private school pupils in *Agostini v. Felton*; and computers and other educational materials to private schools in *Mitchell v. Helms*. At the level of higher education, the Court even upheld a program under which a state would pay for a student’s education to become a clergyman in *Witters v. Washington Department of Services for the Blind*.

In sum, the Court has clearly backed away from a rigid adherence to the “high wall of separation” vision of the First Amendment. Yet, the legal doctrine in this area has become so convoluted that in 2001 legal scholars were quite uncertain about whether it is constitutional for states and school districts to adopt, as three had, school choice plans that permit families to pay for tuition at private schools (including religious schools) with publicly funded vouchers.

## Race

Starting in 1954 the Court centrally immersed itself in issues of race and American education by taking the lead in dismantling the system of official and intentional segregation that marked American public schools not only in the South, but also in many school districts throughout the nation. Before its famous 1954 decision in *Brown v. Board of Education*, the Court tolerated a scheme of “separate but equal” as in *Plessy v. Ferguson* (1896). During the twenty years leading up to *Brown*, the Court issued several decisions—*Missouri ex rel Gaines v. Canada* and *Sweat v. Painter*—invalidating evasive schemes that pretended to treat whites and blacks equally, but clearly did not. But in *Brown I*, the Court relied upon the “equal protection” clause of the Fourteenth Amendment to declare “separate” inherently “unequal” and a year later, in *Brown II*, it ordered public school desegregation “with all deliberate speed.”

Although the Court then became embroiled in “massive resistance” strategies throughout much of the South, it held its ground. For example, in 1964 the *Griffin v. County School Board* decision prevented districts from closing their schools to avoid desegregation. In 1968 it rejected in *Green v. County School Board* purported “choice” plans that left schools identifiably black and white. In 1971 the *Swann v. Charlotte-Mecklenburg Board of Education* decision refused to approve a neighborhood school assignment policy that maintained the prior system of black and white schools. *Norwood v. Harrison* blocked in 1973 desegregation-evading schemes that sought to fund an alternative system of private “white academies,” and the *Runyon v. McCrary* decision in 1976 precluded private schools from excluding applicants because they were black.

In 1973 in *Keyes v. School District No. 1*, the Court also extended the reach of *Brown* to northern and western school districts when it could be shown that officials had deliberately drawn school lines, erected new schools, and made other decisions on the basis of race. And with the help of Congressional enactment of the 1964 Civil Rights Act, the intervention of federal government officials from the executive branch, and the tireless work of many federal district judges often working in a hostile local environment, what has become known as formal “de jure” school segregation was rooted out.

Yet over time it became clear that continued racial isolation in public schools and the accompanying continued lower academic achievement of non-white pupils is not so easily blamed on the official racism of identified state and local school officials. The combination of (1) individual residential decisions by white (and non-white) families; (2) the suburbanization of America and the traditional existence outside the South of many small school districts surrounding the large central city district; (3) national and local housing policies; (4) persistent differences in family poverty between whites and non-whites; and other factors demonstrate that de facto school segregation, especially in urban cities, is not primarily caused by, and can not easily be eliminated by, the deliberate actions of local public school officials.

Although some legal and policy scholars and political leaders called for the end of racial isolation whatever its cause, others began to challenge the fairness, desirability, or feasibility of doing so. By 1974 a closely divided Supreme Court gave an early

signal that it was going to start withdrawing the judiciary from this battle. It refused to bring the Detroit suburbs into a proposed metropolitan remedy of a school segregation case in which the federal district judge was presented with a Detroit public school district that had already become overwhelmingly populated by black children in *Milliken v. Bradley*. Starting in the 1990s, it has been telling lower federal courts to relinquish their supervision of school districts, thereby freeing local officials from the affirmative obligation to keep their schools from becoming racially identifiable, for instance *Board of Education of Oklahoma City Public Schools v. Dowell* and *Freeman v. Pitts*. And it voided a remedy adopted by a federal district judge in a Kansas City case that had imposed substantial obligations upon the state and was seen impermissibly to involve the surrounding suburbs in *Missouri v. Jenkins*.

Nonetheless, something of a political turnaround took place in many venues across the nation. Concluding that merely ending obvious official discrimination against minorities was insufficient, many public and private entities (prodded by federal agencies) began to engage in affirmative action. Some saw this as a way to remedy institutional or invisible racism that continued; others viewed it as desirable social policy even in a setting that was no longer officially hostile to racial minorities. Selective colleges and universities began to give preferences to non-white applicants; some employers, including school district employers, did the same; some school districts that had previously fought tenaciously for segregation turned completely about and were now committed to racially balanced schools.

But this practice has generated its own backlash, into which the Court has been drawn. Although a badly divided Court declared in 1978 that race was one of the many factors that colleges could legally employ in order to decide who to admit as students in *Regents of the University of California v. Bakke*, by the mid-1990s the Court had become much more hostile to affirmative action efforts outside of education. If the official action was not racially neutral and was not part of a remedy designed to undo past specific acts of illegal segregation, then the Court decided, in *Adarand Constructors, Inc. v. Peña*, that deliberate race-based actions said to benefit minorities were just as illegal as those adopted to harm them.

As a result, legal scholars in 2001 were uncertain whether affirmative action engaged in by selective high schools and selective colleges was still permissible. Indeed, it was unclear whether racially prompted school busing and other school assignment decisions at the elementary and secondary school levels could be kept in place once a formerly discriminating school district had been declared “unitary” by having eliminated the past vestiges of official segregation.

### Individual Rights of Students

The Court’s dealing with free speech and other constitutional rights of individual public school children has undergone something of a zig-zag as well. During World War II, the Court relied upon the First Amendment’s “free speech” clause to uphold the refusal of religiously motivated Jehovah’s Witnesses to participate in the flag salute at school in *West Virginia Board of Education v. Barnette*. Student free speech rights were much further strengthened during the Vietnam War, when the Court protected affirmative student rights of expression at school in the form of non-disruptive wearing of antiwar arm bands in *Tinker v. Des Moines School District*. In that same period, the Court extended to students the right to a hearing before serious disciplinary penalties are imposed on them, thereby bringing the Fourteenth Amendment’s “procedural due process” clause into the schoolhouse in *Goss v. Lopez*. Later, in *Board of Education Island Trees Union Free School District No. 26 v. Pico*, the Court, on free speech grounds, thwarted religiously inspired efforts to rid school libraries of books that offended some parent groups.

But in subsequent cases, starting in the late 1970s, the Court has drawn back from this pro-student rights’ agenda. It allowed public officials to discipline a student who gave a “lewd” speech at an assembly in *Bethel School District No. 403 v. Frazer*; to delete pages from a high school student newspaper in *Hazelwood School District v. Kuhlmeier*; to impose corporal punishment on public school children in *Ingraham v. Wright*; and to search student posses-

sions (e.g., purses) under circumstances that would be illegal if done to adults in normal circumstances in *New Jersey v. T.L.O.* The Court also declined to get involved with academic dismissals at the college level in its decision *Board of Curators of the University of Missouri v. Horowitz*.

Hence, while it remains true that students do not “shed their constitutional rights to freedom of speech or expression at the schoolhouse gate,” it is also now quite clear that school children have many fewer rights than adults have.

Although the Court has involved itself in many additional important issues as well (e.g., teachers’ rights, gender discrimination, bilingual education, and the rights of disabled children), the three areas discussed illustrate not only the Court’s great importance to American education, but also the Court’s own shifting view of its role.

**See also:** AFFIRMATIVE ACTION COMPLIANCE IN HIGHER EDUCATION; SEGREGATION, LEGAL ASPECTS.

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STEPHEN D. SUGARMAN

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## **TABA, HILDA (1902–1967)**

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Curriculum theorist, curriculum reformer, and teacher educator, Hilda Taba contributed to the theoretical and pedagogical foundations of concept development and critical thinking in social studies curriculum and helped to lay the foundations of education for diverse student populations.

Taba was born in a small village in southeastern Estonia at a time when the country was in transition politically. Taba was introduced to Progressive education ideas at Tartu University by her philosophy professor in the period following the Russian Revolution, when John Dewey's ideas about democracy and education were celebrated in Russia and eastern Europe. She pursued her interests in Progressive education and the relationship between democracy and curricula at Bryn Mawr College (M.A. 1927) and Teachers College, Columbia University (Ph.D. 1932), where she studied the work of Progressive education pioneers William Kilpatrick, John Dewey, and Boyd H. Bode, to whom she dedicated her dissertation, *The Dynamics of Education*.

Taba's dissertation established a foundation for much of her subsequent work. Three key ideas in the work are particularly important for curriculum history in the twentieth century. First, she argued that learning and the study of learning should be modeled after dynamic models derived from contemporary physics. Rather than relying on observation, prediction, and measurement of static phenomena, educators should see learning as a dynamic interactive phenomena that is informed by the developing field of cognitive psychology. Thus she established a paradigm that was appreciably different from a simple transmission model of education and evaluation.

Second, she argued that education for democracy was a critical component of contemporary schooling and curricula, and that it needed to be experiential, where children learn to solve problems and resolve conflicts together. Her thinking in democratic education foreshadowed constructivist curricula. Third, she argued that educators had to provide conceptually sound curriculum that was organized and taught effectively, and that student understanding had to be evaluated using appropriate tools and processes. This last goal led to her groundbreaking work in evaluating social attitudes in Progressive education curricula.

Over the next four decades, Taba's work as a curriculum theorist developed. The combination of her considerable intellect, her appreciation for democracy, which grew as intellectual freedom in Estonia diminished in the middle years of the twentieth century, her belief in the power of individuals and groups in educational contexts to realize significant social goals, and her expressed commitment to demonstrate empirically the effects of social education established her leadership in curriculum generally and in three major twentieth century projects specifically.

### **Evaluation**

The Eight-Year Study, also known as the Commission on the Relation of School and College, was an ambitious research project that was to evaluate how students from Progressive secondary schools would fare in colleges. Ralph Tyler was responsible for overall evaluation in the Eight-Year Study and he invited Hilda Taba to join him following a meeting at the Dalton School in New York. The significance of the study was that it included curriculum goals that

were important to Progressive educators but were not easily measured on standardized tests, such as social responsibility and cooperative behavior.

Taba's contribution to the study was evaluation of social sensitivity, which was related to the general goal of preparing students for effective democratic participation. Using multiple means of evaluation that included group activities, informal conversations, anecdotal records, reading records, and book reviews, Taba delved under the surfaces of social phenomena to identify the attitudes and problems in students' social life that would contribute to a particular phenomena. She tackled a challenging area of social studies curriculum, the measurement of attitudes about race, class, and ethnicity and at the same time provided authentic alternatives to paper and pencil assessment.

Taba's work on evaluation, conducted at the Ohio State University, led to a productive collaboration with Ralph Tyler and the design of a general framework and theoretical rationale for developing curriculum. It also led to a position as director of the Curriculum Laboratory at the University of Chicago in 1938 and her subsequent leadership in intergroup education in the 1940s.

### Intergroup Education

In response to racism, anti-Semitism, and perceived threats to national unity, a collaboration was created in 1934 between the National Conference of Christians and Jews and the American Council on Education. This collaboration, focused on the reduction of prejudice and conflict through education, was known as the Intergroup Education in Cooperating Schools Project. Taba developed an association with the project in 1944 when she headed a summer workshop at Harvard that resulted in a yearbook for the National Council for Social Studies titled *Democratic Human Relations*. She assumed the directorship of the project beginning in 1945, and then served as director of the Center for Intergroup Education at the University of Chicago until 1951.

Taba brought a staff of eight educators together, who fanned out across eighteen sites and seventy-two schools over a period of two years to work with local site faculty on issues of prejudice and discrimination. The Intergroup education project tackled the issues of newcomers, economic instability, housing patterns, and community relations, using typically Taba-type interactive curriculum and processes such

as literature groups, conflict resolution, and role playing. The project constitutes a landmark in social education and foreshadowed multicultural education projects of the 1970s and 1980s.

### The Taba Curriculum Framework

In 1951 Taba left the Intergroup Education Center to take a position at San Francisco State College, where her third curriculum reform project developed. Working collaboratively with teachers and administrators in Contra Costa County, California, a San Francisco Bay area community, Taba formulated, researched, and wrote about the foundations of curriculum development. Taba and her colleagues from the college and the county schools explicated and documented the complex processes associated with concept formation by children using social studies curriculum. She and her staff organized and implemented staff development for teachers, and documented the processes for research purposes.

Taba's close associate, Mary Durkin, a teacher and curriculum specialist from the Contra Costa County schools, anchored the critical bridge between Taba's theoretical work and her practice of teaching classroom teachers about concept attainment and writing curriculum.

The Taba Spiral of Curriculum Development is a graphic organizer, which was designed to illustrate concept development in elementary social studies curriculum that was used by teachers in Taba workshops in the 1960s. That graphic tool has sustained its utility and is found in curriculum texts in the early twenty-first century. Taba's theorizing and curriculum development processes provided a blueprint for curriculum development in the twentieth century. She comprehended and articulated the complex connections between culture, politics, and social change; cognition and learning; and experience and evaluation in curriculum development—and the significance of all three for teacher preparation and civic education. Her in-service work with teachers in the San Francisco Bay area and in communities around the United States and in Europe left a permanent imprint on curriculum development discourse.

*See also:* EIGHT-YEAR STUDY; MULTICULTURAL EDUCATION; PROGRESSIVE EDUCATION; SOCIAL STUDIES EDUCATION, *subentries on* OVERVIEW, PREPARATION OF TEACHERS; TYLER, RALPH.

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JANE BERNARD-POWERS

## TAXONOMIES OF EDUCATIONAL OBJECTIVES

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*Educational objectives* describe the goals toward which the education process is directed—the learning that is to result from instruction. When drawn up by an education authority or professional organization, objectives are usually called *standards*. Taxonomies are classification systems based on an organizational scheme. In this instance, a set of carefully defined terms, organized from simple to complex and from concrete to abstract, provide a framework of categories into which one may classify educational goals. Such schemes can:

- Provide a common language about educational goals that can bridge subject matter and grade levels
- Serve as a touchstone for specifying the meaning of broad educational goals for the classroom
- Help to determine the congruence of goals, classroom activities and assessments

- Provide a panorama of the range of possible educational goals against which the limited breadth and depth of any particular educational curriculum may be contrasted

### The First Taxonomy of Educational Objectives: Cognitive Domain

The idea of creating a taxonomy of educational objectives was conceived by Benjamin Bloom in the 1950s, the assistant director of the University of Chicago's Board of Examinations. Bloom sought to reduce the extensive labor of test development by exchanging test items among universities. He believed this could be facilitated by developing a carefully defined framework into which items measuring the same objective could be classified. Examiners and testing specialists from across the country were assembled into a working group that met periodically over a number of years. The result was a framework with six major categories and many subcategories for the most common objectives of classroom instruction—those dealing with the cognitive domain. To facilitate test development, the framework provided extensive examples of test items (largely multiple choice) for each major category. Here is an overview of the categories that make up the framework:

#### 1.0. Knowledge

- 1.1. Knowledge of specifics
  - 1.1.1. Knowledge of terminology
  - 1.1.2. Knowledge of specific facts
- 1.2. Knowledge of ways and means of dealing with specifics
  - 1.2.1. Knowledge of conventions
  - 1.2.2. Knowledge of trends and sequences
  - 1.2.3. Knowledge of classifications and categories
  - 1.2.4. Knowledge of criteria
  - 1.2.5. Knowledge of methodology
- 1.3. Knowledge of universals and abstractions in a field
  - 1.3.1. Knowledge of principles and generalizations
  - 1.3.2. Knowledge of theories and structures

#### 2.0. Comprehension

- 2.1. Translation
- 2.2. Interpretation
- 2.3. Extrapolation

**3.0. Application****4.0. Analysis**

- 4.1. Analysis of elements
- 4.2. Analysis of relationships
- 4.3. Analysis of organizational principles

**5.0. Synthesis**

- 5.1. Production of a unique communication
- 5.2. Production of a plan, or proposed set of operations
- 5.3. Derivation of a set of abstract relations

**6.0. Evaluation**

- 6.1. Evaluation in terms of internal evidence
- 6.2. Judgments in terms of external criteria

The categories were designed to range from simple to complex and from concrete to abstract. Further, it was assumed that the taxonomy represented a cumulative hierarchy, so that mastery of each simpler category was prerequisite to mastery of the next, more complex one. A meta-analysis of the scanty empirical evidence available, which is described in the Lorin Anderson and David Krathwohl taxonomy revision noted below, supports this assumption for Comprehension through Analysis. The data were ambiguous, however, with respect to the location of Knowledge in the hierarchy and for the order of Evaluation and Synthesis.

The taxonomy has been used for the analysis of a course's objectives, an entire curriculum, or a test in order to determine the relative emphasis on each major category. The unceasing growth of knowledge exerts constant pressure on educators to pack more and more into each course. Thus, these analyses repeatedly show a marked overemphasis on Knowledge objectives. Because memory for most knowledge is short, in contrast to learning in the other categories, such findings raise important questions about learning priorities.

Along these same lines is the taxonomy's use to assure that objectives, instructional activities, and assessment are congruent (aligned) with one another. Even when instruction emphasizes objectives in the more complex categories, the difficulty of constructing test items to measure such achievement often results in tests that emphasize knowledge measurement instead. Alignment analyses highlight this inconsistency.

The taxonomy has also commonly been used in developing a test's blueprint, providing the detail for

guiding item development to assure adequate, and appropriate curriculum coverage. Some standardized tests show how their test items are distributed across taxonomy categories.

**The Affective Domain**

In addition to devising the cognitive taxonomy, the Bloom group later grappled with a taxonomy of the affective domain—objectives concerned with interests, attitudes, adjustment, appreciation, and values. This taxonomy consisted of five categories arranged in order of increased internalization. Like the cognitive taxonomy, it assumed that learning at the lower category was prerequisite to the attainment of the next higher one. Here is an overview of the categories:

**1.0. Receiving (Attending)**

- 1.1. Awareness
- 1.2. Willingness to receive
- 1.3. Controlled or selected attention

**2.0. Responding**

- 2.1. Acquiescence in responding
- 2.2. Willingness to respond
- 2.3. Satisfaction in response

**3.0. Valuing**

- 3.1. Acceptance of a value
- 3.2. Preference for a value
- 3.3. Commitment

**4.0. Organization**

- 4.1. Conceptualization of a value
- 4.2. Organization of a value system

**5.0. Characterization by a value or value complex**

- 5.1. Generalized set
- 5.2. Characterization

In addition, Elizabeth Simpson, Ravindrakumar Dave, and Anita Harrow developed taxonomies of the psychomotor domain.

**Revision of the Taxonomy**

A forty-year retrospective of the impact of the Cognitive Taxonomy by Lorin Anderson and Lauren Sosniak in 1994 (dating back to its preliminary edition in 1954) resulted in renewed consideration of a revision, prior efforts having failed to come to fruition. In 1995, Anderson and Krathwohl co-chaired

a group to explore this possibility, and the group agreed on guidelines for attempting a revision. Like the original group, they met twice yearly, and in 2001 they produced *A Taxonomy for Learning, Teaching and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives*, hereinafter referred to as the *revision*. Whereas the original was unidimensional, the revision had two dimensions, based on the two parts of objectives: (1) nouns describing the content (knowledge) to be learned, and (2) verbs describing what students will learn to do with that content; that is, the processes they use in producing or working with knowledge.

**The Knowledge dimension.** The Knowledge category of the original cognitive taxonomy included both a content aspect and the action aspect of remembering. These were separated in the revision, so that the content aspect (the nouns) became its own dimension with four categories:

- A. **Factual Knowledge** (the basic elements students must know to be acquainted with a discipline or solve problems in it)
  - a. Knowledge of terminology
  - b. Knowledge of specific details and elements
- B. **Conceptual Knowledge** (the interrelationships among the basic elements within a larger structure that enable them to function together)
  - a. Knowledge of classifications and categories
  - b. Knowledge of principles and generalizations
  - c. Knowledge of theories, models, and structures
- C. **Procedural Knowledge** (how to do something, including methods of inquiry and criteria for using skills, algorithms, techniques, and methods)
  - a. Knowledge of subject-specific skills and algorithms
  - b. Knowledge of subject-specific techniques and methods
  - c. Knowledge of criteria for determining when to use appropriate procedures
- D. **Metacognitive Knowledge** (knowledge of cognition in general, as well as awareness and knowledge of one's own cognition)
  - a. Strategic knowledge
  - b. Knowledge about cognitive tasks, including appropriate contextual and conditional knowledge

c. Self-knowledge

**The Process dimension.** In the revision, the concepts of the six original categories were retained but changed to verbs for the second (process) dimension. The action aspect of Knowledge was retitled as *Remember*. Comprehension became *Understand*. Synthesis, replaced by *Create*, became the top category. Subcategories, all new, consisted of verbs in gerund form. In overview, the dimension's categories are:

- 1.0. **Remember** (retrieving relevant knowledge from long-term memory)
  - 1.1. Recognizing
  - 1.2. Recalling
- 2.0. **Understand** (determining the meaning of instructional messages, including oral, written, and graphic communication)
  - 2.1. Interpreting
  - 2.2. Exemplifying
  - 2.3. Classifying
  - 2.4. Summarizing
  - 2.5. Inferring
  - 2.6. Comparing
  - 2.7. Explaining
- 3.0. **Apply** (carrying out or using a procedure in a given situation)
  - 3.1. Executing
  - 3.2. Implementing
- 4.0. **Analyze** (breaking material into its constituent parts and detecting how the parts relate to one another and to an overall structure or purpose)
  - 4.1. Differentiating
  - 4.2. Organizing
  - 4.3. Attributing
- 5.0. **Evaluate** (making judgments based on criteria and standards)
  - 5.1. Checking
  - 5.2. Critiquing
- 6.0. **Create** (putting elements together to form a novel, coherent whole or make an original product)
  - 6.1. Generating
  - 6.2. Planning
  - 6.3. Producing

**FIGURE 1**

**A taxonomy table with “X’s” showing the classification of the objective: “The student should be able to recognize which facts or assumptions are essential to an argument.”**

The Cognitive Process Dimension						
The Knowledge Dimension	1. Remember	2. Understand	3. Apply	4. Analyze	5. Evaluate	6. Create
A. Factual Knowledge				X		
B. Conceptual Knowledge				X		
C. Procedural Knowledge						
D. Metacognitive Knowledge						

SOURCE: Courtesy of author.

### The Taxonomy Table

With these two dimensions one can construct a taxonomy table in which one can locate the junction of the classifications of an objective’s verb and noun. Consider the objective: “The student should be able to recognize the facts and/or assumptions that are essential to an argument.” The opening phrase, “The student should be able to,” is common to objectives—it is the unique part of the objective that we classify. The verb is “recognize” and the noun is really a noun clause: “the facts and assumptions that are essential to an argument.”

First, it is determined what is meant by “recognize.” Initially, the term appears to belong to the category Remember because *recognizing* is Remember’s first subcategory. But *recognizing*, the subcategory, refers to something learned before, which is not its meaning here. Here, it means that, on analyzing the logic of the argument, the student teases out the facts and assumptions on which the argument depends. The correct classification is Analyze.

The noun clause, “the facts or assumptions that are essential to an argument,” appears to include two kinds of knowledge. “The facts” is clearly Factual Knowledge, and “the assumptions”—as in assuming an argument’s facts are true—may also be Factual Knowledge. But assuming a principle or concept as part of an argument (e.g. evolution) would be classified as Conceptual Knowledge. So this objective would fall into two cells of the taxonomy table—the junction of Analyze with Factual Knowledge and with Conceptual Knowledge, as shown by the X’s in Figure 1.

Just as objectives can be classified in a table, so can classroom activities used to attain them. Like-

wise, one can construct a table for assessment tasks and test items. If goals, activities, and assessments are aligned, the X’s should fall in identical cells in all three tables. To the extent that they do not, the goals may be only partially attained and/or measured, and steps can be taken to restore alignment.

Comments inserted into classroom vignettes in the revision explain the classification of objectives, activities, and assessments as they lead to three completed taxonomy tables. The three tables are then compared to show the alignment, or lack of it, in each vignette. The six vignettes include different subject matters in elementary and secondary education.

### Alternative Classification Frameworks

Since the publication of the original framework, numerous alternatives have appeared—intended to supplement, improve upon, or replace it. Chapter 15 of the revision analyzes nineteen such frameworks in relation to the original and revised Taxonomies. Eleven are unidimensional, while eight include two or more dimensions. Some use entirely new terms, and a few include the affective domain.

For example, in 1981 Robert Stahl and Gary Murphy provided these new headings: Preparation, Observation, Reception, Transformation, Information Acquisition, Retention, Transfession, Incorporation, Organization, and Generation. The Organization heading bridges to the affective domain. David Merrill, in 1994, devised a framework similar to the revised taxonomy, using two dimensions, each with four categories, to form a Performance-Content matrix with a student performance dimension (Remember-Instance, Remember-

Generality, Use, and Find) and a subject matter dimension (Fact, Concept, Procedure, and Principle). The 1977 framework of Larry Hannah and John Michaelis is even more similar. Alfred DeBlock (1972) and others have developed frameworks with more than two dimensions, while Dean Hauenstein's 1998 framework provided taxonomies for all three domains. Marzano's taxonomy (2001) proposes a combination of three kinds of knowledge—Information (often called declarative knowledge), Mental Procedures (procedural knowledge), and Psychomotor Procedures. Marzano also develops a processing model of actions that successively flow through three hierarchically related systems of thinking: first the Self System, then the Metacognitive system, and finally the Cognitive system (which includes Retrieval, Comprehension, Analysis, and Knowledge Utilization).

See also: CURRICULUM, *subentry on* SCHOOL.

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#### TAYLOR, HAROLD (1914–1993)

Philosopher of education, college president, and social activist, Harold Taylor was a recognized spokesperson for Progressive education at the postsecondary level. Taylor was born in Toronto and, upon completion of the B.A. and M.A. degrees at the University of Toronto, received a fellowship to study philosophy at Cambridge University. Shortly after his arrival he questioned the social significance of analytical philosophy and, ultimately, transferred to a doctoral program at University of London. Upon completion of the Ph.D. in philosophy in 1938, Taylor accepted a faculty position at the University of Wisconsin, where he served for six years. In 1945, at age thirty, Taylor assumed the presidency of Sarah Lawrence College, a highly progressive, experimental school outside of New York City. Taylor held this

position for fourteen years, during which time he became a national leader for Progressive education, the liberal arts curriculum, international education, and the arts in the United States. While at Sarah Lawrence he worked closely with Eleanor Roosevelt and Adlai Stevenson as a consultant on human rights. Taylor left the presidency of Sarah Lawrence in 1959 and proceeded to establish a career as public intellectual, independent writer and lecturer, and adjunct faculty at the New School for Social Research and the City University of New York. In addition, he served as president of the Agnes de Mille Dance Theatre, vice-chair of the Martha Graham School of Contemporary Dance, and president of the American Ballet Theatre. Taylor also maintained a lifelong friendship with Duke Ellington and was instrumental in arranging for the preservation of the John Dewey professional papers.

By assuming the presidency of Sarah Lawrence College at the young age of thirty, Taylor was immediately thrown into a national spotlight and compared to Robert M. Hutchins of the University of Chicago, another former “boy president.” During Taylor’s years at Sarah Lawrence College, one of the first Progressive, experimental colleges in the United States, he fostered a setting where there were no formal departments or academic ranks. Everyone on the faculty was considered a teacher and a member of a community of equals, each of whom was responsible for assisting students in creating their own course of study. No examinations or grades were given; students learned to judge the quality of their own work with the help of their teachers and fellow students. Since there were no required courses, the curriculum was built by a series of conscious choices made by the student. Theater, dance, music, painting, sculpture, design, and graphics were central to the overall-all curriculum and integrated with the humanities and sciences course of study. Within the context of this “open curriculum” Taylor sought opportunities to bring to the Sarah Lawrence campus cultural figures with provocative ideological, social activist, liberal, and radical views. This led anticommunist Senator Joseph McCarthy to identify Sarah Lawrence College as a target for attack during the hearings of the House Committee on Un-American Activities.

While Taylor became a leading spokesperson for peace education, academic freedom, and world education, a main theme throughout his academic career was the crucial role of students as active learners

where they would be involved in making college policy and in running their own lives. In *Students without Teachers* (1969), considered by many as a blueprint for radical change, Taylor condemned colleges and universities for being out of touch with their students and with the surrounding intellectual community. He objected to the trend of colleges turning from dynamic cultural centers devoted to intellectual freedom and democracy to large bureaucracies that trained students and were managed by “corporate faculty.” In essence, Taylor foresaw the impending “moral collapse” of the university (as noted in the 1990s) and sought to encourage student and university political activism at the national level. Taylor’s call for postsecondary reform reoriented the learning–teaching system so that students collaborated with professors in the instruction of courses and were actively involved with the selection and organization of the curriculum. Running throughout this point of view was a strong Progressive education ideology, guided by the writings of John Dewey, as Taylor emphasized the importance of democracy and experience. Taylor questioned the traditional liberal arts curriculum with its concentration upon knowledge independent of the student’s experience, and he argued for a curriculum embodying personal development, social and cultural activism (social agency), and the unity of intellect and emotions in the educational process. Taylor’s position adopted a more tangible form in *How to Change Colleges: Notes on Radical Reform* (1971) which, in essence, constituted a manifesto-manual for postsecondary reform. Taylor advocated reconstructing the college departmental system as learning centers, abolishing the lecture system, required courses, and tests. Implicit within these and other recommendations was Taylor’s belief in the importance of bringing the arts into the mainstream of American education and students’ life.

While Taylor addressed many administrative and instructional issues at the postsecondary level, he was also active in the area of teacher education. *The World as Teacher* (1969) represents a three-year study of teacher education and combined Taylor’s interests in the development in the early 1960s of the World College program and the International Baccalaureate. Taylor charged that teachers must understand the world, and their education must not be composed of mere courses in foreign cultures. Instead, he recommended ways for teachers to participate in international service learning projects and

other educational experiences that would initiate broader, cultural perspectives. As the universities transformed in the 1950s and 1960s into corporate, multiversity conglomerates, Harold Taylor was one of the few university spokespeople who maintained a Progressive education perspective for postsecondary school reform and who championed the university as the most appropriate venue for discussion and debate of pressing societal and cultural problems.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; PROGRESSIVE EDUCATION.

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CRAIG KRIDEL

## TEACHER

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The role and responsibilities of elementary and secondary school teachers have undergone a significant evolution since the publication of the first edition of the *Encyclopedia of Education*. Historically, teachers have been viewed as purveyors of content knowledge and academic skills, but teachers in the early twenty-first century have also become ambassadors to multicultural communities and promulgators of democracy. As expectations for teacher performance have increased, so too has the status of teaching—the term *teaching profession* has become commonplace.

Conventionally viewed as dispensers of knowledge, teachers are increasingly perceived as facilitators or managers of knowledge. They are often thought to be colearners with their students. Few modern teachers would try to claim intellectual hegemony in the classroom; such a claim would not

stand the challenge of increasingly sophisticated students. There is too much to know and too many sources of knowledge outside the classroom that can easily be brought to bear within school walls by students themselves. Teachers teach, of course, but they do not simply dispense information to their students. Teachers are also intellectual leaders who create opportunities for students to demonstrate what they know and what they know how to do.

### Responsibilities of Elementary and Secondary School Teachers

Public school teachers spend an average of 49.3 hours per week meeting their responsibilities, including 11.2 hours per week on noncompensated duties. Customary responsibilities for teachers include planning and executing instructional lessons, assessing students based on specific objectives derived from a set curricula, and communicating with parents.

This list of seemingly simple tasks belies the complexity of the job. It was once the norm for teachers to address the needs of large groups of students via standard lesson plans and stock practice. This is no longer the case. Teachers of the early twenty-first century must create and modify lessons, fitting them to the diverse instructional needs and abilities of their students. The Individuals with Disabilities Education Act ensures that any student with an identified disability receive a written Individualized Education Program stating the modifications that must be implemented by any teacher working with that particular child. Students' needs run the gamut from learning disabilities to giftedness—a broad range that compels teachers to behave in certain ways.

Unlike their predecessors, twenty-first-century teachers expect to deal with the dictates of standardized testing and curricula to match. Signed in 2002 by President George W. Bush, the No Child Left Behind Act is simply one very visible indication of the emphasis on local accountability for student performance. The bill requires that all schools display proof of meeting a minimal set of academic standards, as defined by each state. States must begin implementing annual high-stakes testing—testing upon which important decisions such as passing and failing depend. These tests will concentrate, at least initially, on reading and mathematics in grades three through eight.

As always, teachers are responsible for classroom management and discipline. This aspect of a teacher's job shows no signs of growing easier—quite the contrary. According to the U.S. Department of Education, during the period from 1992 to 1996, 1,581,000 teachers were victims of nonfatal crimes that occurred while at school. Recognizing the challenge of student discipline, the No Child Left Behind Act includes steps for providing a safer work environment for teachers as well as students. Opportunities for professional development and training in positive methods of discipline abound.

Teachers are expected to use computer-based technology with increasing frequency and proficiency. The technology boom of the 1990s was accompanied by many efforts to help teachers integrate technology into their teaching and into students' learning. Although there is legitimate concern about the ultimate value of the use of technology in schools, there is little doubt that considerable resources have been expended to advance the digital revolution. The E-rate, for example—a federal program that provides targeted discounts to schools and libraries with the goal of increasing access to the Internet and other telecommunications services—funneled \$3.65 billion into schools from 1997 to 2002. The federal government spent another \$275 million from 1999 to 2002 to train teachers to use technology via the PT3 program.

Changing societal demographics have forced changes in the practice of teaching. There are, for instance, more than ninety languages spoken in Fairfax County Public Schools in Virginia. Teachers all over the nation work with students and parents from many different cultures. Teachers themselves are students of culture. They create classroom environments to celebrate various ethnic and religious traditions. They are expected to treat children and their families sensitively so as to avoid the proliferation of stereotypical images of races, cultures, or religions.

Teachers continue to exhibit a rich history of participation in educational and political groups, committees, and events. In 1996, 42 percent of public school teachers participated in committees dealing with local curriculum. On the national level, teachers are members of unions that include the American Federation of Teachers (AFT) and the National Education Association (NEA), as well as their local affiliates.

## Qualifications of Elementary and Secondary Teachers

State governments determine their own requirements for a teaching license. In addition to a college degree with course work in appropriate areas, more than thirty states require a national teacher examination, such as the Praxis Series. Developed by the Educational Testing Service, the Praxis Series is designed to assess a teacher's knowledge of basic subject matter including reading, writing, and mathematics. Praxis also evaluates a prospective teacher in two other areas: general knowledge of the field of education and knowledge within the teacher's specialty content area.

Many states recognize licenses earned in other states, thus a license earned in one state may be used to work in another state. This process is referred to as “reciprocity” of licensing. Teachers who are interested in pursuing additional endorsements—that is, approvals to teach other specialties—do so most often by taking additional college course work. They can also attempt to acquire national certification through the National Board for Professional Teaching Standards, but they may still have to gain a state license in order to teach in a public school. In 2001 the NEA estimated that there would be 100,000 National Board Certified teachers by 2005.

Teachers also join professional honorary societies. For example, teachers may be invited to become a member of Kappa Delta Pi, an international honor society in education that seeks to inspire high teaching standards. Kappa Delta Pi and other education honorary societies recognize the actions of individual teachers and through membership distinguish them as exceptional educators.

There were approximately 2.78 million public school teachers working in K–12 education during the 1998–1999 academic year. It was estimated that by 2008 the number of teachers needed to meet the demands of a growing student population would be 3.46 million. To address an increasing teacher shortage, the No Child Left Behind Act suggests that state governments and school districts use alternative means of licensing and endorsing teachers, including fast-track teacher education programs for professionals outside education. The act also supports various incentives to keep teachers on the job, including merit pay for practicing educators and performance-based bonuses.

### Research on Elementary and Secondary Teachers

Teacher quality has been said to be the number one school-related influence on student achievement. Although research on what constitutes a quality teacher is often the subject of debate, there are some findings on teacher quality that are rarely contested. These suggest that it is what teachers do in classrooms that matters. Research has shown that teachers can improve student achievement when they communicate high expectations, avoid criticism, reward truly praiseworthy behavior, and provide abundant opportunities for success (academic learning time) on material over which students are tested.

### Demographics

According to the first edition of the *Encyclopedia of Education*, the average salary in 1969 for a public school teacher was \$8,320 at the elementary level and \$8,840 at the secondary level. The average salary for a male secondary public school teacher was \$9,160, and the average for a female public school secondary teacher was \$8,670. While the average salaries have increased, the differences in salaries between elementary and secondary teachers as well as the disparity in salary between male and female educators have diminished. These changes in salaries reflect changes in attitudes about equal pay for equal work and the increasing responsibilities of female educators. The current public school teacher workforce is approximately 74 percent female.

A survey performed in 1995–1996 by the NEA found elementary and secondary public school teachers with a mean salary of \$35,549. The range of salaries, however, is quite remarkable. Connecticut consistently ranks number one; in 1999–2000 its average teacher salary was \$52,401. South Dakota falls on the opposite end of the spectrum, with an average salary that year of \$29,072.

With approximately 90 percent of public school teachers classified as white in 2001, the racial demographics of teachers have not changed as noticeably as the student populations they serve. What has changed significantly is the number of advanced degrees obtained by teachers. In 1970, 25 percent of public school teachers received an advanced degree. The NEA reported in 1997 that this number had more than doubled to 56 percent—54 percent with master's degrees and 2 percent with doctoral degrees.

**See also:** AMERICAN FEDERATION OF TEACHERS; INTERNATIONAL TEACHERS ASSOCIATIONS; NATIONAL

EDUCATION ASSOCIATION; NO CHILD LEFT BEHIND ACT, 2001; TEACHER EDUCATION; TEACHER EMPLOYMENT; TEACHER EVALUATION; TEACHER LEARNING COMMUNITIES; TEACHER UNIONS.

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## TEACHER EDUCATION

### HISTORICAL OVERVIEW

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### INTERNATIONAL PERSPECTIVE

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### HISTORICAL OVERVIEW

Can teaching be taught? Do individuals learn to teach or are they endowed with an innate gift for pedagogy? Are certain individuals born teachers? Do individuals learn about teaching from copying others, from listening to lectures, from reading about it? Are some ways of preparing teachers better than others? These and related questions about teaching and teacher education persist.

#### Didactic and Evocative Teaching

Joseph Axelrod describes two types of teaching as “the *didactic* modes, employed by teacher-craftsmen, and the *evocative* modes, employed by teacher-artists” (p. 5). Didactic teaching implies passing on traditional knowledge or lore, or teaching how to do something. Teachers use lecture to inculcate knowledge or demonstration to model actions, after which students demonstrate they have learned what was taught either by reciting or writing the material or by repeating the demonstration, as in a science class experiment. Much state and national testing relies on rote recall of material. In this context, learning means being able to reproduce what has been taught or demonstrated. For example, students should recall key facts of American history such as the order of the American presidents. Emphases are often on learning facts and conditions, not on understanding complexity and drawing conclusions.

Early in human history, most teaching was didactic. Poets recited ancient myths and stories and a few listeners learned them by rote. Individuals acquired skills by observing their elders who were fishers, artisans, lawyers, or anything else, and emulating what they saw. Seeing teaching as a process of passing on knowledge has persisted. Paul Woodring argues that “The oldest form of teacher education is the observation and emulation of a master. Plato learned to teach by sitting at the feet of Socrates. Aristotle, in turn, learned from Plato” (p. 1).

Much observation and emulation still go on. In *The Teacher Educator’s Handbook*, Sharon Feiman-

Nemser and Janine Remillard note that “Like much of our society, prospective teachers believe that teaching is a process of passing knowledge from teacher to student and that learning involves absorbing or memorizing information and practicing skills. Students wait like empty vessels to be filled and teachers do the filling” (p. 70).

Most teaching in early America was highly didactic. Teachers taught both the processes of learning to read and the morals attendant to a proper life through moralistic texts. Children learning their letters in the early nineteenth century read in the *New England Primer* under the letter A, “In Adam’s fall, we sinned all”; under the letter F, “The idle fool Is wipt at school”; and under the letter J, “Job feels the rod Yet blesses God” (pp. 12–13). Students thus simultaneously learned their letters, religious lessons, and injunctions about behavior.

Not all teaching in the past was didactic; not all learning was rote. Socrates relied on the relationship between himself and his students to arrive at truths of human existence; he was, in Axelrod’s sense, an evocative teacher. Socrates corrected occasionally and enjoined his students, but rarely taught didactically. The Socratic, or evocative, method places responsibility for knowledge growth on the students.

Using the evocative method, social studies teachers might teach geographical lessons from which they expect students to describe how communities develop relative to the natural world surrounding them. Teachers might present students with a computer program describing an environment near a river, with large forests, good soil, and a moderate climate. Students would then describe how they believe a community might evolve, given these circumstances. The teacher’s role is to elicit conclusions, probabilities, and hypotheses from the students and have them assiduously pursue the most likely correct answers. Learning means being able to gather and assimilate data and evidence and draw conclusions based on sound thinking.

Neither didactic nor evocative teaching alone will suffice because learners vary widely in how they learn. Some individuals learn material effectively when teachers present it sequentially or chronologically; others may learn better when teachers present material thematically. Some learners have an affinity for concreteness while others prefer abstraction. Teachers require tolerance and understanding for these and other differences in learners. Although

some learners may master a variety of ways of learning, teachers more often than not appeal to what they discern to be the learner's most comfortable way of learning. Ideally, teachers attach neither special praise nor stigma to different ways of learning. They recognize not all individuals learn in similar ways. However, in many classrooms, teachers fail to teach a variety of ways of learning. This can frustrate many learners.

Didactic teaching and evocative teaching are merely two modes of instruction among other related ways teachers teach and learners learn. Little exists to suggest one mode is superior to all others. Nearly all teachers use a variety of modes of instruction as they go about their daily teaching tasks. Teacher education must provide opportunities for prospective and practicing teachers to master a range of teaching modes.

### Teaching and Teacher Education in Early America

In his biography of John Adams, David McCullough points out that in colonial America, teaching was something men did if they did not have anything better to do. He notes that in 1755 John Adams, not having the money for the fee to apprentice to a lawyer, although "untried and untrained as a teacher, immediately assumed his new role in a one-room schoolhouse at the center of town" (p. 37). It is interesting that McCullough uses the phrase "untried and untrained." The fact is there was no training for teachers in 1755. The first formal teacher preparation began in the 1820s with the establishment of "normal schools" in Vermont and Massachusetts.

The establishment of normal schools became a movement later in the nineteenth century; almost every state had at least one of them. The normal schools' purpose was perfectly straightforward: the preparation of teachers. Cities were desperate for teachers. By the early 1900s, nearly every city with a population of more than 300,000 had a normal school, often tied in with the high schools. Normal schools were technically oriented toward the practice of teaching. Modeled on earlier established European institutions for teacher training, these schools provided very specific training.

In *The Salterton Trilogy* (1986), Robertson Davies provides a fictional but accurate picture of what transpired in many normal school classrooms. "They [normal school teachers] taught how to teach;

they taught when to open the windows in a classroom and when to close them; . . . they taught ways of teaching children with no talent for drawing how to draw; they taught how a school choir could be formed and trained where there was no instrument but a pitchpipe . . . they taught how to make hangings, somewhat resembling batik, by drawing in wax crayon on unbleached cotton, and pressing it with a hot iron" (p. 79). These examples illustrate the didactic mode of teacher education in which prospective teachers learn how to *do* things, not how to *think about* the whys and wherefores of doing things. Didactic teacher education treats teaching as craft. It suggests that individuals can acquire the essential skills to impart knowledge, facts, and even abilities through lecture and demonstration. By contrast, the evocative mode, as applied to the education of teachers, suggests that teaching is an emergent art in which teachers evoke from students what they already know and lead them to the acquisition of new knowledge and skills.

By the 1940s, most normal schools had expanded, first into four-year state teachers colleges or liberal arts colleges emphasizing teacher education, and then, during the higher education expansion in the 1960s and 1970s, into state universities. For example, by the 1960s, the three former normal schools in Vermont had become four-year liberal arts colleges with new campuses and diminished teacher education programs.

### Into the Twenty-First Century

As the normal schools morphed into four-year colleges and eventually state universities, established state universities that did not already have them began to develop teacher preparation programs. University and college teacher education programs grew rapidly as states developed specific licensure requirements often based on college level coursework. As accreditation of secondary schools grew, the need for teachers with college degrees also grew. The norm became a combination of a degree with a major in an academic subject and completion of required education courses. Scholars argue that universities were anything but altruistic in their development of teacher preparation programs. Reasons included a desire to show some public service commitment, a need to increase revenues from enrollment of teacher education students, and the development of graduate programs in educational administration.

In 2002, most universities had firmly entrenched teacher preparation programs on their campuses. Campus programs remain the major place of preparation for teachers. State universities continue to be major sources of beginning teachers. Institutions such as Utah's Brigham Young University, South Florida University, Indiana University, and Wayne State University, in Detroit, Michigan, annually graduate hundreds of licensed teachers. In addition, liberal arts colleges with small teacher preparation programs consistently graduate licensed teachers. More than 1,200 institutions continue to provide teacher preparation programs.

During the last decades of the twentieth century a variety of nontraditional centers of activity evolved. The combination of the need for teachers in critically short areas such as mathematics and science and the public criticism of campus-based teacher education produced situations in which individuals and groups developed alternative routes for teacher preparation. Periodic shortages in teachers, particularly in urban and rural settings, led to a variety of ways of circumventing licensure regulations and university requirements. Teacher education was occurring through a variety of vehicles, including colleges and universities, public schools, state departments of education, special projects such as Teach for America, and district and university affiliated programs such as a New York City project for recruiting non-traditional candidates.

### **Intellectual Caliber and Content of Teacher Education**

College and university-based teacher education is often the target of many critics contending that students in teacher education programs are academically weaker than students in other programs, that preparation programs are vacuous, and that the faculty are second-rate. Despite reliable studies responding to these criticisms and demonstrating some of the criticism as ill founded, the attacks continue. The alleged low quality of teacher education students has led to a lack of acceptance by higher education faculty of teacher education on the campus.

Burton Clark and Harry Judge have noted a certain university reluctance to *own* teacher education despite its major presence on campuses. Clark shows how faculty at state universities that had been normal schools or state teachers colleges resent the influence of "education people"; Judge believes that such institutions, their faculties, and their adminis-

trations have little respect for teacher preparation. He contends that the further away from direct involvement in teacher preparation the education faculty are, the better they feel about themselves. Thus, although teacher education has a long history on campuses, the relationship between it and the broader campus remains strained.

Chester Finn, a vitriolic critic of teacher education, argues that colleges of education "are the most-despised institutions in the education universe" (p. 223). Even among the friends of teacher education, criticism is severe. In his 1990 book, *Teachers for Our Nation's Schools*, John Goodlad notes, "Teachers and teacher educators don't know enough about how to teach, and they don't know enough about how to understand and influence the conditions around them" (p. 108).

J. Palmer describes the tenuous nature of teacher education: "Training programs that were established tended to disappear after a few years. Then, as now, public universities were not certain how to deal with teacher education or if they wanted it. The low status of teacher education in state universities was established early, and it has persisted" (p. 52). A reason for the low status of teacher education faculty may be that they prepare people who work with the young in schools: preschool staffs, day care center employees, elementary and secondary school teachers—all groups that are held in low esteem by various segments of society.

Programs to prepare teachers remain remarkably consistent. They generally consist of a general arts and sciences component, advanced study in a discipline, a teacher preparation component, and field experiences. In *The Teacher Educator's Handbook* (1996), Barbara Senkowski Stengal and Alan Tom note that "Traditional teacher education programs are typically marked by three components: foundations of schooling and learning, teaching methodology, and practice teaching" (p. 593). Foundations of schooling and learning include the vital areas of psychology, philosophy, and learning principles, a pattern first established in the normal schools.

### **Teacher Education and Field Experiences**

Teacher education has always provided opportunities for prospective teachers to practice teaching in school settings while still in their preparation programs. For decades, these experiences occurred dur-

ing the last year of the preparation program and lasted approximately six to eight weeks. In many programs, this was the only experience that prospective teachers had in a school or with students. The typical experience included assigning the student to an experienced teacher in the school who would provide guidance and supervision. A teacher education faculty member would provide a minimum of three visits to observe the prospective teacher teach.

In the 1960s, programs began requiring early experiences in the schools for undergraduate students, often during their freshman year and continuing throughout the four years, culminating in a full semester of student teaching or internship. Preparation programs began placing clusters of four or five students in the same school so as to provide a collective experience rather than a private ordeal for future teachers.

Changes in the requirements of preparation programs regarding field experiences coincided with changes in what teacher education faculty were required to do and expectations of what schools should do. In 1986 and 1990 the Holmes Group argued for professional development schools (PDSs). In a PDS, a teacher preparation program or institution would commit to providing a school population with a cadre of prospective teachers, several higher education faculty, and curriculum assistance over a period of several years. The goals of a PDS are to provide better field experiences for the teacher education students, increased faculty cooperation with the schools, and sustained curricular improvement in schools and in teacher education programs.

Many variations have occurred and will continue to occur in the field experiences of prospective teachers. The reactions of student teachers to their experiences will likely continue to be consistent. Study after study reveals that the student teaching experience is rated most important of all their preparation programs. And why not? It is the one time that they have sustained interaction with the young people that they have professed a desire to spend their working lives with.

### Teacher Education Faculty

Who teaches the teachers? Who is a teacher educator? The broadest conception of who is a teacher educator includes everyone who teaches prospective and practicing teachers, from their freshman English professors and those who teach special methods

courses to those who supervise student teaching. Teacher educators may be defined specifically as “those who hold tenure-line positions in teacher preparation in higher education institutions, teach beginning and advanced students in teacher education, and conduct research or engage in scholarly studies germane to teacher education” (Ducharme, p. 6).

Research on teacher educators began in the 1980s as Heather Carter, Edward Ducharme and Russell Agne, Judith Lanier and Judith Little, and others began publishing research studies of teacher education faculty. In *The Handbook of Research on Teacher Education*, published in 1996, Nancy Zimpher and Julie Sherrill describe the teacher education professoriate as majority male and more than 90 percent Anglo. Summarizing several studies, they note that males dominate in the higher ranks, publish more than females, and work less in schools. Ducharme offers the observation that “there is a contradiction between a commitment to prepare a professional cadre of students, a majority of whom are female, to become powerful teachers and effective advocates for youth in which the female faculty are in roles and positions implying an inequity between the genders” (p. 120).

The ethnic makeup of the teacher education professoriate is heavily skewed toward white males. The Anglo population of the professoriate is between 91 and 93 percent. Candidates for teaching remain heavily white. With the exception of faculty in the historically black colleges, there are few black or other minority professors in teacher education. As the schools become more and more multicultural, those who teach teachers remain majority white and male; those who teach children in elementary schools remain mostly female and white; those who teach adolescents remain majority female and mostly white.

### Teacher Education Themes

Many teacher education programs have defining characteristics. Programs generally lean toward one of several thematic patterns: behaviorist or competency-based, humanistic, and developmental. The 1960s and 1970s were the heydays of the competency-based teacher education (CBTE) and performance-based teacher education (PBTE) programs. In CBTE, researchers attempted to isolate what they perceived as the discrete tasks of teaching, develop protocols for training teachers to master the tasks,

and produce tests to assess whether or not the teachers could perform the tasks. The CBTE movement soon degenerated into lists of hundreds of competencies as proponents attempted to outdo one another through elaborate lists. Instead of a system designed to help manage teacher education, it became an unmanageable process.

In *Teacher Education* (1975), N. L. Gage and Philip Winne defined PBTE as “teacher training in which the prospective or inservice teacher acquires, to a prespecified degree, performance tendencies and capabilities that promote student achievement of educational objectives” (p. 146). Both CBTE and PBTE derived from beliefs in relationships between teaching practices and student learning. Intensely behaviorist, both CBTE and PBTE grew in part from a desire for accountability in education, a concern that has persisted into the twenty-first century. Although the nomenclature of CBTE and PBTE has largely vanished from higher education teacher education syllabi, the concerns for accountability and the premises underlying the movements persist.

Other programs emphasize a more developmental approach, typically focusing on field experiences integrated with coursework, analyses of classrooms, journal writing, and reflective practice. The 1980s and 1990s saw emphasis on reflective practice as a program keynote in many institutions.

### Accreditation

Teacher education, like other fields in higher education that prepare professionals, has used accreditation as a means of quality control. In 1948 the newly formed American Association of Colleges for Teacher Education (AACTE) began accrediting institutions that prepared teachers. By 1950 AACTE had issued the first of several versions of *Revised Standards and Policies for Accrediting Colleges for Teacher Education*. In 1954, perhaps recognizing the possible conflicts inherent in being the organization of those institutions preparing teachers and also being responsible for managing the accrediting process, AACTE gave up responsibility for accreditation. The National Council for the Accreditation of Teacher Education (NCATE) was created and has dominated the accrediting process at the national level since. Over the years, several versions of its standards, policies, and practices have emerged. Most states have processes for accrediting teacher preparation programs and many work collaboratively with NCATE.

Almost six hundred institutions are NCATE accredited.

The accreditation movement has not been without controversy, controversy that combined with concerns for quality produced a series of revisions of standards and practices over the years. Major controversies include the voluntary nature of NCATE accreditation; the standards used; and the complexity, costs, and time required to complete the process. Perhaps as a result of controversy over these and other issues, an alternative accrediting body, the Teacher Education Accreditation Council, began in the 1990s and by 2002 had more than sixty member institutions.

Thus institutions had two agencies from which to seek professional accreditation. However, the combination of NCATE’s longevity and the number of states working together on accreditation suggest that NCATE will continue to be the major accrediting body.

### Summary

Paul Woodring, quoting the seventeenth-century writer Comenius, notes that the main object of teacher education is “to find a method of instruction by which teachers may teach less but learners may learn more” (Woodring, p. 1). This brief article suggests the difficulties inherent in finding flawless ways of teaching and of preparing teachers. Despite many research studies purporting to show that one way of doing things is superior to others, finding a way to prepare teachers so that students will learn more remains problematic. Yet if the past is prologue to the present, teacher educators in the many preparation environments that exist and that will evolve will continue to seek better ways so that all may learn.

*See also:* TEACHER EVALUATION, *subentries on* METHODS, OVERVIEW; TEACHING, *subentry on* LEARNING TO TEACH.

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## INTERNATIONAL PERSPECTIVE

In 1995 there were approximately 46 million primary and secondary school teachers in the world's formal education systems. A little more than 3 million of them were in the United States and Canada.

Initial teacher education throughout the world has five main features, all representing decisions regarding key issues. These are: recruitment, curriculum, structure, governance, and accreditation and standards. This article focuses on the first three issues.

### Recruitment

Among the most important features of teacher education are the criteria and procedures by which candidates are selected or recruited for entry to programs and institutions. Unlike some other professions, teaching often suffers from a shortage of qualified candidates for admission. Therefore, teaching often does not enjoy the privilege of being able to select the best qualified from among a large pool of applicants. The problem for a system is, first, ensuring that there is a large enough pool of qualified graduates to meet the needs of the professions and, second, attracting enough qualified applicants to enter teaching in competition with the other professions.

How much schooling should a candidate for admission to teacher education have? How valuable are experiences outside school for prospective teachers? If the demand for fully qualified applicants for admission to teacher education programs is greater than the supply, are there alternative qualifications that might satisfy the demand? These are some of the issues confronted in attempts made to recruit candidates for entry to teaching. Factors influencing recruitment include the status of the teaching profession; the supply of, and demand for, teachers; and the economic resources of the system.

An example of the status of the profession affecting recruitment can be seen in Thailand. In 1996 it was reported that the low status of the teaching profession in Thailand was discouraging competent people from entering teaching and that some en-

trants were not seriously committed to becoming teachers. For Thailand, therefore, the need to improve the status of teaching and to provide other incentives for joining the profession was important.

Raymond Bolam pointed out that the career structure of the profession is also influential, contrasting the situation in the United Kingdom, where a head teacher might earn four times as much as a beginning teacher, with the situation in Spain, where head teachers received only a small increase in salary above that of their colleagues. Presumably, in Spain, candidates motivated by prospects of economic advancement are less likely to enter teaching than they are in the United Kingdom, other things being equal.

Another important aspect of recruitment concerns the number of years of schooling candidates have completed before entry to training institutions. While in most developed countries completion of a full eleven or twelve years of schooling is a normal requirement, that is an unrealistic expectation in a country that is unable to produce a sufficient number of such graduates to meet its needs for teachers. Toward the end of the twentieth century, in the central and south Asian countries of Afghanistan, Pakistan, India, Sri Lanka, Bangladesh, and Nepal, the mean number of years of schooling required before entry to teacher training was 10.7 years. In the southeast Asian countries of Thailand, Malaysia, Singapore, Indonesia, and the Philippines, it was 10.5 years, while in the Latin American countries of Brazil, Chile, Cuba, Peru, Venezuela, and Colombia, it was 9.3 years. In the African countries of Algeria, Ghana, Nigeria, Ivory Coast, Morocco, and Kenya, the mean was 9.6 years.

This is not to say that the only qualifications accepted for entry to teacher education are the number of years of schooling or level of academic achievement. In some countries, candidates are recruited without completing the full secondary education available because of their valuable experience in other types of activities beyond formal schooling, such as employment and community development work, and their strong motivation to become teachers. In Australia, for example, universities like the University of Sydney offer such candidates programs specially designed to take advantage of their strengths.

### Structure

Most systems provide teacher education in face-to-face situations to students attending institutions of

higher education. However, many teachers around the world receive substantial components of their training through distance education. Beginning near the end of the 1950s, this approach involved the use of postal services for the delivery of learning materials to students remote from an institution, and the sending back of completed assignments by the students. The correspondence elements of this model were supplemented with tutorials conducted at centers located within reach of enough students to form a group. On a number of occasions tutors would meet with the groups to render the process in more motivating social contexts and to deal with students at a more personal level. Sometimes students traveled to the campuses for residential schools. Telephone hook-ups were also arranged by land line or even satellite. Two Australian universities, the University of New England and the University of Queensland, pioneered this approach to distance teacher education. As technical electronic advances occurred with the introduction of personal computers and electronic mail the process became much faster and more efficient. Distance education is a relatively inexpensive approach that is especially useful in locations where populations are sparse and distances are great.

The duration of teacher education programs varies across systems from a year or less to four or even five years. That range exists in quite a variety of countries and seems not always to depend on the economic development level of the countries concerned. Among the African developing countries of Algeria, Ghana, Nigeria, Ivory Coast, Morocco, and Kenya, the range in 1990 was from one to five years. In Australia, recruits who have completed three- or four-year university bachelor's degrees can complete a professional teaching qualification in one year, while most choose to enter teaching immediately after completing secondary schooling and then take up to four years to complete a bachelor of education degree.

The crucial factor is the foundation on which the professional training is based. Sometimes systems try to compensate for lack of a full secondary education in its recruits by adding time to the training program in which to supply missing knowledge and skills. However, this can increase the costs of teacher education to prohibitive levels.

One of the chief controversies in initial teacher education in more developed countries in the second half of the twentieth century was whether pro-

fessional components of programs should be offered concurrently with academic components or consecutively. It became commonly accepted that concurrent programs were preferable. However, fluctuations in teacher supply and demand, and the demands of other programs in universities often resulted in decisions being adopted on the basis of practicalities rather than ideals, so that consecutive programs began to take precedence. Continuous, or concurrent, programs tend to introduce professional components early and in close association with general education and specialist academic studies. Consecutive programs, sometimes called "end-on" programs, delay the introduction of professional components until general and specialist studies have been completed.

Especially controversial during the 1970s, 1980s, and 1990s were the relationships between the university or college offering the programs and the schools for which the student teachers were being prepared. Traditionally, schools provided professional experiences during the *practicum* component of the program, perhaps for up to three periods of three or four weeks a year. However, the role of the schools in initial teacher education generally became greater during those decades. In some cases, the school became the locus of the program, with student teachers being based in schools rather than in universities or colleges. Crucial to this controversy was the role of experienced teachers employed in the schools. Whereas it had been more usual for them to act as advisers and supervisors of initial school experience, they now sometimes undertook much more onerous responsibilities, such as designing and coordinating the whole program, with universities providing a supporting role and awarding the final qualification.

The types of institutions offering initial teacher education programs also vary from system to system. In some places, teacher education, especially at the elementary level, is offered in single purpose, state-run or private colleges known often as teachers colleges or colleges of education. In other countries, teacher education is offered by multipurpose institutions, sometimes called polytechnics, which are tertiary education institutions emphasizing training for a variety of occupations, for example paramedical services, occupational therapy, and journalism. During the 1990s both England and Australia restructured their higher education systems so that all such

institutions became new universities or additional components of existing universities.

All of these institutions work in conjunction with early childhood, elementary, and secondary schools, which provide practice teaching experiences for teacher education students.

### Curriculum

What do student teachers need to learn in order to become effective teachers in the contexts in which they will be employed? That is the most fundamental of all the questions that can be asked about teacher education. Initial teacher education programs usually have five strands: general education, specialist subjects, education foundation studies, professional studies, and the practicum, including practice teaching.

General education programs attempt to ensure that intending teachers have a sound grounding in the predominant knowledge, attitudes, and values of the cultures in which they are preparing to teach. General studies in history, the arts, science, mathematics, philosophy, ethics, government, psychology, and sociology are common components of this strand.

Specialist subjects involve studies in depth, which qualify students to teach specific areas of knowledge. Literature and literacy, languages, history, geography, mathematics, science, computing, domestic science, physical education, and industrial arts are examples. Student teachers preparing to teach in elementary schools are usually expected to teach a broader range of content, whereas postelementary teachers are usually more specialized.

Education foundation studies include studies of the history of educational thought, principles of learning and teaching, human growth and development, comparative education, and sociology of education. Curriculum and instruction subjects provide units on principles and practice of planning, delivering and assessing learning experiences for students and include such matters as programming, classroom management skills, test construction, individualizing instruction, small group teaching methods, laboratory instruction, and cooperative learning techniques.

In some systems, the distinction between these theoretical and applied learnings is eschewed on the grounds that theoretical studies have little relevance to newcomers unless they are seen to arise from

practice, and attempts are made to integrate the two. This was well exemplified in England in 1992, when, partly on the grounds that the content of teacher education was too theoretical, Kenneth Clarke, then the Secretary of State for Education, announced that 80 percent of programs in secondary teacher education should be "school-based." In North America, Bruce Joyce and Beverly Showers, among others, called for a more central role of the school in teacher education. A somewhat similar complaint about the excess of theory in the curriculum of teacher education programs was reported in 1991 by Andrea B. Rugh and colleagues with reference to Pakistan, and in 1986 by Linda A. Dove regarding Papua New Guinea.

In some parts of the world, the role of the teacher is wider than in others and the curriculum of teacher education is adjusted accordingly. In 1991 Beatrice Avalos described situations in Tanzania and Papua New Guinea that are useful examples of the risks encountered in such widening of the curriculum. In Tanzania, adherence was given to the belief that education should produce citizens who were self-reliant, especially as most children would not receive more than a basic education. Schools were to be community schools that inculcated "socialist" work habits; were self-supporting financially; emphasized knowledge and skills useful to the village or rural community; and encouraged the participation of the community in school activities. Pursuit of these goals necessitated a broadening of the teacher education curriculum at the same time as the length of the program was shortened in order to produce graduates more quickly. In consequence of these changes, the curriculum became overcrowded and content-centered with little time for practical components. Avalos claimed that the teachers did not even achieve sufficient competence to teach basic literacy and numeracy, and concluded that great caution needs to be exerted in training teachers for more than one purpose.

Providing actual teaching experience in real school situations (the practicum) is one of the most challenging tasks for planners of teacher education. Traditionally, in the elementary school context, the student teacher was placed with a volunteer school teacher and would be assigned lessons to design, prepare, and present under that teacher's guidance. Usually these lessons would number about three per day, after an initial period of orientation and observation, for about three weeks each year of the pro-

gram. The teacher would provide feedback on a selection of those lessons but, in order to develop confidence and independence, would not be present for all of the lessons, especially toward the end of the period of practice teaching. The college or university in which the student teacher was enrolled would usually appoint one of its own faculty to supervise this process and that person would visit and observe the student teacher on several occasions and would have the responsibility of reporting on progress and awarding a grade, after discussing the experience with both the student and the cooperating teacher. Student teachers would often have other assignments to complete as well as those involving face-to-face teaching. For example, they might be required to establish a file on school organization and curriculum resources in the school. In the context of the secondary school, in which the student teacher might be obtaining experience in a number of specialist subject areas involving more than one school department, a corresponding number of cooperating teachers and college or university supervisors might be appointed.

This traditional approach to the practicum has been criticized on the grounds that it militates against bridging the gap between theory and practice, when the two might be learned more effectively if integrated. In some cases the problem was approached by trying to make the university or college the site of more practically orientated school experiences. Thus, such innovations as laboratory schools were established at the university. Over the last three decades of the twentieth century, the bridge was sought in the form of simulations, such as microteaching. Microteaching usually occurred on the campus of the college or university. It consisted of scaled-down teaching situations in which shorter than normal lessons would be taught to smaller groups of students with limited numbers of teaching skills to be practiced in pursuit of a small number of learning objectives. Usually, teaching spaces were developed and built specifically for the environment of microteaching. The lessons would be videotaped, so that the student teacher could view the lesson, often in consultation with peers and a supervisor or mentor, and obtain feedback which could be used in replanning the lessons.

While the controlled context in which microteaching occurs has facilitated much research on its effectiveness, there has been concern about the extent to which skills developed under microteach-

ing conditions are transferred to normal classroom situations. It has been argued that there is no adequate substitute for real experience in normal classrooms and seldom, if ever, was reliance placed on microteaching as a complete substitute for actual classroom experience. Indeed, some systems have sought to make school experience the central component of teacher education in what has become known as “school-based teacher education” or, at least, by providing much more enduring periods of school experience at some stage of the teacher education program. A medical model has sometimes been applied, with student teachers approaching the end of their programs becoming “interns” attached to schools for a semester, or even a year.

Critics often claimed that professional experiences gained through such innovations as microteaching and such models as “performance-based” or “competency-based” teacher education gave too much emphasis to the “performance” or “behavioral” aspects of teaching at the expense of insight and reflection. Accordingly, calls for more reflective approaches were made and were accepted. The concept of reflective teacher education generated much literature in the 1980s and 1990s. In 1998, Marvin Wideen and colleagues, after an extensive review of research on the effectiveness of innovations in teacher education, including reflective practice, found little encouragement for their adoption, and concluded that such innovations have little ability to affect beginning teachers within teacher education structures common at the end of the twentieth century.

### Challenges

Major challenges for initial teacher education in the twenty-first century include:

1. The raising of the status of the teaching profession to a level at which it attracts the best qualified applicants.
2. Harnessing rapidly developing technology to provide maximum learning opportunities for student teachers, especially those in remote areas and those in developing countries, where conventional resources such as libraries are impossible to resource adequately.
3. Discovering the optimum balance between theory and practice in the curriculum of teacher education in the many and varying contexts in which it is provided.
4. Developing teacher education structures and

curricula that provide optimal balances among the academic, humanitarian, aesthetic, and moral domains of human experience.

5. Designing research that takes account of the many complex factors that impinge upon the process of teacher education, so that a greater understanding may be gained of the ways in which students learn to teach in the myriad of contexts in which they live.

*See also:* ELEMENTARY EDUCATION, *subentry on* PREPARATION OF TEACHERS; TEACHER PREPARATION, INTERNATIONAL PERSPECTIVE.

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MICHAEL J. DUNKIN

## TEACHER EMPLOYMENT

By 2005 America's schools will be serving more children (54 million) than ever before, and the total number of teachers will have grown to more than 3.5 million (up from 2.5 million in 1980). Because of rising student enrollments, growing numbers of teacher retirements, the reduction of class sizes, new curriculum requirements, and high rates of attrition among beginning teachers, the United States will need to hire 2 million new teachers by 2010.

Despite reports of shortages in some areas, the United States annually produces many more new teachers than its schools hire. Nevertheless, only about 60 percent of newly prepared teachers nationwide actually teach after they graduate.

Still, there is a stark maldistribution of qualified teachers. Many schools are hiring increasing numbers of teachers from nontraditional routes into teaching, many of which offer very little preparation or mentoring support. Furthermore, teachers report that they cannot find jobs because they are not trained to teach in subjects and/or in geographic areas where vacancies exist or they are not willing to work for the salaries offered or where poor working conditions are present.

To be sure, noncompetitive salaries and inadequate incentives contribute to the nation's teacher recruitment problems. The average teacher salary was \$40,574 in 1999. When accounting for inflation, however, the 1999 average salary gave teachers only a \$135 raise from the average earned in 1972.

Improving salaries is critical but not sufficient to address teacher supply, demand, and quality issues. Most districts and states lack a coherent teaching policy framework that can link the ways teachers

are recruited, prepared, inducted, evaluated, paid, developed, and retained. This entry outlines the latest trends in teacher supply and demand, licensure, and other employment policies that bear on these matters.

### **Inequities in Who Is Taught by Whom**

In some communities, especially in high-poverty urban and rural locations, schools report increasing difficulties in recruiting qualified teachers in critical subject areas such as physical science, mathematics, bilingual education, and special education. As a result, schools often assign teachers outside of the field in which they have prepared. For example, in 1994, 28 percent of mathematics teachers and 55 percent of physical science teachers did not have the equivalent of a college minor in the subjects they were teaching.

Across the nation there is a need for more teachers of color to meet schools' desires for a teaching force that reflects growing student diversity. The teaching profession continues to be about three-fourths female and white. While only 13 percent of teachers are minorities, nearly one-third of the students are minorities. About 15 percent of students in teacher preparation are individuals of color—but, if past trends hold true, only two-thirds of these will find their way into teaching.

In 1996 William Sanders and June Rivers found that African-American students are nearly twice as likely to be assigned to the most ineffective teachers and about half as likely to be assigned to the most effective teachers; poor children and those of color are more likely to be assigned out-of-field, lesser prepared, and nonlicensed teachers than their counterparts. Schools serving larger numbers of low-income students offer teachers fewer salary schedules and poorer teaching conditions (e.g., class sizes, availability of supplies and materials) than those who serve more affluent schools. Ronald Ferguson found in 1991 that academically able teachers were less likely to teach in lower socioeconomic schools unless salaries were raised. Beginning salaries can make a difference in terms of the numbers and quality of teachers recruited and in commitment to teaching.

### **Recruiting High-Quality Teachers**

Newly licensed teachers have been found to be more academically qualified than those who enter without preparation. A 2001 review of teacher certification studies has shown that teachers who entered without

preparation had lower scores on teacher tests. These numbers and findings stand in stark contrast to reports that surfaced in the 1980s, indicating that prospective teachers were disproportionately drawn from the bottom quartile of college students.

Yesterday's standards of teacher quality may not be tomorrow's standards. Growing evidence suggests that effective teachers must possess content-specific pedagogical knowledge—that is, they must have knowledge not only of the subjects they are assigned to teach but also of how to teach their content in different ways that make sense to increasingly diverse students. Given growing student diversity, teachers of all grades and subjects need to know how to teach literacy skills and respond to the needs of second-language learners or students with learning disabilities.

### **Preparing and Supporting Teachers**

The extent to which teachers are well-prepared and the degree to which newly hired teachers are supported and assessed in their initial years of teaching can determine whether they remain in teaching and are effective over time. While as many as 30 percent of new teachers leave within five years, high-quality preparation combined with induction programs lowers attrition and enhances effectiveness. New teachers who have had student teaching are twice as likely to stay in teaching for more than five years. Graduates of five-year preparation programs are more self-assured and highly rated and have lower attrition rates than those from four-year programs in the same institutions. Teachers who have left the profession point not only to poor salaries but also to poor working conditions as having the most detrimental impact on their decision to leave teaching. They cite problems with administrative support and leadership, student behavior, school atmosphere, and a lack of autonomy.

### **Hiring and Selecting Teachers**

School districts do not always hire the most qualified and highly ranked teachers in their applicant pools because of inadequate management information systems and hiring procedures that discourage good applicants for several reasons: the large numbers of steps in the application process, demeaning treatment, and lack of timely action. Some prospective teachers report that they decided not to enter teaching after having their files lost, experiencing interviews in which their qualifications were barely

reviewed, failing to receive responses to repeated requests for information, and receiving late notification of job availability. These problems have been particularly acute in large urban districts. Other problematic practices that hinder the hiring of the best candidates include: (1) salary caps on experienced candidates, (2) cumbersome interstate licensure reciprocity, (3) limited ability to transfer pension benefits for mobile teachers, and (4) placement of beginning teachers in the most difficult assignments. While some school districts have eliminated these problems by professionalizing teaching and investing more in teachers, these lessons have not translated easily to other school districts.

### Teacher Licensure and Certification

In the 1990s twenty-five states created new standards for teacher licensure. By the early twenty-first century, forty-three states were testing teachers, using almost 600 different tests. In 2001 the National Academy of Sciences found that even the relatively well-developed tests do not provide adequate information for distinguishing moderately from highly qualified teachers. Current teacher tests are designed to assess limited competencies, and states use a variety of unclear methods to set passing scores.

Several states are working to create three-tiered licensure systems based upon more rigorous standards. By 2002 only Connecticut had fully implemented such a system, and did so in combination with substantial salary increases. Indiana was in the process of mirroring the Connecticut system. Ohio and Georgia are using a standardized classroom observation system as part of its process, while North Carolina is devising its own portfolio system to assess new teachers. Most states still use simple paper and pencil tests.

In addition, more than 115 alternative certification programs are operating in forty states. While some of these programs expect teachers to meet the same standards as those in traditional certification programs, many do not. For example, in Texas, where about 17 percent of new hires come from alternative routes, there are no SAT score minimums, no requirements to have a content major in the field the teacher will be teaching, and virtually no mentoring guidelines. Studies show that alternative programs have added minorities and men to the teaching ranks in urban areas. A 1997 analysis by Jianping Shen, however, revealed that those who en-

tered teaching through short-term alternate routes had lower academic qualifications, were less likely to stay in teaching, and were more likely to be teaching in inner-city schools that serve more economically disadvantaged students.

Regular certification standards vary widely across the states as well. Some states, such as Connecticut, require a master's degree in addition to a strong subject matter degree, substantial education course work, and a lengthy internship, for a full standard certification. Meanwhile, other states, such as Louisiana, do not require a minor in the field to be taught and specify few education course-work hours or clinical training demands.

States that hold high teaching standards, however, do not necessarily enforce them. For example, 67 percent of all mathematics teachers nationwide in 1994 had a major in mathematics and held full state certification; more than 80 percent met this standard in Minnesota and Wisconsin, while only 39 percent did in Alaska.

### Teacher Evaluation and Compensation

States often do not have a standard teacher evaluation process. Principals often have little training in evaluation and find it difficult to balance evaluation with other responsibilities. Inadequate teacher evaluations contribute to difficulty in dismissing ineffective teachers. In the early twenty-first century, more states are passing legislation to create new standards-based evaluation systems, some with measures of student improvement. Value-added student assessments are being considered for teacher evaluation and pay systems, although a number of technical issues need to be resolved.

New salary plans are beginning to emerge. In early 2000 the Cincinnati school district and teacher unions crafted a plan for overhauling teachers' career paths, using standards established by the National Board for Professional Teaching Standards (NBPTS). The process includes administrators and peer review, along with detailed portfolios focused on student and teacher learning. Teachers can advance on a career ladder and earn an additional \$9,000. In 2000 Iowa passed a \$40 million package that frames new teaching standards, reinvents the evaluation system, and creates a bonus plan for teachers. Teachers will be able earn substantially more, but many issues are yet to be resolved, including how principals, many of whom supervise at least

forty teachers each, will have time to conduct valid evaluations.

Supported by new research linking NBPTS certification to improved student learning, forty-four states established policies to encourage teachers to receive NBPTS certification. In about half of the states and about eighty-five districts, teachers receive salary supplements for completion. Some states are offering up to \$7,500 annual bonuses to those who have earned certification, and in California, National Board Certified Teachers can earn an additional \$20,000 (over four years) by teaching in low-performing schools. These policies are quite new and represent groundbreaking developments in dismantling the traditional lockstep teacher salary schedule.

Proactive and coherent teacher development policies help ensure an adequate supply of well-qualified teachers. At the state level, Connecticut took significant strides to recruit and retain qualified teachers in 1986. By raising and equalizing beginning salaries, while simultaneously raising standards for teacher education and licensing and introducing a well-managed teacher induction program, the state eliminated shortages and created a surplus of teachers by 1990. The state has few unqualified teachers teaching in its public schools and posted some of the highest student achievement gains on the National Assessment of Educational Progress.

The overall problem is not a shortage of people willing to consider teaching but an array of labor, market, and occupational factors. Wealthy districts that pay high salaries and offer good working conditions rarely experience shortages. Districts that have more difficulty recruiting and retaining teachers tend to serve low-income students, pay teachers less, offer larger class sizes and pupil loads, provide fewer materials, and present less desirable working conditions, including less professional autonomy. Thus, teacher supply should not be evaluated in terms of gross numbers of teachers needed in relation to gross demand, but in terms of specific qualifications and characteristics of the teaching force and in terms of the demands of schooling all of the nation's students well.

See also: TEACHER EDUCATION; TEACHER EVALUATION.

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## TEACHER EVALUATION

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### OVERVIEW

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### METHODS

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### OVERVIEW

Baseball is known as the national pastime of the United States, but teacher evaluation beats it hands down. Everybody does it—some with a vengeance, others with the casual disregard that physical and emotional distance afford. Most enthusiasts grow up with the game, playing a sandlot version as they go through school. Indeed, familiarity with the job of teaching and the widespread practice of judging teachers has shaped the history of teacher evaluation.

#### History of Teacher Evaluation

Donald Medley, Homer Coker, and Robert Soar (1984) describe succinctly the modern history of formal teacher evaluation—that period from the turn of the twentieth century to about 1980. This history might be divided into three overlapping periods: (1) The Search for Great Teachers; (2) Inferring Teacher Quality from Student Learning; and (3) Examining Teaching Performance. At the beginning of the twenty-first century, teacher evaluation appears to be entering a new phase of disequilibrium; that is, a transition to a period of Evaluating Teaching as Professional Behavior.

The *Search for Great Teachers* began in earnest in 1896 with the report of a study conducted by H. E. Kratz. Kratz asked 2,411 students from the second

through the eighth grades in Sioux City, Iowa, to describe the characteristics of their best teachers. Kratz thought that by making desirable characteristics explicit he could establish a benchmark against which all teachers might be judged. Some 87 percent of those young Iowans mentioned “helpfulness” as the most important teacher characteristic. But a stunning 58 percent mentioned “personal appearance” as the next most influential factor.

Arvil Barr’s 1948 compendium of research on teaching competence noted that supervisors’ ratings of teachers were the metric of choice. A few researchers, however, examined average gains in student achievement for the purpose of *Inferring Teacher Quality from Student Learning*. They assumed, for good reason, that supervisors’ opinions of teachers revealed little or nothing about student learning. Indeed, according to Medley and his colleagues, these early findings were “most discouraging.” The average correlation between teacher characteristics and student learning, as measured most often by achievement tests, was zero. Some characteristics related positively to student achievement gains in one study and negatively in another study. Most showed no relation at all. Simeon J. Domas and David Tiedeman (1950) reviewed more than 1,000 studies of teacher characteristics, defined in nearly every way imaginable, and found no clear direction for evaluators. Jacob Getzels and Philip Jackson (1963) called once and for all for an end to research and evaluation aimed at linking teacher characteristics to student learning, arguing it was an idea without merit.

Medley and his colleagues note several reasons for the failure of early efforts to judge teachers by student outcomes. First, student achievement varied, and relying on average measures of achievement masked differences. Second, researchers failed to control for the regression effect in student achievement—extreme high and low scores automatically regress toward the mean in second administrations of tests. Third, achievement tests were, for a variety of reasons, poor measures of student success. Perhaps most important, as the researchers who ushered in the period of *Examining Teaching Performance* were to suggest, these early approaches were conceptually inadequate, and even misleading. Student learning as measured by standardized achievement tests simply did not depend on a teacher’s education, intelligence, gender, age, personality, attitudes, or any other personal attribute. What mat-

tered was how teachers behaved when they were in classrooms.

The period of *Examining Teaching Performance* abandoned efforts to identify desirable teacher characteristics and concentrated instead on identifying effective teaching behaviors; that is, those behaviors that were linked to student learning. The tack was to describe clearly and precisely teaching behaviors and relate them to student learning—as measured most often by standardized achievement test scores. In rare instances, researchers conducted experiments for the purpose of arguing that certain teaching behaviors actually caused student learning. Like Kratz a century earlier, these investigators assumed that “principles of effective teaching” would serve as new and improved benchmarks for guiding both the evaluation and education of teachers. Jere Brophy and Thomas Good produced the most conceptually elaborate and useful description of this work in 1986, while Marjorie Powell and Joseph Beard’s 1984 extensive bibliography of research done from 1965 to 1980 is a useful reference.

### Goals of Teacher Evaluation

Although there are multiple goals of teacher evaluation, they are perhaps most often described as either *formative* or *summative* in nature. Formative evaluation consists of evaluation practices meant to shape, form, or improve teachers’ performances. Clinical supervisors observe teachers, collect data on teaching behavior, organize these data, and share the results in conferences with the teachers observed. The supervisors’ intent is to help teachers improve their practice. In contrast, summative evaluation, as the term implies, has as its aim the development and use of data to inform summary judgments of teachers. A principal observes teachers in action, works with them on committees, examines their students’ work, talks with parents, and the like. These actions, aimed at least in part at obtaining evaluative information about teachers’ work, inform the principal’s decision to recommend teachers either for continuing a teacher’s contract or for termination of employment. Decisions about initial licensure, hiring, promoting, rewarding, and terminating are examples of the class of summative evaluation decisions.

The goals of summative and formative evaluation may not be so different as they appear at first glance. If an evaluator is examining teachers collectively in a school system, some summary judgments of individuals might be considered formative in

terms of improving the teaching staff as a whole. For instance, the summative decision to add a single strong teacher to a group of other strong teachers results in improving the capacity and value of the whole staff.

In a slightly different way, individual performance and group performance affect discussions of merit and worth. *Merit* deals with the notion of how a single teacher measures up on some scale of desirable characteristics. Does the person exhibit motivating behavior in the classroom? Does she take advantage of opportunities to continue professional development? Do her students do well on standardized achievement tests? If the answers to these types of questions are “yes,” then the teacher might be said to be “meritorious.” Assume for a moment that the same teacher is one of six members of a high school social studies team in a rural school district. Assume also that one of the two physics teachers just quit, the special education population is growing rapidly, and the state education department recently replaced one social science requirement for graduation with a computer science requirement. Given these circumstances, the meritorious teacher might not add much value to the school system; that is, other teachers, even less meritorious ones, might be worth more to the system.

The example of the meritorious teacher suggests yet another important distinction in processes of evaluating teachers: the difference between *domain-referenced* and *norm-referenced* teacher evaluation. When individual teachers are compared to a set of externally derived, publicly expressed standards, as in the case of merit decisions, the process is one of domain-referenced evaluation. What counts is how the teacher compares to the benchmarks of success identified in a particular domain of professional behavior. In contrast, norm-referenced teacher evaluation consists of grouping teachers’ scores on a given set of measures and describing these scores in relation to one another. What is the mean score of the group? What is the range or standard deviation of the scores? What is shape of the distribution of the scores? These questions emanate from a norm-referenced perspective—one often adopted in initial certification or licensure decisions.

The work of John Meyer and Brian Rowan (1977) suggests that there are yet other goals driving the structure and function of teacher evaluation systems. If school leaders intend to maintain public confidence and support, they must behave in ways

that assure their constituents and the public at large that they are legitimate. Schools must innovate to be healthy organizations, but if school leaders get too far ahead of the pack—look too different, behave too radically—they do so at their own peril. When they incorporate acceptable ideas, schools protect themselves. The idea that teachers must be held accountable, or in some way evaluated, is an easy one to sell to the public, and thus one that enhances a leader's or system's legitimacy.

### Trends, Issues, and Controversies

With the standards movement of the late 1990s came increased expectations for student performance and renewed concerns about teacher practice. Driven by politicians, parents, and, notably, teacher unions, school districts began an analysis of teacher evaluation goals and procedures. The traditional model of teacher evaluation, based on scheduled observations of a handful of direct instruction lessons, came under fire. "Seventy years of empirical research on teacher evaluation shows that current practices do not improve teachers or accurately tell what happens in classrooms" (Peterson, p. 14). Not surprisingly, in this climate, numerous alternative evaluative practices have been developed or reborn.

In the early twenty-first century, the first line of teacher evaluation consists of state and national tests created as barriers for entry to the profession. Some forty states use basic skills and subject matter assessments provided by the Praxis Series examinations for this purpose. Creators of the examinations assume teachers should be masters of grammar, mathematics, and the content they intend to teach. Though many states use the same basic skills tests, each sets its own passing score. The movement to identify and hire quality teachers based on test scores has resulted in some notable legal cases. Teachers who graduate from approved teacher education programs yet fail to pass licensure tests have challenged the validity of such tests, as well as the assignment of culpability. If a person pays for teacher education and is awarded a degree, who is to blame when that person fails a licensure examination? This is not an insignificant concern. In 1998, for example, the state of Massachusetts implemented a new test that resulted in a 59 percent failure rate for prospective teachers. Once a teacher has assumed a job, however, that teacher is rarely, if ever, tested again. In-service teachers typically succeed at resisting pressure to submit to periodic examinations because of the

power of their numbers and their political organization.

Despite the well-known difficulties of measuring links between teaching and learning, the practice of judging teachers by the performance of their students is enjoying a resurgence of interest. Polls indicate that a majority of the American public favors this idea. School leaders routinely praise or chastise schools, and by implication teachers, for students' test results. Despite researchers' inability to examine the complexity of life in schools and in classrooms, studies of relationships between teaching and learning often become political springboards for policy formulation. For example, William Sanders (1996) suggests that teacher effectiveness is the single greatest factor affecting academic growth. His work has been seized upon by accountability proponents to argue that teachers must be held accountable for students' low test scores.

Although there may be much to be gained from focusing educators on common themes of accountability through the use of standards and accompanying tests, there may be much to lose as well. The upside can be measured over time in greater collective attention to common concerns. The downside results when people assume teachers can influence factors outside their control—factors that affect students' test scores, such as students' experiences, socioeconomic status, and parental involvement. A focus on scores as the sole, or even primary, indicator of accountability also creates the possibility for academic misconduct, such as ignoring important but untested material, teaching to the test, or cheating.

As researchers have demonstrated, those schools that need the most help are often least likely to get it. Daniel L. Duke, Pamela Tucker, and Walter Heinecke (2000) studied sixteen high schools involved in initial efforts to meet the challenges of new accountability standards that emphasize student test scores. These schools represented various combinations of need and ability. The researchers found that the schools with high need and low ability (those with poor test scores and low levels of financial resources) reported the highest concerns about staffing, morale, instruction, and students. Thus, the schools that needed the most help, the ones that were the primary targets of new accountability efforts, appeared in this study to be put at greater risk by the accountability movement.

Teachers' jobs involve far more than raising test scores. An evaluation strategy borrowed from institutions of higher education and business, sometimes referred to as *360-degree feedback*, acknowledges the necessity of considering the bigger picture. The intent of this holistic approach is to gather information from everyone with knowledge of a teacher's performance to create a complete representation of a teacher's practice and to identify areas for improvement. Multiple data sources, including questionnaires and surveys, student achievement, observation notes, teacher-developed curricula and tests, parent reports, teacher participation on committees, and the like, assure a rich store of information on which to base evaluation decisions. Current models tend to place the responsibility with administrators to interpret and respond to the data. To be sure, there are risks involved. The strategy asks children to evaluate their teachers, and it gathers feedback from individuals who possess only a secondary knowledge of a teacher's practices, namely parents and fellow teachers. Nonetheless, different kinds of information collected from different vantage points encourage full and fair representation of teachers' professional lives.

### **Toward Evaluating Teaching as Professional Behavior**

At the turn of the twenty-first century, people continue to debate whether teaching is a true profession. Questions persist about educators' lack of self-regulation, the nebulously defined knowledge base upon which teaching rests, the lack of rigid entrance requirements to teacher education programs (witness alternative licensure routes), the level of teachers' salaries, and the locus of control in matters of evaluation. Yet school districts, state governments, the federal government, and national professional and lay organizations appear intent as never before on building and strengthening teaching as a profession.

One simple example of a changing attitude toward teaching as a profession is that of the use of peer evaluation. Two decades ago, in Toledo, Ohio, educators advanced processes of peer review as a method of evaluation. At its most basic level, peer review consists of an accomplished teacher observing and assessing the pedagogy of a novice or struggling veteran teacher. School districts that use peer review, however, often link the practice with teacher intervention, mentoring programs, and, in some in-

stances, hiring and firing decisions. Columbus, Ohio's Peer Assistance and Review Program, seemingly representative of many review systems, releases expert teachers from classroom responsibilities to act as teaching consultants. Driven by the National Education Association's 1997 decision to reverse its opposition to peer review, the idea has enjoyed a resurgence of popularity in recent years.

Founded in 1987, the National Board for Professional Teaching Standards (NBPTS) is yet another example of people from different constituencies working together to advance the concept of teaching as a profession. The NBPTS attempts to identify and reward the highest caliber teachers, those who represent the top end of the quality distribution. Based on the medical profession's concept of board-certified physicians, the NBPTS bestows certification only on those teachers who meet what board representatives perceive to be the highest performance standards. By the end of the year 2000, nearly 10,000 teachers had received board certification—though this amounts to a tiny fraction of the nation's 2.6 million teachers. Widespread political and financial support, from both political conservatives and liberals, suggests this idea may have staying power.

Teacher evaluation will grow and develop as the concept of teaching as a profession evolves. Computer technology is only beginning to suggest how new methods of formative and summative evaluation can alter the landscape. Perhaps most important is that as reformers confront the realities of life in schools, public knowledge of what it means to be a teacher increases. More people in more walks of life are recognizing how complex and demanding teaching can be, and how important teachers are to society as a whole. Teacher evaluators of the future will demonstrate much higher levels of knowledge and skill than their predecessors, leaving the teaching profession better than they found it.

*See also:* SUPERVISION OF INSTRUCTION.

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## METHODS

In the decade from 1991 to 2001, a number of developments in public policy and assessment practices significantly altered the landscape for teacher evaluation practices. The single most important shift in the public policy arena has been the emergence of a tidal wave of support for what is loosely called "teacher accountability." What this seems to mean in effect is a growing insistence on measurement of teacher quality and teacher performance in terms of student achievement, which is often poorly defined, crudely measured, and unconnected to what educators regard as significant learning.

Because there is still little consensus about acceptable ways to meet the very substantial challenges posed by links between measures of student achievement and consequent conclusions about teacher effectiveness, the fact that this issue dominates current discourse about teacher evaluation is very significant, and somewhat alarming. This is not a new effort or a new issue, but the heated insistence on its power as the single most important criterion for establishing a teacher's effectiveness is new. Simply put, most efforts to connect student achievement to individual teacher performance have foundered in the past on the following weaknesses:

- The measurement does not take into account teaching context as a performance variable.
- The measurement is unreliable, in part because it does not include time as a variable—both the teacher's time with a cohort of students; and some model or models of sufficient time to see learning effects in students.
- The measures used to reflect student achievement are not congruent with best practice and philosophy of instruction in modern education.

The link between teacher performance and student achievement is both so intuitively compelling as a

major part of a teacher's performance evaluation and so very difficult to implement that it has never really been systematically achieved in the United States. The pressure to forge such links is immense in the early twenty-first century, and it is critical to the health and vitality of the education workforce that the link be credible and valid. A foundational validity issue is, of course, the quality and integrity of the methods states and districts have developed or adopted to measure student achievement. The teaching workforce has long disdained standardized national tests, the most commonly used assessments in school districts across the United States to represent student achievement, arguing persuasively that actual local and state curricula—and thus instruction—are not adequately aligned (or aligned at all) with the content of these tests. Furthermore, education reformers have almost universally excoriated these tests for two decades as reductive and not representative of the skills and abilities students really need to develop for the new millennium.

An evaluative commentary on the use of student tests for the purpose of high stakes accountability decisions was given by incoming American Educational Research Association President Robert Linn (2002), who evaluated fifty years of student testing in the U.S. education system, and the effects of that testing:

I am led to conclude that in most cases the instruments and technology have not been up to the demands that have been placed on them by high-stakes accountability. Assessment systems that are useful monitors lose much of their dependability and credibility for that purpose when high stakes are attached to them. The unintended negative effects of the high-stakes accountability uses often outweigh the intended positive effects. (p. 14)

Given the policy climate in the early twenty-first century, this is a sobering and cautionary conclusion, coming as it does from such a major figure in the measurement community, and one known for his even-handed and judicious treatment of measurement issues. It is clear that the most widely used current measures of student achievement, primarily standardized norm-referenced multiple-choice tests developed and sold off-the-shelf by commercial test publishers, are useful for many educational purposes, but not valid for school accountability. Indeed, they may be positively misleading at the school

level, and certainly a distortion of teaching effectiveness at the individual teacher level. Concerns about the increased dependence on high-stakes testing has prompted a number of carefully worded technical cautions from important policy bodies as well. Although it is possible to imagine a program of student testing that aligns the assessments used to the standards for learning and to the curriculum actually taught, and that employs multiple methods and occasions to evaluate student learning, the investment such a program would demand would increase the cost of student assessment significantly. Furthermore, involving teachers in the conceptual development and interpretation of assessment measures that would be instructionally useful (particularly when those measures may have a direct effect on the teachers' performance evaluation and livelihood) is no closer to the realities of assessment practice than it has ever been—it is, in general, simply not part of the practice of school districts in the United States.

The emphasis on teacher quality has gained considerable momentum from the body of empirical evidence substantiating the linkage between teacher competence and student achievement. The "value-added" research, typified by the work of William Sanders and colleagues (1996; 1997; 1998) reinforces the assumption that the teacher is the most significant factor that affects student achievement. Sanders's work in this area is the best known and, increasingly, most influential among policymakers. In the measurement community, however, independent analyses of Sanders's data and methods have just begun. There appear to be controversial issues associated with both the statistical model Sanders uses and replicability of his findings.

### Teacher Evaluation

At the beginning of the twenty-first century there is more teacher testing for various purposes than ever before. Some of this testing serves traditional purposes; for example, for admission into programs of professional preparation in colleges and universities or for licensure. For the first time in the United States there is a high-stakes assessment for purposes of certification, the National Board for Professional Teaching Standards (NBPTS) certification assessments, which are modeled on medical specialty board certification. Finally, there is a growing use of performance assessments of actual teaching for both formative purposes—during a teacher's initial years of practice, or the induction period—and for sum-

mative purposes, to grant an initial or more advanced teaching license. Performance-assessment-based licensure has been implemented in Connecticut since 2000 and is being implemented in 2002 in Ohio and in 2003 in Arkansas. In addition, California plans to implement a teaching performance assessment for all beginning teachers in California beginning in 2004.

Both the policy climate and the standards movement have had profound effects on teacher testing. States set passing standards on licensing tests, often rigorous, for demonstrations of sufficient skill and knowledge to be licensed. For example, as of the year 2000, thirty-nine states require all licensed teachers to pass a basic skills test (reading, mathematics, and writing), twenty-nine require secondary teachers to pass subject-specific tests in their prospective teaching fields, and thirty-nine require prospective secondary teachers to have a major, minor, or equivalent course credits for a subject-specific license. This means that a number of states require all three hurdles to be cleared before granting a license. In addition, most states require that the teacher's preparation institution recommend the candidate for the license. In every state but New Jersey, however, the state has the power to waive all of these requirements "either by granting licenses to individuals who have not met them or by permitting districts to hire such people" (Edwards, p. 8). And, perhaps most discouraging, only about twenty-five of the fifty states even have accessible records of "the numbers and percentages of teachers who hold various waivers" (Jerald and Boser, p. 44). Thus, reliance on rigorous state testing and preparation requirements to assure the quality of the education workforce is likely to lead to disappointment.

In 2000, thirty-six of the thirty-nine states that require teachers to pass a basic skills test waived that requirement and permitted a teacher to enter a classroom as teacher of record without passing the test. In sixteen states, this waiver can be renewed indefinitely, so long as the hiring school district asserts its inability to find a qualified applicant. Of the twenty-nine states that require secondary teachers to pass subject matter exams—most often only multiple-choice tests, even though more sophisticated tests are available—only New Jersey denies a license and therefore a job to candidates who have not passed the tests. Eleven of these twenty-nine states allow such candidates to remain in the job indefinitely, and all twenty-nine but New Jersey waive the course

work completion requirement for secondary teachers if the hiring district claims that it cannot find a more qualified applicant for the position.

Thus, while initial licensing tests have become increasingly sophisticated—they are based on K–12 student and disciplinary standards and offer both multiple-choice and constructed response formats—the requirements for their use are not only widely variable, but also not rigorously enforced.

As of 2001 the NBPTS certification assessments represent the first-ever, widely accepted national recognition of excellence in the teaching profession. The program has grown exponentially since 1994 when eighty-six teachers, the first National Board Certified Teachers, were announced. In 2001 approximately 14,000 candidates in nineteen different fields were assessed; the NBPTS expects that the number of National Board Certified Teachers nationwide will rise from 9,534 (2000) to approximately 15,000. The certification assessment consists of a classroom-based portfolio, including videotapes and student work samples with detailed analytical commentaries by the teacher-candidates, and a computer-delivered written assessment focused primarily on content and pedagogical-content knowledge. The NBPTS assessments have established a number of new benchmarks for teacher evaluation. The assessments themselves are both elaborate and very rigorous; it takes approximately nine months for a teacher to complete the assessment process. Almost universally regarded by candidates as the single most profound learning and professional development experience they have ever had, the assessment process is being widely used as a model for teacher professional development. The scoring process, which requires extensive training of peer teachers, is itself a substantial professional development opportunity.

In addition, the actual technical quality of the scoring has contradicted long-held opinions that complex human judgments sacrifice reliability or consistency for validity, or credibility. The NBPTS scoring reliability is extremely high. The expense of the assessment—\$2,300 per candidate in 2002—has been borne largely by states and local governments as part of their support for teacher quality initiatives. That level of public support for a high-stakes, voluntary assessment is unprecedented in education in the United States. In 2001, the NBPTS published the first in a series of validity studies that showed substantive differences between National Board Certified Teachers and non-certified teachers in terms of

what actually goes on in the classrooms and in student learning.

The third area of change and innovation in teacher evaluation has taken place in states' provision for mentoring and formative assessment in the initial period of a beginning teacher's career, a period commonly called the induction period. States vary in the nature of the support they provide, with twenty-eight states requiring or providing funds for beginning-teacher induction programs, but only ten states doing both. The most sophisticated induction programs exist in Connecticut (the Connecticut BEST program), California (the CFASST program), and Ohio (the Ohio FIRST program). Each of these programs uses structured portfolio-based learning experiences to guide a new teacher and a mentor through a collaborative first year of practice.

Few states assess the actual teaching performance of new teachers. Twenty-seven states require that the school principal evaluate each new teacher. As of 2000, only four states (Kentucky, Louisiana, Oklahoma, and South Carolina) go beyond this requirement and require that the principal and a team of other educators from outside the school, trained to a common set of criteria, participate in the new teacher's evaluation. As of 2001 Connecticut, New York, and Ohio will all have performance-based licensure tests for beginning teachers at the end of the first or second year of teaching. Connecticut requires a subject-specific teaching portfolio; New York requires a videotape of teaching; Ohio will use an observation-based licensing assessment developed by Educational Testing Service called Praxis III. In 2002 Arkansas will begin using Praxis III as well; by 2004 California will make its work-sample-based Teaching Performance Assessment operational for initial licensure of all California teachers.

*See also:* TEACHER EDUCATION; TEACHER EMPLOYMENT; TEACHER UNIONS, *subentry on* INFLUENCE ON INSTRUCTION AND OTHER EDUCATIONAL PRACTICES.

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## TEACHER LEARNING COMMUNITIES

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Although they are seldom mentioned in the educational literature or in professional educators' organizations before the early 1980s, it has become commonplace to refer to certain projects, programs, networks, and collaboratives of prospective or experienced teachers as *teacher learning communities*. The term combines two basic concepts—*teacher learning* and *community*—that are part of the discourse in teacher education, professional development, school reform, and educational policy in the early twenty-first century.

### Teacher Learning and the New Professional Development

It has become understood that teachers are linchpins in educational reforms of all kinds. In fact, Michael Fullan, a well-known contemporary writer on educational change, suggests that "teachers' capacities to deal with change, learn from it, and help students learn from it will be critical for the future development of societies" (p. ix). This means that teacher learning—how, what, and under what conditions teachers learn to respond to the needs of a changing society—is among the most important issues in educational policy and practice. A strong emphasis on teacher learning is part of what has been referred to as a new paradigm of professional development or a new model of teacher education. The new professional development is conceptualized as continuous teacher learning over time. Early research about how teachers think about their work prompted a shift in emphasis away from what teachers do and toward what they know, what their sources of knowledge are, how those sources influence their work in classrooms, and how they make decisions and construct

curriculum within conditions that are ultimately uncertain and changing.

With its focus on teachers as "knowers" and thinkers (not just do-ers), the concept of teacher learning is more constructivist than transmission-oriented. The concept carries with it the idea that both prospective and experienced teachers (like all learners) bring prior knowledge and experience to all new learning situations, which are social and specific, and that active learning requires opportunities to link previous knowledge with new understandings. This means that teachers are acknowledged as not just receivers of information or implementers of teaching methods and curriculum, but also translators and interpreters of subject matter, inventors of teaching strategies, and generators of knowledge, curriculum and instruction.

For prospective teachers, the concept of teacher learning replaces earlier notions of "teacher training," a one-time process prior to the beginning of the teaching career wherein undergraduates were equipped with content, methods in the subject area, and information about educational foundations and then sent out to "practice" teaching. Similarly, for experienced teachers, the notion of teacher learning replaces the concept of periodic "in-service staff development" wherein experienced teachers were congregated to receive the latest information about effective teaching processes and techniques from various educational experts. Rather, it is generally understood that teacher learning takes place over time rather than in isolated moments in time and that teacher learning occurs over the entire professional life span (i.e., prior to and during formal preparation and initial teaching but also during the induction period and the early and later career years) rather than beginning during the formal preparation period and ending once a teacher has achieved a particular professional benchmark (e.g., tenure in a school system, permanent state licensure, national board certification) or position (e.g., mentor teacher, teacher leader, teacher on special assignment). It has also been widely acknowledged that teacher learning projects are most effective when linked to students' learning and curricular reform that is embedded in the daily life of schools and when focused on what Ann Lieberman and Lynn Miller call "culture-building," not skills training.

The concept of teacher learning is part of a new perspective on teacher education and professional development. It is used to emphasize that across the

career lifespan, the professional education of teachers is a process of learning to adapt and invent strategies, manage competing agendas, interpret and construct subject-specific and interdisciplinary curriculum, and build classroom and school cultures within conditions that are ultimately uncertain.

### Community

Although long used in other fields, the term *community* is relatively new in the mainstream literature about teacher education, professional development, and educational change. In literary theory, “interpretive community” has been used by Stanley Fish and other theorists to refer to a network of people with similar meaning perspectives. In sociolinguistics, “speech community” has been used by Dell Hymes, John Gumperz, and other linguistic anthropologists to refer to a group of people who engage in face-to-face interaction within a specific context. Jay Lemke defines community as “systems of doing, of social and cultural activities or practices, rather than as systems of doers, of human individuals per se” (p. 93). In the field of composition, Joseph Harris has suggested that the term “discourse community” draws on the everyday meaning of community as a group with common goals and interests as well as the literary concept of interpretive community and the sociolinguistic notion of speech community. In this sense discourse communities are real groupings of readers and writers who share a kind of larger mission, but they also become networks of “citations and allusions” that refer to texts both within the speech community and outside of it.

According to social theorists such as Joel Westheimer, the central features of community include “interaction and participation, interdependence, shared interests and beliefs, concern for individual and minority views, and meaningful relationships” (p. 12). Along different lines, John McKnight suggests that community is the primary location for the development of relationships and commitments among citizens. In teacher education and professional development, the terms *inquiry communities* and *teacher research groups* have been used for some time to describe groups of education practitioners who meet together to inquire systematically about aspects of their own work in schools and classrooms.

*Communities of practice* is a term that has become prominent in the literature on learning. Drawing on the social psychology of learning, particularly on research about situated cognition and activity

theory, the notion of communities of practice is developed in the work of Jean Lave and Etienne Wenger. Lave and Wenger suggest that “learning, thinking, and knowing are relations among people engaged in activity *in, with, and arising from the socially and culturally structured world*” (p. 67, emphasis in original). This means that learning is a process that occurs when more and less experienced people work together within communities of practice, which are “the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence” (Wenger, p. 5). Communities of practice organized around a common goal are the site for participants’ learning new roles that are connected to new knowledge and skills. From this perspective, it is not simply learning that takes place within communities of practice, but—since knowing and being are intimately connected to one another—it is also identity formation itself. The idea of professional communities has also been used to understand variations in teachers’ interpretations of their opportunities and challenges within the social and organizational structures of schools.

Conceptually, *community* has been used in a number of different ways in education theory and research and in the social sciences to denote groups of people engaged in particular kinds of work or other activity and linked by a common purpose. Community members typically exchange meaning perspectives and ideas about what it means to be actively engaged in a particular activity or enterprise.

### Teacher Learning Communities

“Teacher learning communities” (TLCs) is a term that combines many of the meanings of the two concepts above to refer to projects, programs, cooperatives, and collaboratives of prospective or experienced teachers—often in partnership with university-based educators—that support the ongoing education of participants. TLCs are social groupings of new and experienced educators who come together over time for the purpose of gaining new information, reconsidering previous knowledge and beliefs, and building on their own and others’ ideas and experiences in order to work on a specific agenda intended to improve practice and enhance students’ learning in K–12 schools and other educational settings. Conceptually, *teacher learning community* refers to an intellectual space as much as it designates a particular group of people and, some-

times, a physical location. In this sense, communities are the intellectual, social, and organizational configurations that support teachers' ongoing professional growth by providing opportunities for teachers to think, talk, read, and write about their daily work, including its larger social, cultural, and political contexts in planned and intentional ways.

**Key Characteristics.** Although TLCs vary considerably (as discussed below), they have several key characteristics: ways of spending and organizing time, planned and intentional patterns of structuring talk and written texts in their work together, and a shared purpose or understanding about the central tasks of teaching.

**Organizing time.** TLCs need sufficient chunks of time in which to work and sufficient longevity as a group over time. Generally, TLCs function over relatively long periods—at least an academic year—and often on an ongoing basis wherein group membership is basically stable although membership changes from time to time. In TLCs that include both experienced and prospective teachers, as is the case in some projects that combine pre-service teacher education with ongoing professional development, the experienced educators may be members of the community over time, while the prospective teachers may change with every program cycle or cohort. When members of a community make a commitment to work over time, there is the potential for ideas to develop, trust to build in the group, and participants to feel comfortable raising sensitive issues. Over time, many communities that support teacher learning develop their own histories and, in a certain sense, their own culture—a common discourse, shared experiences that function as touchstones, and a set of procedures that provide structure and form for continued experience.

**Structuring talk and texts.** Second, TLCs have particular ways of using language in their work together—both oral conversations and written texts. In communities that support teacher learning, groups develop ways of describing, discussing, debating, reflecting on, writing about, and reading about teaching, learning, and schooling. In some TLCs, groups engage in joint construction of knowledge through conversation by making their tacit knowledge more visible, questioning assumptions about common practice, and examining together school and classroom data and artifacts that make possible the generation and consideration of alternative explanations and analyses. Some TLCs use very

structured formats for oral inquiries into teaching, such as reflections on practice or descriptive reviews of students described by Patricia Carini of the Prospect School. Other communities do not use formal conversation formats, but they do talk in distinctive ways about teaching and learning. In communities that support teacher learning, all talk does not contribute directly to the joint construction of knowledge about teaching and schooling. Rather, teachers also swap classroom stories, share specific ideas, seek one another's advice, and trade opinions about issues and problems in their schools and larger educational arenas. In TLCs, this "small talk" has an important function—it helps to create and sustain the interpersonal relationships necessary for the larger project or purpose of the community.

In addition, many TLCs use a wide range of texts in their work together, not all of which are published or widely disseminated. These texts often include books and journal articles from the extensive theoretical and research literature in fields related to teaching and learning as well as subject matter literature, including history, fiction, drama, and scientific accounts. Some communities focus on teacher research, action research, and other forms of practitioner inquiry as the primary vehicle for teacher learning. In these TLCs, then, the texts also include teacher research and action research reports in the form of journals, essays, and studies as well as teachers' written records and accounts, transcriptions of classroom interactions, students' writing and other work, school forms and documents, demographic data, and curriculum guidelines and materials. Teacher learning in communities is a fundamentally social and constructive activity that depends on the collective and cumulative power of the community to disseminate ideas, stimulate discussion, and widen the oral and written discourse about schools and schooling.

**Shared purpose.** Finally, although the specific purposes of various TLCs can be quite different from one another, most TLCs are organized around a common purpose or goal. Almost always, a fundamental goal of TLCs is some kind of improvement or change in professional practice, school culture, community partnerships, or school routines and procedures, in order—ultimately—to enhance students' learning opportunities and increase their life chances. How this task is understood, however—that is, what it means to enhance students' learning and what it takes to increase life chances—varies

enormously. Some TLCs focus on the improvement of curriculum and teaching in a particular subject matter or disciplinary area, such as writing, mathematics, or science. Others focus on a broad-based educational agenda such as restructuring or reinventing urban schools, or incorporating the ideals of progressive education across curriculum, assessment, and teaching. Some TLCs are more specifically focused, such as those intended to improve the conditions and outcomes of teaching and learning in particular local schools with a population that has been traditionally under-served by the mainstream educational system.

TLCs in particular school districts may be organized to improve teachers' work in a general area, such as supporting the language growth and development of English language learners or improving early reading instruction in the primary grades. TLCs are sometimes focused on a particular curriculum package, such as "Success for All" or "Reading Recovery," or a particular school district goal, such as improving students' scores on state-wide standardized high stakes tests. Some communities aim to help teachers learn about a particular approach to subject matter teaching, such as cognitively guided instruction in mathematics, process writing, or problem-based approaches to science teaching and learning. Generally speaking, TLCs are most effective and long-lived when teachers choose to participate and when they play a significant role in constructing the issues that are important. This includes participation and choice in community governance and structures—planning, timing, topics, strategies, speakers, evaluation procedures, dissemination activities, and so on. However, in some cases, teachers choose to take on and eventually come to "own" an already-established agenda or purpose and agree to work collaboratively toward a goal set by a school or school district.

### **Knowing More, Teaching Better: Differences among TLCs**

The surface characteristics of many TLCs are similar, and in a general sense, all TLCs are aimed at teachers knowing more and teaching better. However, different TLCs are initiated and motivated by quite different ideas about what it means to "know more" and "teach better." A useful way to sort out some of the differences among TLCs, then, is in terms of their underlying assumptions about teaching knowledge and professional practice and about how these are

related in teachers' work. Although competing, three major ideas about the relationships of knowledge and practice co-exist in the world of educational policy, research, and practice and are invoked by differently positioned people in order to justify quite different approaches to improving teaching and learning through TLCs.

The first approach is "knowledge-*for*-practice," where it is assumed that knowing more (e.g., more subject matter, more educational theory, more pedagogy, more instructional strategies) leads more or less directly to more effective practice. Here, knowledge for teaching consists primarily of what is commonly called formal knowledge, or the general theories and research-based findings on a wide range of foundational and applied topics that together constitute the basic domains of knowledge about teaching, widely referred to by educators as the knowledge base. The idea here is that competent practice reflects the state of the art—that is, that highly skilled teachers have deep knowledge of their content areas and of the most effective teaching strategies for creating learning opportunities for students. From this perspective, the purpose of TLCs is to provide access to the knowledge base and help teachers implement, translate, or otherwise put into practice the knowledge they acquire from experts outside the classroom. TLCs that operate according to these assumptions often include school district groups working with coaches or content area experts to implement a new curriculum, institute strategies intended to raise test scores, or make instruction consistent with state or national curriculum standards.

The second approach is "knowledge-*in*-practice," wherein it is assumed that some of the most essential knowledge for teaching is what many people call practical knowledge, or, what very competent teachers know as it is expressed or embedded in the artistry of practice, in teachers' reflections on practice, in teachers' practical inquiries, or in teachers' narrative accounts of practice. A basic assumption here is that the knowledge teachers need to teach well is acquired through experience and through considered and deliberative reflection about or inquiry into experience. To improve teaching, then, teachers need opportunities to work in communities to enhance, make explicit, and articulate the tacit knowledge embedded in experience and in the wise action of very competent professionals. Teacher learning communities with these underlying

assumptions often include facilitated teacher groups, dyads composed of more and less experienced teachers, and other kinds of collaborative arrangements that support teachers' working together to reflect in and on practice. TLCs that operate according to these assumptions often include pre-service contexts where prospective teachers learn how experienced teachers plan and reflect on their work, induction programs wherein novice teachers work with experts, and school-based groups where teachers share stories and experiences.

The third approach is "knowledge-of-practice," wherein it is assumed that the knowledge teachers need to teach well is generated when teachers treat their own classrooms and schools as sites for intentional investigation at the same time that they treat the knowledge produced by others as generative material for interrogation and interpretation. In this sense, teachers learn when they generate local knowledge of practice by working within the contexts of inquiry communities to theorize and construct their work and to connect it to larger social, cultural, and political issues. Here basic questions about what it means to generate knowledge, who generates it, what counts as knowledge and to whom, and how knowledge is used and evaluated in particular contexts are always open to question. From this perspective, new information is not necessarily expected to be used or applied to an immediate situation but may also shape the interpretive frameworks teachers develop to make judgments, theorize practice, and connect their efforts to larger efforts. Teacher research groups, action research groups, inquiry communities, and other school or cross-school collectives in which teachers and others conjoin their efforts to construct knowledge are the major kinds of TLCs that work from this set of assumptions.

Finally, it is important to point out that although TLCs share the goal of enhancing students' learning and improving the quality of schooling, all communities do not share the same ideas about the ultimate purposes of teachers' work and educational change. Some TLCs are overtly committed to working for social change and social justice by altering the fundamental arrangements of schooling and society. Others are more in keeping with the basic goals of the current educational system. Some TLCs fit comfortably with a university's or a school district's stated commitment to teacher leadership, site-based management, or curricular revision. At other times,

members of TLCs challenge fundamental school practices such as tracking, promotion and retention policies, testing and assessment practices, and school-community-family relationships, as well as what counts as teaching and learning in classrooms. To the extent that TLCs fit comfortably with a university or school district's institutional agenda for reflective practice, increased professionalism, and teacher accountability, they can be regarded as compatible with ongoing efforts toward teacher education and professional development. But sometimes TLCs critique and seek to alter cultures of collegiality; ways that school or program structures promote or undermine collaboration; ratios of teacher autonomy to teacher responsibility; norms of teacher evaluation; relationships among student teachers, teachers, and their university colleagues; and the ways power is exercised in teacher-to-teacher, mentor-to-teacher, and school-university partnerships. What this suggests is that there is a whole range of TLCs—some that are more readily integrated into the existing social and institutional arrangements of schools, school systems, and universities than others.

### Examples of Teacher Learning Communities

There are scores of TLCs in the United States and in many other countries worldwide. Many are school-based and/or develop from a local or regional teachers' network or from a particular need, e.g., preparing for National Board Certification. A relatively small number of school-based professional communities have been treated in the literature. Many TLCs are subject-centered and offer teachers opportunities to learn from their own experiences as learners. In the area of literacy, teacher inquiry communities have been sponsored by a range of social and organizational structures, including the federal government, national professional organizations, national networks, foundations and centers, and university centers and university-generated networks. With a few notable exceptions, those connected to universities are most likely to disseminate their work through presentations and publication. A few of these are described here to provide a sense of the range and variation across communities.

Many TLCs have been formed with participants in the National Writing Project, perhaps the most prominent subject-centered teacher professional network nationally. The Multicultural Collaborative for Literacy and Secondary Schools (M-CLASS) teacher research network, based at the University of

California Berkeley, began in 1990 as a collaborative of twenty-four teacher researchers from four U.S. cities and has grown to include seventy-five additional teachers who are teacher-credential candidates or part of a university-teacher-research collaborative or members of school-change teams. All M-CLASS teacher researchers seek to improve literacy learning in their urban multicultural classrooms and to communicate the results of their research to other professionals. The Philadelphia Writing Project (PhilWP) is an urban teacher collaborative network of more than 500 Philadelphia K–12 teachers and educators at the University of Pennsylvania. A site of the National Writing Project since 1986, the community utilizes a wide variety of oral and written inquiry formats to support its many projects, all of which are designed to improve the teaching/learning of writing and literacy by strengthening the critical linkages among language, access to literacy, social justice and educational change. Since its inception in 1986, PhilWP has organized and received funding from various foundations and other sources for more than fifteen teacher inquiry communities, lasting from two to six years each and many linked with other TLCs nationally. The National Writing Project sponsors the Teacher Inquiry Communities Network, a consortium of groups formed by NWP around the country.

Other TLCs exemplify local collaborations between school districts and area universities. The Madison Metropolitan School District Classroom Action Research Professional Development program has been in existence since 1990. More than 500 teachers and administrators have participated in this program within small groups facilitated by teachers or staff development staff. The research studies, which are published by the school district each year, employ an action research model and use a variety of mostly qualitative research methods. Collaborations have existed since 1990 between this program and teacher education programs at the University of Wisconsin–Madison. In another example of university–school collaboration, school- and university-based teachers in the Athens, Georgia, area have formed fluid, evolving study groups such as LEADS (Literacy Educators for a Democratic Society) and PhOLKS (Photographs of Local Knowledge Sources), and collaborative action research teams (e.g., the Kings Bridge Road Research Team, and the eight-year collaboration of Shockley, Michelove, and Allen [1995] who wrote the “engaging children/

families/teachers” series). Using mediating dialogue and action research, they inquire into issues of culturally engaged teaching, educational equity, and social justice.

Often TLCs evolve and take different shapes over time as membership changes and groups develop new purposes and interests. Led by Susan Florio-Ruane and Taffy Raphael, the Teachers Learning Collaborative Network, for example, brought together a diverse group of teachers who lived and taught in school districts across southeast Michigan. The Network comprised three study groups, all focused on improving their understandings and teaching practices in literacy and diversity. Activities included reading and writing autobiography and autobiographical fiction, developing curriculum to support struggling readers, and engaging in school reform of literacy instruction and assessment practices. Another example of teachers working with a university-based faculty member is Kathryn Au’s work with the Ka Lama Teacher Education Initiative, established in 1996. This is an effort to create a community of teachers committed to working on the Leeward Coast, a rural area in which the majority of residents are Native Hawaiian. The initiative emphasizes the themes of literacy, multicultural education, and Hawaiian studies, and teachers engage in a variety of inquiry activities, including creating literacy portfolios, writing family educational histories, and developing Hawaiian studies units with challenging academic content.

Some TLCs connected to universities reflect the priorities of academic research centers or departments. For example, The Action Research Group (ARG), an affiliated program of Community Psychology’s “Partners for Progress” at the University of Illinois, Urbana, is one part of a long-term commitment by staff from a university and public school to work together to develop awareness and sustain initiatives that will make connections between communities in order to enhance student achievement in a predominantly low-income, African American area. In addition to dialogue about work in classrooms, the “Partners” group has worked on a school-based course in “Race and Teaching,” a community garden on the school site, and a community arts project. It is currently involved in efforts to develop more project-based learning through regular planning meetings of grade-level teams, to create an evaluation of students’ learning that goes beyond standardized test scores, and to develop a practice-

based course in “Teaching for Social Justice.” Since the early 1990s Sarah Michaels and the Hiatt Center for Urban Education at Clark University have worked closely with a number of Worcester Public School teachers in a variety of teacher research activities. These include university and school-based seminars, informal teacher research groups that meet after school over a period of years, and a number of Spencer Foundation supported efforts from their Practitioner Research, Mentoring, and Communication grant program. This work has resulted in the publication of books, videos, articles, and presentations at national conferences. A common thread in this work is the focus on talk and the importance of the teacher’s role as orchestrator of rigorous, coherent, and equitable classroom conversations.

Quite a number of TLCs function outside any school or university context. Among the most prominent and widely published is the Brookline Teacher Researcher Seminar founded in 1989 as a collaborative of seven teacher researchers whose members have adapted the research tools of sociolinguistics and ethnography to the classroom in order to explore their own questions, dilemmas, and concerns for equity through the study of “talk” or classroom discourse. The weekly meeting serves as a central part of the methodology where teachers assist one another as each member, through collaborative exploration of an individual’s data, begins to uncover new understandings of children’s meanings and to cast away habitual ways of seeing and thinking. Also widely known is the Philadelphia Teachers’ Learning Cooperative, which is closely related to Patricia Carini’s work at the Prospect School in Vermont, founded in 1965. Using the documentary processes developed at Prospect, the Philadelphia TLC has been meeting weekly for more than twenty years. Beginning, new, and experienced teachers use structured oral inquiry processes to examine children’s work and classroom/school life. Members of this group and others connected with Prospect consult with other TLCs—locally and nationally—to acquaint others with ways to use these processes in different contexts and for various purposes. The work of Prospect and the Philadelphia TLC is disseminated through summer institutes and a growing number of publications.

### **Electronic Teacher Learning Communities**

Many TLCs—particularly those that involve local, regional, or national teacher networks—have devel-

oped online technologies integral to their collaborative work. One of the oldest and best known, The Bread Loaf Teacher Network, creates online communities of teachers who have attended one of the campuses of Middlebury College designed to bring together rural and urban teachers for intensive graduate work related to teaching writing, theater, literature, and multicultural studies. For more than ten years, Bread Loaf has been giving teachers financial assistance for ongoing research and has used major grant support to make it possible for rural and more recently urban teachers to participate in summer graduate work designed to foster learning communities supported by technology. Linked across sites by an electronic network called Breadnet, many Bread Loaf teachers focus on teacher and student generated collaborative and community-based projects that combine action research, service, and advocacy. Increasingly, teacher learning communities are using electronic media to disseminate their work for other audiences.

The examples above represent a small number of the teacher learning communities that have burgeoned over the last several decades. In contrast to training programs for teachers or transmission-oriented, in-service staff development programs, this growth is not yet well-documented. Teacher learning communities represent a major cultural shift with considerable potential for promoting lifespan learning in the teaching profession and altering the cultures of teaching and teachers’ work. Realizing this potential clearly depends upon the willingness of teachers to engage with each other in a joint search for meaning in the work of teaching and schooling. But it also depends upon support at all levels of the educational system to reconceptualize teaching as learning and teacher education and professional development as continuous work in learning communities. The rapid growth of learning communities signals that practicing teachers can effectively self-organize for intellectual work, collaborate with consultants and university partners, generate new knowledge about daily practice that is of value beyond their local community, and contribute meaningfully to the transformation of schools and districts.

*See also:* COOPERATIVE AND COLLABORATIVE LEARNING; INSTRUCTIONAL STRATEGIES; TEACHER; TEACHER EDUCATION; TEACHING, *subentry on* LEARNING TO TEACH.

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## TEACHER PREPARATION

*See:* ART EDUCATION, *subentry on* PREPARATION OF TEACHERS; BUSINESS EDUCATION, *subentry on* PREPARATION OF TEACHERS; EARLY CHILDHOOD EDUCATION, *subentry on* PREPARATION OF TEACHERS; ELEMENTARY EDUCATION, *subentry on* PREPARATION OF TEACHERS; ENGLISH EDUCATION, *subentry on* PREPARATION OF TEACHERS; MATHEMATICS EDUCATION,

*subentry on* PREPARATION OF TEACHERS; MUSIC EDUCATION, *subentry on* PREPARATION OF TEACHERS; PHYSICAL EDUCATION, *subentry on* PREPARATION OF TEACHERS; SCIENCE EDUCATION, *subentry on* PREPARATION OF TEACHERS; SOCIAL STUDIES EDUCATION, *subentry on* PREPARATION OF TEACHERS; SPECIAL EDUCATION, *subentry on* PREPARATION OF TEACHERS; TEACHER EDUCATION; TEACHING, *subentry on* LEARNING TO TEACH.

## **TEACHER PREPARATION, INTERNATIONAL PERSPECTIVE**

All nations have established specialized institutions and particular processes by which prospective teachers are educated; however these institutions and processes vary in their structure, goals, and organization around the world. The variation is not only due to expected differences across countries and cultures, but also to a major transition that the field of teacher education has been undergoing in developed countries since the late 1980s. At the beginning of the twenty-first century this transition has also begun to affect several developing nations. For years, the preparation of teachers was described as *teacher training*; this label reflected the actual process of giving prospective teachers or noncertified in-service teachers some subject matter knowledge and some pedagogical tools so that they could transfer information to their students. That is still the case in a majority of developing countries, particularly in Africa, Asia, and Latin America where the shortage of certified teachers still is found to be a major factor in the kind of teacher education offered.

However, the trend is to use *teacher training* only to refer to specific short-term training that teachers may receive, mostly on the job, to learn a particular skill (for example, a training session or unit on the use of computers) and to refer to the preparation of teachers as *professional development*, as it reflects more effectively the fact that teachers are professionals, their job is a complex process of helping students learn, and thus their preparation is not a one-shot training, but rather a lifelong process of learning and development. Professional development includes formal experiences (such as completing a program of initial teacher preparation, and also

attending workshops, institutes, and professional meetings, mentoring, completing research, etc.) and informal experiences (such as reading professional publications, viewing television specials related to an academic discipline, joining study groups with other teachers, etc.).

### **New Paradigm in Teacher Education**

This perspective of teacher education as a long-term process that includes regular opportunities and experiences planned systematically to promote growth and development in the profession has been welcomed by educators everywhere. This shift has been so dramatic that many have referred to it as a new image of teacher learning, a new model of teacher education, a revolution in education, and even a new paradigm of professional development.

This new paradigm of teacher education has several characteristics. First of all, it is based on constructivism rather than on a transmission-oriented model. As a consequence, teachers are treated as active learners who are engaged in the concrete tasks of teaching, assessment, observation, and reflection. Several research studies have shown that when the constructivist method is used in the preparation of teachers, the results are quite positive: teachers who are engaged, reflective, thoughtful, and effective. A few new studies, however, have been critical of this method, as it appears to be most effective only with middle-class learners, or only when used in very specific contexts and under certain conditions, something that could potentially limit the effectiveness of its use in teacher education.

It is also conceived of as a long-term process, as it acknowledges that teachers learn over time. As a result, connected experiences (rather than one-shot presentations) are thought of as most effective as they allow teachers to relate prior knowledge with new experiences. Regular follow-up support is perceived as an “indispensable catalyst of the change process” (Schifter, Russell, and Bastable, p. 30).

This approach to teacher education is conceived as a process that takes place in a particular context. Contrary to the traditional staff development opportunities that did not connect the “training” with the actual experiences in the classroom, the most effective professional development is based in schools, connected to the daily activities of teachers and learners. Schools are transformed into communities of learners, communities of inquiry, professional

communities, and caring communities because teachers are engaged in professional development activities. The most successful teacher development opportunities are “on the job learning” activities such as study groups, action research, and portfolios.

Many identify this process as one that is intimately linked to school reform since professional development is a process of culture building, and not just skill-training, that is affected by the coherence of the school program. In this case, teachers are empowered as professionals; they should be treated in the same ways as society expects them to treat students. Teachers’ professional development that is not supported by school and curriculum reform is not effective.

With this approach to teacher education and professional development, a teacher is considered a reflective practitioner, someone who comes into the profession with a certain knowledge base and who will build new knowledge and experiences based on that prior knowledge. For this reason, the role of professional development is to facilitate teachers’ building new pedagogical theory and practice and help teachers improve their expertise in the field.

Professional development is regarded as a collaborative process. Even though there may be some opportunities for isolated work and reflection, most effective professional development happens when there are meaningful interactions, not only among teachers, but also with administrators, parents, and other community members.

Professional development may look and be very different in diverse settings, and even within one setting there may be a variety of dimensions. There is not “one best” form or model of professional development that can be implemented anywhere. Schools and educators must evaluate their needs and cultural beliefs and practices to decide which professional development model may be most successful in that particular context. It is clear in the literature that workplace factors (one significant variable of “the context”) such as school structure and school culture can influence teachers’ sense of efficacy and professional motivation. Apparent contradictory results reported in the literature (such as the fact that some studies conclude that the best professional development is that designed and implemented at a smaller scale, while others say that it is better at a larger, system-approach scale) may be explained not by deciding that one study is more accurate than an-

other, but by examining the contexts in which the different studies were completed. In his 1995 article, “Results-Oriented Professional Development: In Search of an Optimal Mix of Effective Practices,” Thomas Guskey argues strongly about the importance of paying attention to context so that the “optimal mix” of professional development processes can be identified and planned. In other words, professional development has to be considered within a framework of social, economic, and political trends and events. In another 1995 article, “Professional Development in Education,” Guskey writes: “The uniqueness of the individual setting will always be a critical factor in education. What works in one situation may not work in another . . . . Because of the enormous variability in educational contexts, there will never be ‘one right answer.’ Instead, there will be a collection of answers, each specific to a context. Our search must focus, therefore, on finding the *optimal mix*—that assortment of professional development processes and technologies that work best in a particular setting” (p. 117).

This new form of teacher education has had a significant positive impact on teachers’ beliefs and practices, students’ learning, and on the implementation of education reforms. In fact, Linda Darling-Hammond noted in a 1999 article in the *Journal of Staff Development* that “investments in teachers’ knowledge and skills net greater increases in students’ achievement [in the United States] than other uses of an education dollar” (p. 32).

### What Do Teachers Need to Know?

For years, educators and other related professionals have argued whether teacher preparation should emphasize content knowledge or pedagogical knowledge. Under this new model of teacher professional development, there is a recognition that the work of teachers is complex and thus needs a broad and inclusive perspective. Authors including Anne Grosse de Leon, Anne Reynolds, Robert Glaser, Hilda Borko and Ralph Putnam, and Olugbemiro Jegede, Margaret Taplin, and Sing-Lai Chan have offered lists of types of knowledge, skills, dispositions, and values that effective teachers must have a mastery of. They include:

- General pedagogical knowledge. This includes knowledge of learning environments and instructional strategies; classroom management; and knowledge of learners and learning.

- Subject-matter knowledge. This includes knowledge of content and substantive structures and syntactic structures (equivalent to knowledge about a discipline).
- Pedagogical content knowledge. A conceptual map of how to teach a subject; knowledge of instructional strategies and representations; knowledge of students' understanding and potential misunderstandings; and knowledge of curriculum and curricular materials.
- Knowledge of student context and a disposition to find out more about students, their families, and their schools. Knowledge and disposition to involved families in the day-to-day work of the schools.
- A repertoire of metaphors in order to be able to bridge theory and practice.
- External evaluation of learning.
- Clinical training.
- Knowledge of strategies, techniques, and tools to create and sustain a learning environment or community, and the ability to employ them.
- Knowledge, skills, and dispositions to work with children of diverse cultural, social, and linguistic backgrounds. A multicultural perspective in teacher preparation is crucial for an effective program of teacher education and professional development.
- Knowledge and attitudes that support political and social justice as social realities make teachers very important agents of social change. In some extreme situations (such as that of South Africa after the apartheid regime and Namibia after gaining independence), this aspect of the professional work of a teacher is more emphasized and thus institutions of teacher preparation have adopted this as a requirement of their programs. Michael Samuel, Katarina Norberg, and others argue that the development of this critical consciousness should be part of teacher preparation, not only in extreme cases, but also in all countries and contexts.
- Knowledge and skills on how to use technology in the curriculum. In a 2001 article in *Language Arts*, Evangeline Pianfetti lists a number of "virtual opportunities for professional development," and also a number of Internet sites with information about grant providers that support professional development efforts to educate

teachers about new technologies in the classroom.

### **Twenty-First Century Trends in Teacher Education and Professional Development**

Most countries acknowledge that initial or pre-service teacher education is just the first step in a longer process of professional development, and not the only preparation teachers will receive. A majority of countries are beginning to require the same level of preparation for all teachers, regardless of the level they will teach, and the worldwide trend is toward requiring a minimum of a bachelor's degree to enter programs that prepare teachers.

In terms of the content of teacher preparation programs, different countries vary in their emphasis on particular components of the curriculum or the time devoted to each one. But in general, most include courses and experiences that address subject matter, foundation of education courses, professional studies (such as pedagogy and methods courses), and child development, and a practicum, or student teaching. The tendency in a majority of countries is to emphasize the teaching of content in the initial preparation and to emphasize the pedagogy in the practicum and programs of induction for new teachers as well as other professional development opportunities.

There are trends to increase the length of teacher preparation programs and to increase the amount of time pre-service teachers spend in practicum sites. Pre-service programs that provide opportunities for supervised practice teaching throughout the duration of the course are the most effective. There is a wide variation of length for this practical experience of student teachers in the world. In some countries where the practicum is short, teachers are required to have extensive in-service opportunity to practice under serious supervision.

In a number of developed and developing countries, the need for more teachers and the lack of candidates entering the profession have been fertile ground for the creation of a number of alternative teacher certification programs. These programs usually include a heavy component of in-service training and usually begin with a "crash course" on pedagogical knowledge that is completed in a very short amount of time. The creation and proliferation of such programs has generated great controversy in most countries where they exist.

Among more recent developments is a tendency to offer new teachers some support in the form of “induction programs.” Induction programs are planned and systematic programs of sustained assistance to beginning teachers. Finally, the trend in “in-service education” is to offer a variety of opportunities for professional development that go beyond the “one-shot” short course or workshop traditionally offered to experienced teachers.

*See also:* ELEMENTARY EDUCATION, *subentry on* PREPARATION OF TEACHERS; INTERNATIONAL TEACHERS ASSOCIATION; TEACHER EDUCATION, *subentry on* INTERNATIONAL PERSPECTIVE; TEACHING AND LEARNING.

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ELEONORA VILLEGAS-REIMERS

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## TEACHER UNIONS

### OVERVIEW

David W. Kirkpatrick

### INFLUENCE ON INSTRUCTION AND OTHER EDUCATIONAL PRACTICES

Willis D. Hawley

Donna Redmond Jones

### OVERVIEW

The best-known teacher unions in the United States are the National Education Association (NEA) and

the American Federation of Teachers (AFT). However, not all public school teachers are their members, nor are all of their members public school teachers. Membership also includes support staff in the public schools, such as secretaries, bus drivers, and cafeteria workers, and some outside the schools, such as hospital nurses.

Other teacher groups include Independent Education Associations (IEAs) at the local, state, and national levels, which remain largely unknown, and Local Only Teacher Unions (LOTUs) which are almost totally unknown. There are also public school teachers who are not members of any organizations, plus private school teachers, few of whom are organized except for the National Association of Catholic Teachers. This organization, headquartered in Philadelphia, represents some, but not all, of the teachers in Catholic schools.

### The National Education Association

The National Education Association was founded in 1857 in Philadelphia as the National Teachers' Association. For the first century it grew slowly, with fewer than 2,400 members in 1900 and 330,000 as late as 1964, the point at which its most rapid growth was getting underway. By 2001 NEA membership exceeded 2.3 million in more than 13,000 local affiliate organizations.

A handful of key events led to the evolution of the NEA to its characteristics at the beginning of the twenty-first century. The first was external, in the form of the victory in New York City at the beginning of the 1960s of the American Federation of Teachers local affiliate, the United Federation of Teachers, which emerged as the dominant union from what had been more than 100 groups. Subsequent AFT victories in other urban areas, plus Wisconsin's 1962 passage of the first collective bargaining law for educators, forced the NEA to begin a transformation that initially faced both internal and external problems.

In 1960 the NEA assembly had rejected a resolution endorsing representative negotiations. Although this position was reversed the next year, for much of the 1960s the NEA stressed that it was an association and referred to *professional negotiations*, rather than *collective bargaining*, because of the resistance of many of its own members to identification as a union.

The early 1970s saw a number of major internal changes. Until then the NEA permitted members to

join any combination of the local, state, and national units, although some local and state affiliates had different rules. A 1975 provision added to the NEA Constitution established a unified membership, whereby those who did join would have to do so at all three levels. Until then the NEA included departments with specific professional interests, such as administrators, math or science, and curriculum or instruction, in both basic and higher education. With the introduction of unified dues many local affiliated organizations dropped out. These included not only the professional interest groups but even the Missouri state association, which had been one of the NEA's charter members in 1857. These losses were more than compensated by the addition of huge numbers of individual members at the state and national level, most of whom, as they had always done, joined the local association at the urging of their colleagues, whether or not they had any understanding of, commitment to, or even interest in, the state and national organizations.

This membership growth was both accompanied and accelerated by the NEA's establishment of its Uniserv program, which led to the creation of hundreds of offices across the nation in cooperation with its state and local affiliates. The state affiliates employ the Uniserv staff but, with financial and coordinating support from the NEA, these staff function as quasi-NEA employees. Within less than thirty years there were 1,800 of these staff members.

In 1972 the NEA also became the first national education organization with a political action committee, one that remains among the nation's largest and most influential. By the 1990s the NEA came to have one of the largest delegations to the quadrennial Democratic National Convention and a smaller delegation at the Republican National Convention. One example of its influence was the establishment of the U.S. Department of Education by Congress in 1979, with the support of President Jimmy Carter, whom the NEA had endorsed in 1976, despite the opposition of the AFT. Teacher unions also benefit from advantages that Congress has granted unions in general, such as exemption from laws prohibiting conspiracies in restraint of trade.

Ironically, at the peak of their power and influence, the NEA and AFT face more pressures and opposition than ever before. Internal problems for the NEA include the tendency of newer teachers to show less interest in joining. A 1997 membership survey commissioned by the NEA warned that it faced "or-

ganizational death.” While that is probably overly pessimistic, the NEA recognizes there are difficulties even beyond what might be expected in an influential organization with a budget of nearly \$250 million, a national staff of nearly six hundred and, with its affiliates, an additional staff of thousands.

One source of tension is that nearly all of NEA’s political endorsements go to Democrats, although its Democratic members, while they comprise a larger political block than either Republicans or Independents, still make up less than 50 percent of its membership. Reportedly 40 percent of NEA members regularly vote contrary to the organization’s recommendations and sometimes more than half do so, as in President Ronald Reagan’s 1980 and 1984 campaigns. There is also unhappiness with the NEA’s adoption of positions on social issues such as abortion and gun control, which many members feel detracts from the attention that should be paid to educational issues.

Externally, both unions face challenges not only from the private school sector but from such growing trends in education as home schooling, tuition vouchers, and charter schools, all of which weaken teachers’ perceived need for a union. Unions face a dilemma in dealing with these issues. If they oppose vouchers, charter schools, and private schools, it becomes extremely difficult for them to appeal to teachers in such schools once they are established. As a result, very few charter schools or private schools are unionized. While it is unlikely that the NEA will disappear, some of its leadership advocates a “new unionism,” and its future depends upon how it deals with these challenges.

### **The American Federation of Teachers**

Four local teacher unions met in Chicago in April 1916. After charters were granted to other local organizations, an application to the American Federation of Labor for affiliation was granted to the four local unions the next month and the American Federation of Teachers was established. Shortly after World War I, its membership briefly exceeded that of the older but still small NEA.

In 1952 teacher Al Shanker joined the New York Teachers Guild, which had been founded in 1917 with American educator and philosopher John Dewey as a charter member. Shanker edited the Guild’s newspaper and began organizing individual schools with colleagues such as David Selden; both

men subsequently became presidents of the national AFT. It was the Guild that triumphed in the 1961 election resulting in the United Federation of Teachers (UFT) local in New York City. Much of the subsequent history of the AFT is the history of Al Shanker. Shanker served first as UFT President, and then from 1974, when he succeeded Selden, until his death in 1997, as president of the AFT. For part of that time he was president of both the UFT and AFT, a result of AFT rules that permit holding multiple offices and an unrestricted number of terms.

This continuity of officers, and its representation of teachers in key urban areas, especially in such media centers as Washington, D.C., and New York City, has enabled the AFT and its presidents to develop greater visibility than the NEA and its leaders, thus partially offsetting the advantages the NEA enjoys because it represents far more people and resources and has a virtually universal distribution of its membership throughout society. The AFT embraced collective bargaining earlier and more enthusiastically than the NEA, but changing circumstances and the competition between the two organizations resulted in victories and growth for both, including legislative and political victories that saw collective bargaining laws adopted in more than half of the states by the early 1970s.

During the tumult of the 1960s AFT membership increased five-fold, from 60,000 in 1961 to 300,000 in 1970 and to 820,000 in 1993, by which time, except for Nevada, the AFT had affiliates in every state plus the District of Columbia, in U.S. territories such as Guam and Puerto Rico, and in ten other nations. But these members represent fewer than 2,300 local organizations, far less than the NEA’s more than 13,000. Additionally, nearly half of the locals were in New York state.

### **Union Influence**

The AFT’s 900,000 members at the start of the twenty-first century, coupled with the NEA’s 2.3 million, give the two unions representation of about three-quarters of all public school teachers; 40 percent of all unionized public employees; a total income at the local, state, and national levels of nearly \$1.5 billion; 6,000 employees, more than both major political parties combined; and a distribution of membership and power from rural areas to urban centers such as New York City. On average, there are nearly 7,000 teachers in each congressional district, over 5,000 of whom are organized. As in most unions, NEA and

AFT leaders tend to rise from the ranks but, unlike in most other unions, the leaders who emerge from the ranks are college graduates. These conditions explain the influence the two unions have, and not just on education.

Despite individual strengths, emerging challenges have led to strong efforts by both organizations to merge. The AFT was prepared to accept a merger in 1998 but, at its annual convention that year, the NEA's delegates defeated a proposal by nearly a three to two margin. While there are still efforts to bring about a merger, in the interim, the two groups are seeking to cooperate more, compete less, and maximize their effectiveness against what they perceive as common enemies and obstacles.

Another effort at cooperation developed in the late 1990s when a number of locals of both unions met to establish the Teacher Union Reform Network (TURN) to forward their own reform agenda to counter those coming from other sources. Within a few years twenty-three local organizations had joined, mostly from major urban areas including New York City, Los Angeles, Denver, Seattle, and San Francisco. Their ability to meet contemporary challenges remains to be seen.

### Other Teacher Groups

While they do not yet comprise a national force, there are now dozens of local and state teacher groups and one emerging national group—these groups are often referred to as Independent Education Associations (IEAs). The IEA associations in Georgia, Missouri, and Texas are larger than either the NEA or AFT affiliates in those states; the one in Texas has more than 100,000 members. Most reject the union title and oppose strikes or the agency shop model, whereby nonmembers are required to pay a fee to the bargaining representative. Many are in non-union, or right-to-work states, and strongly advocate remaining that way. The national group, known as the American Association of Educators (AAE), was founded in 1994. By 2002 it had 33,000 members and a dozen state affiliates.

There are also an undetermined number of Local Only Teacher Unions (LOTUs), with at least ten in Indiana and others in Ohio. The largest, the Akron Education Association, does proclaim itself to be a union, utilizes the agency shop provision for nonmembers, and has conducted a strike.

There are an estimated 300,000 unorganized public school teachers and as many or more who be-

long to the IEAs and LOTUs. These 600,000 individuals could have a national influence on education but they lack the cohesiveness, organizational structure, or visibility to do so. The AAE may prove to be the group that can counteract the national dominance of the NEA and the AFT. It planned to move from its original base in California to the Washington, D.C. area in 2002. Such a move should provide it the opportunity to become better known to the national media and to other teachers, thus making it more significant in education affairs.

*See also:* AMERICAN FEDERATION OF TEACHERS; INTERNATIONAL TEACHERS ASSOCIATION; NATIONAL EDUCATION ASSOCIATION; TEACHER UNIONS, *sub-entry on* INFLUENCE ON INSTRUCTION AND OTHER EDUCATIONAL PRACTICES.

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DAVID W. KIRKPATRICK

## INFLUENCE ON INSTRUCTION AND OTHER EDUCATIONAL PRACTICES

Schools cannot be significantly improved without improving the quality of teaching. Teacher unions significantly influence how teachers view their work. Not all teachers belong to teacher unions, but more than 90 percent of the 2.6 million public school teachers belong to either the American Federation of Teachers (AFT) or the larger National Education Association (NEA). While teachers do not blindly fol-

low union leaders, it seems unlikely that substantial school improvement can occur without the support and resources of teacher unions.

### Overview

Historically, many educational policymakers and researchers have viewed efforts of teacher unions as antithetical to school reform. Most teacher union activity has involved aggressive efforts to raise teacher salaries, improve teachers' working conditions, and protect teachers' rights, even if this entailed protests that limited or suspended teachers' work with students. Although school improvement has been on the agenda of the AFT and the NEA for decades, most observers, and union leaders themselves, have recognized that there has been a tension between fighting for rights that are most beneficial to its members and pressing for reform that is most beneficial for students.

In the 1990s both national unions substantially increased their engagement in direct efforts to increase student achievement by improving instructional strategies and school conditions that support good teaching and student learning. These initiatives—which have been dubbed the "new unionism"—have been motivated by demands of newer members, by the recognition that effective teaching requires new structures and relationships in schools, and by perceived needs to build public and political support for the unions. In spite of national resolutions and new alliances that promote union leadership in reform, some informed observers, such as Gregory Moo and Myron Lieberman, have expressed doubts about the viability of new unionism. Moreover, as federated organizations, both the NEA and AFT propose national stances that are loosely coupled with the practices of state and local affiliates that believe in the unions' more traditional mission of advocating teachers' rights and benefits.

Teacher unions influence instruction and other educational practices of interest to those who define themselves as school reformers in four general ways: (1) electoral politics and lobbying, (2) collective bargaining, (3) reform initiatives focused on their members, and (4) dissemination of information about best practice.

### Electoral Politics and Lobbying

Teacher unions engage in direct political action at national, state, and local levels to secure the election of candidates who support their priorities and to

promote or oppose the adoption of ballot issues—such as support for increases in education funding and opposition to school vouchers. Likewise, teacher unions seek to influence legislative initiatives and executive actions through the provision of information, promises of electoral support or opposition, and efforts to shape public opinion. As is the case for most political interest groups, teacher unions may be more effective in opposing policies than in getting policies adopted that they favor.

### **Collective Bargaining**

Since the 1960s a hallmark of the traditionally adversarial relationships between union and school district leaders has been their engagement in industrial-style collective bargaining often characterized by divergent labor-management interests, standardized work rules, and equal treatment of teachers who have varying degrees of skill and marketability. Studies, such as Joe A. Stone's 2000 research, have generally found few connections between collective bargaining and improved student achievement. The "new unionism," however, calls for "interest-based bargaining" in which labor and management enter into discussions about what they see as important in efforts to find solutions to problems instead of focusing on prerogatives and issues of control. According to Charles Kerchner, unions can work to enhance teaching quality by promoting teacher leadership and collaboration in initiatives such as peer review, teacher induction, professional development, and performance rewards.

### **Peer Review**

Peer Assistance and Review (PAR) is a union-initiated teacher evaluation system in which veteran teachers jointly selected by union and district representatives are released from their classroom duties to assist beginning teachers or improve the competence of poorly performing, tenured teachers. At the end of the year, the veteran teachers recommend renewal or nonrenewal of the beginning and tenured teachers' contracts. Union support of an evaluation system that could lead to the termination of tenured teachers who are not responsive to remediation attempts is a dramatic departure from a stance that has typically privileged the protection of teachers' jobs. The American Federation of Teachers and National Education Association both favor PAR and argue that it places teachers in charge of setting and enforcing the standards of the profession.

### **Induction**

Although some union locals have not amassed enough support or funding for Peer Assistance and Review programs, a number have established peer assistance programs to provide mentoring to new or veteran teachers expressing a need for help. At the national level, unions provide grants to locals that form partnerships with their districts and local universities to provide intensive training and support for new teachers. On the other hand, contract provisions that give experienced teachers options to move to schools with vacant positions often result in new teachers being assigned to schools with underperforming students, and this contributes to teacher turnover and to low student achievement.

### **Professional Development**

Beyond using the contract to provide time or compensation for teachers engaging in professional development, a growing number of local unions are using contracts to define characteristics of effective professional development, insisting that their districts provide teachers with "ongoing" opportunities for "job-embedded" professional development connected to school and district student achievement objectives. Union contracts can also have negative effects on professional development by reducing flexibility in the how time is used and how teachers are rewarded for their participation in learning new knowledge and skills.

### **Performance-Based Pay**

Although most union-district contracts provide for salary increases to teachers that are based on their years of service or attainment of graduate credits, a number of union affiliates are pushing for pay-for-performance compensation structures that would provide higher compensation to teachers who are exemplary practitioners and who choose to engage in leadership and professional development. Some affiliates also propose to cut the pay of teachers failing to meet high standards. Whether or not student achievement as measured by standardized tests should be a part of the criteria used to determine teacher pay is controversial.

### **Programmatic Reform Initiatives**

In the early twenty-first century, both national unions are engaged in numerous programs that seek to respond to member interests in school improvement and to influence both public policy and public

opinion by demonstrating their commitment to student learning. The demand that these activities place on union resources has increased dramatically. In 2001, thousands of schools were involved in a broad array of NEA-supported programs dealing with a broad range of concerns that include changing school conditions that support effective teaching and organizational efficiency and accountability, jumpstarting reform in low-performing schools, teacher education, and the implementation of charter schools. The AFT has placed organizational priority on toughening curriculum standards and preschool education. Both national organizations have programmatic initiatives aimed at improving the teaching of reading and promoting school safety and both are actively involved in promoting teacher involvement in certification by the National Board for Professional Teaching Standards.

### **Dissemination of Information about Best Practice**

Both national unions have made efforts to make useful information about educational practice available to their members. Both publish professional journals and specialized newsletters focused on particular segments of their membership as well as books and reports on dozens of topics. The AFT supports the Educational Research and Dissemination program that helps teachers apply research findings to their classroom practice. These efforts to influence their members' actions have grown substantially and have become more prescriptive in the sense that explicit endorsement of particular strategies is now common. Both organizations, at the national level and in many states and districts, have elaborate websites that both provide information and allow members to engage in professional discussions. During elections and with respect to specific policies under consideration, teacher unions have sought to influence public opinion through press releases, media events, and political advertising. The effort to shape popular thinking about best practice transcends these overtly political actions. Teacher unions buy space in leading newspapers, support cable and public television programming that draws attention to the importance of good teaching, and form partnerships with other educational organizations to disseminate and advocate for research-based practices.

### **Effect on Educational Reform**

There is little research that systematically examines the effects of union actions on improving instruc-

tion and on school reform more generally. It is clear however, that certain policies frequently advocated by would-be reformers would not be as far along as they are now without teacher union cooperation and leadership. These steps include peer review of teacher competence, more robust induction programs, job-embedded professional development, and performance-based pay. It is also clear that the greater emphasis on school improvement and student achievement that has characterized teacher union priorities in the late twentieth century is unlikely to be reversed. This redirection is being institutionalized in organizational structures and new staff positions in state and national units, in organizational initiatives such as the Teacher Union Reform Network, and in relationships at all levels with other professional educators, from principals and superintendents in local schools and districts to national partnerships, such as the Learning First Alliance.

*See also:* AMERICAN FEDERATION OF TEACHERS; NATIONAL EDUCATION ASSOCIATION; TEACHER EMPLOYMENT; TEACHER EVALUATION; TEACHER LEARNING COMMUNITIES; TEACHER UNIONS.

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## TEACHING

### KNOWLEDGE BASES OF

Ralph T. Putnam

### LEARNING TO TEACH

Sharon Feiman-Nemser

### METHODS FOR STUDYING

James Calderhead

## KNOWLEDGE BASES OF

Researchers and other scholars seeking to understand and define the knowledge and thinking underlying teaching have focused on numerous issues and bring multiple perspectives to bear on this complex domain. Much of this work has addressed some combination of three sets of interrelated questions:

1. What do (or should) teachers know? What domains or categories of knowledge are important for teaching?
2. How do teachers know? What is the nature or form of various kinds of knowledge needed for teaching?
3. How do teachers think? What thought processes underlie teaching?

Efforts to address these questions are motivated, in part, by the connection between how teachers teach and what teachers think, know, and believe.

### Historical Overview

During the first half of the twentieth century the substance and nature of teachers' knowledge was relatively unproblematic. Judging from various assessments for teacher certification of the period, teachers needed to know the content that they would teach

students and have some knowledge of pedagogical practice. As systematic programs of research on teaching began to emerge in the 1960s, attention shifted to various teacher characteristics and behaviors associated with increased student achievement. Although this research did not directly examine the knowledge or thinking of teachers, it was grounded in an assumption that knowledge of relationships established through systematic research could provide a "scientific basis for the art of teaching," as the title of the 1978 book by Nathaniel L. Gage suggested.

As psychology shifted from behavioral to cognitive perspectives, scholars of teaching followed suit and began to focus on the mental life of teachers. By the 1980s, cognitive psychologists had established that the accumulation of rich bodies of knowledge is critical to expert performance in various domains, ranging from chess playing to medical diagnosis. Scholars of teaching began trying to characterize the expert knowledge that is needed for good teaching. In 1986 Lee S. Shulman catalyzed interest in the systematic study of the knowledge underlying teaching, arguing especially for the importance of understanding the role of teachers' knowledge of the content they teach.

### Domains of Knowledge for Teaching

Teaching is a complex act, requiring many kinds of knowledge. Some of this knowledge is general and fairly enduring—such as knowledge of subject matter content or of general pedagogical principles; some is more specific and transient—such as knowledge of the particular students being taught and what has taken place in a particular class. Various systems for describing the knowledge needed for teaching have been developed with varying emphases and purposes. With any set of categories or domains of knowledge, it is important to keep in mind that these systems are used to bring conceptual order to knowledge that is in reality complex and interrelated. The various categories of knowledge are not discrete entities, and the boundaries between domains are fuzzy at best. With these caveats in mind, the following set of categories of teacher knowledge is loosely based on a 1987 article by Shulman:

- Knowledge of subject matter content
- Knowledge of general pedagogical principles and strategies
- Knowledge of learners, their characteristics, and how they learn
- Knowledge of educational contexts

- Knowledge of educational goals, purposes, and values

Because they are central to the daily work of teachers, general pedagogical knowledge, knowledge about learners, and knowledge of subject matter have been the focus of considerable research and scholarly discourse.

**General pedagogical knowledge/knowledge about learners.** These closely related categories of teacher knowledge include knowledge about teaching, learning, and learners that is not specific to the teaching of particular subject matter content. One large component of this domain is knowledge of classroom management—knowledge of how to keep groups of students engaged with various classroom tasks. Teachers must have repertoires of routines and strategies for establishing classroom procedures, organizing classroom events, keeping activities on track, and reacting to student misbehavior. Teachers also draw upon knowledge of instructional strategies for arranging classroom environments and conducting lessons to promote student learning. Experienced teachers have repertoires of strategies and routines for conducting lessons, keeping them running smoothly, and promoting student engagement.

Teachers' knowledge about managing classrooms and conducting lessons is intertwined with knowledge and beliefs about learners, learning, and teaching. Theories about how students learn guide teachers' instructional decisions and interactions with students, often in an implicit way. For example, a teacher who conceives of the learner's role as a passive recipient of knowledge teaches differently than one who conceives of the learner's role as an active participant in the learning process. The former typically presents information that students are expected to attend to, followed by rehearsal and practice of the presented information. The latter is apt to present problem-solving situations designed to stimulate students' thinking and knowledge-building.

**Content knowledge.** Obviously, teachers must know something about the content they teach. In drawing attention to the need for more attention to the role of content knowledge in teaching, Shulman in 1986 distinguished three kinds of content knowledge: subject matter content knowledge, pedagogical content knowledge, and curricular knowledge. Subject matter content knowledge is what a content specialist knows, for example what a mathematician knows about mathematics. Pedagogical content

knowledge is specialized knowledge needed for teaching the subject, such as understanding how key ideas in mathematics are likely to be misunderstood by learners, and multiple ways of representing important ideas in the domain. Curricular knowledge is knowledge of materials and resources for teaching particular content, including how subject matter content is structured and sequenced in different materials.

Early research sought but failed to establish a clear relationship between teachers' subject-matter knowledge—as measured by the amount of coursework, grades, and tests—and teaching effectiveness; taking more university mathematics courses did not necessarily make one a better teacher of mathematics. Nevertheless, when researchers examined what was learned and hence known by teachers, they were able to establish a connection between the degree of disciplinary knowledge and teaching effectiveness. In general, teachers with rich subject matter knowledge tend to emphasize conceptual, problem solving, and inquiry aspects of their subjects; less knowledgeable teachers tend to emphasize facts, rules, and procedures. Less knowledgeable teachers may stick closely to detailed plans or the textbook, sometimes missing opportunities to focus on important ideas and connections to other ideas. When the goal is fostering student understanding and meaningful learning, as promoted by many U.S. educational reform efforts of the 1980s and 1990s, the demands on a teacher's content knowledge intensify. Helping students understand important ideas in a discipline and how these ideas can be used in varied contexts requires that a teacher know more than the facts, concepts, and procedures they are teaching. They must also know how these ideas connect with one another and to other domains.

Often, when one thinks of understanding a discipline—such as mathematics, biology, or history—one means knowing important concepts and principles in the field, how they are related to one another, and how they connect to ideas in other domains. Additionally, to be truly knowledgeable, or “literate,” in a particular field involves knowing how experts in that field think. Knowing science, for example, entails knowing something about rules for evidence and how scientific knowledge is established. Knowing literature involves knowing what makes a good critique or argument about a literary point. To teach particular disciplines well, a teacher must be aware of these aspects of disciplinary knowledge and be

able to make them explicit in ways that are accessible to learners.

### Nature and Form of Teacher Knowledge

A potential danger in describing various categories of knowledge for teaching is coming to think of teachers' knowledge itself as organized into abstract, discrete categories. In fact, what teachers know is complexly intertwined with other knowledge and beliefs and with the specific contexts in which teachers work. Numerous scholars have posed constructs to try to capture the complex contextualized nature of teachers' knowledge. Some researchers have argued that teachers' personalities and life experiences play a major role in shaping the kind of knowledge they develop about teaching, calling this knowledge "personal practical knowledge." In 1987 Kathy Carter and Walter Doyle argued that much of what experienced teachers know is "event-structured knowledge"—knowledge organized around the activities and events they have experienced in classrooms. Others have argued for the importance of articulating the "craft knowledge" of teaching—the implicit theories, skills, and ways of perceiving that teachers develop through their work.

In the late twentieth and early twenty-first centuries, such efforts to understand knowledge for teaching have intersected and been informed by a more general movement in psychology and education to view knowledge and cognition as *situated*. Situative theorists posit that how and where a person learns a particular set of knowledge and skills become a fundamental part of what is learned. An individual's knowledge is intertwined with the physical and social contexts in which it was acquired. All of these efforts to characterize the ways in which knowledge for teaching is intertwined with contexts, other people, and personal histories help one appreciate the rich and complex nature of what teachers need to know. A number of important implications arise from this work.

What teachers know and how they know it are tied to particular contexts. Developing expertise in teaching entails working and learning in the contexts of teaching. Much of what teachers know is connected to particular tools—such as textbooks and instructional materials. Much of what teachers know is routinized and automatic. Just as a person driving a car with a manual transmission is not conscious of the coordination of movements of feet and hands as they drive—unless a problem arises—much of how

teachers interact with students is similarly guided by routine. It is having much of what they know embedded in these routines that enables teachers and students to manage in a highly complex social environment. A downside of much of teachers' knowledge being routinized and automatic is that it can be difficult to examine and change when desired.

### Teacher Thinking

As psychological perspectives shifted from behavioral to cognitive in the 1970s, a number of researchers began to focus on the thinking processes entailed in teaching. Much of this research focused on teachers' planning and decision-making. Research on planning suggests that it occurs at different levels (e.g., across a year, across a unit, across a day), that it is mostly informal (i.e., formal written plans play less of a role than does informal thinking about what to do), and that planning requires a broad knowledge base (i.e., of the various categories discussed above). Research that focused on the decisions made during interactive teaching itself found that teachers made few decisions as they taught and that those decisions dealt primarily with keeping planned activities on track. Other research suggests, however, that the well-established routines that teachers and students have developed do much to determine the nature of instruction and minimize conscious on-the-spot decision-making.

**See also:** ENGLISH EDUCATION; HISTORY, TEACHING OF; LANGUAGE ARTS, TEACHING OF; MATHEMATICS EDUCATION; READING; SCIENCE EDUCATION; SOCIAL STUDIES EDUCATION; TEACHER EDUCATION; TEACHER EVALUATION; TEACHING, *subentry on* LEARNING TO TEACH; WRITING, TEACHING OF.

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RALPH T. PUTNAM

## LEARNING TO TEACH

The meaning of the phrase *learning to teach* seems clear and straightforward, but in fact, its definition

raises a host of empirical, conceptual, and normative questions. What do teachers need to know, care about, and be able to do in order to teach effectively in different contexts? How do teachers build a strong teaching practice and develop a professional identity over time? What role should teacher education play in learning to teach? How do the conditions of teaching shape the content of teacher learning? How do views of teaching shape theories of learning to teach?

Learning to teach is an emerging priority for policymakers and educational reformers. For example, the report of the National Commission on Teaching and America's Future, issued in 1996, placed teacher learning at the heart of its comprehensive blueprint for reform. The report asserts that what students learn is directly related to what teachers teach, and what teachers teach depends on the knowledge, skills, and commitments they bring to their teaching.

### Myths About Learning to Teach

Conventional wisdom about learning to teach is rooted in social attitudes toward teaching and the experience of being a student. Some of these ideas contain half truths; some have influenced educational policy.

**Teachers are born, not made.** Some people believe that the ability to teach is a natural endowment like being musical. Some teachers seem to be "naturals" and some theorists posit an innate tendency in human beings to explain things. Even the founders of the common school believed that teaching was "women's true profession" because it tapped their instinct for nurturing the young. Still, the belief that teachers are born, not made rests on a narrow view of the intellectual and personal requirements of teaching. It ignores the growing understanding of teaching as a complex, uncertain practice, and minimizes the role of professional education on the grounds that the practice of teaching cannot be taught.

**If you know your subject, you can teach it.** Whatever else teachers need to know, they need to know their subjects. There are teachers whose abundant knowledge and love of their subject make them extremely effective even though they have had no special preparation for teaching. Other teachers who possess extensive subject matter knowledge are unable to present this knowledge clearly or help others

learn it. Research is beginning to clarify what it means to “know” one’s subject for purposes of teaching it, and why conventional measures of subject matter knowledge are problematic.

Historically, a liberal arts education was considered sufficient preparation for teaching secondary school. Policies that require academic majors for both elementary and secondary teaching candidates represent a contemporary variation on this theme. There is mounting evidence of teachers with a major in their subject not being able to explain fundamental concepts in that subject; this situation raises questions about such policies.

Scholars have identified three dimensions of subject matter knowledge for teaching: knowledge of central facts, concepts, theories and procedures; knowledge of explanatory frameworks that organize and connect ideas within a given field; and knowledge of the rules of evidence and proof in a given field. How is a proof in mathematics different from a historic explanation or a literary interpretation? In addition, teachers must be able to look at their subjects through the eyes of students, anticipating what students might find difficult or confusing, framing compelling purposes for studying particular content, and understanding how ideas connect across fields and relate to everyday life. Future teachers are unlikely to acquire this kind of knowledge in academic courses.

**Teacher education prepares people to teach.** Whereas the previous myths reflect considerable skepticism about teacher education, this myth reflects confidence that pre-service programs prepare people to teach. The typical program consists of a two-year sequence of education courses and field experiences. Common components include educational psychology, general and subject specific methods, and student teaching. What these components consist of varies across institutions.

Some studies show that teacher education is a weak intervention compared with the socializing effects of teachers’ own elementary and secondary schooling, and the influence of on-the-job experience. Other studies suggest that intense, coherent teacher education programs do make a difference. Even the best program, however, cannot prepare someone to teach in a particular setting. Some of the most important things teachers need to know are local and can only be learned in context. Pre-service preparation can lay a foundation for this complex,

situation-specific work, but the early years of teaching are an intense and formative phase in practice of learning to teach.

### Phases in Learning to Teach

It is hard to say when learning to teach begins. From an early age, people are surrounded by teaching on the part of parents and teachers, and these early experiences with authority figures unconsciously shape teachers’ pedagogical tendencies. The experience of elementary and secondary schooling has a particularly strong impact. From thousands of hours of teacher watching, prospective teachers form images of teaching, learning, and subject matter that influence their future practice unless professional education intervenes.

Liberal studies affect the way teachers think about knowledge and approach the teaching of academic content, although not always in educative directions. At their best, education courses and field experiences cultivate a professional understanding of and orientation toward teaching. Learning to teach begins in earnest when novices step into their own classroom and take up the responsibilities of full-time teaching.

Efforts to describe the stages teachers go through in learning to teach generally posit an initial stage of survival and discovery, a second stage of experimentation and consolidation, and a third stage of mastery and stabilization. These stages are loosely tied to years of experience, with stabilization occurring around the fifth year of teaching. Self-knowledge is a major outcome of early teaching. Novices craft a professional identity through their struggles with and explorations of students and subject matter. Over time, teachers develop instructional routines and classroom procedures and learn what to expect from their students. Experience generally yields greater self-confidence, flexibility, and a sense of professional autonomy. After five to seven years most teachers feel they know how to teach. Whether we call these teachers “masters” or “experts” depends on what kind of teaching is valued and how mastery and expertise are defined.

Models of teacher development serve as a reminder that the process of learning to teach extends over a number of years; however, the current structure of professional education and the conditions of beginning teaching do not reflect this. Continuity of learning opportunities between pre-service prepara-

tion and new teacher induction is rare. The assignment of beginning teachers does not reflect their status as learners. Most beginning teachers have the same responsibilities as their more experienced colleagues, and often get the most difficult classes because they lack seniority.

The rise of formal induction programs signals a recognition on the part of some educators and policymakers that learning to teach occurs during the early years of teaching. About thirty states have support systems for beginning teachers and most urban districts offer some induction support, usually in the form of mentor teachers. Still, few programs rest on a robust understanding of teacher learning or help novices learn the kind of ambitious teaching advocated by reformers. Many programs treat induction as short-term support designed to ease the novice into full-time teaching.

What might a developmental curriculum for learning to teach entail? Which tasks belong to initial preparation and which to the induction phase? Despite gaps in knowledge and a lack of consensus about the best ways to prepare teachers and support their learning over time, it is possible to conceptualize a continuum of learning opportunities for teachers.

### **Teacher Preparation and Learning to Teach**

If teachers are to learn a version of teaching that they have not experienced as pupils, they need to develop new frames of reference for interpreting what goes on in classrooms and making decisions about what and how to teach. Positioned between teachers' past experience as students and their future experience as teachers, university-based teacher education is well situated to encourage this shift in thinking. Unless pre-service teachers reconstruct their early beliefs about teaching, learning, students, and subject matter, continuing experience will solidify these beliefs, making them even less susceptible to change.

A second task of teacher preparation particularly suited to university-based study is helping future teachers develop conceptual and pedagogical knowledge of their teaching subjects. Current educational reforms have prompted renewed interest in teachers' subject matter knowledge because they call for a kind of teaching that engages students not only in acquiring knowledge, but also in building and communicating about knowledge. This task depends on contributions from arts and sciences, and education.

To build bridges between subject matter and students, teachers must understand what children are like at different ages, how they make sense of their world, how their ways of thinking and acting are shaped by their language and culture, how they gain knowledge and skills, and develop confidence as learners. This background knowledge becomes increasingly critical as teachers work with children whose racial, cultural, and socioeconomic backgrounds differ from their own.

In order to learn from teaching, teacher candidates must develop the necessary tools and dispositions. This includes skills of observation, interpretation and analysis, the habit of supporting claims about student learning with evidence, the willingness to consider alternative explanations. If teacher candidates work on these skills with others, they may begin to see colleagues as resources in learning to teach.

Although teachers need to know many things, effective teaching depends on the ability to use knowledge appropriately in particular situations. Pre-service teachers can begin developing a repertoire of approaches to curriculum, instruction, and assessment during pre-service preparation. Learning to adapt and use this knowledge in practice is an appropriate task for teacher induction.

### **Teacher Induction and Learning to Teach**

Induction happens with or without a formal program; however, the presence of a strong program can minimize the survival mentality that grips so many beginning teachers and orient their learning in productive directions. Beginning teachers need to learn the goals and standards for students at their grade level, and how these expectations fit into a larger framework of curriculum and assessment. They must get to know their students and community, and figure out how to use this knowledge in developing a responsive curriculum.

If teacher preparation has been successful, beginning teachers will have a vision of good teaching and a beginning repertoire consistent with that vision. A major task for beginning teachers is acquiring the local understandings and developing the flexibility of response to enact this repertoire. The challenges of teaching alone for the first time can discourage new teachers from trying ambitious pedagogies. Induction support can keep them from abandoning such approaches in favor of what they

perceive as safer, less complex activities. It can also help novices focus on the purposes and not just the management of learning activities and their meaning for students.

To teach in ways that respond to students and move learning forward, teachers must be able to elicit and interpret students' ideas and generate appropriate teaching moves as the lesson unfolds. Listening to what students say and constructing responses on a moment-to-moment basis; and attending to the needs of the group while attending to individuals requires considerable skill and practice: It represents a demanding learning task for beginning teachers. Beginning teachers must create and maintain a classroom learning community that is safe, respectful, and productive of student learning. Issues of power and control lie at the heart of this task that is tied up with novices' evolving professional identity. Often beginning teachers struggle to reconcile competing images of their role as they evolve a coherent professional stance.

If teachers are asked how they learned to teach, they will say they learned to teach by teaching. Although experience plays an important role in learning to teach, there is a big difference between "having" experience and learning desirable lessons from that experience. To learn from the experience of teaching, teachers must be able to use their practice as a site for inquiry. This means turning confusions into questions, experimenting with new approaches and studying the effects, and framing new questions to extend their understanding.

The ongoing study and improvement of teaching is difficult to accomplish alone. Teachers need opportunities to talk with others about teaching, to analyze samples of student work, to compare curricular materials, to discuss problems and consider different explanations and actions. Many reformers believe that this kind of intellectual work can best be accomplished by groups of teachers working together over time.

*See also:* LANGUAGE ARTS, TEACHING OF; MATHEMATICS EDUCATION, *subentry on* PREPARATION OF TEACHERS; MOTIVATION, *subentry on* INSTRUCTION; READING, *subentry on* TEACHING OF; SCIENCE EDUCATION, *subentry on* PREPARATION OF TEACHERS; SOCIAL STUDIES EDUCATION, *subentry on* PREPARATION OF TEACHERS; TEACHER EDUCATION; TEACHER LEARNING COMMUNITIES; WRITING, TEACHING OF.

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SHARON FEIMAN-NEMSER

## METHODS FOR STUDYING

Teaching has been the subject of systematic inquiry for several decades. The first American Educational

Research Association *Handbook of Research on Teaching*, edited by Nathaniel L. Gage, appeared in 1963 and later editions have appeared at approximately ten-year intervals. Since the 1960s there have also been a number of significant reviews of this research, such as Arnold Morrison and Donald McIntyre's 1969 and 1973 editions of *Teachers and Teaching* and Penelope L. Peterson and Herbert J. Walberg's *Research on Teaching* (1979). Such reviews have highlighted both the complexity of teaching and the fact that it is amenable to study from a number of perspectives, using a variety of methods.

Inquiry into teaching has been pursued for essentially three different purposes. First, researchers and practitioners aim to understand better the processes involved, to develop the knowledge base of teaching, and to contribute to theoretical frameworks, which help to conceptualize teaching. Second, inquiry into teaching has also been pursued for the purposes of improving practice. This is particularly the case, for instance, in action research studies that generally follow a cycle, beginning with the identification of a practical problem or area of concern, followed by the gathering of evidence using various research methods, decisions about how to change practice, and then the gathering of further evidence to monitor the effects of the change. Such cycles are frequently repeated and provide a means of constantly monitoring and improving practice as well as developing an enhanced self-critical awareness. Third, inquiry is intrinsic to professional preparation, and research methods may be employed by student teachers, for example, in helping to make sense of their observations of teaching and in developing their own practice. Classroom interaction schedules, for example, have frequently been used to help student teachers to structure their observations and to note the ways in which teachers ask questions, or move from one task to another within the classroom, or deal with student behavior problems. Any one research project, however, may be being pursued for any or all of these purposes and could draw upon a variety of different research methods in order to achieve its aims.

### Research Methods

Various methods have been used to gather information about teaching. The most common fall into the following categories: systematic observation, case study and ethnography, survey techniques, simulations, commentaries, concept mapping, and narra-

tives. Each yields its own distinctive type of data about teaching, and may be more or less appropriate for different purposes as discussed below.

**Systematic observation.** Ned Flanders in 1970 was the first to popularize the use of observation schedules in the study of teaching. His Flanders Interaction Analysis Categories (FIAC) identified ten categories of behavior that characterised teacher-student interaction within the classroom. Observers, once trained in identifying and categorizing these behaviors, could then code their observations, which would later be studied for interaction patterns. Flanders's work has since been elaborated with numerous schedules designed for specific purposes. Observation schedules essentially provide a checklist of behaviors that the researcher is interested in, and enable a sample of teachers' interactions to be described in quantitative terms. Sometimes the schedule is more oriented towards studying a sequence of teaching behavior rather than the quantity of different types of behavior and may be used to identify the ways in which behaviors change over time or as a result of an experimental intervention.

The major advantage of systematic observation is that it provides a relatively objective account of classroom behavior. For instance it might describe the proportion of questions that a teacher asks that are open-ended, or the proportion of teacher commands that have a disciplinary focus, or the relative number of times that teachers or students initiate interaction. The method, however, is rarely able to offer much information about the context of particular interactions, and is unable to illuminate the interpretations that teachers and students place upon their own and others' behavior. A question directed toward a student, for instance, may be a matter of simple recall for one, an intellectually challenging task for another, a largely social exchange in one context or an implied reprimand in a different context, and the observer may be unable to distinguish sufficient cues to appreciate fully its significance. Systematic observation may be useful, therefore, in considering the general impact of new curriculum materials on instructional behavior, for example, but may have limited value on its own in identifying the full complexities of teachers' work, why teachers behave as they do, and the reasoning that guides their actions.

**Case study and ethnography.** Some have argued that case study and ethnography refer more to approaches to research than methods in themselves.

Frequently they draw upon interviews and semi-structured observations, though occasionally on other evidence as well, in order to come to an understanding of a particular teacher's practice. One of their distinguishing features is that they involve in-depth study. Over a lengthy period of time, the researcher is able to appreciate the context in which a teacher works, and through interaction with the teacher about their practice is able to develop insights into how they view their work. These insights can then be tested against future observations or other data. Gaea Leinhardt (1988), for example, observed several mathematics lessons taught by one teacher and interviewed her at length both about her teaching and about her past experiences of mathematics. As a result, she was able to piece together an understanding of the ways in which the teacher's own learning of mathematics as a student and her experiences of professional training had come to influence her approach to teaching the subject. Case studies have frequently highlighted the ways in which teachers cope with the complex competing demands that they face in their work or the ways in which beginning teachers encounter and overcome the initial difficulties of learning to teach.

Case studies and ethnographies frequently involve the analysis of very large amounts of qualitative data, and some writers have drawn attention to the possibility that researchers can extract from these their own particular interpretations. The potential of ethnographic research to yield generalizations about teaching has also been debated, with some researchers arguing that the merit of the approach lies in the insights about particular aspects of teaching that such studies can provide.

**Survey techniques.** Surveys on teachers and teaching have relied on the use of questionnaires, structured interviews, checklists, tests, or attitude scales. Surveys have been used to describe the characteristics of teachers as a professional group, such as their attitudes towards children, their opinions about a particular innovation, or their own aspirations and feelings of job satisfaction. They have also been used to collect teachers' own descriptions of their practices or the professional concerns they have at different stages of their careers.

Surveys allow data to be collected about large numbers of teachers, and if appropriate sampling techniques are used and a sufficiently high return rate is obtained, it is possible to make generalizations about teachers as a whole or about particular groups

of teachers, such as elementary school teachers, or teachers in a particular subject area or geographical region. Surveys, however, can only collect information that teachers can easily report, and other methods are required if the researcher wishes to penetrate more deeply into the complex interactions of teachers' thinking and behavior and the contexts in which they work.

**Simulations.** A variety of simulation techniques have been developed that involve presenting teachers with a task or situation similar to one that would be encountered in their normal work and observing how systematic variations in the nature of different tasks or situations affects the ways teachers aim to deal with them. Such techniques have been used to investigate how teachers plan lessons, how they are influenced in their decision-making by external constraints, or how they are influenced in their interactions with students by different student attributes. Mary M. Rohrkemper and Jere E. Brophy (1983), for example, provided teachers with descriptions or vignettes of children in a variety of classroom situations, each presenting a particular challenge to the teacher. By examining the relationship between the teachers' judgements or decisions and the factors varying within the vignettes, it was possible to identify those features of children that are influential in teachers' thinking about problem situations. Simulations can be used to elicit the knowledge that teachers have and use in their everyday practice and that might be difficult to access through other methods.

**Commentaries.** Understanding the processes of teaching involves understanding the meaning teachers attribute to their actions and the rationales they have for behaving as they do. Attempts to access the ongoing thinking and decision-making of teachers have necessitated the use of methods particularly geared toward eliciting teachers' knowledge and thought processes. This has included think-aloud protocols where teachers, while engaged in a planning or assessment task, for example, have attempted to verbalize their thoughts at the same time. The thinking and decision-making of teachers during active teaching have been elicited using stimulated recall techniques in which a lesson is videotaped and later played back to the teachers who attempt to recall their thinking at the time. Some researchers have also used the notes taken from observation of lessons to structure interviews with teachers afterwards in order to construct a commentary on what the teacher was doing and the reasons for their actions.

Research in this area has raised several issues about the status of teachers' verbal reports on their practice: Do they genuinely reflect teachers' real thinking at the time, or are they after-the-event justifications? And can the thought that accompanies practical action be adequately represented in terms of words alone, or is "real" thought as much tied up with images, metaphors, and feelings? There are several conceptual issues concerning this type of research method, and clearly care must be taken to consider potential sources of distortion in self-report data. Nevertheless, steps can be taken to minimize such influences, and these methods have been used effectively to explore some of the cognitive aspects of teachers' work.

**Concept mapping.** Several techniques, loosely labelled as concept mapping, have been used to represent teachers' understanding of various aspects of their work. They generally follow a three-stage process, beginning with brainstorming on a particular topic to identify concepts, followed by a process of indicating how these concepts are interrelated, and finally naming the relationships between the concepts. The end product is a visual representation of teachers' understanding as it relates to a particular topic. Greta Morine-Dersheimer (1991), for example, used the technique to identify the ways in which different student teachers think about classroom management: some student teachers, for example, would link classroom management to concepts of personal relationships, classroom climate, and an ethos of mutual respect, whereas others would link it to concepts of rules, sanctions, rewards, and praise. Such techniques can help to illuminate the different understandings that student teachers hold of key concepts or may be used to identify the changes that occur in teachers' understandings over time or as a result of inservice training or curriculum development.

**Narratives.** Narrative studies aim to provide an account of teaching in teachers' own words. They support an experiential approach to describing teachers' work, taking particular note of the teachers' "voice" and placing teachers' experience within the context of other life events. Narrative researchers have frequently argued against more mechanistic approaches to describing teaching and have argued for a storytelling approach in which the researcher acts as a facilitator helping teachers to recount their experience with due recognition of the personal and contextual factors within which it is framed. D. Jean

Clandinin (1986), for example, develops narrative accounts of three primary teachers. Each narrative highlights a key image or guiding metaphor that is influential in shaping how the teacher thinks about teaching and learning. One teacher, for instance, held an image of "language as the key" and language was perceived as the basis of all classroom activity. Another held the image of "classroom as home" and this image manifested itself in her relationships with children and in her organization of the classroom. In 1994 J. Gary Knowles, Ardra L. Cole, and Colleen S. Presswood charted the difficulties of student teachers on field experience through the construction of narratives, drawing largely on the students' own autobiographies, diaries, and discussions. This approach to research has grown rapidly in recent years and has stimulated several debates about the status and veracity of narratives.

### Conclusion

Research on teaching has involved a wide range of different methods. Each has its own advantages as well as its drawbacks. Each has the potential to illuminate particular aspects of the teaching process. Different methods are appropriate for different questions. Moreover, certain orientations towards research—such as cognitive or experiential—predispose researchers to certain types of inquiry and therefore particular methods. Teaching, however, is a complex process and the rich and diverse modes of inquiry currently available enable researchers to pursue those complexities and to contribute to their understanding more fully.

*See also:* RESEARCH METHODS; TEACHER EDUCATION; TEACHER EVALUATION.

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JAMES CALDERHEAD

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## TEACHING AND LEARNING

HIGHER EDUCATION  
Michael Theall

## INTERNATIONAL PERSPECTIVE

Joseph P. Farrell

**HIGHER EDUCATION**

Student learning in higher education is a function of both formal and informal experiences. Formal learning takes place as a result of a classroom or related activity structured by a teacher and/or others for the purpose of helping students to achieve specified cognitive, or other, objectives. Informal learning encompasses all the other outcomes of students' participation in a higher education experience. In both cases, the more extended or comprehensive the experience, the greater the potential effect. In a comprehensive 1991 review, Ernest Pascarella and Patrick Terenzini described the ways in which college affects students with respect to many kinds of learning. While they found that formal learning related to academic and cognitive skills, and to subject-matter competence, informal learning was shown to impact on many other areas.

Complications arise, however, because of the number and variety of variables affecting college learning. For example, while the differences between being a residential student and a commuter student do not seem to greatly affect cognitive or subject-matter learning, they are relatively influential with respect to psychosocial change, intellectual and cultural values, independence, and similar factors. Is this purely an on-campus versus off-campus difference? Age may be an intervening variable in such cases, because one would expect older, working adults (a constantly growing student population in all of higher education) to represent a substantial percentage of students living off-campus. Given that less psychosocial change might be expected with such learners—because their attitudes and values are already well established—the observed differences between on- and off-campus learning could be a function of student demographic differences such as age, as well as the environment itself. For example, while the influence of college on the intellectual and cultural values of resident students is significant, this effect derives much of its impact from immersion in the college environment and the maturation of younger learners who may not have had a broad range of experience. Adult, non-resident learners may have more firmly-held beliefs and a broader range of experience and by simple maturation, may already have developed more refined sets of values. Thus it is not simply location that makes the differ-

ence, but the combination of location and characteristics of the learners.

**The Theory behind the Practice**

When the first edition of this encyclopedia was published in 1971, the prevailing approach to teaching and learning was the *behaviorist model*. Developed by B. F. Skinner and others in the 1950s, this model considered stimuli such as instructional events or activities, the responses of learners to these stimuli, and contingencies or consequences based on those responses. The basic proposition was that learning occurred when the desired responses were elicited by the stimuli. Robert Mager's work with *instructional objectives* (precise statements of intended behaviors along with measurement criteria) and Benjamin Bloom and colleague's 1956 *taxonomies* (classification schemes) of objectives were also major influences on the ways in which instruction was designed and delivered. The taxonomic levels are knowledge, comprehension, application, analysis, synthesis, and evaluation. A practical problem for teachers is that there can be objectives for literally every instructional activity and every kind of behavior—from acquiring basic knowledge to classroom attentiveness and the development of value systems. While behaviorism has been largely replaced as an instructional theory, the underlying value of clear objectives, appropriate measurement criteria, and the specification of various types of desired learning have remained as important basics for designing effective instruction.

*Cognitive theory*, essentially the position that learning involves the learner's associations of new stimuli with existing concepts and categorization schemes, regained some support in the 1970s and has continued to develop in its applications since that time. Marilla Svinicki (1999) outlined five general strategies for teaching that derive from the early theory: (1) directing students' attention through verbal or visual cues; (2) emphasizing how material is organized, again with various cues; (3) making information more meaningful by providing associations with other material or applications; (4) encouraging active checking of understanding through questioning and feedback; and (5) compensating for limits of information processing and memory systems with smaller amounts of information, review, breaks, and focusing attention.

*Metacognition*, or thinking about thinking, went beyond simple associations and brought learners

more into the process of actively manipulating new information and incorporating it into both their own conceptual schemes and those of the subject involved. Svinicki suggests that instructors should model and describe their own thinking as they work through problems, stress problem solving and other activities that provide opportunities for practicing thought processes, and even teach specific strategies when necessary. The teacher, as the expert in a specific field, becomes a cognitive mentor and uses such techniques to help students move from positions as novices in the discipline to more seasoned practitioners. Teachers thus provide students with tools for understanding and dealing with future, more complex material. Since efficient problem-solving strategies enhance performance, the additional benefit is motivational: it increases students' expectations for successful completion of the work and strengthens their beliefs about their ability to do the work.

*Learner-centered instruction* is a term that refers to attending to a learner's individual needs, differences, and abilities, as well as to sharing responsibility for learning. Research by Paul Pintrich (1995) has established that students who are able to control their own behavior, motivation, and cognition are generally successful in college. Such students self-regulate their learning in three ways. First, they exercise active control by monitoring what they do, why they do it, and what happens—and then making adjustments. Second, they have goals that mark desired performance levels and they use these when deciding what adjustments to make. Third, they accept that the control must be theirs rather than someone else's. These procedures revolve around the important underlying concept that learners can exercise control and influence educational outcomes, and that doing so has many benefits.

*Collaborative learning* is the practice of actively engaging learners in joint discovery, analysis, and use of information. It has its roots in the power of peer and other groups to influence the development of understandings, values, and beliefs. From a pragmatic perspective, collaborative learning is also a more representative model of contemporary practice in the working world. In an interesting irony, however, students who have been generally successful in teacher-centered models tend, at first, to reject collaborative learning as an abdication of the teacher's responsibility, assuming that the job of delivering content has been transferred to other students. This

is a misinterpretation of the purpose of collaboration, and it poses an additional problem for teachers: planning and structuring collaborative work so that learners' roles and responsibilities are clear, and also making it apparent that the teacher is serving different, but equally important roles as a resource, a guide, a mentor, an assessor, and any of several other roles. Students are not expected to teach each other, they are expected to work together to reach appropriate goals. The value of self-regulated learning is apparent in this context. Well-constructed collaborative work identifies learner responsibilities, sets goals, provides learners with opportunities to consider the goals and to structure their own efforts accordingly, and supports cooperative effort. Svinicki proposes the following methods for promoting learner-centered instruction: (1) encourage self-regulation; (2) use collaborative methods; (3) employ problem-solving activities that connect content to real-world situations; and (4) provide models of the processes, strategies, and habits of thought of the discipline being taught.

### Teaching and Its Outcomes

There is not sufficient space here to provide details of all the relationships between various kinds of learning and teaching techniques. More complete descriptions are available in Kenneth Feldman and Michael Paulsen's 1998 discussion of college teaching and learning and in *How College Affects Students* (1991) by Pascarella and Terenzini. Some basic findings from that work are extracted and outlined below, and the organization of the following paragraphs follows that of the chapters in Pascarella and Terenzini's text.

For verbal, quantitative, and subject-matter learning, lecturing appears to be a valuable method, particularly in learning material at the knowledge and comprehension levels of the Bloom et al. taxonomy. Individualized instruction in various forms seems reasonably effective in teaching similar content. More sophisticated cognitive objectives and affective objectives appear better learned when opportunities for interaction occur, as in smaller classes and those that use discussion and active learning methods. Collaborative learning also provides learners with numerous alternative explanations that must be reconciled, and efforts in this direction support achievement of both complex cognitive and affective objectives for learning content material.

When general cognitive skills and intellectual growth are desired, a process involving exploration of information, developing explanations, and reaching generalizations is useful. Like the *experiential model* of David Kolb (1984), this process is reiterative, and its strength is in the need for learners to go beyond memorization of facts and into solving problems through locating relevant information, testing possible theories, and arriving at conclusions. The cognitive practice involved in such activities provides useful training that can be transferred. Additionally, the need to discuss and debate the merits of conflicting arguments provides opportunities to develop written and spoken communication skills. Similar methods support intellectual growth, critical thinking, and the ability to deal with conceptually complex issues. However, a single course experience may not produce large effects; more time and exposure are generally necessary.

The psychosocial changes described by Pascarella and Terenzini include internal matters such as identity and self-esteem, as well as external factors such as relationships with people and constructs in the outside world. In the internal psychosocial realm, there do not seem to be many effects that can be directly attributed to college teaching and learning, or even to the overall college environment. One reason offered by Pascarella and Terenzini for the lack of significant or important findings is the difficulty in measuring such changes. Research lacks a generally accepted set of theories to guide the work, and measurement itself is imprecise. They also note the variety of college environments and the difficulty in generalizing from data gathered across these environments. Another reason may be that attending college does not guarantee a progressively positive set of experiences. Academic difficulties can have large negative effects on self-esteem, and research suggests that many students leave college because of a sense of isolation and loneliness. Such negative outcomes can counterbalance the positive effects of college, thus diminishing the overall strength of the findings.

There are things that can be done to avoid such problems. Arthur Chickering and Zelda Gamson (1987) developed a list of “Seven Principles for Good Practice in Undergraduate Education.” They suggest that instruction that encourages social and academic interaction, cooperative efforts, active learning, regular feedback, high expectations about both student effort and outcomes, and the creation

of respect and trust among individuals and groups are all critical to success.

In terms of changes with respect to external factors, Pascarella and Terenzini report general student gains in independence, nonauthoritarian thinking, tolerance, intellectual orientation, maturity, personal adjustment skills, and personal development. They note that “the largest freshman-senior changes appear to be away from authoritarian, dogmatic, and ethnocentric thinking and behavior” (p. 257).

Teachers can do much to support the kinds of growth that have been found in the external psychosocial area. The use of cooperative and collaborative methods of teaching and learning supports the development of social skills and team membership skills, and also exposes students to a variety of opinions and ideas. Teachers can present diverse points of view and engage students in exploration, analysis, and synthesis of these views. Indeed, most instruction that addresses the upper levels of the Bloom taxonomy (i.e., analysis, synthesis, and evaluation) requires students to weigh the merits of alternative ideas and approaches, and to make evidence-based judgments. As students move from entry-level courses through graduation and into graduate education, there is an increasingly heavy stress on independent learning and the development of the ability to carry out one’s own analyses and arrive at one’s own conclusions. It is not surprising then, that one of the best-documented effects of college is an increase in the *internality* of students’ locus of control. Locus is one aspect of *attribution theory*, and it refers to the student’s perception of the extent to which she or he has the power to influence outcomes. Those students whose locus is more internal (those who are generally successful) feel capable of exercising some control and they take action to do so, while students who exhibit external tendencies are generally less successful and have few feelings of power or the ability to affect outcomes. They are often more passive and attribute their failures (and sometimes, even their successes) to external factors such as the skill of the teacher, their classmates, course difficulty or simplicity, and even, to luck.

As with external psychosocial factors, a number of attitudes and values seem to change in college, and there seems a reasonable relationship between these kinds of changes in terms of their nature as well as in the kinds of instruction that can promote growth. Attitudinal changes occur in cultural, aesthetic, and intellectual areas and are marked by

greater sophistication and interest in broader ranges of music, literature, philosophy, creative activities, history, and the humanities. Other changes are found in educational and occupational values, including such things as interest in a liberal education and the desire for a fulfilling career. More change seems to occur in the early years of college than does in the latter years. Programs and institutions that support (particularly) younger learners from the outset—and that combine sound instructional methods, the development of a sense of engagement in an intellectual community, and readily available support services—create many opportunities for success.

Insofar as moral development is concerned, attending college appears to consistently promote growth in the direction of principled moral reasoning. This growth takes place primarily in the early years of college and it is reflected in both in-college and postgraduation behavior. Pascarella and Terenzini report this change as one of the most prominent, but they also note that evidence of change does not tell how or why such change takes place. There are some logical connections to teaching strategies in this area, and they are similar to those noted above. For example, use of the discussion method, collaborative learning, peer review, and other techniques that require students to consider alternative points of view and to reconcile differences among these alternatives, can lead to more openness to new ideas, more cultural sensitivity, and more awareness of social/ethical issues. Such techniques can be used in many disciplines and are not limited to particular courses dealing with moral reasoning, ethics, and related subjects. In these or other courses, exposing students to real-world ethical issues and requiring them to propose alternative solutions to problems using the perspectives of the various stakeholders is one way to demonstrate the complexities of making such decisions. Such an approach can also help expand the students' range of understanding of differing points of view.

One of the advantages of higher education's emphasis on diversity and multicultural issues is that the range of experiences and opinions available for discussion is considerably broadened. This advantage relates to research findings that moral reasoning does not develop as much, or as consistently, in contexts where there is a high degree of similarity among students. Homogeneity tends to reduce the

conflicting opinions that are the basis for discussion and synthesis.

### **The Importance of Individual Differences and Motivation**

Despite a great deal of discussion and the development of a large number of schema and indicators of individual difference, some caution is necessary when considering their effects. Individual differences—such as general intelligence, affinity for certain subjects, level of knowledge, prior training, personal experience, and cultural and related differences—can be identified reasonably well and taken into account. Other variables, however, are less understood and more difficult to reconcile when instruction is designed. One area of debate is over that group of differences known as teaching and learning styles.

While it is generally agreed that each person may have some unique combinations of characteristics, and that certain of these characteristics can be identified and categorized, it is dangerous to make simplistic assumptions about style. Indeed, there are so many different classifications of style and individual difference, that it is all too easy to assume unilateral reliance on any one, or to attempt to include too many. Research suggests that since most learners have a repertoire of styles, simply using a variety of instructional methods will provide the majority with sufficient opportunities to learn. While students may use some approaches more frequently than others, they can adapt to new situations by using whatever alternative approaches seem most suitable at the moment. It is those few learners who have limited repertoires who have the greatest difficulty and for whom the greatest accommodations are necessary. Useful interventions for these learners include individual assistance, making instruction more concrete and relevant through relating content to real-world situations or to their own experiences, explaining processes for organizing content information, teaching general study skills as well as specific problem-solving strategies, using frequent assessment techniques, and providing regular feedback.

*Motivation* is a well-researched area, and though there are several descriptions of the elements of motivation, these elements are quite similar. Michael Theall's 1998 distillation of thirteen motivational approaches resulted in a six-item conceptualization that applies to higher education students and faculty. The elements were: inclusion, attitude, meaning,

competence, leadership, and satisfaction. Of the models reviewed, one that can be directly connected to college teaching is that of John Keller (1983). Keller proposed a model for the *motivational design of instruction*. The model outlines a cycle of inputs, events, and consequences that could result in positive or negative outcomes. Students and teachers enter into a teaching-learning situation with sets of values and expectations that affect the extent and nature of the effort they expend. Positive attitudes (e.g., the student is interested in the subject; the teacher has done research on the topic) and expectations (e.g., the students believe themselves to be able in the content area; the teacher expects the course to be well received) lead to greater effort, and effort directly affects performance. Strong performance leads to both satisfaction (via the consequences of good grades, the sense of a “job well done” and the recognition of effective learning) and heightened value and expectations for the future (which further motivate effort). However, in the negative direction, certain attitudes (e.g., the students do not want to take the class; the teacher is tired of teaching the material) and expectations (e.g., a student’s subject anxiety; the teacher’s concerns about the course) can diminish effort and lead to reduced performance and disappointment, thus reinforcing negative attitudes and expectations.

Raymond Wlodkowski (1998) stresses that *intrinsic motivation* is more powerful than *extrinsic motivation*. In other words, the older view of motivation as something that is done to someone is less relevant than the understanding that success involves promoting or creating sets of conditions under which the individual is the one who actually provides the motivation. A typical case in college learning would be a teacher’s creation of sets of experiences that arouse the students’ interest and allow engagement in activities that both promote growth and provide opportunities for success. In this scenario, satisfaction comes internally from accomplishment, while grades are only a documentation of the learning and satisfaction, rather than after-the-fact rewards that drive performance.

### Determining Outcomes

The growth of both evaluation and assessment has been exponential, and with this growth have come expectations that teachers and institutions will be able to document their performance, and that of their students, in meaningful ways. Classroom tests

are no longer sufficient as evidence. Certification and licensure are important in certain professional fields, but many disciplines do not require such standardized demonstrations of learning, and many have questioned even these more carefully constructed measures in terms of their ability to truly describe learning.

Moreover, the interest of accrediting bodies is not only in what kinds of data are collected in what ways, but also in what actions have been taken as a result of assessments. In other words, assessment has become a process for continuous revision and improvement. Assessment is concerned with the results of teaching and the educational experience, and of determining as precisely as possible what was learned. This role differs from that of evaluation, which is more a process to determine merit or worth. Evaluation is a more global, formal, quantitative, and occasional process, while assessment is often more narrow, informal, qualitative, and ongoing. This is because assessment’s objectives are often at the level of the individual learner and less amenable to social science research methods that depend on samples of adequate size to allow statistical inference. Interestingly, both evaluation and assessment use the terms *formative*, meaning a process for exploration, revision, and improvement; and *summative*, meaning a process for determining merit and making administrative decisions about people or programs.

The most widely circulated and complete source of assessment information is *Classroom Assessment Techniques* (1993) by Thomas Angelo and K. Patricia Cross. This book contains numerous techniques for assessing learning in the immediate context of the classroom, as well as in the broader context of the full course, the college semester, and beyond. In the 1990s, this work and the concurrent interest in Ernest Boyer’s conception of the *scholarship of teaching* led to the development of methods for classroom research that are, according to Cross and Mimi Steadman (1996), learner-centered, teacher-directed, collaborative, context-specific, scholarly, practical/relevant, and continual. Very much like assessment in its emphasis on learning, classroom research provided a bridge that connected investigation of classroom learning with the more formal research that had previously held exclusive rights to the term *scholarship*. In effect, evaluation and assessment methods were blended to provide a vehicle for the

teacher-scholar to carry out the scholarship of teaching.

### Adult Learning and the Growth of Technology

A new and unique set of circumstances arose during the 1990s due to the increase in the number of adult learners and programs accessible at a distance. Not only was this population of students very different from traditional, residential students, but the contexts of teaching and learning were also markedly different. Stephen Brookfield (1991) suggests six principles for effectively working with adult learners: (1) voluntary participation and engagement by learners; (2) respect among participants and acknowledgement of learners' experiences and knowledge; (3) collaborative rather than directive facilitation of learners' experiences; (4) praxis and constant integration of activities into a unified whole; (5) critical reflection; and (6) promoting self-directed efforts and a sense of empowerment. But since the majority of adult learners are commuters or students taking courses away from the traditional campus setting, the benefits of the traditional communities of the college campus are not readily available to this population, and opportunities for informal dialogue, for developing social relationships, and for spending concentrated time on course requirements are limited.

At the same time that these issues about new student populations were being discussed, the rapid growth of distance education programs, especially courses and curricula delivered entirely, or almost entirely, via the Internet, was raising questions about how instruction could be delivered in a disembodied form. Rena Palloff and Keith Pratt (2001) suggest that the following lessons have been learned so far: (1) course development needs to focus on interactivity, not content, because even if course content is known and established, there remains the need to deliver it in ways that facilitate learning; (2) faculty and student roles need to change, with less emphasis on one-sided delivery and more on active and interactive modes; (3) faculty and student training on the use of the technology, as well as the new modes of instruction, is critical to success; (4) faculty and students need to have substantial support networks throughout the course experience; (5) institutions must develop strategic plans that go well beyond technological requirements and deal with everything from pedagogical support to intellectual property rights; (6) institutions must have tested and reliable

infrastructure in place, and the systems used should be accessible and usable; (7) technologies should be chosen by teams of users, and choices should be based in instructional as well as technical parameters.

### Summary

Since 1970 there have been many changes in higher education—changes that center on different student populations, different methods of delivering instruction, and different conceptions of what a college education is and how it should be pursued. This change process will continue, but despite dire predictions that technology will replace the need for college campuses, it is likely that the residential experience of undergraduate education and the intensive nature of graduate training will continue to require opportunities for interaction and apprenticeship that can only be provided on traditional campuses.

*See also:* COLLEGE TEACHING; COOPERATIVE AND COLLABORATIVE LEARNING; INDIVIDUAL DIFFERENCES; LEARNING THEORY; LEARNING TO LEARN AND METACOGNITION; MORAL DEVELOPMENT; MOTIVATION.

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MICHAEL THEALL

## INTERNATIONAL PERSPECTIVE

A curious paradox can be seen as one considers schooling and teaching across the many cultures of

the world. On the one hand there is enormous variation among cultures—and within most cultures—in the ways in which people learn. At the same time there is a remarkable similarity across nations in the ways in which opportunities to learn are provided through formal schools and school systems.

Anthropologists, and educators who have taught in a variety of cultural settings, have long noted differences in the ways that children born into different cultural settings *learn to learn*. While there are variations within any cultural group—sometimes across a narrow range of difference, and sometimes across a wide range (such differences are frequently referred to as *individual learning styles*)—clearly observable modal differences among cultural groups have been well documented. Such differences are analyzed in the literature of European settler states, such as the United States, Canada, Australia, and New Zealand, which contain references to differences in approaches to, and understanding of, learning between the European settler/colonizer groups and the original aboriginal inhabitants, and between settlers and more recently arrived immigrant groups from areas of the world other than Europe. These differences have also figured prominently in analyses of education in other colonial and postcolonial (or neocolonial) states around the world. Yet, with an increasing awareness of these considerable variations in learning, there has simultaneously spread throughout the world a standard model of schooling, which often does not take these differences into account, and thus often does considerable damage to the learning potential of children.

It is frequently forgotten that *schooling*, as it has come to be known, is only one of a vast array of social institutions that humans have invented to provide opportunities for young people to learn. It is, in fact, a human invention of relatively recent origin, at least on a mass scale. The broad-scale provision of education as an instrument of statecraft and state development was effectively "invented" in Prussia after, and as a result of, the Napoleonic invasion of that nation. It spread quickly throughout Europe and other relatively wealthy nations of the time, and more gradually across the world through colonial imposition and, in some cases, through cultural borrowing. But in the broad sweep of history it is a quite new social institution. In its fundamental forms (hence the term *formal education*) it was set by the experience, attitudes, and understanding of the mid-to late-nineteenth century elites in the then newly

industrialized nations. As those basic forms have spread around the world they have hardly changed, even in the wealthiest nations, for well over a century. That standard model generally comprises, around the world, the following basic elements.

- One hundred to several hundred children/youth assembled (often compulsorily for a period of years) in a building called a school, from approximately the age of six or seven up to somewhere between age eleven and sixteen.
- Instruction lasts for three to six hours per day, five or six days per week.
- Students are divided into groups of twenty to sixty individuals.
- Students work with a single adult (a “certified” teacher) in a single room for (especially in the upper grades) discrete periods of forty to sixty minutes, each devoted to a separate subject.
- Subjects are studied and learned in a group of young people of roughly the same age, with supporting learning materials, such as books, chalkboards, notebooks, workbooks and worksheets, and, increasingly, computers (and in technical areas such things as laboratories, workbenches, and practice sites).
- There is a standard curriculum, set by an authority level much above the individual school (normally a central or provincial/state government), and which all students are expected to cover in an age-graded fashion.
- Adults, assumed to be more knowledgeable, teach, and students receive instruction from them.
- If they are to go any higher in the schooling system, students are expected and required to repeat back to the adults what they have been taught.
- Teachers and/or a central examination system evaluate students’ ability to repeat back to them what the students have been taught, and also provide formal recognized credentials for passing particular grades or levels.
- Most or all of the financial support comes from national or regional governments, or other kinds of authority centers (e.g. church-related schools) well above the local community level.

There are a variety of explanations or theories regarding how and why this particular pattern of orga-

nizing and providing teaching for young people has become almost universally overlaid upon the wide diversity of ways in which young people learn to learn. Within this cross-national paradox, there is irony. While it has been clearly demonstrated that this standard model of teaching and schooling has frequently proven very dysfunctional for learning among children from cultural groups different from its place of origin, the accumulated literature from cognitive and learning psychology, anthropology, and comparative education has increasingly demonstrated that it is also inherently dysfunctional for children (and adults for that matter) from those very cultures of origin.

The system, in short, is inherently inefficient and ineffective. People of every age and culture simply do not learn well under these arrangements. These traditional, but now nearly universal, patterns of teaching and schooling are an artifact of the misconceptions of a different time and, for much of the world, a different place. But now that patterns are in place, it seems nearly impossible to get rid of them, and even the richest nations are able to alter them only slightly at great effort and cost, and usually only over very long periods of time.

In the closing decades of the twentieth century, however, a new pattern began to appear in developing nations where the European system has proven to be so often dysfunctional for learning. School systems have begun to appear that are breaking the forms of formal schooling in quite fundamental ways, and that are producing remarkable learning gains among extremely poor and marginalized children. As of 2002 more than 100 of these teaching/school programs have been documented, some involving tens or hundreds of schools, others tens of thousands of schools. Some common features of these alternative forms of schooling are these:

- Child-centered rather than teacher-driven pedagogy
- Active rather than passive learning
- Multigraded classrooms with continuous progress learning
- Peer-tutoring—older and/or faster learning children assist and “teach” younger and/or slower learning children
- Carefully developed self-guided learning materials, which children, alone or in small groups, can work through themselves, at their own pace, with help from other students and teachers as

necessary—the children are responsible for their own learning

- Combinations of fully trained teachers, partially trained teachers, and community resource people—parents and other community members are heavily involved in the learning of the children, and in the management of the school
- Active student involvement in the governance and management of the school
- Free flows of children and adults between the school and the community
- Community involvement includes attention to the nutrition and health needs of young children long before they reach school age
- Locally adapted changes in the cycle of the school day or the school year
- Ongoing monitoring/evaluation/feedback systems allowing the “system” to learn from its own experience, with constant modification of/experimentation with the methodology
- Ongoing and very frequent in-service teacher development programs, with heavy use of peer mentoring

Early indications suggest that they are far more flexible and successful in adapting their teaching/schooling approaches to the variations among cultures in how people learn to learn. But little serious research has been done to try to understand how and why these new programs seem to work so well in promoting learning among very diverse groups. That is a challenge for the twenty-first century.

*See also:* INDIVIDUAL DIFFERENCES; LEARNING TO LEARN AND METACOGNITION.

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## TEACHING AND RESEARCH, THE RELATIONSHIP BETWEEN

Faculty members' work accomplishes the core teaching, research, and service goals of colleges and universities. Teaching enhances the development of students, research advances the development of new knowledge, and service contributes to the growth of nonacademic, professional, or college and university communities. Observers have debated since the late 1800s whether faculty work roles enhance each other or conflict. The debate focuses in particular on teaching and research, and concerns the best way to organize individual faculty work, departments, institutions, and the entire loosely coupled United States higher education system for maximum research productivity and teaching effectiveness.

## Alternative Perspectives

Analysts who perceive that teaching and research enhance each other argue that active researchers are informed and engaging teachers and that teaching stimulates faculty creativity and enthusiasm for research. Economic theory suggests that teaching and research are complementary. Because they use many of the same resources, facilities, and personnel, producing teaching and research together is more efficient than producing each separately. Similarly, individual faculty may improve their efficiency and productivity if they sometimes engage in activities that accomplish both teaching and research goals at the same time. Arguments for integrating teaching and research are consistent with a view that colleges and universities should respond to increasing environmental and technical complexity by considering faculty as professionals—highly qualified, flexible, and complex workers who are able to relate associated tasks in creative ways and to handle unpredictable problems independently.

Analysts, such as Ronald Barnett, who perceive that teaching and research are separate and incompatible argue that faculty members' preoccupation with research interferes with teaching, or that teaching limits precious time available for research. System and organization level arguments suggest that different people in different locations should conduct teaching and research. To some extent, such organizational fragmentation already exists in the United States. For example, most faculty at community colleges focus exclusively on teaching, while many faculty at four-year institutions engage in some combination of teaching and research. Similarly, some university faculty working within institutes or centers focus primarily on research, while many tenure-track faculty in departments engage in both teaching and research. Some analysts suggest that even in institutions that produce both teaching and research, responsibilities for the two roles should be assigned to different faculty according to their varying interests and strengths. Many departments already partially subdivide labor in this way. Adjunct or part-time faculty focus primarily on either teaching or research, while tenure-track faculty are usually expected to do both. At the individual level, teaching and research may be separated by time. In the short-term, some faculty teach during the academic year and save summers for doing research. In the long-term, some faculty may be more effective if they focus primarily on research at one

stage in their careers and on teaching at another career stage. Arguments for formalizing de facto fragmentation of faculty work roles are consistent with a view that colleges and universities should respond to increasing environmental and technical complexity by subdividing work, thereby increasing organizational complexity and administrative control.

Perceptions of a positive or negative relationship between teaching and research depend on how observers define the content of the two roles. Teaching is often defined as activities involved in delivering formal classroom instruction to registered students. Some analysts, however, suggest that teaching also includes advising, informal instruction, and training students to conduct research. Similarly, research is often defined as publications. In 1990, however, Ernest Boyer of the Carnegie Foundation asserted that research should be more broadly defined as the scholarships of discovery, integration, application, and teaching. Those who define teaching and research in terms of classroom instruction and publications are less likely to perceive a positive relationship between the two faculty roles than those who define the roles more broadly.

## Research Findings

Studies that investigate the relationship between teaching and research also vary in the ways they define the nature of the two roles. One line of inquiry defines teaching and research in terms of measurable outputs. Other lines of inquiry define teaching and research as activities that use time.

**Measurable outputs.** Many investigators have attempted to determine whether there is some measurable correlation between teaching and research quality. They typically measure teaching effectiveness by student ratings of formal classroom instruction and research productivity by numbers of publications. Most of these studies were conducted at one or only a few institutions and included relatively small (less than 300) samples of faculty. To attain more comprehensive results applicable to more faculty, two meta-analytic studies synthesized the results of multiple studies. In 1987, Kenneth Feldman analyzed the combined results of twenty-nine studies of the relationship between teaching effectiveness and research productivity, and found a very small (0.12) positive correlation. A meta-analysis conducted by John Hattie and Herbert W. March in 1996 analyzed the combined results of fifty-eight studies, and found an even smaller (.06) positive

correlation between teaching effectiveness and research productivity. There are several possible reasons for their findings of a relationship so close to zero that it may be considered a null relationship.

A null relationship suggests that teaching and research outputs are completely independent, neither enhancing nor detracting from each other. The substantive reasons frequently given for no relationship discuss inputs and processes for producing effective teaching or large numbers of publications rather than outputs themselves. For example, the organizational resources, production processes, and faculty abilities and personality traits needed for teaching and research may be different while not competing with each other. A methodological reason for finding a statistically null relationship may be that mediating factors that contribute to a negative relationship between research and teaching are effectively canceled out by other mediating factors that contribute to a positive relationship.

There are both individual and organizational explanations for a possible partially negative teaching-research relationship. Some personality characteristics and abilities needed to teach effectively and produce many publications may compete with each other. Students may see extroverts as better teachers, for example, while introverts may be well suited to writing alone about ideas and abstractions. Organizational context may contribute to competition between teaching and research when evaluation and reward policies systematically fragment the two roles. According to James Fairweather, “faculty rewards emphasize the discreteness, not the mutuality, of teaching and research” (p. 110), and faculty are rewarded more for research productivity than for effective teaching. Therefore, faculty may neglect teaching to attain rewards for research.

A partially positive relationship between teaching and research may also be explained by individual and organizational reasons. Individual characteristics that may contribute to success in both teaching and research include general ability, organization, and intellectual curiosity. Organizational evaluation of faculty work as an integrated whole might increase evaluators’ and faculty members’ own perceptions of a positive association between teaching and research.

Variations in discipline and type of institution may also affect whether the relationship between teaching and research outputs is null, negative, or

positive. Although scholars have described comprehensive models that could account for relative impact of many organizational and individual factors on the relationship, no such model has yet been tested.

**Time on tasks.** Studies that analyze the time faculty take to engage in tasks that meet institutional teaching and research goals define the content of the two roles more broadly than studies that analyze measurable outputs. Time on teaching involves preparing and delivering classroom instruction, grading students’ work, meeting students in office hours, advising, and training students to conduct research. Time on research includes reading foundational literature, gathering and analyzing data, supervising assistants, securing funding, writing reports, and presenting findings.

Findings of either a negative or a positive relationship between teaching and research time are primarily a consequence of research methods used. Most workload surveys that ask faculty to estimate the time they devote to their primary work roles define teaching, research, and service as mutually exclusive. A negative relationship between teaching and research emerges by design, because time spent teaching is inevitably not time engaged in research. These studies have been conducted with department, institution, state, and representative national faculty samples.

In contrast, a few workload surveys asked faculty to cross reference time on tasks with institutional teaching, research, and service goals. One such workload survey conducted at the University of Arizona in 1998 found, on average, that faculty engaged in tasks that met all three goals, and teaching and research goals 14 and 18 percent of their time, respectively. A 1998 study by Carol L. Colbeck that observed English and physics faculty on the job found they engaged in integrated teaching and research activities nearly 19 percent of the time. In both studies, the degree of positive relationship—the amount of time spent in activities that accomplished both teaching and research goals—varied by discipline. Studies that account for time spent meeting both teaching and research goals have been conducted at either a single or a few universities and with very small faculty samples.

## Conclusion

Evidence indicates that the outputs from teaching and research neither enhance nor interfere with each

other, and that faculty engage in activities that meet both teaching and research goals some of the time. Perhaps because of the limitations of small sample size and simple models, however, faculty, administrators, and policy analysts still debate whether the relationship is positive or negative. Evidence that may resolve the debate will require research designs and methods that consider teaching and research both as uses of time and as outputs, take into account mediating factors, and include large samples of faculty across many disciplines and types of institutions.

*See also:* COLLEGE TEACHING; FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY ROLES AND RESPONSIBILITIES.

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CAROL L. COLBECK

## TEACHING, COLLEGE

*See:* COLLEGE TEACHING.

## TEAM TEACHING

Team teaching involves a group of instructors working purposefully, regularly, and cooperatively to help a group of students of any age learn. Teachers together set goals for a course, design a syllabus, prepare individual lesson plans, teach students, and evaluate the results. They share insights, argue with one another, and perhaps even challenge students to decide which approach is better.

Teams can be single-discipline, interdisciplinary, or school-within-a-school teams that meet with a common set of students over an extended period of time. New teachers may be paired with veteran teachers. Innovations are encouraged, and modifications in class size, location, and time are permitted. Different personalities, voices, values, and approaches spark interest, keep attention, and prevent boredom.

The team-teaching approach allows for more interaction between teachers and students. Faculty evaluate students on their achievement of the learning goals; students evaluate faculty members on their teaching proficiency. Emphasis is on student and faculty growth, balancing initiative and shared responsibility, specialization and broadening horizons, the clear and interesting presentation of content and student development, democratic participation and common expectations, and cognitive, affective, and behavioral outcomes. This combination of analysis, synthesis, critical thinking, and practical applica-

tions can be done on all levels of education, from kindergarten through graduate school.

Working as a team, teachers model respect for differences, interdependence, and conflict-resolution skills. Team members together set the course goals and content, select common materials such as texts and films, and develop tests and final examinations for all students. They set the sequence of topics and supplemental materials. They also give their own interpretations of the materials and use their own teaching styles. The greater the agreement on common objectives and interests, the more likely that teaching will be interdependent and coordinated.

Teaching periods can be scheduled side by side or consecutively. For example, teachers of two similar classes may team up during the same or adjacent periods so that each teacher may focus on that phase of the course that he or she can best handle. Students can sometimes meet all together, sometimes in small groups supervised by individual teachers or teaching assistants, or they can work singly or together on projects in the library, laboratory, or fieldwork. Teachers can be at different sites, linked by video-conferencing, satellites, or the Internet.

Breaking out of the taken-for-granted single-subject, single-course, single-teacher pattern encourages other innovations and experiments. For example, students can be split along or across lines of sex, age, culture, or other interests, then recombined to stimulate reflection. Remedial programs and honors sections provide other attractive opportunities to make available appropriate and effective curricula for students with special needs or interests. They can address different study skills and learning techniques. Team teaching can also offset the danger of imposing ideas, values, and mindsets on minorities or less powerful ethnic groups. Teachers of different backgrounds can culturally enrich one another and students.

### **Advantages**

Students do not all learn at the same rate. Periods of equal length are not appropriate for all learning situations. Educators are no longer dealing primarily with top-down transmission of the tried and true by the mature and experienced teacher to the young, immature, and inexperienced pupil in the single-subject classroom. Schools are moving toward the inclusion of another whole dimension of learning:

the lateral transmission to every sentient member of society of what has just been discovered, invented, created, manufactured, or marketed. For this, team members with different areas of expertise are invaluable.

Of course, team teaching is not the only answer to all problems plaguing teachers, students, and administrators. It requires planning, skilled management, willingness to risk change and even failure, humility, open-mindedness, imagination, and creativity. But the results are worth it.

Teamwork improves the quality of teaching as various experts approach the same topic from different angles: theory and practice, past and present, different genders or ethnic backgrounds. Teacher strengths are combined and weaknesses are remedied. Poor teachers can be observed, critiqued, and improved by the other team members in a nonthreatening, supportive context. The evaluation done by a team of teachers will be more insightful and balanced than the introspection and self-evaluation of an individual teacher.

Working in teams spreads responsibility, encourages creativity, deepens friendships, and builds community among teachers. Teachers complement one another. They share insights, propose new approaches, and challenge assumptions. They learn new perspectives and insights, techniques and values from watching one another. Students enter into conversations between them as they debate, disagree with premises or conclusions, raise new questions, and point out consequences. Contrasting viewpoints encourage more active class participation and independent thinking from students, especially if there is team balance for gender, race, culture, and age. Team teaching is particularly effective with older and underprepared students when it moves beyond communicating facts to tap into their life experience.

The team cuts teaching burdens and boosts morale. The presence of another teacher reduces student-teacher personality problems. In an emergency one team member can attend to the problem while the class goes on. Sharing in decision-making bolsters self-confidence. As teachers see the quality of teaching and learning improve, their self-esteem and happiness grow. This aids in recruiting and keeping faculty.

### **Disadvantages**

Team teaching is not always successful. Some teachers are rigid personality types or may be wedded to

a single method. Some simply dislike the other teachers on the team. Some do not want to risk humiliation and discouragement at possible failures. Some fear they will be expected to do more work for the same salary. Others are unwilling to share the spotlight or their pet ideas or to lose total control.

Team teaching makes more demands on time and energy. Members must arrange mutually agreeable times for planning and evaluation. Discussions can be draining and group decisions take longer. Re-thinking the courses to accommodate the team-teaching method is often inconvenient.

Opposition may also come from students, parents, and administrators who may resist change of any sort. Some students flourish in a highly structured environment that favors repetition. Some are confused by conflicting opinions. Too much variety may hinder habit formation.

Salaries may have to reflect the additional responsibilities undertaken by team members. Team leaders may need some form of bonus. Such costs could be met by enlarging some class sizes. Nonprofessional staff members could take over some responsibilities.

All things being considered, team teaching so enhances the quality of learning that it is sure to spread widely in the future.

*See also:* ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; INSTRUCTIONAL STRATEGIES; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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FRANCIS J. BUCKLEY

## TECHNOLOGY EDUCATION

Technology education (TE) in the United States is a field of elementary and secondary education that until the 1980s was commonly referred to as *industrial arts*. Its focus is on promoting technological knowledge and skills.

The notion of teaching children about contemporary technology and industry has been a recurring international theme throughout the history of education. Modern American technology education took form in the first quarter of the twentieth century, mainly in the Northeast. In 1923 Frederick Bonser and Lois Coffey Mossman laid out the view of industrial arts as a general school subject for boys and girls in pre-secondary education. As a subject, industrial arts was a branch of the social studies, with content focused primarily on food, clothing, and shelter. As a method of teaching, it provided a constructional basis for curricular integration. Thus Bonser and Mossman, in the larger context of the Activity and Progressive-education movements of the time, attempted to subsume traditional home economics and manual training topics into a participatory curriculum that went beyond tool manipulation to include larger social issues.

Ostensibly, the Bonser and Mossman conception of industrial arts guided most American industrial arts teacher preparation, as well as the philosophy of the predominant professional organization, the American Industrial Arts Association (AIAA), from the late 1930s until the 1980s, when the AIAA changed its name to the International Technology Education Association (ITEA). But most leaders and practitioners did not observe the progressive ideals of Bonser and Mossman and instead focused mainly on educating high school boys in traditional manual-training subjects such as woodworking, metalworking, and drawing. As re-

cently as the late 1990s, these three subjects were still the most popular technology education courses in the United States. Thus in describing TE one must differentiate between theory and practice.

### Philosophies

While the purpose of technology education is often encapsulated as “learning by doing,” the relative importance of knowledge and activity is a subject of debate. Specifically, most technology teacher educators and theoreticians regard the primary purpose of technology education either as content, method, or process.

The content philosophy views technology education as an academic discipline with a well-defined taxonomy of knowledge related to industries and technologies such as manufacturing, construction, communication, and transportation. That technology is an important subject of study for children at all grade levels is the essential precept of “Standards for Technology Education: Content for the Study of Technology” (2000), a multimillion dollar ITEA project funded by the National Science Foundation and NASA.

Proponents of the method philosophy see technology education primarily as a means of teaching the subjects of the K–12 curriculum. In this view, technology education takes the form of constructional activities in which children manipulate tools and materials to create products and, in so doing, learn about social studies, science, and other subjects. Advocates of the method philosophy put secondary focus on technological content, emphasizing that any content may be taught via technology education. This conception is most common in the elementary grades.

In the process philosophy, teaching technology education is tantamount to fostering competence in problem solving and solution design. The content of technology education in the process view is any and all knowledge needed to design solutions to problems, and technology activities constitute a context for the entire K–12 curriculum. This philosophy has re-emerged in U.S. technology education literature and teacher education due to its popularity abroad, especially in Anglophone Europe and Australia.

Because it is espoused by the major U.S. technology teachers’ organizations and enjoys the financial support of well-known U.S. government agencies, the view of technology education as a con-

tent area dominates teacher education, textbooks, curriculum, funded projects, and doctoral research. Scholarly discourse also favors this view, but to a smaller extent. *The Standards for Technology Education* represents an attempt by the field to position itself as an academic subject by emulating the efforts of educators in the mathematics, science, language arts, social studies, and fine arts fields in the standards movement of the 1980s and 1990s. It is also the most comprehensive effort in the field’s history to arrive at consensus as to the nature of American technology education.

### Approaches to Curriculum

It is clear that in classroom practice, the most common approaches to technology education do not correspond neatly to these three philosophies. Surveys revealing that high school technology course offerings closely resemble those from the early twentieth century have been a source of consternation to leaders in the field since the 1960s, yet schools and teachers in the United States have been very slow to shift curricula from traditional industrial courses, such as woodworking and drafting, to technological studies like manufacturing or communications. The most prominent leaders in the field have advocated this change in focus since the late 1940s. Their primary success has been in the nearly nationwide name change from *industrial arts* to *technology education*, accomplished in the 1980s and 1990s.

A 1999 survey found that the four most frequently taught middle and high school technology courses had not changed since 1963: general technology education, drafting, woodworking, and metalworking. Other popular courses include automotive, architectural drafting, communications, electricity/electronics, and manufacturing.

In American elementary schools, technology education is rare. Where it is included in the curriculum, it is usually the responsibility of the classroom teacher rather than of a technology specialist. In other nations, however, elementary-school technology education has been a growing area since the 1970s.

In the 1980s and 1990s professorial exchange programs, international tours, and an notable increase in foreign authors publishing in American journals led to a growing interest in overseas curricula, especially process-oriented technology educa-

tion from the United Kingdom, where *design and technology* is compulsory at the primary level. The first American critiques of late-twentieth-century British design and technology deemed it intriguing but inferior in content depth and tool and machine instruction. But when it became clear that the primarily pre-secondary British model was being compared to traditional high school courses in the United States, design and technology began to be presented as a supplement to, and in some cases a replacement for, the prevailing American curriculum.

### Trends and Prospects

As suggested by the titles of the most frequent technology-education offerings in American high schools, the field has always been associated with vocationalism. The connection is downplayed or rejected in many teacher-education curricula, but in practice, educators both within and without the field often see technology education as a branch of vocational education. In fact, the Association for Career and Technical Education (ACTE), by far the largest association for vocational educators in the United States, has maintained a Technology Education (or Industrial Arts) Division since the 1940s. Especially in the western United States, practitioners make very little distinction between career-oriented technology education, supported by the ACTE, and the view of technology education as a general subject matter, advocated by the ITEA. As the career and technical education field continues to style itself as appropriate for all students, the distinction may disappear for all but the most doctrinaire technology educators.

Another challenge which may prove central to the field's future is its failure to identify unique ways in which technology education contributes to K–12 education. Much of its nonvocational content would appear to the lay person to overlap significantly with social studies and science education, as technological content is already included in each of these fields' standards documents. Neither is technology education the sole provider of problem-solving and design skills, two of its most frequently cited benefits to children. Further, research has not demonstrated that technology education practice is efficient as a method of teaching other school subjects.

In addition to these identity concerns, the field has two significant demographic obstacles to its continued growth. First, most states in the United States are experiencing severe shortages of technology

teachers, and both the number of institutions preparing technology teachers and the number of pre-service technology teachers graduated each year have been declining since the 1970s. The second problem is more systemic and has existed as long as technology education has: the field's inability to shed its image as an antiquated program intended primarily for boys. Research has confirmed that technology teachers are primarily conservative and overwhelmingly male Caucasians, and that boys elect technology classes much more frequently than girls do. There is also concern that technology education offerings are being reduced or eliminated in urban areas much more often than in suburban areas. Thus technology education does not always seem to be "for all Americans" (Scott, p.195).

But the ideals of technology education are more democratic than those of any field with its level of implementation in American schools. Its potential as a means of achieving curricular integration, student-centered learning, and the authentic assessment of critical thinking is considerable, and technology teacher education and curriculum are designed to deliver these very goals.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; MEDIA AND LEARNING; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; TECHNOLOGY IN EDUCATION, *subentry on* SCHOOL; VOCATIONAL AND TECHNICAL EDUCATION.

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PATRICK N. FOSTER

## **TECHNOLOGY IN EDUCATION**

### CURRENT TRENDS

Susan M. Williams

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### **CURRENT TRENDS**

Computers and Internet connections are becoming widely available in schools and classrooms. In 1999, 99 percent of teachers in the United States had access to a computer in their schools, and 84 percent had one or more computers in their classrooms. At the same time, Internet connections were also widespread, with 95 percent of schools and 63 percent of classrooms having access. Worldwide, many countries are making the creation and diffusion of information and communications technology (ICT) an important priority. Even in developing countries, usage is increasing dramatically. As ICT becomes more widely available, teachers and policymakers are turning their attention to the difficult task of understanding how best to integrate this technology into learning environments.

ICT can be used in many different ways, and how it is integrated into educational settings depends largely on teachers' instructional goals and strategies. Changes in the goals of education during the latter part of the twentieth century, coupled with increases in the amount and type of available technology, has created changes in teachers' use of tech-

nology. In the 1970s and early 1980s the primary goal of instruction was to have students memorize important information and procedures. Instruction was teacher-led and dominated by lectures, followed by practice using worksheets and short-answer tests. Students worked alone to complete assignments, and when help was needed they consulted parents, teachers, or textbooks for assistance. If computers were available in classrooms during this time period, their use mirrored this dominant mode of instruction; that is, they were primarily used to present passages of text and test students' comprehension and memory for information contained in the passages.

Research on learning has demonstrated the shortcomings of this type of instruction. Students often forget memorized information, or they fail to apply it in situations where it would be useful. They need help in connecting new information to what they already know and in extending and applying their knowledge to new problems. Researchers in the early twenty-first century believe that students learn best when they work to combine their own past experience with new information in order to solve problems that are personally meaningful to them.

In addition to changes in the understanding of how students learn, there have been substantial changes in what educators and policymakers believe students should know how to do. The exponential growth in information since 1950 has shifted the purpose of education. Information has become abundant and easily accessible. Rather than reading the unified perspective typically presented by a textbook, students have access to many different points of view. Instead of memorizing, students now need assistance in learning how to find and select relevant information for problems they need to solve. They need to learn how to collaborate with others as they solve these problems and communicate their solutions to their teachers and to the world beyond their classroom.

Along with changes in what students should know and an increased understanding of how they learn, new approaches to instruction are being advocated. Instead of listening to lectures and memorizing facts and procedures, educational reforms suggest that students learn best in the context of solving complex, realistic problems. Traditional computer-assisted instruction (CAI) and many integrated learning systems (ILSs) deliver precisely this form of instruction in a range of subject-matter areas. Typically computers dedicated to ILSs are

clustered in computer laboratory settings, rather than being located in individual teacher's classrooms. Students who acquire new information as they solve problems are able to understand its usefulness, remember it, and use it to solve problems in the future. Solving interesting problems is more likely to stimulate a student's interest than memorizing isolated facts, and this interest has been shown to positively affect learning. Students solving real problems view their efforts as real work and have a sense of purpose and value.

Organizing instruction around problem solving makes new demands on teachers, including locating meaningful problems and projects and providing students with the resources and guidance for solving them. Teachers are finding that ICT can help them meet these demands, and they are integrating it into their instruction in many new and exciting ways.

### Technology and New Forms of Instruction

**Using technology to find and represent educational problems.** One major challenge for teachers interested in problem-based learning is locating problems that are appropriate for their students and for the topics that they need to learn. Problems must be complex enough to support sustained exploration and encourage collaboration, and they should have multiple interrelated parts to develop students' ability to break problems down and organize their solutions. Representing and communicating such complex problem situations is an important function of technology. Unlike problems that occur in the real world, technology can incorporate graphics, video, animation, and other tools to create problems that can be explored repeatedly. Multimedia representations are easier to understand than problems presented as text. One example of using technology to present problems is the mathematical problem-solving series, *The Adventures of Jasper Woodbury*. Each problem in the *Jasper* series is presented as a video story that ends when the main character experiences a problem that can be solved using math. Using technology that can be easily searched and paused for inspection, students search the video looking for clues to help them understand and solve the problem. In one episode, students explore a variety of transportation methods and routes to rescue a wounded bald eagle. They compare their solution plans and develop ways to determine which plan is best.

*Microworlds* are another type of technology used to present problems. One example is *Thinkertools*, a computer-based learning environment that simulates aspects of Newtonian physics. Using the *Thinkertools* microworld, students can manipulate various aspects of the environment, observe the results, and attempt to discover the rules that govern this simulation.

Internet and videoconferencing technology allow students to participate in projects sponsored by researchers around the world. In the *Jason Project*, satellite and Internet technology bring classroom students into direct real-time contact with leading scientists, conducting scientific research expeditions around the globe. Each year the project explores a different location in order to help students understand the earth's biological and geological development. Some of the past expeditions have studied deep-sea archaeology, compared shallow and deep ocean habitats, studied plate tectonics and volcanoes, and compared conditions experienced in space and under the oceans. In addition to observing research activities, students are able to ask questions and get immediate answers from the scientists.

Whatever type of technology is used, an important goal is to create problem representations that are interactive and under the learner's control. The student creates a plan for investigating the problem, and the technology creates an environment that makes flexible exploration possible.

**Using technology to find educational resources.** A second function of technology in problem-based learning environments is locating information needed to solve problems or do other kinds of research. In the past, teachers attempting a problem-based curriculum felt the need to limit problems to those for which they had expertise or the local library had resources. Now the World Wide Web brings a seemingly endless amount of information on almost any subject, and it is possible for students to choose topics based on personal interest rather than availability of resources.

Internet research projects are gaining rapidly in popularity. In the spring of 1998, 30 percent of teachers surveyed (and 70% of those with high-speed Internet connections) reported they had assigned Internet research tasks for their students during the school year. Use of the Internet to gather information for solving problems sometimes resembles a modern version of library research, in which

students gather and synthesize information from published reports. Despite the fact that the task seems traditional, the characteristics of this new medium require special skills for students. The sheer volume of information allows students to study almost any topic, but also makes it more difficult to locate precisely the right information from among the thousands, or even millions, of sites that might be located. In addition, the ease of publishing and accessing materials on the Internet increases the likelihood that students will encounter inaccurate or biased information. As a result, students must learn new strategies for conducting searches and evaluating the information that they retrieve.

In addition to its function as a source of information, the Internet's capability for communication and interaction provides many innovative educational opportunities. Many times students are unable to find or understand the available resources. In such cases, teachers are also turning to ICT to link their students with mentors and subject-matter experts. In one such project, fourth- and fifth-grade students in McAllen, Texas, compared the experiences of their families on the Texas *La Frontera* to colonial life in the original thirteen U.S. colonies, with the help of the director of a historic preservation center and museum in Fredericksburg, Virginia.

Students carrying out scientific investigations can use the Internet to make observations and collect data. For example, fourth and fifth graders in California collected insects and sent them to San Diego State University. Using two-way audio and video connecting the school and the university, scientists guided the students in using an electron microscope to examine their specimens. Technology has made it possible to collect data from places students could never visit. In recent projects, high school students explored the floor of the Monterey bay by studying video from remotely operated robots, and middle school students were given time to use the Hubble telescope.

Students also use technology to collect data in their schools and communities. For example, using handheld computers outfitted with various types of probes, students can monitor the water quality at various locations in nearby streams or lakes. By transmitting their individual readings to a laptop computer in a field laboratory they can quickly graph their data and visually compare readings.

**Using technology to summarize and present findings.** In the past, students memorized and used for-

mulas and models created by others to solve problems. Students often used these formulas, especially in the early stages of learning, with little understanding. In the early twenty-first century computer tools provide the opportunity for students to construct and test their own models using tools such as spreadsheets or concept maps. This type of instruction deepens students' understanding of abstract concepts and allows these concepts to be taught at an earlier age.

Once students have summarized their data and other information, they typically communicate their findings to others. In the past, this meant writing a report to be read by the teacher. Writing reports is still the most widespread use of ICT, with 61 percent of U.S. teachers assigning students word processing tasks. In addition to text, students also use computer-created graphics, video, and animations to communicate their ideas.

The teacher is not the only audience for students' presentations. Students are frequently expected to present their work and receive feedback from their peers and the world outside their classroom. Whether they are using presentation software to accompany a face-to-face presentation or developing materials to put on the Web, the trend is for students to be able to communicate and defend their work to a broad audience. This increases students' perception that problem-based learning is real work for real audiences.

**Using technology for collaboration and distance education.** There are many opportunities for individual students to use technology to enhance their learning. These include online courses that provide students in remote locations with opportunities for customized curriculum and advanced placement courses. These courses are conducted entirely online and offer asynchronous interaction among faculty and students. Because they allow students to participate anytime and from anywhere, online courses are becoming increasingly popular among postsecondary students whose job and personal commitments do not allow them to meet a regular class schedule.

Opportunities for interaction with peers from other countries can also contribute to knowledge and understanding of other cultures. ICT makes this type of communication possible for anyone with Internet access. For example, the KIDLINK project encourages students up to age fifteen to use the Internet to build a global network of friends.

KIDLINK participants discuss issues ranging from how to make and keep friends to war and peace.

### Teachers' Integration of Technology in Instruction

Although ICT is creating opportunities for fundamental changes in the way teachers teach and the way students learn, a recent survey indicated that only one-third of teachers feel prepared to use it effectively. This includes being able to use word processing, spreadsheet, presentation, and Internet-browsing software. Such tools help teachers increase their productivity by preparing reports or lesson plans, taking notes, and communicating with colleagues and parents. These basic skills are necessary, but not sufficient, for creating changes in instruction. Changes require that teachers are familiar with ICT tools and materials in the subjects they teach. They must also be able to incorporate these resources into classroom activities that accomplish important learning goals.

Research has shown that learning to incorporate technology into instruction occurs over time and follows a pattern. Initially, teachers incorporate new technologies into the things that they traditionally do. Then, after observing changes in their students—including improvements in behavior, absenteeism, collaboration, and independent learning—teachers gradually begin to experiment and use technology to teach in new ways. It often takes four years or more from initial attempts until changes in student learning can be observed.

Research indicates that change at all levels will be necessary to bring about widespread and effective use of technology. Successful programs must devote a substantial portion of their budget to extensive professional development and technical support; they must encourage a culture of collaboration in which teachers work together to explore more effective uses of technology; and they must modify their assessment systems to measure changes, such as deeper understanding and improved problem solving, that result from effective technology use.

### Future Trends

Advances in hardware and software have the potential to bring about fundamental changes in how technology is integrated and even in education itself. Computers formerly tethered to desktops by cables are being rapidly replaced by wireless laptop and palmtop models that free students to move about the

school; collect, share, and graph data on field trips; and communicate their whereabouts and progress to teachers and parents.

Monitoring students' independent learning in these flexible environments will be supported by sophisticated new assessment technologies that will help teachers collect and analyze student data and make instructional decisions. These tools will continually assess students' work and provide feedback to them and their teachers. Such assessment has the potential to make time-consuming standardized testing unnecessary and to personalize the curriculum for every student. Ubiquitous, well-integrated technology tools will bring educators closer to redefining the educational enterprise and providing customized, just-in-time solutions for the learning needs of adults and children.

*See also:* ASSESSMENT TOOLS, *subentry on* TECHNOLOGY BASED; INTERNATIONAL ASSESSMENTS, *subentry on* IEA STUDY OF TECHNOLOGY IN THE CLASSROOM; INTERNATIONAL GAP IN TECHNOLOGY, THE; MATHEMATICS LEARNING, *subentry on* LEARNING TOOLS; SCIENCE LEARNING, *subentry on* TOOLS; TECHNOLOGY EDUCATION.

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SUSAN M. WILLIAMS

## SCHOOL

The term *educational technology* refers to the use of technology in educational settings, whether it be elementary and secondary schools, colleges and universities, corporate training sites, or independent study at home. This discussion, however, will focus on educational technology in grades K-12.

Educational technology has both general and specialized meanings. To the lay public and to a majority of educators, the term refers to the instructional use of computers, television, and other kinds of electronic hardware and software. Specialists in educational technology, in particular college and university faculty who conduct research and teach courses on educational technology, prefer the term *instructional technology* because it draws attention to the instructional use of educational technology. This term represents both a process and the particular devices that teachers employ in their classrooms. According to the Association for Educational Communications and Technology, one of the principal professional associations representing educational technologists, "Instructional Technology is a complex, integrated process involving people, procedures, ideas, devices, and organization for analyzing problems, and devising, implementing evaluating, and managing solutions to these problems, in situations in which learning is purposive and controlled." (p. 4). Educational technologists often employ the term *instructional media* to represent all of the devices that teachers and learners use to support learning. However, for many educators the terms *educational technology*, *instructional media*, and *instructional technology* are used interchangeably, and

they are used so here. In addition, the principal focus will be upon the most modern computational and communication devices used in schools today.

### History of Educational Technology

The history of educational technology is marked by the increasing complexity and sophistication of devices, exaggerated claims of effectiveness by technology advocates, sporadic implementation by classroom teachers, and little evidence that the technology employed has made a difference in student learning. Although technology proponents have from time to time claimed that technology will replace teachers, this has not occurred. The typical view among educators is that technology can be used effectively to supplement instruction by providing instructional variety, by helping to make abstract concepts concrete, and by stimulating interest among students.

The terms *visual education* and *visual instruction* were used originally because many of the media available to teachers, such as three-dimensional objects, photographs, and silent films, depended upon sight. Later, when sound was added to film and audio recordings became popular, the terms *audio-visual education*, *audiovisual instruction*, and *audio-visual devices* were used to represent the variety of media employed to supplement instruction. These were the principal terms used to describe educational technology until about 1970.

The first administrative organizations in schools to manage instructional media were school museums. The first school museum was established in St. Louis, Missouri, in 1905. Its purpose was to collect and loan portable museum exhibits, films, photographs, charts, stereographic slides, and other materials to teachers for use in their classrooms. District-wide media centers, common in school systems today, are descendants of school museums.

By the first decade of the twentieth century, silent films were being produced for instructional use. In 1910 George Kleine published the *Catalogue of Educational Motion Pictures*, which listed more than 1,000 titles of films that could be rented by schools. In 1913 Thomas A. Edison asserted, "Books will soon be obsolete in schools . . . . Our school system will be completely changed in the next ten years" (Saettler 1968, p. 98). In 1917 the Chicago public schools established a visual education department to take responsibility for the ordering and management

of films, and by 1931, thirty-one state departments of education had created administrative units to take charge of films and related media. Despite these efforts, films never reached the level of influence in schools that Edison had predicted. From evidence of film use, it appears that teachers used films only sparingly. Some of the reasons cited for infrequent use were teachers' lack of skill in using equipment and film; the cost of films, equipment, and upkeep; inaccessibility of equipment when it was needed; and the time involved in finding the right film for each class.

Radio was the next technology to gain attention. Benjamin Darrow, founder and first director of the Ohio School of the Air, imagined that radio would provide "schools of the air" (Saettler 1990, p. 199). In 1920 the Radio Division of the U.S. Department of Commerce began to license commercial and educational stations. Soon schools, colleges, departments of education, and commercial stations were providing radio programming to schools. Haaren High School in New York City is credited with being the first to teach classes by radio, broadcasting accounting classes in 1923. Peak activity for radio use occurred during the decade between 1925 and 1935, although some radio instruction continued through the 1940s. Nevertheless, radio did not have the impact on schools its advocates had hoped. In the beginning, poor audio reception and the cost of equipment were cited as obstacles to use. When these problems were overcome in later years, the lack of fit between the broadcasts and teachers' instructional agendas became more important factors. Ultimately, efforts to promote radio instruction in schools were abandoned when television became available.

World War II provided a boost for audiovisual education. The federal government and American industry were faced with the challenging task of providing training for large numbers of military recruits and for new industrial workers. Ways had to be found to train people swiftly and effectively. The U.S. government alone purchased 55,000 film projectors and spent \$1 billion on training films. In addition to films, the military used overhead projectors to support lectures, slide projectors to support training in ship and aircraft recognition, and audio equipment for teaching foreign languages. Experience gained from the wartime use of these media fueled their subsequent use in schools in the decades to follow.

Instructional television was the focus of attention during the 1950s and the 1960s. This attention was stimulated by two factors. First, the 1952 decision by the Federal Communications Commission (FCC) to set aside 242 television channels for educational purposes led to a rapid development of educational (now called public) television stations. A portion of their mission was to provide instructional programs to school systems in their viewing area. The second factor was the substantial investment by the Ford Foundation. It has been estimated that during the 1950s and the 1960s the Ford Foundation and its related agencies invested more than \$170 million in educational television. One of the most innovative efforts at this time was the Midwest Program on Airborne Television Instruction (MPATI) which employed airplanes to transmit televised lessons over a six-state area.

By the 1970s much of the enthusiasm for instructional television had been exhausted. Educational television stations continued to provide some programming, and school systems and state departments of education formed consortia to pool funds to provide for the cost of program development. Congress also provided funds to support instructional television via satellite transmission in an effort to help rural schools, in particular, to obtain courses that might not otherwise be available to their students. However, instructional television appeared to prosper only where there was substantial public, corporate, or commercial support. Schools found it difficult to meet the substantial costs incurred for program development and the purchase and maintenance of equipment. Moreover, despite repeated efforts, it proved nearly impossible to broadcast instruction when individual teachers needed it.

The next technology to capture the interest of educators was the computer. Some of the earliest work on instructional applications of computing took place in the 1950s and the 1960s, but these efforts had little impact on schools. It was not until the 1980s, and the appearance of microcomputers, that many educators and public officials became enthusiastic about computers. By January 1983, computers were being used for instructional purposes in 40 percent of all elementary schools and 75 percent of all secondary schools in the United States. These percentages can be misleading, however. In most cases, students had only limited access to computers, often in a computer laboratory and only for an hour or so a week. In 1995 the Office of Technology Assessment

estimated that the optimum ratio of computers to students was five to one, and by the year 2000 the National Center for Educational Statistics reported that there was, in fact, an average of one computer for every five students, with 97 percent of schools having Internet connections.

### Technology and Learning

A primary purpose for employing instructional technology in schools is to enhance student learning. Has technology been successful in helping students learn more effectively and efficiently? Much research has been done on this question, but the answer is far from certain. Most research on educational technology has consisted of media comparison studies. After assigning comparable students to control groups or to experimental groups, the researcher presents the experimental group of students with instruction that employs the new media, while the control group experiences the same content without the new media. The researcher then compares the achievement of the two groups.

After reviewing hundreds of such studies, educational technologist Richard Clark concluded that “there are no learning benefits to be gained from employing any specific medium to deliver instruction,” and that “media do not influence learning under any conditions,” but are “mere vehicles that deliver instruction but do not influence student achievement any more than the truck that delivers our groceries causes changes in our nutrition” (1983, p. 445). According to Clark, any positive results that were gained by experimental groups over the control groups were easily accounted for by differences in instructional strategy.

Clark’s findings were controversial and have been disputed by other reputable scholars. Nevertheless, Clark’s opinions are useful in clarifying technology’s role in instruction. Technology is neutral; there is nothing inherent about the media that assures learning. A poorly designed computer program is unlikely to advance learning and may even hinder it.

This relationship between learning and technology is further complicated by disagreements over what constitutes learning. During the first half of the twentieth century, *transfer-of-learning* theories were popular among classroom teachers. According to these theories, the principal task of the teacher was to transfer the teacher’s knowledge and textbook

content to the students' minds and, through periodic examinations, determine if the transfer occurred. The task of instructional media was to assist in that transfer process by means of accurate and compelling presentations of content.

During the second half of the century, educators embraced other theories of learning. At least two of these theories have influenced the development of instructional media for schools. One of these theories is *behaviorism*; the other is *constructivism*.

Although the intellectual roots of behaviorism can be traced to the beginning of the twentieth century, behaviorism did not have much impact on education until the 1960s. Drawing upon B. F. Skinner's concepts, educators promoting behaviorism emphasized the importance of providing clear statements of what learners should be able to do following instruction. These educators also sought to break complex units of knowledge and skills into smaller and simpler units, sequencing them in ways that would lead to mastering the more complex skills and content. Frequently, their goal was also to individualize instruction as much as possible. Thus, the focus of instruction shifted from presentation of content knowledge before a group of students to a focus on the behavior of individual learners, an analysis of the steps needed to ensure learning, and the reinforcement of desirable behavior when it occurred.

The interest in behaviorism occurred about the same time that the first computer-assisted programs (CAI) were being developed. It is not surprising that the first CAI programs were essentially computer applications of printed, programmed learning books. Computers appeared to offer a good solution. Students could be assigned to a computer to work at their own pace, and the computer would keep track of students' work and provide a record of each student's progress for the teacher. Such programs evolved into what were later called *individualized learning systems* (ILS). ILS software and hardware were installed in school computer laboratories; they provided *drill and practice* exercises that were judged valuable, especially for students with learning difficulties. The behavioral movement also had an impact on the educational technology profession. The belief that it was possible to design instruction so that all students could learn led to an interest in the design of learning materials and in a systems approach to instruction.

During the last half of the twentieth century, cognitive theories of learning gained ascendancy

over behaviorism among psychologists, and some of the views of cognitive psychologists, represented by the term *constructivism*, began to influence education. Constructivists argued that learners must construct their own understanding of whatever is being taught. According to this perspective, the teacher's task is not primarily one of promoting knowledge transfer, nor is it one of ensuring that students perform consistently according to a predetermined description of knowledge and skills. The teacher's role is to create an environment in which students are able to arrive at their own interpretations of knowledge while becoming ever more skillful in directing their own learning.

Many constructivists were initially critical of the use of computers in schools because they equated the use of computers with behaviorist theories of learning. Other constructivists recognized the computer as a potential ally and designed programs that took advantage of constructivist beliefs. The result has been computer-based programs that promote higher-level thinking and encourage collaborative learning.

### Current Technologies Used in Schools

Whatever learning theory a teacher may embrace, many technologies exist in schools to enhance instruction and to support student learning. While teachers vary greatly in their use of these technologies, teachers select media they believe will promote their instructional goals. Following are a few examples of computers being used to support four goals: building student capacity for research, making student inquiry more realistic, enabling students to present information in appealing forms, and offering students access to learning resources within and beyond the school.

**Student research.** Students once relied upon local and school libraries and their printed reference materials to research topics. Now, however, computer technologies provide access to digital versions of these references—and to libraries worldwide. Encyclopedias on CD-ROMs provide information, digital images, video, and audio, and also provide links to websites where students access tools such as live web cameras and global positioning satellites. Dictionaries and thesauruses are built into word processors. Through the Internet students can gain access to a wide variety of primary and secondary sources, including government documents, photographs, and diaries.

**Student inquiry.** Educational reformers believe education needs to be real and authentic for students. Technology can engage students in real-world activities. In the sciences, electronic probes allow science students to collect precise weather or chemical reaction data and digitally trace trends and answer hypotheses. Graphing calculators, spreadsheets, and graphing software provide mathematics students with the ability to visualize difficult mathematical concepts. In the social sciences, electronic communication tools (e.g. Internet conferencing, e-mail, electronic discussion groups) allow students to communicate with their peers from many parts of the world. In the language arts, students use handheld computers and wireless networks to create joint writing exercises and read electronic books that allow them to explore related topics. Concept-mapping software provides all students with the opportunity to build the framework for a story or report and to map out linkages among complex characters, such as those in a play by Shakespeare. In the arts, students can explore images of original artwork through the Internet; with appropriate software they can create original digital artwork or musical compositions. Physical education students can use electronic probes to learn about the relationship between the impact of physical movement and physiological changes.

Authentic student inquiry extends beyond data collection. It also implies the opportunity for students to investigate questions or issues that concern them. Communications technology allows students to contact experts such as scientists, book authors, and political leaders. Electronic communication tools support interactions and increase the probability of prompt responses. Students who want to learn more about a current event, such as an experiment on an international space station, scientific endeavors in the Antarctic, an international meeting of environmentalists, or a musher during the Iditarod dogsled race in Alaska, can use the Internet to investigate the topic, participate in a virtual field trip to the event, and watch the event as it unfolds through a web camera. In this manner, instructional technology assists students who wish to investigate their own questions and concerns.

**Constructing new knowledge.** James Pellegrino and Janice Altman (1997) believe the penultimate use of technology occurs when students use technology to move from being knowledge consumers to being knowledge producers. Results of original student in-

quiry usually take the form of printed reports or oral presentations. With advanced technologies, students can present their original data or newly interpreted data by integrating digital video, audio, and text into word-processed documents, multimedia presentations, videos, or web-based documents. Local, state, national, and international media fairs provide opportunities for students to demonstrate the new knowledge representations that students are capable of creating when given the opportunity. Media fairs showcase photographs, original digital images, overheads, videos, and interactive multimedia projects from students of all ages.

In the past, award-winning projects have included a video created by fourth graders that demonstrates their feelings regarding acceptance, diversity, and compassion; an interactive, multimedia presentation by second graders about the water cycle; and an interactive multimedia project by a high school student depicting the history of war experienced by one family. Each of these projects illustrates student-generated knowledge that could have been demonstrated through a traditional paper or research report. However, the instructional technology tools provided students with a way to express their knowledge in a more interesting manner.

**Access to learning resources.** Some schools lack the resources to provide all of the courses that students may need or want. Advanced placement and foreign language courses can be particularly expensive for a school system to offer when there is not a high level of student demand. A variety of technologies (e.g. interactive television, Internet videoconferencing) provide students the opportunity to participate in a class that is located in a different school, in a different town, and even in a different state or country. Instructional technologies can also serve the instructional needs of students who may be unable to attend classes in the school building. Students who are homebound, home schooled, or who may be forced to drop out of school can take advantage of coursework offered over the Internet. Virtual high schools, online college credit courses, and for-profit companies all make courses available to students through the Internet. Through an online program, students can obtain their high school diplomas or GED without attending a particular school.

Instructional technologies also provide some students important access to traditional classroom instruction. Students who have physical or learning disabilities can use a variety of assistive technologies

in order to be an active member of a mainstreamed class. Braille writers and screen readers allow students with sight limitations to use a computer for work and communication. Various switches allow students with limited mobility to use a computer to speak for them and complete assignments. *Switches*, similar to a computer mouse, manipulate the computer through a touch pad, by head or eye movement, or even by breath. Handheld computing devices and specialized software allow students with learning disabilities to function in traditional classrooms by helping them organize thoughts, structure writing, and manage time. Instructional technology is also used to provide alternative forms of assessment for disabled students, including digital portfolios that electronically capture the accomplishments of students who are not able to complete traditional assessments.

### Approaches to Computer Use in Schools

The function of computers in schools differs from that of other educational technologies. In the case of films, radio, instructional television, overhead projectors, and other instructional media, educational technology is used to support and enhance the teacher's role as instructor. Teacher support has also been one of the justifications for the introduction of computers in schools, but it has not been the only, nor the most important, justification. Computers are also promoted as an important part of the school curriculum. Learning about computers and acquiring computer skills have been accepted by educators and the lay public as a necessary curricular requirement because they give students tools needed to function effectively in modern American society. The role and function of computers in schools can be classified according to three categories: (1) computer literacy, (2) computers as tools, and (3) computers as a catalyst for school transformation.

**Computer literacy.** Beginning in the 1980s it was assumed that all children should become computer literate. While the meaning of the term *computer literacy* has changed over time, all children are expected to graduate with knowledge about the role of computers in society and essential skills in their operation. Educators continue to debate what skills are essential and when and how they are best learned, but there is little controversy about whether students should be competent in the use of computers. No such discussion surrounds the school use of film, radio, and instructional television.

**Computers as tools.** With the continuing increase in computer power and the decline in cost, schools have steadily increased the numbers of computers in schools and their use by students. Rather than place computers in specialized laboratories where students have access to them for only a limited period each week, computers have increasingly been placed in libraries and in classrooms. Beginning in the 1990s the goal became to make computers ubiquitous and to integrate them across the curriculum. Computers had become something more than a curriculum topic; they had become a tool that students needed in order to perform their work. Students were expected to use the Internet to gather information and to use word processing and multimedia software to produce their reports. While other instructional media were seen as tools for teachers, computers are accepted as tools for both teachers and students.

**Computers as a catalyst for school reform.** Throughout the twentieth century, technology zealots have heralded one technology or another as having the capacity to transform schools, but such transformations have not occurred. Film, radio, television, and other instructional media have enriched the classroom resources available to teachers. However, rather than challenging traditional classroom practices, they were used to maintain traditional practices. The culture of schooling, with teachers in charge of instruction before a class of students, has remained relatively constant. Some proponents believe that computers have the power to transform schools because they empower learners in ways that previous technologies were unable to, because they challenge the authority of teachers to be the sole source of information, and because they encourage an active, rather than a passive, learner. Computers may eventually provide the catalyst that will result in school transformation.

### Current Issues Relating to the Use of Educational Technology

The effective use of technology in schools involves more than the purchase of educational technologies and their integration into the curriculum. The existence of technology within a school can create special concerns—particularly regarding legal issues, ethical issues, media literacy, and funding—that must be addressed.

**Legal issues.** Software piracy (the installation of nonlicensed software) is an important legal concern. When software is purchased, generally the buyer ob-

tains one license, which allows that software to be installed on only one computer. Schools may purchase site licenses that permit the software to be installed on multiple computer stations. While the practice of loading software without licenses onto multiple computers (piracy) may seem benign to school officials, it is a form of theft that results in billions of dollars in lost revenue to vendors, and it can result in fines to school corporations.

Technology also raises important legal issues regarding copyright and privacy. Technology allows for easy duplication of many types of media. With a videocassette recorder, a teacher can record a television program for reuse in the classroom. Artwork, photos, and articles can be scanned and reproduced digitally. The Internet provides easy access to digital images, movies, music, and written works from all over the world; these can be downloaded and used in multiple formats, raising not only questions about copyright, but also plagiarism.

When a student or a teacher uses a piece of media that is not in the public domain (copyright-free), they must be certain that they have not violated the doctrine of *Fair Use*. Fair Use (Section 107 of the 1976 Copyright Act) considers the purpose of the use, the nature of the copyrighted work, the amount used in comparison to the entire piece, and the impact of classroom use on the work's commercial value. Therefore, while showing videotape in a classroom to illustrate a point of history may be permissible, the downloading of images from the Internet into a calendar for the student council to sell is probably not.

The right to privacy and free speech is considered an essential American ideal. However, with computer technologies and the Internet, there is little actual privacy. All electronic communications (e-mail, web forums, etc.) pass through multiple computer sites before arriving at a destination. During that process, information is saved that can be read by anyone who has the knowledge to do so. In order to ensure the safety and security of everyone, students and teachers need to be informed that electronic communications from their school are not private and can be accessed. In 2000 Congress passed the Children's Internet Protection Act (CIPA) and the Neighborhood Children's Internet Protection Act (NCIPA), which require all schools and libraries that receive federal technology funds to have an Internet safety policy to protect children from visual depictions that are obscene, contain child pornogra-

phy, or are otherwise harmful to children. An adequate technology protection measure can be an Internet block or filtering software that prevents the objectionable material from being displayed. However, blocking software and other practices to eliminate access to websites raises issues relating to rights of free speech guaranteed by the U.S. Constitution. The conflict about free speech, privacy, and the obligation of schools to protect children make this issue quite controversial within some school systems.

**Ethical issues.** Ethical issues often relate to whether schools are providing students with equal access to technology. Gender-equity issues arise when girls are treated differently than boys in terms of the use of, and encouragement to use, technology. Girls tend to enroll in fewer computer classes, spend fewer hours on the computer either at home or at school, and are less likely to choose majors in computer-related fields than do boys. For example, in 2000 only 15 percent of the students who took the Advanced Placement Computer Science exam were girls. There are a number of factors that contribute to this gender difference, including the limited number of female role models in computer-related fields, adults who especially encourage boys to use the computer and computer games, and software that tends to target boys' interests more than that of girls.

The *digital divide* is the division that exists between the information rich and the information poor. Advanced technologies, and the Internet in particular, provide easy access to vast amounts of information. Digital inequities can exist along racial, economic, academic achievement (low-achieving versus high-achieving classes), and geographic (rural, urban, and suburban) lines. A student in a rural school that lacks fast Internet connections does not have the same access to information as a student near a major city.

The digital divide also extends beyond the school. More economically advantaged children usually have access to information sources through Internet connections and microcomputers at home. Those who are more disadvantaged must rely upon limited school and public library resources. Minority students may be discouraged from accessing online content because of an absence of exposure to computers in general or because of a lack of racially and ethnically diverse information on the Internet. Finally, computers are often used as a reward for high achieving students, leaving out those students with poorer academic records, while some students are

simply not encouraged to use technology to fuel their interest in academics.

**Media literacy.** Media literacy is the ability to access, evaluate, and produce information. Teachers themselves not only need to be media literate, but they must also ensure that their students are able to access the information they need, are capable of determining the relative merits of the information obtained, and are able to represent the information they have gathered in new ways using the different forms of media available to them (print, video, audio, digital). The concept of media literacy is not unique to computer technology. For decades, child advocates have expressed concern about the impact of movies and television on children and about whether children can distinguish the illusion presented to them from what is real. Media literacy has become an even greater teaching responsibility for educators, as the Internet provides access to vast quantities of information, much of which is inaccurate or represents biased views.

**Adequate funding.** The Office of Technology Assessment described four barriers to technology integration in instruction: inadequate teacher training, a lack of vision of technology's potential, a lack of time to experiment, and inadequate technical support. Each of these obstacles stems in part from weak or inconsistent financial support for technology. Much of the money used to support technology in schools has been provided through special governmental appropriations or by private funds. Technology funds have rarely become a part of the regular, operating budget of school systems. For technology to achieve its potential, funds are needed to provide adequate training for teachers, to keep equipment repaired and up-to-date, and to provide the time necessary for teachers and administrators to plan ways to use technology effectively. Only then will the schools be able to experience the advantages afforded by technology.

*See also:* ASSESSMENT TOOLS, *subentry on* TECHNOLOGY BASED; INSTRUCTIONAL DESIGN; MEDIA AND LEARNING; SCHOOL REFORM; TECHNOLOGY EDUCATION.

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## HIGHER EDUCATION

Colleges and universities have generally been quick to adopt new technologies, often even before their educational value has been proven. Throughout its history, higher education has experimented with technological advances as diverse as the blackboard and the personal computer. Some technologies have become permanent parts of the higher education enterprise. Others, such as the slide rule and the 16-millimeter movie projector, have been replaced as more sophisticated or more cost-effective technologies have emerged to take their place.

At the dawn of the twenty-first century, new and rapidly improving technologies are in the process of transforming higher education. Each year since 1994, the Campus Computing Survey has shown increased use in college classrooms of technology-dependent resources such as e-mail, the Internet, course web pages, and computer simulations. Technology has the potential to revolutionize the traditional teaching and learning process. It can eliminate the barriers to education imposed by space and time and dramatically expand access to lifelong learning. Students no longer have to meet in the same place at the same time to learn together from an instructor. Fundamentally, modern technologies have the ability to change the conception of a higher education institution. No longer is a higher education institution necessarily a physical place with classrooms and residence halls where students come to pursue an advanced education. Thanks to recent developments in technology, the standard American image of a college or university as a collection of ivy-covered buildings may need to be revised for the first time since the founding of Harvard in 1636.

Computers and telecommunications are the principal technologies reshaping higher education. Due to advances in each of these domains, electronic mail, fax machines, the World Wide Web, CD-ROMs, and commercially developed simulations and courseware are altering the daily operations and expanding the missions of colleges and universities.

### Forces Promoting and Inhibiting Technology Use

Powerful forces are promoting higher education's adoption of new technologies. The rapid advance of globalization that is lowering international barriers and transforming the business world is also expanding the potential reach of colleges and universities.

With sophisticated communication technologies, institutions of higher education are no longer limited to student markets or educational resources in their geographic regions. Likewise, the growing need for lifelong learning opportunities to keep pace with social, economic, and technological changes fuels demand for accessible alternatives to traditional real-time, campus-based instruction. In addition, competition among higher education institutions contributes to technology's advance within colleges and universities. Not wishing to be outpaced by competitors, many institutions are active participants in a technology "arms race" that requires the rapid adoption of new technological innovations as soon as they become available. The alternative is to fall behind other schools that are attempting to recruit the same students, faculty, and donors.

In spite of technology's promise, its integration throughout higher education has not been rapid or painless. Many barriers to technology-based innovations exist within colleges and universities. Academic traditions, such as the faculty-centered lecture, make many professors reluctant to adopt alternative instructional strategies using the computer or telecommunication devices. The cost of many technological applications also prohibits their easy adoption at many resource-limited institutions. Before technology became such a central part of institutional operations, many colleges paid for new or improved technologies from funds left over at the end of their annual budget cycle. Now that technology has become an essential and recurring investment, most schools must locate additional funds to meet their increasing needs for technology resources.

Limited support to help faculty and staff members learn how to take full advantage of technology is another factor inhibiting more widespread use of technology in colleges and universities. According to the 2000 Campus Computing Survey, the single most important educational technology challenge facing colleges and universities is helping faculty integrate information technology into their teaching. The second most important challenge is providing adequate user support. According to Kenneth Green, director of the Campus Computing Project, higher education's investment in technology hardware is, by itself, not sufficient to reap the full benefits of new technology advances. Green concludes that "the real [information technology] challenge is people, not products" (p. 1). Technology will nei-

ther reap its full potential nor revolutionize higher education if these barriers to its adoption are not resolved satisfactorily by individual institutions or the educational system as a whole.

### **Impact on Teaching and Learning**

No aspect of higher education remains untouched by the technological developments of the 1980s and 1990s. Academic administration, as well as the instructional process, has been dramatically altered by new technologies. When compared to other college and university operations such as student services, housing, and administration, however, the teaching and learning process probably is being changed most dramatically by technology.

Traditionally, professors have used much of their class time with students to disseminate information through lectures and follow-up discussion. This was especially the case in introductory-level courses, where students lack a foundation in the basic concepts and principles of a field. In an era of advanced technology, this approach to instruction seems archaic and inefficient. Computers, especially web-based resources, can disseminate basic information more efficiently and more cost effectively than human beings can. For example, Gregory Farrington recommends that instructors use the web to do what it can do well. This includes presenting information to students in a variety of formats, twenty-four hours per day. Students can access course material when it is most convenient for them and return to it as often as they need to achieve basic comprehension, competence, or mastery.

This approach to information dissemination can save precious class time "for the intellectual interactions that only humans can provide" (Farrington, p. 87). Following this revised method of facilitating learning, traditional lectures can be replaced or pared down. In their place, classes can be more informal, seminar-like sessions with more free flowing discussion structured by students' interests, questions, and concerns. In other words, appropriate use of technology applications can help instructors to structure more active learning opportunities. Research shows that active engagement in the learning process helps to motivate students and enhance their learning outcomes. New technologies can facilitate active engagement in learning by reducing the amount of class time where students sit passively listening to lectures.

Technology can also help to make education a much more interactive and collaborative process. E-mail, course-based websites, and computer-based chat rooms are some of the technology-enabled resources that facilitate communication and teamwork among students. Research by education scholars has shown that collaborative learning opportunities enhance recall, understanding, and problem solving. Technology can greatly ease the work of collaborative design teams, peer writing groups, and other types of collaborative learning groups, even among students who do not live in the same geographic area and who cannot meet face to face.

While technology helps to promote collaborative learning, it also helps to personalize and individualize education. By reducing the need to deliver vast amounts of information, technology can free an instructor to devote more time to individual students. With more time to interact and get acquainted, professors can adapt their teaching strategies and assignments to bring them more in line with the interests and needs of the students in their classes. Technology's capacity to deliver large quantities of information over networks also expands the potential for tailoring educational programs to the specific needs of each learner. Dewayne Matthews argues that technology-enhanced programs "can be custom-designed around the needs and interests of the recipient instead of around the scheduling and resource needs of the provider" (p. 3). With the help of technology, educational programs—even full degrees—can be structured around flexible course modules that students can combine in a variety of forms to meet their personal and professional objectives. Matthews suggests that technology-mediated education makes traditional academic calendars and rigid curriculum structures obsolete because it can adapt education so well to individual learning interests and needs.

If education's goal is to help the learner reach his or her full potential, why should education be designed for the convenience of the instructor or the educational institution? Essentially, technology is empowering learners to take more control of their education than ever before. The expanded reach that technology affords educational institutions has encouraged many new providers to offer educational services. This increased competition enables consumers to choose the learning opportunities that best meet their needs within the constraints of their life circumstances. As technology transforms the ed-

ucational marketplace, the balance of power is shifting from the education provider to the education consumer. Education consumers are now freer to pick and choose, from a variety of sources, the learning opportunities that meet their goals. In this fluid educational environment, the old system of accumulating credits from one or two nearby institutions becomes too restrictive for many students who are balancing a variety of personal and professional roles.

There is a related shift underway as technology transforms the teaching and learning process. The traditional higher education measure of educational achievement, the credit hour, is also being questioned. Matthews argues that "learning outcomes, as measured by student competencies [rather than course credits], is the quality measure that makes the most sense to consumers" (p. 4). In the new educational environment defined by technology, innovative institutions such as Western Governors University award degrees by certifying that students have achieved certain required competencies, regardless of where those competencies were acquired. Such a dramatic shift in the way educational achievement is documented would have been unthinkable before the advent of the free market educational system stimulated by the technology advances of the late twentieth century. Measuring competencies rather than credit hours represents another shift in favor of the consumer. As long as a student can document competence in a subject or skill area, it makes no difference where or how the learning occurred.

Technology's potential to lower the cost of education has been one of its principal appeals. The ability of computers and telecommunications to reach large audiences with the same high-quality educational programs has raised hopes for economies of scale never possible in the very labor-intensive traditional forms of instruction. To date, technology's promise to lower instructional costs has not been realized. Developing the infrastructure to support technology-mediated teaching and learning has been a very expensive proposition. The possibility remains, however, that new, advanced technologies may eventually lower the costs of higher education as researchers and educators learn how to blend technology-delivered and traditional instruction in a more cost-effective manner.

### Impact on Professors' Roles

Technology has already changed the lives of college professors in significant ways. As the twenty-first century unfolds, professors' roles will most likely evolve further as computers and telecommunications media are more fully integrated into higher education. Professors can now use technology to prepare for classes, conduct research, deliver instruction, and keep in touch with their students and colleagues in far away places. Electronic mail, fax machines, computerized databases and search engines, and high-tech classrooms are some of the technologies that have transformed the work of college professors. Many experts on teaching and learning and instructional technology are suggesting that a fundamental shift in faculty duties is underway as more technology applications are adopted in higher education. Because technology calls into question the professor's role as a knowledge transmitter, educational reformers such as James Duderstadt, former president of the University of Michigan, suggest that professors should become "designers of learning experiences, processes, and environments" (p. 7).

Rather than serving primarily as a subject expert who shares specialized knowledge with students, this new type of professor acts more as a consultant or coach. With the aid of technology, his primary instructional role is to inspire and motivate students, to construct an environment that promotes learning, and ultimately to manage an active learning process. Ideally, in this carefully designed context, students take more responsibility for their learning and construct meaning themselves, rather than passively absorbing information from a professor. According to conventional wisdom in contemporary higher education, the professor has moved from being "a sage on the stage to a guide on the side." This individual knows his subject deeply, but is also skilled at constructing situations conducive to learning. Effective utilization of instructional technology is part of the twenty-first-century professor's redefined duties.

There has been some discussion that technology may eventually make many instructional positions obsolete, the same way it eliminated the need for telephone operators or police to direct traffic at busy intersections. Why employ undistinguished professors to lecture in classes when sophisticated telecommunications technology can bring world-renowned authorities into classrooms via satellite or the World Wide Web to inspire students and share the latest information in their fields? Critics of this proposal

counter by arguing that big academic "stars" do not hold office hours, grade papers, construct exams, or counsel troubled students. They believe that professors should not lose their jobs to automation. According to this view, there will always be a need for many of the conventional faculty functions, such as designing learning opportunities, motivating students, and evaluating performance.

The future probably lies somewhere between these two contrasting options. Higher education will undoubtedly supplement its local talent with other human resources that have become easily accessible through technology. Yet it will also continue to employ professional staff members to design curriculum, manage academic programs, and work closely with students.

Technology is loosening professors' control of the curriculum. Faculty and academic administrators once wielded nearly absolute power over the academic programs their institutions offered. However, technology has now made it possible—and commercially viable—for publishers, software companies, and other providers to design and distribute a wide variety of courseware and instructional modules. This alternative to "in-house" production of courses and academic programs is appealing for financial as well as educational reasons. Spreading the development costs of technology-enhanced educational products permits the integration of sophisticated instructional strategies, such as gaming and simulations, into educational programs. On the other hand, moving the design of educational programs further from those who know an institution's students best causes many educators some concern. Technological advances usually lead to trade-offs. In this case, the benefit of being able to integrate high-tech elements into courses is counterbalanced by the reduction in local control of the curriculum.

### Rethinking the Concept of College

Since higher education institutions first emerged, they have been physical places where people gather together to learn. Although higher education institutions have grown and become more complex over time, their basic essence has remained constant. Technology now calls into question the very idea of a college or university. Some accredited institutions of higher education, such as Jones International University, now exist entirely in cyberspace with no campus, classrooms, or athletic teams to tie together the academic community. The traditional campus-

based institutions that have served the United States so well are being challenged in the early twenty-first century by a host of nontraditional competitors that offer education at a distance. Many of these entrepreneurial institutions are aided by an assortment of technologies, including computers, satellites, and electronic streaming video. Technology has vastly expanded the demand for education over the course of a lifetime. It has also released education from the confines of the conventional classroom. It has even removed the restrictions imposed by the clock by enabling people who have access to Internet technology to convene for the purpose of shared learning.

The multipurpose American university was so successful because it brought together the array of facilities, experts, students, and funding needed to educate the masses and expand the boundaries of knowledge in service to humanity. The university assembled the critical mass of talent and resources necessary to meet the knowledge needs of a dynamic society. Although this formula worked throughout the twentieth century, technology is challenging this comfortable arrangement. It has enabled many other organizations, such as corporate colleges and for-profit firms, to provide educational services such as degree programs, professional certificate programs, and a host of outreach services that were once monopolized by the higher education community.

The result of this “unbundling” of higher education roles remains in doubt. Technology has led to a vast expansion of the postsecondary education market, and it is calling into question conventional views of what a higher education institution is or should be. However, no one knows precisely what a college or university (physical or virtual) will look like once the other side of the technology revolution is reached. In the past, when higher education adopted technological innovations, the educational system became more open, more complex, and more dynamic. If the past history of higher education can serve as a guide to its future, the technologies now working their way into the system will lead to a more diverse and responsive educational enterprise. How that enterprise resembles the system that functioned throughout the 1900s remains to be seen.

### Special Challenges of Technology

In spite of its nearly irresistible appeal, technology presents higher education with difficult challenges. Systematic planning of technological enhancements to educational programs is difficult when technology

changes so quickly and unpredictably. Academic planners are continually playing catch-up to implement new technology applications that appear more quickly than a careful planning process can anticipate. Similarly, paying for new technologies with exciting educational applications remains troublesome for institutions with more needs than resources. Authors who wrestle with the funding issues raised by technology argue that new budgeting strategies are necessary to keep institutions from lurching from one technology-funding crisis to the next. Institutions must view technology as a routine expense, not an exceptional special expenditure.

Training faculty and staff members to utilize technology effectively remains a challenge that many colleges and universities have not resolved satisfactorily. It seems clear that building a physical technological infrastructure is not enough. It is also necessary to build a human resource infrastructure for technology to fulfill its promise to higher education.

Finally, adequate evaluation of technology’s contribution to higher education remains a challenge. For example, in *Teaching with Technology*, Wake Forest University vice president David Brown concludes that “the case for computers [in collegiate education] rests on scant amounts of hard evidence” (p. 5). Much of the immense investment in technology that occurred in the 1980s and 1990s was to a large extent an act of faith. Brown argues that the logic in favor of using technology in higher education is compelling, however. He believes that “more choice leads to more learning” (p. 4), and that technology greatly enhances the “box of tools” a professor can employ to reach diverse students. According to Brown, most of the evidence that supports using computers in education is indirect. In his view, research demonstrates that repetition, dialog (question and answer, point and counterpoint), collaborative learning, and visualization and animation (using pictures to support learning) enhance learning. Because computers and other technologies can support these proven educational strategies, Brown concludes that the weight of logic comes down firmly on the side of technology use in colleges and universities. Although Brown makes a strong case for technology, more empirical evidence is needed to justify higher education’s massive investment in computers, high-tech classrooms, distance-learning programs, and other technology-based initiatives.

### An Emerging New System

Duderstadt asserts that the United States needs a new educational paradigm in order to deliver educational opportunity to a broader spectrum of humanity. The advanced technologies available at the beginning of the twenty-first century are laying the foundation of a new higher education system, better equipped to meet the needs of a complex and rapidly changing society. The outlines of this system, transformed by technology, have begun to appear. The educational system that George Connick believes will eventually result from the current technology revolution has four defining attributes. First, it is easier to access than the old campus-based system. Second, it is unconstrained by the barriers of time and space because technology can liberate education from the restrictions imposed both by the clock and geography. Third, it is student-centered because technology can increase students' learning options. Fourth, it is cost-effective because technology can reduce the labor-intensive nature of higher education and permit the reorganization necessary to make institutions more responsive and competitive.

No one knows what higher education will look like in 2025 or 2100. It is certain, however, that colleges and universities will be very different places than they were in the year 2000. Many factors will contribute to the changes that will occur as the higher education system moves into the future. There is no doubt that technology will be one of the driving forces contributing to the educational transformation that is already well underway.

*See also:* DISTANCE LEARNING IN HIGHER EDUCATION; FACULTY ROLES AND RESPONSIBILITIES; MEDIA AND LEARNING.

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ROGER G. BALDWIN

### TECHNOLOGY TRANSFER

*Technology* is information or knowledge that is put to use in order to accomplish a particular task. *Technology transfer* is the application of information into use.

American research universities have become increasingly involved in various technology-transfer activities by establishing technology/business incubators, technology parks, venture capital funds for start-up companies, university research foundations, and technology licensing offices. This trend toward what Sheila Slaughter and Larry Leslie (1997) call *academic capitalism* is also illustrated by an increase in the number of university-based research centers—and by the tendency for some universities to retain partial ownership in the start-up companies that spin out of university research.

Through this variety of boundary-spanning activities, research universities seek to facilitate the transfer of technological innovations to private companies in order to: (1) create jobs and contribute to local economic development, and (2) earn additional funding for university research. Technology transfer from research universities has been increasingly recognized as an engine for economic growth in the United States. This relatively new role for research universities has been greeted with considerable discussion and debate. One question that has been raised concerns what role American research universities can, and should, play in transferring research results to private companies in the form of licensed technologies.

A *research university* is an institution whose main purposes are to conduct research and to train graduate students in how to conduct research. The first research universities developed in Germany; the University of Göttingen (founded in 1737) and the University of Berlin (established in 1810) were among the earliest examples. The idea of the research university spread to the United States, first to Johns Hopkins University (in 1876) and Clark University (in 1890), and then to Stanford University (1891) and the University of Chicago (1892). In the early twenty-first century, several hundred U.S. universities consider themselves research universities.

While some U.S. research universities established an office of technology licensing as early as 1925 (the University of Wisconsin at Madison), 1935 (Iowa State University), and 1940 (Massachusetts Institute of Technology [MIT]), most research universities did not adopt this idea until after 1970. Wisconsin, and later Stanford, served as the models for many other research universities as they became increasingly involved in technology transfer. The Patent and Trademark Law Amendments Act of 1980, commonly known as the Bayh-Dole Act and amend-

ed by Public Law 98-620 in 1984, facilitated patenting and licensing on a broad scale by research universities. This legislation shifted the responsibility for the transfer of technologies stemming from federally funded research from the federal government to the research universities that conducted the research.

Since the early 1980s the rise of biotechnology research and development and, more generally, of research in the life sciences has also boosted the number of research universities with offices of technology licensing—and increased the incomes earned by these offices. Today, some 70 percent of all technology royalties earned by universities come from the life sciences, with the remainder mainly derived from the physical sciences, including engineering. David Mowery et al. (1999) found that most invention disclosures, patents, and licensing at Columbia University were concentrated in a very small number of departments, including electrical engineering, computer science, and the medical school.

The spread of university offices of technology licensing followed the S-shaped curve that is characteristic of the cumulative rate of adoption of an innovation, with larger, more research-oriented universities tending to adopt first, followed over ensuing years by universities with a smaller amount of external research funding that devote fewer resources to research and development and technology transfer.

Detractors of university patenting and licensing point to such potential problems as conflicts of interest that may be created for faculty members, delays in publication of research results to accommodate patent filing or to benefit university-licensed companies, and the possible shift from basic research to more applied research, which has a higher potential for yielding patents and licenses. However, Mowery et al. found that there has been very little shift to more applied research due to the Bayh-Dole Act at Columbia University, Stanford University, or in the University of California System.

U.S. universities that are relatively more involved in technology transfer (indicated by invention disclosures, patents filed, start-up companies, and licensing royalties) are characterized by: (1) higher average faculty salaries; (2) a larger number of support staff for technology licensing; (3) a higher value of private gifts, grants, and contracts; and (4) larger research and development expenditures from industry and from federal sources.

*See also:* FACULTY AS ENTREPRENEURS; FACULTY CONSULTING; UNIVERSITY-INDUSTRIAL RESEARCH COLLABORATION.

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EVERETT M. ROGERS

## TELEVISION

*See:* MEDIA, INFLUENCE ON CHILDREN.

### TERMAN, LEWIS (1877-1956)

Lewis M. Terman was a psychologist who developed some of the earliest and most successful measures of

individual differences. He was raised on an Indiana farm and, after an early career as a schoolteacher and high school principal, received his doctorate in psychology from Clark University in 1905. After four years of teaching pedagogy at the Los Angeles State Normal School, he joined the education faculty at Stanford University in 1910. In 1922 he became head of Stanford's Psychology Department, a position he held until his retirement in 1942.

At Stanford, Terman followed up his doctoral research on mental testing by working on a revision of Alfred Binet's 1905 scale of intelligence. Collaborating with graduate students, Terman's revision was published in 1916 as the "Stanford-Binet." An innovative feature of the Stanford-Binet was the inclusion of the "Intelligence Quotient" or IQ, an index that had not been previously used in mental tests. Although there were several competitive versions, Terman's revision of the Binet test utilized the largest standardized sample and, by the 1920s, became the most widely used individually administered intelligence scale.

The success of the Stanford-Binet brought Terman professional acclaim. In 1917 he played a key role in the development of intelligence tests for the army. These group-administered tests were largely based on the Stanford-Binet. Such tests enabled large numbers of individuals to be tested at one time and, after the war, Terman endeavored to utilize this efficient form of test administration in the schools. In collaboration with a committee of psychologists who had worked on the army tests, he developed the "National Intelligence Tests" for grades three to eight, which were ready for use in 1920. Throughout the 1920s he played a leading role in establishing the widespread use of various group intelligence tests in schools so that students could be classified into homogeneous ability groups, in what became termed a *tracking system*. This educational practice became well established in American schools by the 1930s. Terman was also a leader in the development of group achievement tests, which assessed school learning. He collaborated on the construction of the Stanford Achievement Test, the first test battery of its kind.

Terman viewed the widespread adoption of tests in the schools as a reflection of how testing could be of use to American society. It was to be the major means of achieving his vision of a meritocracy; a social order based on ranked levels of native ability. Consistent with the views of other leaders of the

American mental testing movement, Terman believed that mental abilities were primarily a product of heredity. The highest purpose that testing could serve was the identification of intellectually gifted children—the potential leaders of society.

To achieve his goals, Terman launched a longitudinal study of gifted children in 1921, the first longitudinal study in psychology to use a large sample. Canvassing elementary and secondary schools in California, Terman and his research team came up with a sample of close to 1500 children with IQ scores of at least 135. In an attempt to dispel the popular notion that gifted children were underdeveloped in nonintellectual areas, Terman included measures of personality, character, and interests. Compared with a control group of California schoolchildren, Terman reported that gifted children excelled in measures of academic achievement. The profiles of gifted children also revealed that they were emotionally as well as intellectually mature. This sample was followed as the participants moved through adolescence, adulthood, and the retirement years. The study of the gifted over the lifespan demonstrated that they had achieved career success well above the average of college graduates and attained a high degree of personal satisfaction.

As a consequence of his research with the gifted, Terman devoted the latter part of his career to assessing nonintellectual personality traits. This work centered on the measurement of gender identification, which was viewed as a composite of motivational and emotional traits that differentiated the sexes. In 1936, with his research associate Catharine Cox Miles, he produced the first questionnaire measure of masculinity–femininity. The test was standardized on a sample, primarily made up of high school juniors and college sophomores. In essence, the test reflected the gender norms of the 1930s, though Terman was insensitive to the cultural and historical limits of his measure. He chose to emphasize the need to raise and educate girls and boys so that they would conform to the existing gender norms that fostered a clear distinction between the sexes.

He extended his interest in gender differences to the study of marital adjustment. He conducted a large-scale survey of several thousand married and divorced couples. In his study, he stressed that the key to marital happiness was the extent to which each spouse accepted the other's needs and feelings, and did not fight to get their own way. Happily mar-

ried women were therefore characterized as being cooperative and content with their subordinate status. Terman's conventional views on gender thus carried over from his masculinity–femininity study to his marital research.

Terman's seminal contributions to the development of testing and the study of the intellectually gifted ensure his position as one of the pioneers of American psychology. Like many other psychologists of his time, however, he was insensitive to the cultural bias inherent in psychological testing, and did not anticipate the harmful effects that testing could have on those who were not in the mainstream of American society, especially poor and racial minority children. The changing social context of the 1960s therefore brought about a more critical evaluation of Terman's accomplishments in the testing field.

*See also:* BINET, ALFRED; EDUCATIONAL PSYCHOLOGY; INDIVIDUAL DIFFERENCES; INTELLIGENCE, *sub-entry on* MEASUREMENT.

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## TESTING: COLLEGE ADMISSIONS TESTS

*See:* COLLEGE ADMISSIONS TESTS.

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### TESTING

#### STANDARDIZED TESTS AND EDUCATIONAL POLICY

Johanna V. Crighton

#### STANDARDIZED TESTS AND HIGH-STAKES

ASSESSMENT

Lorrie A. Shepard

#### STATEWIDE TESTING PROGRAMS

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Ann E. Flanagan

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### STANDARDIZED TESTS AND EDUCATIONAL POLICY

The term *standardized testing* was used to refer to a certain type of multiple-choice or true/false test that could be machine-scored and was therefore thought to be “objective.” This type of standardization is no longer considered capable of capturing the full range of skills candidates may possess. In the early twenty-first century it is more useful to speak of *standards-based* or *standards-linked* assessment, which seeks to determine to what extent a candidate meets certain specified expectations or standards. The format of the test or examination is less important than how well it elicits from the candidate the kind of performance that can give us that information.

The use of standardized testing for admission to higher education is increasing, but is by no means universal. In many countries, school-leaving (exit) examinations are nonstandardized affairs conducted by schools, with or without government guidelines, while university entrance exams are set by each university or each university department, often without any attempt at standardization across or within universities. The functions of certification (completion of secondary school) and selection (for higher or further education) are separate and frequently non-comparable across institutions or over time. In most countries, however, a school-leaving certificate is a necessary but not a sufficient condition for university entrance.

### Certification

In the United States, states began using high school exit examinations in the late 1970s to ensure that students met minimum state requirements for graduation. In 2001 all states were at some stage of implementing a graduation exam. These are no longer the “minimum competency tests” of the 1970s and 1980s; they are based on curriculum and performance standards developed in all fifty states. All students should be able to demonstrate that they have reached performance standards before they leave secondary school.

Certification examinations based on state standards have long been common in European countries. They may be set centrally by the state and conducted and scored by schools (France); set by the state and conducted and scored by an external or semi-independent agency (the Netherlands, the United Kingdom, Romania, Slovenia); or set, conducted, and scored entirely within the schools themselves (Russian Federation), often in accordance with government guidelines but with no attempt at standardization or comparability. Since the objective is to certify a specified level of learning achieved, these exit examinations are strongly curriculum-based, essentially *criterion-referenced*, and ideally *all* candidates should pass. They are thus typically medium- or low-stakes, and failing students have several opportunities to retake the examination. Sometimes weight is given to a student’s in-school performance as well as to exam results—in the Netherlands, for example, the weightings are 50-50, giving students scope to show a range of skills not easily measured by examination.

In practice, however, when constructing criteria for a criterion-referenced test, norm-referencing is unavoidable. Hidden behind each criterion is norm-referenced data: assumptions about how the *average* child in that particular age group *can be expected* to perform. Pure criterion-referenced assessment is rare, and it would be better to think of assessment as being a hybrid of norm- and criterion-referencing. The same is true of setting standards, especially if they have to be reachable by students of varying ability: one has to know something about the *norm* before one can set a meaningful standard.

### Selection

By contrast, university entrance examinations aim to select some candidates rather than others and are

therefore *norm-referenced*: the objective is not to determine whether all have reached a set standard, but to select “the best.” In most cases, higher education expectations are insufficiently linked to K–12 standards.

Entrance exams are typically academic and high-stakes, and opportunities to retake them are limited. Where entrance exams are set by individual university departments rather than by an entire university or group of universities, accountability for selection is limited, and failing students have little or no recourse. University departments are unwilling to relinquish what they see as their autonomy in selecting entrants; moreover, the lack of accountability and the often lucrative system of private tutoring for entrance exams are barriers to a more transparent and equitable process of university selection.

In the United States the noncompulsory SATs administered by the Educational Testing Service (ETS) are most familiar. SAT I consists of quantitative and verbal reasoning tests, and for a number of years ETS insisted that these were curriculum-free and could not be studied for. Indeed they used to be called “Scholastic *Aptitude* Tests,” because they were said to measure candidates’ aptitude for higher level studies. The emphasis on predictive validity has become less; test formats include a wider range of question types aimed at eliciting more informative student responses; and the link with curriculum and standards is reflected in SAT II, a new subject test in high school subjects, for example English and biology. Fewer U.S. universities and colleges require SAT scores as part of their admission procedure in the early twenty-first century, though many still do.

### Certification Combined with Selection

A number of countries (e.g., the United Kingdom, the Netherlands, Slovenia, and Lithuania) combine school-leaving examinations with university entrance examinations. Candidates typically take a national, curriculum-based, high school graduation exam in a range of subjects; the exams are set and marked (scored) by or under the control of a government department or a professional agency external to the schools; and candidates offer their results to universities as the main or sole basis for selection. Students take only one set of examinations, but the question papers and scoring methods are based on known standards and are nationally comparable, so that an “A” gained by a student in one part of the country is comparable to an “A” gained elsewhere.

Universities are still entitled to set their own entrance requirements such as requiring high grades in biology, chemistry, and physics for students who wish to study medicine, or accepting lower grades in less popular disciplines or for admittance to less prestigious institutions.

### Trends in Educational Policy: National Standards and Competence

Two main trends are evident worldwide. The first is a move towards examinations linked to explicit national (or state) *standards*, often tacitly aligned with international expectations, such as Organisation for Economic Co-Operation and Development (OECD) indicators or the results of multinational assessments such as the Third Mathematics and Science Study (TIMSS) or similar studies in reading literacy and civics. The second trend is towards a more *competence-based* approach to education in general, and to assessment in particular: less emphasis on what candidates can remember and more on what they understand and can do.

**Standards.** The term *standards* here refers to official, written guidelines that define what a country or state expects its state school students to know and be able to do as a result of their schooling.

In the United States all fifty states now have student testing programs, although the details vary widely. Few states, however, have testing programs that explicitly measure student achievement against state standards, despite claims that they do. (Some states ask external assessors to evaluate the alignment of tests to standards.) Standards are also used for school and teacher accountability purposes; about half the states rate schools primarily on the basis of student test scores or test score gains over time, and decisions to finance, close, take over, or otherwise overhaul chronically low-performing schools can be linked to student results. Much debate centers on whether tests designed for one purpose (measuring student learning) can fairly be used to judge teachers, schools, or education systems.

The same debate is heard in England and Wales, where student performance on national curriculum “key stage” testing at ages seven, eleven, fourteen, and sixteen has led to the publication of “league tables” listing schools in order of their students’ performance. A painstaking attempt to arrive at a workable “value-added” formula that would take account of a number of social and educational vari-

ables ended in failure. The concept of “value added” involves linking a baseline assessment to subsequent performance: the term refers to *relative* progress of pupils or how well pupils perform compared to other pupils with similar starting points and background variables. A formula developed to measure these complex relationships was scientifically acceptable but judged too laborious for use by schools. Nevertheless, league tables are popular with parents and the media and remain a feature of standards-based testing in England and Wales.

Most countries in Central and Eastern Europe are likewise engaged in formulating educational standards, but standards still tend to be expressed in terms of content covered and hours on the timetable (“seat time”) for each subject rather than student outcomes. When outcomes are mentioned, it is often in unmeasurable terms: “[Candidates] must be familiar with . . . the essence, purpose, and meaning of human life [and] . . . the correlation between truth and error” (State Committee for Higher Education, Russian Federation, p. 35).

**Competence.** The shift from content and “seat-time” standards to specifying desired student achievement expressed in operational terms (“The student will be able to . . .”) is reflected in new types of performance-based assessment where students show a range of skills as well as knowledge. Portfolios or coursework may be assessed as well as written tests. It has been argued that deconstructing achievement into a list of specified behaviors that can be measured misses the point: that learning is a subtle process that escapes formulas people seek to impose on it. Nevertheless, the realization that it is necessary to focus on outcomes (and not only on input and process) of education is an important step forward.

Apart from these conceptual shifts, many countries are also engaged in practical examinations reform. Seven common policy issues are: (1) changing concepts and techniques of testing (e.g., computer-based interactive testing on demand); (2) shift to standards- and competence-based tests; (3) changed test formats and question types (e.g., essays rather than multiple-choice); (4) more inclusive target levels of tests; (5) standardization of tests; (6) independent, external administration of tests; and (7) convergence of high school exit exams and university entrance.

### Achieving Policy Goals

In terms of monitoring the achievement of education policy goals, standards-linked diagnostic and formative (national, whole-population, or sample-based) assessments at set points *during* a student’s schooling are clearly more useful than scores on high-stakes summative examinations at the end. Trends in annual exam results can still be informative to policy makers, but they come too late for students themselves to improve performance. Thus the key-stage approach used in the United Kingdom provides better data for evidence-based policy making and more helpful information to parents than, for example, the simple numerical scores on SAT tests, which in any case are not systematically fed back to schools or education authorities.

However, the U.K. approach is expensive and labor-intensive. The best compromise might be sample-based periodic national assessments of a small number of key subjects (for policy purposes), plus a summative, curriculum- and standards-linked examination at the end of a major school cycle (for certification and selection).

*See also:* INTERNATIONAL ASSESSMENTS; STANDARDS FOR STUDENT LEARNING; STANDARDS MOVEMENT IN AMERICAN EDUCATION; TESTING, *subentries on* INTERNATIONAL STANDARDS OF TEST DEVELOPMENT, NATIONAL ACHIEVEMENT TESTS, INTERNATIONAL.

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JOHANNA V. CRIGHTON

## STANDARDIZED TESTS AND HIGH-STAKES ASSESSMENT

*Assessment* is the process of collecting data to measure the knowledge or performance of a student or

group. Written tests of students' knowledge are a common form of assessment, but data from homework assignments, informal observations of student proficiency, evaluations of projects, oral presentations, or other samples of student work may also be used in assessment. The word *assessment* carries with it the idea of a broader and more comprehensive evaluation of student performance than a single test.

In an age when testing is controversial, *assessment* has become the preferred term because of its connotation of breadth and thoroughness. The National Assessment of Educational Progress (NAEP) is an example of a comprehensive assessment worthy of the name. Also known as the "Nation's Report Card," NAEP administers achievement tests to a representative sample of U.S. students in reading, mathematics, science, writing, U.S. history, civics, geography, and the arts. The achievement measures used by NAEP in each subject area are so broad that each participating student takes only a small portion of the total assessment. Not all assessment programs, however, are of such high quality. Some administer much more narrow and limited tests, but still use the word *assessment* because of its popular appeal.

*Standardized tests* are tests administered and scored under a consistent set of procedures. Uniform conditions of administration are necessary to make it possible to compare results across individuals or schools. For example, it would be unfair if the performance of students taking a test in February were to be compared to the performance of students tested in May or if one group of students had help from their teacher while another group did not. The most familiar standardized tests of achievement are traditional machine-scorable, multiple-choice tests such as the California Achievement Test (CAT), the Comprehensive Tests of Basic Skills (CTBS), the Iowa Tests of Basic Skills (ITBS), the Metropolitan Achievement Test (MAT), and the Stanford Achievement Test (SAT). Many other assessments, such as open-ended performance assessments, personality and attitude measures, English-language proficiency tests, or Advanced Placement essay tests, may also be standardized so that results can be interpreted on a common scale.

*High-stakes testing* is a term that was first used in the 1980s to describe testing programs that have serious consequences for students or educators. Tests are high-stakes if their outcomes determine such important things as promotion to the next grade, graduation, merit pay for teachers, or school

rankings reported in a newspaper. When test results have serious consequences, the requirements for evidence of test validity are correspondingly higher.

### Purposes of Assessment

The intended use of an assessment—its purpose—determines every other aspect of how the assessment is conducted. Purpose determines the content of the assessment (What should be measured?); methods of data collection (Should the procedures be standardized? Should data come from all students or from a sample of students?); technical requirements of the assessment (What level of reliability and validity must be established?); and finally, the stakes or consequences of the assessment, which in turn determine the kinds of safeguards necessary to protect against potential harm from fallible assessment-based decisions.

In educational testing today, it is possible to distinguish at least four different purposes for assessment: (1) classroom assessment used to guide and evaluate learning; (2) selection testing used to identify students for special programs or for college admissions; (3) large-scale assessment used to evaluate programs and monitor trends; and (4) high-stakes assessment of achievement used to hold individual students, teachers, and schools accountable. Assessments designed for one of these purposes may not be appropriate or valid if used for another purpose.

In classrooms, assessment is an integral part of the teaching and learning process. Teachers use both formal and informal assessments to plan and guide instruction. For individual students, assessments help to gauge what things students already know and understand, where misconceptions exist, what skills need more practice in context, and what supports are needed to take the next steps in learning. Teachers also use assessment to evaluate their own teaching practices so as to adjust and modify curricula, instructional activities, or assignments that did not help students grasp key ideas. To serve classroom purposes, assessments must be closely aligned with what children are learning, and the timing of assessments must correspond to the specific days and weeks when children are learning specific concepts. While external accountability tests can help teachers examine their instructional program overall, external, once-per-year tests are ill-suited for diagnosis and targeting of individual student learning needs. The technical requirements for the reliability of classroom assessments are less stringent than for

other testing purposes because assessment errors on any given day are readily corrected by additional information gathered on subsequent days.

Selection and placement tests may be used to identify students for gifted and talented programs, to provide services for students with disabilities, or for college admissions. Because selection tests are used to evaluate students with a wide variety of prior experiences, they tend to be more generic than standardized achievement tests so as not to presume exposure to a specific curriculum. Nonetheless, performance on selection measures is strongly influenced by past learning opportunities. Unlike IQ tests of the past, it is no longer assumed that any test can measure innate learning ability. Instead, measures of current learning and reasoning abilities are used as practical predictors of future learning; because all tests have some degree of error associated with them, professional standards require that test scores not be the sole determiner of important decisions. For example, college admissions tests are used in conjunction with high school grades and recommendations. School readiness tests are sometimes used as selection tests to decide whether children five years old should start school, but this is an improper use of the tests. None of the existing school readiness measures has sufficient reliability and validity to support such decisions.

Large-scale assessments, such as the National Assessment of Educational Progress (NAEP) or the Third International Mathematics and Science Survey (TIMSS), serve a monitoring and comparative function. Assessment data are gathered about groups of students in the aggregate and can be used by policymakers to make decisions about educational programs. Because there is not a single national or international curriculum, assessment content must be comprehensive and inclusive of all of the curricular goals of the many participating states or nations. Obviously, no one student could be expected to master all of the content in a test spanning many curricula, but, by design, individual student scores are not reported in this type of assessment. As a result, the total assessment can include a much broader array of tasks and problem types to better represent the content domain, with each student being asked to complete only a small sample of tasks from the total set. Given that important policy decisions may follow from shifts in achievement levels or international comparisons of achievement, large-

scale assessments must meet high standards of technical accuracy.

High-stakes assessments of achievement that are used to hold individual students, teachers, and schools accountable are similar to large-scale monitoring assessments, but clearly have very different consequences. In addition, these tests, typically administered by states or school districts, must be much more closely aligned with the content standards and curriculum for which participants are being held accountable. As a practical matter, accountability assessments are often more limited in the variety of formats and tasks included, both because each student must take the same test and because states and districts may lack the resources to develop and score more open-ended performance measures. Regardless of practical constraints, high-stakes tests must meet the most stringent technical standards because of the harm to individuals that would be caused by test inaccuracies.

### A Short History of High-Stakes Testing

Accountability testing in the United States started in 1965 as part of the same legislation (Title I of the Elementary and Secondary Education Act [ESEA]) that first allocated federal funds to improve the academic achievement of children from low-income families. Federal dollars came with a mandate that programs be evaluated to show their effectiveness. The early accountability movement did not assume, however, that public schools were bad. In fact, the idea behind ESEA was to extend the benefits of an excellent education to poor and minority children.

The public's generally positive view of America's schools changed with the famous SAT test score decline of the early 1970s. Despite the fact that a blue-ribbon panel commissioned by the College Board in 1977 later found that two-thirds to three-fourths of the score decline was attributable to an increase in the number of poor and minority students gaining access to college and not to a decline in the quality of education, all subsequent accountability efforts were driven by the belief that America's public schools were failing.

The minimum competency testing movement of the 1970s was the first in a series of educational reforms where tests were used not just as measures of the effectiveness of reforms, but also as the primary drivers of reform. Legislators mandated tests of minimum academic skills or survival skills (e.g., bal-

ancing a checkbook), intending to "put meaning back into the high school diploma." By 1980, thirty-seven states had taken action to mandate minimum competency standards for grade-to-grade promotion or high school graduation. It was not long, however, before the authors of *A Nation at Risk* (1983) concluded that minimum competency examinations were part of the problem, not part of the solution, because the "minimum" [required of students] tends to become the 'maximum,' thus lowering educational standards for all" (p. 20).

Following the publication of *A Nation at Risk*, the excellence movement sought to ratchet up expectations by reinstating course-based graduation requirements, extending time in the school day and school year, requiring more homework, and, most importantly, requiring more testing. Despite the rhetoric of rigorous academic curricula, the new tests adopted in the mid-1980s were predominantly multiple-choice, basic-skills tests—a step up from minimum competency tests, but not much of one. By the end of the 1980s, evidence began to accrue showing that impressive score gains on these tests might not be a sign of real learning gains. For example, John Cannell's 1987 study, dubbed the "Lake Wobegon Report," showed that all fifty states claimed their test scores were above the national average.

Standards-based reforms, which began in the 1990s and continued at the start of the twenty-first century, were both a rejection and extension of previous reforms. Rejecting traditional curricula and especially rote activities, the standards movement called for the development of much more challenging curricula, focused on reasoning, conceptual understanding, and the ability to apply one's knowledge. At the same time, the standards movement continued to rely heavily on large-scale accountability assessments to leverage changes in instruction. However, standards-based reformers explicitly called for a radical change in the content and format of assessments to forestall the negative effects of "teaching the test." Various terms, such as *authentic*, *direct*, and *performance-based*, were used in standards parlance to convey the idea that assessments themselves had to be reformed to more faithfully reflect important learning goals. The idea was that if tests included extended problems and writing tasks, then it would be impossible for scores to go up on such assessments without there being a genuine improvement in learning.

## Effects of High-Stakes Testing

By the end of the 1980s, concerns about dramatic increases in the amount of testing and potential negative effects prompted Congress to commission a comprehensive report on educational testing. This report summarized research documenting the ill effects of high-pressure accountability testing, including that high-stakes testing led to *test score inflation*, meaning that test scores went up without a corresponding gain in student learning. Controlled studies showed that test score gains on familiar and taught-to tests could not be verified by independent tests covering the same content. High-stakes testing also led to *curriculum distortion*, which helped to explain how spurious score gains may occur. Interview and survey data showed that many teachers eliminated science and social studies, especially in high-poverty schools, because more time was needed for math and reading. Teaching to the test also involved rote drill in tested subjects, so that students were unable to use their knowledge in any other format.

It should also be noted that established findings from the motivational literature have raised serious questions about test-based incentive systems. Students who are motivated by trying to do well on tests, instead of working to understand and master the material, are consistently disadvantaged in subsequent endeavors. They become less intrinsically motivated, they learn less, and they are less willing to persist with difficult problems.

To what extent do these results, documented in the late 1980s, still hold true for standards-based assessments begun in the 1990s? Recent studies still show the strong influence that high-stakes tests have on what gets taught. To the extent that the content of assessments has improved, there have been corresponding improvements in instruction and curriculum. The most compelling evidence of positive effects is in the area of writing instruction. In extreme cases, writing has been added to the curriculum in classrooms, most often in urban settings, where previously it was entirely absent.

Unfortunately, recent studies on the effects of standards-based reforms also confirm many of the earlier negative effects of high-stakes testing. The trend to eliminate or reduce social studies and science, because state tests focused only on reading, writing, and mathematics, has been so pervasive nationwide that experts speculate it may explain the recent downturn in performance in science on NAEP.

In Texas, Linda McNeil and Angela Valenzuela found that a focus on tested content and test-taking skills was especially pronounced in urban districts.

In contrast with previous analysts who used test-score gains themselves as evidence of effectiveness, it is now widely understood by researchers and policymakers that some independent confirmation is needed to establish the validity of achievement gains. For example, two different studies by researchers at the RAND Corporation used NAEP as an independent measure of achievement gains and documented both real and spurious aspects of test-score gains in Texas. A 2000 study by David Grissmer, Ann Flanagan, Jennifer Kawata, and Stephanie Williamson found that Texas students performed better than expected based on family characteristics and socioeconomic factors. However, a study by Stephen Klein and colleagues found that gains on NAEP were nothing like the dramatic gains reported on Texas's own test, the Texas Assessment of Academic Skills (TAAS). Klein et al. also found that the gap in achievement between majority and minority groups had widened for Texas students on NAEP whereas the gap had appeared to be closing on the TAAS. Both of these studies could be accurate, of course. Texas students could be learning more in recent years, but not as much as claimed by the TAAS. Studies such as these illustrate the importance of conducting research to evaluate the validity and credibility of results from high-stakes testing programs.

## Professional Standards for High-Stakes Testing

The *Standards for Educational and Psychological Testing* (1999) is published jointly by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education. The *Standards* establish appropriate procedures for test development, scaling, and scoring, as well as the evidence needed to ensure validity, reliability, and fairness in testing. Drawing from the *Standards*, the American Educational Research Association issued a position statement in 2000 identifying the twelve conditions that must be met to ensure sound implementation of high-stakes educational testing programs.

First, individual students should be protected from tests being used as the sole criterion for critically important decisions. Second, students and teachers should not be sanctioned for failing to meet new standards if sufficient resources and opportunities to

learn have not been provided. Third, test validity must be established for each separate intended use, such as student certification or school evaluation. Fourth, the testing program must fully disclose any likely negative side effects of testing. Fifth, the test should be aligned with the curriculum and should not be limited to only the easiest-to-test portion of the curriculum. Sixth, the validity of passing scores and achievement levels should be analyzed, as well as the validity of the test itself. Seventh, students who fail a high-stakes test should be provided with meaningful opportunities for remediation consisting of more than drilling on materials that imitate the test. Eighth, special accommodations should be provided for English language learners so that language does not interfere with assessment of content area knowledge. Ninth, provision should be made for students with disabilities so that they may demonstrate their proficiency on tested content without being impeded by the format of the test. Tenth, explicit rules should be established for excluding English language learners or students with disabilities so that schools, districts, or states cannot improve their scores by excluding some students. Eleventh, test results should be sufficiently reliable for their intended use. Twelfth, an ongoing program of research should be established to evaluate both the intended and unintended consequences of high-stakes testing programs.

Professional standards provide a useful framework for understanding the limitations and potential benefits of sound assessment methodologies. Used appropriately tests can greatly enhance educational decision-making. However, when used in ways that go beyond what tests can validly claim to do, tests could very likely do more harm than good.

*See also:* ASSESSMENT; INTERNATIONAL ASSESSMENTS; STANDARDS FOR STUDENT LEARNING; STANDARDS MOVEMENT IN AMERICAN EDUCATION.

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## STATEWIDE TESTING PROGRAMS

State testing programs have a long history. New York State administered its first Regents' Examinations as early as 1865. Several other state programs had their beginnings in the 1920s, when new forms of achievement examinations—objective tests—were developed for and introduced in the schools. In 1937 representatives from fifteen state programs and non-profit testing agencies met, under the leadership of the American Council on Education's Committee on Measurement and Guidance, to discuss common problems. The group continued to meet annually, except during World War II, for decades.

In 1957 President Dwight D. Eisenhower called attention to state testing programs when he indicated the need for nationwide testing of high school students and a system of incentives for qualified students to pursue scientific or professional careers. The subsequent passage of the National Defense Education Act of 1958 (NDEA) not only encouraged but gave financial support to testing, guidance, and scholarship programs.

The growth in number and importance of state testing programs accelerated rapidly in the 1970s and has continued to grow ever since. The growth in the 1970s reflected, at least in part, the enhanced role of states in education policy. In the academic year 1969–1970, the majority—53 percent—of the funding for schools came from local agencies; states contributed 39 percent and the federal government provided 8 percent. A decade later, however, the state share of education funding had increased to 47 percent, and state governments became the dominant source of funding for schools.

With that increased responsibility came demands for some form of accountability for results, and that meant state tests to determine if students were learning. At the same time, there was growing concern among public officials and the public about the quality of schools, fueled in part by the revelation that average scores on the SAT declined between 1963 and 1977. In response to these concerns, and the interest in accountability, a majority of states in the 1970s implemented some form of minimum competency test, which students were required to pass in order to graduate from high school. The number of states conducting such tests rose from a handful in 1975 to thirty-three in 1985.

The wave of state education reforms enacted following the publication in 1983 of *A Nation at*

*Risk*, the report by the National Commission on Excellence in Education, further accelerated the growth in state testing. That report, which warned of a “rising tide of mediocrity” in America’s schools, recommended that states adopt achievement tests to measure student performance, and many states responded to the call. By the end of the 1980s, forty-seven states were operating at least one testing program, up from thirty-nine in 1984.

This growth continued throughout the 1990s as well. The dominant role of states in education policy was symbolized near the beginning of that decade, when President George H. W. Bush called the nation’s governors to an extraordinary “education summit” in Charlottesville, Virginia. In the wake of that meeting, the President and the governors agreed to a set of national education goals, which included the pledge that all students would be “competent in challenging subject matter” by the year 2000. The goals were enshrined into federal law in 1994; that same year, President Bill Clinton signed the Improving America’s Schools Act, which required states to set challenging standards for student performance and implement tests that measure student performance against the standards. In response to the law, nearly all states revamped their existing tests or developed new tests, and as of 2001, all states except Iowa (where local school districts administer tests) had a statewide testing program; by one estimate, the amount spent by states on testing doubled, to \$410 million, between 1996 and 2001.

The No Child Left Behind Act, which President George W. Bush signed into law in 2002, requires a significant increase in state testing. Under the law, states must administer annual reading and mathematics tests in grades three through eight, tests in science in at least three grade levels, and tests at the high school level. At the time of enactment, only nine states met the law’s requirements for annual tests in reading and mathematics aligned to state standards.

### Types of Tests

Although most state tests consist primarily of multiple-choice questions, there is considerable variation among the states. Thirty-four states include some short-answer questions in at least some of their tests, requiring students to write answers rather than select from among answers already provided, and eighteen states include questions requiring extended responses in subjects other than English language arts.

(Nearly all states administer writing tests that ask for extended responses.) Two states, Kentucky and Vermont, assess student performance in writing through the use of portfolios, which collect students' classroom work during the course of a school year. The portfolios are scored by teachers, using common criteria.

The Maryland state test, the Maryland School Performance Assessment Program (MSPAP), is unusual in that it consists exclusively of open-ended questions. Students work in groups for part of the assessment, and many of the questions are interdisciplinary, requiring students to apply knowledge from English language arts, mathematics, science, and social studies. In addition, the test is designed so that individual students take only a third of the complete assessment; as a result, scores are reported for schools, school districts, and the state, but not for individual students.

The MSPAP, like many state tests, was custom-made to match the state's standards. In Maryland's case, the test was developed by state teachers; other states contract with commercial publishers to develop tests to match their standards. Such tests indicate the level of performance students attained, but do not permit comparisons with student performance from other states. The types of reports vary widely. Maryland, for example, specifies three levels of achievement: excellent, indicating outstanding accomplishment; satisfactory, indicating proficiency; and not met, indicating more work is required to attain proficiency. The state's goal is for 70 percent of students to reach the satisfactory level and 25 percent to reach the excellent level.

Other states, meanwhile, use commercially available tests that provide comparative information. The most commonly used tests are the Stanford Achievement Test, 9th Edition (or SAT-9), published by Harcourt Brace Educational Measurement, and the Terra Nova, published by CTB-McGraw-Hill. These tests are administered to representative samples of students, known as a norm group, and provide information on student performance compared with the norm group. For example, results might indicate that a student performed in the sixty-fifth percentile, meaning that the student performed better than sixty-five percent of the norm group. To provide both information on performance against standards and comparative information, some states employ hybrid systems. Maryland, for example, administers a norm-referenced test in grades in which

the MSPAP is not used. Delaware, meanwhile, has embedded an abbreviated version of the SAT-9 within its state test.

### Purposes

State tests are used for a variety of purposes. The most common is to provide information to parents and the public about student, school, and school system performance. The expectation is that this information can improve instruction and learning by pointing out areas of weakness that need additional attention.

In addition to providing reports to parents about their children's performance, forty-three states issue "report cards" on schools that indicate school performance; twenty states require that these report cards be sent to parents. The No Child Left Behind Act requires all states to produce school report cards and to disseminate them to parents.

States also place consequences for students on the results of tests. As of 2001 four states (Delaware, Louisiana, New Mexico, and North Carolina) make promotion for at least certain grades contingent on passing state tests, and another four states are planning to do so by 2004. In other states, school districts set policies for grade-to-grade promotion, and many districts use state tests as criteria for determining promotion from grade to grade. A 1997 survey of large school districts, conducted by the American Federation of Teachers, found that nearly 40 percent of the districts surveyed used standardized tests in making promotion decisions at the elementary school level, and 35 percent used tests in making such decisions at the middle school level. Although the survey did not indicate which tests the districts used, the report noted that statewide tests were among them.

More commonly states use tests as criteria for high school graduation. Seventeen states, as of 2001, make graduation from high school contingent on passing state tests, and another seven are expected to do so by 2008. These numbers are similar to those recorded in the early 1980s at the height of the minimum-competency era. Yet the graduation requirements first implemented in the late 1990s are different than those of the earlier period because the tests are different. Unlike the previous generation of tests, which measured basic reading and mathematical competencies, many of the newer tests tend to measure more complex skills along with, in many

cases, knowledge and skills in science, social studies, and other subjects.

In most states with graduation test requirements, the tests are administered in the tenth or eleventh grade, and students typically have multiple opportunities to take the tests before graduation. In some states, such as New York, Tennessee, and Virginia, the graduation tests are end-of-course tests, meaning they measure a particular course content (such as algebra or biology) and are administered at the completion of the course.

States also use tests to reward high-performing students. For most of its existence, the New York State Regents' Examination was an optional test; students who took the test and passed earned a special diploma, called a Regents' Diploma. Beginning in 2000, however, the state required all students to take the examinations. Other states, such as Connecticut, continue to use tests to award special diplomas to students who pass them.

Some states, such as Michigan, provide scholarships for students who perform well on state tests. There, the state awards \$2,500 scholarships to students attending Michigan colleges and universities who score in the top level of all four high school tests—mathematics, reading, science, and writing (the scholarships are worth \$1,000 for students attending out-of-state institutions).

In addition to the consequences for students, states also use statewide tests to determine consequences for schools. As of 2001 thirty states rate schools based on performance, and half of those states use test scores as the sole measure of performance (the others use indicators such as graduation and attendance rates, in addition to test scores). In Texas, for example, the state rates each school and school district in one of four categories, based on test performance: exemplary, recognized, acceptable/academically acceptable, and low-performing/academically unacceptable. To earn a rating of exemplary, at least 90 percent of students—and 90 percent of each group of students (white, African American, Hispanic, and economically disadvantaged)—must pass the state tests in each subject area. Those with at least an 80 percent pass rate, overall and for each group, are rated recognized; those with a 55 percent pass rate are rated acceptable.

In eighteen states high-performing schools can earn rewards. In some cases, such schools earn rec-

ognition from the state. In North Carolina, for example, the twenty-five elementary and middle schools and ten high schools that register the highest level of growth in performance on state tests, along with those in which 90 percent of students perform at or above grade level, receive a banner to hang in the school and an invitation to a state banquet in their honor. Schools and teachers in high-performing or rapidly improving schools also receive cash awards in some states. In California, for example, 1,000 teachers in the schools with the largest gains on state tests receive a cash bonus of \$25,000 each. Another 3,750 teachers receive \$10,000 each, and another 7,500 receive \$5,000 each. Schools that demonstrate large gains receive awards of \$150 per pupil.

States also use test results to intervene in low-performing schools. In 2001 twenty-eight states provide assistance to low-performing schools. In most cases, such assistance includes technical assistance in developing improvement plans and financial assistance or priority for state aid. In some cases, such as in North Carolina and Kentucky, the state sends teams of expert educators to work intensively with schools that perform poorly on state tests. These experts help secure additional support and can recommend changes, such as replacing faculty members.

Twenty states also have the authority to levy sanctions on persistently low-performing schools. Such sanctions include withholding funds, allowing students to transfer to other public schools, "reconstitution," which is the replacing of the faculty and administration, and closure. However, despite this authority, few states have actually imposed sanctions. One that did so was Maryland, where in 2000 the state turned over the management of three elementary schools in Baltimore to a private firm.

The No Child Left Behind Act of 2001 contains a number of provisions to strengthen the role of state tests in placing consequences on schools. Under the law, states are required to set a target for proficiency that all students are expected to reach within twelve years, and to set milestones along the way for schools to reach each year. Schools that fail to make adequate progress would be subject to sanctions, such as allowing students to transfer to other public schools, allowing parents to use funds for supplemental tutoring services, or reconstitution.

## Effects of Statewide Testing

The rapid growth in the amount and importance of statewide testing since the 1970s has sparked intense scrutiny about the effects of the tests on students and on classroom practices.

Much of the scrutiny has focused on the effects of tests on students from minority groups who tend to do less well on tests than white students. In several cases, advocates for minority students have challenged tests in court, charging that the testing programs were discriminatory. In one well-known case, African-American high school students in Florida in the 1970s challenged that state's high school graduation test—on which the failure rate for African Americans was ten times the rate for white students—on the grounds that the African Americans had attended segregated schools for years and that denying them diplomas for failing a test preserved the effects of segregation. In its ruling, the U.S. Court of Appeals for the Fifth Circuit upheld the use of the test, but said the state could not withhold diplomas from African-American students until students had no longer attended segregated schools (*Debra P. v. Turlington*).

The court also held that students have a property right to a diploma, but that Florida could use a test to award to diplomas provided that students have adequate notice of the graduation requirement (four years, in that case) and that the test represents a fair measure of what is taught. Although the decision applied only to the states in the Fifth Circuit, the standards the court applied have been cited by other courts and other states since then.

In addition to the legal challenges, state tests have also come under scrutiny for their effects on student behavior—specifically, on the likelihood that students at risk of failing will drop out of school. There is some evidence that dropout rates are higher in states with graduation-test requirements. But it is unclear whether the tests caused the students to decide to drop out of school.

Many testing professionals have also expressed concern that the use of tests to make decisions like promotion or graduation may be inappropriate. Because test scores are not precise measures of a student's knowledge and skills, test professionals warn that any important decision about a student should not rest on a single test score; other relevant information about a student's abilities should be taken into account.

There has been a great deal of research on the effects of state tests on instruction. Since a primary purpose of the state tests is to provide information to improve instruction and learning, this research has been closely watched. The studies have generally found that tests exert a strong influence on classroom practice, but that this influence was not always salutary. On the positive side, the studies found that tests, particularly those with consequences attached to the results, focused the attention of students and educators on academic performance and created incentives for students and teachers to raise test scores. In addition, tests also encouraged teachers to focus on aspects of the curriculum that may have been underrepresented. For example, in states like California that introduced writing tests that assessed students' written prose (as opposed to multiple-choice tests that measured writing abilities indirectly), teachers tended to spend more time asking students to write in class and exposing them to a broader range of writing genres.

On the negative side, studies also found that state tests often encouraged teachers to focus on the material on the test at the expense of other content that may be worthwhile. In states that used exclusively multiple-choice basic skills tests, researchers found that many teachers—particularly those who taught disadvantaged students—spent a great deal of class time on drill and practice of low-level skills, as opposed to instruction on more complex abilities that the tests did not assess. At the same time, researchers found that in some cases teachers devoted a greater proportion of time to tested subjects and less to subjects not tested, like history and the arts, and that teachers spent class time on test-preparation strategies rather than instruction in academic content. The heavy influence of tests on instruction has led some commentators to question whether gains in test scores represent genuine improvements in learning or simply “teaching to the test.”

*See also:* STATES AND EDUCATION; TESTING, *subentry on* STANDARDIZED TESTS AND EDUCATIONAL POLICY.

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## TEST PREPARATION PROGRAMS, IMPACT OF

Test preparation programs share two common features. First, students are prepared to take one specific test and second, the preparation students receive is systematic. Test preparation programs have been found to have differing degrees of the following characteristics:

1. Instruction that develops the skills and abilities that are to be tested.
2. Practice on problems that resemble those on the test.
3. Instruction and practice with test-taking strategies.

Short-term programs that include primarily this third characteristic are often classified as *coaching*.

There are various shades of gray in this definition. First, the difference between short-term and long-term programs is difficult to quantify. Some researchers have used roughly forty to forty-five hours of student contact time as a threshold, but this amount is not set in stone. Second, within those programs classified as short-term or long-term, the intensity of preparation may differ. One might speculate that a program with twenty hours of student contact time spaced over one week is quite different from one with twenty hours spaced over one month. Finally, test preparation programs may include a mix of the three characteristics listed above. It is unclear what proportion of student contact time must be spent on test-taking strategies before a program can be classified as coaching.

There is little research base from which to draw conclusions about the effectiveness of preparatory programs for achievement tests given to students during their primary and secondary education. This may change as these tests are used for increasingly high-stakes purposes, particularly in the United States. There is a much more substantial research base with regard to the effectiveness of test preparation programs on achievement tests taken for the purpose of postsecondary admissions. The remainder of this review will focus on the effectiveness of this class of programs.

The impact of commercial test preparation programs is a very controversial topic. The controversy hinges in large part upon how program impacts are quantified. Students taking commercial programs are usually given some sort of pretest, a period of preparatory training, and then a posttest. The companies supplying these services will typically quantify impact in terms of average score gains for students from pretest to posttest. Conversely, most research on the subject of test preparation will quantify impact as the average gain of students in the program relative to the average gain of a comparable group of students not in the program. Here the impact of a test preparation program is equal to its estimated causal effect. The latter definition of impact is the more valid one when the aim is to evaluate the costs and benefits of a test preparation program. Program benefits should always be expressed relative to the outcome a person could expect had she chosen *not* to participate in the program. This review takes the approach that program impact can only be assessed by estimating program effects.

### Program Effects on College Admissions Tests

Research studies on the effects of admissions test preparation programs have been published periodically since the early 1950s. Most of this research has been concerned with the effect of test preparation on the SAT, the most widely taken test for the purpose of college admission in the United States. A far smaller number of studies have considered the preparation effect on the ACT, another test often required for U.S. college admission. On the main issues, there is a strong consensus in the literature:

- Test preparation programs have a statistically significant effect on the changes of SAT and ACT scores for students taking the test at least twice.
- The magnitude of this effect is relatively small.

How small? The SAT consists of two sections, one verbal and one quantitative, each with a score range from 200 to 800 points. While the section averages of all students taking the SAT each year varies slightly, the standard deviation around these averages is pretty consistently about 100 points. The average effect of test preparation programs on the verbal section of the SAT is probably between 5 and 15 points (.05 and .15 of a standard deviation); the average effect on the quantitative section is probably between 15 and 25 points (.15 and .25 of a standard deviation). The largest effects found in a published study of commercial SAT preparation reported estimates of about 30 points per section. Some unpublished studies have found larger effects, but these have involved very small sample sizes or methodologically flawed research designs.

The ACT consists of four sections: science, math, English, and reading. Scores on each section range from 1 to 36 points and test-takers are also given a composite score for all four sections on the same scale. The standard deviation on the test is usually about 5 points. A smaller body of research, most of it unpublished, has found a test preparation effect (expressed as a percentage of the 5 point standard deviation) of .02 on the composite ACT score, an effect of about .04 to .06 on the math section, an effect of about .08 to .12 on the English section, and a negative effect of .12 to .14 on the reading section.

The importance of how test preparation program effects are estimated cannot be overstated. In most studies, researchers are presented with a group of students who participate in a preparatory program in order to improve their scores on a test they

have already taken once. Estimating the effect of the program is a question of causal inference: How much does exposure to systematic test preparation cause a student's test score to increase above the amount it would have increased without exposure to the preparation? Estimating this causal effect is quite different from calculating the average score gain of all students exposed to the program. A number of commercial test preparation companies have advertised—even guaranteed—score gains based on the average gains calculated from students previously participating in their program. This confuses gains with effects. To determine if the program itself has a real effect on test scores one must contrast the gains of the treatment group (students who have taken the program) to the gains of a comparable control group (students who have not taken the program). This would be an example of a controlled study and is the principle underlying the estimation of effects for test preparation programs.

One vexing problem is how to interpret the score gains of students participating in preparatory programs in the absence of a control group. Some researchers have attempted to do this by subtracting the average gain of students participating in a program from the expected gain of the full test-taking population over a given time period. This has been criticized primarily on the grounds that the former group is never a randomly drawn sample from the latter. Students participating in test preparation are in fact often systematically different from the full test-taking population along important characteristics that are correlated with test performance—for example, household income, parental education, and student motivation. This is an example of self-selection bias. Due in part to this bias, uncontrolled studies have been found to consistently arrive at estimates for the effect of test preparation programs that are as much as four to five times greater than those found in controlled studies.

### Is Test Preparation More Effective under Certain Programs for Certain People?

In a comprehensive review of studies written between 1950 and 1980 that estimate an effect for test preparation, Samuel Messick and Ann Jungeblut (1981) found evidence of a positive relationship between time spent in a program and the estimated effect on SAT scores. But this relationship was not linear; there were diminishing returns to SAT score changes for time spent in a program beyond 45

hours. Messick and Jungeblut concluded that “the student contact time required to achieve average score increases much greater than 20 to 30 points for both the SAT-V and SAT-M rapidly approaches that of full-time schooling” (p. 215). Since the Messick and Jungeblut review, several reviews of test preparation studies have been written by researchers using the statistical technique known as meta-analysis. Use of this technique allows for the synthesis of effect estimates from a wide range of studies conducted at different points in time. The findings from these reviews suggest that there is little systematic relationship between the observable characteristics of test preparation programs and the estimated effect on test scores. In particular, once a study’s quality was taken into consideration, there was at best a very weak association between program duration and test score improvement.

There is also mixed evidence as to whether test preparation programs are more effective for particular subgroups of test-takers. Many of the studies that demonstrate interactions between the racial/ethnic and socioeconomic characteristics of test-takers and the effects of test preparation suffer from very small and self-selected samples. Because commercial test preparation programs charge a fee, sometimes a substantial one, most students participating in such programs tend to be socioeconomically advantaged. In one of the few studies with a nationally representative sample of test-takers, test preparation for the SAT was found to be most effective for students coming from high socioeconomic backgrounds. A similar association was not found among students who took a preparatory program for the ACT.

## Conclusions

The differential impact of test preparation programs on student subgroups is an area that merits further research. In addition, a theory describing why the pedagogical practices used within commercial test preparatory programs in the twenty-first century would be expected to increase test scores has, with few exceptions, not been adequately explicated or studied in a controlled setting at the item level. In any case, after more than five decades of research on the issue, there is little doubt that commercial preparatory programs, by advertising average score gains without reference to a control group, are misleading prospective test-takers about the benefits of their product. The costs of such programs are high, both in terms of money and in terms of opportunity. For

consumers of test preparation programs, these benefits and costs should be weighed carefully.

*See also:* COLLEGE ADMISSIONS TESTS.

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DEREK C. BRIGGS

## NATIONAL ACHIEVEMENT TESTS, INTERNATIONAL

National testing of elementary and secondary students exists in most industrialized countries. Each country's national examinations are based on national curricula and content standards. The difference in weight and consequence of the exams varies tremendously from country to country, as does the use of exams at various levels of education. In France, Germany, Great Britain, Italy, and Japan, examinations at the lower secondary or elementary level are required for admission to academic secondary schools. In the United States, there is a more informal system of tracking students into academic, vocational, or general studies within the same secondary school. In Japan and Korea secondary students take nationally administered examinations that determine their postsecondary placement. Top-scoring students attend the most prestigious public universities. In France the baccalaureate examinations are given to students at academic secondary schools (the *lycée*) as exit examinations and also to determine university placement. In Germany a similar distinction is made between academic and vocational secondary school, and passing the *Abitur* (exit examination from *Gymnasium* or academic secondary school) allows students to continue on to university-level coursework. In Great Britain students study for their A-level examinations for university placement. Finally, in Italy students must pass exit examinations at both the lower- and upper-secondary levels. At the secondary level, the *Esami di maturità* impacts university attendance or employment.

In the United States the SAT (once called either the Scholastic Assessment Test or the Scholastic Aptitude Test) and the ACT (the American College Test) are required for entrance into the more prestigious and rigorous colleges and universities. This system closely mirrors that of Japan, Korea, France, and Germany with the exception of the lack of federal governing. However, the SAT and ACT are not meant to monitor student performance over time and are not national tests of student performance, as are the aforementioned tests specific to other countries.

In contrast to the nations described above, the United States has no national system of education and as such no national or federal assessment that has an impact on students at the individual level. The system of public education in the United States is characterized by a high degree of decentralization. The Tenth Amendment to the U.S. Constitution prohibits direct federal government involvement in education; the provision of education is a state-level function. States and local school districts are the entities charged with policy and curriculum decisions. Nonetheless, there has been a trend toward increased measures of national performance for the past three to four decades. Although the United States has no national curriculum, given the truly global nature of society, curricula are converging in similarity within the United States as well as internationally.

### Current Trends in Educational Assessment

In 1965 Congress passed the Elementary and Secondary Education Act, which authorized federal support for the education of disadvantaged and handicapped children. The Elementary and Secondary Education Act (ESEA) made clear the federal government's commitment to equal education for all by mandating fairness criteria for disadvantaged and minority students. With ESEA standardized testing became entrenched in American education, as it required regular testing in schools that receive federal funding for disadvantaged students.

A major surge toward education reform can be linked to the 1983 Department of Education sponsored report, *A Nation at Risk*. While the National Assessment of Educational Progress (NAEP) long-term assessment showed gains for every age group between 1971 and 1992, declining SAT scores drew national attention with pronouncements that the

education system in the United States was failing its students and society as a whole.

In 1989 President George Bush and the nation's governors established a set of six national education goals to be achieved by all students in the United States by the year 2000. These six goals plus two more were enacted into law as part of President Bill Clinton's Goals 2000: Educate America Act (1994). The goals stated that by the year 2000, all students would come to school ready to learn, high school graduation rates would increase, students would demonstrate competency in challenging subject matter and would be prepared for life-long learning, U.S. students would be first in the world in science and mathematics, American adults would be literate and productive citizens, schools would be drug- and violence-free, teachers would be more prepared, and parental involvement in education would rise. The education goals set forth by President George Bush and furthered in strength and number by President Bill Clinton with the Educate America Act increased the demands on accountability systems in education at both the state and national levels.

The National Assessment of Educational Progress had been monitoring the nation's student achievement for many years. The new reforms and new goals required more of the NAEP than it could provide. In 1994 NAEP responsibilities and breadth were extended with the reauthorization of NAEP through the Improving America's Schools Act of 1994. As the National Research Council states in its 1999 publication *High Stakes: Testing for Tracking, Promotion, and Graduation*, "recent education summits, national and local reform efforts, the inception of state NAEP and the introduction of performance standards have taken NAEP from a simple monitor of student achievement—free from political influence and notice—into the public spotlight" (p. 25). Linking federal funding with the development of performance-based standards and assessments and accountability only enhanced the attention and emphasis placed on the NAEP.

In 2001 President George W. Bush proposed tying federal education dollars to specific performance-based initiatives including mandatory participation in annual state NAEP assessments in reading and mathematics and high-stakes accountability at the state level. The emphasis in Bush's reform "blueprint" is on closing the achievement gap for minority and disadvantaged students. To this end, President Bush signed into law Public Law 107-110

(H.R.1), the No Child Left Behind Act of 2001. The Act contains four major provisions for education reform: stronger accountability for results, expanded flexibility and local control, expanded options for parents, and an emphasis on teaching methods that have been proven to work. Direct accountability based on NAEP is not part of the final public law.

As the nation turned toward an increasing reliance on student assessment so too did the states. States began implementing minimum competency examinations in the 1970s. By 1990 more than forty states in the nation required some form of minimum competency examination (MCE) before awarding the high school diploma. For example, Massachusetts tenth graders are required to pass the Massachusetts Comprehensive Assessment System (MCAS) prior to earning a high school diploma. In Kentucky graduating seniors can distinguish themselves by not only fulfilling the requirements for graduation and a high school diploma but by also fulfilling the requirements for the Commonwealth Diploma that include successful completion of advanced placement credits. Students in Texas must pass secondary-level exit examinations before graduating high school. In North Carolina students must pass exit examinations as part of the requirement set for obtaining a high school diploma. The trend favors the implementation of more examinations with consequences for states at the national level, and for students at the state level.

### **National Examinations in the United States**

In the United States, there are two sets of "national" examinations. The first set includes the SAT, the American College Test (ACT), and the Advanced Placement (AP) examinations, which allow high school seniors to earn college credits for advanced level classes. The second set is known as the National Assessment of Educational Progress (NAEP). These tests have come to be known as "The Nation's Report Card." The NAEP is a federally funded system of assessing the standard of education in the nation. It is the only nationally representative test. It is also the only test given that selects a representative sample of U.S. students, testing the same standard of knowledge over time. It provides no measure of individual student, school, or school district performance.

## The National Assessment of Educational Progress (NAEP)

The NAEP is a federally funded national examination that regularly tests a national sample of American students. The National Center for Education Statistics (NCES) of the Department of Education has primary responsibility for the NAEP. The Educational Testing Service (ETS) and Westat currently administer the NAEP. Finally, the NAEP is governed by an independent organization, the National Assessment Governing Board (NAGB) charged with setting policies for the NAEP.

The NAEP has three distinct parts: a long-term trend assessment of nine-, thirteen-, and seventeen-year-olds, a main assessment of the nation, and the state trial assessments. The long-term assessment has been administered to nine-, thirteen-, and seventeen-year-old students every four years since 1969. The main assessment and trial state assessments began in 1990, testing fourth, eighth, and twelfth grades in various subjects. NAEP allows trend evaluations as well as comparisons of performance between groups of students.

**NAEP long-term assessment.** The NAEP long-term assessment is the only test based on a nationally representative sample of students. It is the only test that can be used to track long-term trends in student achievement. The tests have been given to national samples of nine-, thirteen-, and seventeen-year-old students and have maintained a set of questions such that the results in any given year can be compared to any other year. The long-term or trend assessments are designed to track academic performance over time.

The early tests were given in science, mathematics, and reading, and were administered every four years until 1988 and more frequently after 1988. Writing tests that can be compared over years were given in 1984, and geography, history, civics, and the arts have been tested more recently. Until the early 1980s NAEP results were reported by question, indicating the percentage of students answering a particular question correctly over time.

Overall NAEP scores show small to modest gains. From the early 1970s to 1996, gains occurred in math, reading, and science for nine- and thirteen-year-old students, and in math and reading for seventeen-year-old students. The gains in science were small, approximately .10 standard deviations or three percentile points, for all age groups. Math

gains for nine- and thirteen-year-old students were larger, between .15 and .30 standard deviations. Evidence suggests that these trends mask differentiated trends by race and/or ethnic groups.

During the same time period (1970–1996), substantial gains occurred for both Hispanic and black students and for lower-scoring students. For instance, black gains between .30 and .80 standard deviations occurred for almost all subjects in all age groups.

**NAEP main assessment and trial state assessments.** Between 1984 and 1987 the NAEP underwent an “overhaul” in order to accommodate the increasing demands being placed on it. First, the main assessment and state assessments were added to the NAEP. Second, new instruments were designed to measure not only what students know but also what students *should* know. Third, test items in every subject area were based on rigorous, challenging content standards. Fourth, NAEP’s independent governing board, the National Assessment Governing Board (NAGB), identified performance standards or achievement levels at advanced, proficient, basic, below basic knowledge levels.

Main NAEP, or the main assessment, is administered to a nationally representative sample of students, testing overall student achievement. Unlike the long-term NAEP, main NAEP test items are content-based, reflecting current curriculum and instructional practices. Test items are designed to test student performance in relation to the national education goals and to monitor short-term trends in academic achievement. The main assessment is given in mathematics, reading, writing, and science to fourth, eighth, and twelfth graders at intervals of two years.

The state-level NAEP is administered to representative samples of students within states. The assessment items are the same as those on the main assessment. The trial state assessment and the main assessment are given in mathematics, reading, writing and science at intervals of two years or more beginning in 1990. Between 1990 and 2000 there were seven math tests: an eighth grade assessment in 1990, and fourth and eighth grade exams in 1992, 1996, and 2000. Reading tests have been administered to fourth graders in 1992, 1994, and 1998. In 1998 an eighth grade assessment in reading was administered for the first time.

Significant short-term trends are being made nationally. Statistically significant trends can be seen

across the 1990–1992, 1992–1994, and 1992–1996 testing cycles. The largest gains occurred for eighth grade math tests, where composite gains between 1990 and 1996 are about .25 standard deviation, or eight percentile points. Smaller gains of approximately .10 standard deviation or three percentile points occurred in fourth grade math from 1992 to 1996. Reading scores show a decline of approximately .10 standard deviations per year between 1992 and 1994.

The estimated score gains in mathematics indicate a trend of .03 standard deviations or one percentile point per year made between 1990 and 1996 in math across states. About three-quarters of states show consistent, statistically significant annual gains in mathematics between 1990 and 1996. The rate of change varies dramatically across states, from being flat to gains of .06 to .07 standard deviations per year. The sizes of the later gains are remarkable and far above the historical gains of .01 standard deviation per year on the long-term assessment. These results do not change when the fourth and eighth grade 1998 NAEP Reading Assessment and 2000 Mathematics Assessment are added to the sample. (This trend estimates control for student demographics and home environments. A consensus has been reached in the education research community that school systems—here, states—should be judged on score differences and trends beyond the family characteristics that they face.)

### **International Assessment of Student Performance**

International comparisons of student achievement are of growing concern given the trend toward a more global economy. Poor United States performance on international examinations is inextricably linked in the minds of Americans of decreasing economic competitiveness. Part of the debate over voluntary national testing includes the question of linking the NAEP to international tests of achievement as well as to state achievement tests.

**Third International Mathematics and Science Study.** In 1995 and 1999 the International Association for the Evaluation of Education Assessment (IEA) administered the Third International Mathematics and Science Study (TIMSS) to students in grades 3–4, 7–8 and the last year of secondary schooling. The TIMSS was an ambitious effort. More than forty-one countries and half a million students participated. Cross-country comparisons place the

United States in the bottom of the distribution in student performance on the TIMSS. International assessments galvanize support for educational improvement. However, recent evidence suggests the overall poor performance of the United States hides the above average performance of several states: Connecticut, Maine, Massachusetts, Indiana, Iowa, North Dakota, Michigan, Minnesota, Vermont and Wisconsin, all of which are states with higher than average levels of median family income and parental educational attainment.

**Programme for International Student Assessment.** In 2000 the Programme for International Student Assessment (PISA) administered examinations of reading, mathematics, and science literacy. Literacy is defined in terms of content knowledge, process ability, and the application of knowledge and skills. Thirty-two countries participated in PISA 2000 with more than 250,000 students representing 17 million students enrolled in secondary education in the participating countries.

The PISA assessments differ from the TIMSS in that

“the assessment materials in TIMSS were constructed on the basis of an analysis of the intended curriculum in each participating country, so as to cover the core material common to the curriculum in the majority of participating countries. The assessment materials in PISA 2000 covered the range of skills and competencies that were, in the respective assessment domains, considered to be crucial to an individual’s capacity to fully participate in, and contribute meaningfully to, a successful modern society.” (Organisation for Economic Co-operation and Development, p. 27.)

The latter assessment form reflects the growing trends in curricula that emphasize the same thing: training students for life-long learning.

PISA performance in reading, mathematics and science literacy is measured on a zero to 500 scale with a standard deviation of 100. The United States performed at the OECD mean score in reading, mathematics, and scientific literacy. The performance of the United States was better in reading than mathematics; reading and scientific literacy were not statistically different. The United States was outperformed in each literacy domain by Japan, Korea, the United Kingdom, Finland, and New Zealand.

## Conclusions

Although there are no federal-level examinations in the United States and there is a distinction between national testing, national standards, and federal testing and standards, the federal government is able to indirectly influence what is taught in public schools. First, the adoption of national goals for education provides states with a centralized framework for what students should know. Second, the federal government awards money to states to develop curriculum and assessments based on these goals. And third, states that align their curriculum and testing to the NAEP achieve higher overall performance measures on the NAEP. All of these and more make the National Assessment of Educational Progress truly a “national” examination.

*See also:* ASSESSMENTS, *subentry on* NATIONAL ASSESSMENT OF EDUCATIONAL ACHIEVEMENT; INTERNATIONAL ASSESSMENTS, *subentry on* INTERNATIONAL ASSOCIATION FOR THE EVALUATION OF EDUCATIONAL ACHIEVEMENT.

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ANN E. FLANAGAN

## INTERNATIONAL STANDARDS OF TEST DEVELOPMENT

Standardized tests are used in important ways at all levels of education, and such tests can help educators and policymakers make important decisions about students, teachers, programs, and institutions. It is therefore critical that these tests, and the information that they provide, meet the highest professional and technical standards. Fortunately, the experts who set policies for testing programs, who design and develop tests, and who make use of the scores and other reports adhere to a number of rigorous and publicly available standards, three of which merit a brief summary.

### Code of Fair Testing Practices in Education

The *Code of Fair Testing Practices in Education* (the *Code*) is one of the most widely distributed and referenced documents in educational testing. It contains standards related to the development, selection, and reporting of results of assessments in education. Written in nontechnical language, it provides test-takers, parents, teachers, and others with clear statements of what they are entitled to receive from those who develop tests, as well as from those who use test scores to help make decisions.

The *Code* has been endorsed by the leading testing organizations in the United States, including the

major nonprofit companies (e.g., the College Board, the Educational Testing Service, ACT Inc.) and the large commercial test publishers (e.g., the California Test Bureau, Harcourt Educational Measurement, Riverside Publishing) who account for a large share of all school district and state-level tests. The *Code* has also been endorsed by major professional organizations in the field of education, whose members make extensive use of tests, including the American Counseling Association, the American Educational Research Association, the American Psychological Association, the American Speech-Language-Hearing Association, the National Association of School Psychologists, and the National Association of Test Directors.

As a result of the widespread acceptance of the *Code*, users of standardized educational tests that are developed by major testing companies can be confident that conscientious efforts have been made to produce tests that yield fair and accurate results when used as intended by the test makers.

### Standards for Educational and Psychological Testing

The basic reference source for technical standards in educational testing is *Standards for Educational and Psychological Testing* (the *Standards*). Since 1950, this document has been prepared in a series of editions by three organizations, the American Educational Research Association (AERA), the American Psychological Association (APA), and the National Council on Measurement in Education (NCME). It is a resource that is very useful for individuals with training in psychometrics, but is not very readable by those without such specialized training. Any team involved in the development of a testing program needs to include at least one person with the expertise necessary to understand and assure adherence to the *Standards*.

### ATP Guidelines for Computer-Based Testing

As useful as the AERA/APA/NCME Standards are as a resource for technical testing standards, they give relatively little attention to one of the most important trends in testing, the growth of computer-based testing. The Association of Test Publishers (ATP) has addressed this "standards vacuum" by creating the *ATP Guidelines for Computer-Based Testing* (the *Guidelines*). The ATP is the industry association for test publishing, with over 100 member companies, an active program of publishing, a highly regarded

annual meeting focused on computer-based testing, and a set of productive divisions.

The *Guidelines* address six general areas related to technology-based test delivery systems:

- Planning and Design
- Test Development
- Test Administration
- Scoring and Score Reporting
- Statistical/Psychometric Analyses
- Communications to Test Takers and Others

The intent of the *Guidelines* is to define the “best practices” that are desirable for all testing systems, without reference to the particular hardware or operating system employed for testing. The fast growth of computer-based testing in education will make these *Guidelines* especially valuable to test makers and test users.

*See also:* INTERNATIONAL ASSESSMENTS.

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JOHN FREMER

## TEXTBOOKS

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### OVERVIEW

Joseph P. Farrell

### SCHOOL TEXTBOOKS IN THE UNITED STATES

Daniel Tanner

## OVERVIEW

Historical records indicate that for as long as systems of writing and formal schools have existed (whether

for secular, religious, or other purposes), textbooks, in one form or another, have also existed, whether on clay tablets; scrolls; bound sheets of papyrus, vellum, or parchment; or modern mass-produced books. There are records of textbooks being used in schools in ancient Greece, Rome, China, India, Sumer, Egypt, and elsewhere. Until the invention in the mid-fifteenth century of printing with moveable type, such textbooks were hand-produced, very rare, and available only to a very small, and generally very privileged, minority of people. The ability to mass-produce books led to an ever-increasing demand for, and supply of, formal schooling, which in turn produced an ever-increasing demand for books specially designed for schools. Thus, the mass-produced textbook for mass schooling was first developed in Europe. Following the patterns of European colonization (and in noncolonized areas through cultural and technological borrowing) it spread to much of the rest of the world. As formerly colonized areas achieved independence, they replaced textbooks originating in the colonizing nation with locally created textbooks reflecting their own national beliefs, aspirations, and creations.

Soon after the United States achieved independence, locally written textbooks began to be created to replace those originating in England, including Noah Webster’s speller, grammar, and reader—in which he introduced U.S. writings, history, and geography. As Latin American nations achieved independence from Spain and Portugal in the early 1800s, a similar pattern of replacing European textbooks with locally produced versions occurred. When Canada gained independence from the United Kingdom in 1867, a similar challenge to “localize” textbooks was faced and met. During the great wave of decolonization in Africa and Asia during the late 1940s through the 1960s, the then newly independent nations attempted to alter their textbooks to reflect their independent status. Most recently, with the disintegration of the former Soviet Union (and Yugoslavia) and the collapse of its domination of its former satellite states, there has been yet another wave of changing textbooks to reflect new national realities and aspirations.

These historical changes have never been simple and superficial. For example, as the nations of formerly French West Africa decolonized, they not only had to change their texts to reflect local history, but had also to change commonly used primary readers, which began with the sentence: “All of our ancestors

were Gauls.” Similarly, in the former Eastern European satellite states, not only did such obvious candidates as history, politics, and economics textbooks have to be changed, but stories in primary readers that glorified “kind Uncle Lenin” or “heroic Young Pioneers” also had to be altered, as did word problems in mathematics texts that reflected a reality that had disappeared (e.g., arithmetic problems that referred to collective farmers or workers in state enterprises). When Canada became independent, the country changed its textbooks to reflect the Canadian view that the War of 1812 was won neither by the United Kingdom nor the United States, but by Canada, since that nation had successfully resisted invasion and attempts at annexation by its neighbor to the south.

Two key points emerge from this history: (1) textbooks are as universal as formal mass schooling—where there are schools there are textbooks (except in some nations so poor that they cannot yet afford universal textbook provision); and (2) textbooks are not just pedagogical instruments—they are intensely political documents whose content reflects a given vision of a people, their history and position in the world, and their values and aspirations. Almost everywhere in the world, disputes over textbooks have been common, heated, and very difficult to resolve. While these disputes are formally over curriculum content, since textbooks basically “carry” the curriculum, the arguments tend to focus on the texts themselves. Thus, arguments in North America about how the curriculum should deal with subjects such as the place of women or racial minorities in society or organized labor, end up as arguments about the place and presence of these groups in the pages and pictures of textbooks. Similarly, arguments about the relative presence of creationism versus evolution as core explanations in science in the curriculum end up as arguments about their presence or absence in textbooks, and arguments in Japan about how to treat that nation’s role in World War II in the curriculum turn into disputes about how this role should be depicted in the prescribed textbooks.

### Policy Issues

There are two basic policy issues regarding textbooks that all nations face: (1) private versus public publishing, and (2) local versus international control and publishing.

**Private versus public publishing.** In all nations, governments tend to intervene strongly in the textbook development and provision process. Even in the most market-oriented economies, such as the United States and much of Europe, government agencies (whether at the central, state, provincial or local level) attempt to control and regulate textbook content and provision. In other words, in this field there is no such thing, empirically, as a wholly free market. Nations differ in the degree, locus, and mechanisms of state intervention, and in the extent to which the state formally “owns” the various agencies of design, production, and distribution of textbooks. In some nations, such as the United States, private publishers handle all three of these stages almost exclusively. In other cases the state presence at all three stages is overwhelming. It is very common for both private and public sectors to co-exist at one or more of these stages. In a 1989 study of twenty-one developing nations, Joseph Farrell and Stephen Heyneman found ten different patterns or combinations of public and private sector participation across the three stages. Clearly there is no general, or even particularly common, pattern. In most cases pedagogical and economic pragmatism, in relation to particular national histories and circumstances, have been the guide to these choices, rather than an ideological predisposition toward either the public or private sectors.

**Local versus international control and publishing.** Since all nations insist upon state influence on school curricula, and hence on textbook content, it is often assumed that a logical extension is that textbook design, production, and distribution must all be done locally, whether by private firms or government agencies. However, that connection has never been as tight as sometimes assumed, and it appears to be getting looser. Even in a nation like the United States, which is large and wealthy enough to support a large multi-firm private textbook publishing industry, in the early twenty-first century almost all textbooks are manufactured (printed and bound) off shore, in low-wage developing nations. For subject areas that “travel well” across cultures (e.g. sciences, mathematics, technology), there has always been considerable international trade in textbooks and textbook publishing, especially for postprimary levels of study. In earlier years this reflected patterns of European colonization. More recently it has reflected the fact that, except in such inherently localized subjects as national history and geography,

curricula in most nations have become very similar, leading to textbooks that are quite similar except for the language of instruction. This makes it increasingly easy, and pedagogically and economically sensible, to borrow, adapt, and translate textbook sections, or entire books, for different nations.

This international transfer of textbook material is commonly accomplished through various forms of licensing and contractual arrangements among publishers, and increasingly frequently through plagiarism and international copyright violations. Major centers of international textbook publishing and export include not only former colonial powers such as France and the United Kingdom, but developing nations such as India, Colombia, and Mexico. Even in very large and wealthy nations, textbook publishers routinely borrow from, adapt, and translate material from textbooks already published elsewhere. A lesson learned is that good ideas about how best to communicate and enhance the learning of bodies of knowledge and skill can be found almost anywhere in the world.

Many smaller and/or poorer nations, especially those using languages of instruction that are not widely spoken and read, are finding quite inventive ways to combine local curriculum control with various combinations of local and international publishing in order to provide textbooks for their students that are locally relevant, of high quality, and affordable. For example, a group of relatively poor British Commonwealth nations has a contractual relationship with an international publisher that has produced a set of history books that combine common chapters on world and regional history with specific locally designed chapters on each individual nation's history. By combining local knowledge with international technical expertise, they have produced books that are locally relevant, pedagogically and technically well designed, and relatively inexpensive due to the resultant economies of scale in production. The distinction between local and international in terms of curriculum content and technical production is increasingly difficult to draw cleanly, and many nations are learning that one can combine local curricular control with various combinations of local and international publishing.

### **Defining the Textbook**

What exactly is a textbook? In one sense the answer will seem obvious to anyone who has gone to school: it is that printed and bound artifact with which one

was provided, or which one had to buy, for each year and course of study. It contained all of the core content and all sorts of exercises and study questions at the end of sections or chapters. However, the textbook is not that simple.

First of all, textbooks are not at all like other kinds of books. Except in some subject areas in secondary school and in many subject areas at the university level, they are not the product of the creativity and imagination of individual authors. Textbooks are commissioned and written by authors or firms who are hired to write to specifications set by whatever authorities develop the standard curriculum for a system of schools. That is, the curriculum is set, then from it a set of specifications for textbooks are developed, and these specifications are then either delivered to a state textbook agency for book development and production or taken up by private sector publishers for textbook development, according to the specifications, in a competitive market. Indeed, it is commonly the case, certainly in North America, that the authors whose names appear on a textbook have had only a marginal input into the entire book development process. Quite often they are names selected by publishers for market appeal. This is a far cry from the days of Noah Webster, whose textbooks essentially set the curriculum for many schools in the new nation. In the early twenty-first century, authors do not set the curriculum—they write to a curriculum set by state educational authorities. This process has tended to produce textbooks that are formulaic and uninteresting.

Secondly, the boundaries between textbooks and other forms of learning materials have become increasingly blurred in recent years. Early in the development of mass formal schooling (and still the case in many poor nations), the textbook was the primary, or the only, carrier of the set curriculum. As wealth and technology have advanced, other learning materials have appeared in classrooms, to the point where it is often difficult to distinguish between the textbook and all the other forms of learning materials. In the early twenty-first century, schools (or school systems) in wealthy nations typically acquire not simply a book or set of books, but a carefully (one hopes) designed set of all sorts of learning materials, including basic texts, teachers' guides, audiovisual material, charts, maps, student exercise and homework sheets, power-point presentations and computer-access resources, and future

resources produced by advancing technology. *Learning materials packages* are increasingly replacing the basic textbook.

But at the core there remains that basic book, which has been there in schoolrooms around the world for several millennia, for good or ill. Research in wealthy nations indicates that even with all of the other learning materials now available, the vast majority of teachers continue to rely heavily on the textbook as their core teaching resource. Recent research in developing nations indicates that the single most important investment poor nations can make for improving the learning of their children is increasing textbook availability and quality. Research regarding the contribution to learning of all the new learning materials is much less clear. The value of all the new learning materials, in nations rich or poor, is less well proven. The content of textbooks is frequently controversial, its forms of presentation often subject to much debate, and which groups actually determine its form and content is a subject of much controversy, but even with all that is available to them, teachers and students throughout history have depended upon this seemingly simple learning tool.

*See also:* CURRICULUM, SCHOOL; MEDIA AND LEARNING; READING, *subentry on* LEARNING FROM TEXT; WEBSTER, NOAH.

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JOSEPH P. FARRELL

### SCHOOL TEXTBOOKS IN THE UNITED STATES

The schoolbook can be traced back to the close of the fifteenth century in Europe, but the actual term *textbook* did not come into general use until the latter part of the eighteenth century in England. In the colonial period in the United States, the religiously oriented *New England Primer* (1690) served as the beginning reader for more than a century and a quarter. Most schoolbooks were imported from England, such as the many editions of *A New Guide to the English Tongue* (1740), which included moral stories and religious selections, and the arithmetic text, *Schoolmaster's Assistant* (1743)—both written by Thomas Dilworth, an English schoolmaster. The turning point for the development of distinctive American textbooks was to emerge dramatically during the national period.

#### Americanization of Schoolbooks

The Revolutionary War cut off the supply of schoolbooks from England during its duration, and although American-born texts began to appear to meet the pent-up demand following the war, most schoolbooks continued to come from England. The epochal transformation was launched by Noah Webster's *American Spelling Book* (1783), a combined speller and reader, and his dictionaries (1806, 1828). It was Noah Webster who recognized the need for a uniform American language to reflect the ideals and realities of the new country, as opposed to the social-class divisions marked by language in England and Europe. The vehicle for this transformation was his American speller, reader, grammar, and dictionaries, which, according to Henry Com-mager, made Webster "schoolmaster to America" and assured him "a place among the Founding Fathers" (p. 83).

Webster criticized the emphasis given to Latin and Greek, as well as the traditional uses of the Bible as a textbook. In addition to his school textbooks on American language, he authored other school textbooks in a range of subjects, including history, geography, and science. Although Webster's readers were moralistic and patriotic, he believed that whereas the nations of the Old World had inherited a long history of national identity, America had been created, and needed to establish its own authentic identity by means of education and language.

### The McGuffey Readers

In 1836 the first two of what was to become a series of six grade readers appeared in Cincinnati. These were the McGuffey readers. Between 1836 and 1870 some 47 million copies of the McGuffey texts were sold. They became the textbooks of the nation, while also contributing to the establishment of the graded school and a more common curriculum. Heavily moralistic and Protestant in religious preachment, the readers were deemed to promote good character. In writing the readers (and the successive editions), the McGuffey brothers (William and Alexander) seemed oblivious to the Progressive pedagogical practices being transformed by the American experience. Nevertheless, the McGuffey readers served to promote a common curriculum that, according to Henry Commager, was a benevolent, not a chauvinistic, expression of nationalism.

### Growth and Development of Textbooks

The educational systems in European nations were traditionally under national ministries, resulting in greater standardization and uniformity of curriculum, with the consequence that textbooks were relatively limited in variety. In contrast, the decentralized American system of education, coupled with the early universalization of public elementary and secondary education in the United States, proved to be fertile ground for the proliferation of textbooks, in both variety and quantity.

Early in the twentieth century, Progressive educators were criticizing rote textbook recitation—and promoting the uses of multiple textbooks and resource books. Units of work, or teaching units, were developed at leading Progressive schools, most notably the Lincoln School at Columbia's Teachers College, in an effort to articulate the new curriculum in the face of the traditionally segmented subject curriculum. A sixth-grade unit on architecture, for ex-

ample, would require the usage of a vast array of books and other resource materials in integrating several previously isolated subjects. The unit of work also typically required students to become engaged in a corresponding variety of projects. Nevertheless, these developments did not curtail the growth and development of textbooks, but instead stimulated the production of supplementary texts and textbooks more realistically attuned to the nature of the learner and the need to connect subject matter to life experience. Since that time, textbooks have typically identified chapter groupings as *units*, although this practice has been more cosmetic than authentic or functional. Yet the better textbooks contained suggested activities, projects, and lines of inquiry beyond the actual textbook content.

Although Progressive education did not lead to the end of the textbook recitation, an early study by William Bagley (1931) found that while "straight" recitation from the single textbook was being used just about as frequently as the socialized recitation, contemporary educational theory was increasingly affecting teaching practices in a fairly profound fashion and moving it away from textbook-linked recitation. More than half a century later, in 1984, John Goodlad reported in his study of schooling that, although textbooks dominated the instruction in the sciences and mathematics, there was a wide range of textbooks and materials in classrooms. However, heavy emphasis was being given to workbooks and worksheets in various subjects, including mathematics, in a mode not always distinguishable from testing.

The early twenty-first century's national movement for standards and external testing has led to efforts to align the curriculum to the standardized tests and for teachers to engage in teaching the test, with the consequence that workbooks, worksheets, and photocopied exercises are increasingly being used. Just as with programmed instruction, the dominant mode of workbook/worksheet teaching and learning is established-convergent. In contrast, good textbooks will suggest activities, projects, and lines of inquiry that are emergent, and even divergent.

### Textbook Controversies

Since the advent of computer-assisted instruction (CAI), much has been made of an impending educational revolution whereby print and paper will no longer be the memory of humanity. In a 1967 publi-

cation commemorating the centennial year of the U.S. Office of Education, a scenario of the school was envisioned in which, before the year 2000, textbooks and other books, and even teachers, would be replaced by the computer. Subsequent developments in educational technology have been accompanied by extravagant promises that eventually faded away. Considering the economy, convenience, and durability of the textbook, it is likely that new electronic technology will not replace the textbook, but will find a supplementary place in the teaching-learning process.

Since 1990 the pressure on school administrators to bring computers into schools created all too many instances where, in the face of limited facilities, space for library books was reduced to make room for computer stations. Considerable effort has been expended on integrating the computer into the curriculum, but virtually no thought has been given to integrating the curriculum with the computer. The most common uses of the computer in schools has been as an electronic workbook or worksheet.

A review of issues of the American Library Association's *Newsletter on Intellectual Freedom* finds virtually no instances of censorship of computer-based instruction programs, whereas the cases on censorship of school textbooks are legion. The most notorious case of textbook censorship stems back to 1925, when John T. Scopes, a Tennessee high school teacher, was brought to trial for having violated a state statute prohibiting the teaching of evolution—ironically by using a state-approved biology text. The case generated national and worldwide notoriety as the “World’s Most Famous Court Trial,” with William Jennings Bryan on the side of the state and Clarence Darrow for the defense. Scopes was convicted and fined \$100. On appeal, the Tennessee Supreme Court upheld the law, but reversed the lower court’s decision on a technicality. The law in question was eventually replaced by a statute prohibiting the use of any textbook presenting evolution without a qualifying statement that evolution is a theory and not a scientific fact—thereby revealing the legislature’s ignorance of what a scientific theory is.

The problem of academic freedom in the schools reached such a critical state in the 1930s that the American Historical Society issued a huge volume of more than 850 pages under the title *Are American Teachers Free?* (1936). The book devoted a lengthy article to the problem of textbook censorship. From the 1930s into the early 1940s, the lead-

ing social studies textbook series for junior and senior high schools, written by Harold Rugg, underwent the full assault of the National Association of Manufacturers, the Advertising Federation of America, the Hearst Press, the American Legion, and other ultra-right-wing groups and individuals seeking to portray the Rugg textbooks as subversive of American ideals and institutions. The Rugg textbooks traced the evolution of modern American democracy in the face of pervasive social problems and issues, but super-patriotic groups viewed any study of unsettling ideas and problems in American life as anti-American. By the early 1940s the Rugg textbooks had been completely removed from the schools. A similar fate befell the widely used *Building America* series (1935–1948) of supplementary pictorial social studies texts during the early years of the cold war. The *Building America* series was focused on thematic problems and issues in the building of American democracy.

### **Nationalizing Influences on the Textbook**

In the wake of the cold war and the space race, an unprecedented national effort was financed with federal funds through the National Science Foundation to support curriculum reform projects in the sciences and mathematics so as to meet the “long range crisis in national security” (Bruner, p. 1). From the 1950s into the early 1970s, the overriding goal of this effort was to produce more scientists and mathematicians to meet the Soviet threat. Early on it had been anticipated that the newer instructional media would play a pivotal role in these national projects, but the mainstay turned out to be the textbook.

Controlled, directed, and promoted by university scholar-specialists, the projects embraced a discipline-centered doctrine focused on specialized, puristic, theoretical, and abstract knowledge. University scholars in the social sciences and other fields soon jumped on the discipline-centered bandwagon. With very few exceptions, the project progenitors avoided controlled research, thereby violating a fundamental principle of scientific inquiry. By the late 1960s and into the early 1970s it was becoming increasingly apparent that what had been heralded as the “new math,” “new physics,” and so on, had failed to deliver what was promised. The number of college majors in the sciences underwent a sharp decline, and noted scientists and mathematicians who had not been involved in the discipline-centered

projects began to examine the school textbooks and proceeded to issue devastating reports criticizing the textbooks and other materials for being too abstract and theoretical for children and adolescents. Nobel Laureate Linus Pauling made a blistering attack on the “new chemistry” texts for covering far too much information and advanced theoretical material, making them incomprehensible to the high school student, and recommended that the chemistry textbooks be reduced to half their size.

In effect, had the textbooks been reviewed by a wider range of authorities from the outset, the massive failure of the national discipline-centered curriculum reforms could have been avoided, and appropriate textbooks could have been created. Clearly the lesson was that textbooks should be subjected to the test of face validity by a cosmopolitan jury of authorities in the field, including educators. Totally neglected in the discipline-centered textbooks were the nature and interests of the learner, practical knowledge applications, and connections of the discipline with bordering fields of knowledge. This was also the case for the national discipline-centered projects in the social sciences and language and literature, which, in the pursuit of puristic knowledge, failed to make connections of the subject matter with the wider social life of American democracy. In following their specializations, the scholars deliberately dismissed the democratic sociocivic function of the curriculum as “ideological bias” (Tanner 1971, pp. 200–201).

### More Disputations

The latter half of the 1960s witnessed the full social impact of the civil rights movement, protests against the escalating Vietnam War, and outbursts of civil disobedience in major cities—accompanied by student disruptions on college campuses that filtered down into high schools. The demand in colleges and schools was now for curriculum *relevance*. A host of neoromantic best-selling books appeared calling for *laissez-faire* pedagogy and even for the elimination of textbooks and the preplanned curriculum. Following a brief period of extreme child-centered classrooms and the uses of *au courant* materials in the secondary schools in the name of relevance, a counterreaction of *back to basics* set in, with emphasis being given to statewide minimum-competency testing.

In a postmortem effort examining the fall of the national disciplinary curriculum-reform projects,

the National Institute of Education formed a task force in 1975. In its report the chair of the task force attributed the collapse of the federally supported projects largely to the forces of censorship, capped by a congressional attack on one of the projects in 1975, and although the new biology textbooks had been attacked by antievolutionists, it was clear that most of the projects were not targets of censorship and were already in a state of imminent collapse by the late 1960s.

Unfortunately, teachers, textbook authors, and publishers sometimes engage in self-censorship. For example, as a means of avoiding attacks by creationists, the leading center for curriculum development in life sciences for schools produced modular materials for one of its projects, rather than a textbook, allowing schools and districts the option of avoiding any of the modules that may be contentious—such as the module on evolution. Whatever the marketing benefits may be, such as the claim of “flexibility,” the fact remains that such an approach only segments the curriculum and in the case of evolution, keeps students in ignorance of a foundational paradigm of life sciences.

### Dumbing-Down of Textbooks

By the mid-1980s it was becoming increasingly clear that the back-to-basics retrenchment and minimum-competency standards had resulted in a renewed proliferation of worksheets, workbooks, and the *dumbing-down* of textbooks. Despite its reckless language in scapegoating the public schools for the decline in U.S. industrial productivity, the 1983 report of the National Commission on Excellence in Education (*A Nation at Risk*) leveled some cogent criticisms at the minimum-competency tests (required in most of the states) for actually lowering educational standards and recommended that textbooks be made more challenging. The report held that textbook expenditures and related instructional materials had declined by 50 percent over the previous seventeen years and recommended that expenditures for textbooks and other curriculum materials should be raised to between 5 and 10 percent of the operating costs of schools—many times the then current level. In 1984 U.S. Secretary of Education Terrel H. Bell accused publishers of “dumbing down” their textbooks, but he failed to acknowledge that the dumbing-down is the inevitable consequence of curriculum fundamentalism, back-to-basics retrenchment, and censorship pressures.

In 1985, upon the recommendation of the California Curriculum Development and Supplemental Materials Commission, the California State Board of Education rejected many of the science textbooks for having failed to address controversial topics adequately, and many mathematics texts for stressing “apparent mastery” of mechanical skills without conceptual understanding and experiential application in problem-solving situations. Within several months, revised textbook editions appeared. One publisher, which had not even listed the topic of evolution in the index of its textbook, produced a revised edition within a year with an entire chapter on evolution. Based on the California experience, it would appear that a knowledgeable curriculum development commission in other states could serve not only as an antidote to censorship, but also as a vehicle for the continual improvement of textbooks and other curriculum materials. Faculty curriculum committees at the local school level could also serve in this capacity.

### Change and Challenge

Good textbooks codify and synthesize knowledge in ways appropriate to the cognitive, affective, and social growth of learners. The durability and popularity of the textbook reside in its economy and flexibility. The fact that textbooks have served historically as prime targets for censorship of ideas is testimony that textbooks are powerful media for emergent, and even divergent, learning. The textbook should not be seen as the syllabus or complete course of study, but should be created as a vehicle for opening up avenues for further inquiry and the use of a range of print materials and other media. Whether the school textbook is designed to meet the function of general education, exploratory education, enrichment education, or even specialized education, to be successful it must be generative in ideas, concepts, and skills for meaningful applications in the life and growth of the learner. Such textbooks should relate to and draw from bordering areas of knowledge. But even the best textbooks depend on the teacher for their successful use as a vehicle for emergent learning.

The programmed textbook failed for many of the reasons cited above—for its narrow-minded behavioristic focus on established-convergent learning, its segmental and mechanical format and approach to knowledge, its mechanistic multiple-choice or fill-in-the-blank mentality, and its artificiality in failing

to engage the learner’s imagination and life experience, to list just a few shortcomings. Unfortunately the workbook and worksheet persist, while the computer has commonly been used in school as an electronic worksheet aligned to external tests. Over the short history of the programmed textbook, censorship was never a problem. As noted by Judith A. Langer and Richard L. Allington in 1992 and by Daniel Tanner in 1999, the established-convergent programming repertoire found no place for provocative ideas.

In the contemporary scene, publishers would do well to cut down on the uses of readability formulas in the construction of textbooks and instead center reading materials on ideas. Even preschoolers can follow a story line, which requires the development of plot, character, sequential events, and relational ideas. Idea-oriented teaching, rather than error-oriented teaching, is required for a generative curriculum.

For more than a century, Progressive educators have deplored the direct textbook recitation method and the use of the textbook as the sole curriculum source for a subject at each grade level. Teachers have been urged to use multiple texts and a rich variety of material resources and activities beyond the texts. Progressive educators promoted and produced textbooks that stimulated students to investigate problems of persistent personal and social significance. In the early twenty-first century, it is not uncommon to find a beginning college textbook in ecology, for example, perfectly suitable for use at both the college and high school levels. The wide range of appeal stems from the appropriateness of the interdisciplinary material to the life of the learner in the wider society.

The design and function of the textbook at virtually any level should be directed at interrelating or correlating the content with bordering areas of knowledge so as to empower the learner in the uses to which knowledge is put. As Margaret McKeown and Isabel Beck noted in 1998, the textbook should be so designed as to reveal turning points, rather than end points, in the development and uses of knowledge.

In a multicultural society there will always be divided and special interests that will seek to impinge on the teacher’s right to teach and the student’s right to learn. But an enlightened citizenry requires freedom of inquiry. Historically, those who would seek

to curtail the free currency of ideas in the teaching-learning process have focused their efforts on print media, especially the school textbook.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; MEDIA AND LEARNING; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; TECHNOLOGY IN EDUCATION; WEBSTER, NOAH.

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DANIEL TANNER

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### THAYER, V. T. (1886–1979)

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Teacher and Progressive education administrator, V. T. Thayer was the author of many books on American education. In his outlook and work, Thayer remained an articulate and persuasive advocate of Progressive education, philosophic naturalism, and secular humanism.

V. T. Thayer received his doctorate in philosophy at the University of Wisconsin in 1922. While studying for that degree he was an instructor in the subject (1919–1922) and additionally acquired wide experience as a teacher and superintendent of schools in Wisconsin. From 1924 to 1928 he held the position of professor of education at Ohio State University and was managing editor of the *American Review* (1923–1927).

Although associated primarily with the philosophy of John Dewey, Thayer was receptive to the educational ideas of Felix Adler and the Ethical Culture Society. In 1928 he was invited to become education director of the Ethical Culture Schools, a position he held until 1948. He was also one of the leaders in the society.

Throughout his life Thayer was frequently in demand as a lecturer and taught at many universities, among them Harvard University; Teachers College, Columbia University; Dartmouth College; the University of Hawaii; the University of Virginia; Johns Hopkins University; the University of Maryland; and Fisk University. He was a member of the Progressive Education Association, the National Education Association, the Advisory Council for Academic Free-

dom Committee of the American Civil Liberties Union, the Public Education Association, and the Institute on the Separation of Church and State. He was named Pioneer Humanist of the Year by the American Humanist Association in 1964. In 1969 he received the Award for Distinguished Service to Education from the John Dewey Society.

In the early 1930s while serving on the Board of Directors of the Progressive Education Association, Thayer was active in two commissions founded by the association. The first was concerned with liberalizing college admissions procedures. By a special arrangement made between some 100 colleges and a select group of secondary schools (known as the "thirty schools") the latter were able to experiment with curricular revisions without jeopardizing the admission of their students to college. The arrangement was the basis of what has been called the Eight-Year Study. The work of this commission soon revealed the need for a fundamental study of the secondary school curriculum. Accordingly the association formed a second commission with Thayer as chairman, titled the Commission on the Secondary School Curriculum. A group of committees was established in which school and college teachers, anthropologists, sociologists, psychologists, psychiatrists, physicians, and social workers participated. The primary purpose was to stimulate research and suggest materials and methods helpful in curricular experimentation on school and college levels, and to develop guidelines for this experimentation relevant to the needs of young people in contemporary society. Thayer reported on this commission in *Reorganizing Secondary Education* (1939). Fieldston was one of the "thirty schools," and Thayer's activity in both of the commissions stimulated wide interest in the Ethical Culture Schools.

During his directorship Thayer was responsible for several major innovations in the administration and curriculum of the Ethical Culture Schools. He had often emphasized the importance of guidance, with a special concern for individual and social aspects of needs and growth, in contrast to traditional views of a curriculum of discipline and fixed standards. With the cooperation of Caroline B. Zachry, Thayer established a Department of Guidance consisting of professionally trained counselors. This recognition of the role of "needs" in the personal and social formation of an adolescent's life and relationships requiring "guidance" was regarded critically by some educators as giving undue attention to the idi-

osyncrasies of individual students. Thus in his history of the Ethical Society, Howard Radest charges that in emphasizing the importance of individual student needs, Thayer subverted the teachings of Felix Adler, who held that the goal of the school is to serve "the needs of civilization." However, Radest fails to consider what Adler and Thayer really meant by "needs." Furthermore, Thayer's humanistic conception of individual student needs was not advanced to replace Adler's ideals, nor were their views ever entirely antithetical.

Thayer also initiated an extensive reorganization of the administrative structure of the Ethical Culture Schools. Each functional group in each of the several schools—faculty, parents, alumni—would participate in the formulation of policies through representation in an integrated ascending order of committees. Each school had its executive committee, consisting of faculty representatives, principal, and the director. These committees were in turn represented in one administrative council. Students, parents, and faculty were also represented by membership on the board of governors. Thayer called this organizational structure "functional democratic administration." As a model it was a contribution to educational administration.

A further novel addition to the school curriculum was the development of ways by which the school could contribute to the community. Programs of community service were designed to involve each student in the upper high school (junior and senior grades) in some form of community service. A notable extension of this effort was the development of Junior Work Camps, managed primarily by members of the Fieldston staff and administered by a board of directors of which Thayer was the chairperson. The camps included students of other schools as well as those of Fieldston. Their purpose was to provide young persons of high school age with an opportunity to engage in meaningful and constructive work (i.e., participation in the harvesting of fruits and vegetables, which gave valuable help to truck farmers in a period of labor shortage).

Despite formidable problems of stability and direction due to the depression of the 1930s and the outbreak of World War II, the impressive academic record and successful curricular experimentation of the Ethical Culture Schools under Thayer's leadership occasioned national and international recognition.

In the early twenty-first century, however, he is remembered primarily for his professional activities after he left the Ethical Culture Schools and especially for his many writings on problems and issues of American education. Two well-known books deal with the historical background and philosophical influences and formative ideas that have shaped the school in American society. In these and other writings, Thayer engaged in critical analyses of certain well-publicized proposals for reforming education; he also examined such major problems as federal aid, desegregation, and contesting views of church and state in relation to the schools.

*See also:* EIGHT-YEAR STUDY; PROGRESSIVE EDUCATION; SECONDARY EDUCATION.

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H. S. THAYER

## THORNDIKE, EDWARD L. (1874–1949)

Edward L. Thorndike was an American psychologist, educator, lexicographer, and pioneer in educational research. The groundwork for research into learning was provided in 1913–1914 by his three-volume *Educational Psychology*, which set forth precepts based on his experimental and statistical investigations. These precepts—which covered such wide-ranging topics as teaching practices and individual differ-

ences between students and such administrative concerns as promotion decisions and grouping according to ability—came to dominate professional thinking.

While such men as John Dewey and Robert M. Hutchins influenced the philosophy of education, Thorndike and those whom he inspired wrote reading and arithmetic books for pupils, school dictionaries and spelling lists, tests, and pedagogical guidebooks and teachers' manuals. Because, however, it is far more difficult to assess influence in the operations of many thousands of American classrooms than to analyze ideas in the words of educational theorists, Thorndike's contributions are taken largely for granted.

### The Man and His Career

In its external details, Thorndike's life was uneventful and circumspect; its drama lay in his genius (his IQ was estimated at nearly 200) and in the tumultuous times to which his work bore such marked reference. Born in Williamsburg, Massachusetts, on August 31, 1874, of a family line resident in New England since 1630, Thorndike, like a surprising number of other notables of his day, was reared in a clergyman's household. But in an era when science was challenging religion as a source of truth, when inquiry and universal education threatened dogmatism and sectarian inculcation, and when a career in the church was becoming less attractive than life in the laboratory, Thorndike rejected even his father's liberal brand of Methodism for an agnostic secularism. Yet, in his evangelical regard for science, Thorndike transferred to science a religious-like belief in the possibility of personal and societal salvation. Science was, he said repeatedly, "the only sure foundation for social progress."

Thorndike grew up in a household where excellence was expected, for the children of a minister were to be models for the congregation in all matters. In academic performance the Reverend Thorndike's children complied, all earning excellent grades and winning the scholarships which made college studies possible. In addition, all established academic careers: Ashley as a professor of English, Lynn as a historian, and Mildred as a high school English teacher; eventually all three Thorndike brothers taught at Columbia University. Edward Thorndike's children continued this scholastic brilliance but turned, like father, from literary to scientific and mathematical careers. All four children earned Ph.D.

degrees: Elizabeth Frances in mathematics, Edward Moulton and Alan in physics, and Robert Ladd in psychology. Thus, from his own boyhood, when his parents encouraged early reading and supervised homework, to his own close guidance of his children's schooling, Thorndike brought high degree of personal involvement to his professional study of education.

Because of the church's requirement that a minister be moved regularly, Thorndike grew in eight New England towns before 1891, when he left home to enter Wesleyan University in Middletown, Connecticut. Never feeling at home anywhere in his childhood, when he possessed the power to decide for himself he chose to stay put: he spent forty years at Teachers College, Columbia University, spurning other positions offered, and built a home at Montrose, New York, at age thirty-three. He died there on August 9, 1949, near age 75, leaving his widow, Elizabeth Moulton, whom he married in 1900, and their four grown children.

The early moving about left Thorndike with pronounced shyness and social uneasiness, helping to make the lonely privacy of research a comfortable world. His educational work also displays a certain nonsocial cast. Unlike the psychologies of the Progressive educators with whom he shared many beliefs, Thorndike's educational psychology was not a social one. To him learning was an essentially private, organic undertaking, something that happened under one's skin, in the nervous system; the "connections" of interest to the teacher were properly those between stimulus and response—not the interactions between individual students, which concern those who view a class primarily as a social group.

During Thorndike's youth the United States fully entered the age of industrialization and urbanization. The mill towns of New England were part of the industrial revolution that was attracting hundreds of thousands of immigrants a year to manufacturing jobs and making Boston, Pittsburgh, Chicago, and New York great, if trouble-plagued, cities. Coming to New York City in 1897 to complete his doctoral studies at Columbia University, Thorndike was to remain there for the rest of his life, except for a brief tenure from 1898 to 1899 as a teacher of psychology and pedagogy at the College for Women of Western Reserve University in Cleveland, Ohio.

It was understandable that an urban setting would be attractive to the modern academic man, particularly to the man of science; it was in the cities that industrial wealth built museums, libraries, and laboratories, and it was there that philanthropic foundations had their headquarters. Such foundations as the Carnegie Corporation of New York, the General Education Board, and the Commonwealth Fund established the Institute of Educational Research at Teachers College, to which Thorndike devoted his energies almost exclusively from 1921. It was at this time that the wealth and centrality of New York City were helping to make Columbia a great national university and its Teachers College the most important center for the training of the leaders in public education in the United States. By 1900 all leading American universities were, like Columbia, in urban settings. Moreover, the leadership of public education nationally was passing into the hands of the superintendents of big-city school systems and to their counterparts in the state capitals and in the Federal Bureau of Education.

By the turn of the century, elementary education in the United States was virtually universal; thereafter, the task was to extend secondary schooling to the entire nation. The need for teachers was great. Although the normal schools, frequently rural institutions, continued to train many teachers, departments of education became common within universities after 1900. Thorndike first arrived at Teachers College in 1899, when its status was changing from that of a private normal school to the education department of Columbia University. Because universities were preeminently places of research, their departments for training teachers and school administrators partook of the prevailing atmosphere favoring scholarly and scientific inquiry. In leaving Western Reserve for Teachers College, Thorndike abandoned a traditional training school for a place which he quickly helped make a center for the scientific study of education and for the training of educational researchers. As its dean, James Earl Russell, recalled: "In developing the subject of educational psychology . . . for students in all departments, Professor Thorndike has shaped the character of the College in its youth as no one else has done and as no one will ever again have the opportunity of doing" ("Personal Appreciations" 1926, p. 460).

In addition to urban resources and leadership for research and to the prestige accorded science by the universities, there was another incentive for ex-

panding educational research: the widespread desire in educational circles to have teaching recognized as a profession. Schoolmen were aware of the high total of public spending for education and shared the prevailing faith in schools as critical agencies of character training and national development. Even in an occupation marked by low prestige, minimal preparation, a preponderance of women, high turnover, and legal dependence upon boards of laymen, professional status was regarded as an attractive, realizable goal.

One of the characteristics claimed by an occupational group seeking professional status is its possession of a large and growing body of expert knowledge. The function of research was to replace the folklore of the teaching craft with scientifically verifiable assertions. Thorndike acknowledged after thirty years of work that research had yielded only a few answers to the practical questions raised by school operations. He maintained, however, that a true profession awaited those who patiently researched fundamental educational questions. The principal barrier was not, he believed, the limitations of science, but the traditional conservatism and inertia characteristic of institutionalized education.

### A Psychology for Educators

At Teachers College, Thorndike taught psychology to large numbers of teachers and school administrators. In his early courses and in such books as his *Notes on Child Study* (1901a), *Principles of Teaching, Based on Psychology* (1906), and *Education: A First Book* (1912), he tried to inform educators of what was already known of human nature and human variation, of what had been written about behavior and learning by such creative psychological thinkers as Scotland's Alexander Bain and William James at Harvard, under whom Thorndike had once studied. Increasingly, however, he turned away from concentrating his efforts on converting teachers to a scientific attitude and away from deducing educational precepts from existing psychological thought. Instead, he began to construct a new educational psychology—one more in keeping with the experimental quantified directions laid out by the “new psychology” being developed in German and American research centers.

**The scientific requirement.** As much as he admired the brilliance, humane perceptiveness, and stylistic elegance of William James's *Principles of Psychology*, Thorndike was of that new generation of younger

psychologists who, after 1895, sought to sever psychology's ties with “mental philosophy” by rejecting armchair theorizing, avoiding such philosophical concepts as “soul,” and opting for the methods, language, and standards of physics and experimental biology. He was deeply impressed by the painstakingly precise observations of animal behavior by Charles Darwin, by the methodological controls in the memory studies of Hermann Ebbinghaus, and by the statistical inventiveness of Sir Francis Galton and Karl Pearson. Discussions in the summer of 1900 with the famed experimentalist Jacques Loeb at the Marine Biology Laboratory at Woods Hole, Massachusetts, finally convinced Thorndike that his talent lay in “doing science,” and that he “ought to be shut up and kept at research work” (Joncich, p. 265).

Lacking mechanical aptitude, Thorndike never incorporated into his research the elaborate instruments found in Wundt's Leipzig laboratory and among Titchener's students at Cornell, or favored by Charles Judd, another important educational psychologist. Thorndike's approach was basically observational and problematic: place the subject in some problem (test) situation—seeking to escape from a confining place, having to rank his attitudes, choosing the correct response among several alternatives to avoid a mild shock—then observe the behavior aroused and report it in quantitative form. The typical Thorndike experiment was a simple paper-and-pencil investigation, like the first he ever attempted: as a Harvard graduate student he tried to measure children's responsiveness to unconscious cues by giving candy rewards to those correctly guessing the number or object he had in mind.

**Lessons from animal studies.** Despite his typically simple approach, Thorndike is credited with two research techniques basic to modern psychological studies of animal behavior: the maze and the problem box, both of which were invented for his now-classic study of learning, *Animal Intelligence* (1898). A thoroughgoing Darwinist, Thorndike was convinced that, because of evolutionary continuity, the study of animal behavior is instructive to human psychology. Hence, when he had difficulty in securing human subjects, Thorndike switched easily from children to chickens in his Harvard studies.

A significant portion of *Animal Intelligence* is a critique of the uncontrolled observation and casually acquired anecdotal reportage prevalent in what little comparative psychology existed in the 1890s. The faulty methods, Thorndike declared, contributed

spurious data and led to unwarranted interpretations. The most serious error was attributing to animals a higher order of intelligence than would be justified by scientific observations of animal behavior. His own painstaking research with cats and dogs, and later with fish and monkeys, convinced Thorndike that the process of animal learning rested not on some form of reasoning and not even on imitation. Learning depends, instead, upon the presence of some situation or stimulus (S) requiring the animal to make various, more or less random responses (R); as a result of such trial and error, the correct, or most adaptive, response is eventually made (for example, hitting a lever to escape a box or to reach food). The effect produced by the appropriate response is a sort of reward: it may be escape, food, sex, or a release of tension (in animals and humans) or an experienced feeling of success or other learned rewards (in humans alone). The effect acts physiologically, creating or reinforcing a neural connection between that response and the situation which provoked it; repetition of that or a similar stimulus becomes more readily able to produce the previously successful response, and inappropriate responses are forgone. Learning has taken place.

**Reward: the key to learning.** The basic principle which Thorndike formulated to account for the S-R connection is the law of effect; in the language of such later psychologists as Clark Hull and B. F. Skinner, this is a reinforcement theory of learning.

If, as Thorndike maintained, human behavior represents primordial attempts to satisfy native and learned wants, then an effective, positive, and humane pedagogy is one which facilitates the making of desired and successful responses, forestalls incorrect responses, and is generous with rewards; a poor teaching method, on the other hand, carelessly permits wrong responses and then must punish them to prevent their becoming established as bad habits. Initially Thorndike assumed that reward and punishment were equal opposites, effects evenly capable of causing learning. Reward is preferable since it is more efficient to forestall inappropriate responses by producing and rewarding desired behavior than by punishing incorrect responses; a positive pedagogy is preferable to a punitive one. As a result of empirical studies undertaken in the late 1920s and 1930s, however, Thorndike concluded that he had been mistaken earlier. Punished responses are not weakened as rewarded connections are strengthened; despite common sense and tradition, punishment may

actually enhance the probability that an undesired response will be repeated.

Thorndike was virtually the first educator to give theoretical and empirical attention to effect, although reward and punishment had been given practical attention by generations of schoolmen. Still, the pedagogical emphasis at the turn of the century centered on punitive and repressive measures and on fault-finding. In 1906 Thorndike warned teachers that the most common violation of human nature was the failure to reward desired behavior. In propounding the law of effect, then, Thorndike gave a psychologist's support to those educational philosophers, like John Dewey, and those founders of Progressive schools, like Marietta Johnson, who wished to make schools more humane and to have them better relate educational methods to the nature of childhood. However, because of his articulation of another law of learning—the law of exercise—Thorndike's psychology differed from that Progressivist thinking which emphasized spontaneity and favored student selection of activities and freedom from a planned curriculum sequence and from drill. (The law of exercise states that once a given response is made to a particular stimulus, each recurrence of that stimulus tends to recall that response; hence, an S-R bond is being strengthened. The educational implication of the law promotes drill, or practice, of desired responses and careful teacher attention to forming appropriate habits.)

### Education as Specific Habit Formation

Accepting William James's views, Thorndike wrote:

Intellect and character are strengthened not by any subtle and easy metamorphosis, but by the establishment of particular ideas and acts under the law of habit . . . The price of a disciplined intellect and will is eternal vigilance in the formation of habits . . . Habit rules us but it also never fails us. The mind does not give us something for nothing, but it never cheats. (1906, pp. 247–248)

A radical educational theory stressing freedom, spontaneity, inner direction, and “unfolding,” one that “stands out of nature's way,” was to Thorndike a “something for nothing” pedagogy. In its place, Thorndike's psychology required the careful ordering of learning tasks, as in the *Thorndike Arithmetics* (1917), which he prepared for school use; practice (exercise, drill) with reward; and measurement of

progress through frequent testing, preferably by standardized tests so that more reliable estimates of learning could be had.

Another “something for nothing” educational theory—this one from the conservative, formalistic right wing of educational opinion—was the belief in mental (formal) discipline: that various mental or perceptual faculties are strengthened by being exercised upon some formal, preferably difficult task; that the study of a rigorously logical subject, like geometry, promotes logical behavior; and that practice in accurate copying transfers to other behavior, making one more accurate generally.

Some skepticism about transfer of training had already developed, on a priori grounds, before Thorndike published the first major empirical challenge to this widely held theory. The proponents of more modern subjects—vocational courses, the modern languages, physical education, even the sciences—had attacked formal discipline and faculty psychology because the defenders of the classical studies had based classical domination of the curriculum primarily on the grounds that these difficult and abstruse subjects, which were unappreciated by pupils, had tremendous transferability value, just as lifting the heaviest weights develops muscle power better than lighter burdens do. Between 1901 and 1924, Thorndike’s research supported those educational reformers who believed that a subject or skill should be included in the curriculum because of its intrinsic value, and not because of unproved assertions about transfer power.

### Education as a Science

In his *Educational Psychology*, Thorndike wrote: “We conquer the facts of nature when we observe and experiment upon them. When we measure them we have made them our servants” (1903, p. 164). Equally as important as empiricism to Thorndike’s psychology was his emphasis on measurement and quantification; poorly prepared by the schools in mathematics and largely self-taught in statistics, Thorndike became the educational world’s exponent of the use of science’s universal language of description, numbers. His theme was, all that exists, exists in some amount and can be measured. He introduced the first university course in educational measurement in 1902, and two years later he wrote the first handbook for researchers in the use of social statistics, *An Introduction to the Theory of Mental and Social Measurements*.

**Educational and intellectual tests.** The movement toward testing was the primary outcome of attempts to translate qualitative statements (Mary seems to be having trouble in reading) into quantitative and comparable terms (In grade 5.6, Mary tests at 4.4 in reading comprehension and 4.7 in vocabulary knowledge). Standardized achievement tests in school subjects were built on centuries of use of teacher-made tests. What the twentieth century added was the standardization necessary for reliability and comparison of results from class to class. Professionally written and administered to thousands of pupils, using norms based on nationwide samples of students, achievement tests were created for every level of schooling, from primary through graduate school, including tests for out-of-school adults at various age levels. In 1921 use of these tests was established when 2 million pupils took standardized tests of academic achievement; thereafter, growth in the use and development of tests was virtually taken for granted. Thorndike contributed several works on construction of tests and devised various tests of his own: rating scales for handwriting, drawing, and composition; tests of oral and silent reading skill, geographical knowledge, English usage, spelling, reading and reasoning; and college entrance tests and law-school entrance examinations.

Intelligence and scholastic aptitude tests have a shorter history but have been even more crucial in shaping school practices (like promotion policies, grouping, and grading) and professional and public thinking. Alfred Binet’s point scale, developed in France early in the twentieth century, is the landmark contribution. But before such testing could have great educational or social impact, it was necessary to find means of adapting the individually administered, Binet-type artifact tasks to groups using paper and pencil. This did not come about until World War I, when the U.S. Army commissioned psychologists to prepare and administer tests to aid in classifying recruits. Thorndike was a member of the Committee on Classification of Personnel from 1917 to 1919 and supervised work on the Beta form (the form for illiterate recruits); it and the Alpha form (for literates) were administered to 2 million soldiers by 1919, the world’s first effort in the mass measurement of intelligence. Within three years, 1 million schoolchildren took similar tests, many of them the National Intelligence Test which a group of former army psychologists, including Thorndike,

had developed. He later devised the CAVD (sentence completion, arithmetic, vocabulary, following directions) intelligence examination and a nonlanguage scale (for illiterates).

Aside from the kind of general intelligence measurements which concern educators most, Thorndike was interested in other types of aptitudes, believing that intelligence is not a unitary or general factor but is constituted of millions of discrete stimulus-response bonds; any intelligence test is simply a selective sample-taking of all the possible learned connections that might be present. Thorndike believed that since individuals differ, primarily by heredity, in their relative ability to form connections (that is, to profit from experience, to learn), and since any one individual is unevenly endowed in the ability to form connections of different types, tests of intelligence-in-general may miss certain aptitudes useful for vocational counseling, hiring programs, or selection of employees for special training programs.

In 1914 Thorndike began devising tests for use in locating persons with clerical aptitudes and interests and thereby fathered personnel-selection psychology in business and industry. In 1918 he headed the wartime search for men with aptitude for learning to fly. To try to prophesy flying success was itself a pioneering venture in a day when hardly a flying school existed in the United States and the aircraft industry was yet unborn. Such wartime experience in measuring aptitudes was continued in Thorndike's later research into vocational guidance for schools. He advocated special efforts and new departures in vocational education for those schoolchildren—perhaps as much as a third of the total—who “may learn only discouragement and failure” from much of the existing curriculum (Jonçich, p. 473). The vocational education movement lagged, however, with the decline of public interest in the 1920s and massive unemployment of the 1930s.

**Studying human variation.** The new instruments for measuring ability and achievement and especially the widespread use of these instruments inspired new knowledge of and intensified concern with individual differences. “It is useless to recount the traits in which men have been found to differ, for there is no trait in which they do not differ,” Thorndike wrote in *Individuality* (1911, p. 6). The new educational psychology, he said, must reject classical psychology's assumption of a typical mind from which pattern there were only rare departures; it must study individual minds, be a differential psychology

which describes, explains, and seeks to make predictions about human variation.

Society's commitment to universal schooling must not, Thorndike believed, obscure its responsibility to every individual and its respect of difference. While psychology will, as a science, search for universal laws explaining human behavior, the pedagogical art, Thorndike believed, must recognize that it is individuals who act, who learn or refuse to learn.

The practical consequence of the fact of individual differences is that every general law of teaching has to be applied with consideration of the particular person . . . [for] the responses of children to any stimulus will not be invariable like the responses of atoms of hydrogen or of filings of iron, but will vary with their individual capacities, interests, and previous experience. (1906, p. 83)

Of these sources of variation, the most important in Thorndike's view was differing capacities—differences caused primarily by genetic inequalities. To the persisting debate about heredity and environment, Thorndike offered comparative studies of twins, siblings, and unrelated individuals, of family histories, and of school eliminations (dropouts). His findings convinced him that heredity is the primary determinant of intellectual difference and, because such other traits as personal morality, civic responsibility, industriousness, and mental health correlate positively with intelligence, that genetic endowment is the critical variable for welfare and social progress. So, in the interest of improving the human gene pool, he espoused eugenics.

In an age when psychoanalysis introduced arresting concepts of the primitive motivations of mankind, when the arts made a virtue of the “natural,” when such educational theorists as G. Stanley Hall espoused a naturalism in education which urged teachers to step aside lest they interfere with nature's way, Thorndike offered dissent. Investigations of original nature and its differing expressions in individuals is not an end in itself, he argued. To find that heredity shapes human potential more than does a favorable environment does not end society's responsibility to improve its institutions, any more than the discovery of gravity was an excuse to cease man's efforts to fly. “The art of human life is to change the world for the better,” Thorndike wrote in *Education: A First Book* (1912, p. 1). “Only one

thing [in man's nature] is unreservedly good, the power to make it better. This power of learning . . . is the essential principle of reason and right in the world," he wrote in *Educational Psychology* (1913–1914, Vol. 1, pp. 281–282).

It is to institutions called schools and universities that modern societies assign most of the formal stimulation of this power of human learning. For his efforts to improve the abilities of educational institutions to capitalize upon learning potential Thorndike received much recognition during his lifetime: the presidencies of and honorary memberships in numerous American and international scientific and educational associations, honorary degrees from many universities, and election to the National Academy of Sciences. A most appropriate award, the Butler Medal in gold, was bestowed upon Thorndike by Columbia University in 1925 "in recognition of his exceptionally significant contributions to the general problem of the measurement of human faculty and to the applications of such measurements to education" (Jonçich, p. 487).

*See also:* EDUCATIONAL PSYCHOLOGY; INTELLIGENCE, *subentry on* MEASUREMENT; LEARNING THEORY, *subentry on* HISTORICAL OVERVIEW.

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GERALDINE JONÇICH CLIFFORD

## TITLE IX

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### SCHOOL SPORTS

Janet M. Holdsworth

### INTERCOLLEGIATE ATHLETICS

Janet M. Holdsworth

## SCHOOL SPORTS

Participation in interscholastic athletics programs provides students from diverse backgrounds opportunities to cooperate with and compete against their peers through sport. Participation in school sports may lead to the following benefits to students: improved physical health and fitness, higher self-esteem, a stronger sense of community and purpose, consistent time spent with an adult mentor, and increased academic performance in the classroom. Given the possible benefits associated with school sport participation, both boys and girls should have equitable opportunities to participate in and benefit from sports. Historically, boys have participated in interscholastic athletics programs in greater numbers than their female peers; at the turn of the twenty-first century, however, girls are participating in larger numbers than ever before.

In 1971 approximately 300,000 girls (compared to 3.5 million boys) participated in interscholastic sports programs. By 1999, an estimated 2.5 million girls (compared to about 4 million boys) participated in youth and high school sports. And overall, society is more accepting of this increased rate of girls' participation in school-sponsored sports. The increase in female participation in athletics at all levels across the United States is attributed mainly to the passage of Title IX of the Education Amendments of 1972 to the Civil Rights Act of 1964.

Since its passage in 1972, Title IX has been the main catalyst behind secondary school and college athletics programs creating more athletic opportunities for females. Title IX requires institutions receiving federal funding to provide equitable resources

and opportunities for women in a nondiscriminatory way. The legislation states that “no person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving federal financial assistance.” The Department of Education’s Office for Civil Rights (OCR) has been responsible for the oversight of Title IX since 1980.

OCR created a three-prong test that is used to assess gender equity compliance in school athletic departments. Schools must meet the criteria of at least one prong to be in compliance with Title IX. To satisfy the first prong of the gender equity test, a school must show that the athletic participation rates by gender are within 5 percent of the enrollment rate for that gender. Schools may also be in compliance if they satisfy the second prong—providing evidence that the school has a history and current practice of program expansion for girls. To meet the requirements of the third prong, the school must demonstrate that it offers an athletic opportunity for girls if there is a sufficient interest and ability in a particular sport. Although schools need to meet only one prong of this three-prong test, most interscholastic athletics programs still have not achieved equity in the three major areas of Title IX that pertain to high school sports: athletic financial assistance, accommodation of student interests and abilities, and other program areas.

Schools do not necessarily need to provide equal funding for boys’ and girls’ sports. School sports programs are in compliance with Title IX if the quality of the girls’ program is equal to that of the boys’ program. The funding may not be equitable because of large programs (such as football), but if the total funding for overall programs are equal, then the school is more than likely in compliance. Other program areas that must be equitable by gender include: equipment and supplies, scheduling of practices and contests, travel, access to quality coaches with equitable pay, locker rooms and facilities, access to training facilities and medical services, publicity, and sporting opportunities.

Achieving sports equity in secondary schools is a significant factor in increasing opportunities for girls in sports and in helping to change perceptions about athletes based on traditional gender stereotypes. Gender equity in interscholastic sports translates into students having similar opportunities for participation in a variety of sports and seasons re-

ardless of their gender. Equitable opportunities to benefit from participation in interscholastic sports should exist for all students. Although the number of girls participating in school sports has increased since the passage of Title IX, inequities still exist. Schools need to work with their athletics administrators and designated Title IX officers to ensure compliance is achieved.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; FINANCIAL SUPPORT OF SCHOOLS; INDIVIDUAL DIFFERENCES, *subentry on* GENDER EQUITY AND SCHOOLING; PHYSICAL EDUCATION; SPORTS, SCHOOL.

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JANET M. HOLDSWORTH

### INTERCOLLEGIATE ATHLETICS

Ever since 1852, when Harvard defeated Yale in a regatta, intercollegiate athletics have played an increasingly significant role on American college and university campuses and in their communities. The boat race, set in New Hampshire, marked the first intercollegiate athletic event in the United States, and athletics rapidly became an important, and

often controversial, part of collegiate life. The surge of enthusiasm around intercollegiate athletics—both on campus and in the surrounding community—mirrored the infectious competitive spirit of the developing American culture and society in the late nineteenth and early twentieth centuries. Since that first intercollegiate athletic event, undergraduate students competing in this unofficial *extra* curriculum have been transformed into the highly trained, specialized student athletes participating in the nationally visible (and televised) athletic events of the twenty-first century.

After 1900, intercollegiate athletic programs grew expansively on campuses across the United States in terms of the quantity and type of sports offered to undergraduate students, the number of male participants, and the size of operating budgets. Athletic competition for female undergraduates saw limited development, however, with the exception of sports-related activities and contests organized by physical educators, such as intramural and related events. Historically, female athletes faced exclusion in sports, as access to scholarships and facilities, and to playing, coaching, and administrative opportunities, were limited.

From the late nineteenth century until the mid-twentieth century, athletic activities offered to female undergraduates (e.g., basketball, field hockey, softball, and tennis) were meant to provide health benefits, not promote competition or any other seemingly negative and unfeminine characteristic in young women. This general protection and attempted preservation of collegiate women's feminine characteristics on campus paralleled the general perception of society at this time in history. The passage of Title IX of the 1972 Education Amendments to the 1964 Civil Rights Act marked the beginning of a shift from this restrictive climate toward an environment of more opportunities for females in athletics and of a growing awareness on campus and in society that female athletes can compete in the athletic arena in ways comparable to their male peers.

#### Gender Equity Legislation

Since its passage in 1972, Title IX has fueled the growth in college athletic programs and opportunities for female student athletes. Title IX requires institutions receiving federal funding to provide equitable resources and opportunities for women in a nondiscriminatory way. The legislation states that "no person in the United States shall, on the basis

of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving federal financial assistance.” After the legislation was passed, colleges and universities were granted until 1978 to make the necessary changes to programs and procedures in order to be in full compliance with the law.

Subsequent legislation passed by Congress has provided further assurance that institutions will be held accountable for complying with Title IX and its principles. For example, the 1987 Civil Rights Restoration Act specifically requires athletic departments to comply with Title IX. Also, the Equity in Athletics Disclosure Act of 1996 mandates the reporting of intercollegiate athletic participation rates and also requires institutions to report on departmental spending on athletic programs, by gender.

The enforcement of Title IX and gender equity in intercollegiate athletics is the responsibility of the federal government. Specifically, it is the responsibility of the Office of Civil Rights (OCR) in the Department of Education to enforce this law. In 1979, the OCR created and released the Intercollegiate Athletics Policy Interpretation, offering regulatory requirements related to Title IX compliance to assist institutions and athletic administrators in achieving gender equity. The OCR’s interpretation of the policy broke down the legislation’s application into the following three major categories: (1) athletic offerings; (2) athletic scholarships; and (3) other program areas, including (but not limited to) equipment, facility use, coaching, tutoring services, and publicity.

### **Gender Equity “Test”**

The institutional task of complying with Title IX legislation is challenging, given the language of the law and its policy interpretations. As institutional practices were, and continue to be, questioned, the courts became involved in ascertaining whether or not the athletic interests and abilities of females are accommodated effectively. In order to determine whether or not an athletic department is in compliance, the OCR created a three-prong test for Title IX. An institution’s athletic department is found in compliance with achieving gender equity if at least one criterion is met.

The first prong in the OCR’s gender equity compliance test is whether or not the intercollegiate athletic participation opportunities for male and

female undergraduates are offered in numbers substantially proportionate to their enrollment numbers at the institution in question. The second prong includes an assessment of whether or not the institution is able to show a continuing practice of program expansion for members of the historically underrepresented sex, based on student interest and abilities. The third prong consists of whether or not an institution can establish that the needs and interests of the underrepresented group are satisfied and accommodated by the existing athletic program. Typically, the OCR and courts will examine this third criterion only when it is clear that an institution’s athletic department meets neither of the first two criteria.

### **Opportunities, Challenges, and Debates**

Title IX created, and continues to create, positive opportunities for females in intercollegiate athletics; however, real challenges sparking debate about gender equity in sports continue to exist. Despite a growth in undergraduate enrollment and participation and opportunities for females in intercollegiate athletics since the enactment of Title IX, data collected and reports released in the late 1990s suggest that inequities still exist across competition levels, with some divisional and sport differences emerging. These athletic-related inequities include fewer participation opportunities, unequal facilities and services, lagging coaches’ salaries, and smaller proportions of operating and recruiting budgets.

According to the General Accounting Office’s 2001 report, approximately 400,000 student athletes participated in intercollegiate athletics at four-year colleges and universities during the 1998–1999 school year, with approximately 160,000 being female athletes. While this represented a significant increase from the 90,000 female student athletes who participated in 1981–1982, published gender-equity statistics continue to highlight the underrepresentation of female student athletes, specifically in Division I universities (the institutions offering the majority of athletic scholarships), compared to the proportion of females in the undergraduate student population at these institutions. According to the National Collegiate Athletic Association (NCAA), females made up the majority of the total undergraduate enrollment in Division I institutions in 1997–1998, while only 37 percent of the student athletes were female. The majority of female student athletes are situated in the colleges and universities

that are classified as Division II- and Division III-level institutions. By 2000, approximately 41 percent of athletes competing at the Division III level were female, compared to 38 percent and 32 percent at the Division II and Division I levels, respectively. As debates over the significance of the gains made for women's athletic programs continue to occur, the fact remains that female student athletes are underrepresented in all divisions, especially when the substantial proportionality criterion of Title IX is applied.

Additional gains have been made in gender equity since Title IX, including an increase in spending on women's sports programs. In the late 1990s, women's sports programs and budgets grew at a faster rate than men's sports programs and budgets, though data suggest that men's sports receive approximately twice as much money for recruiting, athletic scholarships, and operating expenses in the top collegiate athletic programs. In 1974 approximately fifty female athletes received athletic-related scholarships for their athletic ability, while 50,000 male student athletes were awarded such scholarships. By 1997, approximately 35 percent of all athletic scholarship dollars were awarded to female student athletes.

Although athletic-based scholarships awarded to female student athletes at the Division I level are increasing, many supporters of Title IX argue that the gap between male and female scholarship recipients is closing at an inexcusably slow rate. Even with an increase in the proportion of operating and recruiting budgets earmarked for women's sports programs, women's sports teams continue to receive less overall funding than men's sports teams. Additional data reveal that the Division II and III colleges and universities spend a larger proportion of their athletic funding on women's sports programs than do Division I institutions.

Despite the gains made by females in attaining midlevel athletic administrative positions in colleges and universities since 1972, women remain underrepresented in top-ranking, intercollegiate athletic leadership positions, including director-level administrative positions and top-paying coaching positions. A related and especially interesting phenomenon has occurred since 1972 in terms of the demographics of the head coaches of women's teams. Approximately 90 percent of female athletic teams had female coaches prior to 1972; however, by 1998, females coached only 47 percent of women's

sports teams. A debate continues over this and related issues as to whether or not, with the passage of gender equity legislation and the male-dominated NCAA assuming leadership over the administration of women's athletics in 1983, women's sports have assimilated into the dominant culture of male sports. With this assimilation, some argue, came the loss of the unique characteristics of women's sports, as well as the female voice in governance issues related to intercollegiate athletics.

A major concern for many athletic departments at the beginning of the twenty-first century is how to commit to gender equity while building powerful and competitive programs, managing shrinking athletic department budgets, and avoiding the decision to eliminate men's teams. Debates over how to achieve equity, and at what cost to institutions and other athletic programs, are widespread in postsecondary institutions at all competition levels. Campus administrators employ various strategies to comply with Title IX, such as adding new facilities and purchasing new equipment and uniforms in an attempt to provide equal opportunities and equitable resources for female student athletes. Some colleges and universities have discovered creative ways to add athletic opportunities for female student athletes without eliminating men's athletic teams, which creates a win-win situation, produces a less threatening climate on campus, and placates both athletes and alumni.

According to Title IX, women in postsecondary institutions must be afforded equal opportunity in the classrooms as well as on the playing fields, courts, and tracks. Gender equity in general, and Title IX specifically, are necessary components to achieving equitable opportunities in the postsecondary education experience for all students, no matter their sex. Female student athletes and other individuals and groups, collectively, have made significant accomplishments in the area of gender equity in intercollegiate athletics. Debates surrounding how best to achieve gender equity in intercollegiate athletics, despite Title IX, additional supportive legislation, and court rulings mandating compliance, are likely to continue well into the first half of the twenty-first century.

*See also:* COLLEGE ATHLETICS; FINANCE, HIGHER EDUCATION; INDIVIDUAL DIFFERENCES, *subentry on* GENDER EQUITY AND SCHOOLING.

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JANET M. HOLDSWORTH

## TRANSPORTATION AND SCHOOL BUSING

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Pupil transportation, also known as school busing, has become one of the most important segments of the American educational system. It is subject to the same rules one might find in the classroom, includ-

ing the dictates of the Americans with Disabilities Act (ADA) of 1990 and a host of laws and rules governing disabled or special needs pupils.

Pupil transportation is big business. The number of school children riding school buses in the United States has risen dramatically, making school busing one of this nation's greatest service industries. American pupil transportation provides an estimated 10 billion rides to and from school annually.

In 1950, 7 million children were transported in 115,000 school buses. Fifty years later, 448,307 school buses transported 22,675,116 children more than 3,788,427,941 miles to and from public schools. Many of these were pupils with special needs. It is not known how many nonpublic school children are transported or how many school buses are used to transport them.

Public school transportation costs approximately \$500 per year per pupil. Only Pennsylvania transports all school children at state expense. The fifty states spent \$11,746,576,005 for the 1999–2000 school year, which included expenditures for transportation and capital outlay to purchase new or replacement school buses.

According to a national annual survey done through the state directors of pupil transportation of each state, twenty-two children were killed in school bus loading or unloading accidents during the 1999–2000 school year, whereas eighteen were killed in the 1997–1998 school year. The average annual number of pupils killed in school bus-related accidents during the 1990s is 20.4. The highest toll was during the 1993–1994 school year when thirty-two pupils were killed and the lowest was ten in 1997–1998. More than half of the fatal accidents occurred as pupils were exiting the bus in the afternoon, while approximately one-quarter of the accidents took place in the morning as pupils were waiting for the school bus. As one might expect, most of the victims were elementary school children. Only two of the victims were over the age of twelve. Eleven children were struck by their own bus and another eleven were struck by passing vehicles.

### The School Bus

The school bus remains the safest form of surface transportation in the United States. It is far safer than the automobile, truck, public bus, or train. School buses are designed and manufactured specifically for the safety and protection of pupil passen-

gers. Manufacturers must conform to a host of federal standards and certify that each school bus meets all federal and state standards.

The school bus is made up of a straight-body truck chassis with a school bus body mounted on two I-beams. Each area of the school bus body is constructed of a skeletal system beneath the finish and trim elements. The framing elements are heavy-gauge steel collision beams covered by heavy-gauge steel plates. Emergency personnel have to be specially trained in extrication due to this skeletal framework and the safety cushion built around the pupils.

**Safety features.** School buses are constructed using the concept of *compartmentalization*, which provides a passive restraint system in lieu of seat belts. The passengers are seated higher off the ground so that average-sized opposing vehicles are beneath the pupils' feet. The four-inch cushioned seats and seat backs afford the passenger a padded compartment in case of collision. The seats are closer together than in most vehicles to further create a compartmentalized safety zone. The aisles are twelve inches apart. There are no windshields or door close to the riders to offer paths of ejection from the bus. The passenger windows are placed higher than passenger vehicles. Elementary pupils are housed three to a seat while secondary pupils sit two to a seat. This crowding affords an extra measure of safety because the pupils cannot move far from their seat.

In the case of emergency, evacuation may be through the front service door, the rear emergency door, side emergency-operation windows, or roof hatches designed to offer ventilation or fully open as escape routes. In addition, the front windshield may be kicked out to provide another escape route. Escape is also possible through all side windows, which open eleven inches vertically by twenty-two inches in width. Students are trained through school bus evacuation drills to know what to do in case of an emergency. Emergency evacuation drills are held regularly and include what to do after exiting the school bus or in the event of the driver becoming disabled. Emergency evacuation preparation sessions are also conducted with students with disabilities and wheelchair-bound students.

Federal requirements regulate new vehicles that carry eleven or more people that are sold for transporting students to or from school or school-related events. These vehicles are required to meet all federal motor vehicle safety standards (FMVSS) for school

buses. They must have stop arms, as regular buses do, along with many other safety features that exceed those of other passenger vehicles.

The success of the pupil transportation program is more dependent on the professional performance by the school bus driver than any other factor in program service. The welfare of every child is directly related to the skills, attitudes, and decisions of the driver.

### History of Pupil Transportation

In 1869 the Commonwealth of Massachusetts passed the first legislation in the United States allowing the use of public funds for transporting school children. By 1919, with the passage of legislation in Delaware and Wyoming, forty-eight states had enacted similar laws. The primary reasons that states passed such legislation appear to be state-mandated, compulsory school attendance and the consolidation of public schools.

The standard means of transporting children to and from school in the nineteenth century was the school wagon, a modified farm wagon converted to carry pupils from the rural areas to the consolidated schools. By World War I motorized trucks began to replace the farm wagons and soon wooden bodies replaced the canvas tarpaulins that covered the farm wagons. Steel bodies emerged to replace the wooden bodies in the 1920s, and the basic concept of the modern school bus had begun to take shape.

With the passage of the National Traffic and Motor Safety Act of 1966, the federal government was authorized to issue regulations and standards to improve the safety of all motor vehicles manufactured in the United States. As of 2001, thirty-three Federal Motor Vehicle Safety Standards that apply to school buses had been issued. Additions and changes to these standards in 1977 substantially upgraded the safety characteristics, particularly the crashworthiness, of school buses manufactured after April 1, 1977.

The newer the school bus, the safer it is. The watershed year for school bus safety was 1977, when requirements for most of the important safety features were put into place. Tragically, it took a fatal school bus accident to accomplish a goal of further safety. As a result of a major accident in Carrollton, Kentucky, in 1988, safety features were studied and later added to the FMVSS standards. School buses manufactured after 1992 have even more critical safety

equipment such as additional emergency exits, better mirrors for the driver to be able to see around the bus, and swing-out stop arms to alert motorists that children are getting on or off the bus.

### Issues in Pupil Transportation

Most issues in pupil transportation cannot be resolved without substantial increases in expenditures. Demands from the public for expanded programs, door-to-door services, and requests for increases in salaries for bus drivers greatly impact budgets. The elimination of on-board disciplinary problems and a reduction in the rate of turnover of school bus drivers tend to be the major factors affected by budgets. Spending tax dollars wisely in the area of pupil transportation continues to be one of the greatest concerns of school administrators.

**Ridership.** More than 5,000 children under the age of nineteen are killed each year as passengers in motor vehicles other than school buses. More than 800 school-aged children are killed yearly in passenger cars or other private vehicles during normal school hours. It is likely that many of these children were on their way to or from school or a school-related activity. By comparison, an average of eleven children die each year while they are school bus passengers.

Education opportunities for children with disabilities have increased over the years. Transporting children with disabilities to receive education has evolved as well. The passage of the Federal Handicapped Act, Public Law 94-142, and Section 504 of the Federal Rehabilitation Act changed the way schools provide education-related transportation for children with disabilities. Specialized technical and safety equipment have improved greatly to provide safe travel to and from school for students with special transportation needs.

**Compartmentalization as a safety feature.** In today's school buses compartmentalization is used instead of lap belts to provide an extremely high level of crash protection for student passengers, considering all the types of crashes involving school buses. There are no aggregate statistical data to suggest that a safety problem exists in large school buses that the installation of lap belts would solve. In fact, there is growing concern among safety professionals around the world over the use of lap belts as a form of passenger restraint for young or small children. In August 1998 at a public hearing held by the National

Transportation Safety Board (NTSB), five international experts in the field of motor vehicle occupant crash protection expressed their concern about the appropriateness of lap belts in providing crash protection to small children. The unanimous opinion was that lap belts were not a good means of providing crash protection to small children because small children's bone structure, particularly in the area of the hips, is still developing.

An October 1998 study by the Association for the Advancement of Automotive Medicine concluded that children restrained in three-point belts exhibit a similar pattern of injury to those in two-point belts; however, three-point belts appear to be effective for the lumbar spine. The report noted that "seat belt syndrome," which is associated with the use of two-point belts, can include bruising of the abdominal wall, fracture of the lumbar spine, and internal abdominal injuries.

At the outset of the twenty-first century, the National Highway Traffic Safety Administration (NHTSA) is conducting an extensive research program to consider alternative methods of potentially improving federal school bus passenger crash protection requirements. The NHTSA maintains the organizations' position that compartmentalization has proven to be an excellent form of school bus passenger crash protection, but believes it is important to develop the necessary data and science to review and evaluate potential improvements in passenger crash protection for the next generation of school buses.

**Pupil discipline.** Pupil discipline is probably the most serious issue in pupil transportation. If the riders are misbehaving it takes the driver's attention away from the driving responsibilities. The school bus is considered to be an extension of the classroom, as far as rules and regulations are concerned. While teachers normally have twenty-eight to thirty-two pupils in their class, facing them, school bus drivers have up to eighty-one pupils on a school bus, all sitting behind the driver, who has only an interior rear view mirror to monitor the pupils. Only school buses designated for special needs have aides on board to assist the driver in off-loading pupils.

Drivers must receive the most up-to-date training in pupil discipline methodology in order to provide both safe transportation and a safe environment for all riders. This issue requires serious training for both the drivers and the pupil riders, as well as effective policies to deal with problems. Most offenses are

referred to the school administration for action. If riders have come to expect that the school administration will not take action in response to infractions, they are more apt to misbehave.

Methods for minimizing on-board discipline problems include adding personnel or technological means for monitoring behavior, maintaining clear guidelines and consequences for inappropriate activity, and upgrading student education concerning bus behavior. Parent support is also important.

School bus monitors offer a means of altering behavior to reduce discipline problems but cost is a major objection. Video cameras can help promote safe bus behavior, but critics are concerned about the potential for invading student privacy. However, there is no such thing as privacy aboard the school bus except for personal belongings. School bus video cameras are not directed at any person or group but record all that goes on in the school bus.

The use of video cameras mounted inside the bus must be authorized by the state or local boards of education. Prior warning to pupils and parents that video cameras are authorized and in use should be made in writing. A video camera policy should be developed and use of the film should be very limited. School transportation administrators should review tapes when there has been a discipline complaint. They should also review tapes from each school bus on a periodic basis to see if there are problems on that school bus which are not being reported.

Because the video camera and its mounting devices are expensive, most school districts will install the mounting boxes on every school bus and provide one video camera for every ten or so buses. The cameras are mounted in a box with a one-way mirror so that the camera can videotape outward but no one can see through the glass window to see if there is a camera on board the school bus that day. When complaints come in about a particular bus or driver, use of the camera can allay concerns or capture the problems on videotape. The videotape also lets the supervisor know what the driver is doing, although normally the driver is not in direct view while seated in the driver's seat.

Student education is needed as well. It has been estimated that enhanced pupil education programs could be conducted at an additional cost of about one dollar per student per year. Much of the present pupil training relates to loading and unloading the school bus, crossing streets safely, and using emer-

gency exits in case of an accident. Additional education and awareness about appropriate bus behavior could help reduce disciplinary problems.

Suspension of bus riding privileges for rule offenders for one to three days is a common punishment that can act as a deterrent. Parents usually must provide transportation during this time period, because pupils are generally not also suspended from school for bus-related disciplinary problems. As in all aspects of a child's education, parent support is vital in promoting appropriate bus riding behavior.

**Driver recruitment and retention.** The old adage in the school transportation industry goes, "When the economy is bad, we have all of the school bus drivers we need; however, when the economy is good, we cannot get enough drivers." School bus driving is normally a part-time job. Drivers pick the pupils up in the morning and take them to school, then pick them up at school in the afternoon and take them home. In most cases the job takes no more than one to two hours in the morning and one to two hours in the afternoon.

In the past there was a ready reserve of potential drivers among stay-at-home mothers who would take such a job because the hours were short. They would be at work when their children were in or on their way to school, and they would be off work the same days as their children were out of school, including summers. With fewer stay-at-home mothers, the pool of available drivers has been reduced, even during economic downturns.

Transportation officials now have to be creative, offering incentives and more pay, or creating more employment hours. One way to do this is to have the school utilize the hours between morning and afternoon bus trips by employing these drivers as classroom aides, custodians, groundskeepers, and cafeteria workers.

Retaining drivers is another problem. School transportation departments train their drivers to operate a school bus. Drivers obtain commercial drivers licenses with associated endorsements and through on-the-road training they develop experience. Once school bus drivers have this combination of road experience and commercial license endorsements, they are often recruited by the trucking industry, which benefits from having trained and licensed drivers. Commercial transportation jobs offer full-time employment and a higher rate of pay.

To combat this draining of trained drivers, the pupil transportation industry has been lobbying for a *school bus-specific* commercial driver's license. Several states have adopted this measure but the federal government has not yet endorsed the concept.

**Driver training and qualification.** The screening and training of drivers is another issue for the school transportation industry. The minimum age for school bus drivers in most states is eighteen, although some states set the minimum at nineteen or twenty-one. Driver training ranges from eight hours of classroom time to forty hours in the classroom as a minimum training requirement. There is also on-the-road training and qualification under the tutelage of a driver trainer for an additional eight to twelve hours. Some states require in-service training on a yearly basis. All states check driving history and require annual or semiannual physical examinations. Thirty-nine states require fingerprinting and submission of state and federal criminal history background checks. All states interview prospective drivers in the selection process.

To ensure uniform safety of students in all fifty states, industry watchers believe there should be mandatory minimum training standards and qualifications in the United States plus yearly in-service training. The National Highway Traffic Safety Administration recommends that school bus safety instruction be provided to children, as well, on at least a semiannual basis.

**School planning design.** Finally, the issue of school grounds design is of concern to school transportation professionals. When school layouts are designed, the school bus is many times a forgotten or add-on issue. The safety of school children is at stake, and school bus drivers and transportation officials have valuable perspectives on how to increase safety in the vicinity of school buses.

When designing schools, care should be taken to design loading and unloading areas on school grounds that safely allow pupils to board or exit the school bus. This area must be free from conflict with other vehicles and non-bus riders. The drivers must have adequate space designed for entering and exiting the school bus area without backing up their vehicles. Separate locations must be provided for parent pick-up zones and other parking facilities. Transportation officials should be included in the site planning of new schools, and they can also offer assistance in upgrading existing sites for increased safety.

*See also:* SCHOOL FACILITIES.

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## TRIBAL COLLEGES AND UNIVERSITIES

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Tribal colleges and universities are unique American institutions that offer opportunities for Native Americans to pursue higher education within their own cultural and regional contexts. Generally located on or near Indian reservations, tribal colleges and universities (also referred to as tribally controlled colleges) aim to preserve and communicate traditional native culture, provide higher education and career or technical opportunities to tribal members, enhance economic opportunities within the reservation community, and promote tribal self-determination.

In 1968 Diné, Inc., an organization established by Native American political and education leaders, founded Navajo Community College (later renamed Diné College). This was the first tribal college to be created on an American Indian reservation. Since then the number of tribal colleges has increased steadily in the United States. As of 2001, thirty-two tribal colleges have emerged, created *by* American Indians tribes *for* American Indians. These colleges are located in areas with large concentrations of Native Americans, principally in the upper Midwest, the Pacific Northwest, and the Southwest.

There are seven tribal colleges in Montana, five in North Dakota, four in South Dakota, three in Minnesota, three in New Mexico, two each in Michigan, Nebraska, and Wisconsin, and one each in Arizona, California, Kansas, and Washington. Inclusive of these, two new colleges in Michigan and Minnesota were added in 2001, highlighting the steady growth that tribal colleges continue to experience in their relatively short history. Among these tribal colleges and universities, twenty-four are community colleges and offer the associate's degree and technical and vocational certificates, six offer the bachelor's degree, and two offer the master's degree. In light of the tribes' federal sovereign status, however, tribal colleges and universities receive little or no state funds. Thus, they are primarily dependent on federal assistance for their core operating expenses through oversight by the Bureau of Indian Affairs.

### Students and Faculty

The majority of tribal colleges and universities are located on isolated Indian reservations. As a result, most of them have small enrollments, often less than 1,000 students. While smaller classes enable these

tribal colleges to offer more individualized instruction, they also struggle with limited resources in part due to their smaller enrollments. As of 1994 tribal colleges served approximately 15,000 full- and part-time students according to the National Center for Education Statistics. The average age of tribal college students has become younger in recent years, from thirty years of age down to twenty-seven, as students are choosing with greater frequency to enroll directly in a tribal college after graduation from high school. The majority of students are more likely to come from families with lower levels of educational attainment and thus be first-generation college students. Many students also receive some form of federal financial aid.

The modal profile of the typical tribal college student, however, is a single mother with young children, living below the poverty level and often dependent on welfare or her extended family for support. This typical student attends part-time, and is academically underprepared for college, thus in need of some remedial courses. Child care and family services are common needs for these students that tribal colleges try to meet on their campuses. Lack of dependable transportation and available telephone services in isolated reservation areas also impact tribal students' ability to attend regularly or to communicate with college officials when problems arise and they cannot attend classes.

To help overcome these economic and educational obstacles, tribal colleges offer their students opportunities for self-determination and academic and career success. This is done through an array of diverse, comprehensive, academic and technical course offerings; a culturally infused curriculum that incorporates native values, beliefs, and customs; and a variety of academic and student support services. Another important characteristic is that at least 30 percent of the faculty are Native American and Alaska Natives as compared to less than one percent of all faculty at all other public postsecondary institutions. Thus, students have native role models and mentors, some of whom are tribal elders, who bring cultural awareness, sensitivity, and specific curricular expertise to the classroom. As native faculty, they also have a greater understanding of students' academic and personal situations.

Tribal colleges seek to prepare their students to succeed both inside and outside the reservation. In placing a significant value on the students' culture and incorporating it into the college experience in a

holistic manner, tribal colleges and universities are able to achieve higher retention and graduation rates for Native American students than mainstream institutions can. In 1994 tribal colleges awarded 69 percent of their associate's degrees, 81 percent of the bachelor's degrees, and 67 percent of the master's degrees to Native American students. By comparison, only 0.9 percent of the associate's degrees, 0.5 of the bachelor's degrees, and 0.4 of the master's degrees awarded by all other institutions were earned by Native American students that year.

### **Institutional Types**

Four types of tribal colleges and universities have emerged over the years for Native American students. The dominant type of tribal institution to emerge is that chartered by one or more federally recognized American Indian tribes. These receive funds from the federal government administered through the Bureau of Indian Affairs, a subgroup of the Department of Interior. Additionally, two colleges are tribally controlled vocational technical institutions: Crownpoint Institute of Technology in New Mexico and United Tribes Technical College in North Dakota. These are funded under the Carl D. Perkins Vocational and Applied Technology Act through the Department of Education.

Two other colleges, Haskell Indian Nations University in Kansas and Southwestern Indian Polytechnic Institute in New Mexico, fall into a third type as federally chartered institutions. The Bureau of Indian Affairs operates them and limits enrollment in these colleges solely to American Indians and Alaska Natives. One school, the Institute of American Indian Arts in New Mexico, is of the fourth type. It is chartered by Congress and governed by a board of trustees appointed by the president.

### **Accreditation and Funding**

All tribal colleges either have full accreditation status from national accreditation boards, or are in the process of earning accreditation, which is the case for the newest institutions. Moreover, except for the third type, all other tribal colleges have open door admissions policies and serve non-Native Americans in their communities as well.

Two important organizations underwrite additional support for the tribal colleges. In 1972 the American Indian Higher Education Consortium (AIHEC) was organized by leaders of fledgling tribal colleges to unite and promote their institutions. The

AIHEC secured federal funding for tribal colleges by getting Congress to pass the Tribally Controlled Community College Assistance Act in 1978 (now referred to as the Tribally Controlled College or University Assistance Act). This act provides for construction, technical assistance, and endowment building funds. In keeping with the latter provision, the federal government matches every dollar raised by tribes for contribution to their institutional endowment funds. Also, the annual AIHEC meeting brings members together to discuss common issues and highlight examples of member colleges' programs and research by Native American scholars. In addition, the AIHEC publishes *Tribal College*, a quarterly journal. Another important source of financial support is the American Indian College Fund. It was created in 1989 with the active support of Ernest Boyer, president of the Carnegie Foundation, who procured financial contributions from numerous foundations and individual contributors to get it established.

A major funding change for tribal colleges occurred in 1998 with the reauthorization of the Higher Education Act. An amendment to the act recognized tribal colleges and universities as special focus institutions serving a distinct population of students and placed them under Title V alongside historically black colleges and universities. Administered by the Department of Education, Title V enables tribal colleges to receive additional funds allocated by Congress.

Nonetheless, tribal colleges and universities remain seriously underfunded compared to the varied support received by mainstream higher education institutions. This will continue to be the case as these institutions increase in number and compete among themselves for the limited resources available to them. A shortage of funds already has led to inferior facilities due to delayed building maintenance and construction, limited classroom materials and laboratory equipment, few on-campus residence halls for students, and poorly paid administrators, faculty, and staff.

Despite scarcity of funding, tribal colleges and universities remain unique within higher education in several ways. Overall, these institutions remain locally and culturally controlled by their own tribes. Second, almost one-third of the faculty across the spectrum of tribal colleges is Native American. Third, they offer a distinctive curriculum that centers on their own native language and culture, some

taught by tribal elders, to ensure that their cultural heritage is passed on to future generations. Fourth, they are responsive to the economic needs of their communities. Lastly, tribal colleges will continue to increase in number across states as more tribes seek self-determination and greater educational and career success for their members.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentries on* HISTORICAL DEVELOPMENT, SYSTEM; HISPANIC-SERVING COLLEGES AND UNIVERSITIES; HISTORICALLY BLACK COLLEGES AND UNIVERSITIES.

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BERTA VIGIL LADEN

## TUTORING

SCHOOL

Lee Shumow

HIGHER EDUCATION

Art Farlowe

INTERNATIONAL TRENDS

Mark Bray

## SCHOOL

Tutoring typically involves two individuals, a tutor and a tutee. The tutor is more knowledgeable or expert than the tutee and attempts to help the tutee learn, usually in an academic area. Age is not necessarily a factor in the tutoring relationship—the tutor and tutee may be the same age—as long as the tutor has greater knowledge or skill than the tutee. Traditionally, tutoring has involved one-to-one instruction, but some tutoring programs do involve a tutor and two or three tutees.

Scholars have long considered tutoring the most effective form of instruction. Numerous research studies provide evidence on which to base this conclusion. The American public appears to be aware of the value of tutoring. According to a 1998 *Newsweek* survey, 42 percent of Americans strongly believe that children should receive private tutoring outside of school. In addition to providing extra practice, tutoring appears to be successful because the intensive individualized attention allows the tutor to identify the student's level of expertise. When the tutor has a clear idea of the next steps in the learning process, he or she is then able to present tutees with materials at their precise level of understanding. Tutoring also is thought to be effective because of the social support and modeling inherent in the process.

Tutees run the gamut from students performing far below grade level to students vying for Ivy League admissions. A wide range of options exists for students who need or desire tutoring. Those options vary in cost, availability, quality, and effectiveness.

### School-Based Tutoring Programs

Tutoring is a component of numerous educational programs designed for the prevention of, or intervention with, students at risk of educational failure. These programs are to be delivered by professional or paraprofessional teachers in schools. Reading has been the focus of many school-based tutoring programs. For example, tutoring by certified teachers with special training is a component of Success for All, a comprehensive program designed by Robert Slavin for at-risk primary-school children. More than one million students have participated in Suc-

cess for All. Studies have documented the effectiveness of the program, and it has been extended to other academic subjects with the Roots and Wings program. The Success for All program is most effective in schools that fully implement the model, and when it is maintained into, but not beyond, middle school.

Reading Recovery is another popular program—it was used by more than 9,000 schools in the 1995–1996 school year. Reading Recovery identifies first graders performing in the lower 20 percent of their class in reading, and these students receive thirty minutes of individual tutoring each day beyond the time spent in classroom reading instruction until they can read at grade level (on average, this takes three to five months). Tutors are certified teachers who have been specially trained in Reading Recovery methods. Numerous studies document that participants in Reading Recovery read better than control group students. However, some researchers point out that Reading Recovery has not been effective for somewhere between 10 and 30 percent of participating students.

Many school districts use Title I funds to finance Reading Recovery. Initially, teachers must be trained, a cost that varies from five to eight thousand dollars. In subsequent years, the costs involve teacher time for one-to-one instruction. Some schools have scheduled creatively so as to minimize that cost. Cost estimates are site specific, and vary from \$2,500 to \$10,000 annually per student, which is less than the cost of special education programs.

Reading One-to-One, a tutorial program for students in kindergarten through eighth grade who are struggling in reading, has been implemented in more than 100 schools in the United States and Mexico. The program builds on concepts of Reading Recovery and Success for All, but uses paraprofessionals rather than professionals to deliver forty minutes of individualized reading instruction several times per week. Only one study has been conducted on the effectiveness of Reading One-to-One. That study used few students, but found significant positive reading gains associated with program participation. The program designers state that seventy sessions are needed for students to make significant gains. Program costs have been estimated to be \$600 per child per year to cover books, materials, tutor training, and paraprofessional salary.

## **Volunteer Tutoring Programs**

Some tutoring programs depend on adult volunteers. Numerous schools throughout the country utilize parents as volunteer tutors. These parents often listen to children read, or they practice academic skills with students individually or in small groups. The circumstances, time spent, and the tutor preparation, skill, and knowledge vary enormously between programs. There are very few studies on the effectiveness of using volunteer tutors. Barbara Wasik reviewed the literature in 1997 and found only two programs that had used control groups in the evaluation. Those two programs were evaluated positively, but one of the programs no longer operates. A reading specialist supervised both programs, and training was provided to the tutors. The cost of both programs to the school districts entailed the salary of the reading specialist and any materials used during tutoring.

Dropout prevention has been the purpose of a number of other school-based mentoring programs. Mentors are usually volunteers from school staff or the community. There is some evidence that such programs are successful when mentors meet consistently with students and regularly monitor their progress. Social support and modeling appear to be the mechanisms through which those programs help to lower school dropout rates. The cost of those programs involves the time of the program coordinator at the schools.

Two nonprofit educational literacy organizations, Laubach Literacy and Literacy Volunteers of America, support the provision of free tutoring for older youths and adults who need basic literacy instruction. The two programs agreed to merge in 2002. Together, the program professional managers will support approximately 160,000 volunteers in 1,450 local, state, and regional literacy programs. Educational materials are published for tutees and for tutor training. Tutors receive information about approaches that have been found to be effective through experience and empirically tested theory. Laubach Literacy has developed a rigorous accreditation program for literacy tutoring programs.

## **Private For-Profit Tutoring**

Private tutoring paid for by fees is another tutoring arrangement. There have been no comprehensive studies of private tutoring, so little is known about the extent and effects of private tutoring. Parents

choose to send their children to professionally trained tutors at private businesses to address concerns about student's educational progress or preparedness for examinations. Local tutoring businesses operate in affluent communities throughout the nation, and private tutors command as much as \$125 per hour in affluent urban enclaves.

Several tutoring chains operate throughout the nation. Huntington, a corporation that has been operating since 1977, has centers located throughout the United States. Local offices provide tutoring in different subject areas and in test preparation for preschoolers through adults. Most instruction for children takes place in a ratio of three students to one certified teacher but individual (one-to-one) tutoring also is available. Tuition depends on the geographic location of the facility and ranges from thirty to forty-five dollars per hour for group tutoring and from forty to sixty dollars per hour for individual tutoring.

Sylvan Learning, which has been operating since 1979, has approximately 900 centers located in North America, Hong Kong, and Guam. Sylvan conducts their own testing to pinpoint student needs. Most instruction at Sylvan takes place with three students and one certified teacher. Sylvan tutors use the mastery learning approach, in which students must demonstrate proficiency on each skill or concept before progressing. Most students attend between 50 and 100 hours of instruction, with a recommendation of two to four hours of instruction per week. Sylvan uses an incentive system based on behaviorist principles of positive reinforcement, in which tutees receive rewards for their cooperation and learning. Several large urban school systems have contracted with Sylvan to provide reading instruction at public schools to those children who are struggling the most in reading. Sylvan has also introduced live online tutoring for students in the third through ninth grades. The electronic system entails having a student and tutor interact electronically, following the same principles as the center-based program.

The Kaplan organization began test preparation centers for standardized college entrance examinations. Kaplan has since expanded by forming Score! Educational Centers, which tutor students in basic skills and subject matter. Kumon Math and Reading Centers, which originated in Japan, have more than 1,000 centers throughout the United States. Kumon focuses on timed drills of basic skills.

## Peer Tutoring

Peer tutoring often involves students of the same age or grade teaching each other one-to-one or in small groups. A host of research studies provide evidence that peer tutoring is effective for promoting both student achievement and positive attitudes toward both content material and individual differences. Peer tutoring is vastly improved when students are provided with information about how to increase interaction and provide feedback during tutoring. Some evidence suggests that peer tutoring is especially beneficial for children from ethnic backgrounds where cooperation is valued. Peer tutors often cannot help students in sophisticated ways, however. Instead, it seems that peer tutors help classmates succeed by increasing their attention to the learning task and their involvement in practicing.

Cross-age tutoring involves having older students tutor younger students. This method has been used with a variety of both students and subjects. Evidence suggests that cross-age tutoring can provide benefits for both tutors and tutees. Experts agree that providing tutors with guidance in tutoring techniques, content, and social interaction and behavior management skills increases the effectiveness of the programs. Some evidence suggests that primary-grade students can make gains even when tutored by minimally trained adolescents.

## Computer Tutoring

Computer-aided instruction (CAI) is a relatively new form of tutoring that has become more popular as computer availability and use has grown. Three types of CAI are available. The first, and most popular, type involves drill and practice. Drill and practice programs present items for the student to answer and feedback about the correctness of the responses. Such programs sometimes provide helpful suggestions or vary the level of item difficulty based on the user's performance. Tutorial programs teach or reteach material geared to the student's proficiency level as measured by a pretest or performance record. These programs provide alternate paths depending on student responses during tutoring. Simulations present students with problems to solve, and students must learn new material, use existing knowledge, and test ideas to solve the problems.

CAI programs vary widely in quality. Most experts agree that many available programs are not

high quality. Drill and practice programs have been criticized for providing less practice than old-fashioned methods. This is because the attention-getting features that have been added to many programs distract students from the material they are meant to learn, and actually result in little direct practice time. Tutorial programs are very expensive to develop and require the expertise of gifted programmers, educators, and instructional designers. Simulation programs might require teachers to be very involved in helping the students negotiate the challenging situations presented, thus necessitating that the teacher spend time with individuals or small groups while others wait for help. In 1999 Yukiko Inoue pointed out that evaluations of intelligent tutoring systems had resulted in little valid research on which to draw conclusions about the effectiveness of such programs.

### Conclusion

A wide range of tutoring options exists. Tutoring programs are offered in public schools, by private corporations, and by nonprofit corporations. Tutors might be volunteers, professionals, peers, or computers. More studies are needed to draw conclusions about the effectiveness of tutoring offered by private corporations or by computers, but there is considerable evidence that one-to-one instruction by a more skilled or knowledgeable tutor, whether a professional, volunteer, or peer, contributes to the learning and academic development of students.

*See also:* COMPENSATORY EDUCATION, *subentry on* UNITED STATES; SCHOOL-LINKED SERVICES.

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LEE SHUMOW

### HIGHER EDUCATION

The practice of an institution's providing tutors is not a new: Early higher education in America was based on small lectures given by a professor to a

group of students. Most often, the method of instruction consisted of drills by the instructor and recitation by the student. The phenomena of large lecture halls and examinations administered by graduate teaching assistants on computer scantron sheets was still two hundred years away.

By and large, institutions of higher education are not able to replicate the early classroom instruction. American college campuses, however, have instituted various forms of tutoring programs that provide a small group environment and a modified form of lecture and recitation. These programs include tutoring for student athletes and at-risk first-generation college students, and departmental programs for honors students, among others.

Tutors come from a variety of backgrounds and interests. Many are graduate students who work as tutors to offset the cost of graduate education; others are upper-level undergraduate students who excel in a particular subject area, or full-time teachers or employees of the institution. The role of the tutor is to complement, not replace, classroom instruction. A tutor should review classroom notes and assigned readings, and be prepared to discuss the classroom topics with his/her students. It is not the role of the tutor to re-teach the material that was covered in class; instead, the tutor should help to clarify major points or explain difficult concepts.

An effective tutor should be aware of various learning styles and should be able to recognize different methods of relaying information. For example, a student who is a visual learner may have difficulty in a history class where the instructor employs only a lecture-style mode of instruction. The tutor can assist the student in understanding the material by utilizing maps or pictures from the time period that depicts key events. The tutor must be creative in developing different learning strategies, and must not assume that all students process information in the same manner.

The most successful tutors have completed a training program. Although one may know and understand a particular academic subject, that knowledge does not always translate into the skills needed to be a successful tutor. A tutor should be trained in some theories of educational psychology and learning styles, and be cognizant of signs of learning disabilities in students. Tutors should also be well-informed about techniques that can motivate honor students since not all students who seek tutoring are borderline students.

There are several different types of tutoring programs, depending upon the target student population: for example, student-athletes, honors students, and at-risk students. Most National Collegiate Athletic Association (NCAA) member institutions offer some form of tutoring for student-athletes. At many institutions, first-year athletes are required to attend some type of tutoring during their first year of enrollment. The purposes of the tutoring program for student-athletes are varied. Most important: students receive assistance in meeting their academic goals and meet NCAA eligibility requirements. Tutors working with student-athletes shoulder a great deal of responsibility. These students have tremendous demands on their time in addition to the time commitments of completing academic work. In addition, many of these students are first-generation college students—some come to college ill prepared for the challenges of college work. The tutor not only helps to explain and clarify academic work but can often become a mentor, friend, and role model.

Other tutoring programs such as those for honors, first-generation, at-risk students, or specialty programs such as English, mathematics, or foreign-language centers differ in that students are not required to attend these sessions. Institutions offer these services either at no charge or for a reduced fee to students.

One college, the University of South Carolina, met a demand for tutoring by establishing several tutoring centers in its residence halls through the Department of Housing. These Academic Centers for Excellence (ACE) are partnerships between university housing, the math lab, and the writing center on campus. Students can seek out tutors in the lobbies of their residence halls. Graduate students provide on-site support in mathematics and English at the ACE offices.

Tutoring in higher education cannot be narrowly defined as it is interpreted differently by various institutions. Tutoring is an important component in undergraduate education as it provides students with the opportunity to seek help in a one-on-one basis or small group setting. Depending on the institution, this goal can be accomplished in a myriad of models.

*See also:* ADJUSTMENT TO COLLEGE; COLLEGE ATHLETICS, *subentry on* ACADEMIC SUPPORT SYSTEMS FOR ATHLETES; COLLEGE STUDENT RETENTION;

TEACHING AND LEARNING, *subentry on* HIGHER EDUCATION.

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ART FARLOWE

## INTERNATIONAL TRENDS

Private tutoring in academic subjects is defined as tutoring provided on a supplementary basis at the end of the school day, at weekends, or during vacations. In some countries, especially in East Asia, out-of-school supplementary tutoring has long been a major and accepted part of social and educational life. Elsewhere, especially in North America and western Europe, such tutoring has been less significant. It seems, however, to be growing worldwide, including in some countries where it was previously nonexistent. Some observers welcome the phenomenon, but others view it with disquiet.

### Scale

Countries in which tutoring is a major enterprise include the following.

- **Egypt.** A 1994 survey of 4,729 households found that 64.0 percent of urban primary children and 52.0 percent of rural ones had received supplementary tutoring.
- **India.** A 1997 survey of 7,879 primary school pupils in Delhi found that 39.2 percent received tutoring.

- **Japan.** A 1993 survey found that 23.6 percent of elementary pupils and 59.5 percent of lower secondary pupils attended tutorial schools known as *juku*.
- **Malta.** A 1997–1998 survey of 1,482 pupils in upper primary and lower secondary schools found that 50.5 percent had received private tutoring at some time.
- **Tanzania.** A 1995 survey of 2,286 grade-six-pupils found 44.5 percent received tutoring.

The scale of tutoring appears to have increased during the last few decades. In Japan, for example, attendance at elementary-level *juku* is reported to have doubled from 12.0 percent of pupils receiving tutoring in 1976 to 23.6 percent in 1993; in Singapore surveys in 1982 and 1992 suggested that the proportion of primary pupils receiving tutoring had increased from 27.0 to 49.0 percent. During the 1990s the shift toward a market economy in China and Vietnam permitted and encouraged the emergence of supplementary tutoring in settings where previously it did not exist. Eastern Europe has also undergone economic transition. The partial collapse of public education during the period that accompanied that transition has required families to invest in tutoring on a scale not previously evident. Supplementary tutoring has also become more evident in parts of Australia, Canada, and the United States.

### Nature

Tutoring may take diverse forms. They include individual tutorials held in the homes of either tutors or tutees, and large cramming institutions that utilize not only lecture theatres but also overflow rooms in which students watch on a screen what is happening in the main room.

Zeng's 1999 study compared patterns in Japan, South Korea, and Taiwan and focused on "cram schools" in which students gain intensive preparation for examinations. He noted that some tutorial schools are old-fashioned but others are ultramodern. In Japan and South Korea, many tutoring companies have multistory buildings and branch campuses. In Taiwan, by contrast, large operators are much less prominent. This may partly reflect government regulations but also reflects broader economic patterns which emphasize small enterprises more than multibranch chains.

Not all tutees, even within particular locations, receive tutoring for the same duration each day or

week. One Malaysian study of 4,340 primary and secondary students indicated that 69.5 percent of students who received tutoring did so throughout the year, while the others only received tutoring prior to important examinations. Over half the students received tutoring in only one or two subjects, but nearly 20 percent received tutoring in five or more subjects.

### **Determinants**

Among the determinants of the scale and nature of tutoring, and thus its geographic spread, are cultural, educational, and economic factors. Many Asian cultures, particularly those influenced by Confucian traditions, stress effort as a factor that explains and determines success. In contrast, European and North American cultures are more likely to emphasize ability. Supplementary tutoring is especially widespread in cultures which stress effort.

The nature of education systems is also important. Private tutoring is more evident where success in examinations can easily be promoted by supplementary tutoring; tutoring becomes more necessary in systems that are teacher-centered rather than child-centered, and/or which are intolerant of slow learners.

A further crucial factor concerns economic rewards. If supplementary tutoring helps people to stay in education systems longer, then for those people it may be a very good investment. Further, some societies have particularly wide differentials in living standards between individuals with different amounts of education. Differentials have long been great in such societies as Singapore and Hong Kong, but less marked in the United Kingdom and Australia. This implies that the rewards from extra levels of schooling, and from supplementary tutoring, are greater in these Asian societies than in western Europe or Australasia.

Private tutoring is more common in urban than in rural areas. This may be partly because incomes are commonly higher in cities than in rural areas. Also, cities may be more competitive and students may be able to find tutors more easily in densely populated locations.

### **Impact on Mainstream Schooling**

Supplementary tutoring may affect the dynamics of mainstream classes. For example, where all students receive tutoring, mainstream teachers may have a

decreased workload. Where some students receive supplementary tutoring but others do not, mainstream teachers may be confronted by disparities within their classrooms. Some teachers respond to these disparities by assisting the slower learners, but others take the students who receive tutoring as the norm and permit the gaps between students to grow. In the latter case, parents are placed under greater pressure to invest in private tutoring for their children.

When supplementary tutoring helps students to understand and enjoy their mainstream lessons, it may be considered beneficial. Supplementary tutoring can enable remedial teaching to be undertaken according to individual needs and it may help relatively strong students to receive more out of their mainstream classes. However, students may be bored by their classes if they have already covered the content outside school.

The curriculum emphasized by cram schools may be contrasted with that in mainstream schools. Especially in public education systems, schools are expected to develop rounded individuals who have sporting and musical as well as academic interests, and to promote courtesy, civic awareness, and national pride. Mainstream schools may also keep all students of one grade together, in order to reduce labeling of low achievers. Cram schools, by contrast, cut what they perceive to be irrelevant content in order to focus on examinations, and may have much less hesitation about grouping students by ability. Many analysts view this phenomenon negatively, arguing that the tutorial institutes distort the curriculum, which has been designed with care by specialists. However, the phenomenon may also be seen as an expression of public demand, and perhaps even as a check on curriculum developers who might otherwise be too idealistic.

### **Social Implications**

On the positive side, the pressure created by supplementary tutoring may bring out the best in students and maximize their potential. To some extent, the degree of pressure that is considered appropriate is determined by social and cultural norms. East Asian societies influenced by Confucian traditions tend to place great value on discipline and dedication, and to see the pressure applied by supplementary tutoring as generally beneficial. Also, Russell's 1997 study noted that most children in Japan found the Kumon approach to teaching mathematics (involving con-

siderable repetition and gradual increase in difficulty of exercises) an unthreatening experience. Many parents enroll their children in Kumon classes because the children like the activity.

However, many analysts concerned with other contexts consider the negative aspects of tutoring to outweigh the positive ones. One factor concerns social inequalities. Like other forms of private education, supplementary tutoring is more easily available to the rich than to the poor. Research in Mauritius has shown that in primary grade one the proportion of children receiving private tutoring in the highest income group was 7.5 times greater than the proportion of children in the lowest income group.

A further consideration concerns the types of tutoring. Mass tutoring in Japan and Hong Kong may be inexpensive, but it may also be limited in the extent to which it promotes learning. Richer families can more easily afford one-to-one and small-group tutoring tailored to individual needs, while poorer families must tolerate mass-produced tutoring.

### Economic Implications

Advocates of human capital theory may consider supplementary tutoring to be highly desirable. The scale of tutoring may be one reason why Hong Kong, Japan, Singapore, South Korea, and Taiwan became prosperous societies during the second half of the twentieth century.

However, an alternative approach is less positive. Critics argue that most tutorial schools are parasitic, that they waste financial and human resources that could be better allocated to other uses, and that in systems which are dominated by traditional examinations, cramming stifles creativity and can damage the bases of economic production.

These views cannot easily be reconciled. They reflect broader debates on the nature and impact of mainstream education that rest as much on ideological principles as on empirical research. The broad literature on the links between education and development contains many ambiguous findings. No clear formulae can link certain types and amounts of education to certain types and amounts of economic development.

### Conclusions

Private supplementary tutoring is widespread in some societies, and in others it is growing. Such tutoring has major social and economic implications,

and it can have a far-reaching impact on mainstream education systems. Because the nature of supplementary tutoring varies, different policies are needed for different societies. Some planners may prefer to let the market regulate itself, but others may wish to intervene to alleviate what they perceive to be negative dimensions. The growth of private tutoring may be seen in the context of a worldwide shift toward the marketization of education and reduced government control. In many settings, this shift is viewed with ambivalence. Governments may have positive reasons for withdrawing the dominant role that they have played in many countries; but in some societies the rise of private tutoring appears to be a social response to inadequacies in government quantitative and qualitative inputs.

*See also:* COMPENSATORY EDUCATION, *subentry on* POLICIES AND PROGRAMS IN LATIN AMERICA; EAST ASIA AND THE PACIFIC; PRIVATE SCHOOLING.

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MARK BRAY

### TYLER, RALPH W. (1902–1994)

Ralph W. Tyler's long and illustrious career in education resulted in major contributions to the policy and practice of American schooling. His influence was especially felt in the field of testing, where he transformed the idea of measurement into a grander

concept that he called *evaluation*; in the field of curriculum, where he designed a rationale for curriculum planning that still has vitality today; and in the realm of educational policy, where he advised U.S. presidents, legislators, and various school leaders on new directions and improvements for public schooling.

After starting his career in education as a science teacher in South Dakota, Tyler went to the University of Chicago to pursue a doctorate in educational psychology. His training with Charles Judd and W. W. Charters at Chicago led to a research focus on teaching and testing. Upon graduation in 1927, Tyler took an appointment at the University of North Carolina, where he worked with teachers in the state on improving curricula. In 1929 Tyler followed W. W. Charters to the Ohio State University (OSU). He joined a team of scholars directed by Charters at the university's Bureau of Educational Research, taking the position of director of accomplishment testing in the bureau. He was hired to assist OSU faculty with the task of improving their teaching and increasing student retention at the university. In this capacity, he designed a number of path-breaking service studies. He made a name for himself at OSU by showing the faculty how to generate evidence that spoke to their course objectives. In this context, Tyler first coined the term *evaluation* as it pertained to schooling, describing a testing construct that moved away from pencil and paper memorization examinations and toward an evidence collection process dedicated to overarching teaching and learning objectives. Because of his early insistence on looking at evaluation as a matter of evidence tied to fundamental school purposes, Tyler could very well be considered one of the first proponents of what is now popularly known as *portfolio assessment*.

### **Contribution to Testing and Curriculum Development**

The years Tyler spent at OSU clearly shaped the trajectory of his career in testing and curriculum development. His OSU ties brought him into the company of the Progressive Education Association and its effort to design a project dedicated to the re-examination of course requirements in American high schools. Known as the Eight-Year Study, the project involved thirty secondary schools that agreed to experiment with various alternative curricula approaches. The purpose of the study was to help col-

leges and high schools better understand the effects of the high school experience on college performance and other post-high school events. Tyler was chosen as the director of evaluation for the study, recommended for the job by Boyd Bode, who witnessed Tyler's work with faculty at OSU. Tyler designed methods of evaluation particular to the experimental variables of the Eight-Year Study. The details of this work are captured in Tyler and Smith's 1942 book on the evaluative component of the Eight-Year Study. The finding of the Eight-Year Study threw into question the tradition of supporting only one set of high school experiences for success in college and opened the door for more alternative thinking about the secondary school curriculum.

For Tyler, the Eight-Year Study not only provided a venue for his creative perspective on evaluation but it also forced him to think about a rationale for the school curriculum. Answering a call from the participating schools in the study for more curriculum assistance, Tyler designed a curriculum planning rationale for the participating schools. After moving to the University of Chicago in 1938 to take the position of chairman in the Department of Education, Tyler continued to cultivate his ideas on the rationale, using it in a syllabus for his course on curriculum and instruction and eventually publishing it in 1949, under the title *Basic Principles of Curriculum and Instruction*. In the rationale, Tyler conceived of school action as moving across a continuum of concerns that speaks to school purposes, the organization of experiences and the evaluation of experiences. His basic questions are now famous:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organized?
4. How can we determine whether these purposes are being attained?

The rationale also highlighted an important set of factors to be weighed against the questions. Tyler believed that the structure of the school curriculum also had to be responsive to three central factors that represent the main elements of an educative experience: (1) the nature of the learner (developmental factors, learner interests and needs, life experiences,

etc.); (2) the values and aims of society (democratizing principles, values and attitudes); and (3) knowledge of subject matter (what is believed to be worthy and usable knowledge). In answering the four questions and in designing school experience for children, curriculum developers had to screen their judgments through the three factors.

Tyler's rationale has been criticized for being overtly managerial and linear in its position on the school curriculum. Some critics have characterized it as outdated and atheoretical, suitable only to administrators keen on controlling the school curriculum in ways that are unresponsive to teachers and learners. The most well-known criticism of the rationale makes the argument that the rationale is historically wedded to social efficiency traditions. Tyler offered no substantive response to these criticisms, believing that criticism of his curriculum development work required some discussion of an alternative, which none of the critics provided.

Tyler's reputation as an education expert grew with the publication of *Basic Principles of Curriculum and Instruction*. Because of the value Tyler placed on linking objectives to experience (instruction) and evaluation, he became known as the father of behavioral objectives. This led many to again characterize his work in the tradition of the social efficiency expert aiming to atomize the curriculum with hyper-specific objectives. Tyler, however, claimed no allegiance to such thinking. To him, behavioral objectives had to be formed at a generalizable level, an idea he first learned in graduate school under Charles Judd, whose research focused on the role of generalization in the transfer of learning. And although Tyler understood that schooling was a normative enterprise, he showed great regard for the exercise of local prerogatives in the school and cited a concern for "children who differ from the norm" as an educational problem needing attention.

### Advisory Role

Tyler also exercised enormous influence as an educational adviser. Rising to the position of Dean of Social Sciences at the University of Chicago, Tyler assisted Robert Hutchins in restructuring the university's curriculum in the late 1940s and in founding the university's Center for the Study of Democratic Institutions. During this time Tyler also started his career as an education adviser in the White House. In 1952 he offered U.S. President Harry Truman advice on reforming the curriculum

at the service academies. Under Eisenhower, he chaired the President's Conference on Children and Youth. President Lyndon B. Johnson's administration used Tyler to help shape its education bills, most notably the Elementary and Secondary Education Act of 1965, in which he was given the responsibility of writing the section on the development of regional educational research laboratories. In the late 1960s Tyler took on the job of designing the assessment measures for the National Assessment of Education Progress (NAEP), which are federally mandated criterion-reference tests used to gauge national achievement in various disciplines and skill domains.

After leaving the University of Chicago in 1953, Tyler became the first director of the Advanced Center for Behavioral Science at Stanford University, a think tank for social scientists that Tyler founded with private monies. He formally retired in 1967, taking on the position of director emeritus and trustee to the center and itinerant educational consultant.

Given the longevity of his career in education and wide-ranging influence of his work in the policy and practice of public education, especially in the realm of curriculum development and testing, Tyler could very well be seen as among the most influential of figures setting the course for the American public school during the second half of the twentieth century.

*See also:* ASSESSMENT, *subentry on* PORTFOLIO ASSESSMENT; EIGHT-YEAR STUDY; TESTING, *subentry on* STANDARDIZED TESTS AND EDUCATIONAL POLICY.

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PETER HLEBOWITSH

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## UNITED NATIONS AND INTERNATIONAL AGENCIES

*See:* INTERNATIONAL DEVELOPMENT  
AGENCIES, *subentry on* UN AND  
INTERNATIONAL AGENCIES.

## UNIVERSITY COUNCIL FOR EDUCATIONAL ADMINISTRATION

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The University Council for Educational Administration (UCEA) is a consortium of sixty-seven universities that offer doctoral programs in educational administration. UCEA's mission is to advance the preparation and practice of educational leaders for the benefit of all children and schools. UCEA fulfills this purpose collaboratively by (1) promoting, sponsoring, and disseminating research on the essential problems of practice; (2) improving the preparation and professional development of school leaders and professors; and (3) influencing policy and practice through establishing and fostering collaborative networks.

UCEA encourages membership among universities willing and able to commit time and resources to research, development, and dissemination activities toward the ends of improving preparatory programs and solving substantial problems in educational administration. All professors at member universities involved in the preparation program are eligible to participate in and contribute to UCEA activities. Approximately 1,000 professors in the sixty-seven member institutions are involved in various aspect of the UCEA program.

### Program

UCEA sponsors and conducts activities through interuniversity cooperation designed to advance and disseminate research on the essential problems of practice, to improve the preparation and professional development of school leaders and professors, and to influence policy and practice. Research is fostered through task forces, program centers, and national conferences. The UCEA headquarters has facilitated large-scale research projects, involving faculty from a number of member institutions, as well as smaller research projects involving a few faculty. Research is also facilitated by UCEA program centers.

UCEA program centers conduct their research and development work in target areas of contemporary importance and interest. The UCEA program centers focus on the study of (1) academic leadership, (2) educational finance, (3) field practices in special education administration, (4) leadership and ethics in educational administration, (5) leadership in urban schools, (6) school site leadership, (7) the superintendency, and (8) patterns of professional preparation in administration. Whenever possible, center directors involve faculty from multiple universities, as well as practicing school administrators and state education agency leaders, in their work.

Dissemination of research findings and knowledge developed through UCEA collaborative efforts is accomplished through workshops, UCEA conventions, UCEA center conferences, publications, and the UCEA website. The UCEA annual convention is designed to share current research and program innovations, to stimulate discussion and debate on reform issues, and to advance an agenda of research on the essential problems of practice. The convention also provides opportunities for graduate-

student research mentoring and career development.

UCEA task forces provide opportunities for professors interested in particular issues to explore them cooperatively. Such issues have included program content and pedagogy, internships, university-school district links, social justice, program evaluation and improvement, international issues, professional development, and the recruitment and retention of students and faculty from underrepresented groups in educational administration.

New instructional materials developed by professors, teams of professors, and UCEA are disseminated by UCEA to both member and nonmember universities. The most elaborate of these materials is the Information Environment for Educational Leadership Preparation (IESLP), an Internet-based, data-rich, problem-based learning environment. Other instructional materials available through the UCEA include case studies, texts, and simulations. UCEA also sponsors an online peer-reviewed *Journal of Cases in Educational Administration*.

Three other periodicals are sponsored by UCEA. The organization's newsletter, the *UCEA Review*, published three times per year, contains essays, debates, occasional papers, and news on UCEA activities and programs, member institutions, and state and national policy developments. The *Educational Administration Quarterly* provides a forum for scholars to share cutting-edge research and theory. Finally, the *Educational Administration Abstracts* reviews the content of more than 100 journals to select articles relevant to educational administration scholars and practitioners.

The collaborative networks UCEA has developed through its member institutions, program centers, and other educational organizations enable UCEA to influence educational administration at a national level. UCEA is a founding member of the National Policy Board of Educational Administration; has established two national commissions (the National Commission for Excellence in Educational Administration, 1987, and the National Commission for the Advancement of Educational Leadership, 2001); and works closely with organizations such as the National Council of Professors of Educational Administration (NCPEA), the American Association of School Administrators (AASA), and the American Association of Colleges for Teacher Education (AACTE).

### Organizational Structure

A nine-member executive committee formulates UCEA policies. Executive committee members are elected by UCEA plenary session representatives. The UCEA Plenum, which is composed of one representative from each of the member institutions, also establishes goals and priorities, reviews and approves policies, and examines and approves the budget. Representatives to the plenary session serve as official liaison among the universities, the board, and the UCEA executive director. The executive director implements the policies of the executive committee, develops initiatives and programs to achieve organizational goals, coordinates activities, and disseminates information resulting from research and developmental projects.

Financial support for the UCEA comes from the annual fees paid by member universities and from contributions made by its host institution and individual universities, foundations, and governmental agencies for specific programs and projects.

### History and Development

UCEA was established in 1956 through the support of the AASA, the Kellogg Foundation, and the Cooperative Program in Educational Administration. The central office for UCEA was located at Teachers College, Columbia University, until 1959, with faculty devoting part of their time to developing the council, its membership, its goals, and its bylaws. Since 1959 the central office of the UCEA has been hosted by member universities, including the Ohio State University, Arizona State University, the Pennsylvania State University, and the University of Missouri.

*See also:* EDUCATIONAL LEADERSHIP; PRINCIPAL, SCHOOL; SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS; SUPERINTENDENT OF SCHOOLS.

#### INTERNET RESOURCE

UNIVERSITY COUNCIL FOR EDUCATIONAL ADMINISTRATION. 2002. <[www.ucea.org](http://www.ucea.org)>.

MICHELLE D. YOUNG

## UNIVERSITY-INDUSTRIAL RESEARCH COLLABORATION

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Historically, university researchers have collaborated with industrial scientists on marketable projects.

News coverage at the turn of the twenty-first century might lead one to believe that this is a current phenomenon. However, science historians have traced collaborations between European companies and university researchers back to the 1800s. In the United States, university-industry research relationships began with the industrial revolution.

Traditionally, industry sought partnerships with universities as a means to identify and train future employees. As global economies shifted, companies wanted access to faculty who created the cutting-edge knowledge and technology central to university research. Knowledge creation and technology development require considerable capital investments, historically provided by governments. However, declining federal, state, and local funds, as well as increased competition for monies allocated to human services, has forced university researchers to seek new sponsors. In 2002 industry-sponsored research accounted for 8 percent of total university research dollars. These contributions occur through grants, contracts (such as consulting agreements), and collaborative training programs. The areas most likely to benefit commercially from these relationships are agriculture, biotechnology, chemistry, computer science, engineering, and medicine. Furthermore, about half of the biotechnology firms have collaborative agreements with universities and account for nearly one-fourth of all funding for biotechnology research.

The interdependent research relationships between universities and companies enable both entities to sustain growth in their areas. While companies rely on university researchers for product innovations, faculty gain prestige through increased external research funds. Just as industry needs innovative ideas to ensure profits, researchers need additional research dollars to sustain faculty productivity.

Since the 1970s the United States government has aggressively promoted the alignment of university and industrial researchers through specific funding programs. The National Science Foundation (NSF) sponsors both the Industry-University Cooperative Research Projects Program (I/UCRPP) and The Industry-University Research Centers Program (I/URCP). Both began as pilot programs in 1972 and expanded in 1978. The I/UCRPP is a traditional consulting arrangement, for which the NSF provides the initial two years of fiscal support. The I/UCRC is more closely related to university-industry relation-

ships that currently exist. The NSF outlays substantial initial funding, with the intention that the collaborative industry-university engineering centers will become self-supporting. The research centers consist of an interdisciplinary team of university faculty and business representatives. The government, in alliance with universities and industry, provides one year of planning and five years of decreasing operational funds. Generally, universities contribute through a waiver of overhead support for the centers, and businesses pay membership fees to participate. As of February 2002 there were fifty-six operational centers devoted to materials science, biotechnology and health care, energy, manufacturing, agriculture, electronics, and chemistry.

The National Science Foundation also provides funds for industry-university collaborations in engineering for twenty centers (as of February 2002). These centers are hybrids that combine basic with applied research projects, and they receive NSF support for up to eleven years.

University-industry research collaborations merge basic and applied research. Incremental research and product development often occur in industrial labs. However, industry scientists report that when they are involved in breakthrough discoveries, it is important to maintain close alliances with university researchers so that they can gain a better understanding of the science that underlies the discovery.

Academic-industry research relationships take other forms, as well. For example, some companies will *gift* scientific equipment to university researchers to conduct their studies. Although it is called *gift-giving*, companies expect that university researchers will somehow repay their generosity by communicating any cutting-edge research results related to the use of the equipment. This gives companies an edge in innovation, as they can capitalize on the research results and create new, potentially profitable, products.

Frequently, university-industry research collaborations take the form of clinical trials for drugs and medical devices. Universities provide the technical expertise, patients, and physical space to conduct clinical trials while companies supply the drugs, equipment (both diagnostic and therapeutic), and money to operate the trials. The section that describes advantages will address how both researchers and companies benefit from this relationship.

### Advantages of the Collaborative Relationships

There are numerous benefits that derive from university-industry relationships, including benefits to society, universities, and companies.

**Social benefits.** Society benefits from university-industry research relationships through innovative products and technologies. Industry-sponsored university research is often developed into practical applications that benefit society. These applications include new improved medical devices, techniques, and therapies; efficient energy development; and innovative electronic technologies such as computers and DVD players. Indirectly, university-industry partnerships may spawn new industries that enhance the U.S. competitive advantage globally. Federal, state, and local tax bases expand because of the growth of new industries. These are just a few examples of the social promise of university-industry research relationships.

**University benefits.** Interactions with industry are clearly thought out with attention paid to the benefits that will accrue to the university. Some universities seek industrial partnerships because of the potential financial rewards of patents and licenses that result from the commercialization of academic research. This provides a means by which universities can decrease the governmental funding gap. Patents generated through industry-sponsored research are sometimes shared between companies and universities. The intent is that the university will use patent revenues to support activities that are not market oriented, such as the teaching mission of institutions.

Additionally, faculty benefit through the access to cutting-edge scientific equipment not always available in university labs. This equipment enables faculty to pursue additional lines of research that, ultimately, contribute to faculty productivity (such as additional external funds as well as increased publications). Both of these elements combine to enhance institutional prestige—an important component used by institutions to attract top students, establish their legitimacy, and acquire available public funds. Universities also enhance opportunities to find future employment for undergraduate and graduate students through university-industry connections.

**Company benefits.** University-industry collaborations can stimulate companies' internal research and development programs. University researchers help industrial scientists identify current research that

might be useful for the design and development of innovative processes and potential products. This first look at cutting-edge research gives companies a competitive edge because it decreases the time it takes to move a potential product from the laboratory to the market, which strengthens international economic competition.

The association between universities and company sponsors also enhances a company's reputation. Oftentimes, university and industry researchers will coauthor refereed journal articles that describe research results. Joint publications are used as a public relations tool by companies to add to their prestige.

So far, the more abstract benefits companies realize from university-industry relationships have been described. However, the concrete benefits are the ones that drive these collaborations. When a company becomes involved with academic researchers and "buys" access to new ideas, it builds trade secrets that could lead to new, potentially profitable patents. Furthermore, if university researchers develop a patent, the company that sponsored the research often gains the first right of refusal to license the product. Companies thus become industry leaders.

Universities provide inexpensive lab space in which to conduct industrial research. One area where this is critical is in the arena of clinical trials. Medical companies use university partnerships to conduct clinical trials of drugs, devices, and emergent techniques. This is less costly for industry because university hospitals have access to large numbers of patients.

Finally, university-industry research relationships strengthen companies' research and development (R&D). Either through the generation of innovative products developed from current research or through a redirection of industrial development to more profitable lines, R&D is positively affected. University researchers also help industry scientists solve design and technical problems. Often, company employees learn new research techniques with their university partners.

### Disadvantages of the Collaborative Relationships

Despite the benefits of university-industry research relationships, a number of disadvantages are also apparent. Many of these reflect significant normative issues related to the academic enterprise. Professor

and business and ethics writer Norman Bowie suggests that a university becomes “caught between two of its compelling interests” because of its relationship with corporate sponsors (p. 12). Academic researchers are compelled to approach research without regard for its commercial benefits; to share the results with peers so they can be examined and validated; and to train future researchers for universities and industries. Universities must balance their relationships with industry to reflect traditional academic norms, as well as those of industry.

High-profile agreements and legal disputes have created concerns that university faculty no longer set their own research agendas. Instead, research topics are based on both available funds and university needs. This is especially problematic because faculty need the academic freedom to pursue any line of inquiry, regardless of where it may lead. If either industry or the university sets the research agenda, many important social benefits will become neglected as resources are targeted solely at those activities that increase income.

Ownership issues can arise between universities and companies who establish research relationships, causing universities to develop more formal relationships with corporate sponsors through contracts that clearly stipulate data ownership as well as interest in any products developed from university-industry research. For example, some company contracts stipulate that university researchers cannot share data or research materials with other academic scientists who request them. The company assumes that the research generated by the university researchers contains proprietary information.

These contracts extend to publication. Most university policies allow publication delays for up to six months while researchers and their sponsors develop patent applications. Oftentimes, publication delays arise because companies want to approve a journal article before it is published. This is especially problematic when the research reflects unfavorably on the product, a situation that occurred in a 1997 case concerning synthetic thyroid medication. A university researcher found that a particular medication was ineffective, but the university legal department had signed a contract that enabled the company to block publication of damaging results. Critics believe that this type of arrangement reduces the quality of university researchers and creates potentially harmful situations for patients.

Some university researchers are not allowed to include pertinent methodology details in either published or presented results. A company will argue that the methods used to conduct the research constitute a company trade secret and must be protected. This creates problems for academicians who need to publish to generate additional research dollars.

Corporations are concerned with their market edge, and they may require that university researchers not publish studies from their sponsored research activities. Market success depends partly on the innovation of specific products, as well as the investment in production necessary to make products available to the public. Secrecy is something companies use to protect trade secrets that emerge from corporate-funded projects. This is contrary to the wide-scale dissemination practiced in universities, where faculty, postdoctoral fellows, and graduate students publish results from the studies in which they participate. Commercial enterprises are more competitive than academic interests as a company must find a way to secure its niche with a new product.

### **The Role of the Collaboration in Biotech Development and Start-Up Industries**

The collaboration between industry funding, university researchers, and start-up companies is complex. Most often, individual entrepreneurial faculty use their research to start a private company. Much of the research on these spin-off companies has looked at academic entrepreneurs. The university is a passive player, while the entrepreneur generates external venture capital. University faculty often leave institutions to manage the new company, or faculty may use the company to support their academic research activities. Universities tend to react unfavorably when faculty operate new companies in tandem with their research agendas. There is an assumption that faculty will neglect their core duties to the university and focus on research and other activities that support their commercial enterprise.

Some start-up companies that universities support are those that develop into *incubation centers*. Incubation centers are units that support faculty or students in the development of their research products. For example, incubators established near colleges and universities house start-up companies based on faculty research. This is the more traditional form of a collaborative university-industry rela-

tionship that results in start-ups. Currently, the development of start-up companies from university faculty research is housed in various administrative departments of institutions. For example, Massachusetts Institute of Technology (MIT) was involved in forming the American Research and Development Corporation, which has culminated in a venture capital firm.

### The Role of the Collaboration in State Economic Development

Universities often use industry-university collaborations to define their role in economic development. Science policy, for example, has become associated with economic development, especially in light of cases like MIT's and Stanford University's relationships with local economic development. Stanford University faculty played a crucial role in the development of Silicon Valley. Both MIT and Stanford faculty have had profound effects on local and regional economies. Science parks, also associated with economic development, reflect strategies to draw industry and government labs to specific locations to stimulate growth. Research Triangle in North Carolina is an example of this type of enterprise.

A justification for the involvement of universities in economic development is that the government will provide large-scale financial support for university research, provided institutions conduct research that supports and sustains state economies. This is not quite accurate, as reduced federal research dollars have made grant-getting more competitive for university researchers. Thus, there is a greater reliance on industry relationships to help fund these growth areas.

State economic development programs encourage high-tech development through university-industry research relationships. However, the ability to identify any specific economic development agendas by universities is difficult. Many view the industrial-university partnerships as direct contributors to local economies. For example, the Michigan legislature funded a biotechnology center operated at Michigan State University. The legislature believed that the research generated at the center would increase jobs and, ultimately, fill the state coffers. The center did contribute to the creation of commercial products from basic research (e.g., the development of drugs). However, because Michigan lacked the manufacturing infrastructure to support wide-scale production of drugs, the state did not realize a direct

economic benefit from its investment in the center. Instead, New Jersey, Illinois, and Indiana reaped the benefits from drug production based on Michigan State's research. The state legislature, disappointed with this outcome, decreased center funding. This story illustrates the misconceptions policymakers have about the direct economic benefits derived from the commercialization of academic research.

There is a belief that, because of their ability to increase external research funds and establish relationships with industry, only research universities contribute to state economic development. However, colleges and universities from multiple sectors play roles in state economic development. For example, community colleges contribute through training the workforce. Typically, comprehensive and community colleges often forge collaborations with industry that do not require a substantial investment in research. Instead, universities collaborate with industry to help reform higher education curricula, train employees for companies, assist local economic development offices, and retrain displaced workers. These important relationships between industry and the university are often overlooked when scholarly writers and journalists focus only on research collaborations that generate tangible goods.

### Conclusion

University-industry research relationships have existed in multiple forms since the nineteenth century. Current collaborations are complex and often appear threatening to both the academic and industrial enterprises through value and goal conflicts. However, institutions have developed formalized relationships with industry that alleviate some of the tensions that arise from these relationships.

*See also:* ACADEMIC FREEDOM AND TENURE; FACULTY AS ENTREPRENEURS; FACULTY CONSULTING; INTELLECTUAL PROPERTY RIGHTS; NATIONAL SCIENCE FOUNDATION; TECHNOLOGY TRANSFER.

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LISA M. JONES

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## UNIVERSITY OF CHICAGO

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Identified by American industrialist and philanthropist John D. Rockefeller as "the greatest investment I ever made," the University of Chicago, founded in 1891, became a standard-bearer for modern America's universities by being the first to meld the great English and German traditions of higher education by creating an institution focused on teaching and research.

### Early Years

In 1891 the American Baptist Education Society united William Rainey Harper, a dynamic leader, with John D. Rockefeller, an equally magnanimous donor. The union produced the University of Chicago, which became America's shining educational city on a hill. Historian Frederick Rudolph asserted that "no episode was more important in shaping the outlook and expectations of American higher education . . . than the founding of the University of Chicago" (p. 349).

President William Rainey Harper, the "young man in a hurry," was a Hebrew scholar lured from Yale in 1888 to create an institution that would combine the best of German and English higher educational traditions. Harper demanded that Chicago support pure research yet still provide quality instruction and moral guidance. He also revolutionized academic practices by dividing the year into quarters, encouraging year-round attendance, and by allowing students to graduate whenever they completed their degree requirements. Furthermore, Harper introduced *majors* and *minors* to the elective system and thereby provided students with both freedom and direction. Lastly, though founded by Baptists, the university was always nondenominational. Also, it welcomed both women and minority students at a time when many campuses did not.

Harper's vision required deep financial pockets and the deepest were found. John D. Rockefeller, though initially committing to a modest gift, eventually donated more than \$35 million to the project. Harper used the funds to construct an English-Gothic-style campus with towers, spires, and gargoyles within Chicago's Hyde Park. This land, valued at the time at more than \$8 million, was donated by Chicago department store owner Marshall Field. Harper hired 120 faculty members for opening day. Because he wanted only the best researchers and instructors, he used Rockefeller's generosity to raid the faculties of other elite colleges and universities—especially the strapped Clark University.

### Early Twentieth Century

The University of Chicago continued to thrive despite the death of its young president in 1906. Its fifth president, Robert Maynard Hutchins, inaugurated in 1929, like Harper before him left a lasting imprint on Chicago and the nation. Hutchins reduced the dominance of applied science and commercial utility in the nation's great universities by shifting Chicago to an emphasis on perennial issues associated with the humanities. Thus began Chicago's Great Books curriculum, which focused on classics in Western civilization. The program was far more than just reading significant books, however. Rather than relying on professorial lectures for understanding, students engaged their instructors in spirited debate over the treatises. This atmosphere of intense intellectual argument became and remains the essence of the University of Chicago ethos. So popular was this approach that the Great Books were published for a wide reading audience, including discussion groups of laymen that popped up around the country in an effort to capture the Chicago spirit of intellectual discourse.

Not only did Hutchins buck the dominant trends in philosophy and instruction, he also challenged higher education's emphasis on intercollegiate football. Hutchins abolished the university's football team in 1939 because he believed students needed to focus on scholarship and Chicago should play football only if it could remain competitive with major athletic programs. This was a momentous decision as the Maroons were a founding member of the Big Ten Conference and once a national powerhouse under the famed coaching of Amos Alonzo Stagg. In fact, Stagg, who had retired from Chicago in 1933, had been the first coach in the nation to be

a tenured professor, and his large athletics' budget was exempted from normal institutional review. Even as late as 1935, Chicago's Jay Berwanger became the first Heisman Trophy winner, but by 1939 Chicago's scoreboard indicated that the glory days had passed, including a 61–0 loss to Harvard. Therefore, despite the legacies, and partly because of them, after much debate the university dropped football.

### Future Directions

Varsity football was resurrected at Chicago in 1969. Other traditions have been maintained without interruption. The University of Chicago has remained a bold innovator, demonstrated again in 1978 when Hanna Gray was appointed president—the first woman to serve as president of a major research university. The University of Chicago continues to adjust its curriculum, always with its emphasis on humanistic education. It proudly claims to be the “teacher of teachers,” as one in seven of its alumni follows an academic career path. As such, the original vision for the university continues to stand out as a home of critical inquiry and informed discussion within the nation's higher educational landscape.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; HUTCHINS, ROBERT.

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JASON R. EDWARDS  
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## UNIVERSITY OF VIRGINIA

The University of Virginia, known since its founding in 1819 as “Mr. Jefferson's University,” has personi-

fied, in past and present, a distinctive approach to public higher education whose integration of academic vision and architectural environment attracts national and international acclaim.

The University of Virginia remains one of Thomas Jefferson's greatest legacies. The former president led a commission that chose the institution's location, devised the architectural plans for the grounds, and crafted the curriculum. The Board of Visitors nominated Jefferson as the university's first rector. His desire to build a strong faculty encouraged hiring distinguished national and international scholars rather than local clergy.

### Early Years

Jefferson's "academical village" consisted of eight independent schools and offered a radical departure from the rigid curriculum, strict discipline, and theological dogmatism that characterized many American colleges. Students chose their own classes and earned a degree after meeting a school's requirements. In place of the customary bachelor of arts, Virginia offered a master of arts degree to students completing programs in five of the colleges. To encourage self-government, the university vested power in the rector and in the faculty chair rather than in a president. Governing rowdy students, however, became a problem. Serious student riots occurred throughout the 1830s and climaxed in 1840 when a student shot and killed a professor. In the wake of this unrest the university implemented a student honor code, one of the institution's greatest legacies. Virginia students displayed both "honor and dishonor" in their conduct before the Civil War. The university's regional provincialism also precluded attracting a true "aristocracy of talent," and its relatively high tuition prevented attendance by modest-income students. Its presumption of racial and gender exclusion also prohibited the enrollment of African Americans and women.

The university prospered during the antebellum years, but the Civil War brought great hardship to Charlottesville. Prewar enrollments exceeded 600, while literary societies and student groups flourished. In contrast, attendance during the Civil War averaged sixty-four students. U.S. General George Armstrong Custer spared the campus from destruction in 1865. Unlike many other universities in the South, Virginia rebounded quickly.

Growing enrollments and institutional complexity prompted the board to appoint a president.

After Woodrow Wilson declined the board's invitation, Edwin Anderson Alderman accepted the presidency in 1904. That same year Virginia accepted a membership invitation from the Association of American Universities, making the university the first southern institution to receive such an honor.

### The Twentieth Century and Future Directions

Along with changing curricula, Virginia responded selectively to social justice issues. In 1920 the university first admitted women to some graduate and professional departments, although women were not accepted on the same basis as men in Charlottesville until 1970. African Americans first attended Virginia in 1950. When a court order mandated admission, the university complied and avoided much of the strife that engulfed other southern campuses during the civil rights movement. In 1953 it became the first major university in the South to award a doctorate to an African-American student.

After World War II Virginia expanded its programs while distinguishing itself as one of the nation's best universities. Enrollment for the school year beginning in 2001 totaled 18,848 students. In 2001 Virginia achieved the highest graduation and retention rates of any public institution. The library system includes fifteen libraries with more than 4 million holdings. In addition, the Cavaliers compete in National Collegiate Athletic Association (NCAA) division I athletics as a member of the Atlantic Coast Conference (ACC).

A continuing legacy of the university is its architectural design. Original construction of Jefferson's "academical village" provided a symbol of his Enlightenment faith. On October 27, 1895, fire destroyed the Rotunda, the architectural centerpiece that housed the library. The university rebuilt the structure, which underwent renovation during the 1970s. Other institutional reforms during the late twentieth century included curbing the tradition of excessive student drinking. The historic student honor code faced a severe test in 2001 when a computer program detected widespread plagiarism in a physics class.

During the tenure of John T. Casteen III, who became president in 1990, Virginia's capital campaign raised more than \$1.4 billion—the largest effort of any state university. The institution used its good fortune to promote sound educational programs. Casteen's remarkably thoughtful presidential

addresses acknowledged Virginia's unfortunate heritage of racial inequity in admissions and committed the university to correcting that social injustice.

Virginia offers forty-eight bachelor's degrees and fifty-five doctoral degrees along with other graduate and professional programs. *U.S. News and World Report* ranked Virginia among the top public universities in the nation for 2002. Its schools, including the McIntire School of Commerce, the Darden Graduate School of Business Administration, the Law School, and the Medical Center, have received national academic recognition. Virginia has accepted its role as a leader in higher education to promote sound educational values of which Mr. Jefferson would be proud.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT.

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## UNIVERSITY PRESSES

Established by universities to promote scholarly communication, university presses publish books and related material in a wide range of academic, creative, and professional subjects. They provide college and university faculty and other serious re-

searchers with outlets for specialized works and make new ideas and perspectives available to a national and global audience. The sales of university press books are typically very modest by the standards of trade publications. Overall, however, the works issued by university presses play a significant part in shaping the agendas of many disciplines, especially in the humanities and social sciences.

### Historical Background

The relationship between universities and printing dates back at least to the fifteenth and sixteenth centuries, not long after the emergence of movable type printing. Printing and publishing activities were established at Oxford, and soon thereafter at Cambridge, under the approval and protection of the crown through various royal charters. Centuries later, these enterprises remain a powerful presence in academic publishing.

In the English-speaking colonies of the present United States, some early attempts at connecting the small colleges and printing were also undertaken. Without a compelling need for in-house publishing activities beyond what a print shop could provide, however, university presses, in the modern sense, were slow to develop. It was not until the nineteenth century and the rise of the university movement in American higher education that conditions favoring the creation of university presses emerged in the United States. That era brought an emphasis on original research and new disciplinary specialization. As universities began to replace the older, undergraduate-focused colleges at the center stage of American higher education, demand grew for new ways to disseminate the fruits of research to the growing audience of faculty and graduate students.

Andrew Dickson White introduced the idea at Cornell University in 1869, in conjunction with his plans to train professional journalists. Although the results were only marginally successful and the press was discontinued in the 1880s, it was an important first step. Among those following Cornell's lead was Daniel Coit Gilman, who promoted the establishment of the Publication Agency at the Johns Hopkins University in 1878. Later known as the Johns Hopkins University Press, it is the oldest continuously operating university press in the United States.

American university presses did not immediately achieve the goals that later would be expected of them. Often, the research published was from the

faculty of the parent institution, which sometimes limited the ability of the presses to seek out work of a uniformly high caliber. In addition, universities commonly required the publication of doctoral dissertations, and university presses often fulfilled this task, with the authors subsidizing production costs. In these instances again, the presses exercised less critical judgement about what they would publish than in later years.

In the era following World War II, university presses became more prominent and prestigious in the academic world. As American higher education rapidly grew and academic libraries increased acquisitions activities, university presses achieved a greater and more successful position in the academic environment than before the war. Their reputation for quality grew at the same time. University presses blossomed during this period. By the close of the twentieth century, there were more than eighty university presses in the United States.

### Types of Material Published

Unlike trade publishing firms, which usually select and develop books for publication based primarily on commercial appeal, university presses have an overarching mission to produce works of scholarly value even though the audience is usually much smaller than that of a trade book. The financial implications for a publishing project are certainly taken into consideration when a university press contemplates publishing a book. However, as not-for-profit entities, university presses have traditionally placed significantly more weight on the scholarly or creative merits of a book, with much less emphasis on potential profitability. By the closing years of the twentieth century, those traditions were challenged, however, as subsidies from the universities to which they are attached often diminished and budget slumps affected academic libraries' acquisition budgets.

A chief function of university presses lies in their role in selecting topics and perspectives to be brought to the attention of the scholarly community. In the humanities and in many of the social sciences, books about specialized topics (often called *monographs*) remain one of the vital mechanisms for the distribution of scholarly knowledge and critical insight. Such titles continue to be a staple of university press publication lists. (This is less true in the natural sciences, where the more typical mode by which new knowledge is disseminated has been through articles in refereed academic journals.) University presses

also have developed strong reputations for publishing in areas such as poetry and regional studies.

As universities and academic disciplines became more complex and subject to specialization over the course of the twentieth century, so, too, did publishing programs become increasingly specialized. This specialization was partly due to practical reasons, since it would be difficult for a university press to maintain a high degree of competence across the whole of the academic spectrum. One benefit of specialization is that by focusing on fewer disciplines and subject areas, individual university presses are often able to develop stronger and more national and international reputations. This, in turn, makes it easier to market the books that are published and to attract additional high-quality manuscripts. In any case, the strengths of a university press usually reflect those of the university of which it is a part.

### Book Acquisitions Process and Academic Quality

The claim to high quality is closely linked to the process university presses employ in acquiring manuscripts. In this aspect of publishing, the contrast between university presses and commercial publishers is especially sharp. Because the academic value and integrity of works published is a central concern for a university press book, many of these presses have adopted a rigorous, three-part review process to help ensure that the books reaching publication have the characteristics desired.

The process begins with contact between an editor and a prospective author. Sometimes authors send a letter of inquiry—or, more rarely, a completed manuscript—to a publisher, and sometimes the editors themselves seek out possible authors. If the editor accepts a proposed book, the next step is peer review, which is usually not undertaken until the manuscript has been completed. In this phase, the publisher sends the manuscript for independent evaluation by readers who are selected because of their own academic standing and credentials. Typically, the peer review begins with two readers. A third reader may be consulted if one reader approves and the other has reservations about the manuscript.

If the manuscript receives a positive evaluation from two readers, it proceeds to the final step in which it is reviewed by the press's editorial board. This group is a committee of faculty members, largely from the home institution in most cases, with final authority over whether to proceed to publication of the book.

The university press arena is highly decentralized. Though there are many hurdles to publication at any given press, the existence of many university presses means that a manuscript might be rejected at one press yet still find a home with a different publisher that has differing needs and criteria. In addition, there is also a smaller, but important, group of scholarly publishers in the commercial publishing world, some of which have high standing in various academic fields.

### University Presses as Gatekeepers

Commentators have noted that university presses serve as “gatekeepers of ideas.” Many more books are proposed than are accepted for publication at a university press, and the greater the prestige ranking of a press, the greater the competition to have one’s book published with a given press. Decisions about what to publish—and what not to publish—are important in shaping of the academic agendas for many disciplines. For such reasons, the traditional lack of diversity among university press editors has been the cause of some concern.

In addition to the role that university presses play for the scholarly community at large, they also are important to the lives of individual scholars in many disciplines. In fields of the humanities especially, the publication of a book has been an important measure of scholarly achievement. Book publication in such fields, especially by respected university presses, can be extremely important in tenure and promotion decisions and in enhancing a scholar’s reputation outside her or his own institution. Beyond simply having a book published, the academic reputation of the book’s publisher has a central importance for a scholar, since the prestige of the publisher is often taken as an indication of the quality of the work itself.

### Challenges to University Presses

University presses have faced many challenges, a situation that became increasingly acute in the 1980s and 1990s as economic and technological changes accelerated. University presses, as well as the few commercial presses focusing on scholarly works, saw a long period of decline in sales. In part this was due to severe constraints on the budgets of college and university libraries.

Already, some university presses had begun to seek out a broader audience. A prominent example of this impulse was found in Louisiana State Univer-

sity Press’s publication of John Kennedy Toole’s novel *A Confederacy of Dunces*, which won the Pulitzer Prize for fiction in 1981. When financial circumstances later became more pronounced among university presses, many of them similarly aimed to augment their publication lists with books that could be sold to a wider audience of readers without compromising the scholarly reputation of the presses themselves.

Technological advances, which constitute a major challenge to book publishing more generally, also deeply have affected university presses. The future viability of printed books was widely debated in 1990s, and university presses explored various ways to take advantage of the opportunities presented by new electronic technologies.

Though they have evolved over the years and face many challenges, university presses remain an integral part of the academic world.

**See also:** FACULTY PERFORMANCE OF RESEARCH AND SCHOLARSHIP; FACULTY RESEARCH AND SCHOLARSHIP, ASSESSMENT OF.

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GORDON B. ARNOLD

## UPWARD BOUND

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Upward Bound (UB) is a federal educational program designed to prepare high school students from poverty-level homes for entry and success in college. It was begun in the summer of 1965, when the Office of Economic Opportunity (OEO) funded seventeen summer pilot programs on college campuses under the Community Action component of the Economic Opportunity Amendments of 1965. It formed a miniscule part of President Lyndon Johnson's War on Poverty.

The theoretical basis for the program was taken from the work of Richard Cloward and Lloyd Ohlin's opportunity theory, which addressed the problems of juvenile delinquency and gang behavior. Several members of the President's Commission on Juvenile Delinquency in the Justice Department transferred to OEO and adapted Cloward and Ohlin's basic concepts. They designed programs to increase the chances that youth from disadvantaged backgrounds might enter and succeed in higher education as one way to overcome poverty. Experimental precollege programs funded in the early 1960s by foundations provided ready-made structures for what the programs might look like. Upward Bound gained recognition, though it never became as well known as its sister program for preschool youngsters, Head Start, also housed in OEO. It has been restricted in its possible impact because of underfunding, caused at first by the escalating cost of the Vietnam War and then by the inflation that followed. This pattern continued, and in 2001 it was estimated that only between 1 to 7 percent of the eligible students are being served.

The Higher Education Amendments of 1969 transferred UB from OEO to the Office of Education in the Department of Health, Education and Wel-

fare. There it was joined with two other programs designed to work with different populations of low-income youth to increase the likelihood that they would enter and/or succeed in postsecondary education. These formed what began to be called the TRIO Programs.

The current legislative authority for UB is found in the Higher Education Act of 1965, Title IV, Part A, Subpart 2, Section 402C. 20 U.S.C. 107a-13. Program information and requirements, legislative references, and other current information can be accessed at the Department of Education Federal TRIO Program Internet site.

A call for proposals is published every four years in the *Federal Register*. Four- and five-year grants are awarded to institutional applicants based on ranked scores assigned by peer reviewers. In the 1998 competition, 82 percent of the applicants were funded.

Since 1986 the legislation has directed that "prior experience" be considered and points added to the peer review scores of previously funded projects that met certain criteria. TRIO is unique among federal discretionary grant awards for incorporating this element in the competition process, and it helps provide a quasi permanence to previously funded projects.

### The Design of a Project

Regulations require that the students selected have a need for academic support and that two-thirds come from low-income families (defined as income less than 150 percent of poverty level) where neither parent has attained a baccalaureate degree. The student is then defined as a "potential first-generation college student." The remaining one-third must meet only one of these criteria. Participants enter during their ninth or tenth grade and are expected to remain through high school graduation. Most UB programs are located on college campuses and consist of a residential six-week intensive summer program with follow-up during the school year. Many projects offer Saturday and weekday after-school sessions designed to improve student performance in the sciences, mathematics, languages, and computer skills. Other services include college visitations, counseling, test preparation, and various cultural enrichment activities. Students usually receive a small stipend for participation. Programs range in size from 50 to 150 students with an average enrollment of seventy.

Over time, the programs have come to be somewhat standardized and, for the most part, less experimental than in the earlier years. The legislation and regulations have evolved to require more uniform program design and increasingly insist on measurable outcomes. Indicators, such as improvement in student grade point averages, standardized test scores, and enrollment in and graduation from four-year institutions of higher education are monitored by annual performance reports in an attempt to determine whether program goals are being achieved.

Current information on UB as well as links to the home pages of several hundred projects can be accessed through links from the Internet site of the Council for Opportunity in Education (COE), a national organization of TRIO professional staff.

### **Veteran's Upward Bound**

In 1972 Congress authorized a Veteran's Upward Bound program (VUB) in response to the large number of military returning from the Vietnam War. Originally envisioned as lasting for only a short period of time, the VUB has continued to work with veterans from other conflicts despite several attempts to eliminate this component of the UB program. Although the goals of the VUB programs are the same as classic programs, that is, to increase postsecondary enrollment, more latitude is permitted in age range and the types of services offered.

### **Upward Bound Math/Science**

In 1990 an initiative was undertaken to address the concern that students from low-income, first-generation, and minority populations were not well represented in the fields of science and mathematics. Upward Bound Math/Science programs (UBMS) were begun, often drawing participants from a regional area extending over several states and hundreds of miles from the host institution. The emphasis was, and continues to be, the preparation of participants for postsecondary study in fields of mathematics and the sciences. Because participants are spread out over such a large geographic area, these programs face a challenge in continuing follow-up services for participants during the academic year, which follows the summer program at the host institution's campus.

### **Evaluations of the Program**

Many studies have been done on the effectiveness of UB. The most comprehensive evaluation was com-

pleted in 1979 and concluded that UB does have a positive effect on overall educational attainment and college enrollment but no effect on high school academic preparation or persistence in college. A current longitudinal study was begun in 1992. It is following a treatment and control group from a nationally representative sample of students and is designed to assess the impact of the program on participants over a ten- to twelve-year period. Preliminary findings indicate that specific subgroups of students receive the greatest benefits from the program: those with lower academic expectations and poorer performance on entry—Hispanic students, boys, and students who qualified solely under the low-income criteria.

Greater impact on both high school and college outcomes becomes more evident the longer a student remains in the program. Because nearly two-thirds of the participants withdraw from the program within two years, this finding highlights the need for retention if the intervention is to become most effective. The large majority of students leaving report that they terminate to take a job. In response to this, the authorizing statute now allows summer students to participate in a work-study component, designed to expose participants to careers requiring a postsecondary degree. However, current funding is not sufficient to allow the \$900 to be awarded to participants in most projects.

Upward Bound is the most costly of the federal TRIO programs, which as a group rank among the highest expenditures in discretionary federal dollars for education after student financial aid. In 2001–2002 the Department of Education reported there were 772 UB projects, including forty-five VUB, and 123 additional UBMS projects across the United States and its territories. Funding for classic and VUB projects totaled \$251,154,772, serving an estimated 56,564 students; an additional \$30,874,003 was awarded to the UBMS projects serving 6,093 students. The average yearly cost per participant in regular UB was \$4,440 and \$5,063 for UBMS.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES; U.S. DEPARTMENT OF EDUCATION.

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JOHN W. GROUTT

## URBAN EDUCATION

The dictionary definition of *urban* is simply "a term pertaining to a city or town." In everyday parlance the term is used frequently to distinguish something from the terms *rural*, *small town*, *suburban*, or *ex-urban*.

These objective size and density definitions, however, do not convey the range of meanings intended or received when the term is most commonly used. Perceptions of urban areas differ widely. Rooted in the early history of the United States and illustrated in the writings of Alexander Hamilton is a vision of the urban setting as one that fosters free-

doms. This perception defines cities as places of refuge and opportunity, a vision widely accepted in many countries. Also rooted in America's history, as illustrated in the writings of Thomas Jefferson, is the opposing perception of urban as dysfunctional and the cause of many societal problems. In American parlance, "God's country" is used to refer to rural areas or nature preserves, not cities.

During the first half of the twentieth century urban areas were viewed by many as economically dynamic, attracting and employing migrant populations from small towns, rural areas, and abroad. During the second half of the twentieth century, however, the term urban became a pejorative code word for the problems caused by the large numbers of poor and minorities who live in cities. Such negative associations with the term urban profoundly affect education and shape the nature of urban schooling.

#### Students and Structure

Unlike most other countries where education is a federal or national function, schooling in the United States is decentralized. States are the legally responsible entities but local districts are generally perceived as the accountable units of administration. There were approximately 53 million American children entering public and private schools in the fall of the year 2000. Thirty-five percent were members of minority groups. One in five came from an immigrant household. Nearly one-fifth were living in poverty. Eleven states accounted for more than half of the children in poverty: California, Texas, New York, Florida, New Jersey, Pennsylvania, Ohio, Illinois, Michigan, North Carolina, and Georgia. All these students were overseen by more than 15,000 local districts with almost 90,000 schools. The 120 largest school districts, generally defined as the urban ones, served 11 million students, most of whom were of color or in poverty.

Since 1962 the achievement gap between disadvantaged populations and more affluent ones has widened. At one extreme, urban school districts graduate half or fewer of their students. At the other extreme, 11 percent of American students are among the top 10 percent of world achievers. As one researcher remarked, "If you're in the top economic quarter of the population, your children have a 76 percent chance of getting through college and graduating by age 24. . . . If you're in the bottom quarter, however, the figure is 4 percent" (Loeb, pp. 87–

88). According to educational researcher Gerald W. Bracey, white students' standardized test achievement in reading, mathematics, and science ranks second, seventh, and fourth, respectively, when compared with students worldwide. African-American and Hispanic students, however, rank twenty-sixth, twenty-seventh, and twenty-seventh on these basic skills. Such data describe but do not explain the causes of such wide disparities among educational outcomes. The following section describes some of the challenges which, taken together, help to explain the failure of urban school districts. A final section describes many of the characteristics of successful urban schools.

### Special Challenges

**Highly politicized school boards.** Board politics in major urban school districts often impede judicious decision-making. Several practices contribute to the problem. First, in an effort to better represent diverse constituencies, citywide board seats have given way to narrowly drawn district seats. Board members elected from such districts may find it difficult to support policies and budgets aimed at the good of the total district when doing so is viewed negatively by parents, citizens, and educators in their own neighborhood schools. Second, board members often try to micromanage large, complicated school organizations, thereby abrogating the leadership and accountability of their own superintendent. Finally, it is not unusual for narrow majorities on boards to change after a board election and for superintendents to find prior initiatives no longer supported and even have their contracts bought out.

**Superintendent turnover.** The average years of service for an urban superintendent has been reported differently in various surveys, with some reporting as low as 2.3 years. As a result a new superintendent may function more as a temporary employee of a school board than as the educational leader of the district and the community. Administrators and teachers are reluctant to throw themselves into new initiatives that are not likely to remain in place long enough to show any results. Constituencies, including governments, businesses, church groups, foundations, and universities, with whom the superintendent must interact may take a "wait and see" attitude rather than become active partners in the new superintendent's initiatives.

**Principals as managers and leaders.** The size and complexity of most urban schools inevitably lead to

a focus on the principal as the manager or CEO of a major business enterprise. This emphasis has led to a transformation of the traditional principal role as an instructional leader. Few urban districts dismiss principals because of low student achievement unless the achievement falls low enough for the school to be taken over by the state or district and be reconstituted. In practice the typical urban principal who is transferred or coaxed into retirement is one that has "lost control of the building." The district's stated system of accountability may place student learning as the highest priority; however, the real basis for defining urban principals as "failing" may be not because they have been unable to demonstrate increasing student achievement but because they have been unable to maintain a custodial institution. As researchers Kathy Kimball and Kenneth A. Sirotnik report, the fact that most urban principals spend the preponderance of their time and energy on management issues demonstrates that they fully understand this reality.

**Government oversight.** Local and state government officials involve themselves more and more in educational policies that impact urban districts. This politicization of education produces an endless stream of regulations and funding mechanisms, which encourage or penalize the efforts of local urban districts. However the treatments frequently counteract one another or have unintended negative consequences.

**Central office bureaucracies.** In rural, small town, and suburban districts, classroom teachers comprise 80 percent or more of the school district's employees. In the 120 largest urban districts, the number of employees other than teachers is approaching a ratio of almost 2 to 1; that is, for every classroom teacher there are almost two others employed in the district ostensibly to perform services that would help these teachers. The effect of this distortion is frequently a proliferation of procedures, regulations, interruptions, and paperwork that impedes rather than facilitates student learning. Many teachers leaving urban districts cite paperwork and excessive bureaucratic regulation as among the most debilitating conditions they face.

The self-serving nature of the district bureaucracy frequently impedes initiatives, which would decentralize decision-making and transfer power to individual school staffs. Historically centralized systems are reluctant to change. Prodded by parents, community members, and business leaders, urban

districts are gradually allowing more decentralized decision-making at the school level. In response to bureaucratic rigidities, choices are proliferating within public systems. Examples include open enrollment plans, magnet and specialty schools, schools-within-schools, alternative schools, and public choice and charter schools. Urban parents also have increased options outside the public systems through private school voucher programs, but these efforts account for less than one percent of enrollment in urban districts.

**School staff accountability.** As public school options increase so do calls for accountability. The most frequently tried accountability efforts in the twentieth century have been attempts at merit pay for teachers based on student achievement test scores. Private foundations have funded many of these trials and several have been supported initially by local teachers unions. Thus far, however, there have been no successful models for holding either principals or teachers accountable based on achievement scores. In some cases superintendents have clauses in their contracts stating that their tenure or salaries are dependent on improvements in student achievement. In some districts, school principals' annual evaluations and contract extensions have become tied to improving student achievement.

At the start of the twenty-first century, many states have adopted systems for declaring particular schools (or districts) as failing if a given number of the school's students are below a minimum level of achievement. In these cases the state may mandate that a failing school be reconstituted and may grant the local district the authority to re-staff the school with a new principal and teaching staff. The staff of a failing school is typically permitted to transfer to other schools in the district. This means that while an urban school district is being held accountable based on achievement data, the individual staff members are not. Furthermore the concept of accountability is nonexistent for curriculum specialists, hiring officials, or those who appoint principals, psychologists, safety aides, or other school staff.

**Teacher shortages.** The public clearly understands the importance of well-prepared teachers: 82 percent believe that the "recruitment and retention of better teachers is the most important measure for improving public schools, more effective than investing in computers or smaller class size" (Education Commission of the States, p. 6). In the early twenty-first century there may be as many as one million new

teachers hired because of turnover, retirement, and the fact that the typical teaching career has shortened to approximately eleven years. If the school-age population continues to increase, another million teachers may be needed. While all districts face occasional selected shortages of special education teachers, bilingual teachers, and mathematics or science teachers, the major impact of the current and continuing teacher shortage falls on the urban school districts. These are the teaching positions that many traditionally prepared teachers are unwilling to take. This problem is confounded by the fact that many urban districts must lay off teachers to make up for budget deficits in a given year while they are simultaneously recruiting teachers to remedy their chronic shortages.

In the states that prepare a majority of the teachers in traditional university-based programs, more than half of those who graduate and are licensed never take teaching positions. Of those who do enter the classroom, according to a report from the Education Commission of the States, up to one-third have not only left their initial positions but the teaching profession as well by five years after graduation.

The typical teacher education graduate is a 22-year-old white female, who is monolingual and has little work or life experience. She will teach within fifty miles of where she herself attended school. The profile of teachers who succeed and stay in urban school districts differs in important respects. While they are still predominantly women, they are usually over thirty years of age, have attended urban schools themselves, have completed a bachelor's degree in college but not necessarily in education, have worked at other full-time jobs, and are parents themselves. This successful pool also contains a substantially higher number of individuals who are African American, Latino, and male. Typically, the teacher educators who serve as faculty in traditional university-based teacher preparation programs have had little or no teaching experience in urban school districts while those mentoring teachers in alternative licensure programs typically come from long, successful careers as teachers in urban districts.

**State licensure laws.** While traditional teacher preparation programs seek to attract more young people into the teaching profession, past experience suggests that many of these graduates will not seek employment in large urban school districts where most of the new hires will be needed. To assist in meeting

this urban district need, new kinds of recruiting and training programs are being established to attract older, more experienced, and more diverse candidates into the teaching profession. States differ widely in their response to these new programs. On the one hand there are those whose position is that “the key to attracting better teachers is to regulate entry into the classroom ever more tightly” while others argue that “the surest route to quality is to widen the entryway, deregulate the processes, and hold people accountable for their results” (Thomas B. Fordham Foundation, p. 1). Forty-three states have passed alternative licensure laws that permit the hiring of college graduates who were not trained in traditional programs of teacher preparation. But licensure requirements vary greatly across the states and implementation of new approaches is often controversial even though an increasing number of urban districts now develop a pool of teachers using alternative training programs.

**Funding for districts and classrooms.** Urban school districts often receive substantially less annual financial support per student than they need. The level of funding in urban districts, however, generally exceeds the per pupil expenditures in small towns and rural areas. Many argue, therefore, that there is no total shortage of funds for urban schools, especially when categorical aids and grants are considered. The overall problem of inadequate funding is often exacerbated after the urban school district receives its funds and distributes the monies from the central office levels to the individual schools. Too often, too much money is expended to maintain central office functions, leaving too little to cover the direct costs of instruction and equipment in specific school buildings. In addition, many urban districts are characterized by buildings that are outmoded, even unsafe, creating conditions that make learning problematic. In New York City, for example, more than 150 school buildings are still heated by coal in the early twenty-first century.

**“Projectitis.”** New school board members and superintendents often believe they must set their personal stamps on the district through new initiatives. It is common for urban districts to claim they are aware of and experimenting with the latest curricula in reading, mathematics, or science, for example. In addition, administrators are pressured to try out new programs against drugs, violence, gangs, smoking, sex, etc. This proliferation of programs and projects results in so many new initiatives being tried

simultaneously it is not possible to know which initiative caused what results. Furthermore, not enough time is devoted to any given program to allow it to demonstrate intended results. The problem is compounded by the fact that many of these new initiatives are not systematically or carefully evaluated. Veteran teachers, when confronted with the latest initiative from the school board or administration, often become passive resisters, simply waiting for the next fad to come along while they continue to maintain the status quo. The constant claims of experts, school boards and superintendents that their latest initiative will transform their schools is frequently stonewalled by the very people who must be the heart of the effort for it to succeed.

**Narrowing curriculum and lowering expectations.**

As presented in state and local district philosophy and mission statements, the list of what the American people generally expect from their public schools is impressive. A typical list is likely to include the following goals for students: the acquisition of basic skills, positive self-concept, and humane, democratic values; motivation to be life-long learners and active citizens; success in higher education and in the world of work; effective functioning in a culturally diverse society and a global economy; technological competence; development of individual talents; maintenance of physical and emotional health; appreciation and participation in the arts. In many suburban and small town schools the parents, community members, and professional school educators maintain a broad general vision about the goals that thirteen years of full-time schooling is supposed to accomplish. But in the urban districts serving culturally diverse students in poverty, these broad missions are frequently narrowed down to “getting a job and staying out of jail” (Russell p. 51).

Narrowing down the curriculum is particularly evident among the burgeoning populations of students labeled as special or exceptional. The urban districts have disproportionately large and, some observers claim, wildly accelerating numbers of students labeled with some form of disability. In urban districts the numbers of special students currently range from 6 percent to 20 percent of the student body. This means that exceptional education may account for between 20 percent and 35 percent of a total urban district’s budget. In their 1994 book, *The War Against Children*, Peter R. Breggin and Ginger R. Breggin note that well intentioned but sometimes misapplied state and federal initiatives for special ed-

ucation students encourage the labeling of increasing numbers of students as having learning disabilities, cognitive disabilities, or attention deficit hyperactivity disorder.

It is also not uncommon for many urban teachers who do not have in-depth knowledge of child development to perceive undesirable behavior as abnormal rather than as a temporary stage or as student responses to poor teaching. Thus it is common in urban middle schools to find many students doing well academically who have been labeled as having disabilities in primary grades and who will carry these labels throughout the remainder of their school careers. Teacher expectations are likely to be very modest for such children; testing may be waived. Some low-income parents may be enticed to agree to have their children labeled exceptional because of financial grants. Recent efforts at inclusion for exceptional students in regular classrooms are aimed at breaking the cycle of low expectations and isolation. In urban districts, however, inclusion mandates are most frequently followed in the primary grades but seldom at the high school level. The disproportionate number of children of color, particularly males, labeled exceptional further exacerbates this problem.

**Achievement and testing.** There are four curricula operating in schools. The first is the broadest. It is the written mission of the school district. The second curriculum is what the teachers actually teach. The third operative curriculum is what the students actually learn, which is considerably less than what a district claims or what the teachers teach. The fourth curriculum is what is tested for, and this is the narrowest of the four.

The “tested-for” curriculum frequently supports the narrowing and lowering of expectations. As total school and district programs are evaluated by norm-referenced tests, the accountability of teachers and principals is also narrowed and lowered to the kinds of learning that can be readily tested. Recognition of this problem has led to a new emphasis on standards-led testing or performance assessment that is closely linked to curriculum, in place of the norm-reference testing that compares student’s performance to that of others. Done carefully, such assessment measures the performance of successive cohorts of students against an annual rate of improvement (local or state) that is sufficient to achieve whatever curriculum goals have been set. For the most part, aligning the goals, curriculum, in-

struction, and testing is yet to be accomplished, however.

After decades of ignoring low student scores in urban schools or explaining them away as predictable because of family income, national attention has shifted to the numerous and widespread examples of individual urban schools in which students’ scores are being raised and increasing numbers of low income children are reaching grade level achievement. Educators at all levels are being called upon to focus time, thought and resources on the poorest performing schools and the persistent cultural and racial gaps between high and low performing students.

**Research on urban school practices.** The research literature in teaching, learning, and best practice is robust. A great deal is known about best practices for teachers, how children learn, and what makes specific urban schools successful. The problem is that schools, even failing schools in urban districts that would be expected as being more amenable to change, are resistant institutions shaped by history, culture, and their economic support systems. Simply knowing what works does not guarantee its implementation.

Schools reflect not only general American norms and values but also their local cultures. Since the mid-1980s the plethora of federal and state laws and local administrative mandates is testimony to the fact that education is also a flourishing political activity. It seems clear that schools reflect culture more than research, or even logic and theory. Schools reflect and maintain a multiplicity of social norms contradicted by research-based knowledge regarding best practice. It is ironic that those seeking to transform failed urban school districts are frequently expected to prove beforehand that their advocacies are research-based while those who stonewall change rely on a rationale of laws, funding mechanisms, school organization, and practices that reflect culture and tradition, unsupported by a research knowledge base.

One example lies in what has been described by Martin Haberman (1991) as the pedagogy of poverty. Teaching in many urban schools consists of ritualized teacher acts, which seldom engage students in meaningful learning that is connected to their lives. Such teaching includes giving directions and information; making assignments; monitoring seatwork; testing and grading; settling disputes and punishing

noncompliance. While such activities are part of teaching, the research literature is clear that more is needed if schools are to reach diverse groups of students with widely varied backgrounds, interests, and experiences. Allowing these limited teaching practices to become the typical ones in the urban districts serving diverse student populations of low income students not only “dumbs down” the content of the curriculum but also narrows the pedagogy by which it is offered. It is a process in which students are treated in a disrespectful manner—as if they are incapable of appreciating or responding to the genuine teaching of important knowledge.

Taken together, these formidable urban challenges demand the best of educational practices if children are to succeed. While there are no fully successful urban districts, every district has individual schools that *are* effective. Indeed there are examples of outstanding schools in some of the poorest performing urban districts. This anomaly of how individual schools can be successful in the midst of chaos and failure has been sufficiently documented to enable the stating with some certainty the characteristics that account for their effectiveness.

### **Characteristics of Successful Urban Programs**

The correlates of the effective school literature are as follows: a clearly stated mission; a safe climate for learning; high expectations for students, teachers and administrators; high student time on task; administrators who are instructional leaders; frequent monitoring of student progress; and positive home-school relations. These and other necessary conditions are demonstrated in urban schools in the following ways: First, such schools have outstanding principals who serve as leaders rather than building managers. These individuals are instructional leaders with a deep understanding of the teaching and learning process. They also know, appreciate, and respect the cultures of the ethnic and racial groups the school serves.

Second, there is a critical mass of star teachers or teachers on their way to becoming stars. These are individuals who believe that students and their families are the clients. They believe that student effort rather than ability accounts for success in school and their teaching reflects their ability to generate student effort. These teachers not only know the content and methods of teaching, but also have effective relationship skills that connect them with students. The ideology and behaviors of star teachers have

been well documented. While there are numerous exceptions, star urban teachers tend to be people who are more mature with more varied life experience than college youth. They are often people of color who have attended urban schools themselves. Many have experienced poverty firsthand. It is also increasingly likely that they did not go through traditional teacher training.

Third, effective urban schools have a vision of the school’s mission commonly held by students, the entire staff, parents, caregivers, and the community. There is a unity of purpose that grows out of everyone who is involved with the school believing, sharing, and contributing to this common vision.

Fourth, there is a deep and growing knowledge of how computers and information systems can be used in classrooms and for all school activities. The students and staff are connected to the full resources of the Internet and to the latest instructional programs and not engaged in merely “drill and kill” activities using a computer.

Fifth, parents are involved in integral ways in the life of the school and not merely as homework tutors or disciplinarians. Parents have a strong voice in all aspects of the school’s decision-making processes. They are regarded as resources able to inform school policy and curriculum.

Sixth, the curriculum is aligned with achievement tests. There is also a closed loop so that the results of testing inform and guide curriculum revisions as well as what teachers teach everyday. Student evaluation includes more than norm-referenced tests and places great emphasis on the systematic use of students’ work samples and work products. While achievement tests are important, the teachers offer a broad curriculum and do not narrow or dumb it down to prepare for the tests. The acquisition of important knowledge for all students, including those with special needs, is maintained as the school priority.

Seventh, the curriculum is sensitive to issues of equity and social justice. What the teachers plan to teach on any given day can be set aside as students and teachers consider issues that arise in the school. “Problems” are not generally seen as intrusions on the curriculum but are dealt with as opportunities to make learning relevant. The students learn that school is not preparation for living later but rather for learning to deal with issues and challenges now.

Eighth, there are frequent celebrations of student achievements. These take the form of student

accomplishments in all areas, which then culminate in exhibits, publications, performances, and displays for other students, parents, and the community. The climate and schedule of the building clearly manifest student learning and accomplishment.

Ninth, the faculty and staff are themselves a community of learners. Teachers and administrators design annual educational plans to develop further as people and as professionals. Such plans include team and cooperative activities to help teachers combat isolation. Professional development occurs during the workday as well as during nonschool periods. It provides “opportunities to build meaningful partnerships with parents, businesses, educational and cultural institutions to create exciting new learning experiences” (Renyi, p. 18).

Tenth, the school provides a healthy, safe environment for learning. The staff is expert at de-escalating rather than escalating student behavior problems. There are few suspensions and expulsions. Every effort is made to continue student learning during a suspension period.

Finally, successful urban schools frequently find ways to extend the time children spend with knowledgeable, caring adults through preschool, extended day, weekend, and summer school programs, often working as partners with their communities.

At the beginning of the twenty-first century the greatest challenge to every major urban school system is to create and replicate these effective conditions, which are already practiced in specific school buildings, throughout the district as a whole.

**See also:** EDUCATIONAL LEADERSHIP; PRINCIPAL, SCHOOL; SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS; URBAN INSTITUTE.

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## URBAN INSTITUTE

The Urban Institute, founded in 1968, is a private, nonprofit organization dedicated to conducting independent research on a broad range of social and economic issues of particular importance to improving the quality of life in metropolitan centers in the nation and throughout the developing world. Through statistical research, polling, and interviews, the institute seeks to make available pertinent data that will help in the formulation of state and federal policy. Its published reports, offered in print and on the Internet, are made available to interested individuals, organizations, and researchers free of charge, in the interest of expanding public debate.

### Program

The Urban Institute carries out its mission of research and education through the activities conduct-

ed by its nine research centers, each of which specializes in particular aspects of the urban experience. For instance, the Education Policy Center generates research on all aspects of education reform, particularly as it relates to the needs of urban public school programs. The Health Policy Center has long concerned itself in studying the changing landscape of insurance availability and, especially, the growing numbers of uninsured and underinsured workers. The Labor and Social Policy Center explores trends in employment and unemployment and, since the late 1980s, has taken a special interest in addressing the problem of rising homelessness in the nation's cities. And the Metropolitan Housing and Communities Center has concentrated on research into standards and availability of low- and middle-income urban housing and on the social and economic effects of housing policy at the state and federal level.

In addition to research, the institute actively seeks to disseminate its findings to interested parties, from policymakers at the state and national level to academic researchers and the general public. To accomplish this goal, the institute makes its data available, free of charge, to all interested parties via its website, and its experts regularly present their research results in a variety of formats, from books and journal articles to interviews, radio addresses, and testimony before congressional committees. "First Tuesdays" is a series of seminars on urban-related topics of current interest, hosted at the institute's headquarters in Washington, D.C., on the first Tuesday of each month from October to June. In addition, the institute participates in a nationally syndicated program, *CityScapes*, in partnership with WAMU-FM, a Washington, D.C., radio station.

### Membership and Funding

The institute draws its members from the fields of government and community service, academia, journalism, and business. A small group of senior fellows directs institute-sponsored research with the assistance of a research staff of 400. In addition to directing specific projects, senior fellows also conduct independent research, publish in scholarly and mass-market publications, and represent the institute in the media and while testifying before Congress.

### Organization and Funding

The Urban Institute is home to nine separate research centers: the Education Policy Center, the

Health Policy Center, the Income and Benefits Policy Center, the International Activities Center, the Justice Policy Center, the Labor and Social Policy Center, the Metropolitan Housing and Communities Center, the Nonprofits and Philanthropy Center, and the Population Studies Center. It receives financial support from government agencies, charitable foundations, corporate sponsors, individual donations, and grants from international organizations such as the World Bank.

### History

In the mid- to late 1960s the United States was confronted by increasing urban unrest. Then-president Lyndon B. Johnson had initiated an extensive array of social initiatives, termed the "Great Society," in an effort to address many of the problems facing the nation during that era. In 1968 the Urban Institute was created specifically to evaluate the successes and failings of President Johnson's policies, particularly as they affected key urban issues, such as poverty, educational finance, unemployment, housing, transportation, and welfare. Among the first projects undertaken by the institute was a pioneering effort to use computer modeling to track the results achieved by federal social programs and changes in the tax law and to investigate the impact of these policies on a wide variety of U.S. households.

In the 1970s the institute expanded its areas of interest to develop new management techniques, with the goal of aiding federal and state agencies in improving their performance in delivering their program benefits. These early concerns remain central to the institute's mission today, and the research generated by early institute scholars provided the initial data from which the current databases were built.

In the 1980s the institute devoted much of its resources to producing a detailed chronicle of the urban policy initiatives of the Reagan administration. At the same time, however, other research was still carried out, including an in-depth examination of the proliferation of federal and state programs. One result of this latter research was the recognition that many of these programs were redundant and that overlapping authorities, competing bureaucracies, and a host of contradictory eligibility requirements actually inhibited the implementation of many desired initiatives. To address these problems, the institute developed the concept of the *block grant* approach to federal funding, in an effort to provide

states with greater flexibility in addressing the particular needs of their communities. In 1987 the institute also released a groundbreaking study of the problem of urban homelessness. In 1988 it took on the problem of uninsurance and underinsurance, bringing to public awareness the fact that this was not just a problem for the unemployed but for working Americans as well.

The 1990s saw a further broadening of the institute's interests, when the International Activities Center was launched. In 1992 the Los Angeles riots once again brought the institute's attention to the core problems facing the nation's cities, including the problems attendant on the rise in legal and illegal immigration, particularly from Latin America. Meanwhile, increased concerns about problems facing the nation's courts led to the creation, in 1994, of the Federal Justice Statistics Resource Center, a database of trends and issues in criminal justice. In 1997 the institute published its "neighborhood indicators," a progress-assessment checklist designed to help state and local municipalities improve their performance in achieving social and economic goals.

In the year 2000 the institute inaugurated a new project, *Assessing the New Federalism*. This program, inspired by the trend toward "devolution" (the reversion of control over social and economic policy to the states), monitors the progress of local and state initiatives and makes that information available to the wider public.

#### INTERNET RESOURCE

URBAN INSTITUTE. 2002. <[www.urban.org](http://www.urban.org)>.

NANCY E. GRATTON

## U.S. DEPARTMENT OF EDUCATION

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#### OVERVIEW

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#### INTERNATIONAL ROLE

Lenore Yaffee Garcia  
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### OVERVIEW

A persistent debate that the United States has struggled with since its early history is the role of the fed-

eral government in the education of its citizenry. Much of this debate has played out in battles over the existence of a national government entity focused on education, such as the U.S. Department of Education.

The divisive issue of the federal role in education stems from an ambiguous charge from the nation's founding fathers. On one hand, they generally professed a limited national government organized to secure the national interest, leaving the responsibility of most public operations to state and local government bodies. On the other hand, the founding fathers were very direct in their belief in the unalienable relationship between a well-educated citizenry and a healthy democracy.

For the most part, advocates of a very limited federal government were victorious in maintaining the responsibility of education at the local and state level. The strength behind their argument was that the U.S. Constitution made no mention of a federal role in education. However, opponents cite the constitutional clause that grants the power to provide for the nation's "general welfare" to Congress, as reasoning for a substantial federal role. The result was that for the "first three-quarters of a century of the country's existence, there was no agency in the federal government specifically concerned with education" (National Library of Education website).

### History of the Department

In 1867 the U.S. Congress passed legislation to establish the first Department of Education. President Andrew Jackson signed the legislation that created the department, which was to be a non-cabinet-level agency with a mission of improving American education by disseminating sound education information to local- and state-level authorities. Henry Barnard, a dedicated scholar of education reform, became the first commissioner of the Department of Education; he was given a small staff of three and two rooms in Washington, D.C., to run the agency.

Barnard accepted the challenge and believed that American education, especially practitioners at the state and local level, would benefit from having sound information, data, research, and best practices to emulate. Barnard was responsible for collecting a great deal of data about the nation's schools and disseminating it to practitioners. He focused the department on producing scholarly reports and research to provide a context for education. Despite

the miniscule staff, resources, and power that the Department of Education carried, Barnard achieved some success in achieving his mission. However, Congressional opposition did not agree that Barnard's academic approach was cost-effective, charging that the department had become a waste of national resources.

As a result, "the annual appropriations act approved by Congress on July 20, 1868 reduced the funding for the education agency and stated that after June 30, 1869, it would lose its independent status and become the Office of Education within the Department of Interior" (National Library of Education website). Soon thereafter, in 1870, the education agency was renamed the Bureau of Education, and Barnard became discouraged about the new direction and resigned.

Barnard's successor, John Eaton, was immediately appointed as commissioner of the Bureau of Education. Eaton continued Barnard's interest in collecting education statistics, publications, and reports, and in disseminating them to local and state education authorities. In fact, Eaton, recognizing the value of the library collection owned by Barnard and housed in the Bureau of Education, decided to purchase the collection for the Bureau of Education's library. Eaton emphasized the importance of the collection of resources by appointing a librarian and pushing to grow the collection despite a lack of funding support by Congress.

Additionally, Eaton maintained the emphasis on collecting statistics. He realized that there was much to be collected, and he continued Barnard's charge, with some success. In an 1875 report, Eaton stated:

When the work of collecting educational statistics was begun by the Office, it was found that there was no authentic list of the colleges in the United States, or of academies, or normal schools, or schools of science, law, or medicine, or of any other class of education institutions. The lists of nearly all grades of schools are now nearly complete. Information on all other matters relating to educational systems was equally incomplete and difficult to access. (quoted in Grant)

From 1889 to 1906 the Department of Interior's Bureau of Education continued its focus on collecting and diffusing education information and statistics in the United States. William Torrey Harris was

the commissioner during this period, and data collection was greatly expanded. It included private elementary and secondary school enrollment, teachers, and graduates; enrollment by subject field in public high schools; public school revenue receipts by source; and income and value of physical plants of institutions of higher education. The bureau continued along the same path of substantial growth under commissioners such as Eaton, Harris, and Elmer Ellsworth Brown (1906–1911) until 1929, when the Bureau of Education once again became the Office of Education. In 1929 Commissioner of Education William John Cooper took over the newly renamed Office of Education, which was still residing in the Department of the Interior. Cooper maintained the focus on collecting materials for the library.

In 1939 the Office of Education underwent yet another reorganization. This time it was not a cosmetic name change but an actual restructuring. The Office of Education was moved out of the Department of Interior and made part of a new agency called the Federal Security Agency (FSA). The office was granted more autonomy under the reorganization under the direction of another ambitious commissioner of education, John Studebaker.

In 1953, early in the Eisenhower administration, the Department of Health, Education, and Welfare (HEW) was established by merging parts of the Federal Security Agency, including the Office of Education, with related functions in other parts of the government. During the 1950s, more funds became available for education due to political and social circumstances. The United States began to take global competitors seriously, and the government was reminded by the Soviet Union's launch of the satellite *Sputnik* that educating the nation's youth was vital to remaining a world power. The National Defense Education Act (NDEA) of 1958, a direct result of the furor surrounding the launching of *Sputnik*, created major federal education programs in mathematics, science, and foreign languages. When President Lyndon Johnson came into office in 1963, he made education a central element of the War on Poverty, which led to the passage of the Higher Education Act (1965) and the landmark Elementary and Secondary Education Act (ESEA, 1965).

The National Education Association (NEA), the national teachers' union, was a major player in American politics at that time, and the organization was rewarded for its political support with the creation of the cabinet-level U.S. Department of Educa-

tion in 1980. The decision to raise the status of education to a cabinet-level position was one that did not come without controversy and an interesting series of events.

### **Independence Achieved**

The Carter administration proposed the creation of the Department of Education in 1978, despite the active opposition of HEW secretary Joe Califano. While it easily passed the Senate, due to strong advocates such as Abraham Ribicoff (the Democratic senator from Connecticut) and Jacob Javits (a Republican from New York) the bill faced a tough fight in the House of Representatives. Under House rules, the bill was referred to the Government Operations Committee, where a coalition of Republicans led by John Erlenborn (R-Ill.) and Leo Ryan (D-Calif.) kept the bill from being reported out of committee for full House consideration.

At the end of that session of Congress, Representative Ryan led a delegation to Jonestown, Guyana, to investigate reports of a cult leader, Jim Jones, and his influence on young Americans, many from Ryan's district. Following his meetings, Ryan and four others were murdered as he and his delegation returned to their small planes. When the Congress reconvened in January, the Democratic opposition collapsed in the committee and the bill finally passed the House by the very close margin of 210 to 206. President Carter soon thereafter nominated federal judge Shirley Hufstедler from California as the first secretary of the new department. The department formally came into existence on May 4, 1980. In November, Carter was defeated by Ronald Reagan and Hufstедler left office in January. She was replaced by Reagan nominee Terrel Bell.

In the Carter proposal to create the department, it was anticipated that schools operated by the U.S. Department of Defense on and near overseas military bases would be transferred to the new Department of Education. The legislation scheduled the transfer for several years in the future. Prior to that date, Congress intervened and amended the section of the law deleting the provision to transfer Department of Defense schools to the Department of Education. This was a notable action because it reduced the staff size of the agency by nearly half and removed the department from any direct involvement in operating those schools.

Because Reagan had campaigned on a platform that called for dissolving the U.S. Department of Ed-

ucation, Bell operated under severe handicaps: the budget was cut; there was a major consolidation of programs, and a significant downsizing of staff. While Bell was presiding over a department that the White House wanted to dismantle, he took one action that ensured the continued existence of the department. In 1981 he created the National Commission on Excellence in Education, chaired by David Gardner, then president of the University of Utah and later president of the University of California. In 1983 this little-noticed commission issued a report titled *A Nation at Risk*. Using rhetoric in an extraordinarily powerful fashion, this report, which coined the phrase, "a rising tide of mediocrity," captured the attention first of the White House, and then of the nation.

*A Nation at Risk* led to the publication of a tidal wave of similar reports, a wave that swept ashore in 1989 when the George H. W. Bush administration held the first joint White House/Governors summit since the Great Depression. That summit led to the creation of National Education Goals, a renewed status and respect for the department, and an ambitious agenda that largely reversed the declines of the first Reagan administration. It was at this point that President Bush appointed a former governor, Tennessee's Lamar Alexander, as the first political leader of the department. Alexander followed Lauro Cavazos, who had followed William Bennett upon Bell's departure in 1984.

The political leadership of the agency continued when Bill Clinton defeated George Bush in 1992 and appointed another former southern governor, Richard Riley of South Carolina, to the secretariat. Riley stayed at the department the entire Clinton presidency, thereby establishing himself as the longest-serving education secretary and creating a record achieved in few other agencies. In 2001, President George W. Bush appointed Rod Paige, then the Houston superintendent of schools, as secretary of education, returning the department to leadership from the education field.

### **The Department Focuses Its Mission**

With the creation of the Department of Education, education became a prominent national issue. The department's major functions were to establish policy for administrators and coordinate most federal assistance to education. According to the Department of Education Organization Act (1979), Con-

gress set out to accomplish seven things by creating the department:

1. Strengthen the federal commitment to ensuring access to equal educational opportunity for every individual.
2. Supplement and complement the efforts of states, local school systems (and other instrumentalities of the states), the private sector, public and private educational institutions, public and private nonprofit educational research institutions, community-based organizations, parents, and students to improve the quality of education.
3. Encourage the increased involvement of the public, parents, and students in federal education programs.
4. Promote improvements in the quality and usefulness of education through federally supported research, evaluation, and sharing of information.
5. Improve the coordination of federal education programs.
6. Improve the management and efficiency of federal education activities, especially with respect to process and procedural funds, as well as the reduction of unnecessary and duplicative burdens and constraints, including unnecessary paperwork, on the recipients of federal funds.
7. Increase the accountability of federal education programs to the president, the Congress, and the public.

In developing its own mission, the Department of Education identified its own basic responsibilities:

1. Establish policies relating to financial aid for education, administer distribution for these funds, and monitor their use.
2. Collect data and oversee research on America's schools, and disseminate this information to the public.
3. Identify major issues and problems in education and focus attention on these problems.
4. Enforce federal statutes prohibiting discrimination in programs and activities receiving federal funds and ensure equal access to education.

## Organizational Structure

The Department of Education is a horizontally and vertically differentiated agency organized into four levels: management and staff, operations, external relations, and program offices. Each level of the department has its own offices and individual mission that contributes to the attainment of its four stated goals.

**Management and staff.** The secretary of education is responsible for the overall direction, supervision, and coordination of all activities of the department and is the principal adviser to the president on federal policies, programs, and activities related to education in the United States. The deputy secretary serves as the principal policy adviser to the secretary on all major program and management issues, including student financial assistance. The deputy secretary is also responsible for the internal management and daily operations of the department. The under secretary is responsible for oversight of policy development and administration of the Budget Service and the Planning and Evaluation Service.

The Office of the General Counsel is under the supervision of the general counsel, who serves as principal adviser to the secretary on all legal matters affecting departmental programs and activities. The office has three legal practice areas, each of which is headed by a deputy general counsel, and an operation management staff, headed by an executive officer.

The Office of the Inspector General's mission is to promote the efficiency, effectiveness, and integrity of the department's programs and operations; conduct independent and objective audits, investigations, and inspections; and other activities. The Office of Public Affairs develops the department's communications and outreach strategy, coordinates communication with members of the national and local media, directs the department's speechwriting and publications operations, and oversees its in-house television channel and radio news service.

The Executive Management Committee meets each week to discuss and advise the deputy secretary on decisions about the overall management of the agency and the implementation of its initiatives. Its members are all senior offices whose central purpose is management of the agency.

**Operations.** The Office of Management is the department's administrative component and is dedicated to promoting customer services, expanding

staff performance capacity, using strategic approaches to management, and providing a high-quality workplace for the department.

The Office of the Chief Financial Officer is headed by the chief financial officer, whose primary responsibilities involve supervising the activities of major components and serving as the principal adviser to the secretary on all matters related to discretionary grant-making, cooperative agreements, and procurement, as well as financial management, financial control, and accounting. The office's mission is to provide accurate, timely, and useful grant, contract, and financial management information and services to all of the department's stakeholders.

The Office of the Chief Information Officer develops technological strategies and solutions that enable the Department of Education to provide world-class service to schools, students, and their families.

**External relations.** The mission of the Office of Legislative and Congressional Affairs is to serve as the principal adviser to the secretary on education and other legislative matters before the Congress, and as the department's liaison in responding to the needs of Congress. The Office of Intergovernmental and Interagency Affairs works with government officials at federal, state, and local levels—as well as with educators, business and community leaders, parents and families, and religious leaders—to encourage their support for the improvement of American schools.

**Program offices.** The Office of Postsecondary Education is responsible for formulating federal postsecondary education policy and administering programs that provide assistance to postsecondary education institutions and to students pursuing programs of postsecondary education.

The Office of Student Financial Assistance Programs is a performance-based organization (PBO) established as part of the Higher Education Amendments of 1998 to modernize the delivery of student financial aid and improve service to millions of students and the postsecondary institutions they attend. In fiscal year 1998, some 8 million students received more than \$46 billion in federal financial aid.

The mission of the Office of Elementary and Secondary Education is to promote academic excellence, enhance educational opportunities and equity for all of America's children and families, and to improve the quality of teaching and learning by providing leadership, technical assistance, and financial support. The office is responsible for directing, coord-

inating, and recommending policy for programs designed to: (1) assist state and local educational agencies to improve the achievement of elementary and secondary school students; (2) help ensure equal access to services leading to such improvement for all children, particularly children who are educationally disadvantaged, Native American, homeless, or children of migrant workers; (3) foster educational improvement at the state and local levels; (4) and provide financial assistance to local educational agencies whose local revenues are affected by federal activities.

The Office of Educational Research and Improvement (OERI) provides national leadership for educational research and statistics. OERI strives to promote excellence and equity in American education by conducting research and demonstration projects funded through grants to help improve education; collecting statistics on the status and progress of schools and education throughout the nation; and distributing information and providing technical assistance to those working to improve education. OERI houses the National Center for Education Statistics, the primary federal entity for collecting and analyzing data that are related to education in the United States and other nations.

The Office of Bilingual Education and Minority Languages Affairs (OBEMLA) provides national leadership in promoting high-quality education for the nation's population of English language learners (ELLs). Traditionally, this population has been known as limited English proficient (LEP) students. OBEMLA's mission is to include various elements of school reform in programs designed to assist the language minority agenda. These include an emphasis on high academic standards, an improvement of school accountability, an emphasis on professional development, the promotion of family literacy, the encouragement of early reading, and the establishment of partnerships between parents and the community. OBEMLA administers grant programs that help every child learn English and content matter at high levels. It also provides leadership ensuring that policy-related decisions focus principally on the best interests of the ELL child; collaborates with other federal, state and local programs to strengthen and coordinate services for ELLs and promote best practices; monitors funded programs; and provides technical assistance to ensure that funded programs focus on outcomes and accountability.

The Office of Vocational and Adult Education has the mission to help all people achieve the knowledge and skills to be lifelong learners, to be successful in their chosen careers, and to be effective citizens. The Office of Special Education and Rehabilitative Services' mission is to provide leadership to achieve full integration and participation in society of people with disabilities by ensuring equal opportunity and access to, and excellence in, education, employment and community living. In implementing this mission, the office supports programs that help educate children and youth with disabilities, provides for the rehabilitation of youth and adults with disabilities, and supports research to improve the lives of individuals with disabilities.

The mission of the Office for Civil Rights is to ensure equal access to education and to promote educational excellence throughout the nation through vigorous enforcement of civil rights laws.

*See also:* FEDERAL EDUCATIONAL ACTIVITIES, *subentries on* HISTORY, SUMMARY BY AGENCY; FEDERAL INTERAGENCY COMMITTEE ON EDUCATION; U.S. DEPARTMENT OF EDUCATION, *subentry on* INTERNATIONAL ROLE.

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### INTERNATIONAL ROLE

Although the primary mission of the U.S. Department of Education is a domestic one, the department also sponsors international programs, cooperates with other nations, and participates in international organizations, studies, and events. This international role has grown over time with the heightened relevance of global developments for U.S. citizens in an increasingly interdependent world, and the growing awareness of the part played by education in fostering economic, social, and personal development, and in sustaining democracy.

Within these contexts, the department facilitates efforts by U.S. educators, students, researchers, and policymakers to forge partnerships with counterparts abroad who have common interests. The department engages in a variety of international activities with three primary objectives: to strengthen U.S. education, to increase U.S. international expertise, and to facilitate the exchange of information and building of knowledge about education worldwide.

The department's international cooperation helps educators and policymakers understand how U.S. educational performance compares with that of other countries. It also provides information on effective educational policies and practices abroad. The department coordinates U.S. participation in both international assessments of student achievement and the development of internationally comparable educational statistics. Other activities focus on analyzing other countries' best practices in areas in which there have been positive results, as well as learning alongside other nations through joint studies and research projects, on topics ranging from mathematics instruction to migrant education, and from early childhood education to rehabilitation services. Educators and policymakers use such information to improve educational practice in the United States. Other programs support U.S. educational institutions' efforts to build strong partnerships with counterpart institutions abroad.

Through its international activities and grant programs, including those authorized by Title VI of

the Higher Education Act and the Fulbright-Hays Act of 1961, the department supports efforts to expand the study of the languages and societies of other nations, as well as opportunities for U.S. students and teachers to study and carry out research abroad. Such programs help U.S. citizens develop a broader understanding of, and communicate more effectively with, other nations, and contribute to national security by developing experts on regions of the world that are of strategic importance to the United States. A significant proportion of U.S. students studying abroad receive financial aid from the department.

The department represents the U.S. government in education-related matters at international meetings and conferences, and provides expertise to the U.S. government's foreign affairs and foreign assistance agencies on matters related to education policy and practice. In doing so, it helps to (1) stimulate discussion and research on topics of priority to the United States; (2) increase the participation of U.S. experts in international policy dialogues; (3) build mutual understanding on social issues with other nations; and (4) improve education both at home and abroad. New technologies facilitate these efforts.

Foreign demand for information regarding U.S. education policy and practices results in frequent information exchanges between the department and colleagues in other countries. The department also receives foreign visitors who request to meet with their counterparts to learn about education in the United States. Visitors (more than 1,500 in the year 2000) range from ministers of education and senior policy advisors to school administrators, teachers, members of legislatures, the press, and the private sector. Many others obtain information on U.S. education via the department's web-based resources.

*See also:* INTERNATIONAL EDUCATION; INTERNATIONAL STUDENTS.

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## U.S. WAR COLLEGES

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Career-long education is a cornerstone tradition of the American military. The capstone of the America's professional military education systems is the War College, or, more correctly, the Senior Service Colleges (SSCs). While each of the four primary SSCs reflects its service origins, students attending each are selected from the five military services, from civilian agencies, and from allied nations. The collective mission of the SSCs is to prepare senior leaders for duties of responsibility and to enhance their ability to make sound decisions in command, staff, and managerial positions. Each SSC provides interdisciplinary instruction in national strategy and operational arts, and seeks to instill a commitment to joint service and combined operations. SSCs also serve as centers for research, doctrinal development, and war gaming, focusing on issues of strategy and international relations, national security policy and mobilization, executive management and leadership, and the operational command of joint and multinational forces.

The oldest of these institutions, the Naval War College (NWC), was established at Newport, Rhode Island, in 1884 to provide an advanced course of professional study for naval officers. Commodore Stephen B. Luce served as its first president. Luce viewed the college as "a place of original research on all questions relating to war, and to statesmanship connected to war, or the prevention of war" (Naval War College website). Instructors were recruited from the Navy, other services, and civilian universities, shaping an interdisciplinary faculty that is characteristic of all the SSCs in the early twenty-first century.

The NWC is actually a university, home to five named colleges and numerous departments and specialized programs. Its SSC-level program for senior officers is housed in the College of Naval Warfare.

The College of Naval Command and Staff educates midcareer officers selected from all five armed services and other governmental agencies. The Naval Command College serves senior naval officers from allied nations, while the Naval Staff College provides training for midgrade allied officers. The College of Continuing Education develops and administers a nonresident program equivalent of the College of Naval Command and Staff. Among its many departments is the War Gaming Department. Battle simulations have been part of the Naval War College curriculum since 1887, and they are used today to train leaders at all levels and to evaluate doctrinal concepts and operational techniques.

The Army War College (AWC) was established by Secretary of War Elihu Root in 1903. Root envisioned a learning institution “not to promote war, but to preserve peace” with a mission “to study and confer on the great problems of national defense, of military science, and of responsible command.” Housed at Carlisle Barracks, Pennsylvania, the AWC focuses on education, research, and outreach. Three hundred American and allied students attend the resident course each year, while thousands of others participate in specialized programs and research projects. The Department of Distance Learning conducts an SSC-equivalent nonresident course, employing advanced Internet-based learning tools, and extensive professional readings and written reflection. Specialized programs include the Center for Strategic Leadership, Military History Institute, Peacekeeping Institute, and the Strategic Studies Institute.

The Air University (AU), located at Maxwell Air Force Base in Alabama, was established in 1946, and has a broad education scope. Collectively, its five named colleges seek to “educate Air Force people to develop and lead the world’s best aerospace force and to inspire commitment to a war-winning profession of arms” (Air University website). The Air War College educates senior officers to lead at the strategic level in the employment of aerospace forces, including joint operations, in support of national security. The AU also includes the Air Command and Staff College, the College of Aerospace Doctrine, the Department of Research and Education (specializing in war gaming), the College of En-

listed Professional Education, and the Community College of the Air Force.

The National Defense University (NDU), headquartered in Washington, D.C., serves the educational needs of uniformed and civilian officials from the Defense and State Departments and other federal agencies by focusing on the resource component of national power. NDU colleges emphasize material acquisition, industrial mobilization, and joint logistics. NDU oversees the educational and research programs of the Industrial College of the Armed Forces, Joint Forces Staff College, Information Resources Management College, the National War College, the Institute for National Strategic Studies, and the Center for Hemispheric Defense Studies.

Collectively, the Senior Service Colleges, and the professional education systems they represent, are a national education asset of great value. Each employs a full range of advanced teaching techniques and information-age technologies, from case-based learning and simulations to distance learning and across-the-curriculum interdisciplinary studies. Graduation from one of these highly selective programs is the professional equivalent of a doctoral degree in other fields.

*See also:* MILITARY PROFESSIONAL EDUCATION SYSTEM.

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# V

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## **VIOLENCE, CHILDREN'S EXPOSURE TO**

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### GENERAL EFFECTS

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### COMMUNITY VIOLENCE

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### **GENERAL EFFECTS**

Children's experience with violence has been linked to a variety of negative outcomes, one of particular importance being children's school adaptation and academic success. Since the early 1980s researchers and professionals working with children have become increasingly aware of the extent to which many children experience or observe violence within the confines of their own homes or within their own neighborhoods. Data from 1999 reports by states to the National Child Abuse and Neglect Data Systems indicate that approximately 826,000 children (nearly 12 out of every 1,000 children) were confirmed by child protective services as victims of maltreatment. With respect to exposure to interparental violence, Murray A. Straus estimated, in a report published in 1992, that more than 10 million children in the U.S. witness physical aggression between their parents each year, with prevalence rates throughout childhood being at least triple the rates of exposure within a given year.

Community violence also has an impact on many children. Estimates of community violence ex-

posure are based on data gathered through interview or survey methods, and generally reflect the number of children who were personally victimized as well as those who witness community violence involving their family members, schoolmates, neighbors, and peers as victims. Whereas attempts are made to keep child abuse and interparental aggression private and secret, community violence is discussed widely, often resulting in rapidly spreading ripple effects. Thus, even children who do not directly observe community violence often have knowledge of violent events within their community or hear repeated accounts of a specific incident, and may form their own mental imagery of the violence. Studies suggest that in inner city neighborhoods, almost all children have been exposed to community violence, and at least one-third of pre-teenage and teenage children have been directly victimized. Exposure to violence (i.e. children's experience as either targets or witnesses to violence) affects children's views of the world and themselves, their ideas about the meaning and purpose of life, their expectations for future happiness, and their moral development. Moreover, exposure to violence often interferes with developmental tasks children need to accomplish in order to become competent members of society.

Two key developmental tasks frequently compromised by exposure to violence are children's adaptation to school and academic achievement. Children exposed to either familial or community violence (or both) often demonstrate lower school achievement and poorer adaptation to the academic environment. Exposure to violence affects these developmental tasks both directly and indirectly. Violence exposure can lead to disturbances in cognitive functioning, emotional difficulties such as depres-

sion and anxiety, and behavior and peer problems. Before examining how each of these effects can interfere with children's adaptation to school and academic competence, it is important to consider three issues related to children's violence exposure.

First, violence exposure rarely occurs only once or only in one form. That is, most children who are exposed to violence are rarely exposed to only one incident or one type of violence. Researchers have determined that there are high rates of co-occurrence between exposure to community violence and intrafamilial violence, and within the family, high rates of co-occurrence have been detected between interparental violence and parent-to-child violence. Moreover, it also has become clear that these different forms of violence are frequently recurring events.

A second central issue is that violence exposure often goes hand in hand with numerous other adverse life experiences. Children living with violence typically experience other stressors such as poverty, neglect, poor nutrition, overcrowding, substance abuse, lack of adequate medical care, parents' unemployment, and parents' psychopathology. These factors can exacerbate and extend the negative effects of violence exposure in children. For example, children whose parents suffer from psychopathology or struggle with substance abuse problems may not have had the opportunity or guidance to develop pro-social coping skills with which to deal with violence exposure in their community. Although children exposed to violence may have a greater need for nurturance and protection than children without such stressors, they may actually have less access to social support from their caretakers. Therefore, efforts to grasp the effects of violence exposure on children also must evaluate the context in which the child is embedded.

A third issue is that the effects of violence exposure are developmentally contingent. Children face specific challenges at different points in development. Thus, the impact of violence exposure will vary according to the child's developmental level. Children's abilities to appraise and understand violence, to respond to and cope with danger, and to garner environmental resources that offer protection and support change become refined over the course of development. Moreover, theorists assert that as children mature, the skills required to master current life challenges rest on competencies acquired earlier in development. Accordingly, exposure to vi-

olence early rather than later in development may be more detrimental, particularly if the violence exposure compromises the foundations required to develop future competencies. In a related vein, however, if early violence exposure is terminated, the plasticity in children's developmental processes may promote recovery for any lost or delayed functioning. The implications of length and timing of violence exposure are complicated and require future empirical investigation.

The review that follows examines the cognitive, emotional, behavioral and social effects of violence exposure, and highlights the ways in which these effects can disrupt children's adaptation to school and academic competence. Although the effects of violence exposure are presented here as distinct, in reality the cognitive, emotional, behavioral and social effects of violence are interrelated and contribute to one another. For example, if children who are exposed to violence are less flexible and resourceful in their reasoning, these cognitive processes may be associated with problems with peers and school work, which may then lead to depression and anxiety.

### **Cognitive Effects**

Exposure to violence, particularly parent-to-child violence, has been associated with problems in children's cognitive processes and poor academic functioning. Researchers have linked exposure to chronic abuse and violence with lower IQ scores, poorer language skills, decrements in visual-motor integration skills and problems with attention and memory. Cognitive problems associated with exposure to violence and abuse comprise one of the most direct threats to the developmental task of school adaptation and academic achievement. Deficits in attention regulation, language skills, and memory undermine the child's ability to accomplish the central requirements of academic achievement and school adaptation, namely to encode, organize, recall, and express understanding of new information. Accordingly, physically abused school-age children have been found to score lower than non-abused comparison children on tests of verbal ability and comprehension, reading and math skills, and overall achievement on standardized tests. Similarly, children exposed to community violence tend to show lower school achievement.

The cognitive effects of violence exposure affect more than children's academic performance. Children who have difficulty with attention and memory

may not be sensitive to important social cues and expectations, and thus find themselves struggling with school rules, peer relationships, and classroom instructions. Thus, the cognitive effects of violence exposure may disrupt children's successful functioning in the school environment in addition to hindering academic competence.

### **Emotional Effects**

Exposure to violence almost always carries emotional consequences for children. Children's exposure to intrafamilial violence has been linked to depression and more negative self-concept. Studies have shown that both witnessing and/or being a victim of community violence may put children at risk for increased anxiety and depressive symptoms. Violence exposure can be interpreted by the child to mean not only that the world is unsafe but also that the child is unworthy of being kept safe. Whether related to violence in the home or in the community, these attitudes can undermine children's school adjustment and academic achievement by contributing to negative self-perceptions and problems with depression and anxiety.

Another emotional consequence for children exposed to violence is posttraumatic stress disorder (PTSD). Researchers have determined that both chronic and acute exposure to violence is linked to heightened levels of PTSD symptoms, including diminished concentration, sleep disturbance, sudden startling, and intrusive thoughts. These symptoms, as well as the symptoms of anxiety and depression, interfere with children's academic achievement by making it more difficult to attend to school lessons, and by lowering the motivation and disrupting the concentration necessary to complete academic tasks. Similarly, children's adaptation to the school environment may be undermined by the emotional consequences of violence exposure. Violence-exposed children have been rated by teachers and parents as less "ready to learn," less competent in school, and more likely to repeat grades.

In addition, children's efforts to manage the emotional consequences of violence exposure may interfere with school adaptation and academic achievement. Research has shown that children use both behavioral distraction and attentional disengagement to cope with uncontrollable stress and reduce anxiety. Children's efforts to cope with the symptoms of depression, anxiety, and PTSD may have a deleterious effect on their social awareness,

social engagement, ability to problem solve, and their attentional resources. Whereas some children will cope with the emotional toll of violence exposure by isolating themselves and withdrawing from the environment, other children will use behavioral distraction to cope with overwhelming negative emotions. Both coping strategies can create problems in the classroom and on the playground.

### **Behavioral and Social Effects**

Childhood exposure to violence is associated with a variety of aggressive and otherwise maladaptive behaviors that can disrupt children's school adaptation and academic competence. Such behavior problems not only interfere with classroom learning, they also hamper children's efforts to make friends, another essential task of childhood and an important dimension of school adaptation. Exposure to intrafamilial violence has been linked with increased aggression, fighting, "meanness," and generally disruptive behavior. Children exposed to intrafamilial violence are reported to have more disciplinary problems at school than their non-exposed peers, and are more likely to be suspended. Likewise, exposure to community violence has been associated with increases in antisocial behavior and aggression, as reported by teachers and parents.

Behavior problems that emerge following exposure to violence can be thought of as stemming from a lack of appropriate role models, difficulties with emotion regulation skills, and aberrant information processing. Children exposed to adult violence, particularly intrafamilial adult violence, may learn from these adults that aggressive behavior is a viable problem-solving option, and that physical aggression in close relationships is normal. Clearly, such lessons could create problems for children on the playground and later in life.

Researchers have observed that exposure to violence is related to difficulties regulating anger, frustration, and other negative feelings, as well as deficits in understanding and experiencing empathy for the feelings of others. These difficulties can lead to significant behavioral and social problems for children. As noted above, one way in which children deal with overwhelming negative feelings is through behavioral distraction. Performance in academic settings will suffer if violence-exposed children attempt to cope with anger towards other children or frustration with academic material by behaving disruptively. Moreover, children with deficits in emotion regula-

tion, empathy, and understanding emotions tend to be rated as less popular and more rejected by their peers.

Another source of behavior and social problems for violence-exposed children involves aberrant processing of social information. Researchers have observed relations between exposure to violence, problems in the way children think about social relationships, and children's social adjustment in the school peer group. Violence-exposed children have been found to be less interpersonally sensitive and attentive to social cues, less competent at social perspective taking, less able to identify others' emotional expressions and to understand complex social roles, and more likely to ascribe hostile intentions to the neutral behavior of others. The suboptimal processing of social information may contribute to the problem behaviors seen in children exposed to violence.

### Long-Term Consequences of Violence Exposure

The impact of violence exposure can go beyond the period of exposure and the immediate aftermath, affecting some individuals into adulthood. Although little is known concerning the effects of exposure to community violence, researchers have examined the adult lives of individuals exposed in childhood to intrafamilial aggression. Adults exposed to such violence as children have been found to have completed significantly fewer years of school and reported more episodes of truancy during their time in school compared to non-exposed peers. In addition, and perhaps related to their lack of schooling, adults exposed to intrafamilial violence in childhood also are at greater risk for arrest for a violent crime, and for earlier and more chronic involvement in criminal behavior.

It is important to recognize, however, that the damaging effects of violence exposure are not inevitable. Researchers have identified a host of protective factors that can buffer the detrimental effects of adverse life events, such as violence exposure. Among these factors are the presence of supportive adults in children's lives, scholastic competence, and realistic educational and vocational plans.

### Conclusion

The effects of violence exposure, problematic in their own right, also have a detrimental impact on two key developmental challenges, namely, children's school adaptation and academic achievement.

Both the effects of violence exposure and consequent poor mastery of important developmental challenges set violence-exposed children on a trajectory towards maladaptive outcomes. Much remains to be learned about how violence exposure brings about these effects and how the cognitive, emotional, behavioral and social systems of a child are interconnected. It is important for social scientists and professionals working with children to continue to search for ways to reduce violence exposure and to intervene effectively to keep violence-exposed children on a pro-social track.

Although different types of violence exposure can hold unique effects for children, there are common symptom patterns among children exposed to violence. Difficulties with attention and other cognitive processes, troubling emotional aftereffects, and problems with behavioral and social adaptations are frequent outcomes for children exposed to diverse types of violence. Because children's reactions to violence exposure may be present as common emotional or behavioral symptoms, violence exposure may be overlooked as the underlying problem. From treatment and policy perspectives, it is critical that the assessment of children routinely evaluates for both family and community violence.

*See also:* AFFECT AND EMOTIONAL DEVELOPMENT; AGGRESSIVE BEHAVIOR; ATTENTION; JUVENILE JUSTICE SYSTEM, *subentry on* JUVENILE CRIME AND JUSTICE.

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#### INTERNET RESOURCE

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#### COMMUNITY VIOLENCE

Many children in the United States are exposed to so much violence that the problem has been characterized as a "public health epidemic." Related in part to transient age-related demographic changes (that is, in the percentage of youth who are at highest risk for violence), children's violence exposure has declined slightly since the early 1990s. The homicide rate, however, is still more than double that reported in 1950 according to the National Summary of Injury Mortality Data, with the 1996 rate being 22 per 100,000 for young people fifteen to twenty-four years old. Further, the United States has the highest level of violence exposure of any developed country in the world. Homicide is the third-leading cause of death for children five to fourteen years of age, the second-leading cause of death for those aged fifteen to twenty-four, and has been the leading cause of death for African-American youth from the early 1980s into the early twenty-first century. It is crucial to understand what such levels of exposure may mean for children in the United States.

In addition to community violence exposure, some estimates, such as those reported by Murray

Straus and Richard Gelles in 1990, indicate that between 8.5 and 11.3 women per 100 are abused by husbands or boyfriends in the United States. Dating violence—that is, the perpetration of an act of violence by at least one member of an unmarried couple on the other member (which can include sexual assault, physical violence, or verbal or emotional abuse)—appears to range from 9 to 65 percent depending on whether threats and emotional or verbal aggression are included in the definition.

While exposure to community violence occurs less frequently for children who do not live in lower socioeconomic neighborhoods, children are also often exposed to violence in their homes and in the media. Exposure to media and family violence crosses socioeconomic and cultural boundaries, occurring in all groups in U.S. society. The effects are often less visible in higher socioeconomic groups, but, nonetheless, such violence impacts significantly on children during their development and influences their later relationship experiences.

### Levels of Exposure to Community Violence

Community violence exposure, whether it be isolated, frequent, or unfortunately at times almost continuous, includes frequent and continual exposure to random violence and the use of guns, knives, and drugs. In the early twenty-first century it is rare in urban elementary schools not to find children who have been exposed to such negative events. Children who have been interviewed in several different studies lucidly tell their stories of witnessing violence, including shootings and beatings, as if they were ordinary, everyday events.

In Steven Maran and Donald Cohen's survey of sixth, eighth, and tenth graders in New Haven, Connecticut, in 1992, 40 percent reported witnessing at least one violent crime in the previous year. Very few of these inner-city children were able to avoid being exposed to violence, and almost all eighth graders knew someone who had been killed in a violent incident. In a study by Carl C. Bell and Esther J. Jenkins involving 500 children at three elementary schools on the South Side of Chicago in 1993, one in four had witnessed a shooting and one-third had seen a stabbing. In another study by Jenkins and Bell (published in 1997) surveying 200 Chicago high school students in 1993, almost two-thirds had seen a shooting and close to one-half had seen a stabbing. Three in five of those who witnessed a shooting or stabbing indicated that the incident had resulted in

a death. More than one-fourth of these high school students reported that they had themselves been victims of severe violence.

Even very young children are exposed to high levels of violence. Betsy Groves and colleagues' 1993 survey of parents whose children attended a pediatric clinic at a public hospital in Boston in 1993 found that one of every ten children under the age of six had witnessed a shooting or stabbing. In Marva Lewis, Joy Osofsky, and Mary Sue Moore's 1997 study, African-American third- and fifth-grade children living in a high-violence area of New Orleans were asked to draw pictures of "what happens" in their neighborhoods. They drew in graphic detail pictures of shootings, drug deals, stabbings, fighting, and funerals and reported being scared of the violence and of something happening to them. Children living with domestic and community violence commonly draw similar pictures.

In 1993 John E. Richter and Pedro Martinez conducted an extensive interview study on the exposure to violence with 165 mothers of children, ages six to ten, living in a low-income neighborhood in Washington, DC. According to police statistics, this neighborhood was characterized as having a moderate level of violence; there might be an occasional murder or violent incident, but violence was not a regular event. Concurrently, another study by Joy Osofsky and colleagues gathered similar interview data on fifty-three African-American mothers of children, ages nine to twelve, in a low-income neighborhood in New Orleans, Louisiana. According to police statistics, this neighborhood was characterized as having a high level of violence; a murder or more than one violent incident occurred on a regular basis. Some differences in violence exposure were noted, likely due, to a considerable extent, to differences in the levels of violence in the two neighborhoods being sampled. The data from both studies, however, clearly showed that children frequently are victims of and witnesses to significant amounts of violence. Fifty-one percent of the New Orleans fifth graders and 32 percent of the Washington, D.C., children had been victims of violence, ranging from being chased or beaten to having a gun held to their head.

Xiaoming Li and colleagues, in a 1998 study of 349 low-income black urban children (ages nine to fifteen), found that those who witnessed or were victims of violence showed symptoms of post-traumatic stress disorder similar to those of soldiers

coming back from war. The symptoms increased according to the number of violent acts the child had witnessed or experienced. In a 1996 report, Hope Hill and colleagues focused on some of the sociopolitical issues related to violence exposure as well as the importance of support for children by the family, teachers, and community in effective prevention and intervention efforts. This work is consistent with the findings of the Violence Intervention Program, which have indicated the importance of a broad base of support for violence prevention. Deborah Gorman-Smith and Patrick Tolan found that exposure to community violence was related to subsequent symptoms of depression and anxiety as well as to aggressive behaviors as reported by the children, their parents, and teachers. In this 1998 study, having a mother present in the home seemed to be a major factor in mitigating the relationship between community violence exposure and subsequent depressive symptoms in the children.

While specific rates of exposure to community violence vary depending on the definition of exposure and the nature of the sample, children of all ages are being exposed to community violence at an alarming rate. As noted, such exposure has been linked to higher rates of post-traumatic stress symptoms, as well as to depressive symptoms, antisocial behavior, and decreased school performance. In a 2000 article, Stacey Overstreet suggested that repeated exposure to community violence may influence children to become numbed, demonstrating uncaring behavior toward others and desensitization to aggression. Such children may themselves show increased aggression, acting out, and subsequent antisocial behavior.

### **Impact on Children in School**

Exposure to violence is not limited to homes and neighborhoods. For many youth, schools, which should be safe havens, are also places where they can be exposed to violence, which can impact on a student's concentration and ability to be successful in school. Exposure to violence and trauma can lead to feelings of helplessness, hopelessness, and vulnerability in children. Some may react with anger and aggression, which can lead to behavior and discipline problems in school. Others may withdraw and become depressed, which while not drawing as much attention can have a great affect on their ability to concentrate, their self-esteem, and, consequently, their performance. Beyond the psychological and

behavioral consequences of exposure to violence that may impact on a child in school, children may learn that violence is an acceptable behavior. They learn violence from what they observe and may believe that fighting and violent behavior is all right either in or outside of the classroom. They do not learn to negotiate to solve problems; rather, they may more quickly lose control of their emotions. Children exposed to violence often do not learn to communicate feelings and may be more easily pressured by peers. They may believe that aggressive behaviors lead to attention and respect. Bullying and intimidating behaviors may be another consequence.

The Centers for Disease Control and Prevention in Atlanta, in their 1998 "Surveillance Summaries," reported survey results from a nationally representative sample of students in grades nine through twelve for selected risk behaviors both at school and outside of school. The survey focused on categories, including students who had carried a weapon, had carried a gun, were in a physical fight, were injured in a physical fight, were threatened or injured on school property, were in a physical fight on school property, and had property stolen or deliberately damaged on school property. The study found alarmingly high incidents of these disturbing behaviors in schools throughout the country.

Children suffer with enormous short-term and long-term consequences from such violence exposure. Students living in urban inner-city environments commonly provide vivid descriptions of the violence they see and experience in their environment, sometimes on a daily basis. Susan Chira's 1994 poll of high school students indicated that 30 percent of white students and 70 percent of African-American students knew someone who had been shot within the previous five years; 19 percent of white students and 37 percent of African-American students identified violence as the biggest problem at school; and 5 percent of white students and 27 percent of African-American students reported worrying about shootings at school. A Harris poll of 2,000 teenagers from around the country indicated that one in eight overall, and almost two in five from inner cities, said that they carried a weapon to protect themselves. In addition, one in nine overall, and one in three in high violence areas, said they had stayed away from school for fear of violence. This 1996 poll was carried out before the many school shootings that later occurred. Despite the previously

noted data indicating that the overall incidence of violence exposure has been decreasing slightly (although this may be transient), national surveys demonstrate increased concern and fears about violence in school, especially among older children.

The problem of children's exposure to community violence is significant. Without intervention efforts, it may increase with age shifts in coming years. It is clear that major efforts need to be undertaken to decrease violence exposure and to mitigate the effects of this exposure when it occurs.

*See also:* AGGRESSIVE BEHAVIOR; JUVENILE JUSTICE SYSTEM, *subentry on* JUVENILE CRIME AND JUSTICE; NEIGHBORHOODS; PARENTING, *subentry on* HIGH-RISK NEIGHBORHOODS; URBAN EDUCATION.

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## DOMESTIC VIOLENCE

Domestic violence is the greatest public health issue confronting women and children in the United States today. Information from the American Medical Association indicates that:

- Battering is the primary cause of injury to women in the United States.
- The average victim of domestic violence will be physically abused three times per year.
- The total annual health care cost of domestic violence is estimated at over \$40 million.
- 20 to 45 percent of all injuries seen in emergency rooms are the result of domestic violence.
- Two-thirds of all women who are murdered die as a result of domestic violence.

Domestic violence is defined as a pattern of behavior that may include physical and sexual violence, threats, insults, and economic deprivation aimed at gaining and maintaining power and control over the mind, body, behavior, and lifestyle of a partner. Under this definition, domestic violence is not limited to married couples or even heterogeneous relationships. Domestic violence can and often does occur within families and across generations.

One of the problems that social scientists, researchers, doctors, and advocates have in documenting the numbers of victims of domestic violence is the stigma attached to an act of violence between family members and intimate partners. One's home

is considered a place of safety and refuge, so when violence occurs in that sanctuary, the perpetrators and victims are often reluctant and even fearful to report the incident to outside persons or agencies. When the violence is reported, women and children are overwhelmingly reported as the victims.

In the United States, researchers estimate that one in four women will experience domestic violence at some point in their lifetime. Women who seem most vulnerable to domestic violence are ages sixteen to twenty-four. Data from a 1998 study by the National Violence Against Women Survey indicate that 8 million women are physically, sexually, or emotionally abused every year and 1.9 percent of the women in the United States, which represents 1.9 million women, were physically assaulted in the 12 months prior to the survey.

But physical assault is only a small part of the overall cycle that constitutes domestic violence. The cycle frequently begins with forms of emotional abuse including humiliation, name calling, and making the victim feel guilty. The perpetrator may also use economic abuse, such as preventing the victim from getting a job or taking all the money away and controlling every expenditure. The perpetrator may isolate the victim, limiting the victim's contacts with other family members, friends, and social contacts. As the cycle escalates the perpetrator may use threats of violence against the victim or against children in the home or actual violence such as abusing pets, breaking things, and displaying weapons. Eventually the threats will lead to physical violence causing injury and sometimes death. Physical violence includes beatings, rape, and mutilation.

When the violence is over there may be a period of peace in which the perpetrator asks for forgiveness, apologizes, presents gifts, and blames others, including the victim, for causing the violence. Most often the victim will forgive the perpetrator due to emotional and financial dependence. Victims may also, because of past humiliations and intimidations, feel that they share the blame for causing the violence and the cycle will repeat itself. By definition, domestic violence is a pattern of behavior and not a single act of violence. This pattern or cycle repeats itself many times and it is the repetition that classifies the behavior as domestic violence.

Domestic violence cuts across all areas of culture, class, income, education, profession, race, and age. Internationally an estimated 20 to 50 percent of

women have experienced physical violence from an intimate partner or family member. But the true magnitude of domestic violence is hard to assess. In some cultures sexual abuse or rape by an intimate partner is not considered a crime and many incidents of domestic violence are ultimately reported as child injury or abuse when a child is intentionally or unintentionally injured during a violent episode. Even when the situation is made known to legal or social service agencies, treatment or prosecution may be difficult because the victim will not press charges or leave the home.

### **The Effect of Domestic Violence on Children**

Police reports indicate that children are present in the home in 40 to 50 percent of cases involving domestic violence calls. Research indicates that between 3.3 and 10 million children are exposed to domestic violence in the United States every year. Children are significantly affected by this exposure to domestic violence in a number of ways. The most common are that they observe violent acts, they incur injury to themselves, and they suffer neglect by their caretakers.

Children who observe domestic violence react in many ways. External behaviors may include aggressive behavior and conduct problems in home and in school, fighting, cursing, and name calling. Internal behaviors that may also occur include anxiety, depression, low self esteem, guilt, crying; decreased intellectual and academic functioning including inability to concentrate; difficulty with school work, school truancy and failure; and developmental delay. Domestic violence can also affect children's social development, causing them to become isolated and withdrawn from friends and family and demonstrate low levels of empathy. Children affected by domestic violence may also exhibit negative physical health, developing somatic symptoms, poor sleeping and eating habits, headaches, stomach aches, and self-destructive behaviors such as suicide attempts and self-mutilation. A 1998 study indicates that between 45 and 70 per cent of children exposed to domestic violence are also victims of physical abuse. Children in homes with domestic violence are at higher risk of sexual abuse than children in nonviolent homes.

At every stage of a child's life the impact of exposure to violence in the home is evident. Infants or very young children are vulnerable to injury when adults handle them roughly in a moment of vio-

lence, but children are also subject to injury when flying objects are thrown or smashed or when weapons are used. They also may be ripped from their caretakers' arms or hurt when the person holding them falls or is knocked down. The victim of domestic violence may neglect the child in an attempt to appease the abuser or in fear that the child might be harmed further if concern is shown. Effects of this neglect can be seen in infants or young children through eating or sleeping disturbances (particularly if the abuse routinely occurs during meal times or after the child has gone to sleep), listlessness, developmental delays (due to lack of stimulation), and failure to thrive (due to lack of nurturing). Exposure to violence interferes with children's ability to develop trust in adults charged with their care. These children commonly exhibit excessive irritability, fear of being left alone, regression in toileting and language skills, and other delays in learning.

School-age children between the ages of five and twelve may exhibit more significant behaviors as a result of observing domestic violence. These children may be aggressive toward other children, exhibit low self-esteem, feel insecure, run away, use drugs, or have problems in school. As the child enters the teen years the child may exhibit more of the behaviors associated with the abuser or the victim. The child who identifies with the victim may come to accept violence as part of an intimate relationship. The child who identifies with the perpetrator learns to use violence to control relationships. Teens may also feel compelled to intervene on behalf of the victim and be injured, or be coerced into participating in the violence. Teens commonly experience shame about what is going on in their home and seek to remove themselves from the situation by running away or attempting suicide. When a victim seeks to remove herself and her children from an abusive situation, the children are frequently separated from their communities, friends, and schools. This puts additional stress on the child.

Given the serious consequence of domestic violence on children, some professionals argue that exposure to domestic violence constitutes a form of child maltreatment. But others argue that not all children are affected in the same way and that, in fact, many children learn to cope with the violence. Thus, witnessing abuse should be viewed as a potential risk factor for child maltreatment rather than conclusive evidence.

## **Response to Domestic Violence and Child Maltreatment**

Since the late 1980s, researchers and practitioners have recognized the relationship between domestic violence and child maltreatment, yet little has been done to coordinate the delivery of services to these populations. The typical service delivery model has different points of entry into the system for adult victims and child victims. Frequently cases are heard in different court systems and those seeking help have to repeat their stories numerous times, fill out similar types of forms at each agency, and receive counseling separately from their children. In some systems the victim is required to seek counseling to receive other services, but the abuser is not required to receive any treatment at all.

As communities have focused on making families safer, new strategies have been developed to address domestic violence treatment and prevention. These strategies focus on building collaboration among law enforcement, child welfare, health care, and domestic violence prevention advocates. Cross-training is one of the most commonly implemented strategies to ensure that police officers, child protective services workers, school personnel, and mental health and medical professionals all recognize the signs of domestic violence and child abuse and know where to refer the victim. Co-location of services to facilitate access to safe housing, counseling, financial support, and legal intervention to victims and children is another effective strategy. But there is still much about prevention, identification, reporting, and treatment of domestic violence victims and abusers that is not known.

## **Laws on Domestic Violence**

In 1984 Congress passed the Family Violence Prevention and Services Act, designed to help states in their efforts to increase public awareness about domestic violence. Ten years later the Violence Against Women Act of 1994 (VAWA) was passed. This act includes provisions to increase the number of programs available to victims of domestic violence. In addition, VAWA directly addresses the impact of domestic violence on children through treatment programs for children who are harmed by these acts.

State laws vary in approaches to domestic violence. For example, all states have provisions for restraining orders to keep the abuser away from the victim, but how long the order lasts, who is included

in the order, and how specific courts process such requests vary from state to state. More than half of the states have laws that require that domestic violence be considered when a court makes an award of child custody or visitation. And while this is an improvement over the days when domestic issues were considered irrelevant to the welfare of the child, the laws still leave much discretion to the court.

Societal costs of the effects of domestic violence are enormous. Some costs, such as the cost of mental health and medical treatment, loss of work time for victims and abusers, court proceedings, and law enforcement response, can be estimated. But society cannot begin to estimate the worth of a lost childhood, broken homes, death of a parent, and fear caused by domestic violence.

*See also:* AGGRESSIVE BEHAVIOR; ATTENTION; CHILD ABUSE AND NEGLECT; DROPOUTS, SCHOOL; PARENTING; STRESS AND DEPRESSION.

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DEBBIE MILLER

## VISUAL IMPAIRMENTS, EDUCATION OF INDIVIDUALS WITH

The term *blindness* brings to mind many images as well as many unfounded beliefs. Although popular opinion suggests otherwise, individuals with blindness do not possess an extra sense allowing them to intuit the visual world. Likewise, people with visual impairments do not exhibit superhuman abilities in touch and hearing. In fact, most people who are blind can actually see—very few people who are blind are completely blind.

An individual who is legally blind has limited visual acuity relative to either distance (visual acuity of 20/200 or less in his or her better eye even with correction), or field (a field of vision so narrow that its widest diameter subtends an angular distance no greater than twenty degrees). Individuals considered to be partially sighted have visual acuity falling between 20/70 and 20/200 in the better eye, even with correction. Educators commonly use a more functional definition of blindness. Educators use the term *blind* to describe students who are so severely impaired that they must learn to read using braille or aural methods. Children who can read print with magnifying devices or large-print books are often referred to as students with low vision. The different definitions are used in reported prevalence rates. Overall, visual impairment in children is estimated at three per 10,000. In the 1998 through 1999 school year, the Office of Special Education Programs reported more than 26,000 students with visual impairments (approximately .04% of all students ages 6–21).

The causes of partial sight include nystagmus (conditions caused by improper muscle functioning), optic atrophy (conditions including glaucoma), cataracts, and other congenital abnormalities. The main causes of blindness are optic atrophy, retinal conditions, and cataracts and other congenital abnormalities. Although the most serious visual impairments are caused by glaucoma, cataracts, and diabetes, retinopathy of prematurity (ROP) is reemerging as a significant cause of blindness. In the 1940s ROP began appearing in premature infants. Excessive concentrations of oxygen administered to prevent brain damage resulted in scar tissue behind the lens of the eye. More than sixty years later, efforts to save the lives of medically fragile infants that use high concentrations of oxygen are also resulting in ROP.

Although blindness is primarily an adult disability, educational services for individuals with visual impairments include not only training centers and sheltered workshops, but also specialized schools, classrooms, and teachers. The first schools for children with blindness opened in the United States in 1832. The Perkins School for the Blind and the New York Institute for the Education of the Blind were modeled after programs in Europe and led by Dr. John Dix Fisher and Samuel Gridley Howe. These schools and others like them developed sheltered workshops designed to give students skills for employment. Many of these workshops in the early twenty-first century operate independently from educational institutions.

The twentieth century heralded many significant milestones in the provision of services for both children and adults with visual impairment. In 1920, the Smith-Fess Act appropriated state and federal funds for the vocational rehabilitation of people with physical handicaps. Later in 1940, the National Federation of the Blind was formed. This federation began advocating for individuals with blindness and continues to prepare and place people with blindness in suitable jobs. Finally, in 1975 the Education for All Handicapped Children Act (Pub. L. 94-142) was passed. This act guaranteed a free and appropriate education for all children regardless of disability.

In the early 1900s most students with blindness were educated in residential schools; at the beginning of the twenty-first century most attend regular classes with periodic support from a teacher for the visually impaired. However, some professionals still advocate for special schools and programs, arguing

that students with blindness need specific services and supplies that cannot be offered in regular classrooms.

The use of braille declined dramatically in the last half of the twentieth century. In opposition to this trend, many professionals, along with the National Federation of the Blind, have argued that knowledge of braille is essential for independent living and that too few teachers are proficient in braille. In the 1997 reauthorization of Public Law 94-142, the U.S. Congress mandated braille services for all students with blindness unless all members of the educational team deemed the services unnecessary. Students with visual impairment also require mobility training. Historically, white canes were not available to young children; however, some experts now contend that cane training should begin as soon as the child is walking independently. This training should be a critical component of preschool programming. Guide dogs are generally not recommended for children because of the care they require.

*See also:* ASSISTIVE TECHNOLOGY; SPECIAL EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF.

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DEVERY R. MOCK  
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## VOCABULARY DEVELOPMENT

*See:* LITERACY, *subentry on* VOCABULARY AND VOCABULARY LEARNING.

## VOCATIONAL AND TECHNICAL EDUCATION

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### HISTORY OF

Howard R. D. Gordon

### CURRENT TRENDS

Willard R. Daggett

### PREPARATION OF TEACHERS

N. L. McCaslin

Darrel Parks

### INTERNATIONAL CONTEXT

Claudio de Moura Castro

### HISTORY OF

Vocational education in the United States is the product of an extended evolutionary process. Economic, educational, and societal issues have repeatedly exerted influence on the definition of vocational education, as well as on how, when, where, and to whom it will be provided. There are many legal definitions of vocational education (i.e., how vocational education is defined by law). These legal definitions are critical since they specify how, for what purpose, and to what extent federal monies may be spent for vocational education. All too often this legal definition is interpreted by state and local officials as the only definition of vocational education.

For the purpose of this article, vocational education is defined as a practically illustrated and attempted job or career skill instruction. As such, a variety of components fall under the vocational education umbrella: agricultural education, business education, family and consumer sciences, health occupations education, marketing education, technical education, technology education, and trade and industrial education. The vocational curriculum can be identified as a combination of classroom instruction—hands-on laboratory work and on-the-job training—augmented by an active network of student organizations. Vocational preparation must always be viewed against the backdrop of the needs of society and of the individual. While meeting the demands of the economy, the abilities of individuals must be utilized to the fullest. Meeting the internalized job needs of individuals is a crucial objective of vocational education.

#### Historical Foundations

The first formalized vocational education system in America can be traced to apprenticeship agreements of colonial times. The first education law passed in

America, the Old Deluder Satan Act of the Massachusetts Bay Colony, set specific requirements for masters to teach apprentices academic as well as vocational skills. During the colonial period the colonies frequently cared for orphans, poor children, and delinquents by indenturing them to serve apprenticeships. As apprenticeship declined, other institutions developed to care for these youngsters. By the mid-1880s vocational education in the form of industrial education was synonymous with institutional programs for these youth. The children of defeated Native American leaders were sent to the Carlisle Pennsylvania Indian School, and the curriculum was job training.

After the Civil War Samuel Chapman Armstrong, the founder of Hampton Institute and the ideological father of African-American vocational education, tried to address the racial aspects of the social and economic relations between the former slaves and the white South. His vocational education programs emphasized the need for African Americans to be good, subservient laborers. The prominent educator Booker T. Washington, Armstrong's prize student, took the same values and philosophical views as his former mentor. Washington held firmly to his beliefs that vocational education was the ideal route for most African Americans. W. E. B. Du Bois, also an influential African-American educator, strongly objected to Washington's educational program. He accused Washington of teaching lessons of work and money, which potentially encouraged African Americans to forget about the highest aims of life.

The first land-grant college provisions, known as the First Morrill Act, were enacted by the U.S. Congress on July 2, 1862. The statute articulated the appointment of public lands to the states based on their representation in Congress in 1860. The Morrill Act was one of the first congressional actions to benefit from the post-Civil War constitutional amendments. By the late 1860s Morrill Act funds were being distributed to the states, with the intention that they would foster educational opportunity for all students. Following the Civil War, the expansion of the land-grant college system continued, with its implied focus on educational opportunities. However, with the close of the army's occupation to the old South, funds from the Morrill Act began to flow systemically to schools offering only all-white education. Congress attempted by various legislation to force racial equality, including equality of educa-

tional opportunity. However, the U.S. Supreme Court initiated a series of interpretations of the post-Civil War constitutional amendments that ultimately defeated these various legislative efforts. Culminating with its 1882 decision finding the first Civil Rights Act unconstitutional, the Supreme Court held that the Fourteenth amendment only protected against direct discriminatory action by a state government. What followed was a period of nearly seventy-five years when only modest gains were made in higher educational opportunity for minorities. Congress did pass a second Morrill Act (1890), which required states with dual systems of education (all-white and nonwhite) to provide land-grant institutions for both systems. Basing their jurisdiction on the 1882 Supreme Court decision, Congress acted to curb direct state-sponsored discrimination. Eventually, nineteen higher education institutions for African Americans were organized as land-grant institutions. These institutions were founded to raise the aspirations of a generation of children of former slaves and to ensure that high quality higher education was provided for Americans of all races. While efforts persisted throughout the late nineteenth and early twentieth centuries to reduce the funding to these colleges, the schools continued to function based on land-grant funds.

Early in the twentieth century, vocational education was a prominent topic of discussion among American educators as schools struggled to meet the labor force needs consistent with the shift from an agrarian to an industrial economic base. In his 1907 address to Congress, President Theodore Roosevelt urged major school reform that would provide industrial education in urban centers and agriculture education in rural areas. A powerful alliance supporting federal funding for vocational education was formed in 1910 when the American Federation of Labor (AFL), who had long opposed such programs as discriminatory, lent its approval to the National Association of Manufacturers' (NAM) promotion of trade instruction in schools. Formed in 1895, one of NAM's first projects was to investigate how education might provide a more effective means to help American manufacturers compete in expanding international markets. The AFL joined the vocational reform movement believing its participation would help protect working-class interests by providing them with a voice at the table on education policy development with the emerging industrial economy. The strength of the combined lobby influenced Con-

gress in 1914 to authorize President Woodrow Wilson to appoint a commission to study whether federal aid to vocational education was warranted. Charles Prosser, a student of social efficiency advocate David Snedden, was principal author of the commission's report to Congress. Prosser considered separately administered, and narrowly focused, vocational training as the best available way to help nonacademic students secure employment after completing high school. In its final report to Congress, the commission chaired by Georgia Senator Hoke Smith declared an urgent social and educational need of vocational training in public schools.

### **Legislative History and Reforms**

Federal support for vocational education began with the Smith-Hughes Act of 1917. Two Democratic lawmakers from Georgia, Senator Hoke Smith and Representative Dudley Mays Hughes, were chiefly responsible for this historic bill, which established vocational education, particularly agricultural education, as a federal program. The act reflected the view of reformers who believed that youth should be prepared for entry-level jobs by learning specific occupational skills in separated vocational schools. According to Harvey Kantor and David B. Tyack, this brand of vocationalism had its critics, including the American philosopher and educator John Dewey, who believed that such specific skill training was unnecessarily narrow and undermined democracy. The Smith-Hughes Act, however, firmly supported the notion of a separate vocational education system and supported courses offered by vocational schools. The act called for specific skill training, focused on entry-level skills, and helped establish separate state boards for vocational education. The Smith-Hughes Act and its successors until 1963 were largely designed to expand these separate vocational education programs, in an effort to retain more students in secondary education, and to provide trained workers for a growing number of semiskilled occupations. These acts focused on basic support, providing funds for teachers and teacher training, and encouraging state support for vocational education through extensive funds-matching requirements.

By the 1960s, the vocational education system had been firmly established, and Congress recognized the need for a new focus. As a result, the 1963 Vocational Education Act, while still supporting the separate system approach by funding the construction of area vocational schools, broadened the defi-

dition of vocational education to include occupational programs in comprehensive high schools, such as business and commerce. The act also included the improvement of vocational education programs and the provision of programs and services for disadvantaged and disabled students.

Faced with initial evidence that localities were not responding to the new focus on improving programs and serving students with special needs, the 1968 Amendments to the Vocational Education Act backed each goal with specific funding. This change set the stage for what has become the distinguishing feature of all such legislation since 1968—the manner in which it seeks a compromise between the demands for improved vocational program quality and for increased vocational education opportunities for students with special needs.

Separate funds set aside for disabled and disadvantaged students seemed an effective strategy, as it resulted in more funds expended on these groups and in increased enrollments. Since there are few other sources of federal assistance for secondary special needs students (other than students with disabilities), it is not surprising that other special populations were added to federal vocational education legislation over time. In 1974, the needs of limited English proficient (LEP) students were addressed through provisions for bilingual vocational training; funds for Native American students were also added. In 1976 LEP students were made eligible for part of the disadvantaged set-aside, and provisions to eliminate sex bias and sex stereotyping in vocational education were added.

Education reforms focusing on secondary education began in the early 1980s, prompted by concern about the nation's declining competitiveness in the international market, the relatively poor performance of American students on tests of educational achievement (both nationally and internationally), and complaints from the business community about the low level of skills and abilities found in high school graduates entering the workforce. This reform came in two waves. The first wave, sometimes characterized as academic reform, called for increased effort from the current education system: more academic course requirements for high school graduation, more stringent college entrance requirements, longer school days and years, and an emphasis on standards and testing for both students and teachers. The basic message might be paraphrased, "work more, try harder, strive for excellence."

Beginning in the mid-1980s, a second wave of school reform arose, based in part on the belief that the first wave did not go far enough to improve education for all students. The second wave, sometimes referred to as *restructuring*, called for changes in the way schools and the educational process were organized. While restructuring proposals included school choice and site-based management, of particular interest in this report was the emphasis on improving the school-to-work transition for nonbaccalaureate youth by creating closer linkages between vocational and academic education, secondary and postsecondary institutions, and schools and workplaces.

The reform movement, particularly its first phase, received major impetus from the publication in 1983 of the National Commission on Excellence in Education's report *A Nation at Risk*. This influential report observed that the United States was losing ground in international economic competition and attributed the decline in large part to the relatively low standards and poor performance of the American educational system. The report recommended many of the changes subsequently enacted in first-wave reforms: the strengthening of requirements for high school graduation, including the requirement of a core academic curriculum; the development and use of rigorous educational standards; more time in school or the more efficient use of presently available time; and better preparation of teachers.

The response to this report and related education reform initiatives was rapid and widespread. Marion Asche reported in 1991 that between the early and mid-1980s, more than 275 education task forces had been organized in the United States. By the mid-1980s, forty-three states had increased course requirements for high school graduation; seventeen had developed stronger requirements for admission to state colleges and universities; thirty-seven had created statewide student assessment programs; twenty-nine had developed teacher competency tests; and twenty-eight had increased teacher licensure requirements. Between 1984 and 1986 more than 700 state laws affecting some aspect of the teaching profession had been enacted.

The Carl D. Perkins Vocational Education Act of 1984 (Pub. L. 98-524), known as the Perkins Act, continued the affirmation of Congress that effective vocational education programs are essential to the nation's future as a free and democratic society. The act had two interrelated goals, one economic and

one social. The economic goal was to improve the skills of the labor force and prepare adults for job opportunities—a long-standing goal traceable to the Smith-Hughes Act. The social goal was to provide equal opportunities for adults in vocational education. In the late summer of 1990, Congress passed the Carl D. Perkins Vocational and Applied Technology Education Act (Pub. L. 101-392, also known as Perkins II), which amended and extended the Carl D. Perkins Vocational Act of 1984.

The School-to-Work Opportunities Act (STWOA) of 1994 (Pub. L. 103-239) was passed to address the national skills shortage by providing a model to create a highly skilled workforce for the nation's economy through partnerships between educators and employers. The STWOA emphasized preparing students with the knowledge, skills, abilities, and information about occupations and the labor market that would help them make the transition from school to postschool employment through school-based and work-based instructional components supported by a connecting activity's component. Key elements of STWOA included (a) collaborative partnerships, (b) integrated curriculum, (c) technological advances, (d) adaptable workers, (e) comprehensive career guidance, (f) work-based learning, and (g) a step-by-step approach.

On October 31, 1998 President Clinton signed the Carl D. Perkins Vocational and Technical Education Act (Pub. L. 105-332). Two major focus areas of this legislation were to increase accountability and provide states with more flexibility to use funds.

### Trends and Issues

In the United States of the early twenty-first century, vocational education has entered a new era. There is increasing acknowledgement that the traditional educational focus on college-bound youth needs to change. Greater attention is being focused on work-bound youth, particularly those who will require less than baccalaureate education. There is increasing concern that the United States is not adequately preparing a growing pool of new workers—women, minorities, and immigrants—for productive, successful roles in the workforce. Education is being urged to change the way it is preparing youth and adults to function in a global economy. All of these trends are bringing new importance to vocational education.

A U.S. General Accounting Office study examined strategies used to prepare work-bound youth

for employment in the United States and four competitor nations—England, Germany, Japan and Sweden. Among the findings:

1. The four competitor nations expect all students to do well in school, especially in the early years. U.S. schools accept that many will lag behind.
2. The competitor nations have established competency-based national training standards that are used to certify skill competency. U.S. practice is to certify program completion.
3. All four competitor nations invest as heavily in the education and training of work-bound youth as they do for each college-bound youth.
4. To a much greater extent than in the United States, the schools and employment communities in the competitor countries guide students' transition from school to work, helping students learn about job requirements and assisting them in finding employment.
5. Young adults in the four competitor nations have higher literacy rates than the comparable population segment in the United States.

Generally, research has shown that obtaining workers with a good work ethic and appropriate social behavior has been a priority for employers. Employers complain about the attitude and character of workers—particularly about absenteeism, an inability to adapt, a lack of discipline, and negative work behaviors. In response to criticism about the general employability of the workforce, the Secretary's Commission on Achieving Necessary Skills published in 1991 a range of skills that all workforce participants should have. These include the following:

1. Basic Skills
  - a. Reading
  - b. Writing
  - c. Mathematics
  - d. Listening
  - e. Speaking
2. Thinking Skills
  - a. Creative Thinking
  - b. Decision Making
  - c. Problem Solving
  - d. Knowing How to Learn
  - e. Reasoning

### 3. Personal Qualities

- a. Responsibility
- b. Self-Esteem
- c. Sociability
- d. Self-Management
- e. Integrity/Honesty

If the United States is to remain at the forefront in the high-tech global marketplace, the workforce must possess the requisite technological competencies and academic skills. As technology continues to influence vocational education, new and innovative educational approaches must be established to provide vocational education students with the enhanced skills and knowledge they will need to participate in the international marketplace.

### Technology Education

Most people recognize that technology has changed the world, but few people understand the various aspects of technology and how pervasive technology is in U.S. society. Technology is commonly defined as a discipline or body of knowledge and the application of this knowledge combined with resources to produce outcomes in response to human desires and needs. Technology education draws its content from four universal domains: (1) sciences, (2) humanities, (3) technologies, and (4) formal knowledge. The sciences and humanities domains contain all recorded knowledge of the sciences and humanities. The technologies domain likewise contains all recorded knowledge related to the types of technology. The formal knowledge domain consists of language, linguistics, mathematics, and logic.

Technology education programs are available at the elementary, middle/junior high school, and secondary levels. At the elementary school level, the focus is on technological awareness with classroom activities oriented around the development of motor skills and informed attitudes about technology's influence on society. At the middle school level, the focus of technology education programs is on exploring the applications of technology to solve problems and exploring the various technological careers. A wide variety of problem-solving situations are used, giving students opportunities to create and design. Activities are designed to further promote technological awareness and to promote psychomotor development through processes associated with technology. Secondary technology education pro-

grams are designed to give students experience related to scientific principles, engineering concepts, and technological systems.

### The New Vocationalism

*Vocationalism* is defined as the method used by schools, particularly high schools, to organize their curricula so the students may develop skills, both vocational and academic, that will give them the strategic labor market advantages needed to compete for good jobs. Overall enrollment in vocational courses has fallen. However, an incoming current has brought a growing number of participants into new programs and curricula. While traditional vocational offerings have been geared toward immediate entry into specific occupations, new programs and course sequences are intended to prepare students for both colleges and careers, by combining a challenging academic curriculum with development of work-related knowledge skill. The new combination aims to keep students' options open after high school. They can go to a two-year or four-year college and then work, go to work full-time and then back to college, or engage in paid employment and further education simultaneously.

The overall decline in high school vocational enrollment is evident from student transcript data. Between 1982 and 1994 the average number of vocational credits completed by high school graduates declined from 4.7 to 4.0, or from 22 percent to 16 percent of total credits earned in all subjects. The number of students who completed three or more courses in a single vocational program area slipped from 34 percent to 25 percent. Furthermore, students with disabilities, or with low grades, accounted for a growing proportion of vocational course-taking in high schools during this period. Combining a vocational sequence with college-prep academic courses seems to yield positive results. Several studies have found that high school students who combine a substantial academic curriculum with a set of vocational courses do better than students who omit either one of these two components.

The idea of combining vocational and academic coursework is also central to *High Schools That Work*, a network of more of more than 800 schools engaged in raising academic curriculum with modern vocational studies. It is also a key component of the *New American High Schools* identified by the U.S. Department of Education. Many of these schools are trying to raise academic standards and expectations

by structuring the curriculum alignment around students' career-related interests. Charles Benson, in a paper delivered in 1992 and published posthumously in 1997, articulated some of the objectives of the new vocationalism: The first is to enable almost all students, not just the minority, to obtain a thorough working knowledge of mathematics, sciences, and languages. That is, the first objective of the new vocationalism is to help many more students obtain a much higher standard of academic proficiency. The second objective is to help many, many more students gain such a level of occupational proficiency that they enter easily and quickly into productive, rewarding, and interesting careers.

What does the integration of academic and vocational curricula entail? Research has shown that schools bring academic and vocational education together in a number of different ways, which comprise eight different models of integration at the secondary level. These models are summarized as follows:

1. More academic content is incorporated in vocational courses.
2. Academic courses are made more vocationally relevant.
3. Academic and vocational teachers cooperate to incorporate academic content into vocational programs.
4. Curricular alignment is accomplished by modifying or coordinating both academic and vocational curricula across courses.
5. Seminar projects are done in lieu of elective courses and require students to complete a project that integrates knowledge and skills learned in both academic and vocational courses.
6. The academy model is a school-within-a-school that aligns courses with each other and to an occupational focus.
7. Vocational high schools and magnet schools align courses with each other and to an occupational focus for all students.
8. Occupational clusters, career paths, and occupational majors feature a coherent sequence of courses and alignment among courses within clusters.

### Work-Based Learning

Work experience programs allow students to learn first-hand about the world of work while still in

school. These efforts, broadly referred to as work experience programs, include formal work-based training programs outside the school, such as cooperative education, youth apprenticeship, and school-based enterprises. *Co-op education* is run by individual schools as part of their vocational education programs. Students are provided part-time jobs during the school year in their field of vocational specialization. The job placements are arranged by the classroom vocational instructor or by the school's co-op coordinator. A training plan that clearly states what the student is expected to learn and what the employer is expected to provide is developed. Business and marketing education programs are generally the largest sponsors of co-op education.

The concept of *youth apprenticeship* includes preparation for postsecondary education as well as employment. Youth apprenticeship, typically designed for high school students who may go on to postsecondary education, are different from traditional apprenticeships run by unions or trade associations, that usually enroll young adults who have graduated from high school. There is a growing consensus about the principles that should guide any youth apprenticeship and about the basic design elements that differentiate youth apprenticeships from other models linking school and work. These principles include active participation of employers; integration of work-based and school-based learning; integration of academic and vocational learning; structured linkages between secondary and postsecondary institutions; and award of a broadly recognized certificate of occupational skill.

The third type of work experience program is *school-based enterprises*. In these programs, students produce goods or services for sale or use to other people. Such enterprises include school restaurants, construction projects, child care centers, auto repair shops, hair salons, and retail stores.

These programs differ from co-ops and apprenticeships in that they do not place students with employers. Rather, the goal of school-based enterprises is to allow students to apply their classroom knowledge to running real-world businesses. School-based enterprises are a viable option in communities where there are too few employers to provide sufficient jobs and training opportunities in the private sector.

As the evolution toward higher technology in the work place continues, the focus of federal support for vocational education must be on redoubling

efforts to increase linkages between academic and occupational skill development, secondary and postsecondary education, and business and education.

*See also:* AGRICULTURAL EDUCATION; BUSINESS EDUCATION, *subentry on* SCHOOL; FAMILY AND CONSUMER SCIENCES EDUCATION; TECHNOLOGY EDUCATION; VOCATIONAL SCHOOL FALLACY.

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#### CURRENT TRENDS

The trend in contemporary K–12 vocational education is away from the use of the word *vocational* to label these programs. Most states have selected a broader term, although a few use *vocational technical education*. A number of states have followed the lead of the national vocational education organizations and adopted the term *career and technical education*. Others use variations, such as *career and technology education* and *professional-technical education*, and several states include the word *workforce* in describing these programs. The changes in terminology reflect a changing economy, in which technical careers have become the mainstay.

When the term *career education* first became popular in the 1970s, it was distinguished from vocational education by its emphasis on general employability and adaptability skills applicable to all occupations, while vocational education was primarily concerned with occupational skill training for specific occupations. That basic definition of career education remains appropriate today.

The purpose of career and technical education is to provide a foundation of skills that enable high school students to be gainfully employed after graduation—either full-time or while continuing their education or training. Nearly two-thirds of all grad-

uates of career and technical programs enter some form of postsecondary program.

Across the United States, career and technical education programs are offered in about 11,000 comprehensive high schools, several hundred vocational-technical high schools, and about 1,400 area vocational-technical centers. Public middle schools typically offer some career and technical education courses, such as family and consumer sciences and technology education. About 9,400 postsecondary institutions offer technical programs, including community colleges, technical institutes, skill centers, and other public and private two- and four-year colleges. In 2001 there were 11 million secondary and postsecondary career and technical education students in the United States, according to the U.S. Office of Educational Research and Improvement.

The subject areas most commonly associated with career and technical education are: business (office administration, entrepreneurship); trade and industrial (e.g., automotive technician, carpenter, computer numerical control technician); health occupations (nursing, dental, and medical technicians); agriculture (food and fiber production, agribusiness); family and consumer sciences (culinary arts, family management and life skills); marketing (merchandising, retail); and technology (computer-based careers).

Career and technical education programs usually are offered as a sequence of courses supplemented by work-based experiences, such as internships or apprenticeships. These work experiences remain a hallmark of career and technical education.

### **Rethinking the Mission**

For the last two decades of the twentieth century, business led the charge for school reform in order to have better prepared students for the workplace. Yet career and technical education programs, which have the mission of readying young people for employment, continue to be pushed aside by courses designed to prepare students for high-stakes academic assessments. All states have testing requirements for high school students in mathematics, science, English language arts, and sometimes social studies. One result of the emphasis on academic testing is a continuing decline in the number of students enrolled in career and technical education.

To reverse declining enrollments, career and technical education faces a twofold challenge: to re-

structure its programs and to rebuild its image. Traditional vocational programs provided students with job-specific skills that many parents viewed as too narrow for their children.

The trend is for career and technical education programs to rethink their mission by asking how they can prepare students with high-level academic skills and the broad-based transferable skills and technical skills required for participation in the “new economy,” where adaptability is key. Programs adopt this dual approach in an effort to make career and technical education a realistic option for large numbers of students to achieve academic success, which will translate into employment for them.

These programs teach broad skills that are applicable to many occupations. This preparation for the world of work is anchored in strong academic skills, which students learn how to apply to real-world situations. These academic skills include the competencies needed in the contemporary workplace as well as the knowledge and skills valued by academic education and measured by state examinations.

The reality is that the academic skills needed for the workplace are often more rigorous than the academic skills required for college. The multidisciplinary approach of most work tasks and the amount of technology and information in the workplace contribute to the heightened expectations of all workers, including entry-level.

For career and technical education programs to flourish in the early twentieth century’s test-driven school environment, they must: (1) find ways to continue to prepare students with the skills and knowledge needed in the increasingly sophisticated workplace; (2) embed, develop, and reinforce the academic standards/benchmarks that are tested on the state-mandated assessments; and (3) teach the essential skills that all students need for success in life.

### **Organizing Programs Around Career Clusters**

The workplace requires three sets of skills of most workers:

- Strong academics, especially in English language arts, mathematics, and science, as well as computer skills;
- Career specific skills for a chosen career cluster;
- Virtues such as honesty, responsibility, and integrity.

The U.S. Department of Education Office of Vocational and Adult Education has identified sixteen

broad career clusters that reflect a new direction for education. The clusters were created to assist educators in preparing students for a changing workplace. The intent is for secondary and postsecondary educators, employers, and industry group representatives to work together to formulate cluster standards. The careers in each cluster range from entry level through professional/technical management in a broad industry field. Each cluster includes both the academic and technical skills and knowledge needed for careers and postsecondary education. These clusters provide a way for schools to organize course offerings so students can learn about the whole cluster of occupations in a career field. It is an excellent tool to assist students in identifying their interests and goals for the future. The sixteen career clusters are:

- Agriculture and Natural Resources
- Architecture and Construction
- Arts, Audiovisual Technology, and Communications
- Business and Administration
- Education and Training
- Finance
- Government and Public Administration
- Health Science
- Hospitality and Tourism
- Human Services
- Information Technology
- Law and Public Safety
- Manufacturing
- Retail/Wholesale Sales and Services
- Scientific Research/Engineering
- Transportation, Distribution, and Logistics

The preparation of students in the career clusters must include (1) academic skills, (2) cluster-specific standards, and (3) broad transferable skills. All of these aspects of the curriculum must be organized in a continuum. As students grow and develop through this continuum, they will prepare themselves for broader and higher-level opportunities.

### The Academic Issues

The 1983 publication of a government report, *A Nation at Risk*, sounded an alarm about the competitiveness of U.S. students in comparison to their international counterparts. Education systems responded by raising standards in mathematics, sci-

ence, English language arts, and, in some states, other disciplines such as social studies as well. States have passed legislation and implemented regulations in hopes of solving the problem.

Because the business community was directly involved in the school reform process, business concepts were applied in schools in the 1980s and 1990s. Examples included Total Quality Management, continuous improvement, and the strategic planning techniques used by senior management to change business organizations.

Many schools also spent a great deal of energy creating vision, mission, and goal statements in their quest for higher student achievement. By the early 1990s, however, it was clear that these endeavors and others, such as site-based management, while well intended, had not improved student performance. Too often, the institutional issues took precedence over the needs of the students.

Schools then made a more aggressive effort to focus instruction on raising achievement, in what became referred to as the “standards movement.” Again, this concept was taken directly from business, but industry standards for products and services were not easily transferable to the intellectual development of children. Furthermore, the rules of engagement in education are fundamentally different from the rules of engagement in the business sector. In business, everyone is expendable, whereas in education, nearly everyone is protected. Moreover, education is committed to equity as well as excellence.

Although the standards movement was intended to bring focus and direction to the curriculum, it led instead to a proliferation of content to be taught in the curriculum. This can be seen in research by Dr. Robert Marzano and colleagues in *What Americans Believe Students Should Know: A Survey of U.S. Adults* (1999). The authors examined standards across all subjects and grade levels and identified 200 distinct standards with 3,093 related benchmarks. From teachers’ estimates of how long it would take to teach each benchmark adequately, the researchers calculated that it would require 15,465 hours to cover all of them. Yet, students have only 9,042 hours of instructional time over the course of their K–12 careers.

The International Center for Leadership in Education conducted a survey in 1999 to identify the skills and knowledge graduates need for success in the world beyond school. The survey, reported in

*The Overcrowded Curriculum* (1999), asked respondents to identify the top thirty-five standards—in terms of what a high school senior should know and be able to do—from a list of content topics commonly found in states' exit standards. The top-rated skills in mathematics, science, and English language arts bear a striking resemblance to skills typically covered in career and technical education programs. Many of the lowest-rated topics remain a central focus of instruction in these disciplines.

### More School Reform

When the standards movement did not translate into graduates with the skills that corporate America deemed necessary, business leaders pressed elected officials to instill more rigor into the system and to prove that students were mastering what was taught. In response, states initiated or upgraded mandatory statewide testing programs to find out what students know.

Although these testing programs have served some useful purposes, they do not measure a broad scope of knowledge. Schools do not have enough time to teach all the standards, benchmarks, performance objectives, goals, and other subcategories of standards, so states cannot test students on all of them.

While raising academic standards was a central concern of K–12 education for two decades, issues raised by business about students' inability to apply their skills and knowledge on the job did not receive widespread attention. Vocational education was the only area uniformly to embrace the necessity for students to learn how to apply their knowledge in the real world.

### The New Workplace

At the conclusion of World War II, the adults in the United States, many of whom grew up during the Great Depression, wanted their children to have a better standard of living than they did. They saw higher education as the ticket to that better life. Meanwhile, Europe and Asia focused more on rebuilding their war-torn countries than on education, thus allowing American colleges and universities to have the highest academic standards in the world for the next several decades.

America's reversal of educational prominence happened at the time when technology began to reshape the workplace. By the early 1990s the academ-

ic skills needed in the workplace often surpassed the academic skills required for entry into college. Like the United States, other countries experienced the call for school reform, but they did not need to be convinced of the link between education and work. The United States, with a different value system, retreated to the old ways: raise standards and define excellence through testing. But the reality is that the tests do not measure the skills that underpin the workplace, and U.S. graduates continue to be at a disadvantage in the global and domestic marketplaces.

Another significant event that occurred in the late 1980s was the shift from big business to small business. Companies across the America began to downsize. In small companies, broad skills and the ability to handle multiple tasks are of paramount importance. Even entry-level workers are expected to be jacks-of-all-trades.

The contemporary workplace is dynamic and entrepreneurial. Approximately one-third of jobs is in flux every year, meaning that they have just been added or will be eliminated. The job security once enjoyed in big companies is no sure bet anymore. Employees must continuously reinvent themselves by seeking out the additional training and new skills that will keep them marketable. Skills and adaptability have become the new job security.

The new economy requires that employees be able to apply mathematics, science, and technical reading and writings skills in a variety of job tasks. The trend in career and technical education is to teach transferable skills via the various occupational clusters. These clusters are industry-specific enough to enable students to develop employment skills without being so limited as to track students into narrowly defined or dead-end jobs. To accomplish this, the programs provide a strong academic foundation and teach students the processes of applying this knowledge.

The work environment is always in transition, with changing equipment, tasks, and responsibilities. Technology is progressing too rapidly to train students on the latest equipment, so the trend in career and technical education is to focus on teaching the skills, concepts, and systems that underpin technology rather than how to operate a particular piece of technology.

### Use Research about Learning

A growing body of education research supports the efficacy of the methodology used in career and technical education programs. Research documents that the capacity to apply knowledge to practical situations is not only an important ability for students to have, but also an effective way to improve their academic performance. Research also shows that students learn more when they are motivated to do so. In career and technical education, motivation stems from the realization that what they are learning has a practical application to the world of work.

Arnold Packer, Chairman of the Secretary's Commission on Achieving Necessary Skills (SCANS) 2000 Center at the Johns Hopkins Institute for Policy Studies, has found that "solving realistic problems motivates students to work on their academics. They have their own answer to the oft-asked question: "Why do I have to learn this?" This blend of academic, career, and computer learning helps them acquire the skills needed for successful careers while they achieve to meet state standards."

The National Research Council has found that when instruction is based on students' interests and aptitudes and is appropriate to their learning styles, students are more motivated to learn. Academic performance generally improves, for example, when students attend magnet schools and theme academies.

The research suggests that the ability to apply knowledge requires experience in using that knowledge in a variety of ways over a period of time, drawing on the same knowledge base. Career and technical education does a good job in this regard. Skill and knowledge are taught and reinforced through hands-on activities and real-world applications.

The National Research Council's comprehensive 1999 report, *How People Learn: Bridging Research and Practice*, shared key findings of the research literature on human learning, curriculum design, and the learning environment. One of those findings concerned metacognition. Metacognition occurs when a learner takes a new piece of information, debates its validity in relation to what else he or she knows about the subject, and then considers how it expands his or her understanding of the topic. Most career and technical education programs employ more metacognition activities than traditional programs, in which many students spend the school

day listening to teachers disseminate knowledge. Learning by doing is the standard approach in their courses, as students use skills and knowledge to create products and model solutions to problems.

Research shows that students will try to rise to the level of expectation established for them. For career and technical education, this means having as high expectations for students' academic performance as for their performance of job-related skills.

In the technological, information-based economy, workers must be able to apply high-level, integrated academic skills on the job. As career and technical education programs redesign curriculum to embed academic standards, their students have an advantage over other students because career and technical education students also learn how to apply these skills.

*See also:* BUSINESS EDUCATION, *subentry on* SCHOOL; SCHOOL REFORM; TECHNOLOGY EDUCATION; VOCATIONAL SCHOOL FALLACY.

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## PREPARATION OF TEACHERS

Most state and local education agencies in the United States have changed the name of vocational education to "career and technical" or "career technical" education to reflect a broader mission. The National Association of State Directors of Career Technical Education Consortium indicated that career technical education "is provided in a variety of settings and levels including middle school career exploration, secondary programs, postsecondary certificates and degrees, and customized training for employees in the workplace. Career Technical Edu-

cation also provides students and adults (1) the technical skills and knowledge necessary to succeed in occupations and careers, (2) the cross-functional or workplace basics necessary for success in any occupation or career (such as problem solving, teamwork and the ability to find and use information) as well as skills for balancing family and work responsibilities, and (3) the context in which traditional academic skills and a variety of more general educational goals can be enhanced" (National Association of State Directors of Career and Technical Education website). The term *career and technical education*, rather than *vocational education*, will be used throughout this article when describing current programs and activities.

### History of Pre-Service Teacher Education

In 1914 a congressional Commission on National Aid to Vocational Education was established to study the skilled worker needs and report its findings to Congress. The findings of this commission resulted in the passage of the Smith-Hughes Act in 1917—the first federally enacted legislation to promote vocational education in public high schools in America. This act provided federal funds for vocational education at the secondary level in the areas of agriculture, trades and industry, and home economics.

The Smith-Hughes Act was also the first federal legislation to make funds available to train teachers. Sections 2, 3, and 4 in the Act authorized the use of funds to be paid to states for the purpose of paying the salaries of teachers, supervisors, and directors and in the preparation of teachers, supervisors, and directors. The George-Deen Act (1936) extended the coverage of vocational education to include distributive education. The George-Barden Act Amendments (1956) extended coverage to include practical nursing and the fishery trades. The Vocational Education Act (1963) included business and office education.

Vocational education teacher requirements have often required a number of years of experience in a craft or trade prior to being employed as a teacher. In some occupational areas, some alternative state certification schemes have allowed those without a college degree, but with extensive occupational experience, to teach vocational education courses.

The educational reform movement of the late twentieth century and the beginning of the twenty-

first century has had an important impact on career and technical teacher education programs. Educational reform influences in career and technical teacher education programs include increasing technical and academic achievement; increasing assessment and accountability requirements; designing meaningful instructional tasks based on real world problems; using technology; teaching teamwork and collaboration skills; and developing leadership skills.

A career and technical education teacher must also be prepared to relate to an increasingly diverse student clientele in a manner that results in higher levels of academic and technical proficiency. Furthermore, these students need to be able to reason analytically, solve complex problems, and gather and process information and data.

### **Organization of Career and Technical Teacher Education**

Land-grant universities, state colleges and universities, church-related colleges, and private colleges are important sources of career and technical education teachers. The majority of career and technical teacher education programs are housed in departments or colleges of education. However, they are also found in other colleges or subject area departments such as Food, Agricultural, and Environmental Sciences; Business; Engineering; Human Ecology; and Professional Studies.

Career and technical teacher education faculties are charged with teaching both pre-service and in-service educational programs. Increasingly, colleges and universities are relying on adjunct and part-time faculty to teach career and technical teacher education courses. More programs are offering field-based courses in conjunction with public schools and distance education is also being used to deliver instruction.

Students are generally admitted to a career and technical teacher education program after they have earned at least a 2.5 cumulative grade point average. Other criteria for admission include requirements such as general education courses, work experience, letters of reference and successful passing of the Praxis I (academic skills) examination.

Career and technical teacher education programs include courses such as history and philosophy, methods of teaching, program planning, curriculum development, and field-based inquiry/student teaching. At the end of their pre-service pro-

gram, students often must pass the Praxis II (subject assessments and principles of learning and teaching) test. Beginning teachers are increasingly required to pass the Praxis III (classroom performance assessments) examination by the end of their first year of teaching. The shortage of certified and/or licensed career and technical education teachers has resulted in the hiring of people from business and industry to fill teacher vacancies. Individuals from business and industry often have the technical skills required but lack the pedagogical skills and understanding needed to establish productive teaching and learning environments. People from business and industry entering teaching are often brought in under temporary licensure and required to obtain, within a specified time period, the educational competencies needed to succeed in the classroom. Individuals entering alternative licensure programs often have the option of being a part of field-based or cohort-based courses.

### **In-Service and Staff Development Programs**

Career and technical education teachers are expected to meet their students' needs for career development, technical and academic achievement, and technology skills. Career and technical education students must also demonstrate higher order skills in reasoning, problem solving, and collaborative work. At the same time, teachers are faced with serving a more diverse student clientele. Finally, the rapidly changing workplace and technological revolution require ongoing curriculum revisions.

Career and technical education teachers participate in professional development using a variety of techniques. These include techniques such as formal education courses, interactions with business and industry, workshops, seminars, conferences, literature, and networking with other career and technical education professionals.

Beginning career and technical education teachers, while facing the same expectations and demands required of all teachers, are also faced with the need to refine their pedagogical skills. Most beginning teachers are required to participate in teacher induction programs designed to help them survive their first year of teaching and pass the Praxis III (classroom performance assessment) examination. Often teacher induction programs are offered through cooperative efforts of local school districts, colleges and universities, state departments of education, and

professional career and technical education teachers' organizations.

### Major Trends and Issues in Teacher Preparation

Career and technical teacher education is affected by a number of trends and issues. Four of these major trends and issues are: approaches to teaching and learning, infrastructure, teacher licensure and standards, and innovative programs.

**Approaches to teaching and learning.** Behavioral, cognitive, constructivist, and contextual learning environments have all been used in vocational and career and technical education. However, the psychological approaches in career and technical teacher education changed significantly in the last half of the twentieth century.

From about 1920 to 1970, behaviorists such as B. F. Skinner theorized that human behavior was highly shaped by its consequences. Later, cognitive psychologists portrayed learners as being active processors of information and assigned priority to the knowledge and perspective students bring to their learning. Cognitive theorists stressed the role of thinking in the learning process and believed that the teacher was to provide learners with opportunities and incentives to learn. Cognitive development theorists have more recently taken a constructivist view of learning that incorporates learner-centered teaching practices, problem-based learning, contextual teaching and learning experiences, integrated academic and vocational curriculum, and authentic assessments. Career and technical education teachers, in working with their students, have routinely used learner-centered approaches.

Contextual teaching and learning represents yet another approach to teaching and learning used by career and technical education. Contextual teaching and learning encourages students to employ their academic understandings and abilities in a variety of in- and out-of-school contexts by asking them to solve simulated or real-world problems both alone and with others. Career and technical education teachers often use contextual teaching strategies to help students make connections with their roles and responsibilities as family members, citizens, students, and workers.

**Infrastructure.** High quality career and technical teacher education programs require personnel (e.g., faculty, staff, and students), productivity tools (such as curriculum, technology, professional develop-

ment opportunities, supplies, and telecommunication technology), and physical facilities (buildings, libraries, classrooms, and laboratories). Unfortunately, higher education—for the most part—has failed to invest in career and technical education personnel, productivity tools, and physical facilities to support quality teacher education programs.

**Teacher licensure and standards.** The licensure of career and technical teachers varies greatly across states, and can be obtained in a number of different ways depending upon the requirements established by each state. Several types of licenses are available, including initial (or probationary), regular (or permanent), emergency, private school, and alternative. Although numerous routes are available to obtaining a teaching license, very little is known about the effects of these licenses on student achievement.

The National Board for Professional Teaching Standards was created to recognize teachers who have been judged by their peers as being accomplished, making sound professional judgments about students' best interests, and acting effectively on those judgments. As of 2001 there were 342 Nationally Board Certified Early Adolescence through Young Adulthood/Career and Technical Education teachers.

**Innovative programs.** One of the major suggestions emanating from policy studies for improving education has been to ensure that students are achieving at higher levels of academic and technical competency. Career and technical teacher education has a long history of responding to national needs and initiatives. Among the newer developments in career and technical education are career clusters, career pathways, career academies, and exemplary programs and promising practices.

Seventeen broad clusters have been identified that include all entry-level through professional-level occupations. The goal for these career clusters was to create curricular frameworks designed to organize knowledge and skills in a relevant manner that would help prepare students to transition successfully from high school to postsecondary education and employment in a career area, or both. These career clusters include agriculture and natural resources; business and administration; education and training; health science; human services; law and public safety; government and public administration; scientific research/engineering; arts; audio/video technology and communication; architecture

and construction; finance; hospitality and tourism; information technology; manufacturing; retail/wholesale sales and service; and transportation, distribution, and logistics.

Career pathways are a series of academic, technological, and occupational courses and other educational experiences with a career focus in which students participate. Through a continuum of career-focused programs, students are provided with multiple pathways to employment and postsecondary education. Career pathways include rigorous academics as well as technical skills, in order for students to be prepared for both postsecondary education and for careers.

Career academies align clusters of courses around specific career areas, with teachers collaborating to develop integrated academic and vocational programs in a personalized learning environment, delivered over a period of years. These academies are designed to increase engagement and academic performance, students' personal and academic development, preparation for college and work, postsecondary attainment, and successful employment. Many large city school districts, such as Philadelphia, are organizing schools around career academies.

Teacher educators also look for examples of high quality career and technical education programs to use as illustrations in preparing prospective teachers. Wesley Budke, Debra Bragg, and others identified exemplary and promising secondary and postsecondary career and technical education programs in 2000 and 2001. The exemplary secondary career and technical education programs included programs in culinary arts and hospitality services, digital design, tech prep electronics technology, welding technology fabrication, computer graphics design, computer network administrator, culinary academy, and early childhood education/careers in education. The exemplary postsecondary career and technical education programs included programs in associate-degree nursing, telecommunications, integrated manufacturing management, and refugee targeted assistance. This effort to identify and disseminate information about exemplary and promising programs is ongoing.

*See also:* AGRICULTURAL EDUCATION; BUSINESS EDUCATION, *subentries on* PREPARATION OF TEACHERS, SCHOOL; EXPERIENTIAL EDUCATION; TEACHER EDU-

CATION; TEACHING, *subentry on* KNOWLEDGE BASES OF; TECHNOLOGY EDUCATION.

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#### INTERNATIONAL CONTEXT

Education and training have often been considered polar extremes, the first being the development of the mind and the latter the mastery of strictly practical endeavors. But the two worlds of practical and conceptual endeavors are less distant than they may seem, and these simplistic views of education and training are misguided.

Indeed, there are definitional problems concerning education and training, leading to misguided

ed policies. There is a need for a clear understanding of the overlaps and contrasts between the two concepts.

There is a long and old controversy in the literature opposing education and training. The Roman rhetorician Quintilian claimed that oratory was more useful than philosophy, thereby stating the superiority of training over education. But for many centuries education was closer to philosophy than to applied endeavors.

Some educators use the word *training* in a derogatory way, as if to suggest that the learning is intellectually shallow or that it goes with attempts to educate the poor. In contrast, some trainers refer to education as vacuous, fuzzy, and rambling learning that is good only for wasting the time of students.

#### What Vocational Training Offers

Both views, however, are too narrow and misleading. When dealing with less-schooled students, vocational subjects can be used to motivate and to create an environment that is familiar to them. Good training may function as a conduit for the best possible education for students less ready for abstraction. By using practical situations as start and end points, abstract concepts can be introduced and mastered by students who otherwise would be very low achievers in academic schools.

The environment created by good vocational schools can give students a sense of getting closer to a concrete job. This can in turn generate a degree of motivation and sense of self-efficacy that is conducive to the mastery of abstract concepts that would leave students cold and aloof when taught at academic schools that have difficulties in recreating environments that motivate low-achieving students.

Good vocational training makes use of the context of the practical subjects to teach mathematics, writing, reading, and science. Students are asked to read the instructions of what they are doing and write down the procedures they will execute. Concrete workshop situations are conceived, for instance, to have students convert inches to centimeters, Fahrenheit to Celsius, and so on. In other words, proportion is learned as a by-product of solving shop problems. Mathematics is smuggled into the practicalities of shop work. In fact, good training institutions have different versions of mathematics, one for machinists, another for electricians, and so on.

As research in the psychology of learning suggests, the mastery of subjects increases when the contexts in which phenomena are examined are fully familiar to the students. Experiments have shown that a physical principle is better understood when the students are given the broad context in which it applies. For instance, it has been shown that students acquired a better grasp of the concept of density when they were shown a clip from the film *Raiders of the Lost Ark* in which the hero, Indiana Jones, has to replace a golden skull sitting on a platform with his bag filled with rocks, both which weighed the same. Students were asked to estimate the weight of the golden skull by measuring the approximate volume of a human skull and multiplying it by the relative density of gold. What good training does is to present inside the workshop such concrete problems based on concrete needs arising in the practical tasks to be performed.

Nevertheless, what training offers is merely the possibility to tap into this potential. There is nothing automatic about it. Training can fail to use these opportunities. Training that is only training is bad training or merely too shallow to go beyond the transmission of some dexterity. How to put out a fire or how to unclog a pipe are useful pieces of knowledge in their own right and need to be taught. But they are essentially different from longer training programs that contain more conceptual and theoretical structures.

The “basic skills” movement consists of improving the knowledge of the fundamental literacy and numeracy skills of workers who are learning a trade or have already mastered the more practical and manual aspects of their occupations. The essence of the successful strategies, however, is to use the same workplace operations as a scaffold on which to build the conceptual or cognitive skills that are missing. Workers learn how to read by reading the same manual that they need to read to perform their job correctly.

Vocational contents can be an ideal context in which to plant cognitive development of a higher order. Thinking skills and good reading and writing habits can be developed while doing practical tasks that lead to marketable skills.

By the same token, academic education may also resort to practical endeavors in order to carry the more general message. Laboratory classes try to do this, and the *Indiana Jones* example illustrates

more deliberate attempts to bring context to learning. Theory, after all, involves the generalization and conceptualization of real-world observations. Formulas written on the blackboard merely display packaged and sanitized versions of the intense intellectual effort that was required to arrive at them. The idea of having students “rediscover” physical principles goes in the same direction.

### Developments in Technology and Work Organization

This reasoning implies that the differences between education and training have always been exaggerated and that most reputable training programs are education as much as training. Recent developments in technology and work organization, however, seem to be blurring even further the distinction between education and training. In industrialized countries, a very significant share of manufacturing activities have changed considerably and incorporate new technologies, particularly those based on microprocessors and the variety of automation techniques that result from them. Some successful industrializing countries are definitely moving in the same direction.

New production technologies require more reading, more writing, more applied mathematics, and more science. In the past, these cognitive skills were, at best, a means to master a trade (e.g., one needs to know how to read to take the machinist course because some of the instruction is written in books or handouts). But these cognitive skills are becoming part and parcel of the occupational profile. For example, reading is directly useful for the performance of the core tasks of the occupation. Could it then be said that reading and mathematics are now vocational subjects? For that reason, most training programs could benefit from a little more emphasis on language, mathematics, and science, as occurs in the best courses and apprenticeships. This is increasingly happening in Germany, in the American tech-prep programs, and in the new generation of SENAI courses in Brazil.

While learning an occupation, the trainee may have an ideal opportunity to develop the same general skills that are taught in academic schools, that is, a general education. But this will not happen spontaneously. The integration of theory and practice, of shop activities with general principles of science, can be the result only of deliberate and well-informed efforts. Training programs should not

underestimate the potential offered by such integration or the difficulties of achieving it. But there are good examples of these ideas. For instance, the new versions of the traditional Latin American “methodical series,” as well as new methods developed in countries such as the United States (tech prep, School to Work) and Germany (key qualifications), have good track records.

In short, vocational subjects can be used to motivate and to create an environment that is familiar to the students. Good training may function as a conduit for the best possible education for students less ready for abstraction. By the same token, academic education may also resort to practical endeavors in order to carry the more general message.

### **Differences and Similarities between Training and Education**

There are conceptual differences between the roles of vocational training and education. Yet, as mentioned, the borderline between training and education is quite blurred. In its purest version, education is knowledge removed from practical applications (e.g., learning astronomy is pure education, except for those who plan to become professional astronomers). At the other extreme, pure training is a version of skill preparation that does not explore the theoretical implications of the tasks being learned (e.g., learning how to use a saw and a jack plane without learning drafting and the requisite mathematics). In most cases, however, the two are combined.

Good training and a good education are equally good—and actually very similar in nature—when they promote the broad conceptual and analytical development of the trainee. By the same token, a good education is often linked to applied endeavors that turn theoretical knowledge into a practical skill. The difference is mostly one of intention. Education uses the practical or occupational content to obtain a deeper mastery of theory, being somewhat unconcerned with the application of the knowledge in the marketplace. Training starts with the clear goal of preparing for an existing occupation, the theory being a necessary component to prepare a better worker for that position.

Yet, despite all the merits of training, it is not a cost-efficient substitute for good schools for all. By contrast, a solid basic education is the best preparation for a wide range of jobs. In addition, a good

basic education shortens the length of training required. In other words, the need to develop a good training system does not replace the (perhaps) stronger imperative to develop a good general education system.

Workers with a good mix of practical skills and conceptual understanding of technology can adjust more easily to new and different occupations, grow in their careers, and adjust to technological changes. The real issue is not general versus superspecialized training but the solidity and depth of the basic skills that go together with specialized training.

A first element to understanding the differences and similarities between training and education is to consider that the presence of training contents that may be applicable at the workplace does not vary inversely with the presence of fundamental concepts and abstraction. Both poetry and solid-state physics are rich in abstraction. The first has scarce direct applicability at the workplace. The second has ample utilization. Basket weaving has hardly any abstraction or conceptualization and finds little demand in modern societies. Cutting hair offers little in abstract thinking but there are ample economic applications for this skill.

It is necessary to stress that theory and practice are not the extremes of a single continuum but independent concepts that admit all possible combinations of highs and lows, as exemplified above. Fortunately, to have the high theoretical and conceptual content that educates and sharpens the mind, one does not have to forego learning the practicalities of life and work. Both what is called vocational training and what is called education of all sorts have both the theory and the practice. The main point here is that occupational training that fetches a good market is as good or better than any other environment to educate the mind in the fundamental concepts that are usually found in good education.

Training should not be understood as something poor in theory and conceptualization. It can be rich or poor. Education should not be understood as something helplessly unpractical. In fact, it may be removed from immediate applications or it may be very close to them. There are no good reasons to be concerned with the differences between education and training instead of offering learning opportunities that have both.

## Conclusion

Abstract subjects that are removed from the everyday life of students offer a more arid ground for learning. Such subjects as Latin declensions, French irregular verbs, underground geological layers, the successions of kings of France, and the capitals of African states are not topics that fascinate the average student. Hence, they are not the ideal place to graft the broad basic skills that constitute an education for a modern society. Vocational schools can avoid these motivational difficulties by bringing in the world of the factory, with its practicalities and the inherent motivation of learning some skills that have immediate market value. Nevertheless, not everything that happens in the factory is ideal for the process of learning. In particular, the factory routines teach mostly how to deal with repetitive activities. This is a worthy objective of short training courses and for the preparation of workers who lack the prerequisites for further development. This may be justified in many cases, but it is not what is considered the optimal environment for broad learning. But equally important to understand is that many interesting, motivating, or even fascinating practical applications of the concepts and theories taught in academic schools may fail to have immediate demand in the marketplace—even though, indirectly, all good education ends up being valuable in the world of work. Learning statistics by dealing with Formula 1 auto racing data is as good as any other method of motivating students and leading them to complex concepts. However, newspapers rarely include advertisements for jobs involving the analysis of Formula 1 data.

*See also:* CURRICULUM, INTERNATIONAL; INTERNATIONAL GAP IN TECHNOLOGY, THE; SECONDARY EDUCATION, *subentry on* INTERNATIONAL ISSUES; VOCATIONAL SCHOOL FALLACY.

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## VOCATIONAL EDUCATION

*See:* VOCATIONAL AND TECHNICAL EDUCATION.

## VOCATIONAL SCHOOL FALLACY

Few articles in the field of international and comparative education have been as influential in academic

circles and among some donor-agency personnel as Philip Foster's "The Vocational School Fallacy in Development Planning" (1965). This article went to the heart of the long-running (and continuing) debate about whether schools and their curricula can influence society through changing student attitudes towards jobs and work—or whether schools and their pupils are themselves much more influenced by the surrounding economy and by the patterns of work and rewards that exist in the surrounding urban and rural areas. During the period immediately following the independence of many African countries, it was commonplace to suggest that schools could deliver all kinds of attitude change (e.g., towards nation building, good citizenship, and rural development). Foster, however, argued that "schools are remarkably clumsy instruments for inducing large-scale changes in underdeveloped areas" (1965a, p. 144). Foster's message came at a time when a whole series of innovations were being introduced to deal with a sudden surge in unemployment in the developing world among those who had finished primary school, as well as the flight of young people from subsistence agriculture in rural areas. The most famous of these schemes was Education for Self-Reliance, developed by Tanzania's first president, Julius Nyerere.

Foster's warning about the limitations of schooling to change society arrived during the 1960s, a decade that saw many new and more instrumental approaches to schooling (from manpower planning to educational planning). These were frequently about engaging the schools in the creation of high-level manpower for the rapidly Africanizing civil service, but they also implied that schools could directly contribute to the modernization of traditional societies.

Foster's critique of these visions for engaging schools in the transformation of their surrounding societies was derived from an in-depth analysis of Ghana and from a detailed knowledge of its educational history prior to independence in 1957, when it was known as the Gold Coast. Foster was able to argue that, for well over a hundred years, Western education had been responsible for a massive amount of social change in this area, but that schools had very seldom functioned in the manner expected by the educators and the policymakers. In the new era of rational education planning and the new discipline of the economics of education (which involved looking at education as human capital and calculat-

ing the costs and benefits of different mixes of education), Foster's research was a vivid testimony to what he called the "unplanned consequences of educational growth" (1965b, p. 303).

At the heart of this debate lay the issue of vocationalism and its relationship to economic growth. Should not schools, the argument went, and especially those in predominantly agricultural societies where the formal sector of the economy could only absorb a very small proportion of the economically active population, keenly prepare young people with a substantial measure of the practical, agricultural, and technical skills needed for the transformation of their societies? Foster's answer was that, in Ghana, missionary societies, colonial governments, and the new independence government had frequently been attracted by the apparent logic of this position, and had sought to use schools in this instrumental way. But the plain truth was that "the educational history of the Gold Coast is strewn with the wreckage of schemes" based on these assumptions (1965a, p. 145).

Foster's explanation for these failures was that pupils are very realistic and are able to work out what is in their best career interests, regardless of the orientations schools seek to provide. In particular, he argued that schools had been very shrewdly used by pupils as a gateway to the modern sector of the economy—and as an escape from poor prospects in many rural areas. The core argument of the vocational school fallacy, according to Foster, is that "the schools themselves can do little about this. So long as parents and students perceive the function of education in this manner, agricultural education and vocational instruction *in the schools* is [sic] not likely to have a determinative influence on the occupational aspirations and destinations of students. Aspirations are determined largely the individual's perception of opportunities within the exchange sector of the economy, destinations by the *actual* structure of opportunities in that sector" (1965a, p. 151).

### Impact of the Vocational School Fallacy

It could be argued that the vocational school fallacy is much better known by students and professors of international and comparative education than by policymakers in ministries of education. Policymakers in many countries continue to be attracted by the possibility of using the school system to change young peoples' attitudes towards different kinds of work and employment. With the reduction

in the number of good jobs in the formal sector of many African economies, the school system in the early twenty-first century is being asked to reorient young people towards skills for self-employment. Such optimism tends to be uninformed about the complexity of entering dynamic forms of self-employment.

One exception to the suggestion that policy-makers have been largely immune to the message of the vocational school fallacy can be found in the policies of the World Bank. There is strong evidence that acceptance of the vocational school fallacy was one reason why the World Bank, in the late 1970s and early 1980s, turned its back on its earlier widespread policy of supporting *vocationalised*, or *diversified*, secondary education.

The question of whether the vocational school fallacy is still relevant has been addressed in a study conducted by Kenneth King and Chris Martin during 1999 and 2000. This study sought to revisit in Ghanaian secondary schools the same questions and debates that Foster explored in post-independence Ghana. The results confirmed many of Foster's findings about the impact of the economy on education, but, intriguingly, they also suggest that there does, in fact, seem to be a substantial school influence on attitudes towards employment and self-employment and that this is connected in some way to the vocational options in school.

*See also:* SUB-SAHARAN AFRICA; VOCATIONAL AND TECHNICAL EDUCATION, *subentry on* INTERNATIONAL CONTEXT.

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KENNETH KING

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## VOLUNTEER WORK

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Volunteer work offers an opportunity for individuals and communities to engage in activities that affect the common good of society. For young people, volunteer work provides a way to gain a variety of useful skills, to understand the community in which they live, and to enhance community life. The community, in turn, fosters the development of a citizenry that is involved in creating a better democracy.

There is an increasing emphasis in schools on the development of character in students, through the study of community issues, actions to address these issues, and reflection on the experience. Many schools are moving students from volunteerism to service-learning initiatives within the curriculum so that students at all levels can develop cooperation, empathy, citizenship, and self-esteem. For example, the Kentucky Education Reform Act of 1990 mandates graduation requirements that emphasize application and integration of community-service work and learning.

Elementary and secondary schools have devised a variety of ways to integrate volunteerism into their schools and community. In some cases, students are left to their own motivations to engage in service to the community through acts of volunteerism. These volunteer experiences can take the form of a one-time involvement in a community agency or event, or can result in a sustained relationship over a period of time with a particular service organization in the community.

Many schools have moved from an emphasis on volunteerism to an involvement by students that connect their service with the curriculum. For example, one elementary school focuses on service to the elderly. As part of the history curriculum, a history of the community was produced after students interviewed older citizens and created a collection of their stories. In art classes, the students produced artwork as gifts for senior members of the community. In

math, students helped older adults with grocery shopping, and older adults were able to help students with math problems that arose regarding product pricing.

Some schools have made service a requirement for graduation, though there is debate regarding the merits of requiring service of all students. Some believe that schools should encourage service, but not make it a requirement and that required service is a contradiction in terms. Others argue that service is a responsibility, a debt due to society, and that it is every citizen's civic duty to contribute to the community. Volunteer service requirements vary from having students enroll in a service class in addition to spending a certain amount of hours in a service activity, while other schools require only the service commitment.

Another approach to engage students in volunteer activities is for the school and an organization to partner in a common initiative. Community organizations that have an investment in fostering a service ethic among a new generation of citizens should be sought out by schools for a partnership.

Engaging students with underserved populations and diverse populations in a community usually builds bridges that link the students with individuals and initiatives with whom they might otherwise never have the opportunity to develop and nurture relationships of understanding and reciprocity. Experiences of this nature enable students to ascertain community assets and needs and gain perspective on how to cooperatively develop community-building initiatives. It can also help students understand issues of social injustice and move them toward moral deliberation and critical thinking about societal issues.

Another option schools have implemented is in-school service. Many programs look within the school community for service activities. Cross-age tutoring, school improvement projects, and mentoring are examples of beneficial student service activities.

Institutions of higher education look to create an "engaged campus," where boundaries are blurred between campus and community, and between knowledge and practice. A campus that is engaged with the surrounding community is not just located in a community, but is connected in an intimate way to the public purposes and aspirations of community life itself.

Many campuses also distinguish between acts of volunteerism and academic service-learning experiences. Offices of volunteer activities on college campuses work with community partners to enlist students to provide much needed hands-on aid to the community. These experiences are authorized and supported by the institution in order to contribute to an organized, efficient, effective, and sustainable effort with students and the community. Many of the social organizations on college campuses include volunteerism as a part of their mission of service. In addition, many students act out of their own intrinsic motivation and sense of civic responsibility to become active volunteers in their community.

While volunteerism is supported and promoted in the student affairs divisions of colleges and universities, academic service-learning is being strongly integrated into the curricular offerings of institutions of higher education. Service-learning usually has a two-fold goal: (1) meeting community needs and providing meaningful learning experiences for the students; and (2) enlivening the public service mission of the institution while becoming engaged in the life of the local community.

Volunteerism does not necessarily produce the same outcomes as a service-learning component in the curriculum. When service learning is integrated into the curriculum, it is desired that students learn and develop through active participation in thoughtfully organized service in the community, and that this service meets the needs of the community, is coordinated with school and community activities, helps foster civic responsibility, is integrated into the academic curriculum or educational components of community service programs, and provides structured time for students to reflect on the service experience.

Volunteerism and academic service learning are considered important components in the educational process for building a stronger democracy. Emphasis on curricular and extracurricular means of moving students toward civic engagement has become a focal point of teaching and learning in elementary, secondary, and postsecondary educational institutions.

*See also:* COMMUNITY EDUCATION; EXPERIENTIAL EDUCATION; SERVICE LEARNING.

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**VOUCHERS, SCHOOL**

*See:* CONSTITUTIONAL REQUIREMENTS GOVERNING AMERICAN EDUCATION; PRIVATE SCHOOLING.

**VIYGOTSKY, LEV (1896–1934)**

Fifty years after his death, Lev Semyonich Vygotsky attracted the attention of Western psychologists and educators for his theory of cognitive development. In contrast to other cognitive perspectives, Vygotsky accorded a central role to culture and social interaction in the development of complex thinking. In addition, he advocated the study of children's unfolding development of cognitive processes, and pioneered a research method to accomplish this purpose. He also contributed ideas to pedology (child study) and defectology (special education) that anticipated current views.

A humanist and intellectual, Vygotsky graduated in 1913 with a gold medal from the private Jewish gymnasium in his native Russian province. Fluent in French and German, he studied philosophy and literature at Shanyavsky People's University while completing a master's degree in law at Moscow Uni-

versity. Returning home in 1917, he taught at various institutes, and began reading widely in psychology and education.

Vygotsky's invitation to join the Institute of Experimental Psychology in Moscow in 1924, his official entry into psychology, was an accident of history. The disappearance of old professional hierarchies in the reorganization of Soviet society and the directive to redesign psychology consistent with Marxist philosophy created an opportunity for new ideas. Thus, Vygotsky joined a discipline for which he had had no formal training.

After completing his doctoral dissertation, "The Psychology of Art," in 1925, Vygotsky pursued his goals of reconstructing psychology as a unified social science and explaining both the origins and development of human consciousness. His rationale for this major task, discussed in his paper "The Crisis in Psychology," foreshadowed the views of modern post-positivist philosophers of science. Specifically, research lacked a unifying theory, and as a result, had produced conflicting or unrelated findings. Vygotsky sought to remedy this problem.

In his brief ten-year career, interrupted by severe bouts of tuberculosis, Vygotsky's demanding schedule included lecturing throughout the U.S.S.R., organizing research projects, and conducting clinical work. His writing, undertaken late at night and during his hospitalizations, was banned in the U.S.S.R. in 1936 for twenty years for "bourgeois thinking." This charge originated from the fact that Vygotsky had incorporated ideas from European and American anthropologists, linguists, psychologists, and zoologists into his work. In his thinking, Vygotsky applied dialectical synthesis in which a perspective (thesis) is negated by an opposing view (antithesis). Their interaction produces a synthesis in the form of a novel development or idea. Vygotsky reviewed and contrasted ideas from a variety of fields, fusing many of them into a qualitatively new explanation of cognitive development (synthesis).

Misinterpretations of Vygotsky's work have occurred because, until the 1990s, only a few fragmented ideas, taken out of context, had been translated into English. Thus, the long-term impact of his thinking is yet to be determined.

**Cultural-Historical Theory**

Applying dialectical synthesis, Vygotsky noted the Marxist concept of the influence of tool invention

on human mental life (thesis) and the anthropological view of the role of culture in human development (antithesis). His resolution was the designation of cultural signs and symbols as psychological tools, which he defined as instruments of cognitive development (synthesis). Their importance is that early humans created signs (simple psychological tools) and initiated progress toward complex thinking in the species (phylogeny). For the individual in society, the task is to appropriate the symbol systems of one's culture to develop the related forms of reasoning (ontogeny).

In other words, the traditional role of signs and symbols, such as human speech, written language, and algebraic and mathematical symbols, is to serve as carriers of both meaning and sociocultural patterns. Vygotsky, however, emphasized a second essential role, that of assisting individuals to master complex cognitive functions that are not fully developed prior to adolescence. Referred to by Vygotsky as complex or higher cognitive functions, these capabilities are voluntary (self-regulated) attention, categorical perception, conceptual thinking, and logical memory.

Of particular importance is that Vygotsky considered higher cognitive functioning, the cultural development of behavior, and the mastery of one's behavior by internal processes as equivalent. That is, the higher cognitive functions, which require self-mastery, develop through a complex dialectical process from given biological functions. The process requires the child's mastery of the external materials of cultural reasoning, which become internal mechanisms of thinking.

Vygotsky's conceptualization anticipated subsequent discussions of the need to develop self-regulated learners who can direct and manage their own learning and thinking. Unlike these perspectives, which have had limited success in teaching specific self-regulatory strategies for particular situations, Vygotsky identified two general requirements for developing self-directed thinking. First, higher cognitive functions emerge only after students develop conscious awareness and some control of their own thought processes. Second, school instruction should focus on developing these broad capabilities, which, in turn, develops self-regulation.

The lengthy process required to develop self-mastery and the higher cognitive functions is illustrated in Vygotsky's identification of the four stages

of learning to use symbols for thinking. In developing logical memory, for example, symbol use progresses from preintellectual (child cannot master his or her behavior by organizing selected stimuli) to internalization in which individuals construct self-generated symbols as memory aids.

Essential to cognitive development is the social interaction between the learner and a knowledgeable adult. Development of the higher cognitive functions depends on situations in which the adult commands the learner's attention, focuses his or her perception, or guides the learner's conceptual thinking. Formally stated, any higher cognitive function, such as self-regulated attention, categorical perception, or conceptual thinking, was first external in the form of a social relationship between two people. Then, through the learner's activity, it becomes internalized as an intracognitive function.

Vygotsky's emphasis on the dynamics of development is reflected in his critique of psychological research for studying already developed or fossilized behaviors. Instead, research methods should capture the processes of development. Vygotsky's double-stimulation method placed learners in problem-solving situations that were above their natural capacities. Available nearby were aids, such as colored cards or pictures. Vygotsky and his co-workers studied the ways learners of different ages struggled or successfully used these aids, documenting changes in learner activity and accompanying changes in cognitive functioning.

### Education and Cognitive Development

Two influential Vygotskian concepts are *the role of inner speech* and *the zone of proximal development*. In contrast to the Swiss psychologist Jean Piaget, Vygotsky maintained that the child's external self-focused speech during activities did not disappear. Instead, through a dialectical transformation, it became inner speech that guided the child's planning and other emerging thought processes.

Vygotsky's view that learning leads development and the immaturity of students' conscious awareness and mastery of their thinking at school age set the stage for the concept referred to as the zone of proximal development (ZPD). Defined as including higher cognitive functions that are about to mature or develop, the ZPD is determined by the cognitive tasks the learner can complete in collaboration with an adult or an advanced peer. Simply stated, the cog-

nitive operations that the student can complete with the assistance of another today, he or she can accomplish alone tomorrow.

Some discussions of classroom practices credit Vygotsky as supporting or advocating peer collaboration in the classroom. However, translations of his writings indicate that he discussed only teacher-student collaboration in the classroom. Higher cognitive functions develop through the teacher's requiring the learner to explain, compare, contrast, and generalize from subject-matter concepts. In this way, students learn to control their attention, to think conceptually, and to develop logical networks of well-developed concepts in long-term memory.

Applying cultural-historical theory to disabilities such as deafness, Vygotsky emphasized that the child's social deprivation is the factor responsible for defective development. For example, he noted that the blindness of a farmer's daughter and that of a duchess are different psychological situations because their social situations differ. To address the difficulties faced by disabled learners, Vygotsky suggested that societies continue developing special psychological tools that can provide the social and cultural interactions essential for cognitive development.

Finally, Vygotsky's intellectual heritage includes his emphasis on child study as the science of child development. Required is the synthesis of knowledge from different disciplines that addresses both the de-

velopment of novel cognitive functions and the educational needs of children.

*See also:* DEVELOPMENTAL THEORY, *subentry on* VYGOTSKIAN THEORY; EDUCATIONAL PSYCHOLOGY.

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MARGARET E. GREDLER

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## WALLER, WILLARD W. (1899–1945)

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Among education scholars the sociologist Willard W. Waller is known for writing the *Sociology of Teaching* (1932), an early classic in the sociology of education and the first extended treatment of schools as organizations in social contexts. He was born in Murphysboro, Illinois, and died in New York City, just days prior to his forty-sixth birthday. After attending public school in Illinois, Waller completed a B.A. at the University of Illinois in 1920 and then taught Latin and French for six years at the Morgan Park Military Academy. He completed an M.A. degree at the University of Chicago in 1925, followed by his Ph.D. at the University of Pennsylvania. His dissertation study of divorce, *The Old Love and the New* (1929), became his first book.

During his relatively short career, Waller explored a broad range of topics, but much of his written work reflected three major interests. He wrote on the family with special attention to courtship and divorce, on education, and on war and the veteran. Those who read Waller's works and accounts of his life often find the man as intriguing as the scholar. Waller's sociological interests reflected his experiences. His interest in the family stemmed from his own divorce and his awareness of the long and sometimes troubled relationship of his parents. His interests in education reflect his being the son of a school superintendent and his years as a high school teacher at Morgan Park Military Academy. His interest in war and the veteran seem connected to his brief service in the navy at the close of World War I and to his having taught at a military academy,

where he was addressed as captain, a rank he had in the Illinois National Guard.

Waller pioneered in his ethnographic analysis of schools as miniature societies with problematic relationships to the larger community. Although Waller's work provided rich conceptual resources for scholars in the sociology of education and in educational administration, his influence on subsequent research on schools was limited. He died young, leaving few disciples; what he believed was a realistic portrayal of schools may well have been seen by others as too bleak and harsh; and social science and educational research moved away from the kind of methods Waller employed to more quantitative techniques.

Although Waller's work did not receive the critical attention it deserved at first, since the 1960s scholars have increasingly recognized the significance and staying power of his pioneering analysis of the sociological characteristics of schools. Waller's *The Sociology of Teaching* (1932) remains a key book in the field. Further indicative of his high standing, the award for the outstanding publication in the sociology of education, presented annually by the American Sociological Association's section on that topic, is named after Waller.

Readers of *The Sociology of Teaching* are often troubled by Waller's account of how teaching affects teachers, and by what David Tyack called Waller's "bleak vision" of schools. David Cohen provided an eloquent discussion of these issues and what he viewed as Waller's ambivalence in "hating school but loving education." As it turns out, Waller's bleak vision of schools and his pessimism about the difficulty of changing schools and teachers were prophetic. The sustained school reform movement that

began with the 1983 report by the National Commission on Excellence in Education, *Nation at Risk: The Imperative for Educational Reform*, failed to appreciate until the late 1990s one of Waller's key insights: "The reformation of the schools must begin with the teachers, and no program that does not include the personal rehabilitation of teachers can ever overcome the passive resistance of the old order" (1932, p. 458).

In one way or another, in *The Sociology of Teaching* Waller touched on most of the issues that continue to perplex school reformers. For example, how best to reform schools, from within or without, top-down or bottom-up? How can teaching and the teaching profession be improved? What impedes the quality of teaching and learning? What accounts for goal displacement in schools? What balance should be struck in teaching and learning between control and authority, on the one hand, and freedom and spontaneity on the other hand? Likewise, in managing and governing schools, what balance should be made among the competing interests of students, teachers, administrators, parents, and taxpayers? Waller dealt with all of these and more.

Willard Waller understood acutely what few policymakers have grasped about the fundamental nature of schools: They are highly institutionalized "small societies," run by employees with a strong feeling of vulnerability to pressures, both from within and without. Facing restive students and critical parents and taxpayers, teachers and administrators must strive continuously for control over their enterprise. Consequently, Waller believed that schools are typically run on autocratic principles and often develop a garrison mentality. The result, he argued, is that the school is "a despotism in a state of perilous equilibrium" (1932, p. 10). "The school is continually threatened," he said, "because it is autocratic, and it has to be autocratic because it is threatened" (1932, p. 11). These conditions, dividing teachers from both students and the community, have profound consequences for the attitudes and behavior of teachers. Those who fail to reckon with these consequences, he suggested, will fail in efforts to reform schools. Waller's message of the 1930s is relevant even for the more democratically run schools of the twenty-first century.

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WILLIAM LOWE BOYD

## WASHBURNE, CARLETON (1889-1968)

Superintendent of schools in Winnetka, Illinois, from 1919 to 1943, Carleton W. Washburne is most notably connected with the Winnetka Plan which he developed and promoted. Washburne also served as president of the Progressive Education Association (1939-1943) and on the faculty of Brooklyn College (1949-1960).

Early in his career Washburne was a protégé of Frederic Burk, president of the San Francisco State Normal School which, under Burk's leadership, had gained wide recognition as a center of Progressive education before World War I. Burk and his faculty had launched an attack on the traditional pedagogical practice of classroom recitation and the lockstep system of holding all students to the same pace at each grade level. At the San Francisco State laboratory school, self-instruction booklets were developed

in various studies to allow students to progress at their own pace under the “individual system.” These booklets garnered wide demand nationally despite Burk’s policy against promotional marketing. It was a time when the traditional basis or common essentials were being seen by Progressive educators as “tool studies,” denoting the basic skills as instrumental for further learning through practical application as opposed to meaningless and mechanical rote learning.

On Burk’s recommendation, Washburne was appointed superintendent at Winnetka where he instituted a plan whereby the school day at the elementary level was divided into two parts—at least half being devoted to common essentials and from one-third to one-half to group work or social-creative activities stemming from the social studies, literature, art, music, and dramatics—involving discussion, projects, and reports. Washburne’s extensive writings, however, were centered more on the development of objective tests for the common essentials (multiple choice and fill-in items), and self-instruction booklets with self-correction exercises linked to specific objectives. Pupils were to proceed at their own rates until mastery was demonstrated subject-by-subject. Demonstrated mastery in basic subjects did not usually lead to an individual’s promotion to the next grade, but allowed additional time for work in weaker areas and enrichment. A pupil failing to achieve mastery in a subject was usually not held back at the time of class promotion to the next grade, but would continue instructional exercises in the next grade until mastery was attained. Washburne held that nonpromotion was wasteful and it was virtually eliminated under the Winnetka system.

Although Washburne’s self-paced program was promoted as individualized instruction, the only factor individualized was the rate of correct items completed and time of testing to certify achievement. Other problems with the Winnetka Plan were raised by William H. Kilpatrick and fellow Progressive educators, who questioned the division of the curriculum into two disconnected and unequal parts, and the designation as the common essentials those subjects that most readily conformed to mechanistic self-instruction exercises and objective items. Further, at the time curriculum-making was moving toward correlation and integration of subjects, a trend supported by mounting research that showed not only positive outcomes when various subjects were

articulated, but also when the skill studies were made meaningful through the widest applications in all studies. The Progressive movement in curriculum development had turned to units of work, projects, enrichment and exploratory studies, and, at the middle-school and secondary level, block-time teaching and a correlated core curriculum in place of the separate subjects.

Nevertheless, Washburne had anticipated the rise of programmed instruction, mastery learning, and the increasing use of the multiple-choice test in determining achievement. By his own account Washburne laid claim to the evolution of his self-instruction booklets into “workbooks,” which became a perennial pedagogical instrument in the traditional classroom from that day onward. Few Progressive educators would ally themselves with the workbook then or now.

The widespread interest generated by the Winnetka Plan stemmed in no small measure from its being seen as an answer to the incessant and mounting allegations leveled at Progressive education for neglecting the essentials. Under the dual plan, school administrators could lay claim to embracing the new education while simultaneously giving proof that at least half of every school day was being devoted to the essentials. At the same time they would not be encumbered by the onerous process of developing an articulated curriculum and the task of convincing parents and the wider public of the need for departing from the traditional separate subject curriculum.

Overlooked in accounts of Washburne’s work was his establishment of nursery schools in the Winnetka schools and his required course for middle school students and junior high students in family living, which involved laboratory work in the nursery schools. He also engaged leading international architects, who worked in full cooperation with teachers, to build a school described in *Architectural Forum* as the prototype of the modern elementary school.

*See also:* ELEMENTARY EDUCATION, *subentry on* HISTORY OF; PHILOSOPHY OF EDUCATION; PROGRESSIVE EDUCATION.

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DANIEL TANNER

## WASHINGTON, BOOKER T. (1856–1915)

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Born a slave on a Virginia plantation five years before the Civil War began, Booker T. Washington's professional life as an educator and leader of African-American interests demonstrates how education, race, public policy, and politics intersected in the United States during the late nineteenth century. Washington's career placed him at the center of a debate among African Americans about the proper path to full citizenship and complete participation in American society economically, politically, and socially.

He was also the instrument of elite white industrialists such as George Foster Peabody, William H. Baldwin Jr., and Robert C. Ogden. They shaped the shift in black American educational focus from universal, state-supported public education with its liberal arts component to an industrial education, a move that accommodated their aims for national industrialization and southern white planters' demands for a subservient African-American working class. As a result of his collaboration, Washington became the primary exponent of white philanthropic-industrial efforts to channel African-American

and working-class white education to meet the needs of industrial America. The words *Industrial education* and *Washington* became synonymous between his 1895 Atlanta Cotton Exposition Speech and death in 1915. The legacy of Washington's educational philosophy continues to be the source of an early-twenty-first-century debate among African Americans who attempt to reconcile questions of how education must lead the black working class to life as middle-class Americans. This debate also seeks to ensure that the majority of African-American working people obtain access to a better life with mass education as the primary path to modernization and the technology that transforms black political, economic, and social status in the United States.

### Early Years

Booker T. Washington was born to a slave mother and "unknown" father near Hales Ford, Virginia, on James Burroughs's plantation in 1856. He survived chattel slavery and the Civil War. He moved with his mother and siblings to West Virginia to join his stepfather, a Union Army veteran. Living under impoverished circumstances, Washington worked in the local salt mines to assist the family. He attended night school initially and eventually obtained permission from his stepfather to go to the day school while he worked from 4 A.M. to 9 A.M. in the mines. Employed as a houseboy by General Lewis Ruffner, he furthered his early education under Mrs. Viola Knapp Ruffner, a former governess and schoolteacher.

The major transformative event, however, in Washington's personal education occurred at Hampton Institute in Hampton, Virginia, under the direction of former Union Army General Samuel Chapman Armstrong, the school's founder. At Hampton, Washington absorbed Armstrong's industrial education philosophy of manual labor, trade training, economic development, self-help, and normal school training. After brief sojourns in black higher education in Washington, D.C., at Howard University and exploration of the ministry, Washington returned to Hampton Institute to teach. Armstrong recommended his protégé, Washington noted, to a "group of white Alabama gentlemen" in Tuskegee, Alabama, who endeavored to open a school similar to the Hampton model (Washington 1965, p. 82). Washington accepted their invitation to lead this normal and industrial institution.

In 1881 Washington began organizing and building Tuskegee Normal and Industrial Institute, literally from the ground up. His leadership of Tuskegee Institute from 1881 to 1915 would elevate him from obscurity to national prominence. He became not only a leader in black education, but also a patron of such industrialists and education philanthropists as Andrew Carnegie; George Foster Peabody; Charles D. McIver, president of the Southern Education Association; and Edgar Gardner Murphy, racial moderate and distinguished southern educator. Washington also advised U.S. presidents William McKinley, Theodore Roosevelt, and William Howard Taft. With these associates and supporters Washington amassed enough political power to become the most powerful southern politician of his era, 1895 to 1915.

### **The Black Commitment to Free Education**

The emancipated slaves, including Washington, looked to education in 1865 to define their newly earned freedom and citizenship. According to education historian James D. Anderson, black people emerging from slavery committed themselves to universal, state-supported public education. It continued a tradition developed in slavery among African Americans that the ability to read and write were important skills within the slave community. Blacks held in high esteem fellow slaves and free blacks who had mastered literacy. Even Washington, a critic of slaves and black working-class behavior and goals, acknowledged that freedom was a “great responsibility” and that slaves realized they had “to think and plan for themselves and their children” including “the question . . . of a school . . . for colored children” (Washington 1965, pp. 27–28, 32). Education meant self-reliance, self-determination, and the right to control the institutions of education for their benefit. According to William Channing, an American Missionary Association teacher from New England, black people sought free public education that included white assistance but not white control—seemingly contradictory concepts. Black people challenged white planter repugnance against state government control of the education of all children, especially slaves. African Americans contested the rationale of a society that used the law to prohibit reading and writing. Black educator and Booker T. Washington’s political rival, W. E. B. Du Bois, asserted that free public education for all citizens in the South was “a Negro idea,” proposed by enslaved blacks as a condition of freedom.

Washington observed that black slaves and ex-slaves were determined to educate themselves by securing their own teachers and even paying “for school as best they could” (Washington 1965, p. 33). They made this commitment long before white and black northern American Missionary Association teachers came south during the Civil War. These efforts at self-education served as a foundation for universal schooling as slaves and ex-slaves organized and willingly taxed themselves to keep the private schools they founded on their own initiative. At the beginning of Reconstruction, the Freedmen’s Bureau took control of some of these schools founded by slaves. In 1866 the Freedmen’s Bureau in Louisiana failed to force blacks to retake responsibility for administering education for African Americans. Blacks in Georgia in 1865 created a free system of schools. Sabbath schools were also free and operated in black churches stressing literacy. Black student enrollment increased in Sabbath schools in the 1870s and 1880s, demonstrating the African-American commitment to free education and literacy. The ability to read and write was a key to black freedom. These skills helped African Americans secure jobs and direct their access to upward mobility. Literacy ensured that ex-slaves could defend their economic rights in written contracts as well as acquire land, the main symbol of freedom.

Black people attained universal, state-supported public education through a union of African Americans and radical members of the Republican Party. Conservative Republicans and southern Democrats opposed universal education. Black Republicans at southern constitutional conventions during Reconstruction, between 1865 and 1868, institutionalized free public education based on state-supported taxation. By 1870 the eleven states of the former Confederacy had installed constitutions that established free education as a basic citizenship right.

Emancipated blacks also viewed education as the key to political, economic, and personal independence. They pursued education to learn how to organize themselves and build institutions they controlled. To achieve this they sought training and development of their intellectual and leadership capacities. In this context, Anderson notes, “black leaders and educators adopted the New England classical liberal curriculum” (p. 28). After attaining political power in 1895, Booker T. Washington objected to classical education for the general black population on the grounds that it was “impractical”;

however, working-class African Americans in Alabama and across the south insisted that blacks needed classical, common school, normal, and industrial education to ensure the advancement of the race to full citizenship in the United States.

White southern planters and merchants used their control over land, labor, housing, and wages to undermine universal, state-supported public education. This class had opposed state-supported public education for the working classes (white people who were not part of the landed elite) before the Civil War. The planters, Anderson asserts, “did not believe in giving the Negro any education” (p. 22). Any degree of education eroded the planter’s ability to exploit black labor “upon which their agrarian order depended” (p. 23). Southern white leaders used labor to prevent black children from attending school after the Civil War. Between 1869 and 1877 the planters and merchants ousted African-American legislators from southern state governments. The planters and merchants, armed with political power that gave them a dominant position in state government, dismantled universal, state-supported public education utilizing state authority, economic intimidation, and violence. By legal means, white opponents of universal education lowered taxation, challenged compulsory attendance laws, and prevented the passage of new laws that could have reinforced free public education. The planters and merchants wanted to restore slavery and their domination of all societal institutions, which were undermined by the Civil War, Reconstruction, northern capital investment in the south, and the centralization of federal power.

No white group challenged white planter-merchant class antipublic education policies between 1865 and 1880. Beginning in the late 1880s, however, white Populists and Progressive-era reformers who followed the Populists questioned the planter-merchant vision of limiting white working-class education. As the nineteenth century drew to a close white people were forced by black agitation to confront their conflicting views of universal, state-supported public education.

### **Industrial Education**

Industrial education introduced northern educators, industrialists, philanthropists, and Booker T. Washington into the debate between African-Americans’ universal, state-supported public education and the white planter-merchant class’s efforts to reconstruct

antebellum slavery. The partnership formed by General Samuel Chapman Armstrong and Washington at Hampton Institute in the 1870s was part of a broader northern industrial-capital campaign to undercut black adaptation of the New England classical curriculum. The Hampton Institute was not envisioned as an industrial education institution. It was a normal school dedicated to training teachers, such as Washington, who would teach black workers and prepare them for their “place” in the South after Reconstruction. The institute was additionally part of a national movement focused on technological, trade, and manual education for the general American population. Although Hampton focused on teacher training, industrial education as it was originally defined did not involve teacher preparation.

There were three primary areas of vocational training that defined industrial education in the latter part of the nineteenth century. One area was collegiate training in applied science and technology to educate engineers, architects, chemists, and other professionals to work in the newly emerging technologically based twentieth-century economy. A second area encompassed trade schools that taught labor supervision and management. The third area supplemented the academic curriculum to modify or transform the behavior of working people from sloth to “habits of industry,” thrift, and morality.

General Armstrong’s Hampton Institute was founded in 1868. It utilized daily manual labor as the base of its normal school training. Armstrong wrongly assumed that the newly freed black people had to be guided and controlled because they were incapable of “self-direction” due to slavery’s destruction of their minds and moral compasses. He hoped Hampton Institute might train black teachers who would impart the lessons of “work habits, practical knowledge, Christian morality, and acceptance of a subservient role” (Anderson, p. 35) in the post-Reconstruction southern household. Washington completed Hampton’s curriculum and became the chief disciple of the Hampton model.

The Hampton model of industrial education was intended to “de-politicize” and “defuse” black challenges to white opposition to universal education. Providing, Anderson asserted, “the equivalent . . . of a fair tenth grade” education, the Hampton model preached an education gospel that emphasized that black people be apolitical (p. 35). Armstrong believed that African Americans should not be “allowed to vote,” serve as politicians, or par-

ticipate in public policy decisions because black people were “not capable of self-government” (p. 37). Armstrong based his assertions on the supposition that black people needed “moral development” as the basis for voting intelligently. He rejected the belief embraced by black people that a “literate culture” created a morally responsible voting electorate. Finally, Armstrong believed that African Americans’ real role was to serve the planters’ and merchants’ needs for cheap non-confrontational labor.

Armstrong created the *Southern Workman*, a monthly magazine founded in 1872 to create a “public forum” on black education and to more broadly disseminate his views on the “place” of black people in the New South’s social, political, and economic structure. He aligned his vision of black education with the planter and merchant class and northern industrialists. Armstrong was a friend of Robert C. Ogden, who also served as a Hampton Institute trustee. He wrote Ogden that the southern workman needed to be “a power” who would influence northern philanthropists and white southern racial moderates principally opposed, Anderson contended, “to black higher education, equal job opportunities, civil equality, and equal political rights” (pp. 36–37). Together they hoped to be the critical individuals in determining the direction of black education, especially in the south.

### **Planter-Merchant and Northern Industrialist Agenda**

In 1896, a year after Booker T. Washington’s infamous “Atlanta Compromise” speech (partly crafted by industrialist William H. Baldwin Jr.) at the Atlanta Cotton States International Exposition, a conference on “the higher education of the colored people” was convened in Saratoga, New York. Du Bois biographer David Levering Lewis characterized the meeting as a “watershed conclave” where national white leaders decided to forsake and cut off their support for “black higher education” in favor of the Hampton model of industrial education. George Foster Peabody, Hampton trustee and a key distributor of funding to black education in the south, attended the meeting, and alumnus Washington spoke favoring practical education superceding liberal arts instruction. Philadelphia’s Baptist leader H. L. Wayland was enthused to hear Washington’s industrial education vision was being substituted for Atlanta and Fisk Universities’ New England classical

education for black people. Wayland also threatened to terminate funding support to these black liberal arts institutions and shift financial aid to the exponents of the Hampton model, Hampton and Tuskegee Institutes. According to David L. Lewis, William Baldwin Jr. and Robert C. Ogden were determined to let nothing impede “the regional reconciliation [of the north and south] and southern modernization that their kind of educational philosophy and capital investment was intended to foster.” With Samuel Armstrong’s death three years before this conclave, Washington inherited Armstrong’s mantle and the people who had supported his mentor. Washington after 1895 was the instrument of the industrialists and planters to restore the Union, modernize the South, and control black mass education.

The late nineteenth century and early twentieth century was defined by a debate between former slaves establishing a vision and the utility of universal, state-supported public education for all U.S. citizens, especially in the South, and the white planters-merchants and northern industrialists coalition to create a cheap labor force. Black people hoped to utilize education as the means to acquire full citizenship and the key to political participation and economic success. The north-south white elite coalition used education to control blacks politically, economically, and socially, while reconciling the sectional divisions of the Civil War. Washington was at the center of this debate. He represented the white elite and some emerging black middle-class members’ thoughts on African-American education for the masses. Political reality in the 1890s and afterward caused Washington to publicly accept white violations of the Fourteenth Amendment that included denying black people the right to vote across the south. Privately, Washington paid lawyers to challenge disfranchisement in the American court system, but even the Supreme Court of the United States endorsed preventing black voting as “an appropriate reform” to remove corruption from politics.

### **Washington’s Legacy**

In the late twentieth century and early twenty-first century, the debate about Booker T. Washington’s educational legacy has been transformed into a contest between “liberal” thinking African Americans and conservative black intellectuals seeking a viable route to economic success in technology-based America. Specifically, Washington has wrongly be-

come the proponent of a classical education that opened black students' minds to a broader world culture that included the exploration of Latin and the classics. Advocates of this position assert that Washington had a plan for black education that could have ensured African American access to economic success and perhaps middle-class status.

A look back to the Booker T. Washington of the past disregards his criticism of "Latin and Greek" for the newly freed ex-slave as making "a very superior human being . . . something bordering almost on the super natural" (Washington 1965, p. 65). Washington suggested in *Up from Slavery* that "the craze for Greek and Latin learning" was wrongly tied by blacks to "a desire to hold [political] office." He did stress that black people should embrace "manual labor" first and then build to the next levels of human achievement over time. He publicly charged that black working people were not ready for all the avenues of freedom. They would have to work toward attaining these privileges over an unspecified amount of time. This was the public rationale of African Americans for forsaking the right to vote in exchange for access to economic success, which would be supervised by white northern and southern capitalists. The white elite, Washington argued publicly, would see to it that black political rights were protected when black people proved their economic importance to white leaders.

For Washington, Samuel Chapman Armstrong was "the perfect man." Washington was "convinced that there is no education which one can get from books and costly apparatus that is equal to that which can be gotten from contact with great men and women. . . . Instead of studying books . . . how I wish that our schools and colleges might learn to study men and things (1965, p. 49). Washington wanted African Americans to have access to America's material wealth. That objective is still the subject of education reform in the twenty-first century.

*See also:* EDUCATION REFORM; DUBOIS, W.E.B.; HISTORICALLY BLACK COLLEGES AND UNIVERSITIES; MULTICULTURAL EDUCATION.

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GREGORY MIXON

### WATSON, JOHN B. (1878–1958)

John B. Watson was an important contributor to classical behaviorism, who paved the way for B. F. Skinner's radical or operant behaviorism, which has had a major impact on American educational systems.

A professor of psychology at Johns Hopkins University (1908–1920), Watson is often listed as one of the most influential psychologists of the twentieth century; his work is standard material in most introductory psychology and educational psychology texts. Yet his academic career was brief, lasting for only fourteen years, and his legacy has been hotly debated for nearly a century. Watson helped define the study of behavior, anticipated Skinner's emphasis on operant conditioning, and emphasized the importance of learning and environmental influences in human development. Watson's often harsh criticism of Sigmund Freud has been given credit for helping to disseminate principles of Freudian psychoanalysis. Watson is widely known for the Little Albert study and his "dozen healthy infants" quote.

#### Popularizing Behaviorism

John B. Watson is generally given credit for creating and popularizing the term *behaviorism* with the publication of his seminal 1913 article "Psychology as

the Behaviorist Views It.” In the article, Watson argued that psychology had failed in its quest to become a natural science, largely due to a focus on consciousness and other unseen phenomena. Rather than study these unverifiable ideas, Watson urged the careful scientific study of observable behavior. His view of behaviorism was a reaction to introspection, where each researcher served as his or her own research subject, and the study of consciousness by Freud and others, which Watson believed to be highly subjective and unscientific.

In response to introspection, Watson and other early behaviorists believed that controlled laboratory studies were the most effective way to study learning. With this approach, manipulation of the learner’s environment was the key to fostering development. This approach stands in contrast to techniques that placed the emphasis for learning in the mind of the learner. The 1913 article is often given credit for the founding of behaviorism, but it had a minor impact after its publication. His popular 1919 psychology text is probably more responsible for introducing behaviorist principles to a generation of future scholars of learning. In this way, Watson prepared psychologists and educators for the highly influential work of Skinner and other radical behaviorists in subsequent decades.

### The Little Albert Study

In 1920 Watson and an assistant, Rosalie Rayner, published one of the most famous research studies of the past century. Watson attempted to condition a severe emotional response in Little Albert, a nine-month-old child. Watson determined that white, furry objects, such as a rat, a rabbit, and cotton, did not produce any negative reaction in the baby. But by pairing together a neutral stimulus (white, furry animals and objects) with an unconditioned stimulus (a very loud noise) that elicited an unconditioned response (fear), Watson was able to create a new stimulus-response link: When Albert saw white, furry objects, this conditioned stimulus produced a conditioned response of fear. This study is generally presented as a seminal work that provided evidence that even complex behaviors, such as emotions, could be learned through manipulation of one’s environment. As such, it became a standard bearer for behaviorist approaches to learning and is still widely cited in the early twenty-first century.

### The “Dozen Healthy Infants”

To a behaviorist, manipulation of the environment is the critical mechanism for learning (e.g., the Little Albert study). To illustrate this point, Watson wrote in 1930, “Give me a dozen healthy infants, well-formed, and my own specified world to bring them up in and I’ll guarantee to take any one at random and train him to become any type of specialist I might select—doctor, lawyer, artist—regardless of his talents, penchants, tendencies, abilities, vocations and race of his ancestors” (p. 104). This quote routinely appears in introductory texts in education and psychology and is used to illustrate the radical environmental views of behaviorists.

But that sentence is only the first part of the quote. In that same statement, Watson subsequently wrote, “I am going beyond my facts and I admit it, but so have the advocates of the contrary and they have been doing so for many thousands of years” (p. 104). This second sentence is rarely quoted with the first sentence. In taking this quote out of context, authors have presented Watson and classical behaviorism as having an extreme perspective on the importance of environment. However, Watson was reacting to the work of other psychologists and educators who believed that heredity was solely responsible for human development and learning. Early behaviorists accented the role of environment, but their views were probably not as radical and extreme as they are often presented.

### Life after the University

Following a personal scandal in 1920, Watson resigned his position at Johns Hopkins and entered advertising, where he achieved some degree of success. He also published popular accounts of behaviorism after leaving his university position. His book *Psychological Care of the Infant and Child* (1928) was very popular, advocating a rather detached approach to parenting, with few displays of affection such as kissing and hugging of children. Given Watson’s relatively short academic career, his lasting contributions in the areas of learning, psychological methods, and behaviorism are remarkable.

*See also:* EDUCATIONAL PSYCHOLOGY.

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JONATHAN A. PLUCKER

## WEBSTER, NOAH (1758–1843)

The first person to write a dictionary of American English and permanently alter the spelling of American English, Noah Webster through his spelling book taught millions of American children to read for the first half-century of the republic and millions more to spell for the following half-century.

Born a farmer's son in what is now West Hartford, Connecticut, Webster attended Yale College from 1774 to 1778, during the Revolutionary War. After graduating, he taught at Connecticut district schools before studying for the bar. The dismal conditions of these schools, combined with his patriotism and a search for self-identity, inspired him to compose three schoolbooks that, he believed, would unify the new nation through speaking and writing a common language. (Previously, almost all American schoolbooks had been reprints of imported British ones.) Part one of Webster's *A Grammatical Institute of the English Language*, a spelling book, was printed in 1783; part two, a grammar, in 1784; part three, a reader (a compilation of essays and poetry for children who could already read), in 1785. Webster then left on an eighteen-month tour south to promote his books and register them for state copyright, in the absence of national copyright legislation. In 1787 he revised the *Grammatical Institute*, retitling his speller the *American Spelling Book* and his reader *An American Selection of Lessons*.

He began editing periodicals in New York: the *American Magazine* for one year (1788–1789) and

the pro-federalist *American Minerva* (1793–1798). Between the two came his marriage to Rebecca Greenleaf in 1789, the publication of various collections of essays, and an introduction to his reader, the *Little Reader's Assistant* (1790). In 1798 he retreated from politics and periodicals to New Haven and helped open a private school there.

After publishing a commercially unsuccessful history of epidemics, Webster began writing schoolbooks with renewed vigor, issuing the first three volumes of *Elements of Useful Knowledge* (1802–1806). He had obtained national copyright protection for his speller in 1790, when the first national copyright law was passed, a law that granted protection for fourteen-year periods. However, the income from his speller, for which he negotiated a penny a copy in 1804 (the date of his first copyright renewal), could not support his large family, and in 1812 he moved to Amherst, Massachusetts, to economize. He was instrumental there in founding Amherst Academy, now Amherst College. In 1816 Webster sold the entire rights to the *American Spelling Book* for its third copyright period, 1818 to 1832, to Hudson and Company of Hartford, Connecticut, in order to work solely on his major dictionary. In 1824, with his son William to aid him, he voyaged to Europe to complete it. Titled *An American Dictionary of the English Language*, it was published in New York in 1828. A year later, Webster produced the final revision of his speller, the *Elementary Spelling Book*, in conjunction with Aaron Ely, a New York educator. From then until his death in 1843 Webster issued several other schoolbooks and a bowdlerized edition of the Bible. The latter was the fruit of a conversion experience to fundamentalist Christianity in 1807.

### Webster's Innovations

One of Webster's most important and lasting contributions to American English was to change, for the better, the spellings of certain groups of words from their British spelling. He used the principle of uniformity to justify his alterations, arguing that words that were alike, such as nouns and their derivatives, should be spelled alike. He therefore transformed words such as *honour* to *honor* (compare *honorific*), *musick* to *music* (compare *musical*)—the latter a change now adopted by the British—*defence* to *defense* (compare *defensive*) and *centre* to *center*. This last alteration actually violated his own principle—compare *central*—but brought *centre* and congruent

words into conformity with numerous other words ending *-er*. Webster also respelled many anomalous British spellings, writing *gaol* as *jail*, and *plough* as *plow*. Earlier, in works such as the *Little Reader's Assistant*, Webster had gone much further with his reforms, with spellings such as *yung* and *nabor*. However, these had evoked so much ridicule that he soon abandoned them. His ability to introduce his major classes of spelling reform into his spellers and dictionaries was crucial to their success, as they became imprinted on the minds of each new generation.

Webster's second major contribution to American education was in the field of lexicography. Indeed, the word *Webster* is still virtually synonymous with *dictionary*. Although Webster issued a small stopgap dictionary, his *Compendious Dictionary*, in 1806, his masterpiece was his *An American Dictionary of the English Language* of 1828, a two-volume work of more than 70,000 entries and the first truly American dictionary. In it, Webster eliminated words that were not useful to Americans, such as words associated with coats of arms, and included those unique to the United States, like *squash* and *skunk*.

Webster was not equally successful in all aspects of his dictionary. By modern standards, his etymologies are flawed. His conversion to fundamentalist Christianity had led him to believe in one original language as the progenitor of all the rest, and his etymologies were compromised by his efforts to fit all words into this framework. On the other hand, he brought a new approach to definitions, which were more accurate, comprehensive, and logically organized than in any previous dictionary. His orthography has become standard American orthography. His indication of pronunciations by the use of diacritical marks was also innovative; lexicographers still use similar markings in the early twenty-first century.

### Perfecting the Spelling Book for Reading Instruction

Important as Webster's lexicographical work was, his contributions to the spelling book tradition were even more significant. His spellers enjoyed vastly greater popularity than any other of his works. His original speller, the first part of the *Institute* (1783), sold out its first edition of 5,000 copies within a few months. By 1804 more than a million copies of its revision, the *American Spelling Book* of 1787, had

been printed, most of them in Hartford and Boston. From 1804 to 1818 Webster's account books document the sales of licenses of another 3,223,000 copies. Between 1818 and 1832, the third copyright period, an estimated 3 million copies were printed. Even higher numbers are documented for Webster's completely revamped version, the *Elementary Spelling Book* of 1829, which he published in response to what he perceived as the slipping sales of the *American Spelling Book* under Hudson and Company. Between 1829, the *Elementary's* first publication, and 1843, the year of Webster's death, almost 3,868,000 copies were licensed for sale. Over all its editions, a conservative estimate puts the total sales of the speller at 70 million.

The national popularity and huge sales of Webster's spelling books can only be understood if it is appreciated that they were books designed primarily to teach children to read, and only secondarily to spell, through the alphabet method of reading instruction. The underlying assumption of all spelling books was that "reading" (defined as oral, not silent, reading) was a matter of pronouncing words, spelled aloud syllable by syllable, and that once a word was pronounced correctly, comprehension would follow. Webster's contribution to the spelling book tradition was to indicate how words should be pronounced. He introduced a system of numerical superscripts to indicate vowel pronunciation and altered the syllabification of words to their present format (*si-ster* now became *sis-ter*). In so doing, he improved significantly on his model and rival, *A New Guide to the English Tongue* (1740) by the British Thomas Dilworth. In his final revision, the *Elementary* of 1829, Webster replaced the superscripts with diacritical marks very similar to those he had used in his *American Dictionary* a year earlier—another innovation.

### Other Works

A fourth contribution to education by Webster was to originate works that others would improve upon. He had a very large view of American education: He attempted to influence school content, "beginning with children & ending with men" (Monaghan, p. 69) who would progress from the Webster spelling book through other subjects up to the Webster dictionaries. Webster's grammar of 1784 was swiftly superseded by Lindley Murray's grammar, and his revised reader, *An American Selection*, was also overtaken, first by Caleb Bingham's *American Preceptor*

and later by Murray's *English Reader*. (The latter would appear in some 350 editions by 1840.) Webster's school dictionaries, his four-volume *Elements of Useful Knowledge* (1802, 1804, 1806, 1812), his *Biography, for the Use of Schools* (1830), his *History of the United States* (1832), and his *Manual of Useful Studies* (1839) introduced many topics that would later evolve into school staples: geography and history of the United States and elsewhere and (in a primitive form in the fourth volume of the *Elements*) biology.

### The "First" American Author

Webster was innovative in a fifth arena: he was the earliest American author to make a living from his own publications. He saw as a young man that there was money to be made from a schoolbook and sought protection for his first spelling book even before it was in print and before any state had yet passed laws protecting intellectual property. Webster has become known as the "father of copyright," and indeed he remained active in promoting copyright protection throughout his life. He might with more justice be termed the "father of royalties," as he was one of the first to exact payment from his publishers according to the number of books they printed or that he licensed to them.

Webster's ability to live from the proceeds of the spelling book was aided by another factor: his extraordinary promotion of his own books. He was the first, but certainly not the last, American author to involve himself deeply in the publishing and promotional aspects of his books. His activities prefigure almost all aspects of modern publishing. His first concern, particularly for part one of the *Institute* and later for the *Elementary Spelling Book*, was with the quality of the printed product. He monitored every printer himself, first across New England and then in the middle and southern states. He fussed over every internal detail of the product in an effort to make all his editions uniform across publishers: the spelling, the paper, the standing type. He revised and corrected each edition unceasingly.

His second concern was with promotion. No aspect of it escaped him. As was common practice at the time, he sought recommendations. (Both Benjamin Franklin and George Washington turned him down.) He went on promotional tours, as he did for the *Institute* in 1785. He gave lectures that brought him to the public's attention; he advertised the series and, when possible, planted "notices" (equivalent to

press releases) in local newspapers; he donated his books to colleges and schools; he even gave portions of his proceeds to worthy causes. He was originally his own best agent, and used paid agents only late in his life. Above all, Webster kept an eye out for competitors and did not hesitate to launch stinging attacks, often in newspapers, on his rivals. In much of this, for better or worse, he foreshadowed modern practice.

The view of reading instruction incorporated in Webster's spellers—as systematic, sequential, letter-based, and learned by rote—would not be challenged until the 1820s. The charge brought against all spelling books hinged on the meaninglessness to the child of much of the spelling book's content. Reformers deplored the long lists of syllabified words that children had to encounter before they met sustained reading passages. By the late 1830s the success of the new-style readers, those like the *Eclectic* series originally authored by William Holmes McGuffey, were rendering spelling books obsolete as reading instructional texts.

Yet the sales of Webster's *Elementary Spelling Book*, now dubbed affectionately the "blue-back speller" or just "ole blue-back," continued to increase. By 1859, according to Appleton and Company of New York, the firm was printing the speller at the rate of a million and one-half copies per year. For the blue-back speller still had an educational role to play: It lived on for the rest of the century as a spelling instructional text and as the favorite arbiter at spelling bees in and out of school.

*See also:* CURRICULUM, SCHOOL; READING, *subentry on* TEACHING OF; SPELLING, TEACHING OF.

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E. JENNIFER MONAGHAN

## WELFARE REFORM

EFFECTS ON FAMILIES AND CHILDREN

Catherine Dunn Shiffman

MOVING MOTHERS FROM WELFARE TO WORK

Pearl Sims

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### EFFECTS ON FAMILIES AND CHILDREN

In 1996 the Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) brought sweeping changes to the welfare system in the United States. This federal law was designed to move adults quickly and permanently into the workforce, promote family stability, and allocate greater flexibility to states in designing public-assistance programs. Though welfare reform primarily targets the

behaviors of adults, children are indirectly affected by the reorganization of family roles and responsibilities, and by the shifts in resources associated with new employment. Research regarding the effects of welfare reform on families and children is preliminary, but nonetheless illuminates areas that warrant further study and has implications for children's ability to succeed in school.

### Summary of Welfare Reform

The American welfare system is a diverse array of state programs that emphasize the promotion of family stability, the provision of time-limited cash assistance, and the movement of recipients into full employment. Under PRWORA, several existing federal welfare programs were eliminated, including the entitlement programs Aid to Families with Dependent Children (AFDC), Job Opportunities and Basic Skills Training (JOBS), and Emergency Assistance (EA). In their place, PRWORA created Temporary Assistance for Needy Families (TANF), which provides block grants to the states to provide cash assistance to families, and which supports other state programs consistent with the welfare law. PRWORA also made various changes to other government benefits designed for low-income families. The affected programs provided benefits for child care, health care, food stamps, individuals with disabilities, child-support enforcement, and child welfare. In addition, under PRWORA most immigrants are denied welfare-related benefits.

In general, TANF rules move more low-income adults into the workforce by: (1) requiring current recipients to participate in employment or training-related activities; (2) imposing a five-year lifetime limit on cash assistance; (3) terminating benefits if rules are violated; and, (4) reducing the number of families exempt from work requirements. Of particular impact to young children, federal TANF guidelines limit work exemptions to parents with children under one year of age. Eighteen states require a mother to resume work when her child is six months old or less. Welfare caseloads dropped dramatically from a record high of 14.4 million in 1994 to 5.3 million in 2001.

Along with these changes, government support for child care increased substantially to address the needs of low-income parents entering the workforce. PRWORA consolidated federal funding for child care under the Child Care and Development Fund (CCDF), and federal and state funding under CCDF

rose from \$2.8 billion in 1995 to \$8 billion in 2000. Nonetheless many eligible families are not receiving subsidies.

PRWORA also altered several long-standing federal welfare programs. Significant changes were made to Medicaid, Food Stamps, and Supplemental Security Income. Historically, Medicaid provided health care coverage to families eligible for welfare assistance. PRWORA extended this coverage to children and their parents for up to one year after leaving welfare. For children whose family income exceeded the Medicaid limit, Congress created a special program, the State Children's Health Insurance Plan (SCHIP), to serve their needs. Second, PRO-WRA made eligibility for Food Stamps more restrictive. Program participation dropped significantly (and out of proportion to these changes in eligibility). Third, PRWORA tightened eligibility for Supplemental Security Income (SSI), the program that provides financial assistance to low-income individuals who have a disability. By changing the definition of child disability, roughly 100,000 children were no longer eligible for this government benefit.

### **Economic Picture for Low-Income Children and Families**

While national statistics point to an improved economic picture for low-income families, mitigating factors temper an overly optimistic assessment of welfare reform. The employment rate of current and former adult welfare recipients increased by 33 percent between 1996 and 1999; however, this increase coincided with a period of unprecedented economic prosperity. Similarly, while the percentage of children living in poverty dropped to 16.2 percent, the lowest percentage since 1978, many families did not substantially improve their living standard.

Definitive conclusions about the relationship of welfare reform to family and child well-being are problematic for at least three reasons. First, welfare programs vary across states and communities in their programmatic emphases and in the types of support available. Second, these programs target adult behaviors and measure success in terms of economic indicators, rather than employing a more multidimensional assessment of family and child well-being. Third, much of the existing research is based on samples drawn from experimental welfare programs that predate the 1996 law.

### **Welfare Reform and Changes in Parenting Practices**

Research to date has found limited effects of welfare reform on parenting, with the exception of changes in how mothers select nonparental care for their children. Parents in welfare-to-work programs with increased resources tend to place children in higher quality child care and after-school programs. Not surprisingly, as mothers move into full-time employment they tend to use formal child care, such as centers and family-based home care, rather than informal arrangements.

Much remains unknown, however, about the effects of welfare-to-work programs on the less tangible aspects of parenting. The Growing Up in Poverty Project found few changes in parenting practices three years after researchers began following families in PRWORA welfare-to-work programs. Slight declines in child-development activities and an increase in television use were detected among families in welfare-to-work programs, when compared to unemployed households.

### **Welfare Reform and Child Outcomes**

The evidence collected thus far does not point to dramatic changes in children's well-being associated with welfare-to-work programs. Detected impacts tend to be found in terms of a child's behavioral and emotional adjustment, and to a lesser extent in cognitive development. Programmatic emphases, family characteristics, family circumstances, and a child's developmental stage influence the effect of welfare on children.

In general, children tend to fare better when family income improves, irrespective of specific programmatic emphases. Studies that compared job-training programs with work-first programs have not found patterns of difference in child outcomes in three domains: behavioral/emotional adjustment, cognitive development, and health and safety.

Family circumstances and characteristics can influence the relationship between welfare reform and child well-being. Children whose families received welfare for less time tended to fare worse under welfare-to-work requirements than children of long-term recipients in some studies. Maternal depression in combination with welfare-to-work requirements may be associated with declines in academic achievement, and with increased emotional and behavioral problems, among school-age children.

Many researchers and policymakers predicted that young children would be most adversely affected by parental employment. Findings thus far are mixed, however, suggesting that the influence of welfare-to-work on outcomes for young children is likely mediated by other factors, particularly the type and quality of nonparental care. Two studies of welfare-to-work that predate PRWORA found minimal impacts on young children. One of these studies showed that outcomes tended to be favorable in terms of cognitive development and unfavorable in terms of health and safety outcomes. Related findings on behavioral and emotional adjustment were mixed. A third study of families receiving TANF found that low-performing children placed in child-care centers showed greater gains in learning and school readiness than those children in home-based care. Further increases in cognitive development were found among children in higher-quality child-care centers.

There is some evidence that welfare-to-work programs are associated with cognitive, behavioral, and emotional changes among school-age children and among adolescents in particular. Detected effects are small but troubling. Adolescents whose parents are engaged in the welfare-to-work transition may be more likely to exhibit behavioral problems—such as school suspension or expulsion—and declines in school performance such as more frequent use of special educational services and grade repetition. Research suggests that adolescents in families who recently left welfare are more likely to be employed—and working longer hours—than youth of current welfare recipients. Long work hours may be detrimental to academic achievement. The influence of welfare-to-work programs on adolescents may be uneven. For example, youth with younger siblings have exhibited more behavior problems and lower school performance than those without younger brothers and sisters.

### Conclusion

Government welfare programs underwent a substantial transformation in the 1990s. The influence of these changes on family and child outcomes is only beginning to be understood. Early evidence suggests that changes in family and child outcomes associated with welfare reform are due to the interaction of programmatic, family, and contextual factors.

*See also:* POVERTY AND EDUCATION.

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CATHERINE DUNN SHIFFMAN

## MOVING MOTHERS FROM WELFARE TO WORK

Welfare policy at the start of the twenty-first century is the result of many changes in the nature of assistance to the economically disadvantaged throughout the history of this nation. Before 1900 the federal government played a minimal role in the alleviation of poverty. During this period, assistance to the poor was given through religious organizations and private philanthropic societies in the form of in-kind benefits such as clothes, shelter, and food. This assis-

tance was often predicated on some type of work done in return on the part of the recipient, thus allowing for the recipient to retain a sense of pride and responsibility in "working" for the assistance given. Around the turn of the century, the plight of America's poor was just beginning to catch the attention of commentators such as Jacob Riis (1890) and Jane Addams (1902), who chronicled the conditions of urban housing tenements in New York and Chicago. Still, the government was a relatively small part of the American welfare structure at this time. As indicated by Carl Chelf (1992), in the years prior to the Great Depression, only about 12 percent of the assistance provided in the nation's fifteen largest cities came from public sources. Nevertheless, the idea that the federal government had a role in ameliorating the conditions of poverty was beginning to creep into the American consciousness.

In 1909 the first significant recognition of the problem of poverty by the federal government occurred when President Theodore Roosevelt invited 200 experts to the White House Conference on the Care of Dependent Children, which was essentially a brainstorming session on how best to devise programmatic solutions to assist widows and impoverished children. Two primary movements arose out of this conference—one to provide mothers' pensions and one to establish a federal children's bureau. The mothers' pension movement was primarily manifested at the state level, and by 1919 such pensions were available in thirty-nine states. The movement to establish a federal children's bureau culminated in the passage of federal legislation in 1912 that created the U.S. Children's Bureau, which provided federal grants to states that funded maternal and child health services. Federal involvement on this front was further institutionalized with the passage of the Sheppard-Towner Act of 1921, which supported the implementation of the first direct federal expenditures for child welfare.

The national economic collapse experienced during the Great Depression created the impetus for a much greater federal involvement in social welfare. In the face of unemployment rates of more than 20 percent that negatively affected the ranks of the middle and even the upper class, President Franklin D. Roosevelt created the Committee on Economic Security. This committee provided the momentum for the passage of the Social Security Act of 1935, which had two primary components: The first was an employment-based social insurance system based upon

the contributions of employees and employers and the second provided assistance to economically disadvantaged mothers that was noncontributory in nature. This latter program, known as Aid to Families with Dependent Children (AFDC), would form the foundation of the welfare state well into the 1990s.

In the years after World War II America's urban centers began to deindustrialize, as advances in mass-produced housing construction and the development of the national highway system facilitated the movement of industry and population to peripheral suburban areas. This movement was skewed by income and race. Those that moved outward tended to be largely more affluent and Caucasian, while those that remained within the urban core were largely economically disadvantaged minorities that faced declining opportunities for employment near their residences. These changes in the "structure of opportunity" resulted in highly concentrated populations of disadvantaged people within the nation's inner cities. As a result, the number of AFDC recipients increased 17 percent between 1950 and 1960. According to the U.S. Bureau of the Census, by 1960, more than 22 percent of the nation's population continued to live at incomes below the poverty line.

The persistence of poverty in America was addressed through federal initiatives in the 1960s, including John F. Kennedy's "War on Poverty" and Lyndon B. Johnson's "Great Society." Perhaps the most significant result of these efforts was the passage of the Economic Opportunity Act of 1964, which created the Office of Economic Opportunity (OEO). The OEO operated through a huge network of "neighborhood service centers" that facilitated the allocation of benefits to the community. The effect of the Economic Opportunity Act was profound. Between 1960 and 1970 the number of AFDC recipients increased by 107 percent and the national poverty rate declined to just under 13 percent.

### **From Welfare to Work: Federal and State Programs**

The first federal effort to connect employment to welfare receipt was embodied in the Workforce Incentives Program, which was part of the AFDC law between 1967 and 1989. Under this program, states were required to register through their employment services any AFDC recipients with no preschool children. Of 1.2 million AFDC recipients in 1986, only 130,000 "worked" their way out of welfare, most

without the assistance of the program. An attempt at addressing these shortcomings was represented in the Family Support Act of 1988 (FSA), which created the Job Opportunities and Basic Skill (JOBS) Program. The JOBS program required any woman whose youngest child was three or over to participate in activities intended to promote self-sufficiency. Although FSA was a significant improvement over past efforts in that it provided for job training, childcare, and transitional assistance, states had difficulty meeting the 40 percent match requirement for the JOBS program. As a result, states were exempting more than half of the adult caseload in 1992, with some states reaching a 70 to 80 percent exemption rate. Overall, only about 7 percent of the adult caseload participated in the JOBS program in 1992.

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) of 1996 effectively ended the federal direct cash benefit to disadvantaged parents by reverting to funding awarded in the form of block grants to states. This policy gave states wide latitude in expending this funding, although several parameters were established. First, PRWORA placed a sixty-month lifetime limit on the receipt of benefits. States were allowed, however, to allow for a time limit exemption for up to twenty percent of the caseload. Second, PRWORA limited consecutive receipt of benefits to twenty-four months, after which recipients would have to reapply to continue participation in the program. Third, recipients were required to work as soon as they were determined to be "job-ready." Thus, PWORA re-established welfare policy as a means of providing short-term assistance as recipients worked towards employment.

The implementation of this latest permutation of welfare policy was a response to a wave of efforts at welfare reform at the state level, as more than forty states had been granted waivers to impose major changes in their welfare systems between 1993 and 1996. The passage of PRWORA only accelerated this tendency. Within the framework of PRWORA, the imposition of time limits at the state level was an important component of these changes. As of 2000, the enforcement of time limits had resulted in the loss of benefits for approximately 60,000 families nationwide.

### **The Impact of Welfare Reform**

According to statistics published by the U.S. Department of Health and Human Services and Economic

Policy Institute in 2001, all of these sweeping changes in federal and state welfare policy resulted in a 56 percent reduction in caseload between 1993 and 2000—from more than five million families (5.5 percent of the population) to just over two million families (2.1 percent of the population). In fiscal year 1994, only 8 percent of TANF adults were employed while receiving assistance compared to 28 percent in fiscal year 1999.

However, it is important to note that the PR-WORA was implemented during the one of the strongest economic cycles in history. Researchers have found that at least 40 percent of the fall in caseloads may be attributable to the growth in the economy, rather than to changes in welfare policies. As unemployment ticked upwards in 2000 and 2001, caseloads again began to rise. Food stamp caseloads jumped by nearly 600,000 from September to October 2001—a 3 percent increase—and the majority of states saw increases in welfare caseloads during the latter part of 2001. Welfare caseloads became increasingly concentrated in America's cities. As of 1999, nearly 60 percent of all welfare cases were in 89 large urban counties, and ten urban counties accounted for almost one-third of all U.S. welfare cases.

Analysis of the poverty data regarding those moving from welfare to work indicates that although the poverty rate has declined overall, it has increased among working families, particularly those headed by single mothers. For those families that were already poor, poverty deepened between 1995 and 1999. The poverty rate among people in these families, after government benefits and taxes are taken into account, was 19.4 percent in 1999, nearly the same level as in 1995, when it stood at 19.2 percent. The census data also show that in 1999, the incomes of working single-mother families that were poor fell below the poverty line by an average of \$1,505 for each person in these families. The number of working single-mother families that were poor climbed considerably between 1995 and 1999 and was larger in 1999 than at any other time in the 1993 to 1999 period. These data indicate that while welfare reform policies resulted in the employment of more single mothers, an unintended consequence of this public policy has been that working-poor families headed by single mothers have grown poorer.

Work supports were also implemented in the welfare to work reform efforts. The major areas of support focused on childcare, health care, the EITC,

food stamps, and housing. The total federal dollars available for childcare nearly doubled from the early 1990s to the start of the twenty-first century and new regulations allowed states to use TANF monies for childcare expenditures. However, in 1999 only 12 percent of eligible families received assistance through the Child Care and Development Fund and Head Start served less than half of eligible children. Furthermore, despite increased federal funding on childcare over the 1990s, wages for childcare workers stagnated, resulting in recruitment and retention problems among child care workers.

As families transition to work, the costs of health care and housing costs become major concerns. Some employers do not offer affordable health benefits to the dependents of the employee. A parent in a family of three earning more than \$7,992 (59 percent of the poverty guideline) is not eligible for Medicaid coverage. Former welfare recipients experience levels of health hardships similar to those of welfare families, and higher than those of poor families overall. In addition, the welfare reform legislation did not recognize the large role of housing in the budgets of poor families. A recent report concluded that “families are experiencing high rates of housing hardships: among parents who recently left welfare, 28 percent report being unable to pay housing or utility bills” (Wright, Gould, and Schill, p. 46).

*See also:* PARENTING; POVERTY AND EDUCATION.

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PEARL SIMS  
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#### WESTERN EUROPE

Western Europe is a concept of rather recent origins, reflecting the post–World War II split between those European countries that fell under Soviet domination and much of the rest of the continent. With the collapse of the Soviet Union, the concept may become obsolete. Contemporary western Europe includes France, Spain, Portugal, Italy, Germany, Austria, Switzerland, the Low Countries (Belgium, Luxembourg, and the Netherlands), Scandinavia, Britain, and certain small states such as Liechtenstein. Almost all of the countries of the European Union (EU) are in western Europe, although certain countries such as Norway and Switzerland have chosen not to be a part of the EU. Greece, on the other hand, has joined the EU but is rarely considered to be part of western Europe.

At varying levels, western European countries are intent on giving a European dimension to their education systems. However, the concept of western Europe and a European identity is constantly transforming because many countries from central and eastern Europe hope to join the EU in the coming years and are also committed to a European dimension in education.

## Educational Roots

The European educational tradition traces its roots directly to the establishment of universities toward the end of the Middle Ages. These universities generally emphasized special fields of knowledge, such as law, medicine, philosophy, and theology. Although the primary beneficiaries of medieval schooling were clergymen, separate schools were established where children of merchants and masters, and even females, could develop literacy skills.

In the fourteenth and fifteenth centuries, the intellectuals engaged in a struggle to incorporate classical humanistic studies into the curriculum, known generally as the *liberal arts*. Secondary schools emerged at this time, serving the rising middle class and providing university preparation as well as a liberal arts curriculum. At the time of the Reformation, primary schools were established, which were separate from the universities and secondary schools, both in terms of the pupils they served and the programs of studies they provided. Consequently, a basic dualistic educational structure emerged, reflecting the highly stratified social structure in Europe: universities and higher schools served elites, while primary schools served the masses.

By the seventeenth century, classical ideals and religious loyalties gave way to educational efforts in the name of nationalism and vernacular languages began to prevail over Greek and Latin. Many thinkers saw the advantages of popular education to address national concerns, regardless of gender or class.

There was some variation as to the structure of the state-run education systems in different European countries. Germany created different educational tracks, which provided separate schools for future leaders of the state and for the common people. Its system tended to become the model for other countries that were establishing their own state systems. Following the French Revolution in 1789, France moved toward universal, popular education, where citizenship was to be emphasized over religious values.

By the nineteenth century, Germany achieved nearly universal literacy within the dualist system, due in part to compulsory schooling. In contrast to Germany and France, education in England was not nationalized until the twentieth century and has historically been one of the most decentralized systems in Europe. In fact, England did not create a Ministry of Education until 1944.

Even though the state gained control over the educational enterprise in all the countries, it recognized the importance of the private sector. The major issue in the struggle between church and state was not so much school sponsorship, but school control. In some areas, where there are strong religious cleavages, such as the Netherlands and Belgium, the state has continued to rely on the church to sponsor most of its schools. Consequently, more than 70 percent of the children in the Netherlands and 45 percent in Belgium attend private schools. In more homogeneous populations, such as Norway and Sweden, the state has monopolized schooling to such an extent that less than 3 percent of the children attend private schools. In contrast to areas such as the United States, which maintain a strong separation of church and state, all European states continue to provide substantial financial and regulatory support for private schooling. The level of state support is usually correlated with the level of state control. Private schools that receive support equivalent to public schools are usually under tight state control, while schools that receive less support have more autonomy. Another feature of state regulation concerns private school teachers, who must usually be certified in the same manner as public school teachers and whose salaries are usually defined by the state.

## Reform in the Twentieth Century

During the twentieth century, the major school reform issue was social justice, as advocates of change stressed the need to achieve greater participation of all young people in schooling in order to prepare them to participate more fully in the economy of the state.

By the 1950s, all western European countries had adopted compulsory education requirements, and children were required to begin school from as early as age five in England to as late as age seven in the Scandinavian countries. School quickly became mandatory for seven or eight years in age-graded schools, although the length of mandatory schooling has increased in most countries. Compulsory education continues until age fourteen in Italy; age fifteen in Austria, Greece, and Portugal; and age sixteen in most other countries. In countries such as Germany and Belgium, students are required to stay in school on a part-time basis until the age of eighteen. The age requirements of compulsory schooling continue to be important, for it is in the state's interest that

all citizens acquire a thorough basic education, though it is also important that the age when students leave school coincide more or less with the age when they enter the workforce.

As schooling became universal and the age requirement was extended, some structural reforms were necessary. The major cultural symbol of educational reform in western Europe has been some form of comprehensive school structure that can provide a common schooling experience. At the primary school level, Norway and Sweden adopted a common school even prior to the turn of the twentieth century. France mandated a common primary school in the 1930s, and just before the end of World War II, Great Britain joined most western European countries by adopting a policy of common primary schooling. Germany did not realize common primary schooling until democratization policies were adopted after World War II. By this time all western Europe maintained universal primary schools lasting from four to six years.

Once universal primary schooling was accomplished, the focus of school reform shifted to the secondary level. Sweden led the way in 1949 when it adopted a plan for a universal common nine-year school. Sweden was followed by other countries, such as Italy, Norway, and France, while other western European countries engaged in comprehensive school reforms with varying degrees of success. The German-speaking countries, for example, have been reluctant to move away from the dualistic tradition. Toward the end of the twentieth century, conservatives called the comprehensive school agenda into question, although in some countries the liberal reform agenda continued to take priority.

During the twentieth century, the curriculum debate, which had previously focused on the struggle between religious instruction and a study of the classics, was no longer relevant in societies that were becoming more interested in scientific and practical training. Questioning the classical curriculum was initially due to the humanist realism philosophies that emphasized the importance of experience and practice in education. However, with the advent of the Industrial Revolution, schools recognized the need for a more expansive curriculum. In 1974, Norway, for example, adopted eight branches in its upper secondary school structure: general education, manual and industrial studies, arts and crafts, fishing and maritime studies, sports, clerical and

commercial studies, domestic arts and sciences, and social and health studies.

Some countries, such as Norway, have chosen to harmonize general studies and vocational studies by emphasizing the practical aspects of general studies and making vocational studies more academic and theoretical. What this means is that progress has been made in bringing the two worlds together by requiring that the vocational studies programs look more like the general studies programs. This trend has been accompanied by a substantial increase in enrollments of students planning on attending higher education.

All European countries offer vocational training in addition to the general curriculum. French students, for example, can opt for one of the vocational or technical tracks at around age fourteen or fifteen. Two major vocational education models exist. West Germany developed a dual-system model in the 1950s and 1960s, requiring upper secondary students to attend formal school for two half days or one full day and to be under supervision in the work environment for the rest of the week. In contrast, the French model places young people in formal schooling full-time until the end of compulsory attendance, when they may become full-time vocational students. The major distinction in the two models is that German youth are exposed to the work world at a much earlier age. In some countries, such as Norway, researchers and policymakers have structured their system so that a full range of options is available. In all systems, it is difficult for students to return to a university track once they move to vocational and technical training. As can be expected, countries have developed systems of orientation to deal with tracking issues.

Another debate that carried into the twentieth century from past centuries is one concerning the role of the central government in education. Contrary to previous efforts at the time of the Reformation and the French Revolution that favored an exclusively state-controlled school, the post-World War II movement has been toward decentralization of control from the state to local school authorities. Both private and state schools tend to be centralized in terms of state funding, but decentralized in the administration and management of schools. This enterprise has the aim of making schools more autonomous and democratic by encouraging parental and community involvement. This trend is especially evident in Denmark, England, Italy, Scotland, and

Spain and can even be found in countries where education has been historically quite centralized, such as France and Sweden.

Toward the end of the twentieth century, the different political forces in Europe began moving away from an emphasis on social justice and toward individual choice and economic advantage. The social-democrat position had attempted to be more inclusive of the needs of disadvantaged groups, including women, immigrants, and the poor, stressing cultural imperatives. In contrast, conservative efforts of the 1980s and early 1990s focused more on market-oriented policies, emphasizing school choice, privatization, and other economic imperatives. In the United Kingdom, the Netherlands, and Sweden, for example, the issue of choice has driven reform discourse into the twenty-first century. Conservative governments have tried to reverse past trends, and their reforms might be seen partly as an attempt to address discontent among parents, particularly among the middle classes, who have been dissatisfied with what they deem declining standards of state-provided education. In the United Kingdom in 1981, the Conservatives introduced an *assisted place scheme*, providing a state subsidy to poorer parents whose children were previously less able to gain entry to private schools.

Of course, the market-oriented trend was not identical across Europe. Furthermore, some may argue that there has not been a significant change in education due to the ideological differences of different governments. Nevertheless, European education systems at the end of the twentieth century experienced a general movement toward further decentralization and deregulation of state control.

### Contemporary Reform Trends

With the creation and opening up of the European Union, educational systems are tending to become more alike. This tendency has been in process at least since the establishment of the Council of Europe in 1949 and of the European Community in 1967. In education, policymakers have thus far stressed the value of each nation's historical development by maintaining the linguistic and cultural diversity of individual European countries. Nevertheless, the Council of Europe is interested in developing a European dimension to education. The goal is not to abolish national differences in favor of a European identity, but to strive for unity in diversity. One way the Council of Europe has attempted to create a pan-

European identity is by organizing teachers' conferences that focus on how to avoid national stereotyping and bias in curricula and textbooks. Educational reforms in the twenty-first century illustrate a move away from discovering how to be Dutch or English, and instead learning how to think of oneself as European.

In primary and secondary education, language has been one of the most important issues. As there are eleven different official languages in the European Union, most European schools have decided to teach more languages and to begin teaching them as early as possible—usually in primary school. Moreover, because many European schools are decentralized and some do not even have a central curriculum, language training is one of the ways to bring the European dimension into the curriculum. Such is the case in the Netherlands, where students must prepare for the foreign language and culture component of their exams. Language instruction in all EU countries must be developed for participation in academic exchanges in other countries, which will also contribute to creating a European identity.

These exchanges are an important part of the European dimension agenda in education, and they occur at all levels, from primary school to higher education and teacher and vocational training. The European Union project SOCRATES is useful in improving the quality of language training and school partnerships at the primary and secondary level with the LINGUA and COMENIUS programs (subsets of SOCRATES). Involving both EU and non-EU countries (about 30 total), SOCRATES promotes the buildup of European knowledge and a better response to the major challenges facing the contemporary world. To achieve these goals, it utilizes student exchange, cooperative projects, European networks, and research studies.

At the higher-education level, all national systems have grown massively in terms of student numbers, institutions, faculties, and courses. While university reforms in the twentieth century were few, limited in scope, and rarely applied, fundamental changes are beginning to occur in the early twenty-first century. The most far-reaching reform agenda is related to the Bologna Declaration of 1999, signed by twenty-nine European countries. The declaration aims to establish, by 2010, a common framework of readable and comparable university degrees, including both undergraduate and postgraduate levels. This framework will be relevant to the labor market,

will have compatible credit systems, and will ensure a European dimension. In Italy, for example, the new higher-education system has a first cycle that lasts three years and leads to an undergraduate degree, a second cycle that lasts two years and leads to a postgraduate degree, and a final three-year program resulting in a doctorate. Within these general constraints, the universities are given great autonomy in terms of programs and administration.

Another major innovation is the development of a European Credit Transfer System (ECTS), meant to enhance cooperation between universities. It is embryonic and completely voluntary, but suggests the development of a process for determining curricular transparencies and equivalencies of grades, course credits, and degrees. ECTS enables students to receive credit in their home university or to transfer permanently to the host institution or to a third institution, mainly by generating transcripts that translate the different educational systems into an internationally recognized document.

Student exchange has also become a major policy issue. ERASMUS is an exchange project under SOCRATES that allows university students to participate in exchanges in universities throughout the European Union and receive credit at their home university. The creation of the ECTS renders such an exchange possible for students who may not have the time or finances to take courses that will not count towards their degree. This cooperation between universities does not necessarily mean that they will become identical, but it does suggest the importance of transparency, as well as trust that other universities are equal in quality to one's own. This trust must also be extended to a mutual recognition of diplomas at all levels of the education system, which puts pressure on the various countries to maintain acceptable standards.

One of the difficulties that has arisen regarding exchanges is that they often must be reciprocal, and people may thus be discouraged from taking part in an exchange in countries with less widely spoken languages, such as Dutch or Danish. While many people study English, French, or German and could fathom spending a year in a university where one of these languages is spoken, students may hesitate to study in a country where they are not proficient in the language. One solution at the university level is to offer some courses in a more widely spoken language. Such is the case at the University of Amsterdam, where 25 percent of the classes are taught in

English. Another solution at the primary and secondary levels is to create bilingual programs, especially in the border regions of a country.

### Future Challenges

Some of the immediate challenges for Europe at the beginning of the twenty-first century include those surrounding educational mobility. Educational exchanges are sometimes not possible financially. Although in principle students can freely occupy available places in member states with identical fees and financial aid, grants from the home country are not always available for studies abroad, an issue that has arisen in the Netherlands. Furthermore, language skills will need to be further valued and developed if exchanges are to be reciprocally appreciated and practiced between the countries of the European Union and possibly with other countries on the European continent and elsewhere. Europeans will need to make special efforts to improve language skills in order to encourage the maximum success of exchange projects.

In addition to developing students' language skills, schools are also facing the task of dealing with societal and economic demand for people who are technology and information literate. The schools themselves must learn to cope with an ever-changing world, where people have to learn how to adapt rather than to learn a stable and firm body of knowledge. Schools need to remain current so that they can help students respond to contemporary exigencies.

At the higher-education level, open distance-learning universities exist in countries such as Britain, Spain, and Portugal to help students adapt to change by way of professional and technological training. These universities need to continue to be developed to accommodate people in the workforce who would like to update their skills, or students from other countries who do not have access to adequate universities, but who cannot necessarily live abroad or reside on a university campus for extended periods of time.

A higher-education issue that EU members must address more systematically involves greater compliance in the recognition of diplomas and certification between countries. Some countries, such as the Netherlands, have even suggested the granting of double degrees between the national institution and an associated institution. University overcrowding and high unemployment throughout Europe are not

simplifying the dilemma, and there is a concern that the costly expansion of the university may lower the quality of education and lead to the devaluation of degrees.

These issues need to be considered throughout Europe, because the greatest challenge for many countries, perhaps to even a greater extent for the smaller countries, is to preserve national differences in the creation of a European unity. As various countries from central and eastern Europe plan to become part of the European Union, and borders are fading on a global level, recognizing and respecting institutional differences may be key to the success in efforts to establish unity in diversity.

*See also:* CURRICULUM, INTERNATIONAL; DISTANCE LEARNING IN HIGHER EDUCATION; INTERNATIONAL EDUCATION.

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VAL D. RUST  
TRACI WELLS

## WHITEHEAD, ALFRED NORTH (1861–1947)

One of the twentieth century's most original metaphysicians and a major figure in mathematical logic, Alfred North Whitehead was also an important so-

cial and educational philosopher. Born in England, he was educated at Trinity College, Cambridge, where he also taught mathematics from 1884 until 1910. He then moved to London, where he was professor of applied mathematics at the University of London until 1924. Receiving an invitation to join the philosophy department at Harvard University, Whitehead came to the United States and taught at Harvard until 1937. He remained in Cambridge, Massachusetts, for the rest of his life.

While Whitehead's metaphysical and logical writings merit his inclusion in any pantheon of twentieth-century philosophers, his work in social and educational philosophy is marked by singular qualities of imagination, profound analysis, and personal commitment. His thought resembles much in the philosophy of John Dewey (1859–1952). In the philosophy of higher education, where Dewey wrote very little, Whitehead is probably the most important figure since John Henry Cardinal Newman (1801–1890).

### The Nature of Education

“Education is the acquisition of the art of the utilisation of knowledge.” This simple sentence from Whitehead's introductory essay in his *Aims of Education* (1929, p. 4), epitomizes one of his central themes: Education cannot be dissected from practice. Whitehead's synthesis of knowledge and application contrasts sharply with educational theories that recommend mental training exclusively. His general philosophical position, which he called “the philosophy of organism,” insists upon the ultimate reality of things in relation, changing in time, and arranged in terms of systems of varying complexity, especially living things, including living minds. Whitehead rejected the theory of mind that maintains it is a kind of tool, or dead instrument, needing honing and sharpening. Nor is it a kind of repository for “inert” ideas, stored up in neatly categorized bundles. It is an organic element of an indissoluble mind/body unit, in continuous relationship with the living environment, both social and natural. Whitehead's philosophy of organism, sometimes called “process philosophy,” stands in continuity with his educational thought, both as a general theoretical backdrop for this educational position and as the primary application of his fundamental educational themes.

## Educational Development and the Rhythm of Growth

Whitehead's general concept of the nature and aims of education has as its psychological corollary a conception of the rhythm of education that connects him with developmental educators such as Jean-Jacques Rousseau (1712–1778). For Whitehead, education is a temporal, growth-oriented process, in which both student and subject matter move progressively. The concept of rhythm suggests an aesthetic dimension to the process, one analogous to music. Growth then is a part of physical and mental development, with a strong element of style understood as a central driving motif. There are three fundamental stages in this process, which Whitehead called the stage of romance, the stage of precision, and the stage of generalization.

Romance is the first moment in the educational experience. All rich educational experiences begin with an immediate emotional involvement on the part of the learner. The primary acquisition of knowledge involves freshness, enthusiasm, and enjoyment of learning. The natural ferment of the living mind leads it to fix on those objects that strike it pre-reflectively as important for the fulfilling of some felt need on the part of the learner. All early learning experiences are of this kind and a curriculum ought to include appeals to the spirit of inquiry with which all children are natively endowed. The stage of precision concerns "exactness of formulation" (Whitehead 1929, p. 18), rather than the immediacy and breadth of relations involved in the romantic phase. Precision is discipline in the various languages and grammars of discrete subject matters, particularly science and technical subjects, including logic and spoken languages. It is the scholastic phase with which most students and teachers are familiar in organized schools and curricula. In isolation from the romantic impetus of education, precision can be barren, cold, and unfulfilling, and useless in the personal development of children. An educational system excessively dominated by the ideal of precision reverses the myth of Genesis: "In the Garden of Eden Adam saw the animals before he named them: in the traditional system, children named the animals before they saw them" (Whitehead 1925, p. 285). But precision is nevertheless a necessary element in a rich learning experience, and can neither substitute for romance, nor yield its place to romance. Generalization, the last rhythmic element of the learning process, is the incorporation of romance and preci-

sion into some general context of serviceable ideas and classifications. It is the moment of educational completeness and fruition, in which general ideas or, one may say, a philosophical outlook, both integrate the feelings and thoughts of the earlier moments of growth, and prepare the way for fresh experiences of excitement and romance, signaling a new beginning to the educational process.

It is important to realize that these three rhythmic moments of the educational process characterize all stages of development, although each is typically associated with one period of growth. So, romance, precision, and generalization characterize the rich educational experience of a young child, the adolescent, and the adult, although the romantic period is more closely associated with infancy and young childhood, the stage of precision with adolescence, and generalization with young and mature adulthood. Education is not uniquely oriented to some future moment, but holds the present in an attitude of almost religious awe. It is "holy ground" (Whitehead 1929, p. 3), and each moment in a person's education ought to include all three rhythmical elements. Similarly, the subjects contained in a comprehensive curriculum need to comprise all three stages, at whatever point they are introduced to the student. Thus the young child can be introduced to language acquisition by a deft combination of appeal to the child's emotional involvement, its need for exactitude in detail, and the philosophical consideration of broad generalizations.

## Universities and Professional Training

The pragmatic and progressive aims of education, accompanied by Whitehead's rhythmic developmentalism, have ramifying effects throughout the lifelong educational process, but nowhere more tellingly than in their application to university teaching and research. Whitehead was a university professor throughout his life, and for a time, dean of the Faculty of Science at the University of London. Personal experience makes his analysis of higher studies pointed and relevant. Strikingly, Whitehead chose the modern business school as representative of modern directions in university theory and practice. As a Harvard philosopher, he was in an excellent position to comment on this particular innovation in higher education, since Harvard University was the first school in the United States to have a graduate program in business administration. The novelty of the business school should not be overestimated,

since the wedding of theory and practice has been an unspoken motif of higher education since the foundation of the university in the Middle Ages. What has happened is that business has joined the ranks of the learned professions, no longer exclusively comprising theology, law, and medicine. The business school shows that universities are not merely devoted to postsecondary instruction, nor are they merely research institutions. They are both, and the active presence of young learners and mature scholars is necessary to their organic health. "The justification for a university is that it preserves the connection between knowledge and the zest of life, by uniting the young and the old in the imaginative consideration of learning" (Whitehead 1929, p. 93). This community of young and old is a further extension of the organic nature of learning. It makes the university analogous to other living associations, such as the family. The place of imagination in university life illustrates Whitehead's insistence on the aesthetic element in education. Universities are not merely institutions of analytic and intellectual skills, but of their imaginative integration into life. There is a creative element to all university activity (and not merely to the fine arts), a creativity necessary to the survival of life in a world of adventurous change. "Knowledge does not keep any better than fish" (Whitehead 1929, p. 98) and, while universities have a calling to preserve the great cultural achievements of the past, this conservatism must not be allowed to degenerate into a passive and unreflective commitment to inert ideas. "The task of a University is the creation of the future" (Whitehead 1938, p. 233). Ironically perhaps, the modern university, even one containing a business school, should not be managed like a business organization. The necessary freedom and risk, so important to the inventive scholar, requires a polity "beyond all regulation" (Whitehead 1929, p. 99).

Civilization, as Whitehead expresses it in his 1933 book, *Adventures of Ideas* (pp. 309–381), is constituted by five fundamental ideals, namely, beauty, truth, art, adventure, and peace. These five capture the aims, the rhythm, and the living, zestful and ordered progress of education and its institutional forms. They constitute a rich meaning of the term *creativity*, the ultimate driving source and goal of Whitehead's educational theory and program.

*See also:* PHILOSOPHY OF EDUCATION.

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ROBERT J. MULVANEY

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## WHITE HOUSE FELLOWS

Every year, the White House Fellows program offers a small number of America's most promising young leaders an opportunity to participate in government at the highest levels. The White House Fellows program is one of the most prestigious and selective fellowship programs for leadership development and public service in the country. White House Fellows are selected by the President's Commission on White House Fellowships, a nonpartisan commission of thirty to forty leading American citizens representing a range of backgrounds and professions. All commission members are appointed by the president; many are former White House Fellows.

### Selection Process

Any citizen of the United States who believes that he or she has leadership qualities, the ability to function effectively at the highest levels of government, and a commitment to serve the country may apply for the White House Fellowship program. The competition is extraordinarily keen with 500 to 800 applicants to fill only eleven to nineteen positions each year. There are no age restrictions for admittance to the program, but most Fellows are in their early thir-

ties. Applications must be submitted by February 1 for the fellowship year beginning September 1 and running till the end of August the following year. Candidates may be nominated by universities, colleges, professional associations, or other groups, but the majority of candidates apply on their own initiative.

A screening committee of the President's Commission reads and rates the applications, referring about 100 of the most impressive applicants to ten regional panels for further screening. Applicants are evaluated on the basis of their professional and academic accomplishments, as well as on their potential for growth as leaders. The regional panels designate regional finalists, interview them, and recommend national finalists to the President's Commission. All finalists must undergo background checks to ensure that they qualify for the security clearances necessary to work in the White House. After further interviews over a period of several days, the President's Commission makes its choices known to the president, who then appoints the White House Fellows. The new class of White House Fellows is announced every year in early June.

### **Job Assignments**

White House Fellows perform various functions for their respective principles in the executive branch of the federal government. The commission staff determines each Fellow's job assignment in consultation with the government officials for whom they will be working. Fellows may work as assistants to the vice president, cabinet officers, agency heads, and other top-ranking government officials. Often, Fellows serve as troubleshooters, working on whatever problem requires immediate attention in the highest ranks of their agencies and departments. They may also prepare reports, write speeches, help draft legislation, chair meetings, and conduct briefings. Fellows are paid a salary at federal pay grade GS-14/Step 3 (about \$80,000 in 2001) and are not allowed to receive compensation from any other source during their fellowship year.

### **Educational Program**

Despite their services to the government, many White House Fellows argue that the immediate benefits of the program flow mainly in their direction. First, their job experience gives them a unique opportunity for understanding the operations of one government department or agency, including the

style and methods of top decision makers. In addition, the president's commission operates an education program that provides Fellows with an understanding of areas of government outside of those to which they have been assigned, as well as a knowledge of the major issues and problems with which the government must cope. In this way, the education program supplements job experience.

In a typical year's education series, White House Fellows meet off-the-record with cabinet secretaries, Supreme Court justices, members of Congress, military leaders, and foreign heads of state. Fellows may also meet with governors, mayors, sociologists, urban planners, scientists, representatives of interest groups, foreign service officers, foreign policymakers, fiscal experts, business and labor leaders, and commentators from the press and academic circles. White House Fellows are also offered the opportunity to travel to major American cities, foreign countries, and military bases to explore government and policy in action. These activities help Fellows develop an increased understanding of the challenges facing American society and a greater sensitivity to the role of the federal government in dealing with these challenges.

### **History**

The White House Fellows program was established in October 1964 by President Lyndon B. Johnson for the purpose of enabling the U.S. government to benefit from the services of the large numbers of bright, able, and talented citizens not ordinarily seeking careers in government. The program was a result of the concern expressed by John W. Gardner, then president of the Carnegie Corporation, and shared by President Johnson that the contributions of such citizens were not directly benefiting the government and the nation except in times of national crisis, such as during a war. During its first years, the White House Fellows program was supported entirely by private grant funds. Major support was provided by the Carnegie Corporation and the Ford Foundation, and David Rockefeller made a sizable personal donation to the commission. Gradually, however, the costs of the program have shifted to the federal government.

Since 1964 many former White House Fellows have made significant marks in various fields. Former Fellows of note include Doris Kearns Goodwin (1967–1968 Fellow), who became a Pulitzer Prize-winning author, historian, and television commen-

tator; Henry Cisneros (1971–1972 Fellow), who became mayor of San Antonio, Texas, and secretary of Housing and Urban Development during the Clinton administration; Colin Powell (1972–1973 Fellow), who became a general in the U.S. Army, chairman of the Joint Chiefs of Staff, and secretary of state during the administration of George W. Bush; Wesley Clark (1975–1976 Fellow), who became a general in the U.S. Army and supreme allied commander, Europe; William Roper (1982–1983 Fellow), who became dean of the University of North Carolina School of Public Health and director of the Centers for Disease Control and Prevention (CDC); Elaine L. Chao (1983–1984 Fellow), who became president and chief executive officer of the United Way of America and director of the Peace Corps; and Paul Gigot (1986–1987 Fellow), who became a columnist and editor for the *Wall Street Journal*.

#### INTERNET RESOURCE

WHITE HOUSE FELLOWS PROGRAM. 2002.  
<[www.whitehouse.gov/fellows](http://www.whitehouse.gov/fellows)>.

STEPHEN P. STRICKLAND  
*Revised by*  
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## WOMEN'S STUDIES

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Women's studies is an interdisciplinary field of inquiry that arose in the early 1970s. Within thirty years, it developed into a recognized discipline with undergraduate majors, masters and doctorates programs, university departments and programs, a scholarly literature of books and journals, and professional associations. The origins of women's studies are multiple, the scope and nature of the inquiry extensive, and its relationships to other campus and community organizations related to women and gender diverse.

### Origins, Offerings, and Organization

The first courses in women's studies were taught at Cornell University and San Diego State University in 1969. They were undergraduate offerings, team taught, and provided overviews of the issues that arose out of the women's liberation movement.

The landscape of higher education changed dramatically in the 1960s as larger numbers of women

and minorities entered the professorate and the number and size of institutions grew. Many of the women who entered the academy in the next decade had been influenced by the women's movement and undertook research on women. Thus, scholarship on women grew in the existing disciplines and was designated as feminist scholarship. However, many of the questions that arose fell outside the bounds of disciplines as they were defined then. The field of women's studies emerged as the site for investigating these questions, forging new subject matter, employing multiple research methodologies, and experimenting with pedagogies that took into account gender differences in learning styles. Women's studies refers to the campus administrative unit and concentration of courses covering this material on women.

Women's studies grew rapidly in the 1970s, so that by the end of the decade, the National Women's Studies Association counted some 200 programs offering undergraduate minors and majors. A typical major consisted of an introductory course, courses on women selected from cooperating departments, and a capstone seminar. Many included internships that enabled students to experience first hand the issues community women encountered. The introductory course covered some aspects of women's history, an examination of quantitative research on women's status, selected reading of literary works by women, and attention to issues largely absent from the overall curriculum. These issues centered on the oppression of women, sexual assault, questions of marriage and family, the professional advancement of women, pay equity, and representations of women in media, among other topics. Courses offered by departments—The Psychology of Women, for example—constituted the majority of courses for the major. Some programs and departments were able to offer special topics courses (i.e., Images of Girls in Literature) or additional core courses (i.e., Feminist Methods, Feminist Theories). Most programs attempted to offer a research seminar as a capstone course, enabling majors and minors to come together for research and reflection.

As programs became departments and as departments grew, the course offerings of the major changed to reflect the emergent scholarship. Courses on identities and differences among women, courses with a global focus, courses that linked with other new fields (cultural studies, American studies, popular culture, media studies, ethnic studies, gay and

lesbian studies, queer studies) all emerged in the 1980s and 1990s. The most significant shifts in course offerings at the undergraduate level occurred in the 1990s as the study of gender and of race were added to the study of women.

Feminist scholarship on women grappled with the question of gender, that is, of the relationships among men and women, masculinity and femininity, and social power. Research revealed that new information and interpretations about women forced a reframing of what was known about men and masculinities at any given time or place. Advocates of research on gender argued that the expanded focus enabled scholars to see the sex/gender system holistically. Other scholars and many activists argued that a focus on gender buried a concern with the inequalities women still suffered in society and therefore did not advance an agenda of social change. By 2000 women's studies programs numbered nearly 800; most had added a concern with gender to their teaching and research missions while retaining a focus on women's inequality.

Equally important to the origins and offerings of women's studies through its short history has been the question of identities, particularly those that are race based. While the initial scholarship focused on the ways in which *all* women had suffered injustices, research as well as experience quickly revealed the obvious fact that there were substantial differences *among* women that bore investigation. African-American women and lesbian women advocated greater attention to the ways in which being female was interwoven with other identities, demonstrating that each combination was reflected and refracted in the social world in a distinct way. Developing the conceptual tools as well as the methods to investigate these multiple manifestations of *woman* became the focus of scholarship.

Just as the undergraduate subject matter of women's studies became more complex over time, the relationship of programs and departments to other campus units diversified. There are two primary sets of relationships, one with campus women's centers and the other with graduate schools. On most campuses, either a women's studies program, usually housed in academic affairs, or a women's center, usually housed within a division of student affairs, came first. The unit that was created first was seen by the campus community as *the place* for women's issues to be handled and efforts to establish additional units to deal with the multifaceted needs

of women students, faculty, and staff often had to compete for resources. Because their origins are distinct, their administrative homes different, their missions discrete, and occasionally their audiences separate, the relationships between women's studies and women's centers vary from campus to campus.

Graduate programs, arising in the 1980s, were structured much like undergraduate programs, with core requirements, courses selected from other departments, and an emphasis on either research or practicum to prepare students for careers. The Ph.D. in women's studies emerged in the 1990s. In the United States, M.A. and Ph.D. programs tended to be organized around issue clusters and offered students opportunities to enter the professorate as well as to assume research positions in government, corporate, and non-profit sectors. In Europe, Japan, Latin America, and the United Kingdom, undergraduate degrees in women's studies were less common and graduate research degrees more frequent.

### Intellectual Contours

Women's studies scholarship is in its most basic form an epistemological endeavor. It asks teachers, students, and researchers to develop a reflective critical consciousness whose goal is not only to inform, but also to transform what one knows and how one knows it. To accomplish this goal, it uses a wide variety of methodological approaches and investigates questions at the center of women's lives, questions that have not been central to formal knowledge systems. This innovativeness raises a series of intellectual debates. For some, these debates are a sign of vigor, for others a quagmire. The central topics for debate include the meaning of interdisciplinarity, the relevance of feminist scholarship, the relationship of scholarship to activism, and the utility of various feminist theories.

Women's studies claims to be an interdisciplinary discipline. For some, *interdisciplinary* refers to the fact that the questions and methods used in teaching and research are drawn from two or more of the traditional disciplines, whether by one person or a team. For others, *interdisciplinary* is more specifically defined as the intersection of questions and methods that are used in combination to arrive at new knowledge. For those who see interdisciplinarity in this way, it is not additive but transformative: the methods employed to investigate a subject come from the question that is asked and the question derives from the goals of the researcher or teacher.

Thus, interdisciplinary women's studies scholars use methods and approach questions in distinct combinations, often viewed as nontraditional. This approach requires that scholars balance the breadth of the tools and queries they utilize with the need for depth in analysis.

For those outside the field, the most commonly asked question is *why women's studies?* The question is asked from a least two different standpoints. In the 1970s, colleagues in other disciplines frequently claimed that women's studies was unnecessary. They claimed that any of the questions pursued in women's studies could be handled by the extant disciplines. Women's studies scholars countered that such questions had not been—and were unlikely to be—addressed without a separate site for the production of knowledge about women. The subject matter of women's studies is distinctive: it places women and gender at the center and analyzes practices, contexts, and ideologies from that standpoint.

Given the institutional successes of women's studies, the *why women's studies* question has taken a second form. At least three decades after the founding of this field of study, the claim is made that the questions of discrimination and agency that are foundational to the field are now resolved and therefore irrelevant. Some argue that the questions of the twenty-first century are issue-based, not identity-based, and that questions of women and gender are now included in all such issues, making their separate study unnecessary. Women's studies scholars counter that the inclusion of conversations about women cannot be ongoing without the continuing infusion of new knowledge that derives from specialization.

It is generally agreed among feminist scholars that the impetus for women's studies arose in the activism of the women's movement in the late 1960s. Once faculty and students began investigating the conditions and representations of women's lives as subjects of academic study, however, activism's role became problematic. The issues are formulated in a variety of ways. Some investigators believe that research outcomes should always be of social value. Thus, psychologists who investigate sexual assault often encourage the use of their work in policy and legal projects. Other scholars take the position that all knowledge is ultimately socially useful but that research and teaching on any subject is an end in and of itself. For example, a philosopher who writes in the area of feminism might argue that the critical

thinking skills students develop benefit an informed citizen over the course of a lifetime.

The evolution of scholarship on women and gender in yet other fields, particularly the humanities, has become so specialized that it has developed language, theory, and traditions that are difficult for casual readers to comprehend. These scholars may claim that social activism—the engagement with cultural and political organizations and their activities—is separate from formal study and should be pursued according to individual inclinations. Thus, debates continue: Should an internship in an activist organization be a required part of a major? Should information in women's studies classes explore the links to activism? Should departmental structures support activist endeavors? Given the origins of women's studies in political activism and the continued inequalities in society and culture based on gender, these questions are likely to remain at the center of debates in the field.

A final debate centers on the choice of theories to explain women's positions in the gender systems of societies and cultures. This is perhaps the most controversial of all the debates. Much of the work in women's studies in the 1970s grew out of the social sciences, particularly history, cultural anthropology, sociology, and psychology. These scholars infused theoretical paradigms already in play—liberalism, Marxism, socialism, and psychoanalytic approaches, among others—and revised them to include women. Joined by colleagues in literature and art history, the first generation of feminist scholars engaged in the recovery of texts by, and information about, women, finding patterns in their discoveries that offered new explanations for women's exclusion as well as agency.

By the late 1980s developments in philosophy, literature, and other interdisciplinary fields—cultural studies, queer studies, media studies, studies of popular culture, studies of sexualities—came to prominence in women's studies. These approaches focused more on the representations of women in texts (written and visual as well as spoken) and less on empirical investigations. Known as post-structuralism, post-modernism, and critical theory, they emphasized the fluid and temporal nature of interpretations of women and gender, making the meaning and use of theory both more complex and more contested.

The place of theory was further complicated by the development of a global perspective in women's

studies. Beginning with the first of the United Nations Decade for Women meetings in Mexico City in 1975, followed by meetings in Copenhagen in 1980, Nairobi in 1985, and Beijing in 1995, feminist scholars increasingly conducted research around the globe, and scholars from every country investigated women's issues. The introduction of material on women globally called into question Western-based theories of sex and gender.

For scholars who came from the empirical tradition, theory conveyed a broad range of endeavors aimed at identifying patterns that would yield explanations over time and space. For scholars who worked within the humanities paradigms, theory meant critical theory, the investigation of texts and their meanings. For policy makers who looked to women's studies scholarship to identify women's material conditions, theory had a utilitarian focus. For those in the natural sciences who followed traditions of experimentation, feminist theory often appeared as an unlikely tool. And the work of global scholars, working out of yet other intellectual traditions, further contributed to theoretical debates. However, the evolution of these various debates about what constitutes theory had, by the twenty-first century, encouraged many scholars to examine the interstices and find linkages.

*See also:* ACADEMIC DISCIPLINES; ACADEMIC MAJOR, THE; MULTICULTURALISM IN HIGHER EDUCATION.

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## WOODSON, CARTER GODWIN (1875–1950)

Teacher, scholar, publisher and administrator, Carter Godwin Woodson articulated ideas that are antecedents to the discipline of black studies; however, he is best known as the “father of black history.”

Woodson was born in New Canton, Buckingham County, Virginia, to former slaves Ann Eliza (Riddle) and James Woodson. The oldest of nine children, Woodson labored on his father's farm and in the coal mines of West Virginia. Attending elementary school only a few months per year, Woodson was mostly self-taught. At age nineteen he enrolled in the Frederick Douglass High School in Huntington, West Virginia, where he excelled and completed the four-year curriculum in under two years.

#### Education and Early Career

Woodson attended Berea College in Kentucky for two years, until the institution closed its doors to blacks. Woodson took courses at the University of Chicago, returning to Berea (when blacks were readmitted) to complete his bachelor's degree in literature in 1903. Securing a position as general superintendent of education in Manila, the Philippines, for the United States Bureau of Insular Affairs, Woodson taught English, health, and agriculture. He resigned for health reasons in 1907, and traveled to Asia, North Africa, and Europe.

Woodson applied for graduate study at the University of Chicago; however, school officials would not recognize his Berea degree. This situation forced Woodson to earn a bachelor's degree from the University of Chicago, which he received in 1907. His master's thesis, completed in 1908, examined French diplomatic relations with Germany in the eighteenth century. Woodson then enrolled in the doctoral program at Harvard University. After completing coursework, he sought employment in Washington, D.C., so that he might have access to the Library of Congress. While teaching courses in American history, French, Spanish, and English at local Washington, D.C., high schools, Woodson researched and completed his doctoral dissertation on secession, entitled “The Disruption in Virginia,” in 1912. At the time, he was the first African American of slave ancestry and the second African American, after W. E. B. Du Bois, to receive a doctorate from Harvard.

Woodson's desire to move into the academic world met with frustration. He failed to get his dissertation published and discovered that his professional options were limited. Committed to writing black history, he published another manuscript, *The Education of the Negro Prior to 1861* (1915). Quickly tiring of academic politics, he sought other avenues to advance his passion for the scientific study of blacks and black history.

### The Association for the Study of Negro Life and History

In 1915 Woodson, with associates Dr. George C. Hall, James E. Stamps, William B. Hartgrave, and Alexander L. Jackson, met at a downtown Chicago YMCA to establish the Association for the Study of Negro Life and History (ASNLH), later changed to the Association for the Study of African-American Life and History. Founded as a historical society devoted to the research of black America, the organization was meant to be ideologically and politically independent. There were three organizational tiers within ASNLH: branch members who paid dues; professional historians who conducted research; and a publication department. In 1916 the association established a quarterly, the *Journal of Negro History*.

Woodson evolved a philosophy about black history: He wanted to free black history from white intellectual bias and present blacks as active participants in history. Additionally, he wanted both black and white people to be exposed to the contributions of blacks. He believed that black history should be a part of the school curriculum. Finally, Woodson saw value in James Robinson's "new" history that asserted that history could serve social change. His passion became obsession as he worked to protect and promote the ASNLH. He never married, and friends and supporters noted that Woodson worked day and night for his association.

Financing ASNLH proved difficult as member dues were never sufficient. Woodson raised funds from white corporate philanthropists; however, frequent disagreements and accusations of "radicalism" forced him to compromise his beliefs and declare his loyalty to American capitalism.

Struggling to support the organization and himself, Woodson accepted a position as principal at the Armstrong Manual Training School in Washington, D.C., in 1918. From there he moved on to become the dean of the School of Liberal Arts at Howard

University. Clashing with Howard president J. Stanley Durkee, Woodson left after two years to become dean at West Virginia Collegiate Institute.

After 1922, Woodson was finally able to work full-time for ASNLH, conduct research, and publish prolifically. The spread of Pan-Africanism, Garveyism, and the emergent Renaissance cultural movement were indications of heightened racial consciousness among African Americans. This climate provided support for "race men." Woodson founded Associated Publishers, Incorporated, in 1921 to produce books endorsed by the association. By 1925 the *Journal of Negro History* had published ten monographs and many articles. Woodson expanded his public presence by writing articles for mass consumption, including many newspaper editorials and regular contributions in the Garvey organization's *Negro World*.

In 1926 Woodson and his association made their indelible imprint on America and the world. He began the celebration of Negro History Week—a special commemoration of the birthdays of Frederick Douglass, Booker T. Washington, and Abraham Lincoln. Additionally it would celebrate the achievements of blacks throughout history. In 1976 this celebration was expanded to the widely celebrated Black History Month.

In 1933 Woodson published his most celebrated work, *The Mis-Education of the Negro*. This penetrating work critiqued the established school curriculum as grounded in racism and Eurocentric thought. Such education, he believed, could only result in the colonial subordination of African people in America. The often quoted passage, "When you control a man's thinking, you do not have to worry about his actions. . . . He will find his proper place and will stay in it" (p. viii) points to Woodson's assessment of the deleterious effect of existing schooling on the black psyche. Educated blacks would dissociate themselves from the majority of their race, and black people could never achieve unity and racial advancement with this type of education.

Concerned that the *Journal of Negro History* only reached a limited audience, Woodson established the *Negro History Bulletin* in 1937. Aimed at schools and young people, the *Bulletin* cost very little and used accessible language. Woodson's commitment to make black history accessible to elementary and secondary school students led him to write books for school children, which were often accom-

panied by study guides, chapter questions, and recommended projects.

Throughout the 1940s, the widely respected Woodson worked to popularize black history, maintain the ASNHL, and continue publication efforts. He was honored with the prestigious Spingarn Medal from the National Association for the Advancement of Colored People along with several honorary degrees. The U.S. Postal Service honored him with a memorial stamp in February 1984.

*See also:* MULTICULTURAL EDUCATION.

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WILLIAM H. WATKINS

**WORK AND TRAINING PROGRAMS IN SCHOOLS**

*See:* VOCATIONAL AND TECHNICAL EDUCATION.

**WRITING, TEACHING OF**

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Writing pedagogy has been shaped by an array of influences over the years, including social and demographic change, insights derived from research, and grassroots movements among teachers. Recognizing that writing assumes many guises and serves varied purposes, teachers and researchers continue to chart the challenge of preparing diverse students to meet the literate demands of private, academic, and civic life.

**History**

Written composition became a concern for American high schools in the late nineteenth century. At the time, elementary schools did not teach composition; rather, writing instruction meant teaching students to form letters, to spell words, and to have legible (if not beautiful) handwriting. The high schools, however, focused on preparing an elite group of males for universities, a task that would increasingly demand attention to writing. In 1873 Harvard University initiated a writing requirement as part of its admissions process, asking each candidate to produce a composition about a literary work. Other colleges soon followed with similar requirements, and high schools began to prepare students to fulfill these expectations. Further guidance was provided by the illustrious "Committee of Ten," chaired by Harvard president Charles W. Eliot and charged with formulating parameters for secondary curriculum nationwide. In its final report, the group made the then-revolutionary claim that one purpose of English was "to enable the pupil . . . to give expression to thoughts of his own" (p. 86). And so began the teaching of composition in the nation's schools.

Writing continued to have a place in the secondary curriculum throughout the twentieth century. Students were commonly assigned essays in the forms of description, narration, exposition, or argument, following rhetorical traditions dating back to the late nineteenth century. If teachers followed contemporary textbooks, they taught lessons on the ideal written product, focusing on words, sentences, and paragraphs as component parts, and emphasizing usage and style. Student essays were graded on the basis of how well they approximated these forms and conventions.

Stimulated by the 1966 Dartmouth conference, which brought together leading British and American specialists in the teaching of English, major pedagogic and empirical shifts marked the late 1960s and early 1970s. Active research programs studying writing in the schools followed in both countries, and new ideas were introduced from abroad. The consequences were twofold. First, leading literacy educators argued that assigning and grading writing was not enough, suggesting that students should be supported through an elaborated process of generating ideas, reflection, planning, composing, and revising. Second, U.S. educational leaders began to argue for the teaching of writing in these ways at the

very start of schooling, maintaining that learning to write could help students learn to read, and vice versa.

Founded in 1974, the National Writing Project (NWP) quickly emerged as a major professional development movement in the United States. Building from the work of exemplary classroom teachers, the NWP has continued to influence writing curriculum, instruction, and evaluation internationally. By 1985 the U.S. federal government funded a research center devoted to the study of written language; attention turned to how writing develops across the lifespan, the influences of varied school and out-of-school experiences on learning to write, and how these lived experiences intersect with learning to write in school.

### **Issues and Trends in School-Based Writing Instruction**

As educators have recognized that writing is judged effective where it is appropriate to audience, purpose, and occasion, innovative classrooms have come to provide practice in addressing a range of rhetorical contexts and composing challenges. This focus on the contexts in which writing occurs has been accompanied by an equally intensified interest in the diverse profiles of individual writers—what they bring to particular composing events, and how teachers can effectively support and monitor their growth over time. While these concerns have been reflected in university-based research and emerging theoretic conceptions of the writing process, pedagogic innovations have been primarily formulated by teachers themselves, most notably through the work of the NWP.

A hallmark of these teaching innovations has been an abiding concern with the nature of students' composing processes, and with how teachers across the grade levels might more effectively gear instruction to individual needs, backgrounds, and interests. Process-oriented instructional approaches have become common, with teachers providing opportunities to brainstorm ideas, complete initial rough drafts, receive peer and teacher feedback, and revise and proofread. Ideally, such approaches acknowledge that writers in the world beyond school do not follow a prescribed series of steps. Acknowledging the social aspect of the writing process, many teachers have also provided paper and electronic publication opportunities. Recognizing that discrete grammar instruction does not reliably enhance stu-

dent writing, teachers have increasingly addressed matters of correctness and style as students polish their own drafts.

Guided by theory, research, and insights from their own work with students, teachers have also formulated instructional approaches that acknowledge the developmental trajectories of writers of various ages. Although teachers continue to guide young children toward the standard forms, many are encouraging students to explore sound-letter correspondences through their own "invented spellings," drawing on research that explores these approximations as important developmental building-blocks. Later, as students move through secondary language arts classes, teachers provide assignments similarly informed by an awareness of students' emerging abilities, as thematic instructional units offer opportunities to build from basic writing tasks to more sophisticated challenges that ask students to synthesize and critique information gleaned from divergent sources.

The Writing-to-Learn and Writing-Across-the-Curriculum movements have fostered interest in activities that encourage writing as a tool for exploration and learning in all fields of study. Students may be asked to generate hypotheses or reflect on issues in journals and during spontaneous writing, while more formal writing assignments provide opportunities to learn the discourse conventions of particular disciplines. Especially in middle schools, interdisciplinary teams are creating promising venues for language-arts teachers to assist subject-area colleagues in integrating writing activities across the curriculum.

Given this interest in writing as a process and as a tool for learning, some have worried that teachers may be paying insufficient attention to the quality of students' written products. This focus on the quality of completed writing has infused recent policy debates, and both national and state-level efforts have introduced standards for writing and testing programs. Because writing varies considerably across tasks and contexts, developing valid standardized tests that reliably measure achievement and growth is an enterprise fraught with challenge. Although the most credible tests include actual writing samples, the cost of rating such exams has led some to advocate the use of machine-scored tests assessing students' knowledge of vocabulary and grammar; because students' scores on such tests often correlate well with scores on actual writing, argue some, they

offer an affordable and efficient alternative. Because tests tend to drive curricula, teachers and literacy scholars worry that such assessments may encourage teaching practices predicated on an insufficient model of proficiency in writing—one that privileges discrete skills over an ability to negotiate the demands of writing for real purposes and audiences. As literacy educators argue the need to ground instruction in a broader conception of writing achievement, test-makers continue to work toward assessment strategies that better encompass the range and complexity of the kinds of writing people do in their lives beyond school. During the 1990s the National Council of Teachers of English convened the New Standards project, a group of literacy educators charged with formulating approaches to portfolio assessment that might serve both classroom-level and larger-scale purposes. The cost and complexity of such endeavors have relegated portfolios primarily to the levels of schools and classrooms, where they continue to provide evidence of students' processes, products, and growth over time.

As writing pedagogy enters a new millennium, several issues present enduring challenges for educators. Large-scale writing assessments have continued to reveal comparatively lower levels of achievement among linguistic minority students; in the mid-1990s, for instance, National Assessment of Educational Progress (NAEP) data suggested that European-American students were achieving at a higher level on most of the assessed writing tasks than students from other ethnic groups.

The technological revolution has considerably changed the views of what might be deemed minimal writing and literacy skills. Computers provide new kinds of support for writers as they generate and organize written text and also, through electronic mail and the World Wide Web, have introduced what Melanie Sperling and Sarah Warshauer Freedman (2001) call "a new textual component to human relationships." Amidst widespread conjecture concerning the long-term consequences of these new technologies, researchers continue to explore students' and teachers' experiences with such tools. The implications are many—in terms of expanding our definitions of the writing process, and our conceptions of the relationships among writers, readers, and the texts they create and encounter.

Negotiating this and the many other issues before them demands much of teachers' time and focus, even as most continue to see well over a hun-

dred students each day and to juggle multiple responsibilities. These new approaches to teaching writing are considerably more energy intensive than the decontextualized drills of earlier times, but in most quarters, teachers' workloads have not been adjusted accordingly.

### Research

During the 1970s cognitive studies by John Hayes and Linda Flower (1980) provided insight into the recursive nature of writing. This work charted the various subprocesses that writers negotiate in the service of fulfilling goals and solving rhetorical problems. That is, writers plan what they wish to say, translate those plans into writing, and evaluate and revise their work. Researchers found that these subprocesses do not follow a fixed sequential pattern; rather, writers move recursively among these various activities (pausing in the midst of composing, for instance, to revise or to pursue additional planning).

Teaching innovations related to this research have been informed by continuing interest in the nature of students' composing processes, and in how teachers across the grade levels might more effectively gear instruction to support the processes of diverse writers. Process-oriented instructional approaches have become common, with teachers providing opportunities to brainstorm ideas, complete initial rough drafts, receive peer and teacher feedback, revise, proofread, and pursue paper and electronic publication opportunities. As teachers experimented with new classroom practices that supported writers through such elaborated composing sequences, researchers began to compare the effectiveness of varied kinds of process-based instruction on writing improvement. George Hill-ocks's meta-analysis of these studies (1986) revealed that the approaches leading to the most significant gains in student writing provided students with clear and specific objectives, and opportunities to work together to solve particular writing problems.

Research on the nature and development of spelling knowledge and skills, especially among preschoolers and primary grade students, has been conducted on primarily white, middle-class, monolingual youngsters. This work has revealed that students' spellings follow a developmental trajectory, with their initial errors providing much information about how they understand the system of English writing (information that can guide teachers' efforts to help their students to acquire standard forms).

Focusing on a similar student population base, research on the teaching of grammar has suggested that such instruction has little effect where it remains divorced from students' actual writing; however, teaching that links grammar to students' genuine communicative needs as they attempt to write for real readers does appear to benefit students' writing and learning.

Finally, researchers have found important links among the activities of writing, speaking, and reading. These links are related to the finding that writing is primarily a process of making meaning, enacted in social, cultural, and material contexts. Thus, especially given the diversity of our student population, it is critical that teachers understand the ways students make meaning outside of school and that teachers know how to help students use what they bring as a resource for what they learn inside the classroom.

*See also:* JOURNALISM, TEACHING OF; LANGUAGE ARTS, TEACHING OF; LITERACY, *subentry on* WRITING AND COMPOSITION; READING, *subentry on* TEACHING OF; SPELLING, TEACHING OF.

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ANNE DiPARDO

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## YALE UNIVERSITY

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Yale University, a private institution, is situated in New Haven, Connecticut. Its library of more than 10 million volumes is the second largest university library and third largest library system in the United States. The Yale Center for British Art (1977) holds the largest collection of British art and illustrated books outside the United Kingdom. Yale College provides a liberal arts education in which undergraduate students explore a variety of fields and obtain a wide cultural background. The Graduate School of Arts and Sciences and the ten professional schools—architecture, art, divinity, drama, forestry and environmental studies, law, management, medicine, music, and nursing—award master’s, doctoral, and professional degrees.

Historian Franklin Dexter chronicles that in 1701 ten Connecticut ministers obtained a colony charter “to Erect a Collegiate School” whose mission was to instruct youth in the arts and sciences and fit them “for Publick employment both in Church & Civil State” (pp. 20–21). In 1716 the college was moved from Saybrook to New Haven, and in 1718 when Elihu Yale, an Englishman with New Haven ties, donated books and saleable goods the college was named after him. The early curriculum consisted of traditional liberal arts studies and strict Congregational instruction, and most graduates became ministers. By the 1770s the students were entering other fields and actively supported the American revolutionary cause. In 1802 President Timothy Dwight (1795–1817) advanced the sciences by appointing Benjamin Silliman the first science professor in America.

Over the next half century Silliman developed the arts and sciences, establishing a medical school in 1810, the first university art gallery in 1832, and the first American graduate school and scientific school in 1846. In 1852 the engineering school and the bachelor of philosophy degrees were instituted, and science instruction was consolidated into the Sheffield Scientific School in 1861. Graduate education was formalized in America when Yale awarded the first doctor of philosophy degrees in 1861. In 1876 Yale awarded the first American doctorate to an African American, physics student Edward Bouchet. The college continued to maintain its liberal arts tradition as affirmed in its 1828 *Report on the Course of Instruction*, a landmark document in nineteenth-century education.

In the 1820s the divinity and law schools were established, and by mid-century Yale was the largest U.S. college. The first university art school, Yale’s first coeducational school, was founded in 1869. In the 1870s, the Peabody Museum opened to exhibit the first dinosaur bones and fossils collected by Professor Othniel C. Marsh on Western expeditions. The college became Yale University in 1888, and women were admitted to the graduate school in 1892. In 1900, Gifford Pinchot established the oldest continuously operating forestry school in America.

American college sports and traditions were largely developed at Yale, beginning with rowing in 1843. Yale’s greatest sports contributions have been in the invention of American football by Walter Camp, and in developing the sports of swimming, baseball, basketball, golf, and boxing.

Yale’s distinguished professors, such as Josiah Willard Gibbs, Irving Fisher, and William Graham Sumner, earned international reputations in the late

nineteenth and early twentieth century. In the first quarter of the twentieth century Yale made further advances in the education of women, admitting them to the schools of medicine in 1916 and law in 1919, and establishing the first academic nursing school in 1923. President James Rowland Angell's administration (1921–1937) was marked by extensive development of the graduate and professional schools as well as the college. Gifts of John W. Sterling and the Harkness family enabled Yale to reform its educational system, rebuild its campus, and broaden its educational mission. One of the most significant features, the undergraduate residential college system, was instituted in 1933. The twelve colleges are separate entities designed to give the students of a sense of belonging to and participating in smaller groups. In the 1950s, President A. Whitney Griswold (1950–1963) strengthened the liberal arts educational mission of Yale and modernized its architectural appearance. Under President Kingman Brewster (1963–1977), Yale became more democratic and diverse, and women were admitted to Yale College in 1969. The School of Management was established in 1973. As New Haven's largest employer, Yale, under president Richard C. Levin (1993–), is strongly committed to working with the city in developing mutually beneficial educational, cultural, and economic projects.

*See also:* HIGHER EDUCATION IN THE UNITED STATES, *subentry on* HISTORICAL DEVELOPMENT; RESEARCH UNIVERSITIES.

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JUDITH ANN SCHIFF

## YEAR-ROUND EDUCATION

A concept designed to minimize three-month summer learning losses, year-round education (YRE) maximizes the use of public facilities by dividing the school attendance days into rotating instruction and vacation segments. Students are enrolled in formal learning programs over a twelve-month year, keeping school buildings open at least 240 days.

Intersessions—the equivalent of summer schools—are offered each vacation block. They can be full or partial days, located on campus or cooperatively based in the community. Voluntary intermittent intersessions overcome the nine-month wait for remediation in difficult classes, while creating acceleration, enrichment, and interest specializations for all students throughout the year. They are especially of value for those who lack stimulating out-of-school activities.

Districts often promote this modification of the calendar as a *multiple-vacation plan* featuring shorter segments for both studies and vacations, in contrast with the *single-vacation plan*, which offers one longer instructional period followed by an extensive vacation. The brief but more numerous breaks, which can be one to six weeks in duration, appeal to many families. Six weeks is accepted as the maximum to be classified as YRE unless an individualized format purposely provides for special furloughs.

Educator visionaries go beyond this basic concept. They do not view YRE as a calendar configuration for space, achievement, or enrichment, but rather as part of the transformation toward a philosophy of lifelong continuous learning. They believe that schools and universities, like hospitals, are helping institutions, and therefore should offer planned and spontaneous learning opportunities through combinations of on- and off-campus studies, home computers, and distance instruction 365 days per year.

Related to this perception, supportive community advocates state there is no rationale for utilizing expensive facilities only one-fourth (e.g., 6 hours) or one-third (8) of the hours of the day, one-half (180) of the days of the year, and three-fourths (9) of the months of the year; no other public or private institutions consider such patterns. Therefore, districts and cities together should create community schools where infants through senior citizens may share an array of services as in child care, library, electronic, theater, and arts centers, vocational enhancement, health clinics, social services, and parks and recreation programs.

Traditionally, there are four reasons for implementing such year-round education designs: (1) to improve student achievement; (2) to increase building capacity; (3) to reduce capital expenses; and (4) to accommodate special-needs youth. Innovators add the following eight criteria:

- promotion of continuous progress: Billy can learn about bugs in July
- employment realities: not all can take summer vacations
- lifestyle diversities: many prefer varied vacations
- curriculum facilities: reduced enrollment provides space for expanded offerings
- improvement catalyst: nongraded individualized programs can create success
- community enhancement: year-round swimming pools, Bible schools, and traffic reduction
- people considerations: especially offering varied support and opportunities for the less affluent
- personal choice: the option of twelve- or nine-month patterns

Adopting YRE does require strong philosophical convictions and plans to make the school better. Combining the four traditional and eight nontraditional categories creates a powerful agenda for year-round education.

### Track Plans

In implementing year-round programs, a *track* is related to the calendar, not ability. In a single-track program all students and teachers follow the same instructional blocks, intersession offerings, and vacation periods. For example, in a 45-15 plan, all students and teachers learn together for forty-five days, and then vacation or attend intersession for the next fifteen days. They return for three more forty-five

day blocks of instruction, each followed by fifteen days of vacation. State-required and common holiday periods are preserved. Single-track plans do not increase space or save money, but they do promote continuous learning, especially when combined with intersession programs.

Multiple-track adoptions follow the same calendar configurations, but offer three, four, or five tracks to increase building capacity. Using the 45-15 rotation illustration, a school constructed for 600 can enroll 800 students by placing 200 students in each of four tracks (A, B, C, D). When A, B, and C are in school (600 students), D (200) is on vacation. When D returns, A goes on vacation.

Dual track creates two schools-within-a-school; families choose whether to remain on a nine-month calendar (School X), or participate in a twelve-month pattern (School Y). Flexible-track plans allow some students to change groups when rotations are scheduled, or enroll in studies during intersessions, to meet the required attendance days while creating a special-need calendar. Personalized-track programs individualize curriculum and instruction through nongraded teams of teachers, allowing families, students, and teachers to self-select their own vacation periods. The school ensures a balance of student and staff attendance to maintain a twelve-month program.

There are more than thirty possible calendar configurations, with more being invented as communities seek to meet their own unique environments. Multiple plans can create a 50, 33, or 25 percent increase in capacity; the fewer the tracks, the greater the enrollment, as illustrated by a sampling of patterns, each of which can also be implemented as a single track:

A four-track design of forty-five days in school, fifteen days on vacation; a middle school of 1200 can house 1600 through four rotating tracks (A, B, C, D) of 400 each, with only three groups in attendance at one time. Four hundred of 1200 creates 33 percent increase in capacity; in enrollment figures, 400 of 1600 equates to a 25 percent gain in student numbers.

A four-track plan of 60 days in school, 20 days away; three 60-day blocks equal 180 days, while three 20-day blocks provide 60 days of vacation and intersession programs. Four tracks (A, B, C, D) create the same space figures as in the 45-15; the primary differences are the length of the periods, and the three versus four room change cycles.

### Concept 6

A three-track calendar dividing the year into six blocks of approximately 41 days is termed *Concept 6*. Students attend two consecutive eight-week periods, followed by an eight-week vacation. For Concept 6, most states allow 163 days of attendance rather than 180 by increasing the number of minutes per day. A high school built for 1600 can house 2400. Three tracks (A, B, C) each enroll 800 students. While A and B are in school, C is on vacation. When C returns, A vacations. Thus 800 of 1600 is a 50 percent increase in building capacity; 800 of 2400 is a 33 percent enrollment gain. Modified Concept 6 is the same except there are twelve four-week blocks. A student rotates eight weeks in and four weeks out of school. An elementary facility built for 600 can house 900 (300 each in A, B, C) by rotating the three groups.

A five-track calendar stipulates that students attend school for 60 days and have vacation for 15 days. Three such rotations equal 180 days in school, but with only 45 days off, providing 15 days to use as desired for additional vacation time. If space is an issue, a school constructed for 400 can house only 500 students; with five groups (A, B, C, D, E), 100 of 400 equals 25 percent increase in capacity, while 100 of 500 increases the enrollment figure by 20 percent.

### Personalized Year

A completely individualized calendar, personalized year's curriculum is continuous and self-directed. Students and teachers may be away any length of time—two days or even a year. Upon returning, they continue from where they were at their last attendance. This plan can function as a single or multiple track program by assuring a balance of staff and students.

### Other Calendars

Other possible calendars among the more than thirty include Concept 8, 25-5, 30-10, 90-30, Flexible All-Year, and the Orchard Plan. Such modified configurations are not new, as YRE dates from 1904 in Indiana. Many successful programs existed prior to World War II. Reinvented in the 1960s, year-round education has witnessed steady growth. By the turn of the twenty-first century, more than 2 million youths were enrolled in over 3000 schools in forty-four states and Washington D.C., four Canadian provinces, and four Pacific Islands.

In considering the adoption of a continuous learning model, there are more than sixty basics that must be addressed. Each is easy to resolve with creative thinking, commitment, and visitations, for numerous districts have offered modified calendars for twenty to thirty years. All the perceived dilemmas—costs, community acceptance, teacher union contracts, and other realistic factors—can be resolved, but even more, arranged to enhance the learning climate. There are students who never attended a nine-month school, for when they enrolled in kindergarten, year-round was offered at all grade levels. They graduated from a year-round high school after spending their K–12 years in a twelve-month calendar pattern.

### Major Obstacles

The major obstacle in the adoption of year-round education is tradition. When first proposed, 30 percent of the community are strongly in favor, 40 percent are undecided, and 30 percent are strongly opposed. The ideal is to begin on a voluntary basis for the 30 percent who are ready; they usually will be joined by half of the middle group. If YRE must be mandated for space reasons, the key is to convince the 40 percent group that it is the best solution. Critics cite numerous objections:

- Possible separation of families (elementary student on twelve-month and high school student on nine-month calendar)
- Employment of parents during the traditional school year (that may require vacation in the summer)
- Child care issues
- Family lifestyles preference
- Disruption of summer recreation and camp programs
- Changing rooms in multiple track calendars
- High school social and athletic schedules
- Student employment and family events
- Assemblies at the school

### Arguments in Favor

Those who oppose YRE overlook numerous factors: (1) construction workers in cold states can best vacation in January and February; (2) the single-parent hotel housekeeper may best vacation in November; (3) the snow-ski family living in warm climates may want winter vacation in the mountains; and (4) chil-

dren from low-income families and those who are low achieving can benefit from food service, caring, and twelve-month assistance from concerned staff. More than fifty percent of the population in the United States either cannot or should not take a summer vacation because of employment issues or other activities or family factors; in addition, many prefer three or four shorter seasonal vacations.

Wherever year-round education has been implemented, it has been successful. Every program that began and then closed was the result of political reasons (new board, new superintendent, parents' desire for uniformity of calendar), or unusual circumstances. No district ever discontinued YRE from lack of success. More than thirty evaluation studies have verified that students in continuous programs do as well as or better than matched pairs of nine-month students in every category of school achievement and personal growth. Surveys of satisfaction, including doctoral dissertations that document interviews of parents and teachers, have verified that the overwhelming majority of those who have participated in YRE like it, and would vote to continue the concept. Surprising to many are the number of sport, music, and drama championships earned by schools on rotating school calendars.

*See also:* COMMUNITY EDUCATION; ELEMENTARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SCHOOL FACILITIES, *subentry on* MAINTENANCE AND MODERNIZATION OF; SECONDARY EDUCATION, *subentries on* CURRENT TRENDS, HISTORY OF; SUMMER ENRICHMENT PROGRAMS; SUMMER SCHOOL.

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DON GLINES

#### YOUNG, ELLA FLAGG (1845–1918)

Superintendent of the Chicago schools from 1909 through 1915 and elected president of the National

Education Association (NEA) in 1910, Ella Flagg Young attempted widespread reform in an increasingly industrialized and diverse America. During her teens, Young enrolled in a normal school in Chicago, and after graduation began teaching, receiving a series of rapid promotions eventually leading to her appointment as assistant superintendent. During her fifties, she completed her doctoral studies in the newly created education program at the University of Chicago where she wrote her dissertation under philosopher and educator John Dewey's direction and later served as a popular faculty member. When the Chicago school board could not agree on a new superintendent in 1909, they chose Young, an experienced insider, making her the first woman superintendent of a large-city school system in the country. A year later, the membership of the NEA elected her as its first woman president. Eventually Young resigned as superintendent in 1915 after a tumultuous relationship with several board members. She died in 1918 during the great influenza pandemic.

During her long and distinguished career, Young led the Chicago schools through a period of dramatic change in which industrialization rapidly dominated the economy and diverse new populations arrived. She responded to these and many other challenges by instituting a range of reforms. To ensure the quality and welfare of the system's teachers, she created school governing bodies in which all teachers and administrators discussed curriculum and logistical matters, insisting that work time be reserved for this purpose. She encouraged the formation of study groups where educators considered educational theory, and designed screening programs for students entering the city normal school. She decentralized many administrative functions, delegating greater authority to school-level, rather than central office, staff. She endeavored to change the principalship from a position of rigid accounting and paperwork to one requiring a deep knowledge of curriculum and pedagogy. She added deans to schools to help counsel students. With her leadership, the Chicago schools also added sex hygiene programs, among the first to be offered in schools anywhere.

Beyond her administrative service, Young published works on a variety of topics including peace, literature, manual training, and ethics. Perhaps her most enduring work is *Isolation in the Schools* (1900), where she analyzed the relationships between schools and an industrial society, and suggest-

ed that a rigidly compartmentalized educational system alienated students who then failed to find their studies personally meaningful. Essentially, she contended that schools had adopted the mechanization of industry and that the rigid differentiation of work functions robbed people of their humanity and intelligence. In schools, this differentiation appeared in such forms as schools and classes divided by student age, and also as clock-driven courses with artificially neat content divisions. She argued that both students and teachers found their capacity for independent thought diminished by a system that made little provision for it. She claimed that much as a new class of supervisors had emerged in industry to drive the increasingly hierarchical structure, new classes of administrators had arrived in schools. These administrators, she explained, were determined to make all school-related decisions of substance for those positioned below them. This reduced students and teachers to mere operatives in a larger mechanical system. She explained that an inherent problem with this system was its lack of reciprocity—that school administrators were unwilling to endure the same demands for uniformity and obedience as students and teachers. Compounding matters, she argued, administrators higher in the hierarchy became more insulated from the primary work of schools, and as such they understood less about it. This effectively isolated them and kept them from making wise decisions.

In stark contrast with other prominent school administrators of her day, Young maintained that teachers, and in turn students, needed much more power in running schools. Only when people could make significant decisions for themselves and with each other could they tap their natural intelligence and begin to develop it fully. This meant teachers and students must have the freedom and power to create and execute their own ideas. Young argued that this responsibility would attract the most talented and qualified individuals while repelling those more inclined toward rote, prescriptive, and punitive systems. To foster the deliberative process that would build school communities, she maintained that schools needed to provide time and space for teachers to engage in the intellectual, legislative, and logistical functions of running their schools. In the pages of *Isolation*, Young detailed this difficult but liberating vision of schools as democratic institutions. Her years of service to the Chicago schools informed the volume along with a lifetime of

disciplined study of philosophy, schooling, and society. Both her writing and leadership, then, demonstrated a remarkable balance of theory and practice.

Finally, as a gifted leader during the era of women's suffrage, Young worked closely with women's organizations and provided important leadership for their causes. Suffragists regarded Young as an exemplary leader whose successes reflected well on all women. Many women, especially teachers, propelled her into a variety of leadership positions. When Young encountered opposition, they comforted her and sometimes staged rallies of support for her efforts. Young reciprocated by continually championing the causes held dear by organized women's groups. She also sought to lead in a manner compatible with her beliefs: She involved those around her in making critically important decisions; she structured time and opportunities so that her constituents could discuss and carry out their plans; and she engaged in her work with a spirit of community-building. Though this manner of leadership often proved difficult and time-consuming, she sought it as a matter of course. As a result, her relationships with organized women and the general public were intense, mutual, and ongoing. The strong support she engendered was critical to the success of many of the daring programs she established. Clearly, Young was as much a part of the women's movement as she was a national symbol of its finest successes.

*See also:* SUPERINTENDENT OF LARGE-CITY SCHOOL SYSTEMS; URBAN EDUCATION.

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JACKIE M. BLOUNT

## YOUTH DEMOGRAPHIC TRENDS

The United States has a complex and rapidly changing population and is fortunate in having analytical tools such as the U.S. Census, which is compiled each decade, and the Current Population Survey, which is compiled every year. Thomas Jefferson directed the first census in 1790, implementing the Constitution's provision that each state add or lose seats in the U.S. House of Representatives based on changes in their population—the major reason why the census has such a powerful political and economic impact. The first census showed that 95 percent of Americans lived on farms or in rural areas. In the early twenty-first century, more than half of the U.S. population lives in the suburbs (which were unknown in Jefferson's time), a quarter are in large cities, and a quarter live in small towns and rural areas. Every census since 1790 has seen a change in the racial categories being profiled, from Jefferson's "free males, free females, slaves, and others," which included "mulattos," to the current complex mélange of races, ethnic groups, and national origins. However, through the end of the twentieth century, the census has always forced people to select only one racial category, creating a good deal of confusion. The first time people could admit that they were of mixed racial ancestry was in Census 2000.

### General Population Trends

In 1900, the average American was only twenty-one years of age, while in 2000 the average age was thirty-seven. The average person lived for only forty-seven years in 1900, while in 2000 the average U.S. citizen lived to be nearly seventy-eight—a life expectancy increase of nearly two-thirds in only a century. Much of this increase has come from the elimination of childhood diseases through vaccination, safe drinking water, and public health measures. In 2000, about seven babies in 1,000 died in the United States; while in New York City in 1900, for every baby born, another baby died. (In 1861 in London, Charles Dickens reported that half the funerals were for children under ten.)

In the twentieth-first century, most Americans are living longer, though the average white female in

the United States (and in the world) currently has only 1.7 children over her lifetime, not enough to replace the population, which requires 2.1 children—enough to replace one's mother and father (the .1 covers infant mortality). Almost all developed nations have fertility rates below replacement levels, signaling both rapid aging and population declines. (In 2030 there will be only two workers per retiree in the United States, while in Italy there will be only seven-tenths of a worker per retiree—meaning more retirees than workers.) The United States has an advantage over other developed countries due to its large and growing population of immigrants and minorities. Young families from these groups have much higher fertility rates than the older white population, keeping the U.S. population more youthful. While the average white female in the United States gives birth to 1.7 children over her lifetime, the average black female gives birth to 2.6 children and the average Hispanic female gives birth to 3.0 children (as of 2000), a situation referred to as *differential fertility*.

### World Population

In the early twenty-first century, the human species consists of about 6.1 billion people, with 95 percent of the population growth occurring in developing nations. Throughout the world, women are having fewer babies, but in the developing nations the decline may be from six to four babies per female, still enough for population growth. In 2100, the human species will stabilize at 11 billion people, and most humans will have aged out of the childbearing years. The developed nations of Europe, Asia, and the Americas will account for less than 2 percent of the world's population in 2100. Those born in 2000 will have a good chance of being there, if life expectancy continues to increase throughout the world. Characteristics of the split between rich and poor in 2100 are not predictable, but will likely define the human species.

### American Demographics

There is a demographic principle that states that nothing is equally distributed across the nation—not race, not age, not wealth, not religion, not jobs. For example, Census 2000 put the U.S. population at 281 million, but California has 33 million people and Wyoming has only half a million. This means that the difference between the biggest and smallest state in terms of population is increasing. Additionally,

more than half of the 281 million live in only ten states (California, Texas, New York, Florida, Illinois, Pennsylvania, Ohio, Michigan, New Jersey, and Georgia), and a third live in only nine metropolitan areas (New York, Los Angeles, Chicago, the District of Columbia, San Francisco, Philadelphia, Boston, Detroit, and Dallas). Hispanics are the fastest growing minority, yet 90 percent live in only ten states. Only 5 percent of Utah's people are over age sixty-five; while 18 percent of Floridians are over age sixty-five. Such statistics mean that federal policies will be increasingly difficult to apply identically in each state, and state policies will be increasingly difficult to apply equitably in each county.

These differences are often studiously ignored. For example, the Department of Education's main compendium, *Conditions of Education, 2001*, contains more than 300 tables and graphs, but not a single one presents data using state or county comparisons. However, nonfederal educational publications (and the U.S. Census) are full of state education comparisons, which are essential to understanding the nation.

### An Aging America

It is true that America is a rapidly aging society— young people have steadily declined as a percentage of all Americans. In the early twenty-first century, less than a quarter of U.S. households have a child of public school age (five to eighteen). At the upper end, there are 34.5 million Americans over age sixty-five, and the 72 million baby boomers born between 1946 and 1964 are between thirty-eight and fifty-six years of age, poised to create the biggest increase in retirees in history, beginning in 2011 and ending in 2028, although many are retiring before and after age 65, a trend that will continue. However, sixty-five no longer signals the onset of severe physical decline, which now happens mainly in the seventies, suggesting that baby boomers will not retire and remain retired permanently as has been the pattern. About a quarter of the baby boom generation will live past age eighty-five. Their retirement experience may include part-time work, starting a small business, a little travel, time with family, gardening, golf, volunteering—in other words, they plan to give nothing up in their “senior” years. However, there are severe implications for schools if this population of 70 million voters decides that support for public schools is not in their self-interest.

## Family Changes

Children are being brought up in very different family patterns compared to a few decades ago—23 percent of all children live only with their mothers, a figure that rises to 51 percent for African-American children. The biggest change is from a preponderance of divorced mothers to an equal number of never-married single mothers and divorced mothers. Four percent of children live with just their father, and 3 million children are being raised by their grandparents, with no parents present. About 75 percent of preschool children have working mothers, making quality day care a major component of the education agenda. In addition, the Census Bureau's definition of *family* and *parent* was not appropriate for the number of children being raised by two parents of the same sex, in a gay or lesbian relationship. Census 2000 figures also indicated a small decline in the number of children being raised by single mothers and a larger decline in single mothers with two or more children.

## The Role of Race

Ethnic diversity in the United States is also increasing, and one surprise in the Census 2000 numbers was the rapid increase in the number of Hispanics to 35 million, surpassing the number of African Americans (34.7 million). However, of the 7 million people of mixed race, 2 million indicated that they were black and some other race. It is not entirely clear how such people should be counted—if they are counted as black only, the total number of African Americans would jump to almost 37 million, but then what would happen to their other racial composition? Hispanics are not a race but an *ethnic group*, which is extremely difficult to define, so that all Hispanics are forced to choose at least one race on the census form. While most chose white in 2000, there were 3 million black Hispanics in the nation. There are, in fact, no physical qualities that define Hispanics, not even language—15 percent of California's Hispanics do not speak Spanish. If to these are added American Indian/Eskimos (2.4 million, plus 300,000 mixed Indian/Hispanics) and Asians (almost 11 million), minorities are about 30 percent of the U.S. population, and almost 40 percent of those under eighteen are minorities.

Census projections for 2050 show that 50 percent of Americans will be members of minority groups, though the term will be meaningless if minorities are half the total. Minorities are also not dis-

tributed evenly—Hispanics and Asians will account for 61 percent of U.S. population growth between 1995 and 2025 (44 percent Hispanic and 17 percent Asian), but California alone will add 12 million Hispanics and 6 million Asians, while Texas and Florida will add 8 million more Hispanics. Seventy percent of the U.S. Hispanic population now live in California, Texas, New York, and Florida, a situation that will exist for the foreseeable future. There is good news regarding minority access to the middle class, particularly involving major increases in suburban black residents. While not perfect, suburban residency is a good indicator of middle class status. Similar successes can be found in other minority groups. Although Hispanics are not doing as well as African-Americans in getting into college in the early twenty-first century, they are starting small businesses and buying homes at a rapid rate, while Asians are doing well in both college admission and small business ownership.

There is also some confusion in the area of defining one's ancestry. In a Census 2000 supplement, 20 million Americans said that their ethnic ancestry was "American" or "United States." Increasing intermarriage, and increasing years between the arrival in America of one's ancestors and the present day, will probably increase the number of people who will report their race as "American."

## Sources of Change

There are four major factors that change the U.S. population: (1) There are almost 4 million births per year; (2) There are about half as many deaths (2.3 million) as births; (3) There are about one million immigrants coming to the United States each year; and (4) 43 million Americans change their residence each year, the highest figure by far of any nation. Transience is strongly related to crime (it is easier to steal from, hurt, or kill strangers) and presents numerous difficulties for health care and education, as both health care professionals and educators can do a better job if they can get to know their patients and students over an extended period of time. If a child attends two or three schools in a year, they are less likely to make friends, get to know teachers and the school, and be loyal school members. Certainly the forces of cohesion have a difficult time against these forces of instability.

## Educational Demographics

Most striking about the U.S. educational system is its complexity, with many different routes to get

where one is going. (In France, great pride is taken in the fact that at 10 A.M. on Wednesday every child in the fourth form is studying the predicate nominative.) Americans can return to acquire a high school diploma at age twenty-five, or even at fifty, an impossible task in most centralized nations. This flexibility is necessary because of the country's diverse population. Rather than a ministry of education, U.S. public schools are governed by 15,000 locally elected school committees, as well as a chief state school officer for each state and a state legislative structure. The federal government provides only about 11 percent of all public school expenditures, but represents far more than 11 percent of influence on educational decisions. Federal programs concentrate in areas difficult for state and local governments to fund, such as antipoverty programs like Head Start and Title I, programs for children with disabilities, school transportation and construction funds for schools and colleges, and student scholarship support at the college level.

There are also demographic implications in where the 80,000 U.S. public schools are located—19,000 in central cities, 22,000 in suburbia, and 39,000 in small towns and sparsely populated rural areas. Every one of the 3,100 U.S. counties provides schools, whether they have six people per square mile or 1,500. Just as the citizens of Wyoming have more “pull” with their senators (only a half million people) than do California residents (33 million people, but only two senators), it is also true that wealthy districts can spend more per pupil than poor ones, and a dense school district will have more taxpayers per square mile than one with only six people per square mile. In many states, such as Kentucky, low-density, high-poverty rural districts have sued the state on the grounds that there is no way they can provide the same level of investment in every child that wealthy suburban districts can. These economic inequities in household income and tax revenues have resulted in unequal investments in education. There will always be income differences in any society, but American rhetoric suggests that every child should enter kindergarten at the same starting line as all others. The media focus on big-city school systems, where poverty is concentrated, and on large school systems in the suburbs. In these systems, superintendents often last no more than three years, whereas in rural systems a superintendent usually lasts for more than a decade and teachers know who

their students will be a year before they actually arrive in their classroom.

There is, in general, little national media interest in rural issues, even though rural and small town populations are a quarter of the U.S. total, and these areas contain the largest number of the nation's schools. In these 80,000 schools there are 47 million students—24 million of them in 52,000 elementary schools, 8 million in 134,500 middle schools, and 12.6 million in 15,900 high schools. There are 2.8 million teachers (1.7 million elementary school teachers and 1.1 million middle and secondary school teachers), who are paid approximately \$40,600 each. There are 9.7 million computers in schools, but only 60 percent of U.S. classrooms have a computer in them. The evidence on the computer's utility in improving student subject-matter knowledge, as judged by scores on so-called high-stakes tests, is, thus far, mixed. In addition to the nation's 2.8 million teachers, there are 2.6 million salaried nonteachers working in U.S. schools as well, including janitors, cafeteria workers, nurses, guidance counselors, administrators, curriculum specialists, bus drivers, librarians, secretaries, and others.

### School Successes

Several major accomplishments of American schools have been mostly ignored by the media. First, there has been a major increase in American adults who possess a bachelor's degree—from 20 percent in 1990 to 25 percent in 1999, probably the largest increase in any nine-year period in the nation's history. There are, however, large differences between states, ranging from West Virginia's 14 percent to Maryland's 41 percent. Second, the rate of high school graduation for African Americans has become virtually the same as that of whites, and in access to higher education the gap between blacks and whites has been narrowing rapidly. The only severe gap left is in college graduation rates, with blacks graduating at about half the rate of whites. In that there is such a direct relationship between educational level and personal income, there should be a concerted effort to increase college graduation rates among African Americans. Hispanics are graduating from high school only about half the time, about where blacks were in 1982. High school graduation rates must be increased for Hispanics before their college-going rates can improve.

Third, a massive effort to provide a computer for every school in the nation has been very success-

ful, especially compared with other developed countries. However, the evidence of the impact of the more than nine million computers in U.S. schools on student learning is far from clear, due largely to a shortage of subject-specific software that could help teachers teach specific subjects more creatively and more efficiently. Countries with virtually no computers in schools still outscore the United States by a large margin on international comparison tests, such as the Third International Mathematics and Science Study (TIMMS).

Although many observers have projected a massive increase in high school enrollments in the next decade, the data do not support such a notion. (see Figure 1). What matters, however, is the variation in high school graduation rates, ranging from a 61 percent increase in Nevada to Wyoming's 23 percent decline. The states vary enormously in the number of nineteen-year-olds that graduate from high school and are admitted to college, with 55 to 60 percent of students graduating and going to college in North Dakota, Massachusetts, New Jersey, Iowa, and South Dakota (all very stable populations), but only 25 to 30 percent doing so in Alaska, Nevada, Florida, Georgia, and Texas, the six most transient states, and those with the six highest crime rates. These differences in state performance of the major task in education—high school graduation and college admission—are far greater than any international comparisons of the U.S. educational system with other nations, according to data from the Mortenson Institute. It seems clear that parental level of education and household income are strong predictors of success in these areas.

### The Issue of Poverty

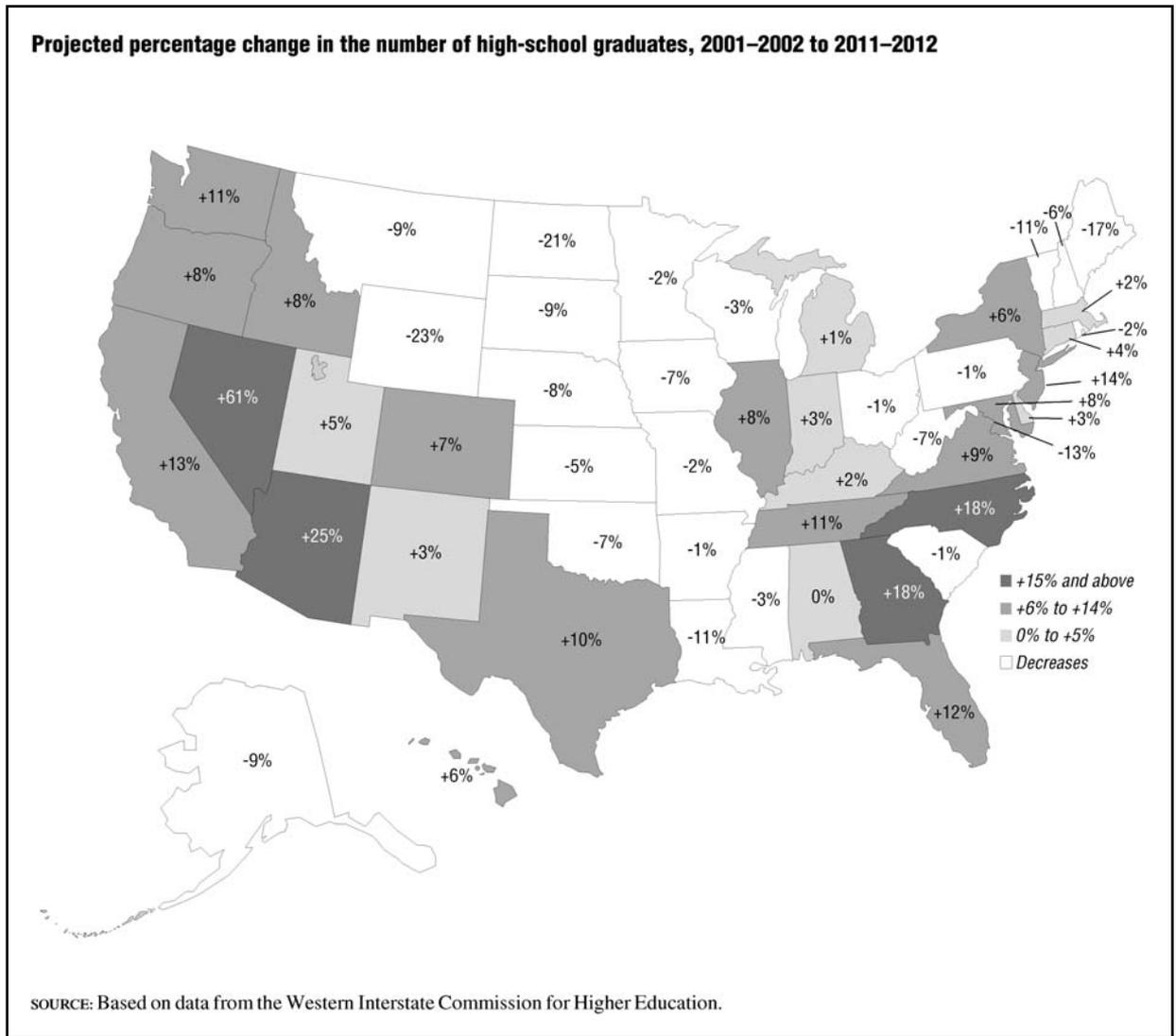
The U.S. poverty rate among children is 18 percent, the highest in the developed nations. The media generally presents pictures of poor black children in the United States, although the largest number of poor children are white (8.9 million of the 14 million poor children in 1999 were white, 4.2 million were black, and 3.9 million were Hispanic.) However, only 19 percent of all white children were poor, while 37 percent of black children were poor. It is no longer true that race is a universally handicapping condition—more than 25 percent of black households have a higher income than the white average. But poverty is a universal handicap. While efforts to eliminate racial segregation have been mostly effective, this has not led to increased economic equality, and the dif-

ference between the richest tenth of society and the poorest tenth continues to increase. The goal to “leave no child behind” is unreachable without equal investments in each child's education, starting with preschool.

**See also:** MULTICULTURAL EDUCATION; POPULATION AND EDUCATION; POVERTY AND EDUCATION; RACE, ETHNICITY, AND CULTURE.

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**FIGURE 1**

WELNER, ALISON. 2002. "The Census Report." *American Demographics*, January (special issue).

HAROLD HODGKINSON

## YOUTH DEVELOPMENT PROGRAMS

Youth development programs seek to improve the lives of children and adolescents by meeting their basic physical, developmental, and social needs and by helping them to build the competencies needed to become successful adults. Examples of youth development programs include community service,

mentoring programs, and neighborhood youth centers.

It is unclear exactly how many youth development programs are operating in the United States in the early twenty-first century. In 1998 the Internal Revenue Service identified more than 5,700 non-profit organizations—almost 3 percent of all charitable agencies—that focused their primary services on youth development. In addition, countless other organizations offer youth development activities within a different primary focus. Examples include youth groups within religious organizations and after-school activities offered by public elementary schools.

The purpose of this entry is to provide an overview of youth development programs. It is organized in the following manner. First, a brief history of services for children and youth is presented. Second, the current framework for youth development programs, including school-based youth development efforts, is discussed. Next, issues regarding access to youth development programs and findings from evaluations of youth development efforts are presented. Finally, several issues regarding implementation of youth development programs and future research directions are discussed.

### Historical Development of Youth Development Programs

The concept of childhood as a unique and crucial stage of human development is a relatively recent idea. Until the mid-1800s, children were viewed as miniature adults who, without strict guidance from their families, would follow their natural inclination toward aggression, stubbornness, sinfulness, and idleness to their doom. Not surprisingly, the earliest programs and services for children who were poor, orphaned, delinquent, or mentally ill focused heavily on helping them avoid their natural inclination toward vice and sought to help them gain useful occupation. Apprenticeships were arranged for older children, while younger children were cared for in almshouses where their health, morals, and education would be improved with the overall goal of ensuring future self-sufficiency.

Beginning in the mid-1800s, numerous factors combined to influence a transformation in the view of children and childhood and subsequently in services for children. Writings of the English philosopher John Locke (1632–1704) and American transcendentalists fostered the view of children as pure and good human beings who learn from experience and, as a result, are corrupted only by the influence of society. The nineteenth-century English naturalist Charles Darwin's theory of evolution—specifically its premise of environmental influence on behavior and development—contributed to the growing belief that, with appropriate nurturing, children could be molded into successful adults. As a result, childhood began to be viewed as a particularly critical point in human development. Friedrich Froebel (1782–1852), the German educator and founder of the kindergarten movement, encouraged this viewpoint and contended that children required special preparation for adulthood, as well as opportunities

for recreation and play. The publication of American psychologist and educator G. Stanley Hall's seminal work *Adolescence* in 1904 expanded this notion to older children and served to further cement such views.

This shift led to significant changes in services for children and adolescents. Institutions specifically designed to nurture the needs of children replaced apprenticeships and almshouses. Although the earliest institutions for children date to the mid-1700s, the movement to remove children from almshouses did not gain broad support until the nineteenth century. In 1861 Ohio passed the first state statute calling for the mandatory removal of all children from county almshouses, and by 1890 about 600 institutions—mostly owned and operated privately by religious and ethnic groups—were serving indigent children. Institutional child care during this period tended to take an undemocratic and antifamily approach characterized by discipline, training, and rehabilitation. These institutions operated with minimal oversight and mass care, rather than individualized attention, was the norm. Support for institutional child care waned for several reasons including increased economic uncertainty; the inability to build institutions at a rate sufficient to meet the needs of a growing number of orphaned, dependent, and delinquent children; the rise of public education; and the reduction in apprenticeship and legal indenture opportunities.

Child-care institutions were quickly replaced by a movement to place needy children with families. Led by the New York Children's Aid Society and its founder, the Reverend Charles Loring Brace, this movement focused on helping delinquent and needy children from New York City's poorest classes by transplanting them to a more healthful environment. Under Brace's direction, thousands of children were transported on *orphan trains* from New York City slums to live with farm families in the expanding West. Although they were subsidized by the city and the state, Brace's orphan trains failed to live up to his ideals. The families with whom the children lived often took advantage of their labor and failed to provide them with even the basic necessities and education. Poor families resented having their children sent so far away, and eventually the western states complained about what they perceived to be the dumping of thousands of delinquent and needy children each year. The economic shift from an agrarian society to an industrial society reduced the

need for child labor on farms and further doomed this movement. Brace's conviction that family life was best for children and youth, however, continues to influence services for children to this day.

The first half of the twentieth century brought growing interest in the problem of juvenile delinquency. Investigation done by Dr. William Healy's Juvenile Psychopathic Institute led to the realization that the problem of delinquent children was not limited to the poorest classes. Further, delinquency was increasingly viewed as resulting from numerous factors, with the most prevalent being the lack of parental discipline resulting from the loss of one or both parents. Concurrently, it was becoming increasingly clear that efforts to punish offending youth did not deter future criminal action and that many of the youth who left institutions often returned. As a result, interest shifted to finding ways to treat troubled youth, rather than merely punish them, and led to the creation of the juvenile court system, which separated juvenile and adult offenders and focused on rehabilitation and cure. The first juvenile court law was enacted in Illinois in 1899, and by 1919 all but three states had established similar legislation.

Exploration into the causes of delinquency continued well into 1900s. Particularly influential were Richard Cloward and Lloyd Ohlin, who in a 1960 book advanced the opinion that young people turned to delinquency out of frustration with the lack of opportunity available to them. Opportunity theory suggested that providing at-risk youth with increased opportunity—particularly for economic success—could serve to prevent delinquency. As a result, services for children began to focus for the first time on the prevention of youth problems. One early such effort was the Mobilization for Youth Program, funded by the National Institute of Mental Health, which offered a comprehensive array of services including employment bureaus, training programs, education programs, antidiscrimination activities, and neighborhood service centers. Despite the mixed results of this program and others like it, the interest in prevention set the stage for the youth development efforts of the early twenty-first century.

### **Youth Development Programs in the Early Twenty-First Century**

In the early twenty-first century, youth development programs take a more positive or strengths-based approach to prevention. Rather than trying to keep teens from engaging in risky behaviors, youth devel-

opment programs focus on helping them grow into happy, healthy adults. This approach mandates a conceptual shift from thinking that “youth problems are the principal barrier to youth development to thinking that youth development serves as the most effective strategy for the prevention of youth problems” (Pittman and Fleming, p. 3). Although professionals and researchers have yet to agree on a single definition of youth development, they have identified a set of principles common to most youth development programmatic efforts.

First, youth development efforts focus on meeting needs and developing competencies for *all* youth, not just for those engaged in problem behaviors or perceived to be at risk for doing so. The youth development model assumes that because all youth must pass through a specific developmental process to become successful adults, all youth are at risk for problems.

Second, youth development replaces the deficit-based focus of public-health prevention models with a strength-based approach that focuses on meeting needs and building competencies, rather than solving problems and providing treatment. The needs that must be met and the competencies that must be built to ensure the transition to successful adulthood are outlined in Table 1.

Third, unlike the public-health prevention model's focus on individual behavior, youth development assumes that “the way to improve the lives of young people is to improve the communities in which they live” (Jarvis, Shear, and Hughes, p. 721). Thus, community-level variables, rather than individual-level variables, are targeted for intervention and play a key role in youth development initiatives. Youth development's focus on community-level interventions influences how youth development initiatives are structured and implemented. Specifically, youth development programs focus on the “creation of a supportive community for children and families” and mandates that community-wide support and participation must be objectives “not only within an initiative's institutional collaboration structure, but also between a community's institutions and those citizens who live within it” (O'Brien, Pittman, and Cahill, p. 8). In 1994 Karen J. Pittman and Shepherd Zeldin further maintained that the establishment of youth development as a policy goal “must become incorporated into public institutions of education, employment, training, juvenile justice and health services to be successful” (p. 15).

Finally, the youth development approach requires the active participation of youth in the planning, delivery, and evaluation of services. The notion of involving youth as partners, rather than simply as clients, is unique to the youth development approach and is deeply rooted in empowerment theory, which focuses on the process of individuals' gaining power in order to improve their life circumstances. These points are summarized in Table 2.

**Youth Development Programs and Education**

Schools are viewed as a critical component of community-based youth development efforts. Of particular interest are efforts to provide youth development activities in school buildings during nonschool hours. Such activities range from educational enrichment, career exploration and development, and social and recreational opportunities. Four basic models of school-based youth development programs have been identified.

The Beacons model was established in New York City in 1991 and implemented as part of a comprehensive antidrug strategy. The model is based on the premise that youth development and academic achievement are strengthened when parents and community residents are involved in schools and when gaps between the home and the school are minimized. School-based community centers were opened to create safe places for youth and families in poor neighborhoods beset with drugs and violence. In addition to keeping school buildings open sixteen hours a day, seven days a week, 365 days a year, the Beacons model strived to create an environment within each school that promoted youth development and resiliency.

The Bridges to Success model, a school-based youth development model developed by the United Way of Central Indiana, began in Indianapolis in 1991. This model seeks to increase the educational success of students by improving the ability of schools to meet the noneducational needs of students and their families through a partnership between educators and the local human and community-service delivery systems. Activities, including educational enrichment, career development, arts and culture, life skills, counseling, case management, health and mental health services, and recreation, seek to establish schools as lifelong learning centers and focal points within their communities.

**TABLE 1**

<b>Critical components of youth development</b>	
<p><b>Meeting Needs</b></p> <p>Young people have basic needs critical to survival and healthy development. These needs are:</p> <ul style="list-style-type: none"> <li>• Safety and structure</li> <li>• Belonging and membership</li> <li>• Self-worth and an ability to contribute</li> <li>• Independence and control over one's life</li> <li>• Competence and mastery</li> <li>• Self-awareness</li> </ul>	<p><b>Building Competencies</b></p> <p>To succeed as adults, youth must acquire adequate attitudes, behaviors, and skills in the following areas:</p> <ul style="list-style-type: none"> <li>• Cognitive and creative competence: broad base of knowledge; ability to appreciate and participate in creative expression; good oral and written language skills; problem-solving and analytical skills, ability to learn, and an interest in learning and achieving</li> <li>• Personal and social competence: intrapersonal skills (understanding of self), interpersonal skills, and judgment skills</li> <li>• Health and physical competence: good current health, plus evidence of appropriate knowledge, attitudes, and behaviors that will ensure future health</li> <li>• Vocational competence: broad understanding of vocational and avocational options and of the steps needed to act on choices; adequate preparation for chosen career; understanding of value and function of work (and leisure)</li> <li>• Citizenship competence: understanding of nation's and community's history and values; understanding of pluralism and ability to function in a heterogeneous society; the desire to be involved in efforts that contribute to nation and community</li> </ul>
<p><small>SOURCE: Adapted from Pittman, Karen J., and Cahill, W. E. 1991. <i>A New Vision: Promoting Youth Development</i>. Washington, DC: Center for Youth Development and Policy Research, Academy for Educational Development.</small></p>	

Developed by the Children's Aid Society of New York City and initially implemented in New York City's Washington Heights neighborhood in 1989, the Community Schools model seeks to provide a myriad of health and social services within a public school setting. Operating fifteen hours a day, six days a week year-round, community school activities include medical, dental, and mental health service; recreation; supplemental education; parent education; family life education; and summer programs. This model is based on the premise that children's educational outcomes cannot be separated from that

**TABLE 2****Comparison between traditional youth services and youth development programs**

<b>Traditional Youth Program Paradigm</b>	<b>Youth Development Program Paradigm</b>
Adolescent problems, such as teen pregnancy, substance abuse, and violence, are viewed as unique and unrelated.	Adolescent problems, such as teen pregnancy, substance abuse, and violence, are viewed as interrelated and rooted in similar causes.
Service providers develop specialties in particular problem areas and offer services independently.	Programs and services are developed through collaboration between providers, community members, and youth.
Services and programs are focused on correcting deficits.	Services and programs are focused on enhancing the potential for healthy youth development.
Youth have access to services if they are identified as having a problem or at risk of a problem.	All youth have access to services and programs aimed at helping them to avoid problems.
Adolescents are viewed as clients.	Adolescents are viewed as partners in planning and treatment.
Providing services to adolescents is viewed as a way to improve the community (by reducing problem behaviors and delinquency).	Improving the community is viewed as a way to nurture and support adolescents, thereby improving their lives.

SOURCE: Courtesy of author.

of their families and other community residents. As a result, the model seeks to transform schools into institutions that house a comprehensive array of services, provide a focal point for community life, and ultimately strengthen the entire community.

The fourth model, the West Philadelphia Improvement Corps, a program initiated at the University of Pennsylvania in 1985, features university-assisted schools. The underlying strategy of this model is to create a partnership between a school and a university that strengthens both institutions and produces positive outcomes for youth, university faculty and students, and the greater community. Specific programmatic activities include the development of enrichment activities, school-based health and social services, and community service projects. This model stresses community participation in program design and planning.

Private and public funders are expected to continue their push for school-based youth development efforts. Unlike programs offered in other community settings (such as churches and social-

service agencies), school-based programs are viewed as being able to reach many youth and eliminating or reducing issues related to disparities in access.

### Access to Youth Development Programs

A handful of studies have identified major discrepancies in access to youth development programs. In general, these studies have found that white or suburban youth have greater access to youth development activities than do their minority, urban, or rural counterparts. In addition, access to youth development programs also appears to be positively correlated with family income level.

In 1982 Judith Erickson found that members of youth organizations were more likely to come from families whose fathers were better educated or whose incomes were higher. Fred Newmann and Robert Rutter found in 1986 that private Catholic and alternative public schools were more likely to include community-service programs in their curriculum than regular public schools. Furthermore, larger schools and those with a larger minority population were also more likely to stress community service than smaller schools or those with predominantly white students.

In their 1985 examination of library distribution within communities, Mark Testa and Edward Lawlor found a link between family income and library availability. Specifically, they found that in Chicago neighborhoods where the median family income was below \$25,000, the average number of children per public library was twice the average number of children per library in neighborhoods with a median family income above \$25,000. Similarly, more than twice as much money was spent per child on the libraries in more affluent communities as compared to communities with lower family incomes.

Julia Littell and Joan Wynn further explored this issue in a 1989 study that compared the youth development opportunities available for middle-school-aged youth (eleven- to fourteen-year-olds) in two Chicago communities that differed strikingly on numerous socioeconomic factors including educational attainment, occupational status, employment rates, median age, and racial composition. One community, given the pseudonym "Innerville" by the authors, was a low-income African-American community on Chicago's west side. The other community, which the authors called "Greenwood," was an affluent suburban municipality with predominantly

white residents. They found stark differences in the number of community resources available for youth in these two communities. For every 1,000 youth aged eleven to fourteen, the inner-city community had 9.4 nonreligious organizations providing activities or facilities for youth, compared to 24.4 such organizations in the suburban community. In an average week, children in the inner-city community had access to 22.8 activities (per 1,000 youth aged eleven to fourteen), compared to 70.6 activities in the suburban community. In an average week, children in the inner-city community had access to 12.8 youth development activities offered through the public school (per 1,000 sixth through eighth graders), compared to 20.9 such activities for the suburban youth. Similarly, inner-city youth had access to 2.2 public-park programs (per 1,000 youth aged eleven to fourteen), compared to 18.2 public-park programs for youth living in the suburb. Finally, the urban youth had access to about 9.4 facilities each week (per 1,000 youth aged eleven to fourteen), whereas the suburban youth could access 42.4 facilities.

### **Evaluation of Youth Development Programs**

The effectiveness of youth development programs remains somewhat unsubstantiated because of the dearth of comprehensive, rigorous evaluations. In their 1999 review of more than sixty evaluation studies of youth-serving programs, Jodie Roth and colleagues were able to identify only six that used rigorous research designs. Findings from such studies, however, are generally promising.

As reported in 1995, an eight-site evaluation of the Big Brothers Big Sisters of America program found that after eighteen months youth who participated in the program were less likely to start using illegal drugs or to initiate alcohol use; were less likely to report hitting someone during the previous twelve months; earned moderately higher grades; skipped half as many days at school; skipped fewer classes; felt more competent about doing their schoolwork; and reported better relationships with peers and parents than the control group. No differences were found between the two groups in the number of times they stole or damaged property, were sent to the principal's office, engaged in risky behaviors, fought, cheated on a test, or used tobacco. There were no statistically significant gains in self-concept or in the number of social and cultural activities in which the youth participated.

As outlined in a 1994 report, a longitudinal study of the Quantum Opportunities Program, a multiservice youth development program operating in five states, identified several long-term positive effects of participation. Compared to the control group, program participants had significant increases in academic skills and educational expectations; were more likely to have graduated from high school or received their GED; were more likely to attend a postsecondary school; were less likely to have been in trouble with the police within the previous twelve months; and had fewer children. Additionally, 22 percent more participants received honors or awards during the previous twelve months and 30 percent more were involved in community service within six months of finishing the program. No differences were found in grades or knowledge about contraceptives and AIDS.

A 1997 evaluation of an effort to promote inter-racial, interethnic, and intercultural harmony among youth found that the treatment group (which numbered 244) had significant improvements in reported school attendance and race relations and significant decreases in drug and alcohol use in the previous month compared to the control group (which numbered 471). Program participants also tended to report higher self-esteem, less drug and alcohol use for the previous year, and greater control of aggressive behavior.

An evaluation of the ADEPT Program, a comprehensive after-school program focusing on building positive self-esteem and providing homework assistance and activities for social and emotional growth, found that the program did not have any measurable effects on personality variables, such as self-esteem, risk-taking behavior, depression, and in-class behavior. Further, there was no positive program effect on standardized test scores. There was, however, a statistically significant improvement in average standardized test scores for students who received the self-esteem-building curriculum.

A two-year, longitudinal study of ten after-school programs offering alternative supports to improve educational achievement found that, two years following program completion, program youth received significantly higher grades than comparison group students in mathematics, science, social studies, reading and composition. Further, program participants showed greater improvement in their reported effort in science and social studies. The students who participated in the program for

two or more years held significantly more positive attitudes about themselves and school; felt safer during the after-school hours; knew more people in college; had higher educational expectations; and liked school more than nonparticipants.

A three-year longitudinal study of the South Baltimore Youth Center featuring multiple comparison groups found that the program had a significant impact on participants. The amount of self-reported alcohol consumption increased significantly less than the comparison group for youth who participated in the program's social activities such as mentoring, tutoring, and job training. Further, the self-reported amount of drug use decreased significantly for the program youth during the study. The amount of self-reported delinquent behavior, both minor and serious, decreased significantly for the program youth. There were no differences, however, in the pro-social behavior of either group.

### Issues Regarding Youth Development Programs

The required level of community-wide collaboration, the basic tenants of the youth development approach, and limited evaluation efforts are all barriers to widespread implementation of youth development programming.

**Community-wide collaboration.** The high level of community-wide collaboration required for successful youth development efforts has been identified by many researchers as posing a significant barrier to successful adoption of this approach. Previous research has documented that collaboration is often the element that distinguishes between successful youth development initiatives and those that fail. Both Marian W. Edelman, in 1987, and R. Jenkins, in 1989, concluded that targeting critical needs with proven programs is secondary to establishing broad community support in ensuring the long-term success of youth development interventions.

While both practitioners and researchers agree that community-wide collaboration is critical for youth development efforts to be successful, they concede that garnering such support is often difficult. Specific barriers to community-wide support include the lack of clarity regarding the concept of youth development and outcomes associated with it, the lack of clear leadership in many youth development efforts, and the wide range of values and perspectives that participants bring to the collaboration. Until such barriers to collaboration can be meaning-

fully addressed through research and practice, youth development initiatives will continue to prove to be difficult to implement and to maintain.

**Conflict with youth development philosophy.** Several studies have found that the basic tenants of the youth development approach prove troublesome for many participants in youth development initiatives. Faced with many pressing community needs, collaborators may have difficulty prioritizing prevention over treatment, and, as a result, it is often more difficult to mobilize parents, community leaders, policymakers, and service providers around promoting overall health or wellness than attacking a specific problem or crisis. Joan Wynn and her colleagues also noted the challenge of shifting institutional attention from "day-to-day survival and maintenance toward a more 'future' orientation" (Wynn, Costello, Halpern, and Richman, p. 48).

In addition, collaborators frequently have different viewpoints regarding another hallmark of the youth development approach: the involvement of youth and families in planning and policy development. One reason for this challenge is the lack of a theoretical framework that practitioners may use to guide collaborative efforts. However, work by N. Andrew Peterson and colleagues may begin to fill this gap. In a 1996 report, the National Clearinghouse on Families and Youth contended that while many youth-serving agencies believe in client participation, putting that belief into practice to the extent required by youth development is often a challenge for many community organizations.

Finally, researchers have hypothesized that embracing youth development may be particularly difficult for social service agencies, whose philosophies, programs, and funding are likely to be deeply rooted in the traditional youth services paradigm. In 1995 Joan Wynn and her colleagues contended that such a paradigm is often too narrow to accept the broader youth development perspective, and, as a result, many of these agencies find it particularly difficult to institute the fundamental changes needed to embrace youth development. Funding streams that favor treatment and intervention over prevention may further discourage agencies from shifting services to the youth development paradigm.

**Limited evaluation efforts.** The lack of rigorous evaluation efforts has also limited more widespread adoption of the youth development approach. In its 1992 review of evaluation of youth-serving pro-

grams, the Carnegie Council on Adolescent Development identified several reasons for the lack of evaluative effort. First, they found that many agencies failed to allocate appropriate resources for outcome evaluation. Second, they found that many existing evaluations had weak evaluation designs and as a result their findings were unclear at best. Third, the staff of youth development programs were often resistant to participating in evaluation efforts. Finally, the council found that no clear, universally agreed-upon outcome measures for youth development programs had been identified. The council, however, felt that improving the state of youth development evaluation was critical to expanded implementation.

*See also:* CLUBS; COMMUNITY EDUCATION; NEIGHBORHOODS; URBAN EDUCATION; YOUTH ORGANIZATIONS.

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DONNA VAN ALST  
N. ANDREW PETERSON

## YOUTH ORGANIZATIONS

### AMERICAN FIELD SERVICE

Arthur Howe Jr.

### BIG BROTHERS BIG SISTERS OF AMERICA

Raymond J. Hoffman

### B'NAI B'RITH YOUTH ORGANIZATION

Max F. Baer

### BOYS AND GIRLS CLUBS OF AMERICA

Cheri Tiernan

### BOYS AND GIRLS STATES

James C. Watkins

### BOY SCOUTS OF AMERICA

Lee Shumow

### CAMP FIRE USA

Rosemary Kornfeld

### DISTRIBUTIVE EDUCATION CLUBS OF AMERICA

Harry A. Applegate

### FOUR-H PROGRAMS

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### GIRL SCOUTS OF THE USA

Lee Shumow

### HOSTELLING INTERNATIONAL—AMERICAN YOUTH

HOSTELS

Sam Shayon

### NATIONAL FORENSIC LEAGUE

James M. Copeland

### NATIONAL FUTURE FARMERS OF AMERICA

ORGANIZATION

A. Daniel Reuwee

### QUILL AND SCROLL

Lester G. Benz

### SKILLSUSA—VICA

Thomas W. Holdsworth

Jane A. DeShong Jones

### YOUNG MEN'S CHRISTIAN ASSOCIATION

Joe A. Pizarro

### YOUNG MEN'S HEBREW ASSOCIATION AND YOUNG

WOMEN'S HEBREW ASSOCIATION

Bernard Postal

### YOUNG WOMEN'S CHRISTIAN ASSOCIATION

Edith M. Lerrigo

### INTERNET RESOURCE

NATIONAL YOUTH DEVELOPMENT INFORMATION CENTER. 1999. "Definitions of Youth Develop-

### AMERICAN FIELD SERVICE

The American Field Service (AFS) is a nonprofit volunteer-based educational organization concerned

with promoting understanding among people throughout the world. Its purposes are to involve high school students, young adults, and teachers in the family, community, and school life of other nations.

### **Program**

Each year the AFS sends more than 10,000 students, young adults, and teachers to a foreign country through one of its several international exchange programs. Through its Americans Abroad Program, the AFS annually provides opportunities for approximately 1,700 American high school juniors and seniors to live and study in one of forty-four foreign countries for a year, a semester, or a summer. Each year, the AFS also brings approximately 2,500 high school students from more than fifty countries to the United States to live for one year or one semester with an American family and attend the local high school. High school graduates can participate in the AFS Community Service Program, which sends men and women for four months to a year to one of twenty countries to perform volunteer work. Community Service volunteers may work with street children, orphans, or people with disabilities. Volunteers may also tutor children in local schools or participate in community development and environmental programs.

Through its Global Educators Program, the AFS sends American teachers, counselors, and educational administrators to Argentina, China, Indonesia, Mexico, South Africa, Spain, Thailand, and several other countries. Exchange educators live with host families and teach in local schools for one month or one semester. The AFS also brings teachers from other countries to live and teach in the United States for a semester or a year.

AFS programs are administered in cooperation with volunteer organizations throughout the world and with the help of local volunteer chapters in the U.S. communities where students are placed. Participating students and teachers must pay their own program fees. The AFS helps by offering more than \$1 million each year in financial aid and scholarships through the Awards for Excellence Merit Scholarship, the AFS World Citizen Scholarship, the Stephen Galatti Scholarships, and other AFS scholarship and financial aid programs.

### **Organization**

The AFS is controlled by fifty international trustee members, who meet annually to review policies,

guide the development of programs, and elect a board of directors, which conducts the organization's business throughout the year. In most foreign countries participating in AFS programs, a small paid staff coordinates the work of volunteers and serves as liaison with international headquarters. In some counties, a private citizen, a binational center director, or a cultural assistant on the U.S. embassy staff handles the representation procedures.

### **Membership**

In the United States there are approximately 3,000 chapters that represent the AFS program in every high school in which an overseas student is placed. These schools are eligible to nominate candidates for the AFS Americans Abroad Program. Each chapter assumes financial responsibility for an overseas student; many chapters also raise funds to assist needy Americans Abroad students.

### **History**

In 1914 Americans residing in Paris, France, organized the AFS as a volunteer ambulance service to assist French hospitals in the evacuation of the wounded from the French war front. Additional volunteers formed both ambulance and trucking units under the command of the French armies. After World War I the remaining funds were used to operate a postgraduate scholarship program for the exchange of American and French students. During World War II the AFS provided ambulance drivers for the French forces and later for the British forces in the Middle East. Units also served in Italy, France, Germany, and on the India–Burma front. The international scholarship exchange program began in 1947 when fifty-two students came from ten countries to the United States for one year. Since then, nearly 290,000 students have participated in AFS exchange programs.

#### **INTERNET RESOURCE**

AMERICAN FIELD SERVICE. 2002. <[www.afs.org](http://www.afs.org)>.

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## **BIG BROTHERS BIG SISTERS OF AMERICA**

Big Brothers Big Sisters of America is a social service organization that provides guidance for young boys

and girls who lack normal parental and family relationships. Big Brothers Big Sisters of America is committed to the principle that every boy and girl needs adult companionship, and it encourages mature, responsible men and women to offer friendship and counsel to boys and girls who have been deprived of such support from their fathers, mothers, and other adult family members.

### **Program**

Big Brothers Big Sisters of America serves member agencies in the United States and Canada. It enlists dedicated men and women from all walks of life to help guide, instruct, and influence young girls and boys from economically and educationally disadvantaged backgrounds. Adult volunteers (called “Bigs”) dedicate themselves to developing positive social and educational attitudes in young boys and girls. As a result of their assignments to Big Brothers Big Sisters, boys and girls have shown marked improvement in schoolwork and decreases in juvenile behavioral problems. According to the organization’s national office, children involved in the program have developed more positive attitudes toward school, achieved higher grades and better attendance records, strengthened their relationships with family members and peers, and demonstrated higher levels of self-confidence and trust. Boys and girls in the program were also less likely to become drug and alcohol abusers.

Although there is no structured educational program, all men and women who volunteer as Big Brothers or Big Sisters are concerned with helping boys and girls learn the best ways of relating to society. Many Big Brothers Big Sisters agencies have a High School Bigs program in which mature teenagers can serve as mentors and role models for at-risk elementary and middle school children. In some communities, agencies work with local police departments to provide early intervention for first-time juvenile offenders by matching them with a Big Sister or Big Brother. In most instances, referrals to Big Brother agencies come from local schools.

Big Brothers Big Sisters staff carefully screen prospective volunteers, then match them to children with whom they can form a useful, harmonious, and long-lasting relationship. Adult volunteers undergo orientation before meeting the child to whom they are matched. After the organization brings together the child and adult, the pair will meet regularly to go to movies and shows, visit museums and parks,

attend sporting events, and engage in various other activities and outings. Bigs may also help children with schoolwork and talk to them about problems at home. Big Sisters and Big Brothers are free to spend as much money as they wish while with the child.

### **Organization**

In some large metropolitan centers there may be several separate Big Brothers Big Sisters agencies that help match children and adults. Most smaller communities have only one such agency. A large national board determines program policies and standards for all Big Brothers Big Sisters agencies. A small paid staff at the national headquarters organizes regional professional staff conferences, council meetings, and an annual meeting at which all agencies are represented. Each local agency has its own board of directors. Many of the local agencies receive a portion of their support from local United Way appeals; much of the work is financed by contributions from foundations, private donors, and corporate partners.

Big Brothers Big Sisters of America is affiliated with Big Brothers Big Sisters International (BBBSI). Established in 1998, BBBSI promotes and supports the development of Big Brothers Big Sisters-type programs throughout the world by offering materials, funding, consultation, and professional training. Agencies have been established in many countries, including Australia, Poland, South Africa, Japan, and Israel.

### **Membership**

The work of Big Brothers Big Sisters of America is carried out at the local agency level, where volunteers are interviewed and screened prior to being accepted as Big Brothers or Big Sisters. Boys and girls are also introduced to the program at the local agency level, where an adult and a young person are assigned as a team. No dues or fees are charged either to the adults or children. Most youths who take part in the program are between the ages of ten and fourteen. The majority are boys; about half are minorities. Most of the children come from low-income households and single-parent families, many of which have a history of substance abuse or domestic violence.

### **History**

The Big Brother concept of one man working with one boy began in 1904 in New York City as a result

of a clerk's interest in children's court. The clerk, who was concerned with the increasing rate of juvenile crime, spoke to a church men's club about the problem. As a result, each man in the club agreed to befriend a boy who had experienced behavioral problems. Later that year, an organization called Catholic Big Sisters was formed in New York; it was the first known Big Sisters program in the country. Although other similarly motivated groups joined the movement, Big Brothers of America was not officially organized until after World War II. The organization undertook a growth and development program that encouraged communities to form agencies. It sought highly skilled social workers to staff local agencies; launched a public information program; and initiated a research program to determine need, effectiveness, and value for the national organization and its local affiliates.

By 1970 there were 192 member agencies in the United States and Canada, with 175 other communities in the process of organizing agencies. In 1977 separate Big Brothers and Big Sisters organizations merged into Big Brothers Big Sisters of America and the national headquarters was established in Philadelphia, Pennsylvania. By 2001 the organization had over 500 affiliates in communities across North America.

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### B'NAI B'RITH YOUTH ORGANIZATION

The B'nai B'rith Youth Organization (BBYO) is an international organization whose purpose is to help

young Jewish people achieve personal growth so that they may lead satisfying and socially useful lives in the Jewish community and in the larger community in which they live. The BBYO encourages its members to participate in a broad program of cultural, religious, community service, educational, human relations, athletic, and social activities.

#### Program

All BBYO activities are designed as learning experiences. The community-service program combines fund-raising and personal service. Each local chapter contributes to the International Service Fund. The money is used for leadership training activities within the BBYO and for such philanthropic organizations as the Leo N. Levi Memorial Hospital in Hot Springs, Arkansas; the B'nai B'rith Children's Home near Jerusalem in Israel; the Kennedy Center for the Performing Arts in Washington, D.C.; the United Nations Educational, Scientific and Cultural Organization (UNESCO); Cooperative for Assistance and Relief Everywhere (CARE); and many others. B'nai B'rith Youth Organization groups also participate in local Jewish Welfare Fund campaigns, local health drives, and other local community-service efforts. The BBYO operates two camps for members: the B'nai B'rith Perlman Camp in Starlight, Pennsylvania, and the B'nai B'rith Beber Camp in Mukwonago, Wisconsin. In addition, the BBYO sponsors summer exchange programs for members to study and work in Israel, with Israeli teenagers traveling to the United States and other countries.

In the area of personal service, the BBYO sponsors the Adopt-a-Grandparent Program, in which youngsters provide companionship to the aged in or out of institutions. B'nai B'rith Youth Organization groups also entertain and help children in hospitals, homes, and other institutions. BBYO members read to the blind and help the physically and mentally handicapped. Further BBYO activities include tutoring underachievers, taking disadvantaged children to museums and recreational events, and collecting books for use in economically deprived areas.

The BBYO also sponsors various interfaith initiatives and runs the College Ambassador Alumni program and the Holocaust Expression Theatre. Religious services and holiday celebrations, as well as contests in athletics, drama, oratory, storytelling, creative writing, sermon writing, music, and visual arts are held at the chapter level. Local winners pro-

ceed through chapter and regional levels to the international finals held at Perlman or Berber Camp.

The BBYO publishes numerous pamphlets about Judaism for use by teenagers. The organization also publishes adviser newsletters, various program guides and other program aids, and newspapers called *Shofar* and *The Commish*.

### Organization

The BBYO is a federation of three youth organizations: the Aleph Zadik Aleph (AZA) for high school boys, the B'nai B'rith Girls (BBG) for high school girls, and the B'nai B'rith Teen Connection for middle school boys and girls. Each local chapter has a volunteer adviser who is supervised by the professional staff of social group workers. Chapters are united into regions, each of which has a youth structure, an adult policymaking structure, and a professional staff structure. There are thirty-seven BBYO regions in North America, which report directly to the BBYO International Executive Board. The international office is responsible for setting standards and goals, budget and staffing, and publications. Most programs and activities are organized at the local level.

### Membership

Because Jewish aspirations are emphasized, membership is open only to Jewish youths. Parents of BBYO members need not be affiliated with the larger B'nai B'rith organization. By 2000 the BBYO had more than 50,000 members in over 1,500 chapters throughout the world.

### History

The B'nai B'rith youth movement originated in 1924 in Omaha, Nebraska, with a single chapter of sixteen boys who opposed the exclusive high school and college social fraternity system. Three other chapters were formed during the same year, and the four groups held their first convention in July 1924. In 1925 the youth organization received official sponsorship by the B'nai B'rith organization. The first chapter of B'nai B'rith Girls was founded in 1927 in San Francisco, California. In 1944 the two organizations merged and became the BBYO. The Teen Connection was established later to meet the needs of younger boys and girls.

### INTERNET RESOURCE

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### BOYS AND GIRLS CLUBS OF AMERICA

The Boys and Girls Clubs of America's tradition of service to the nation's youth began in 1860, when the first Boys Club was established in Hartford, Connecticut. Since then the organization has grown to serve millions of young people in thousands of Boys and Girls Clubs across the country.

The national organization—originally named Federated Boys Clubs, and later Boys Clubs of America—was founded in 1906 by the fifty-three local Boys Clubs in existence at that time. The purpose of the organization was to provide leadership and programs for member clubs, and to help establish new clubs in disadvantaged communities. In 1990 the name became Boys and Girls Clubs of America (B&GCA), reflecting an expanded mission of service to all young people who need the support, guidance, and character-development experiences the clubs provide.

In the closing years of the twentieth century, Boys and Girls Clubs of America experienced dramatic growth, chartering more than 1,000 new club locations. Many factors contributed to this successful outreach effort, among them the dedication of national volunteers—men and women whose experience and knowledge are drawn upon to advise and strengthen the organization. Strong partnerships with committed corporations and foundations also provide invaluable support, helping raise funds and awareness on behalf of Boys and Girls Clubs of America and local clubs.

B&GCA's efficient use of financial resources has won national recognition. In a 2000 "Philanthropy 400" report, *The Chronicle of Philanthropy* ranked B&GCA thirteenth among all nonprofit organizations, while placing B&GCA in the number one position among youth organizations for the seventh consecutive year. *Forbes*, *Fortune*, *Money*, *Newsweek*, and *U.S. News and World Report* have all ranked B&GCA among the top charitable organizations in America, based on cost-effective use of donor dollars. *SmartMoney* magazine ranked B&GCA as one

of the two top children's charities, and among the top ten of all nonprofit organizations, based on financial efficiency, strength of reputation, and program effectiveness.

Boys and Girls Clubs of America continues to maximize its human and financial resources to reach more young people and communities in need. At the beginning of the twenty-first century, an estimated 15 million American children live in poverty. Half live in urban areas, and many face serious obstacles to achieving productive futures, but all deserve the chance to achieve their full potential as productive, responsible, and caring citizens and leaders.

B&GCA's commitment to growth and quality is based on its concern for deserving youth, as well as the national interest: soon these boys and girls will become the mainstay of America's economy. Club programs and services promote and enhance the development of boys and girls by instilling a sense of competence, usefulness, and power. By aiding their development, all of society benefits.

B&GCA is especially committed to high-quality after-school programming. According to the U.S. Department of Justice, nearly half of all juvenile crimes occur on weekdays between 3 P.M. and 8 P.M. B&GCA's proven after-school programs not only keep children safe and out of trouble, they also provide a prime opportunity to increase learning. Young people in B&GCA's after-school programs show better achievement in math, reading, and other subjects.

Among the children in greatest need are those living in America's public housing developments. In 1986 fewer than forty clubs operated in public housing. By the end of the twentieth century, however, more than 400 public housing-based Boys and Girls Clubs served more than 150,000 youths. This number grows steadily, thanks to effective collaboration between clubs, schools, housing authorities, government agencies, and private funding sources.

B&GCA continues to break new ground, reaching out to at-risk youth in nontraditional ways. Boys and Girls Clubs work with young people in schools, homeless shelters, shopping malls, and on military bases and Native American lands.

Boys and Girls Clubs of America's mission is to inspire and enable all young people, especially those from disadvantaged circumstances, to realize their full potential as productive, responsible, and caring citizens. While America's youth face many difficult

challenges, Boys and Girls Clubs continue their tradition of offering proven solutions that work. Clubs have provided millions of girls and boys with daily character-development programs, firmly establishing a nationwide reputation as "The Positive Place for Kids."

CHERI TIERNAN

## BOYS AND GIRLS STATES

Boys State and Girls States are educational programs aimed at teaching American high school students the duties, privileges, rights, and responsibilities of American citizenship. Boys State programs are funded and organized by the American Legion; Girls State programs are funded and organized by the American Legion Auxiliary. The program provides teenagers with hands-on experience in government by enabling them to participate in the practical functioning of fictional "states."

### Program

The content and method of Boys State and Girls State programs vary from state to state, but all adhere to the basic goal of teaching about government from the city to the state level. Most state programs last for one week, but some run for as many as fourteen days. Enrollments also vary, with as few as 25 to as many as 1,500 participants in a single "state." Most state programs are held at a college campus or other educational institution.

Participants in Girls State and Boys State programs become citizens of a mythical fifty-first state. As such, they help plan and execute all the main functions of the state, guided by the basic laws and procedures of the actual state where the program is being held. The practical and nonpartisan program is designed to teach students how government actually works in a democratic society.

On arrival, each boy or girl is assigned to a "city," where he or she joins other "citizens" in establishing a city government. They begin by electing a mayor and other city officials, including perhaps a city administrator, city council members, judges and district attorneys, and a sheriff. The newly established city government then enacts and enforces ordinances to govern the city. In larger Boys State and Girls State programs, cities may be organized into counties, which establish county governments. Participants in larger programs may also set up banks, post offices, schools, clinics, and even stores.

At the beginning of the program, each participating student is appointed to an imaginary political party. Most Boys State and Girls State programs include two parties (e.g., Tories and Whigs, Nationalists and Federalists). The two parties are not modeled after the real Republican and Democratic parties, but are meant to teach participants how political parties function and how a two-party system of government works. Party members develop their own party platforms, highlighting issues the participants think are important. Citizens of each party nominate members to be candidates for various city and county offices. They also hold caucuses and political conventions to nominate party members for state office, after which candidates run campaigns and statewide elections are held. Some states even hold inaugural ceremonies after elections, where the new “governor” and other officials take an oath of office.

Elected officials then form state governments and name various appointive officials, including perhaps an attorney general, a secretary of state, and a state treasurer. State officials also establish a supreme court and lower courts, where citizen attorneys defend and prosecute lawbreakers. In addition, citizens elect state representatives and senators and form a functioning legislature.

Each Boys State and Girls State also includes “journalists,” who interview candidates and public officials, report on events within the city and state, and write editorials. The state paper is edited, printed, and published by the student participants themselves, with the goal of teaching the importance and function of a free press in a democratic society. In most states, a newspaper will be published each morning with the news of the preceding day. A summary journal may be published at the end of the program.

During the program, participants also engage in seminars where they discuss subjects pertaining to government, law, and politics. Real public officials and professional leaders often present special lectures about government and citizenship. Student participants are further guided by volunteer adult counselors, most of whom are actual attorneys, judges, teachers, law enforcement officials, and civil servants.

Every year, outstanding “citizens” from the Boys State and Girls State programs around the country are chosen to participate in the Boys Nation

and Girls Nation programs in Washington, D.C. In these programs, run by the national American Legion and American Legion Auxiliary organizations, students take on the roles of “senators,” representing their state within a fictional federal government.

### Membership

The majority of participants in Boys State and Girls State programs are high school juniors or seniors who have been sponsored by an American Legion post or auxiliary unit. Students interested in taking part in a Boys State or Girls State program must apply to their local legion post. Application procedures and selection criteria vary from state to state, but in most cases, applications are reviewed by a board of legion members who select the best candidates. The board may require applicants to undergo an interview before final appointment. In general, the legion is looking for candidates with above average academic records, demonstrated leadership abilities, and high moral character. Applicants must also show an interest in government, current events, and public service.

Financial support for Boys State and Girls State programs comes from the budgets of the American Legion and American Legion Auxiliary national organizations, as well as the state and local legion and auxiliary units. Additional funding is provided by local businesses and other civic and nonprofit organizations. Student participants pay no fees.

### History

The American Legion Department of Illinois conducted the first Boys State program in 1935 at the Illinois State Fairgrounds in Springfield, Illinois. Two Illinois Legionnaires, Hayes Kennedy and Harold Card, initiated the program to counter the influence of the Young Pioneer Camps being promoted by the Communist Party during the 1930s. The Legion Auxiliary of the District of Columbia initiated the first Girls State program in 1938. The first Boys Nation, then called Boys Forum of National Government, was held in 1946. The first Girls Nation was held the following year. By 2000 Boys State and Girls State programs were held annually in every American state except Hawaii.

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## BOY SCOUTS OF AMERICA

The Boy Scouts of America (BSA) provides educational programs for boys and young men that can be delivered through local organizations. The aims of the BSA programs are to develop character, citizenship, and fitness among its members. The Scout promise (oath) and scout laws identify the specific virtues the BSA wishes boys to pursue. Those virtues are honesty, loyalty, helpfulness, friendliness, courteousness, kindness, obedience, optimism, courage, thriftiness, cleanliness, and reverence.

The BSA programs attempt to achieve the stated aims and develop the identified virtues through several methods. First, adult scout leaders are meant to serve as role models who guide members through an advancement system. Second, scouts select activities in their small groups, and each member is expected to take on and share leadership roles. Third, as members demonstrate that they have attained skills through mastering and completing specific challenges set forth in the manuals, scouts earn awards, badges, and advancements to the next level of scouting. Community service and outdoor activities are central features of the programs.

### History

At the beginning of the twentieth century there was a general consensus, both in the United States and Europe, that boys needed educational and recreational activities beyond those provided by schools. In 1910 William Boyce, a publisher from Chicago, incorporated the BSA, after meeting with Robert Baden-Powell, the British author of *Scouting for Boys*. On incorporation in the United States, the Young Men's Christian Association (YMCA) undertook to support the formation and maintenance of Boy Scout programs by community organizations. The Sons of Daniel Boone, founded by Daniel Beard, merged with the BSA and Beard became the first national scout commissioner. Ernest Seton, who had founded the Woodcraft Indians, became the first volunteer national chief scout. The U.S. Congress chartered the BSA in 1916. Membership grew rapidly to approximately 850,000 boys by 1930.

### Legal Status and Governance

Although the BSA holds a congressional charter, the U.S. Supreme Court has affirmed that the BSA is a private organization that can restrict membership. The BSA has chosen to exclude atheists and homosexuals from both membership and volunteer positions. The exclusionary policy has been highly controversial.

Local community and religious organizations sponsor troops led by adult volunteers. The national executive board, made up of volunteers representing local councils, sets guidelines and approves materials and content of leader training and scouting programs. The executive board elects the chief executive who is responsible for operating the BSA. There are several thousand paid employees who administer the organization. Throughout the United States there are 300 local councils organized into twenty-eight areas in four regions.

### Membership

Boy Scouts may be seven through twenty years of age. The initial programs, which are family and home based, are Tiger Cubs for first graders (seven years old), Cub Scouts for second through fifth graders (eight through ten years old), and Webelos Scouts for fourth and fifth graders preparing to be Boy Scouts. Boys in the initial programs attend meetings in dens comprising about eight to ten boys, and the dens are organized into packs. Boy Scouts, who are eleven through seventeen years old, are organized into patrols of five to eight boys who are part of larger troops. Varsity Scouts are fourteen through seventeen years of age. Venturer Scouts are boys or girls from fourteen through twenty years old. Approximately four percent of Boy Scouts earn the Eagle Scout rank, the highest advancement in Boy Scouting, which is obtained by accomplishing specific requirements and badges. In the year 2000 there were approximately one million active scout members and half a million adult volunteers in 52,582 troops.

### Publications

The BSA publishes the magazines *Boys' Life* and *Scouting*. Handbooks are published for boys and leaders at each level of Boy Scouts. Pamphlets, training manuals, and guidebooks provide information for members, parents, and leaders.

## Influence and Significance

Few independent external evaluations of the BSA are available. However, several small studies point to benefits of participation, such as a positive sense of self, leadership skills, work habits, and a sense of responsibility to the community through participating in the Boy Scouts.

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LEE SHUMOW

## CAMP FIRE USA

Camp Fire USA is a national youth organization that offers leisure-time education and recreation programs to all girls and boys from preschool through twelfth grade. The aim of the organization is to assist girls and boys in preparing for adult life through gradually more complex experiences.

### Program

Camp Fire USA's programs are designed to be youth-centered and fun but with serious learning goals, such as fostering tolerance, building friendships and relationships with adults, developing a sense of family and community, and providing service to others in need. Unlike many youth organizations, Camp Fire programs do not segregate boys and girls. All clubs and activities are coeducational. The four program levels of Camp Fire USA are: Starflight for boys and girls from kindergarten through second grade, Adventure for children in third through fifth grades, Discovery for children in sixth through eighth grades, and Horizon for boys and girls in ninth through twelfth grades. Each year some 200 Camp Fire members are named Wohelos, the organization's highest honor.

Most Camp Fire clubs include eight to twenty members who meet at least once a week after school, in the evenings, or on weekends. Each club is lead by one or more adult volunteers. At meetings members may play games, sing and dance, learn crafts, and explore nature. Camp Fire clubs also visit interesting and educational places and take camping trips. Older members engage in community-service activities, such as visiting homes for senior citizens, serving food at a homeless shelter, or tutoring younger children.

Camp Fire USA sponsors special self-reliance and community-service classes. These include I'm Safe and Sure, to teach children in kindergarten and first grade about home safety and family responsibility; Count on Me Kids, to teach children in kindergarten through second grade about alcohol and drug prevention; I Can Do It! to teach second and third graders about safety and nutrition; I'm Peer-Proof, to teach fourth through sixth graders how to build friendships and resist negative peer pressure; I'm Taking Care, to teach fifth and sixth graders how to care for younger children; and A Gift of Giving, to teach kindergarten through sixth-grade children to identify community needs and get involved in worthwhile community-service projects.

Camp Fire clubs are actively involved in teen leadership development. Every two years Camp Fire USA organizes a Youth Leadership Forum, during which hundreds of Horizon members gather to discuss issues of importance to society. In 2001 the forum addressed violence and how to combat it. Camp Fire teenagers also spend time exploring career possibilities.

### Organization

Camp Fire programs are carried out by 120 Camp Fire USA councils serving over 650,000 boys and girls annually in forty states and the District of Columbia. Each council oversees the work of numerous local clubs. Camp Fire USA has a national executive director and policymaking body called the National Council. Representatives from the regional councils serve on the National Council.

### Membership

Camp Fire USA accepts members without regard to race, gender, socioeconomic status, disability, sexual orientation, or religious affiliation. Most boys and girls who participate in Camp Fire programs are between the ages of five and eighteen. They are guided

by adult volunteers and are sponsored by individuals and by civic, religious, fraternal, educational, and other organizations. Financial support is derived from membership in the United Way, private and corporate donations, the sale of official merchandise, program fees, and membership dues. The organization also raises funds through its annual fundraiser, the Camp Fire candy sale.

### History

Camp Fire Girls was founded in 1910 by Luther Gulick, a medical doctor, and his wife, Charlotte. It was the first nonsectarian organization for girls in the United States. The organization began including boys in 1975 and changed its name to Camp Fire Boys and Girls to emphasize the coeducational nature of the programs. The organization changed its name to Camp Fire, Inc., in 1984. By 2001 boys accounted for 46 percent of Camp Fire membership.

In 1999 the organization adopted a new mission statement: "Camp Fire builds caring, confident youth, and future leaders." In 2001 the organization changed its name to Camp Fire USA and launched a major image-awareness campaign, which included television, radio, and magazine spots designed to educate the public about the value and mission of Camp Fire programs.

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### INTERNET RESOURCE

CAMP FIRE USA. 2002. <[www.campfireusa.org](http://www.campfireusa.org)>.

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## DISTRIBUTIVE EDUCATION CLUBS OF AMERICA

Distributive Education Clubs of America (DECA) is a youth organization for American and Canadian high school and college students interested in business, marketing, management, and entrepreneurship. The major goals of the organization are to prepare students for careers in business and market-

ing; to develop the leadership abilities, self-confidence, and citizenship of DECA members; to engender an understanding of the free enterprise system; and to foster in its members a healthy competitive spirit, high standards of business ethics, and proper social and business etiquette. DECA works in cooperation with high school and college marketing and business education programs.

### Program

DECA programs are designed to create interest in all phases of marketing management and distribution study and to provide avenues of expression for individual talent. DECA programs offer members the chance to learn about marketing and international business, become involved in commerce, and develop leadership, competitive, and interpersonal skills. Chapter programs, which are always classroom centered, usually include the cooperation of the local business community; most national programs are run in partnership with national and international corporations. Such partnerships offer DECA members the chance for practical application of the skills and concepts they learned in the classroom. In addition DECA's partnerships with business afford members the opportunity to meet professional businesspeople, giving budding young entrepreneurs and marketers a head start in forming the networks of associates they will need for a successful career in business. Operation Holiday Help, for example, is a popular DECA program through which students who want to work during the holiday season are offered opportunities for on-the-job training and an introduction to local businesses.

DECA sponsors a variety of leadership development and competitive events programs, including the Creative Marketing Project, the E-Commerce Business Plan Event, the Free Enterprise Event, and the Civic Consciousness Project. DECA also sponsors numerous creative marketing projects, through which members study and survey the economic development of their communities. Many local, state, and international businesses employ DECA members because of their interest in and related study of that particular business. DECA contributes to the employability of its members by encouraging and conducting competitive activities in such areas as advertising, sales, job interviews, public speaking, public relations, online advertising design, marketing studies, and management decision-making.

DECA sponsors numerous marketing-related meetings, seminars, workshops, and conferences. State and regional DECA Leadership Conferences are held every fall, leading up to the annual International Career Development Conference. A popular Apparel and Accessories International Marketing and Finance Mini-Conference is held every year in New York City. An annual Sports and Entertainment Marketing Conference focuses on such activities as advertising, promotions, and niche groups. DECA's State Officer Leadership Institute, held each summer in Washington, D.C., teaches DECA state officers how to successfully fulfill their responsibilities.

DECA encourages high school students to stay in school and continue their education at postsecondary institutions by offering scholarships and awards to exceptional and needy DECA members. DECA presents more than \$125,000 each year to winners in competitive events and awards more than \$250,000 annually in scholarships. DECA's most important recognition program is the National Marketing Education Honor Award, given to outstanding high-school-senior business students and DECA leaders.

The association's national publications include *DECA Dimensions*, the official membership magazine featuring business and association news, as well as articles about job skills, leadership, and citizenship; the bimonthly *Advisor*, which offers instructional materials and tips to teachers of business and marketing; the annual *DECA Guide*, which contains guidelines concerning DECA's competitive events programs; and the *DECA Images Catalog*, which features DECA products and curriculum materials.

### Organization

Local chapters are usually organized within a high school as part of the school's business and marketing program, with the business and marketing teacher-coordinator serving as chapter adviser. All chapters within a state belong to a state association under the leadership of the state DECA adviser. Each state association elects its own student advisers. Student delegates elected by each state in turn elect their own national leaders.

The national organization, composed of state associations, has a national executive director and a board of directors made up of state supervisors of distributive education and an appointed representative of the U.S. Department of Education.

The national DECA organization includes a Collegiate Division of DECA, which was formed in 1970. DECA is also affiliated with Delta Epsilon Chi, an international organization for college students preparing for careers in business, marketing, and management.

### Membership

Any high school or college student with an interest in business, marketing, and entrepreneurship is eligible to become a DECA member. In 2001 there were over 180,000 DECA student members and faculty advisers in secondary and postsecondary schools in all fifty states, U.S. territories, and Canada.

### INTERNET RESOURCE

DISTRIBUTIVE EDUCATION CLUBS OF AMERICA. 2002. <[www.deca.org](http://www.deca.org)>.

HARRY A. APPLIGATE

*Revised by*

JUDITH J. CULLIGAN

## FOUR-H PROGRAMS

Four-H is a youth organization dedicated to fostering better family living, community progress, social understanding, and civic responsibility. It sponsors projects in agriculture, homemaking, personal improvement, community service, and good citizenship.

### Program

The earliest 4-H programs were tightly focused on agriculture and other rural concerns. Since then, however, the 4-H has evolved into a nationwide organization operating under the auspices of the U.S. Department of Agriculture (USDA), Cooperative Extension Service. It has chapters in urban and suburban as well as rural counties and has redefined its mission from improving agricultural production to developing the character and skills of young people in a variety of different ways.

Four-H activities are administered through the county extension agencies in the states, and students may join through their schools. The program offers meetings, camps, workshops, and social activities, but the core of the program is the 4-H project. Members are expected to tackle projects from one or

more of eight categories: citizenship and civic education, communications and the expressive arts, consumer and family sciences, environmental education and earth science, healthy lifestyle education, personal development and leadership, plants and animals, and science and technology. Projects are designed to allow the participant to “learn by doing,” in accordance with the 4-H slogan.

### Organization and Support

Approximately 6.8 million young people are members of 4-H clubs nationwide. Leadership is provided by the USDA, and the program is administered through county extension agents. Council groups at the state, district, and county level provide planning and guidance. Individual clubs are led by adult volunteers, many of whom were themselves 4-H club members during their youth. Meetings are usually held in the home of the club leader, in community centers, or in schools. The local clubs draft their own programs, in accordance with the general organizational standards set by the USDA.

There are no dues for membership in the 4-H. The bulk of the program’s funding comes from the government, but civic groups, local businesses, and other organizations often donate to 4-H groups at the local level. In addition, local clubs may hold fund-raising activities for a particular project.

### Membership

Any boy or girl age nine to nineteen is welcome to join the 4-H, regardless of race or creed. Interested young persons can join a club through their school or by contacting the county extension office in their area. There are no dues. The early clubs allocated projects according to the gender attitudes of their time, assigning boys to farm and livestock projects and girls to domestic skills, such as canning, baking, and sewing. Today, however, this has changed: all projects are open to any member, with no distinction made between boys and girls.

### History

At the start of the twentieth century, rural America was still the cornerstone of the nation’s economy, but times were clearly changing. Young people were moving to the cities, while older people were holding tenaciously to outmoded farming techniques, so that many of the family farms were in danger of failing. In the Midwest, local civic leaders and educators responded to these problems by looking for ways to

make agriculture attractive to young people, while also making improved farming techniques more available to established farmers. Out of this original grassroots movement, the 4-H clubs were born.

The early clubs were based on the idea that education, especially agricultural education, was best accomplished through hands-on experience. This principle has remained a core concept in 4-H. Much of the organization’s early success came from the effective use of members as demonstrators of new farming technology. For example, to spread the word about improved seed corn strains, contests were held in which the young person who achieved the best crop would win a prize. Project-based contests were, and continue to be, held at a countywide level, and they have widened to include competitions in such diverse activities as livestock breeding, conservation, and personal development.

By 1914 4-H had become a truly national movement, and the Smith-Lever Act, passed by Congress in that year, forged a formal link between the local clubs and the County Extension Service of the USDA. With the passage of this act, the local groups became eligible for federal funds. To help foster a national identity, the leadership of the movement adopted an official emblem, a three-leaf clover with a capital *H* on each leaf, denoting *Head*, *Heart*, and *Hands* to express the organization’s emphasis on personal development through action. The fourth *H* was added soon after; at first it stood for *Hustle* but was quickly changed to *Health*. The 4-H philosophy is summed up in the official pledge:

I pledge . . .  
 My Head to clearer thinking,  
 My Heart to greater loyalty,  
 My Hands to larger service,  
 and my Health to better living  
 For my club, my community, my country,  
 and my world.

### INTERNET RESOURCE

U.S. DEPARTMENT OF AGRICULTURE. 2002. <<http://national4-hheadquarters.gov>>.

FRANCES C. DICKSON  
 Revised by  
 NANCY E. GRATTON

## FUTURE BUSINESS LEADERS OF AMERICA—PHI BETA LAMBDA

Future Business Leaders of America—Phi Beta Lambda (FBLA-PBL) is a nonprofit 501 (c)(3) educational association of students preparing for careers in business and business-related fields. The association has four divisions: FBLA for high school students; FBLA Middle Level for junior high, middle school and intermediate school students; PBL for postsecondary students; and the Professional Alumni Division for business people, educators, and parents who support the goals of the association.

FBLA-PBL is headquartered in Reston, Virginia, and organized on local, state, and national levels. Business teachers/advisers and advisory councils (including school officials, business people, and community representatives) guide local chapters, while state advisers and committee members coordinate chapter activities for the national organization. FBLA-PBL, Inc. is funded by membership dues, conference fees, corporate contributions, and grants.

Dr. Hamden L. Forkner, head of the Commercial Education Department of the Teachers College of Columbia University, developed the FBLA concept in 1937. In the fall of 1940, the National Council for Business Education accepted official sponsorship of FBLA, and on February 3, 1942, the first high school chapter was chartered in Johnson City, Tennessee. In 1958 the first Phi Beta Lambda chapter was chartered in Iowa. The Professional Division (originally the Alumni Division) began in 1979; as of 2001 the latest group to join FBLA (in 1994) was the FBLA Middle Level, for students in grades five through nine.

The board of directors is comprised of local and state educators, business leaders, and the membership division presidents. The board sets policy and employs a president/CEO, who directs a national staff program and association programs. The association's national center is an 11,600 square foot building, which was completed in 1991. The 1.6-acre site it occupies was purchased through a grant from the Conrad Hilton Foundation.

### Membership

Total membership, including students and advisers, approaches a quarter million members. The high school level has more than 215,000 members, while Phi Beta Lambda (postsecondary level) reaches over 10,000 college students. The newest group, FBLA

Middle Level, is showing remarkable growth with 8,000 student members, and is also developing member interest for the high school level.

### Conferences, Seminars, and Publications

Each year the best and brightest of FBLA and PBL convene at the National Leadership Conference to compete in leadership events, share their successes, and learn new ideas about shaping their career future. These four-day sessions are considered the pinnacle of the FBLA-PBL experience, especially for those running for national office.

FBLA-PBL also sponsors conferences and seminars for members and advisers, which are designed to enhance experience initially developed on the local and state level. The Institute for Leaders is a four-day seminar focused on leadership experience for state and local chapter officers, members, and advisers. Participants build lifetime leadership and career skills in tracks focusing on entrepreneurship, communication, and FBLA-PBL leadership. The institute is held in conjunction with the National Leadership Conference. Each fall, new leaders and advisers from chapters across the nation gather for National Fall Leadership Conferences, which are regional conferences designed to guide and motivate their success for the year. This includes workshops, seminars, and a plenary session, as well as the benefit of networking among their peers.

FBLA-PBL publications bring fresh ideas, new directions, and network-building news to members and advisers. They are published three times each year (except *Tomorrow's Business Leader*, which is produced quarterly). *Tomorrow's Business Leader* is circulated to FBLA and FBLA Middle Level students; *Adviser Hotline* to high school teachers; *Middle Level Advisers' Hotline* to Middle Level teachers; and *PBL Business Leader* to PBL members and advisers. The Professional Division receives *The Professional Edge*. A new electronic publication, *PBL E-line* is distributed to PBL advisers by e-mail three times per year, with additional publication as needed.

FBLA-PBL is officially endorsed by the American Management Association, the Association for Career and Technical Education, the Career College Association, the March of Dimes, the National Association of Parliamentarians, the National Association of Secondary School Principals, the National Business Education Association, the National Man-

agement Association, and the U.S. Department of Education.

BETTY PENZNER

## FUTURE SCIENTISTS AND ENGINEERS OF AMERICA

Future Scientists and Engineers of America (FSEA) is a national nonprofit organization of elementary, middle, and secondary school science clubs. The FSEA aims to identify, motivate, and inspire young girls and boys who have the potential to become scientists, engineers, and science teachers and give them the opportunity to experience science and technology through challenging, interesting, and fun science projects.

### Program

FSEA clubs are organized to give students an opportunity to meet and benefit from sharing scientific interests and abilities. Each club is a scientific community in miniature and is free to develop a program most suited to the interests and needs of its members. FSEA projects are designed to stimulate interest in mathematics, science, engineering, and technology and to train students in techniques of innovation and creativity, problem solving, and trial and error to achieve a stated objective. Most projects are hands-on and team oriented; projects can take anywhere from several hours to an entire semester to complete. Club members can design their own projects or they can use an FSEA-designed project. The national FSEA office provides materials and directions for almost fifty projects for different age levels.

Some projects are simple, such as the Model Airplane, where teams of two students learn about aerodynamics by building and testing a rubber-band-powered model airplane; and the Marble Slide, by which students experiment with potential and kinetic energy by rolling marbles down different types of inclines. Other projects are more advanced, including the Earthquake Tower, where teams of two students learn about drafting and engineering by designing and building a thirty-inch wooden tower that can withstand a simulated earthquake; and the Land Yacht, where teams build a vehicle that will move as far and fast as possible in the wind produced by a fan.

The national FSEA office conducts workshops for science teachers, parents, and sponsors who want

to organize a science club in their local school or want training in how to help students successfully complete advanced FSEA projects. The FSEA also issues an extensive list of volunteer science and technology experts who can answer questions and help students complete difficult projects.

### Organization

FSEA clubs are organized in elementary, middle, and high schools that have agreed to sponsor the club as a sanctioned school activity. As such the school provides a room for club meetings and for storage of materials, as well as a teacher to lead the club. Clubs usually consists of about twenty-five members and can include students from several grade levels. Elementary school clubs start in the fourth grade. Most FSEA clubs also include parent advisers and volunteer mentors. Ideally, mentors will be professional or retired engineers or scientists, or college students majoring in the sciences. Local clubs are organized into regions, headed by a volunteer regional director. The FSEA national headquarters has a small staff that helps new clubs get started, provides training for advisers and mentors, designs new science projects, and ships project materials and manuals to local clubs.

### Membership

FSEA membership is open to all boys and girls from the fourth through twelfth grade who are interested in science and technology. Membership dues are \$5 per year, with the parents, school, or private sponsors contributing an additional \$60 per student each year to pay for program materials. That fee covers costs for up to five projects for each student each year. Many clubs organize fund-raisers, such as bake sales or car washes, to help pay program fees.

### History

The FSEA was founded in 1989 by George Westrom, a rocket scientist and science educator. In 2001 there were FSEA clubs in hundreds of schools across the United States.

### INTERNET RESOURCE

FUTURE SCIENTISTS AND ENGINEERS OF AMERICA. 2002. <[www.fsea.org](http://www.fsea.org)>.

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## GIRL SCOUTS OF THE USA

The Girl Scouts of the USA (GSUSA) describes itself as an “informal educational organization dedicated solely to girls.” GSUSA seeks to help girls to develop character and skills, which will help them to succeed throughout their lives. The GSUSA program, promise, and law are all designed to promote the four main goals of the organization. First, GSUSA strives to help girls to develop their full potential. Girls gain competencies through participating in activities and are expected to develop positive self-esteem as a result. Second, GSUSA fosters the development of social skills, including understanding and respect for one another and for individual differences. Third, GSUSA aims to promote sound decision-making skills and the ability to enact decisions based on values, ethics, ideals, and convictions. Fourth, GSUSA encourages Girl Scouts to use their talents and work cooperatively with others to improve their communities and society.

The Girl Scout programs involve participation in a variety of activities. Individual girls and troops choose activities based on the interests and needs of members. Activities are focused in the following areas: (1) arts; (2) environment; (3) global awareness; (4) health and fitness; (5) literacy; (6) mentoring; and (7) science and technology. Badges are earned to recognize skills and knowledge that girls have gained through participation in a set of activities. Girl Scout camps are available throughout the country, and girls are encouraged to attend the camps in order to develop skills and accomplish goals in the camp setting.

### History

Juliette Low founded the Girl Scouts of America (GSA) in 1912 to expose girls to outdoor experiences and to involve them in community service. Initially she modeled the Girl Scouts on the British Girl Guides. The first group of eighteen Girl Scouts met in Savannah, Georgia. GSA was incorporated as a national organization in 1915 and grew and diversified rapidly to a membership of 137,000 girls by 1926. Since its inception, Girl Scouts has sought to be inclusive. African Americans, Native Americans, and girls with disabilities were members as early as the 1920s. Girl Scouts changed programs and activities to meet the needs of girls and to adapt to historical circumstances throughout the twentieth century. The GSUSA was reincorporated under a congressional charter in 1950.

### Legal Status and Governance

GSUSA is a nonprofit organization governed by the National Board of Directors. The national president provides leadership for the National Board. A national executive director leads the national staff. Most (99%) of the 915,000 adults who work for the Girl Scouts are volunteers. There are approximately 300 local Girl Scout councils throughout the United States. Girls join local troops of which there are 233,000. The local troops are led by volunteer leaders who receive training through their local councils.

### Membership

Girl Scouts are organized into small groups that meet with leaders who have been trained to facilitate the programs. Girls between the ages of five and seventeen may join Girl Scouts at any time. Girls join at the appropriate age level and are not required to have been a member at previous levels. Levels include Daisies (five years old or kindergartners), Brownies (six and seven years old), Juniors (eight through eleven years old), Cadettes (eleven through fourteen years old), and Senior Girl Scouts (fourteen through seventeen years old).

### Publications

GSUSA publishes numerous books, reports, and pamphlets. Books for use by leaders and scouts are available. The Research Institute of GSUSA sponsors and publishes research on the needs and development of girls.

### Influence and Significance

The GSUSA conducted an extensive evaluation in 1997. Girls, their parents, and adult volunteers reported that scouting had made positive contributions to their development. In another study, Louis Harris and Associates interviewed a sample of women listed in *Who's Who of American Women* and found that 64 percent had participated in Girl Scouts compared with 42 percent of a random sample of adult women in the United States. Respondents identified contributions that belonging to Girl Scouts had made to their development.

### INTERNET RESOURCE

GIRL SCOUTS OF THE USA. 2002. <[www.girlscouts.org](http://www.girlscouts.org)>.

## HOSTELLING INTERNATIONAL— AMERICAN YOUTH HOSTELS

Hostelling International—American Youth Hostels (HI—AYH) is a nonprofit organization that emphasizes the values of simple and inexpensive travel and offers reasonable overnight accommodations in the United States, Canada, Mexico, and parts of Asia, Africa, Europe, and South America. The major educational aims of HI—AYH are to help people of all ages gain greater understanding of the world and other people through outdoor activity and educational travel and to develop fit, self-reliant, and well-informed citizens.

### Program

HI—AYA offers inexpensive accommodations to travelers from around the world. Hostels may be located in urban high-rises with hundreds of beds or in small rural houses with fewer than twenty beds. Some hostels are located in preserved historic buildings. Most hostels have cafeterias or self-service kitchens; many also offer recreational facilities, meeting rooms, swimming pools, laundry facilities, libraries, and bicycle rental services. In 2001 overnight hostel rates ranged from \$8 in rural areas to \$24 in large cities such as New York City and San Francisco, California.

When travelers stay at HI—AYH hostels, the organization offers them the chance to meet and interact with other travelers and with people from the community where the hostel is located. HI—AYH programs help broaden a traveler's understanding of an American or foreign community by providing a rich intercultural experience. Programs are offered to groups and individuals and are variously designed for children, teenagers, adults, and senior citizens. At many hostels special activities and programs are designed for people with disabilities and for disadvantaged youths.

Each summer HI—AYH plans and sponsors numerous hostelling trips through the United States, Canada, Mexico, Europe, Israel, Japan, the Caribbean, and other areas. The trips, which are priced low enough to offer planned travel to people with limited financial means, range from one week to eight weeks. Hostelling International also offers educational and cultural tours in cities where hostels are located. Tours are conducted by local volunteer guides, who share inside information about their cities and neighborhoods, describe local history and

customs, and offer tips about the most interesting places to visit and the best places to find good affordable meals.

The organization's Teach-In Program provides hostel guests and local school children and community members the opportunity to learn about one another's countries, customs, languages, and societies. The Cultural Kitchen program offers teenagers the chance to meet and talk with travelers from around the world. Participants stay overnight at a hostel and work in the hostel's kitchen to prepare and share an evening meal. Travelers to New England can participate in the Passport to Adventure Program, which focuses on geography, diversity awareness, and environmental education. The Discover Your World Program in southern California teaches interpersonal skills and intercultural understanding to economically and educationally disadvantaged youths from the Los Angeles area. Participants stay overnight at a Los Angeles hostel, meet with international travelers, and visit local museums and historical sites.

HI—AYH issues periodic *Hostelling International Guides* to sites around the world. The organization also publishes numerous newsletters, brochures, and bulletins to help people plan their trips. In addition, HI—AYH offers online travel resource centers, which are continually updated and include links, maps, advice about transportation and attractions, visa and customs laws, and other information.

### Organization

HI—AYH operates a network of 125 hostels throughout the United States. The national organization comprises thirty-four associate councils, which function as local offices and provide visitors with special programs, events, and activities. Several HI—AYH council offices operate Travel Centers, where members can purchase train and bus passes, airline tickets, tickets to local attractions, backpacks, sleeping bags, and other travel necessities.

HI—AYH is headed by an executive director and a national board made up of representatives from the thirty-four associate councils. HI—AYH is affiliated with the International Youth Hostel Federation (IYHF), a network with nearly 4,500 hostels in more than 70 countries.

### Membership

Membership in HI—AYH is open to people of all ages. A member must purchase a hostel pass, which

is valid for use in all hostels throughout the world. Membership is free for people under 18 years of age. Adults pay from \$15 to \$25 annually, depending on their age. People can also purchase lifetime memberships for \$250. The organization's operating income comes from program and memberships fees, accommodation payments, private contributions, sales of publications, and partnerships with businesses involved in the travel industry.

### History

The youth hostel idea was first conceived in 1909 in Germany by an elementary school teacher Richard Schirrmann. Eleven national associations were represented at the first International Youth Hostel Conference, which was held in Amsterdam in 1932. In the United States, AYH was founded in 1934 by two school teachers, Monroe and Isabel Smith, who started the first American hostel in Northfield, Massachusetts. From its beginning, AYH has been a completely integrated movement. Hostels have been established on farms and in schools, camps, lodges, students' houses, and community centers; they are open to people of any age, nationality, income level, or religious affiliation. The first American urban hostel was opened in May 1965 in Philadelphia, Pennsylvania, at Fairmont Park, when the city turned over the famous colonial Chamounix mansion to a local group for use as a metropolitan youth hostel.

#### INTERNET RESOURCE

HOSTELLING INTERNATIONAL—AMERICAN YOUTH HOSTELS. 2002. <[www.hiayh.org](http://www.hiayh.org)>.

SAM SHAYON

*Revised by*

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### NATIONAL FORENSIC LEAGUE

The National Forensic League (NFL) is a nonpartisan, nonprofit educational honor society founded in 1925 by Bruno E. Jacob at Ripon College, Wisconsin. Its purpose is to encourage and motivate high school students to participate in and become proficient in the speech arts: debate, public speaking, and oral interpretation of literature.

Since its founding, NFL has enrolled more than 1 million members in all fifty states, U.S. posses-

sions, and several foreign countries. At the start of the twenty-first century more than 2,600 high schools, 93,000 high school students, and 3,500 high school teachers were active members.

Any public or private high school is eligible to become affiliated with NFL upon payment of dues and with the permission of the school's principal. High school students enrolled in an NFL member school who rank scholastically in the top two-thirds of their class and who have earned twenty-five NFL points may apply for NFL membership by paying a onetime fee. Students earn points by participating in interscholastic speech and debate contests, student congresses, or community speaking. NFL encourages improvement of student speech skills by awarding NFL points and granting degrees based upon points earned. These degrees are: Degree of Merit (25 points), Honor (75 points), Excellence (150 points), Distinction (250 points), Special Distinction (500 points), Superior Distinction (750 points), and Outstanding Distinction (1,000 points).

The NFL believes that contests are one of the most effective educational devices. The National Speech Tournament has been held continuously since 1931 (except during World War II). Contests are held in the following areas:

- policy debate
- value debate
- legislative debate
- U.S. topic extemporaneous speaking
- foreign topic extemporaneous speaking
- original oratory
- interpretation of dramatic literature
- interpretation of humorous literature
- duo interpretation
- commentary
- impromptu speaking
- prose reading
- poetry reading
- expository speaking
- storytelling

More than \$100,000 in college scholarships is awarded to the winning students at each national tournament. Qualification for the national finals is earned by placement in one of the 103 district tournaments, conducted in all parts of the nation.

A nine-member executive council governs the league. Four councilors, who are active high school

coaches and teachers, are elected every two years by the membership. Each elected councilor serves a four-year term. The ninth councilor is a high school administrator, who is elected every two years by the other councilors. The NFL president and vice president must be councilors and are elected by the council every two years.

The National Student Congress, first established in 1938, has met continuously since 1952. Students are elected from 103 district congresses to serve in the national congress. Student legislators author bills and resolutions, learn to use parliamentary procedure, conduct hearings and committee meetings, engage in floor debate, and vote on proposed legislation. During congress week, eighteen preliminary chambers elect members to eight semifinal chambers, which in turn name twenty-four senators and twenty-four representatives to a final congress. A scholarship is awarded to the superior legislator in each house of the final congress.

The NFL publishes its monthly magazine, *Rosstrum*, during the school year, which features news of the league, educational articles to improve student skills, and teaching materials for coaches. The National Forensic Library contains more than fifty videos of the nation's finest high school and college speech educators, each teaching their specialty. These tapes are free to member schools.

NFL was founded with the motto: "Training Youth for Leadership." NFL alumni are found in the business community, the professions, academic institutions, government, communications, and the arts. Prominent NFL alumni include President Lyndon B. Johnson, Vice President Hubert H. Humphrey, many senators and representatives, Supreme Court justice Stephen Breyer, the scholar Lawrence Tribe, college presidents David Boren and John Sexton, television personality Oprah Winfrey, and CSPAN founder Brian Lamb.

JAMES M. COPELAND

## NATIONAL FUTURE FARMERS OF AMERICA ORGANIZATION

Future Farmers of America (FFA), officially called the National FFA Organization, is an educational organization for high school and college students who are interested in agriculture. The National FFA Organization works in conjunction with the National FFA Foundation, a not-for-profit organization that

seeks partnerships with corporations, foundations, and government agencies to help provide funding for FFA programs. The FFA's main objective is to develop in its members qualities of leadership, character, scholarship, cooperation, and citizenship through agricultural education. The FFA is an integral part of many high school agriculture programs. The organization operates in cooperation with the Office of Vocational and Adult Education in the U.S. Department of Education, as well as with state and local boards for vocational and agricultural education.

### Program

The FFA offers a variety of programs designed to supplement schoolwork by encouraging the practical application of classroom instruction in agricultural science. Many FFA programs also offer information and incentives for students wishing to pursue a career in agriculture. Local FFA chapters sponsor educational tours, agriculture workshops, and on-the-job training. Local chapters also organize recreational activities and hold their own award ceremonies and fund-raisers. The National FFA Organization helps local chapters by supplying program guidance and materials, by offering scholarships and awards, and by sponsoring an annual FFA week, an annual national convention, and agri-science fairs with activities at the local, state, and national level. In addition, the national organization sponsors numerous conferences and workshops covering many agriculture-related topics, and publishes a quarterly student magazine called *New Horizons*, a monthly member newsletter called *Update*, and *Making A Difference*, a bimonthly magazine for FFA chapter advisers.

The FFA's many programs include the New Century Farmer Program, which helps young people become aware of new opportunities in twenty-first century agriculture. New Century farmers are sent on traveling seminars to meet with and learn from innovative professional farmers and agriculture educators around the country. FFA Global Programs send members to foreign countries where they can learn the value, traditions, and role of agriculture in other cultures.

Because the majority of FFA members hope to pursue careers related to agriculture, the FFA sponsors numerous career development events at the chapter, state, and national level. These events help members explore the hundreds of career options

available in the modern agriculture industry, from agronomy to food technology, forestry, floriculture, agricultural communications, and environmental and natural resources management. The FFA also provides information, incentives, and financial aid to members who wish to become college and high school teachers of agriculture.

Another career development program, Supervised Agricultural Experience (SAE), offers members an opportunity for hands-on application of the agricultural skills and principles they learned in the classroom. A student involved in SAE may be placed in an agriculture-related job or may start his or her own agriculture-related business under the guidance of an adult mentor.

In 1984 the National FFA Collegiate Scholarship program was established to counter a trend toward rising costs and declining enrollment in agricultural colleges. Each year, the National FFA Organization awards more than \$1 million in scholarships to hundreds of FFA members. Many FFA scholarships are sponsored by local businesses and national corporations.

Among the numerous awards offered by FFA are the H. O. Sargent Award, which recognizes FFA members who have actively supported cultural diversity in agriculture. The award is named in honor of H. O. Sargent (1875–1936), an agricultural educator who worked to establish an organization similar to FFA for African-American students.

The National FFA Organization also presents three annual Honorary American FFA degrees for exceptional adult teachers and other individuals who have demonstrated support for agricultural education. The annual VIP awards and distinguished service citations are given to individuals, agencies, and organizations that have made a continued contribution to agricultural education over a long period of time.

FFA star medals are awarded to outstanding FFA members of differing age and grade levels. Star Discovery medals for seventh and eighth graders and Star Greenhand medals for exceptional first-year members are awarded at the chapter level. Star Farmer, Star Agribusiness, and Star Agriscience medals are given to outstanding members involved in SAE programs; these awards are given at the chapter, state, and national level. State-level star awards include a \$200 prize. National-level star awards include prizes of \$1,000 to \$2,000.

## Organization

Local FFA chapters are usually organized at a high school, with the school's agriculture and science teachers serving as chapter advisers. All chapters within a state belong to the state FFA association, which is headed by an adviser and executive secretary.

The National FFA Organization is governed by a board of directors and a board of student officers. The elected officers of the adult board include a president, four vice presidents representing different regions in the United States, and a secretary. The board of directors also includes several members of the Office of Vocational and Adult Education in the U.S. Department of Education. Student officers are elected each year by the national convention delegates. State associations and local chapters elect their own officers annually.

The National FFA Foundation is administered by a board of trustees representing the businesses, industries, organizations, and individuals who have agreed to sponsor FFA activities. The foundation board also includes representatives from state FFA associations, vocational agriculture teachers, and members of the Vocational and Adult Education Division of the U.S. Department of Education.

## Membership

Any boy or girl aged twelve to twenty-one who is enrolled in an agriculture course or program is eligible to become a member of FFA. The FFA also includes honorary and alumni members.

## History

The FFA was organized in 1928 and was chartered by the U.S. Congress in 1950. In 1965 a similar organization for African-Americans called the New Farmers of America merged with the FFA. Women were accepted as national FFA members for the first time in 1969, although some chapters had accepted women members much earlier. In 1988 the organization changed its name from Future Farmers of America to the National FFA Organization. In 2001 the FFA had approximately 457,000 active members in more than 7,300 urban, suburban, and rural high school chapters located in all fifty states, the Virgin Islands, Puerto Rico, and Guam.

**INTERNET RESOURCE**

NATIONAL FFA ORGANIZATION. 2002.  
<www.ffa.org>.

A. DANIEL REUWEE  
*Revised by*  
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**QUILL AND SCROLL**

The Quill and Scroll Society is a high school honor society devoted to fostering interest and excellence in the field of journalism. It has member chapters in all fifty states and in forty-four countries around the world, serving more than 14,000 students.

**Program**

Quill and Scroll fulfills its mission in a variety of ways. It administers the Edward J. Neil Memorial Scholarships, granted annually to ten seniors who have demonstrated excellence in high school journalism, and the Lester G. Benz Memorial Scholarship, granted to a high school journalism faculty or yearbook adviser who desires to further his or her education with journalism courses at the college level.

The organization also sponsors contests, open to high school student members. The International Writing, Photo Contest awards a prize to the winning student submissions in eight categories of journalism, including editorial writing, feature writing, and photojournalism. The Yearbook Excellence Contest awards a prize to the participating high school that is judged to have produced the best yearbook.

Quill and Scroll also offers a news media evaluation service to participating high schools, in which the school's newspaper and other media are given a detailed critique along with suggestions for improvement. In addition, the society publishes *Quill and Scroll* magazine, which features articles on the journalism profession.

Seeking to advance the cause of good journalism to as broad a public as possible, Quill and Scroll also awards prizes to nonmember schools and individuals who have, in the opinion of the national committee, made singularly important contributions to the profession.

**Organization**

Quill and Scroll is governed by a board of trustees, the Quill and Scroll Corporation. The board is re-

sponsible for administrating the affairs of the national society. The Quill and Scroll Foundation administers the scholarship program and conducts research in high school journalism.

Local chapters operate autonomously, when it comes to planning local activities, under the leadership of a faculty adviser drawn from the journalism or English department. Participation in most of the nationally sponsored contests and activities requires an application form filed with the society's headquarters.

**Membership**

High schools must apply for a charter from the national organization before they can open an official chapter of Quill and Scroll. Individual membership can only be achieved through a local school chapter. Faculty members of a chartered school who teach journalism courses or who advise the school newspaper or yearbook automatically become society members. Prospective student members must be in their junior year, must be in the upper 30 percent of their class, and must work on one or more of the school's publications. In addition they must secure the recommendation of their publication's faculty adviser. Applications for membership must be approved by the secretary-treasurer of the national society.

Members do not pay dues but are obligated to pay an initiation fee. On initiation, the new member receives a gold badge bearing the society insignia and is issued a membership card. In addition he or she receives a year's subscription to *Quill and Scroll* magazine.

**History**

The Quill and Scroll Society was founded in 1926 by a group of educators at the University of Iowa, led by George H. Gallup, best known for his groundbreaking work in public polling (the Gallup Poll). At the time of its inception, the Quill and Scroll was intended to foster interest and excellence in the field of journalism. From these beginnings in Iowa, the Quill and Scroll Society has spread to schools throughout the country and overseas.

**INTERNET RESOURCE**

QUILL AND SCROLL SOCIETY. 2002.  
<[www.uiowa.edu/~quill-sc](http://www.uiowa.edu/~quill-sc)>.

LESTER G. BENZ  
*Revised by*  
NANCY E. GRATTON

**SKILLSUSA-VICA**

SkillsUSA-VICA is a national organization serving high school and college students (and their instructors) who are preparing for careers in technical, skilled, and service occupations, including health occupations. SkillsUSA-VICA has 250,000 members annually, organized into nearly 13,000 chapters and fifty-four state and territorial associations.

SkillsUSA-VICA was founded in 1965 as the Vocational Industrial Clubs of America (VICA). It is a nonprofit educational organization, incorporated in the District of Columbia. The association changed its name to SkillsUSA-VICA on July 4, 1999. It is governed by a board of directors elected from the corporation's members.

SkillsUSA-VICA, Inc. members of the corporation are not to be confused with the student and instructor members of the organization known as SkillsUSA-VICA. Corporate members are those persons designated by the state boards of vocational education to be responsible for trade and industrial education, technical education, and health occupations education in each state, territory, or possession of the United States where secondary and/or postsecondary state associations have been chartered by the corporation.

Five corporate members, one from each SkillsUSA-VICA region, are elected to serve staggered three-year terms as the board of directors. The board, in turn, elects its own officers. In addition to the corporate members elected to the board, there are four *ex-officio* members: the vice president of the Trade and Industrial Division of the Association for Career and Technical Education; the chair of the State Association Directors Association; the chair of the Youth Development Foundation of SkillsUSA-VICA (the fundraising arm of the organization); and the chair-elect of the Youth Development Foundation. In addition, the bylaws allow a total of four business and/or organized labor representatives on the board and a representative from the National Association of State Directors of Vocational Technical Education Consortium (NASDVTEC).

The board of directors is responsible for directing and managing the affairs, funds, and property of the corporation. The board sets policies in accordance with its certificate of incorporation, its bylaws, and the laws of the District of Columbia. The board administers the national student organization, which is composed of the chartered state associations; hires an executive director; and oversees the operation of the organization. In all national matters, state associations are subordinate to the board of directors.

An effectively-run SkillsUSA-VICA chapter prepares America's high-performance workers in public career and technical programs. It provides quality education experiences for students in leadership, teamwork, citizenship, and character development, and it builds and reinforces self-confidence, positive work attitudes, and communications skills. It emphasizes total quality at work, including high ethical standards, superior work skills, lifelong education, and pride in the dignity of work. SkillsUSA-VICA also promotes understanding of the free enterprise system and involvement in community service.

More than 13,000 teachers and school administrators serve as professional SkillsUSA-VICA members and instructors. More than 1,000 business, industry, and labor sponsors actively support SkillsUSA-VICA at the national level through financial aid, in-kind contributions, and involvement of their people in SkillsUSA-VICA activities. Many more work directly with state associations and local chapters.

SkillsUSA-VICA programs include local, state, and national competitions in which students demonstrate occupational and leadership skills. At the annual national-level SkillsUSA Championships, more than 4,000 students compete in seventy-two occupational and leadership skill areas, and each year new areas are added. SkillsUSA-VICA programs also help to establish industry standards for job-skill training in the lab and classroom.

SkillsUSA-VICA's Total Quality Curriculum program emphasizes the competencies and essential basic workplace skills identified by employers and the U.S. Secretary of Labor's Commission on Achieving Necessary Skills (SCANS) and in subsequent national voluntary skill standards. The Professional Development Program guides students through eighty-four employability skills lessons. These include goal setting, career planning, and community service.

Publications of the organization include *Sharp*, a newsletter for the postsecondary and secondary student members; the *Professional*, a newsletter for teachers and administrator members of the organization; and *Partners in Quality*, a newsletter specifically for the organization's business and industry partners and supporters.

#### INTERNET RESOURCE

SKILLSUSA-VICA. 2002. <<http://skillsusa.org>>.

THOMAS W. HOLDSWORTH  
JANE A. DESHONG JONES

## YOUNG MEN'S CHRISTIAN ASSOCIATION

The Young Men's Christian Association, often called the YMCA or simply the Y, is an international membership organization concerned with the physical, educational, social, and religious needs of young men, women, and boys. The YMCA stresses the Christian code of conduct, ecumenism, and community responsibility, but the organization is open to people of all religious faiths.

### Program

The major programs of the YMCA are conducted through classes and club activities. Program offerings vary from city to city, depending on local needs. Most YMCAs offer a variety of programs addressing adult education (including technical and vocational courses), athletics (especially swimming), health and fitness, child care, community development, arts and humanities, family support, and teen leadership. Club activities for children and teenagers include Hi-Y, Youth and Government, Model United Nations, Black Achievers and Minority Achievers, and the Earth Service Corps. These groups emphasize the development of individual initiatives and leadership qualities. In YMCA urban action efforts throughout the United States, members have undertaken projects for the needy. As one of the six founding organizations of the United Service Organizations (USO), the YMCA also provides welfare, recreational, and religious programs for members of the American armed forces.

YMCA buildings have gymnasiums, swimming pools, and rooms for classes and club activities; many YMCAs also have residence facilities. In addition, the YMCA operates summer-camp and day-camp programs and facilities around the country.

### Organization

Each local YMCA is an autonomous corporation with its own board of directors and staff and is responsible to its community and the distinctive needs of the people who live there. Each YMCA is also a part of the national organization as a member-affiliate of the National Council of YMCAs, the legislative and policymaking national body. The National Council in turn is a member of the World Alliance, the YMCA international body.

### Membership

Membership in the YMCA is open to all men, women, and children, regardless of religious affiliation, race, age, ability, or income. In 2000 approximately 970 corporate YMCAs operated almost 1,500 branches, units, and camps in the United States; the organization served over 17 million Americans, making the YMCA one of the country's largest not-for-profit community-service organizations. Financial support for local associations is derived from program fees, membership dues, community chests, foundation grants, charitable contributions, sustaining memberships, and corporate sponsors. YMCAs have also been established in more than 120 countries around the world, providing service to over 30 million people.

### History

The YMCA was founded in 1844 in London by George Williams, a clerk in a dry-goods firm. The first meeting room was located in a coffeehouse. The American YMCA was established in 1851 in Boston by Thomas V. Sullivan, a retired sea captain. The following year YMCAs were formed in New York City and Buffalo, New York; Worcester and Springfield, Massachusetts; Portsmouth and Concord, New Hampshire; New London and Hartford, Connecticut; Detroit, Michigan; Baltimore, Maryland; Washington, D.C.; and New Orleans, Louisiana. By 1860 there were more than 200 YMCAs with more than 25,000 members in the United States.

Most early YMCAs were open only to men, although a few accepted women members, often unofficially. Some YMCAs were established to serve particular ethnic or immigrant groups. The first YMCA for African Americans was established in Washington, D.C., in 1853 by Anthony Bowen, a freed slave. Beginning in 1875, YMCAs were founded in San Francisco, California, to serve the city's large Chinese population. Thomas Wakeman,

a Dakota Sioux, started the first YMCA for Native Americans in 1879 in Flandreau, South Dakota.

Early YMCA leaders were concerned with addressing the difficulties and temptations facing young men arriving in the cities, far from the stabilizing influence of home and family, during the American Civil War and the Industrial Revolution. In the United States revival meetings were the outstanding programs offered, and the associations sent out the first street workers to preach on street corners and around the wharves. They also sent out "gospel wagons" to distribute Christian tracts and Bibles and give sermons in city neighborhoods.

Delegates from fifteen associations met in New York City in 1861 and formed the United States Christian Commission, the first volunteer agency for spiritual and physical aid to American armed forces. During World War I the American YMCA provided religious services, recreational materials, entertainment programs, and canteens in home ports, on the front lines, and in cities overseas.

During World War II, the YMCA, as part of its United Service Organization affiliation, worked with the armed services throughout the world. In the postwar years the international associations undertook service to displaced persons by providing athletics programs, summer schools, entertainment, and children's camps. The YMCA also helped with the repatriation and resettlement of refugees from Europe.

By the end of the war most YMCAs were accepting women and girls as members and had begun establishing centers in suburbs and outside of major urban areas. During the 1960s and 1970s, urban unrest in America and a lack of funding caused a decline in YMCA membership and many YMCAs reduced program offerings or closed entirely. The organization managed to rebuild in the 1980s and 1990s by seeking new sources of funding, by renovating many older YMCA buildings and constructing new ones, and by changing its focus to include intensive community outreach, job training, drug abuse prevention, mentoring programs, youth development and leadership training, family support and services, and aid for senior citizens. In 2001 the YMCA celebrated its first 150 years in America.

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#### INTERNET RESOURCE

YOUNG MEN'S CHRISTIAN ASSOCIATION. 2002. <[www.ymca.com](http://www.ymca.com)>.

JOE A. PISARRO

Revised by

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### YOUNG MEN'S HEBREW ASSOCIATION AND YOUNG WOMEN'S HEBREW ASSOCIATION

The Young Men's Hebrew Association and the Young Women's Hebrew Association (YM–YWHA or often simply "Y") are part of an organization called the Jewish Community Centers Association of North America (JCCA). Jewish community centers are established by residents of a city with a large Jewish population to provide leisure and educational activities for their members. The aim is to strengthen Jewish family life, foster Jewish living in a democratic society, and provide shared experiences for all age groups.

#### Program

Center programs are multifaceted, flexible, professionally directed, and designed to meet the needs of the community where the center is located. Program activities stimulate personality development, leadership, participation in community affairs, and each member's sense of his or her Jewish identity. Extensive programs for health and physical education, camping, and outdoor recreation afford the opportunity for acquiring new skills and developing friendships. Many Jewish community centers also offer courses in music, arts and crafts, dance, drama,

literature, and Jewish studies, in addition to lectures, concerts, art exhibits, theatrical performances, poetry and fiction readings, and cultural festivals.

The JCCA provides to local centers a variety of program materials dealing with all aspects of community center work, and it organizes and conducts regional and national conferences, institutes, seminars, competitions, and intercenter activities. The JCCA also recruits, orients, and places staff in Jewish community centers and oversees scholarship programs for their continued training.

Jewish community centers throughout the United States and Canada offer day care and early childhood educational services for Jewish children ages three to six. Jewish community centers also offer programs for Jewish senior citizens, permitting elderly men and women the chance to socialize, become involved with their community, and stay mentally and physically fit.

The JCCA and YM–YWHA chapters also offer Jewish athletes a chance to train and compete at local, national, and international sporting events through their sponsorships of Macabbi USA and Macabbi Canada. Every year approximately 6,000 young Jewish athletes compete at JCCA Macabbi Games. The best athletes compete at the World Macabbi Games, a two-week international competition held every four years in Israel. In 2001 Macabbi USA sent 360 athletes representing thirty-nine states to Israel to compete in the world games.

The JCCA and YM–YWHA work in cooperation with twenty-two resident camps throughout the United States and one in Ontario, Canada. Most camps offer day, short-term, and long-term camping programs where young people can learn swimming, canoeing, horseback riding, archery, and other outdoor activities. Many camp programs also include cultural and creative activities, such as jewelry making, wood sculpting, pottery, dance, and theater. Some resident camps organize family camping events. In addition, many local Jewish community centers run their own day-camp programs.

Through the Jewish Welfare Board Chaplain's Council, the JCCA serves the religious and social needs of Jewish military personnel and their families. Regional consultants and national United Service Organizations (USO) staff provide services to state-side USO clubs and councils and to small, isolated Jewish communities serving Jews in nearby military installations.

## Organization and Membership

The JCCA includes 275 affiliated community centers in thirty-nine states, the District of Columbia, and ten Canadian cities. The JCCA is also affiliated with a Jewish community center in Hong Kong. Together, the JCCA-affiliated centers have a membership of more than 1 million people. Most centers and Ys make membership available to anyone in the community, regardless of religious affiliation. Financial support is derived from membership dues, course and programs fees, fund-raisers, corporate sponsorship, and foundation and private donations.

## History

The first Young Men's Hebrew Association (YMHA) was founded in 1854 in Baltimore, Maryland, to provide services and support for Jewish immigrants. By 1884 approximately seventy such agencies had been organized. They served as libraries, settlement houses, cultural centers, and helped new Jewish immigrants adapt to life in America by offering instruction in the English language and the American way of life. In 1913 the National Council of Young Men's Hebrew and Kindred Associations (YMH&KA) was formed to unite the disparate YMHAs into a national association. The national Jewish Welfare Board (JWB) was founded in 1917 to meet the religious needs and improve the morale of Jewish men in the armed forces. In 1921 the YMH&KA merged with the JWB, making the JWB the national association for Jewish community centers and YM–YWHAs. During the 1950s and 1960s many Jewish-Americans moved to the suburbs, and new community centers were established to serve the needs of this more affluent community. The centers began to expand their services to include day camps, travel camps, performing arts, day-care centers, sports programs, adult education, and services for senior citizens.

During the 1970s and 1980s, pride in Israel flourished in the American Jewish community, and many young people became interested in their Jewish roots. In response, Jewish community centers began to sponsor cultural events related to Jewish heritage and history, including Jewish film festivals and celebrations for Hanukkah, Israeli Independence Day, and other Jewish holidays. Many Jewish community centers also organized trips to Israel. The Jewish Welfare Board changed its name to the Jewish Community Centers Association of North America in 1995.

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**INTERNET RESOURCE**

- JEWISH COMMUNITY CENTERS ASSOCIATION OF NORTH AMERICA. 2002. <[www.jcca.org](http://www.jcca.org)>.

BERNARD POSTAL  
*Revised by*  
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## YOUNG WOMEN'S CHRISTIAN ASSOCIATION

The Young Women's Christian Association (YWCA) is a membership organization with a local, national, and international program aimed at helping all women and girls achieve their full potential in a society where justice and peace prevail. The YWCA stresses improving the quality of education with special emphasis on preparing girls to perform their multiple roles in society, providing opportunities for girls and women to continue their education, supplementing the academic work of high school and college students with involvement in community affairs, exploring the problems and needs of women and students in urban settings, and motivating dropouts to return to school or prepare for gainful employment. The YWCA is also actively involved in promoting nonviolence and tolerance throughout the United States and the world.

**Program**

The YWCA of the U.S.A. offers numerous education programs designed to meet the needs of the community where the YWCA is located. Literacy, tutoring, English as a second language (ESL), and General Education Development (GED) classes are popular in many areas. Many YWCAs also offer welfare-to-work programs to help unemployed women learn to support themselves. YWCA's job training, job placement, and career counseling services enable thousands of women who are out of work to improve their employability and find meaningful jobs. The organization helps working mothers by offering

quality child-care services. In 2001 more than 750,000 children participated in YWCA day-care and after-school programs, making the YWCA the largest nonprofit child-care provider in the United States.

Approximately 200 of America's YWCAs provide housing services for women and children; services include emergency shelter, transient housing, and transitional housing. The YWCA will also help needy women find permanent housing.

The YWCA's teen development programs include the YWCA/PepsiCo Girls Leadership Program for economically and educationally disadvantaged teenage girls. In 1997 the YWCA launched its Tech-GYRLS program, in which girls ages nine to thirteen can explore computers and other new technologies under the guidance of technology professionals.

The organization's health care and fitness initiatives include sports and exercise programs, breast and cervical cancer screenings and referrals, breast cancer support groups, and courses on sexually transmitted diseases, prenatal care, self-defense, and substance abuse prevention. Further programs and services address crisis intervention, violence prevention, and family counseling. Many YWCAs also offer a program called Adolescent Pregnancy Prevention Evaluation for teenage girls.

In its ongoing effort to combat violence, the YWCA of the U.S.A. annually designates the third week in October as Week Without Violence. This observance promotes awareness and alternatives to domestic violence, gun violence, ethnic violence, hate crimes, and violence in the media. In addition, since 1992 the YWCA of the U.S.A. has recognized April 30 as National Day of Commitment to Eliminate Racism.

**Organization**

The World YWCA provides a channel for the sharing of resources and the exchange of experience among its affiliated associations in 100 countries, including the United States. The World YWCA also works for international understanding, for improved social and economic conditions, and for basic human rights for all people. In times of emergency, the World YWCA undertakes and sponsors international humanitarian, welfare, and relief work, irrespective of religious, social, political, national, or racial differences. The World YWCA includes in its membership all women and girls who wish to participate.

The YWCA of the U.S.A. is composed of three types of member associations: community YWCAs, registered and accredited state and regional YWCAs, and student YWCAs. In 2001 there were 312 YWCA affiliates across all fifty states. Each local association governs itself and adopts a constitution in keeping with the requirements of affiliation with the national organization and the needs of the community it serves.

The YWCA of the U.S.A. is headed by a president and a chief executive officer. A twenty-five-member national board of directors works with the president and CEO. The national board unites the autonomous member associations into an effective organization for furthering the YWCA mission. The board also plans the annual YWCA convention for the development of a national program and acts as a link between local YWCAs and the World YWCA. The board is assisted in its work by one national student council representative. Through its placement services and training programs, the national YWCA helps secure professional staffs for the local affiliates.

### Membership

Membership in the YWCA is open to any girl or woman twelve years of age or older from any economic, racial, occupational, religious, or cultural group. College women may join a campus-based student YWCA. Membership privileges are transferable from one YWCA facility to any other in the country. All dues-paying members seventeen years or older have voting privileges. Boys and men may become YWCA associates and take part in coeducational activities, especially in recreation, education, discussion, and community projects. In 2001 there were approximately 2 million members in the YWCA of the U.S.A. The World YWCA served over 25 million women worldwide.

Local YWCAs derive most of their financial support from the United Way, membership dues, and program fees. The national organization derives its funding from the local YWCAs, earnings on investments, and gifts from individuals, foundations, and corporations.

### History

The organization that became known as the Young Women's Christian Association began as a movement that gradually organized into a full-fledged association. The North London Home for women, also called the General Female Training Institute,

founded in London, England, in 1855, is generally recognized as the first YWCA. London's Prayer Union for Women and Girls was organized around the same time. By 1859 these two organizations had merged under the name of Young Women's Christian Association. In 1858 a similar organization called the Ladies' Christian Association was founded in New York City. In 1866 a women's group in Boston, Massachusetts, began using the name Young Women's Christian Association. Such organizations proved popular in the United States, and soon YWCAs were established in other communities around the country. By 1875 there were twenty-eight YWCAs in the United States. The first YWCA branch for African-American women was opened in Dayton, Ohio, in 1889. The following year, the first YWCA for Native American women was established in Chilocco, Oklahoma. By 1900 there were 106 American YWCAs. Realizing the need for centralized administration, the local associations formed the National Board of the YWCA in 1907.

Since the early 1900s the YWCA has pioneered the fight against racial discrimination and segregation in the United States. The first interracial conference in the South was held at a YWCA facility in Louisville, Kentucky, in 1915. In 1936 the first coeducational interracial collegiate seminar was held at a YWCA in Raleigh, North Carolina. During World War II the YWCA gave aid and comfort to Japanese-American residents being held in relocation centers, and the YWCA helped resettled Japanese women and families after the war. In 1946 the YWCA adopted a groundbreaking interracial charter to protest racial injustice. In 1960 the cafeteria of the Atlanta YWCA became the first desegregated public dining establishment in the city.

The YWCA was also a pioneer in offering sex education in its health programs as early as 1906; the organization continues this effort by offering educational programs and services addressing such issues as sexual harassment, sexually transmitted diseases, acquaintance rape, adolescent pregnancy prevention, and birth control.

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**INTERNET RESOURCE**

YOUNG WOMEN'S CHRISTIAN ASSOCIATION. 2002. <[www.ywca.org](http://www.ywca.org)>.

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## **ZACHARIAS, JERROLD (1905–1986)**

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Experimental physicist at the Massachusetts Institute of Technology, Jerrold R. Zacharias directed the Physical Sciences Study Committee curriculum development project and other science education reform efforts. Born in Jacksonville, Florida, Zacharias earned his A.B. in 1926, A.M. in 1927, and Ph.D. in 1933, all in physics, from Columbia University. He held a teaching position at Hunter College in New York City until 1940 when he was appointed as a staff member of the Radiation Lab at MIT. In 1946 he became a professor at MIT, and directed the Laboratory for Nuclear Science and Engineering there until 1956. Subsequently at MIT he held the ranks of institute professor and institute professor emeritus. He served on the President's Science Advisory Committee from 1952 to 1964. For his scientific, engineering, and educational work Zacharias received numerous honors, including election to the National Academy of Sciences and the American Academy of Arts and Sciences, the President's Certificate of Merit, and the National Science Teachers Association Citation for Distinguished Service to Science Education. Zacharias's educational projects are best understood as an extension of his earlier scientific and governmental work.

### **Career as a Physicist**

As a member of Nobel Prize winner Isidore Isaac Rabi's laboratory at Columbia University during the 1930s, Zacharias participated in early molecular beam magnetic resonance experiments and in the successful measurement of magnetic and electric quadrupole movements of molecular nuclei. During

World War II, he contributed to the development of radar defense systems at MIT and of nuclear weapons at Los Alamos. After the war, under his direction the MIT Laboratory for Nuclear Science and Engineering achieved several breakthroughs in atomic beam research, including the development of a cesium atomic beam clock. The commercial feasibility of the cesium atomic clock led to the definition in 1967 of the atomic second and the subsequent adoption of atomic time as a laboratory standard and as a frequency source in aircraft navigation systems.

From the late 1940s to the mid-1950s Zacharias directed important national defense studies, from which he recalled concerns he had heard from military sources about the advantage that the Soviets gained from superior education. In 1956 Zacharias conceived a project to create a series of instructional films to promote the teaching and learning of physics in pre-collegiate education. This idea soon grew into the curriculum development project for which he became known, the Physical Sciences Study Committee (PSSC).

### **Physical Sciences Study Committee**

Zacharias's sharing of his idea with an associate who directed the fledgling National Science Foundation (NSF) led to a formal proposal of the plan and initial funding. For the project, Zacharias first recruited from within his circle of physicists and other scientists. The realization that the "problem" of science education reform required a solution grander than a film series, and the promise of NSF and other funding, made possible the expansion of the breadth of the project to include plans for developing four textbooks and a series of dozens of monographs, as well as the participation of scientists from around

the United States. The PSSC held its first meeting in September 1956, and by the end of the following summer the first textbook was drafted. During the fall of 1957 eight schools were piloting materials.

Within a few months of the successful Soviet launch of *Sputnik I* on October 4, 1957, and *Sputnik II* on November 3 of the same year, the blame for the second place status of the United States in the space race fell squarely on the public schools. For PSSC, this meant a virtual guarantee of funding not only from NSF, but also from the Ford Foundation and the Alfred P. Sloan Foundation. During 1958 PSSC established a film studio, conducted an eight-week summer development workshop, and held five training institutes for teachers. During the 1958 though 1959 academic year, 250 schools piloted PSSC materials and a summer institute was held for teachers. Five hundred schools employed the materials in 1959–1960. In the fall of 1960 a finalized PSSC course was implemented in schools throughout the United States.

In September 1959 Zacharias participated in the Woods Hole Conference that defined the structure-of-the-discipline concept that dominated curriculum reform in the years ahead. The hallmark of these curricula was expressed by Harvard psychologist Jerome Bruner in a sentiment that Zacharias often reiterated: the intellectual work of a research scientist and of an elementary school pupil are essentially identical. Thus, students would best learn subject matter—and be better prepared potentially to contribute to the military and space races—by mastering the structure of academic disciplines as defined by research specialists. PSSC became a model for academic specialists in other disciplines as they developed and implemented specialized academic curricula across the land.

Zacharias's intent for PSSC was to foster a scientific mindset that embraced observation, evidence, and basis for belief, while exposing students to state-of-the-art scientific knowledge. In the development stage, PSSC materials benefited from feedback that emerged from piloting. When implemented in its final form, however, the PSSC course expected fidelity from teachers; PSSC and other NSF curriculum projects were designed as “teacher-proof” packages to assure that all students would learn then-current scientific knowledge. Participants in the NSF projects generally valorize those efforts as models of educational reform, while researchers point to the failure of the projects to conduct systematic evalua-

tions and of the movement to achieve its stated goals.

The Physical Sciences Study Committee was the most prominent but only the first of many education reform activities that Zacharias spearheaded under the auspices of Educational Services, Incorporated, a nonprofit organization that emerged from the PSSC project. During the 1960s, the Elementary Science Study developed science curricula and instructional materials for use in schools in the United States. During the late 1960s the African Primary Science Program and the African Mathematics Program developed teaching materials and conducted teacher training for African educational systems. At MIT Zacharias participated in efforts to improve undergraduate physics curricula and proposed reforms for medical education. During the 1970s he took on the issue of standardized testing, which he criticized for stifling student's independent thinking and curiosity in science. Zacharias referred to standardized tests as “the Gestapo of educational systems” (1973, p. 43). He continued, “Uniformity and rigidity require enforcement, so I have chosen a most denigrating title for the enforcement agency. Its hallmark is arbitrariness, secrecy, intolerance, and cruelty.” Apparently, Zacharias never reconciled his dissatisfaction over the curricular homogeneity that standardized tests enforced with the top-down curriculum implementation model that characterized PSSC.

*See also:* SCIENCE EDUCATION; SCIENCE LEARNING, *subentries on* EXPLANATION AND ARGUMENTATION, KNOWLEDGE ORGANIZATION AND UNDERSTANDING, STANDARDS, TOOLS.

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WILLIAM G. WRAGA

### ZIRBES, LAURA (1884–1967)

Laura Zirbes was a leader in elementary education and reading instruction. A professor at the Ohio State University, Zirbes founded its elementary laboratory school and was a strong practitioner and promoter of the Progressive education philosophy.

Zirbes taught elementary school in Cleveland from 1903 to 1919, then worked at the experimental Lincoln School at Teachers College from 1920 until 1926. She received her doctoral degree from Columbia University in 1928. From 1928 until her retirement in 1954 she taught at Ohio State, then conducted workshops and summer sessions until 1964, sixty-one years of teaching in all.

During those sixty-one years Zirbes encountered most of the important issues affecting education in the United States throughout the twentieth century. In Cleveland she taught a class of fifty-six fourth graders, children of immigrants. At Columbia she listened to Edward L. Thorndike, John Dewey, and William Bagley discuss the value of testing, and heard Bagley debate with William Heard Kilpatrick about Kilpatrick's Project Method. She coauthored articles with William S. Gray but turned down his offer to help write the famous Scott-Foresman basal reading series because she disagreed with the philosophy of basal readers. Zirbes's dissertation made her one of the nation's experts on teaching children to read but she never considered herself a reading expert because she did not believe in isolating one subject from other subjects. She founded the laboratory school at the Ohio State University to study the best ways of teaching; the school continued, under her influence, for over thirty years.

The central issue in Zirbes's work was the question, "How do children learn?" She believed they

learned best when their interest was high. That was not a unique observation; others such as Franklin Bobbitt argued that teachers should stimulate children's interest in the subject that the teacher planned to teach, while the teacher remained in complete control and dispensed the knowledge. But Zirbes took the child-centered approach that the teacher should find out the child's needs and interests, and then develop units of study around those needs and interests. Yet Zirbes supported the child-centered approach only if the teacher had a firm understanding of the skills and concepts she wanted the children to learn, and carefully guided her class in that direction. Zirbes was not a laissez-faire progressive who let students do what they pleased.

The next step in learning, according to Zirbes, was to provide good learning experiences that would enlarge children's understanding and their vocabulary. Zirbes believed that the *child*, not the teacher, would make the connections between the new experience and what he or she already knew, following the way it happens in real life, for young and old. When the teacher provided a well-designed experience it would happen the same way in school.

Once a colleague asked Zirbes, "How old must children be before you can teach them generalizations?" Zirbes replied, with wry humor, "Eighty, at least." Then she explained: "You do not teach generalizations. You teach *people* to generalize" (1959, p. 226).

Zirbes believed that several other elements contribute to learning. First, the lesson should be meaningful to the child, and second, learning should be intrinsically motivating. It is better to build on children's interests and to demonstrate that material is relevant to them than it is to force learning. What if, for example, a child is taught reading through *extrinsic* motivation—the child may indeed learn to read, but he may also learn an unintended second lesson: that he hates to read!

The final two key elements of learning, for Zirbes, were that the lesson should stimulate thinking and should be integrated with other subjects. Zirbes wanted students to make observations, to draw inferences, and to learn to think inductively, in science class and in other subjects too. Learning was science with a lowercase "s." Zirbes considered science part of life, part of learning in all subjects, and a way of thinking. She saw science as Dewey saw it: the exciting probing of the unknown in all fields.

Zirbes's teaching philosophy touched upon another great debate of her time, whether educators should teach the arts or focus more on science. In the 1920s Zirbes shared the belief of her times that scientific methods could and would lead to the improvement, indeed to the perfection, of education and of mankind. Though that hope was severely tested by the Depression, she continued to test her classroom practices scientifically throughout her career. At the same time, Zirbes valued the fine arts. She was an amateur painter and an avid art collector; she sang and played the organ. She insisted that a sound education should include art, music, and physical education, integrated with the other subjects. She valued both science and art as part of the vast world of knowledge to be explored and enjoyed.

A related debate was: Is teaching science or art? Zirbes saw that good teaching was both. Child development was a science, which all teachers must study and understand. Applying that knowledge in classrooms was an art. There should be no fixed rules about how to teach; no one method would apply to all situations. The science of child development showed that children learned in different ways and at different rates, but choosing the right teaching method was an art.

As Zirbes neared retirement, her developmentalist approach to education came under attack from critics like Arthur Bestor, who charged schools with neglecting their basic duty of teaching children to think through rigorous training in the academic subjects. Zirbes responded by asking, how do we teach children to be creative? How do we teach them to adjust in an age of expanding knowledge and unprecedented change? The answer came in her best book, *Spurs to Creative Teaching* (1959). She said teachers must become creative and realize that conditions in the classroom can either facilitate or block students from becoming creative. All students, not just the gifted, can benefit from an environment in which teachers are open to new possibilities and not argumentative about change. A teacher who just goes through the motions and is bound to his manu-

al is little better than an organ-grinder "who makes his rounds, grinding out his ready-made tunes in sequence, over and over, without really making music or getting much out of it" (p. 41). The creative teacher, then, is not only more of a professional, but finds the profession more rewarding.

*See also:* CURRICULUM, SCHOOL; ELEMENTARY EDUCATION, *subentry on* HISTORY OF; LEARNING; PROGRESSIVE EDUCATION; READING, *subentry on* TEACHING OF.

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TONY REID

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## APPENDIX I

# ASSESSMENT AND ACHIEVEMENT TESTS

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*This list of commonly administered standardized assessments was compiled from information furnished by ERIC/AE Test Locator. The Test Locator is a joint project of the Educational Resources Information Center Clearinghouse on Assessment and Evaluation, the Library and Reference Services Division of the Educational Testing Service, the Buros Institute of Mental Measurements at the University of Nebraska in Lincoln, the Region III Comprehensive Center at George Washington University, and Pro-Ed test publishers. Information regarding tests not listed here may be obtained by using the Test Locator, located at <<http://ericae.net/testcol.htm>>. Additional information regarding the tests that follow is available through the testing services listed.*

### A

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**ABLE** *see* **Adult Basic Learning Examination, 2nd edition**

**ACT Assessment (ACT)**

*This multiple-choice test assesses high school students' general educational development and their ability to complete college-level work. Skill areas covered include English, mathematics, reading, and science reasoning. Grade 11 and above.*

American College Testing, Inc.  
P.O. Box 1008  
Iowa City, IA 52243-1008  
Phone: 319-337-1000  
<[www.act.org](http://www.act.org)>

**Adult Basic Learning Examination, 2nd edition (ABLE)**

*This multiple-choice exam measures adult achievement in these basic learning skills: reading comprehension, spelling, arithmetic computation, and problem solving. Age 17 and older.*

Harcourt Brace Educational Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<[www.harcourt.com/about/harcourt\\_educational\\_measurement.html](http://www.harcourt.com/about/harcourt_educational_measurement.html)>

**AP Examination: Advanced Placement Program (AP)**

*This College Board-sponsored program gives high school students the opportunity to take college-level courses and exams in a variety of subjects while earning credit or advanced placement, or both, for college. Grades 11–12.*

The College Board/Educational Testing Service  
45 Columbus Avenue  
New York, NY 10023-6992  
Phone: 212-713-8000  
<[www.collegeboard.com](http://www.collegeboard.com)>

**Armed Services Vocational Aptitude Battery (ASVAB)**

*There are two audiences for this battery. First, it is the entrance exam for service in the U.S. Armed Forces. Second, this battery of multiple-choice tests is administered by guidance counselors to high school students as a diagnostic tool in order to determine possible civilian occupations and for career planning. The occupational composites are: mechanical and crafts, business and clerical, health, social and technology, and electronics and electrical. Grade 10 and above.*

Testing Directorate Headquarters  
Military Enlistment Processing Command  
Attn: MERCY  
Fort Sheridan, IL 60037  
Phone: 800-USA-ARMY  
<[www.goarmy.com/util/asvab.htm](http://www.goarmy.com/util/asvab.htm)>

**ASSET**

*This multiple-choice exam assesses writing, reading, numerical, and advanced mathematical skills for course placement. Age 18 and above.*

American College Testing, Inc.  
P.O. Box 1008  
Iowa City, IA 52243-1008  
Phone: 319-337-1000  
<[www.act.org](http://www.act.org)>

**ASVAB** *see* **Armed Services Vocational Aptitude Battery**

### B

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**Ball Aptitude Battery (BAB)**

*This multiple-choice series of exams measures aptitudes for career exploration and self-knowledge. Subjects include: clerical, word association, writing speed, "ideaphoria," associative memory, inductive reasoning, auditory memory, spatial visualization, and vocabulary. Grades 8–12 and above.*

Ball Foundation  
800 Roosevelt Road, E-200  
Glen Ellyn, IL 60137-5866  
Phone: 800-469-8378  
<www.ballfoundation.org>

### Basic Achievement Skills

#### Individual Screener (BASIS)

*This test measures achievement in reading, mathematics, and spelling, and it assesses individual students' strengths and weaknesses with both norm-referenced and criterion-referenced information. Grade 1 and above.*

Harcourt Brace Educational  
Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<www.hemweb.com>

#### Basic Inventory of Natural Language (BINL)

*This oral exam measures language proficiency. It is used in bilingual language development, and speech and language remediation programs. Ages 4–adult.*

CHECpoint Systems, Inc.  
1520 North Waterman Avenue  
San Bernardino, CA 92404-5111  
Phone: 800-975-3250  
Fax: 800-433-9330

#### BASIS *see* Basic Achievement Skills Individual Screener

#### Battelle Developmental Inventory (BDI)

*This exam evaluates development in children by screening and diagnosing developmental strengths and weaknesses. Birth–age 8.*

Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<www.riverpub.com>

#### BINL *see* Basic Inventory of Natural Language

#### Brigance Diagnostic Comprehensive Inventory of Basic Skills (CIBS)

*This assessment measures basic academic skills. Grades pre-K–9.*

Curriculum Associates, Inc.  
153 Rangeway Road  
North Billerica, MA 01862  
Phone: 800-225-0248  
Fax: 800-366-1158  
<www.curriculumassociates.com>

#### Brigance Diagnostic Inventory of Basic Skills

*This assessment measures strengths and weaknesses in 14 major skill*

*areas, provides system for performance record, and determines level of achievement. Grades K–6.*

Curriculum Associates, Inc.  
153 Rangeway Road  
North Billerica, MA 01862  
Phone: 800-225-0248  
Fax: 800-366-1158  
<www.curriculumassociates.com>

## C

#### California Achievement Test (CAT/5)

*This test assesses academic achievement in language arts and mathematics. Grades K–12.*

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<www.ctb.com>

#### California Diagnostic Test (CDMT/CDRT)

*This test assesses basic reading and mathematical skills. Grades 1–12.*

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<www.ctb.com>

#### Career Programs Assessment (CPAt)

*This multiple-choice exam is used for course placement to assess basic language, reading, and numeric skills. Age 18 and above.*

American College Testing, Inc.  
P.O. Box 1008  
Iowa City, IA 52243-1008  
Phone: 319-337-1000  
<www.act.org>

#### CAT/5 *see* California Achievement Test

#### C-BASE *see* College Basic Academic Skills Examination

#### CDMT/CDRT *see* California Diagnostic Test

#### CIBS *see* Brigance Diagnostic Comprehensive Inventory of Basic Skills

#### CLEP *see* College-Level Examination Program

#### Cognitive Abilities Test Form 5 (CogAT)

*This exam assesses students' abilities in reasoning and problem solving*

*through use of verbal, quantitative, and spatial symbols. Grades K–12.*  
Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<www.riverpub.com>

#### College BASE

*This test consists of multiple-choice and essay components, which measure proficiency in English, mathematics, science, and social studies, as well as cross-disciplinary skills. College level.*

Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<www.riverpub.com>

#### College Basic Academic Skills Examination (C-BASE)

*This multiple-choice and essay exam assesses knowledge of basic academic skills. Adults, college level.*

College BASE Coordinator  
Assessment Resource Center  
University of Missouri–Columbia  
2800 Maguire Boulevard  
Columbia, Missouri 65201  
Phone: 800-366-8232  
Fax: 573-882-8937  
<http://arc.missouri.edu/collegebase>

#### College-Level Examination Program (CLEP)

*CLEP measures college-level achievement in 34 different subject areas, and students may earn up to two years of college credit. Grade 10 and above.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000 or 800-257-9558  
Fax: 609-734-5410  
<www.ets.org>

#### COMP Objective Test

*This multiple-choice test assesses general education skills: communicating, solving problems, clarifying values, using the arts, using science, and functioning in social situations. Age 17 and above.*

American College Testing, Inc.  
P.O. Box 1008  
Iowa City, IA 52243-1008  
Phone: 319-337-1000  
<www.act.org>

#### Comprehensive Testing Program (CTP III)

*This test measures verbal and mathematical skills. Use of test is*

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**G**


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restricted to Educational Records Bureau (ERB) members. Grades 1–12.

Educational Records Bureau  
Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000 or 212-672-9809  
Fax: 609-734-5410  
<www.ets.org>

**Comprehensive Test of Basic Skills, 4th edition (CTBS-4)**

*This multiple-choice test assesses basic skills in reading, language, mathematics, science, and social studies. Grades K–12.*

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<www.ctb.com>

**Cooperative Admissions Exam (COOP-Catholic HS entrance exam)**

*This Catholic high school entrance exam assesses language arts skills, such as reading comprehension, sequences, analogies, memory, verbal reasoning, language expression, as well as mathematical skills. It is used in the Archdiocese of New York, Archdiocese of Newark, Archdiocese of New Jersey, Diocese of Brooklyn, and Diocese of Rockland County. Grade 8. Materials available through school.*

**CPAt see Career Programs Assessment**

**CTB5-5 see TerraNova**

**CTBS-4 see Comprehensive Test of Basic Skills, 4th edition**

**CTP III see Comprehensive Testing Program**

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**D**


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**Differential Aptitude Test, 5th edition (DAT)**

*This is a multiple-choice exam that assesses aptitude and interest. It is used for educational and vocational guidance. Grades 8–12.*

Harcourt Brace Educational Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<www.harcourt.com>

**GIFFI see Group Inventory for Finding Interests**

**GIFT see Group Inventory for Finding Creative Talent**

**Graduate Management Admission Test (GMAT)**

*The Graduate Management Admission Council's exam is used by many graduate schools of business and management as a criterion in considering applications for admission. College level.*

Graduate Management Admission Council  
Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000  
Fax: 609-734-5410  
<www.ets.org>

**Graduate Record Examinations (GRE)**

*The Graduate Record Examinations Board Program provides tests, publications, and services that assist graduate schools and departments in graduate admissions activities, guidance and placement, program evaluation, and selection of fellowship recipients. The GRE Program's tests include the General Test, which measures developed verbal, quantitative, and analytical abilities; the Subject Tests, which measure achievement in 8 different fields of study; and the Writing Assessment, which measures proficiency in critical reasoning and analytical writing. College level.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000  
Fax: 609-734-5410  
<www.ets.org>

**Group Inventory for Finding Creative Talent (GIFT)**

*This assessment is used to screen elementary school students for programs for the creatively gifted. Available on three levels: Grades K–2, 3–4, 5–6.*

Sylvia Rimm, Ph.D.  
Educational Assessment Service, Inc.  
W6050 Apple Road  
Watertown, WI 53098  
Phone: 800-795-7466  
Fax: 920-261-6622  
<www.sylviarimm.com>

**Group Inventory for Finding Interests (GIFFI)**

*This assessment is used to identify students at middle and high school levels with attitudes and values associated with creativity. Available on two levels: Grades 6–9, 9–12.*

Sylvia Rimm, Ph.D.  
Educational Assessment Service, Inc.  
W6050 Apple Road  
Watertown, WI 53098  
Phone: 800-795-7466  
Fax: 920-261-6622  
<www.sylviarimm.com>

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**H**


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**HSPT see STS High School Placement Test**

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**I**


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**IEA see International Association for the Evaluation of Educational Achievement**

**Independent School Entrance Exam (ISEE) (middle and upper)**

*This test is a standardized admissions exam used by schools that are members of the Educational Record Bureau consortium (ERB). The ISEE is used to facilitate student placement in course levels and for identifying areas where the student may need reinforcement. Grades 6–12.*

Educational Records Bureau  
Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000  
Fax: 609-734-5410  
<www.ets.org>

**International Association for the Evaluation of Educational Achievement (IEA)**

*This independent, international cooperative of national research institutions and governmental research agencies conducts large-scale comparative studies of educational achievement, with the aim of gaining a more in-depth understanding of the effects of policies and practices within and across systems of education. IEA studies are an important data source for those working to enhance students' learning at the international, national, and local levels. By reporting on a wide range of topics and subject matters, the*

*studies contribute to a deep understanding of educational processes within individual countries, and across a broad international context. IEA's most widely administered tests include: Trends in Mathematics and Science Studies (TIMSS), the Third International Mathematics and Science Study Repeat (TIMSS-R), and the Progress in International Reading Literacy Studies (PIRLS). Grades 4 and 8.*

IEA—USA

International Study Center  
Boston College  
Manresa House  
140 Commonwealth Avenue  
Chestnut Hill, MA  
Phone: 617-552-1600  
Fax: 617-552-1203

IEA—Headquarters

Herengracht 487  
1017 BT Amsterdam  
The Netherlands  
<[www.iea.nl](http://www.iea.nl)>

**Iowa Tests for Educational Development (ITED) Form K & L or Form M**

*These exams assess the development of basic academic skills and identify students' strengths and weaknesses while also evaluating the effectiveness of instructional programs. Grades K–9.*

Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<[www.riverpub.com](http://www.riverpub.com)>

**ISEE see Independent School Entrance Exam**

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**K**

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**K-ABC see Kaufman Assessment Battery for Children**

**Kaufman Adolescent and Adult Intelligence Test (KAIT)**

*This exam is a comprehensive measure of general intelligence. Ages 11–85.*

American Guidance Service  
4201 Woodland Road  
Circle Pines, MN 55014-1796  
Phone: 800-328-2560  
Fax: 800-471-8457  
<[www.agsnet.com](http://www.agsnet.com)>

**Kaufman Assessment Battery for Children (K-ABC)**

*This exam measures individual cognitive assessment. Ages 2 years, 6 months–12 years, 5 months.*

American Guidance Service  
4201 Woodland Road  
Circle Pines, MN 55014-1796  
Phone: 800-328-2560  
Fax: 800-471-8457  
<[www.agsnet.com](http://www.agsnet.com)>

**Kaufman Brief Intelligence Test (K-BIT)**

*This test is used to obtain an estimate of intelligence. It is also used to assess giftedness, to reassess individuals, or as routine intake for patients, prisoners, or recruits. Ages 4–90.*

American Guidance Service  
4201 Woodland Road  
Circle Pines, MN 55014-1796  
Phone: 800-328-2560  
Fax: 800-471-8457  
<[www.agsnet.com](http://www.agsnet.com)>

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**L**

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**Law School Admission Test (LSAT)**

*This half-day, multiple-choice test measures acquired reading and verbal reasoning skills that law schools use as one of several factors in assessing applicants. The LSAT is required for admission to the 198 law schools that are members of the Law School Admission Council (LSAC). College level.*

Law School Admission Council  
661 Penn Street  
Newtown, PA 18940  
Phone: 215-968-1001  
Fax: 215-968-1119  
<[www.lsac.org](http://www.lsac.org)>

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**M**

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**MAT see Miller Analogies Test**

**MCAT see Medical College Admission Test**

**Medical College Admission Test (MCAT)**

*This standardized, multiple-choice exam assesses problem solving, critical thinking, and writing skills in addition to knowledge of science concepts and principles prerequisite to the study of medicine. Subject areas*

*include: verbal reasoning, physical sciences, and biological sciences. A writing sample is also part of the exam. Medical college admission committees consider MCAT scores as part of their admission decision process, and almost all U.S. medical schools require applicants to submit MCAT scores with applications. College level.*

MCAT Program Office  
P.O. Box 4056  
Iowa City, IA 52243  
Phone: 319-337-1357  
<[www.aamc.org](http://www.aamc.org)>

**Metropolitan Achievement Test (Metropolitan8)**

*This broad-ranging test measures foundation skills and critical-thinking processes and strategies. The test format is designed so that all students can easily focus on what's being asked in each question and so that they can navigate easily through the test. Grades K–12.*

Harcourt Brace Educational  
Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<[www.hemweb.com/trophy/achvtest/mat8.htm](http://www.hemweb.com/trophy/achvtest/mat8.htm)>

**Middle Grades Assessment (MGA)**

*This test is composed of a student survey, a transcript study, and achievement tests in mathematics, science, and reading. A detailed school-level report presents the results of the students who have taken the assessment. Grade 8.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000 or 609-734-1987  
Fax: 609-734-5410  
<[www.ets.org](http://www.ets.org)>

**Miller Analogies Test (MAT)**

*This is a high-level mental ability test requiring participants to solve 100 multiple-choice, partial word analogies. Adults.*

The Psychological Corporation  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-622-3231  
<[www.tpcweb.com](http://www.tpcweb.com)>

## N

**National Assessment of Educational Progress (NAEP)**

Also known as "The Nation's Report Card," this national assessment tests knowledge of reading, writing, mathematics, science, U.S. history, civics, geography, and fine arts. Scores are not reported to individual schools; rather, results are for populations of students and subgroups of those populations. Also, they are based on a sampling of students, not the entire group tested. There is a state-level NAEP that is administered as well. Grades 4, 8, and 12.

Office of Educational Research and Improvement  
U.S. Department of Education  
1990 K Street NW  
Washington, DC 20006  
Phone: 202-502-7300  
<[www.nces.ed.gov/nationsreportcard](http://www.nces.ed.gov/nationsreportcard)>

**New York City Specialized Science High Schools Admission Test (SSHSAT)**

This exam is used for admission to Stuyvesant High School, Bronx High School of Science, and Brooklyn Technical High School. It assesses verbal skills and mathematical problem solving. Grades 8–9.

New York City Board of Education  
Division of Assessment and Accountability  
110 Livingston Street  
Brooklyn, NY 11201  
Phone: 718-935-3767  
Fax: 718-935-5268  
<[www.nycenet.edu/daa](http://www.nycenet.edu/daa)>

## O

**Otis-Lennon School Ability Test (OLSAT)**

This multiple-choice test assesses general mental ability and scholastic aptitude. Measures verbal comprehension, verbal reasoning, pictorial reasoning, figural reasoning, and quantitative reasoning. There are seven different grade levels. Grade K–12.

Harcourt Brace Educational Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<[www.hemweb.com/trophy/achvtest/mat8.htm](http://www.hemweb.com/trophy/achvtest/mat8.htm)>

## P

**PIRLS see International Association for the Evaluation of Educational Achievement****PISA see Program for International Student Assessment****PLAN**

This precursor to the ACT helps 10th grade students prepare for the ACT, while measuring their academic development. Also, it focuses attention on both career preparation and improving academic achievement in high school. Grade 10.

American College Testing, Inc.  
P.O. Box 1008  
Iowa City, IA 52243-1008  
Phone: 319-337-1000  
<[www.act.org](http://www.act.org)>

**Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT)**

This precursor to the SAT helps students prepare and practice for the SAT I: Reasoning Test and the SAT II: Writing Test. It is also the qualifying test for the scholarship competitions conducted by the National Merit Scholarship Corporation. Grade 10.

The College Board/Educational Testing Service  
45 Columbus Avenue  
New York, NY 10023-6992  
Phone: 212-713-8000  
<[www.collegeboard.com](http://www.collegeboard.com)>

**Primary Test of Cognitive Skills (PTCS)**

This test serves as a predictor of future academic achievement when given in conjunction with an achievement test. Skills assessed include verbal, nonverbal, memory, and spatial reasoning. This test can be used to identify giftedness, learning disabilities, or developmental delays. Grades K–1.

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<[www.ctb.com](http://www.ctb.com)>

**Program for International Student Assessment (PISA)**

This three-yearly survey coordinated by the Organisation for Economic Co-Operation and Development

(OECD) assesses how well students nearing the end of compulsory education are able to apply the knowledge and skills developed at school, to perform tasks that they will need in their future lives, to function in society, and to continue learning. PISA is a collaborative effort among the governments of 28 OECD and 4 nonmember countries, and its assessment of reading literacy, mathematical literacy, and scientific literacy help educators measure students' ability in the area of life skills. Age 15.

Organisation for Economic Co-Operation and Development  
DEELSA Statistics and Indicators Division  
2 rue André-Pascal  
75775 Paris Cedex 16  
France  
Phone: (33-1) 4524 9366  
<[www.pisa.oecd.org](http://www.pisa.oecd.org)>

**Progress in International Reading Literacy Studies (PIRLS) see International Association for the Evaluation of Educational Achievement (IEA)****PSAT/NMSQT see Preliminary SAT/National Merit Scholarship Qualifying Test****PTCS see Primary Test of Cognitive Skills**

## R

**Riverside Performance Assessment Series (R-PAS)**

This test assesses thinking and process skills, as well as problem-solving strategies. Subjects tested are reading, writing, and mathematics. Grades 1–12.

Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<[www.riverpub.com](http://www.riverpub.com)>

## S

**SAGES-2 see Screening Assessment for Gifted Elementary and Middle School Students, 2nd edition****SAT 9 see Stanford Achievement Test Series, 9th edition****SAT I**

The College Board-sponsored SAT Program consists of the SAT I:

*Reasoning Test and SAT II: Subject Tests. The SAT I measures verbal- and mathematical-reasoning abilities, including reading comprehension, vocabulary, mathematical problem solving, arithmetic reasoning, algebra, and geometry. (The SAT II: Subject Tests measure knowledge of particular subjects and the ability to apply that knowledge.) Grades 11 and 12.*

The College Board/Educational Testing Service  
45 Columbus Avenue  
New York, NY 10023-6992  
Phone: 212-713-8000  
<www.collegeboard.com>

### **SAT II**

*These assessment exams are one-hour, mostly multiple-choice tests in specific subjects that measure knowledge of particular subjects and the ability to apply that knowledge. Many colleges require or recommend these tests for admission or placement purposes. Grades 11–12.*

The College Board/Educational Testing Service  
45 Columbus Avenue  
New York, NY 10023-6992  
Phone: 212-713-8000  
<www.collegeboard.com>

### **SBIS see Stanford-Binet Intelligence Scale, 4th edition**

### **Screening Assessment for Gifted Elementary and Middle School Students, 2nd edition (SAGES-2)**

*This exam identifies gifted students through aptitude and achievement tests. Aptitude is measured using a Reasoning subtest in which students solve problems by identifying relationships among pictures and figures. The other two subtests, Mathematics/Science and Language Arts/Social Studies, assess achievement. Grades K–8.*

Psychological Assessment Resources, Inc.  
16204 North Florida Avenue  
Lutz, FL 33549  
Phone: 800-331-8378  
Fax: 800-727-9329  
<www.parinc.com>

### **Secondary Level English Proficiency Test (SLEP)**

*This exam measures English language ability in terms of listening comprehension and reading comprehension. Grades 7–12 nonnative English language speakers;*

*also used by community colleges as an assessment tool for screening or placing entering students into ESL programs.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-683-2057  
Fax: 609-734-5410  
<www.ets.org>

### **SLEP see Secondary Level English Proficiency Test**

### **SSHSAT see New York City Specialized Science High Schools Admission Test**

### **Stanford Achievement Test Series, 9th edition (SAT 9)**

*This assessment combines multiple-choice and open-ended subtests to help educators obtain a more complete picture of both the breadth and depth of students' educational achievement. Grades K–13.*

Harcourt Brace Educational Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<www.hemweb.com/trophy/achvtest/sat9view.htm>

### **Stanford-Binet Intelligence Scale, 4th edition (SBIS)**

*This test assesses intelligence and cognitive abilities. Ages 2–adult.*  
Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<www.riverpub.com>

### **STS High School Placement Test (HSPT)**

*This multiple-choice exam assesses academic achievement and aptitude. Often used as an entrance exam for parochial school, subjects tested include: verbal cognitive skills, quantitative skills, reading, mathematics, and language, as well as optional sections on Catholic religion, mechanical aptitude, and science. Grades 8.3–9.3.*

Scholastic Testing Service, Inc.  
Administrative & Editorial Division/  
Order Department  
480 Meyer Road  
Bensenville, IL 60106  
Phone: 800-642-6787  
<www.ststesting.com>

## T

### **TABE see Test of Adult Basic Education**

### **TCS/2 see Test of Cognitive Skills, 2nd edition**

### **TEMA see Test for Early Mathematics Ability**

### **TERA-2 see Test of Early Reading Ability, 2nd edition**

### **TerraNova (CTB5-5)**

*This multiple-choice exam assesses academic achievement in reading, language arts, mathematics, science, and social studies. Grades K–12.*

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<www.ctb.com>

### **Test for Early Mathematics Ability (TEMA)**

*This exam measures mathematics performance in early childhood. It can be used as a diagnostic instrument to determine specific strengths and weaknesses, to measure progress, evaluate programs, screen for readiness, and identify gifted students. Ages 3–8 years, 11 months.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

### **Test for Mathematical Abilities, 2nd edition (TOMA-2)**

*This exam measures mathematical performance in two major skill areas in mathematics: word problems and computation, as well as attitude, vocabulary, and general application of mathematics concepts in real life. Grades 3–12.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

### **Test of Adult Basic Education (TABE)**

*This multiple-choice exam measures adult-level proficiency in reading, mathematics, and language in order to identify strengths and weaknesses, establish level of instruction, and measure academic growth. Adults.*

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<www.ctb.com>

**Test of Children's Language  
(TOCL)**

*This exam identifies students' strengths and weaknesses in language components, and it recognizes young students who are at risk for failure in reading and writing. Ages 5–8 years, 11 months.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**Test of Cognitive Skills, 2nd  
edition (TCS/2)**

*This test serves as a predictor of future academic achievement when given in conjunction with an achievement test. Skills assessed include sequences, analogies, memory, and verbal reasoning. This test can be used to identify students for special programs. Grades 2–12.*

CTB/McGraw-Hill  
20 Ryan Ranch Road  
Monterey, CA 93940  
Phone: 800-538-9547  
Fax: 800-282-0266  
<www.ctb.com>

**Test of Early Reading Ability, 2nd  
edition (TERA-2)**

*This exam assesses mastery of early developing reading skills, specifically the ability for spoken language using two subtests: receptive language and expressive language. Ages 3 years, 6 months–8 years, 6 months.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**Test of Early Written Language,  
2nd edition (TEWL-2)**

*This exam assesses mastery of early developing writing skills, measured in two forms, each containing a basic writing and contextual writing component. Ages 3–10 years, 11 months.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**Test of English as a Foreign  
Language (TOEFL)**

*This exam is for non-native English language speakers who are planning to study in a North American college or university. It includes grammar, writing, listening, and speaking sections. Age 16 and above.*

TOEFL Services  
Educational Testing Service (ETS)  
P.O. Box 6151  
Princeton, NJ 08541  
Phone: 609-771-7100  
Fax: 609-771-7500  
<www.toefl.org>

**Test of English for International  
Communication (TOEIC)**

*This exam assesses English language proficiency and communication skills in non-native English language speakers who are planning to work in North American corporations. Age 18 and above.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000  
Fax: 609-720-6550  
<www.ets.org>

**Test of Phonological Awareness  
(TOPA)**

*This exam measures young children's awareness of individual sounds in words. Grades K–2.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**Test of Reading Comprehension,  
3rd edition (TORC-3)**

*This test assesses reading comprehension ability in terms of language and cognition. Areas tested include: vocabulary, syntax, paragraph reading, and sentence sequencing. Grades 2–12.*

Stoelting Company  
620 Wheat Lane  
Wood Dale, IL 60191  
Phone: 630-860-9700  
Fax: 630-860-9775  
<http://stoeltingco.com>

**Test of Spoken English (TSE)**

*This oral exam assesses non-native English language speakers' ability to speak the English language. All answers to the test questions are recorded on tape and scored by language specialists. Age 16 and above.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000  
Fax: 609-734-5410  
<www.ets.org>

**Test of Written English (TWE)**

*This exam is administered along with the Test of English as a Foreign Language (TOEFL) at paper-based TOEFL test administrations. The test involves writing an essay in English on a provided topic. The essay is read and scored by writing specialists. Age 16 and above.*

Educational Testing Service (ETS)  
664 Rosedale Road  
Princeton, NJ 08541  
Phone: 609-921-9000  
Fax: 609-734-5410  
<www.ets.org>

**Test of Written Expression  
(TOWE)**

*This exam, consisting of two parts, is used to assess writing achievement. The first part uses 76 items related to writing, such as vocabulary and spelling, to determine skill. The second part consists of providing the student with a stimulus, such as a beginning of a story, and having the student finish the story in writing. Ages 6 years, 6 months–14 years, 11 months.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**Test of Written Language, 3rd  
edition (TOWL-3)**

*This written test assesses written expression ability in students. The test involves writing a story on a given theme. Grades 2–12.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**Test of Written Spelling, 3rd edition (TOWS-3)**

*This 100-item test assesses written spelling ability. Ages 6 years, 7 months–18 years, 6 months.*

PRO-ED, Inc.  
8700 Shoal Creek Boulevard  
Austin, TX 78757-6897  
Phone: 800-897-3202  
Fax: 800-397-7633  
<www.proedinc.com>

**TEWL-2 see Test of Early Written Language, 2nd edition****TIMSS see International Association for the Evaluation of Educational Achievement****TIMSS-R see International Association for the Evaluation of Educational Achievement****TOCL see Test of Children's Language****TOEFL see Test of English as a Foreign Language****TOEIC see Test of English for International Communication****TOMA-2 see Test for Mathematical Abilities, 2nd edition****TOPA see Test of Phonological Awareness****TORC-3 see Test of Reading Comprehension, 3rd edition****TOWE see Test of Written Expression****TOWL-3 see Test of Written Language, 3rd edition****TOWS-3 see Test of Written Spelling, 3rd edition****Trends in Mathematics and Science Studies (TIMSS) and Third International Mathematics and Science Studies Repeat (TIMSS-R) see International Association for the Evaluation of Educational Achievement (IEA)****TSE see Test of Spoken English****TWE see Test of Written English**


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**W**


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**Watson-Glaser Critical Thinking Appraisal (WGCTA)**

*This exams measures the ability to think critically. The test requires a ninth grade reading level. Adults.*  
The Psychological Corporation  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-622-3231  
<www.tpcweb.com>

**WDRB see Woodcock Diagnostic Reading Battery****Wechsler Individual Achievement Test (WIAT)**

*Using eight subtests linked to diagnostic tests Wechsler Intelligence Scale for Children (WISC-III) and Wechsler Preschool and Primary Scale of Intelligence (WPPSI-R), this exam measures academic abilities in order to evaluate discrepancies between aptitude and achievement. Subjects include: reading, mathematics, spelling, reasoning, reading comprehension, oral expression, and written expression. Ages 5–19.*

Harcourt Brace Educational  
Measurement  
19500 Bulverde Road  
San Antonio, TX 78259  
Phone: 800-211-8378  
<www.hemweb.com/trophy/  
achvtest/sat9view.htm>

**WGCTA see Watson-Glaser Critical Thinking Appraisal****WIAT see Wechsler Individual Achievement Test****Woodcock Diagnostic Reading Battery (WDRB)**

*This is a comprehensive set of tests that measure reading achievement and related cognitive abilities and aptitudes, such as oral language capabilities. It is composed of ten tests selected from several parts of the Woodcock-Johnson Psycho-Educational Battery—Revised: letter-word identification, word attack, reading vocabulary, passage comprehension, incomplete words, sound blending, oral vocabulary, listening comprehension, memory for sentences, and visual matching. The tests determine the status of an individual's abilities and achievement in five areas of functioning: basic reading skills, reading comprehension, phonological awareness, oral language comprehension, and reading aptitude. Ages 4–90.*

Riverside Publishing Company  
425 Spring Lake Drive  
Itasca, IL 60143-2079  
Phone: 800-323-9540  
<www.riverpub.com>

## APPENDIX II

# STATE-BY-STATE DIRECTORY OF DEPARTMENTS OF EDUCATION

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*This directory of state departments of education is provided as a resource for parents, teachers, administrators, and researchers interested in learning more about statewide education initiatives and assessment programs. Specific statewide assessment programs are not listed because many states are in the process of developing new, proprietary assessments to reflect national standards for 2004. The No Child Left Behind Act of 2001 is also expected to have an impact on state assessment tests. Up-to-date information on statewide assessment programs is available online through individual state departments of education.*

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### A

**Alabama Department of Education**  
P.O. Box 302101  
Montgomery, AL 36130-2101  
334-242-9935  
<[www.alsde.edu](http://www.alsde.edu)>

**Alaska Department of Education  
and Early Development**  
801 West 10th Street, Suite 200  
Juneau, AK 99801-1894  
907-465-2800  
<[www.educ.state.ak.us](http://www.educ.state.ak.us)>

**Arizona Department of Education**  
1535 West Jefferson Street  
Phoenix, AZ 85007  
602-542-4361  
<[www.ade.state.az.us](http://www.ade.state.az.us)>

**Arkansas Department of Education**  
4 Capitol Mall  
Little Rock, AR 72201  
501-682-4475  
<<http://arkedu.state.ar.us>>

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### C

**California Department of  
Education**  
P.O. Box 944272  
Sacramento, California 94244-2720  
916-319-0791  
<[www.cde.ca.gov](http://www.cde.ca.gov)>

### Colorado Department of Education

201 East Colfax Avenue  
Denver, CO 80203  
303-866-6600  
<[www.cde.state.co.us](http://www.cde.state.co.us)>

### Connecticut State Department of Education

165 Capitol Avenue  
Hartford, CT 06145  
860-713-6548  
<[www.state.ct.us/sde](http://www.state.ct.us/sde)>

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### D

### Delaware Department of Education

John G. Townsend Building  
401 Federal Street  
P.O. Box 1402  
Dover, DE 19903-1402  
302-739-4601  
<[www.doe.state.de.us](http://www.doe.state.de.us)>

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### F

### Florida Department of Education

Turlington Building  
325 West Gaines Street  
Tallahassee, FL 32399-0400  
904-488-3217  
<[www.firn.edu/doe](http://www.firn.edu/doe)>

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### G

**Georgia Department of Education**  
205 Jesse Hill Jr. Drive, SE  
Atlanta, GA 30334  
404-656-2800  
<[www.doe.k12.ga.us](http://www.doe.k12.ga.us)>

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### H

**Hawaii Department of Education**  
P.O. Box 2360  
Honolulu, HI 96804  
808-586-3230  
<[www.doe.k12.hi.us](http://www.doe.k12.hi.us)>

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### I

### Idaho State Department of Education

650 West State Street  
P.O. Box 83720  
Boise, ID 83720-0027  
208-332-6800  
<[www.sde.state.id.us/Dept](http://www.sde.state.id.us/Dept)>

**Illinois State Board of Education**  
100 West Randolph, Suite 14-300  
Chicago, IL 60601  
312-814-2220  
<[www.isbe.state.il.us](http://www.isbe.state.il.us)>

**Indiana Department of Education**

State House, Room 229  
Indianapolis, IN 46204-2798  
317-232-0808  
<<http://ideanet.doe.state.in.us>>

**Iowa Department of Education**

Grimes State Office Building  
Des Moines, IA 50319-0146  
515-281-5294  
<[www.state.ia.us/educate](http://www.state.ia.us/educate)>

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**K**

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**Kansas State Department of Education**

120 SE 10th Avenue  
Topeka, KS 66612-1182  
785-296-3201  
<[www.ksbe.state.ks.us](http://www.ksbe.state.ks.us)>

**Kentucky Department of Education**

500 Mero Street  
Frankfurt, KY 40601  
502-564-4770  
<[www.kde.state.ky.us](http://www.kde.state.ky.us)>

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**L**

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**Louisiana Department of Education**

P.O. Box 94064  
Baton Rouge, LA 70804  
504-342-3490  
<[www.doe.state.la.us/DOE/asps/home.asp](http://www.doe.state.la.us/DOE/asps/home.asp)>

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**M**

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**Maine State Department of Education**

23 State House Station  
Augusta, ME 04333  
207-287-5944  
<[www.state.me.us/education/homepage.htm](http://www.state.me.us/education/homepage.htm)>

**Maryland State Department of Education**

200 West Baltimore Street  
Baltimore, MD 21201  
410-767-0100  
<[www.msde.state.md.us](http://www.msde.state.md.us)>

**Massachusetts Department of Education**

350 Main Street  
Malden, MA 02148  
781-338-3000  
<[www.doe.mass.edu](http://www.doe.mass.edu)>

**Michigan Department of Education**

608 West Allegan Street  
Lansing, MI 48933  
517-373-3324  
<[www.michigan.gov/mde](http://www.michigan.gov/mde)>

**Minnesota Department of Children, Families, and Learning**

1500 Highway 36 West  
Roseville, MN 55113  
651-582-8200  
<[www.educ.state.mn.us](http://www.educ.state.mn.us)>

**Mississippi Department of Education**

Central High School  
P.O. Box 771  
359 North West Street  
Jackson, MS 39205  
601-359-3513  
<[www.mde.k12.ms.us](http://www.mde.k12.ms.us)>

**Missouri Department of Elementary and Secondary Education**

P.O. Box 480  
Jefferson City, MO 65102  
573-751-4212  
<[www.dese.state.mo.us](http://www.dese.state.mo.us)>

**Montana Office of Public Instruction**

P.O. Box 202501  
Helena, MT 59620-2501  
406-444-3095  
<[www.opi.state.mt.us](http://www.opi.state.mt.us)>

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**N**

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**Nebraska Department of Education**

301 Centennial Mall South  
Lincoln, NE 68509  
402-471-2295  
<[www.nde.state.ne.us](http://www.nde.state.ne.us)>

**Nevada Department of Education**

700 East Fifth Street  
Carson City, NV 89701  
775-687-9200  
<[www.nde.state.nv.us](http://www.nde.state.nv.us)>

**New Hampshire Department of Education**

101 Pleasant Street  
Concord, NH 03301-3860  
603-271-3494  
<[www.state.nh.us/doe](http://www.state.nh.us/doe)>

**New Jersey Department of Education**

100 Riverview Plaza  
Trenton, NJ 08625  
609-292-0739  
<[www.state.nj.us/education](http://www.state.nj.us/education)>

**New Mexico Department of Education**

Education Building  
300 Don Gaspar  
Santa Fe, NM 87501-2786  
505-827-6575  
<<http://sde.state.nm.us>>

**New York State Education Department**

89 Washington Avenue  
Albany, NY 12234  
518-474-3852  
<[www.nysed.gov](http://www.nysed.gov)>

**North Carolina Department of Public Instruction**

301 North Wilmington Street  
Raleigh, NC 27601  
919-807-3300  
<[www.dpi.state.nc.us](http://www.dpi.state.nc.us)>

**North Dakota Department of Public Instruction**

600 East Boulevard Avenue  
Department 201  
Bismark, ND 58505-0440  
701-328-2260  
<[www.dpi.state.nd.us](http://www.dpi.state.nd.us)>

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**O**

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**Ohio Department of Education**

25 South Front Street  
Columbus, OH 43215-4183  
877-644-6338  
<[www.ode.state.oh.us](http://www.ode.state.oh.us)>

**Oklahoma State Department of Education**

2500 North Lincoln Boulevard  
Oklahoma City, OK 73105-4599  
405-521-3301  
<<http://sde.state.ok.us>>

**Oregon Department of Education**

255 Capitol Street NE  
Salem, OR 97310-0203  
503-378-3569  
<[www.ode.state.or.us](http://www.ode.state.or.us)>

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**P**

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**Pennsylvania Department of Education**

333 Market Street  
Harrisburg, PA 17126  
717-783-6788  
<[www.pde.psu.edu](http://www.pde.psu.edu)>

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**R**

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**Rhode Island Department of  
Elementary and Secondary  
Education**

255 Westminster Street  
Providence, RI 02903  
401-222-4600  
<[www.ridoe.net](http://www.ridoe.net)>

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**S**

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**South Carolina State Department  
of Education**

1429 Senate Street  
Columbia, SC 29201  
803-734-8500  
<[www.sde.state.sc.us](http://www.sde.state.sc.us)>

**South Dakota Department of  
Education and Cultural Affairs**

Kneip Building, 3rd Floor  
700 Governors Drive  
Pierre, SD 57501-2291  
605-773-3134  
<[www.state.sd.us/deca](http://www.state.sd.us/deca)>

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**T**

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**Tennessee Department of  
Education**

Andrew Johnson Tower, 6th Floor  
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Nashville, TN 37243-0375  
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<[www.state.tn.us/education](http://www.state.tn.us/education)>

**Texas Education Agency**

1701 North Congress Avenue  
Austin, TX 78701-1494  
512-463-9734  
<[www.tea.state.tx.us](http://www.tea.state.tx.us)>

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**Utah State Office of Education**

250 East 500 South  
P.O. Box 144200  
Salt Lake City, UT 84114-4200  
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<[www.usoe.k12.ut.us](http://www.usoe.k12.ut.us)>

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**V**

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**Vermont Department of Education**

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802-828-3147  
<[www.state.vt.us/educ](http://www.state.vt.us/educ)>

**Virginia Department of Education**

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Richmond, VA 23218  
800-292-3820  
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**W**

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**Washington Office of  
Superintendent of Public  
Instruction**

Old Capitol Building  
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Olympia, WA 98504-7200  
360-725-6000  
<[www.k12.wa.us](http://www.k12.wa.us)>

**West Virginia Department of  
Education**

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Charleston, WV 25305  
304-558-2861  
<<http://wvde.state.wv.us>>

**Wisconsin Department of Public  
Instruction**

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Madison, WI 53707-7841  
800-441-4563  
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**Wyoming Department of  
Education**

2300 Capitol Avenue  
Hathaway Building, 2nd Floor  
Cheyenne, WY 82002-0050  
307-777-7675  
<[www.k12.wy.us](http://www.k12.wy.us)>

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## APPENDIX III

# COURT CASES, LEGISLATION, AND INTERNATIONAL AGREEMENTS

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*The documents included in this Appendix were selected by the editors of the Encyclopedia of Education, Second Edition to represent the essential primary sources relating to the field of education. The documents are divided into four sections as listed in the table of contents. The first section contains key court decisions that govern educational policy and practice in the United States. Footnotes have been omitted due to space limitations. For complete transcripts of U.S. Supreme Court cases including footnotes, please see United States Reports, published for the Court by the Reporter of Decisions and released by the Government Printing Office. The second and third sections contain legislation and reports of significance to American education. The final section is a compilation of significant treaties and other documents that influence education around the world. The documents are organized chronologically. For a topical guide to the documents listed below, please see Appendix VI: Outline of Contents.*

### **Court Cases**

- Charles E. Stuart v. School District No. 1 of the Village of Kalamazoo (1874)
- Plessy v. Ferguson (1896)
- Pierce v. Society of the Sisters of the Holy Names of Jesus and Mary (1925)
- Brown v. Board of Education (1954 and 1955)
- Engel v. Vitale (1962)
- Abington School District v. Schempp (1963)
- Green et al. v. County School Board of New Kent County et al. (1968)
- Tinker et al. v. Des Moines Independent Community School District et al. (1969)
- Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania (1971)
- Swann v. Charlotte-Mecklenburg Board of Education (1971)
- Mills v. Board of Education of the District of Columbia (1972)
- Wisconsin v. Yoder (1972)
- San Antonio Independent School District et al. v. Rodriguez et al. (1973)
- Lau et al. v. Nichols et al. (1974)
- University of California Regents v. Bakke (1978)

### **Reports and Other Sources**

- My Pedagogic Creed* by John Dewey (1897)
- A Nation at Risk* (abbreviated) (1983)
- Joint Statement on the Education Summit with the Nation's Governors in Charlottesville, Virginia (1989)

*State Constitutions and Public Education Governance (2000)***Legislation**

Land Ordinance of 1785

Northwest Ordinance of 1787

Constitution of the United States (1787)

Morrill Land-Grant Act of 1862

Second Morrill Act of 1890

Elementary and Secondary Education Act of 1965

Title IX of the Education Amendments of 1972

Education for All Handicapped Children Act of 1975

Education of the Handicapped Act Amendments of 1990

Individuals with Disabilities Education Act Amendments of 1997

Head Start: Overview of Programs and Legislation (1999)

National Education Goals Panel: Goals 2000

No Child Left Behind Act of 2001

**International Agreements, Charters, and Declarations**

Charter of the United Nations, Article 1 (1945)

Constitution of the United Nations Educational, Scientific and Cultural Organization (1945)

Universal Declaration of Human Rights (1948)

European Convention on Human Rights and Its Five Protocols (1950)

Declaration of the Rights of the Child (1959)

Convention against Discrimination in Education (1960)

Declaration on Race and Racial Prejudice (1978)

Convention on the Rights of the Child (1989)

Document of the Copenhagen Meeting on the Human Dimension of the Conference on Security and Co-operation in Europe (1990)

World Declaration on Education for All (1990)

Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities (1992)

European Charter for Regional or Minority Languages (1992)

Council of Europe Framework Convention for the Protection of National Minorities (1995)

## COURT CASES

## CHARLES E. STUART V. SCHOOL DISTRICT NO. 1 OF THE VILLAGE OF KALAMAZOO (1874)

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SUPREME COURT OF MICHIGAN  
JULY 10, 1874; JULY 15, 1874, HEARD  
JULY 21, 1874, DECIDED

### OPINION:

Cooley, J.:

The bill in this case is filed to restrain the collection of such portion of the school taxes assessed against complainants for the year 1872, as have been voted for the support of the high school in that village, and for the payment of the salary of the superintendent. While, nominally, this is the end sought to be attained by the bill, the real purpose of the suit is wider and vastly more comprehensive than this brief statement would indicate, inasmuch as it seeks a judicial determination of the right of school authorities, in what are called union school districts of the state, to levy taxes upon the general public for the support of what in this state are known as high schools, and to make free by such taxation the instruction of children in other languages than the English. The bill is, consequently, of no small interest to all the people of the state; and to a large number of very flourishing schools, it is of the very highest interest, as their prosperity and usefulness, in a large degree, depend upon the method in which they are supported, so that a blow at this method seems a blow at the schools themselves. The suit, however, is not to be regarded as a blow purposely aimed at the schools. It can never be unimportant to know that taxation, even for the most useful or indispensable purposes, is warranted by the strict letter of the law; and whoever doubts its being so in any particular case, may well be justified by his doubts in asking a legal investigation, that, if errors or defects in the law are found to exist, there may be a review of the subject in legislation, and the whole matter be settled on legal grounds, in such manner and on such principles as the public will may indicate, and as the legislature may prescribe.

The complainants rely upon two objections to the taxes in question, one of which is general, and the other applies only to the authority or action of this particular district. The general objection has already been indicated; the particular objection is that, even conceding that other districts in the state may have authority under special charters or laws, or by the adoption of general statutes, to levy taxes for the support of high schools in which foreign and dead languages shall be taught, yet this district has no such power, because the special legislation for its benefit, which was had in 1859, was invalid for want of compliance with the constitution in the forms of enactment, and it has never adopted the general law (*Comp. L., ?3742*), by taking a vote of the district to establish a union school in accordance with its provisions, though ever since that law was enacted the district has sustained such a school, and proceeded in its action apparently on the assumption that the statutes in all respects were constitutional enactments, and had been complied with.

Whether this particular objection would have been worthy of serious consideration had it been made sooner, we must, after this lapse of time, wholly decline to consider. This district existed *de facto*, and we suppose *de jure*, also, for we are not informed to the contrary, when the legislation of 1859 was had, and from that time to the present it has assumed to possess and exercise all the franchises which are now brought in question, and there has since been a steady concurrence of action on the part of its people in the election of officers, in the levy of large taxes, and in the employment of teachers for the support of a high school. The state

has acquiesced in this assumption of authority, and it has never, so far as we are advised, been questioned by any one until, after thirteen years user, three individual tax payers, out of some thousands, in a suit instituted on their own behalf, and to which the public authorities give no countenance, come forward in this collateral manner and ask us to annul the franchises. To require a municipal corporation, after so long an acquiescence, to defend, in a merely private suit, the irregularity, not only of its own action, but even of the legislation that permitted such action to be had, could not be justified by the principles of law, much less by those of public policy. We may justly take cognizance in these cases, of the notorious fact that municipal action is often exceedingly informal and irregular, when, after all, no wrong or illegality has been intended, and the real purpose of the law has been had in view and been accomplished; so that it may be said the spirit of the law has been kept while the letter has been disregarded. We may also find in the statutes many instances of careless legislation, under which municipalities have acted for many years, until important interests have sprung up, which might be crippled or destroyed, if then for the first time matters of form in legislative action were suffered to be questioned. If every municipality must be subject to be called into court at any time to defend its original organization and its franchises at the will of any dissatisfied citizen who may feel disposed to question them, and subject to dissolution, perhaps, or to be crippled in authority and powers if defects appear, however complete and formal may have been the recognition of its rights and privileges, on the part alike of the state and of its citizens, it may very justly be said that few of our municipalities can be entirely certain of the ground they stand upon, and that any single person, however honestly inclined, if disposed to be litigious, or over technical and precise, may have it in his power in many cases to cause infinite trouble, embarrassment and mischief.

It was remarked by Mr. Justice Campbell in *People v. Maynard*, 15 Mich. 463, that “in public affairs where the people have organized themselves under color of law into the ordinary municipal bodies, and have gone on year after year raising taxes, making improvements, and exercising their usual franchises, their rights are properly regarded as depending quite as much on the acquiescence as on the regularity of their origin, and no *ex post facto* inquiry can be permitted to undo their corporate existence. Whatever may be the rights of individuals before such general acquiescence, the corporate standing of the community can no longer be open to question.” To this doctrine were cited *Rumsey v. People*, 19 N.Y. 41, and *Lanning v. Carpenter*, 20 N.Y. 447. The cases of *State v. Bunker*, 59 Me. 366; *People v. Salomon*, 54 Ill. 39, and *People v. Lothrop*, 24 Mich. 235, are in the same direction. The legislature has recognized this principle with special reference to school districts, and has not only deemed it important that their power should not be questioned after any considerable lapse of time, but has even established what is in effect a very short act of limitation for the purpose in declaring that “Every school district shall, in all cases, be presumed to have been legally organized, when it shall have exercised the franchises and privileges of a district for the term of two years:” *Comp. L. 1871*, §3591. This is wise legislation, and short as the period is, we have held that even a less period is sufficient to justify us in refusing to interfere except on the application of the state itself: *School District v. Joint Board, etc.*, 27 Mich. 3.

It may be said that this doctrine is not applicable to this case because here the corporate organization is not questioned, but only the authority which the district asserts to establish a high school and levy taxes therefor. But we think that, though the statute may not in terms apply, in principle it is strictly applicable. The district claims and has long exercised powers which take it out of the class of ordinary school districts, and place it in another class altogether, whose organization is greatly different and whose authority is much greater. So far as the externals of corporate action are concerned, the two classes are quite distinct, and the one subserves purposes of a higher order than the other, and is permitted to levy much greater burdens. It is not very clear that the case is not strictly within the law: for the organization here claimed is that of a union school district, and nothing else, and it seems little less than an ab-

surdity to say it may be presumed from its user of corporate power to be a school district, but not such a district as the user indicates, and as it has for so long a period claimed to be. But however that may be, we are clear that even if we might be allowed by the law to listen to the objection after the two years, we cannot in reason consent to do so after thirteen. It cannot be permitted that communities can be suffered to be annoyed, embarrassed and unsettled by having agitated in the courts after such a lapse of time questions which every consideration of fairness to the people concerned and of public policy require should be raised and disposed of immediately or never raised at all.

The more general question which the record presents we shall endeavor to state in our own language, but so as to make it stand out distinctly as a naked question of law, disconnected from all considerations of policy or expediency; in which light alone are we at liberty to consider it. It is, as we understand it, that there is no authority in this state to make the high schools free by taxation levied on the people at large. The argument is that while there may be no constitutional provision expressly prohibiting such taxation, the general course of legislation in the state and the general understanding of the people have been such as to require us to regard the instruction in the classics and in living modern languages in these schools as in the nature not of practical and therefore necessary instruction for the benefit of the people at large, but rather as accomplishments for the few, to be sought after in the main by those best able to pay for them, and to be paid for by those who seek them, and not by general tax. And not only has this been the general state policy, but this higher learning of itself, when supplied by the state, is so far a matter of private concern to those who receive it that the courts ought to declare it incompetent to supply it wholly at the public expense. This is in substance, as we understand it, the position of the complainants in this suit.

When this doctrine was broached to us, we must confess to no little surprise that the legislation and policy of our state were appealed to against the right of the state to furnish a liberal education to the youth of the state in schools brought within the reach of all classes. We supposed it had always been understood in this state that education, not merely in the rudiments, but in an enlarged sense, was regarded as an important practical advantage to be supplied at their option to rich and poor alike, and not as something pertaining merely to culture and accomplishment to be brought as such within the reach of those whose accumulated wealth enabled them to pay for it. As this, however, is now so seriously disputed, it may be necessary, perhaps, to take a brief survey of the legislation and general course, not only of the state, but of the antecedent territory, on the subject.

It is not disputed that the dissemination of knowledge by means of schools has been a prominent object from the first, and we allude to the provision of the ordinance of 1787 on that subject, and to the donation of lands by congress for the purpose, only as preliminary to what we may have to say regarding the action of the territorial authorities in the premises. Those authorities accepted in the most liberal spirit the requirement of the ordinance that "schools and the means of education shall forever be encouraged," and endeavored to make early provision therefor on a scale which shows they were fully up to the most advanced ideas that then prevailed on the subject. The earliest territorial legislation regarding education, though somewhat eccentric in form, was framed in this spirit. It was "an act to establish the Catholepistemiad, or University of Michigania," adopted August 26, 1817, which not only incorporated the institution named in the title, with its president and thirteen professors, appointed by the governor, but it provided that its board of instruction should have power "to regulate all the concerns of the institution, to enact laws for that purpose," "to establish colleges, academies, schools, libraries, museums, atheneums, botanic gardens, laboratories and other useful literary and scientific institutions, consonant to the laws of the United States of America, and of Michigan, and to appoint officers and instructors and instructrices, in, among, and throughout the various counties, cities, towns, townships and other geographical divisions of Michigan." To provide for the expense thereof the existing public taxes were in-

creased fifteen per cent, and from the proceeds of all future taxes fifteen per cent was appropriated for the benefit of this corporation: *Territorial Laws, Vol, 2, p. 104; Sherman's School Laws, p. 4*. The act goes but little into details, as was to be expected of a law which proposed to put the whole educational system of the commonwealth into the hands and under the control of a body of learned men, created and made territorial officers for the purpose of planning and carrying it out; but the general purpose was apparent that throughout the territory a system of most liberal education should be supported at the public expense for the benefit of the whole people. The system indicated was prophetic of that which exists to-day, and is remarkable in this connection mainly, as being the very first law on the subject enacted in the territory, and as announcing a policy regarding liberal instruction which, though perhaps impracticable in view of the then limited and scattered population of the territory, has been steadily kept in view from that day to the present.

This act continued in force until 1821, when it was repealed to make way for one "for the establishment of an university," with more limited powers, and authorized only "to establish colleges, academies and schools depending upon the said university," and which, according to the general understanding at the time and afterwards, were to be schools intermediate the university and such common schools as might exist or be provided for: *Code of 1820, p. 443; Code of 1827, p. 445*. In 1827 the educational system was supplemented by "an act for the establishment of common schools," which is also worthy of special attention and reflection, as indicating what was understood at that day by the common schools which were proposed to be established.

The first section of that act provided "that every township within this territory, containing fifty families or householders, shall be provided with a good schoolmaster or schoolmasters, of good morals, to teach children to read and write, and to instruct them in the English or French language, as well as in arithmetic, orthography, and decent behavior, for such term of time as shall be equivalent to six months for one school in each year. And every township containing one hundred families or householders, shall be provided with such schoolmaster or teacher, for such term of time, as shall be equivalent to twelve months for one school in each year. And every township containing one hundred and fifty families or householders shall be provided with such schoolmaster or teacher for such term of time as shall be equivalent to six months in each year, and shall, in addition thereto, be provided with a schoolmaster or teacher, as above described, to instruct children in the English language for such term of time as shall be equivalent to twelve months for one school in each year. And every township containing two hundred families or householders shall be provided with a grammar schoolmaster, of good morals, *well instructed in the Latin, French and English languages*, and shall, in addition thereto, be provided with a schoolmaster or teacher, as above described, to instruct children in the English language, for such term of time as shall be equivalent to twelve months for each of said schools in each year." And the townships respectively were required under a heavy penalty, to be levied in case of default on the inhabitants generally, to keep and maintain the schools so provided for: *Code of 1827, p. 448; Territorial Laws, Vol, 2, p. 472*.

Here, then, was a general law, which, under the name of common schools, required not only schools for elementary instruction, but also grammar schools to be maintained. The qualifications required in teachers of grammar schools were such as to leave it open to no doubt that grammar schools in the sense understood in England and the Eastern States were intended, in which instruction in the classics should be given, as well as in such higher branches of learning as would not usually be taught in the schools of lowest grade. How is it possible, then, to say, as the exigencies of complainants' case require them to do, that the term common or primary schools, as made use of in our legislation, has a known and definite meaning which limits it to the ordinary district schools, and that consequently the legislative authority to levy taxes for the primary schools cannot be held to embrace taxation for the schools supported by village and city districts in which a higher grade of learning is imparted.

It is probable that this act, like that of 1817, was found in advance of the demands of the people of the territory, or of their ability to support high schools, and it was repealed in 1833,

and another passed which did not expressly require the establishment or support of schools of secondary grade, but which provided only for school directors, who must maintain a district school at least three months in each year: *Code of 1833, p. 129*. The act contains no express limitations upon their powers, but it is not important now to consider whether or not they extended to the establishment of grammar schools as district schools, where, in their judgment, they might be required. Such schools would certainly not be out of harmony with any territorial policy that as yet had been developed or indicated.

Thus stood the law when the constitution of 1835 was adopted. The article on education in that instrument contained the following provisions:

- “2. The legislature shall encourage by all suitable means the promotion of intellectual, scientific and agricultural improvement. The proceeds of all lands that have been, or hereafter may be, granted by the United States to this state for the support of schools, which shall hereafter be sold or disposed of, shall be and remain a perpetual fund, the interest of which, together with the rents of all such unsold lands, shall be inviolably appropriated to the support of schools throughout the state.
- “3. The legislature shall provide for a system of common schools, by which a school shall be kept up and supported in each school district at least three months in every year; and any school district neglecting to keep up and support such a school may be deprived of its equal proportion of the interest of the public fund.”

The fifth section provided for the support of the university, “with such branches as the public convenience may hereafter demand for the promotion of literature, the arts and sciences,” etc. Two things are specially noticeable in these provisions: *first*, that they contemplated provision by the state for a complete system of instruction, beginning with that of the primary school and ending with that of the university; *second*, that while the legislature was required to make provision for district schools for at least three months in each year, no restriction was imposed upon its power to establish schools intermediate the common district school and the university, and we find nothing to indicate an intent to limit their discretion as to the class or grade of schools to which the proceeds of school lands might be devoted, or as to the range of studies or grade of instruction which might be provided for in the district schools.

In the very first executive message after the constitution went into effect, the governor, in view of the fact that “our institutions have leveled the artificial distinctions existing in the societies of other countries, and have left open to every one the avenues to distinction and honor,” admonished the legislature that it was their “imperious duty to secure to the state a general diffusion of knowledge,” and that “this can in no wise be so certainly effected as by the perfect organization of a uniform and liberal system of common schools.” Their “attention was therefore called to the effectuation of a perfect school system, open to all classes, as the surest basis of public happiness and prosperity.” In his second message he repeated his admonitions, advising that provision be made for ample compensation to teachers, that those of the highest character, both moral and intellectual, might be secured, and urging that the “youth be taught the first principles in morals, in science, and in government, commencing their studies in the primary schools, elevating its grades as you approach the district seminary, and continue its progress till you arrive at the university.” This message indicated no plan, but referred the legislature to the report of the superintendent, who would recommend a general system.

The system reported by superintendent Pierce contemplated a university, with branches in different parts of the state as preparatory schools, and district schools. This is the parent of our present system, and though its author did not find the legislature prepared to accept all his views, the result has demonstrated that he was only a few years in advance of his generation, and that the changes in our school system which have since been adopted have been in the direction of the views which he then held and urged upon the public. And an examination

of his official report for 1837 will show that the free schools he then favored were schools which taught something more than the rudiments of a common education; which were to give to the poor the advantages of the rich, and enable both alike to obtain within the state an education broad and liberal, as well as practical.

It would be instructive to make liberal extracts from this report did time and space permit. The superintendent would have teachers thoroughly trained, and he would have the great object of common schools "to furnish good instruction in all the elementary and common branches of knowledge, for all classes of community, *as good, indeed, for the poorest boy of the state as the rich man can furnish for his children with all his wealth.*" The context shows that he had the systems of Prussia and of New England in view, and that he proposed by a free school system to fit the children of the poor as well as of the rich for the highest spheres of activity and influence.

It might also be useful in this connection to show that the Prussian system and that "of the Puritans," of which he speaks in such terms of praise, resemble in their main features, so far as bringing within the reach of all a regular gradation of schools is concerned, the system of public instruction as it prevails in this state to-day. But it is not necessary for the purposes of the present case to enter upon this subject. It must suffice to say that the law of 1827, which provided for grammar schools as a grade of common schools, was adopted from laws which from a very early period had been in existence in Massachusetts, and which in like manner, under heavy penalties, compelled the support of these grammar schools in every considerable town: See *Mass. Laws, 1789, p. 39*; compare *General Stat., 1860, p. 215, ? 2*.

The system adopted by the legislature, and which embraced a university and branches, and a common or primary school in every school district of the state, was put into successful operation, and so continued, with one important exception, until the adoption of the constitution of 1850. The exception relates to the branches of the university, which the funds of the university did not warrant keeping up, and which were consequently abandoned. Private schools to some extent took their place; but when the convention met to frame a constitution in 1850, there were already in existence, in a number of the leading towns, schools belonging to the general public system, which were furnishing instruction which fitted young men for the university. These schools for the most part had been organized under special laws, which, while leaving the primary school laws in general applicable, gave the districts a larger board of officers and larger powers of taxation for buildings and the payment of teachers. As the establishment and support of such schools were optional with the people, they encountered in some localities considerable opposition, which, however, is believed to have been always overcome, and the authority of the districts to provide instruction in the languages in these union schools was not, so far as we are aware, seriously contested. The superintendent of public instruction devotes a considerable portion of his annual report for 1848 to these schools, and in that of 1849 he says: "This class of institutions, which may be made to constitute a connecting link between the ordinary common school and the state university, is fast gaining upon the confidence of the public. Those already established have generally surpassed the expectations of their founders. Some of them have already attained a standing rarely equaled by the academical institutions of the older states. Large, commodious, and beautiful edifices have been erected in quite a number of villages for the accommodation of these schools. These school-houses frequently occupy the most eligible sites in the villages where they are located. I am happy in being able to state in this connection that the late capitol of our state, having been fitted up at much expense, was, in June last, opened as a *common school-house*; and that in that house is maintained a free school which constitutes the pride and ornament of the city of the straits." This *common* free school was a union school equivalent in its instruction to the ordinary high school in most matters, and the report furnishes very clear evidence that the superintendent believed schools of that grade to be entirely competent under the primary school law.

It now becomes important to see whether the constitutional convention and the people, in 1850, did any thing to undo what previously had been accomplished towards furnishing

high schools as a part of the primary school system. The convention certainly did nothing to that end. On the contrary, they demonstrated in the most unmistakable manner that they cherished no such desire or purpose. The article on education as originally reported, while providing for free schools to be kept in each district at least three months in every year, added that “the English language and no other shall be taught in such schools.” Attention was called to this provision, and it was amended so as to read that instruction should be “conducted in the English language.” The reason for the change was fully given, that as it was reported it might be understood to prohibit the teaching of other languages than the English in the primary schools; a result that was not desired. Judge Whipple stated in the convention that, in the section from which he came, French and German were taught, and “it is a most valuable improvement of the common school system.” The late superintendent Pierce said that in some schools Latin was taught, and that he himself had taught Latin in a common school. He would not adopt any provision by which any knowledge would be excluded. “All that we ought to do is this: we should say the legislature shall establish primary schools.” This, in his opinion, would give full power, and the details could be left to legislation: See *Debates of the Convention*, 269, 549.

The instrument submitted by the convention to the people and adopted by them provided for the establishment of free schools in every school district for at least three months in each year, and for the university. By the aid of these we have every reason to believe the people expected a complete collegiate education might be obtained. The branches of the university had ceased to exist; the university had no preparatory department, and it must either have been understood that young men were to be prepared for the university in the common schools, or else that they should go abroad for the purpose, or be prepared in private schools. Private schools adapted to the purpose were almost unknown in the state, and comparatively a very few persons were at that time of sufficient pecuniary ability to educate their children abroad. The inference seems irresistible that the people expected the tendency towards the establishment of high schools in the primary school districts would continue until every locality capable of supporting one was supplied. And this inference is strengthened by the fact that a considerable number of our union schools date their establishment from the year 1850 and the two or three years following.

If these facts do not demonstrate clearly and conclusively a general state policy, beginning in 1817 and continuing until after the adoption of the present constitution, in the direction of free schools in which education, and at their option the elements, of classical education, might be brought within the reach of all the children of the state, then, as it seems to us, nothing can demonstrate it. We might follow the subject further, and show that the subsequent legislation has all concurred with this policy, but it would be a waste of time and labor. We content ourselves with the statement that neither in our state policy, in our constitution, or in our laws, do we find the primary school districts restricted in the branches of knowledge which their officers may cause to be taught, or the grade of instruction that may be given, if their voters consent in regular form to bear the expense and raise the taxes for the purpose.

Having reached this conclusion, we shall spend no time upon the objection that the district in question had no authority to appoint a superintendent of schools, and that the duties of superintendency should be performed by the district board. We think the power to make the appointment was incident to the full control which by law the board had over the schools of the district, and that the board and the people of the district have been wisely left by the legislature to follow their own judgment in the premises.

It follows that the decree dismissing the bill was right, and should be affirmed.

The other justices concurred.

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## PLESSY V. FERGUSON, 163 U.S. 537 (1896)

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### SUPREME COURT OF THE UNITED STATES ERROR TO THE SUPREME COURT OF THE STATE OF LOUISIANA ARGUED APRIL 18, 1896. DECIDED MAY 18, 1896.

#### Syllabus

The statute of Louisiana, acts of 1890, c. 111, requiring railway companies carrying passengers in their coaches in that State, to provide equal, but separate, accommodations for the white and colored races, by providing two or more passenger coaches for each passenger train, or by dividing the passenger coaches by a partition so as to secure separate accommodations; and providing that no person shall be permitted to occupy seats in coaches other than the ones assigned to them, on account of the race they belong to; and requiring the officer of the passenger train to assign each passenger to the coach or compartment assigned for the race to which he or she belong; and imposing fines or imprisonment upon passengers insisting on going into a coach or compartment other than the one set aside for the race to which he or she belongs; and conferring upon officers of the train power to refuse to carry on the train passengers refusing to occupy the coach or compartment assigned to them, and exempting the railway company from liability for such refusal, are not in conflict with the provisions either of the Thirteenth Amendment or of the Fourteenth Amendment to the Constitution of the United States.

This was a petition for writs of prohibition and certiorari, originally filed in the Supreme Court of the State by Plessy, the plaintiff in error, against the Hon. John H. Ferguson, judge of the criminal District Court for the parish of Orleans, and setting forth in substance the following facts:

That petitioner was a citizen of the United States and a resident of the State of Louisiana, of mixed descent, in the proportion of seven eighths Caucasian and one eighth African blood; that the mixture of colored blood was not discernible in him, and that he was entitled to every recognition, right, privilege and immunity secured to the citizens of the United States of the white race by its Constitution and laws; that, on June 7, 1892, he engaged and paid for a first class passage on the East Louisiana Railway from New Orleans to Covington, in the same State, and thereupon entered a passenger train, and took possession of a vacant seat in a coach where passengers of the white race were accommodated; that such railroad company was incorporated by the laws of Louisiana as a common carrier, and was not authorized to distinguish between citizens according to their race. But, notwithstanding this, petitioner was required by the conductor, under penalty of ejection from said train and imprisonment, to vacate said coach and occupy another seat in a coach assigned by said company for persons not of the white race, and for no other reason than that petitioner was of the colored race; that, upon petitioner's refusal to comply with such order, he was, with the aid of a police officer, forcibly ejected from said coach and hurried off to and imprisoned in the parish jail of New Orleans, and there held to answer a charge made by such officer to the effect that he was guilty of having criminally violated an act of the General Assembly of the State, approved July 10, 1890, in such case made and provided.

That petitioner was subsequently brought before the recorder of the city for preliminary examination and committed for trial to the criminal District Court for the parish of Orleans, where an information was filed against him in the matter above set forth, for a violation of the above act, which act the petitioner affirmed to be null and void, because in conflict with the Constitution of the United States; that petitioner interposed a plea to such information based upon the unconstitutionality of the act of the General Assembly, to which the district attorney, on behalf of the State, filed a demurrer; that, upon issue being joined upon such demurrer and plea, the court sustained the demurrer, overruled the plea, and ordered petitioner

to plead over to the facts set forth in the information, and that, unless the judge of the said court be enjoined by a writ of prohibition from further proceeding in such case, the court will proceed to fine and sentence petitioner to imprisonment, and thus deprive him of his constitutional rights set forth in his said plea, notwithstanding the unconstitutionality of the act under which he was being prosecuted; that no appeal lay from such sentence, and petitioner was without relief or remedy except by writs of prohibition and certiorari. Copies of the information and other proceedings in the criminal District Court were annexed to the petition as an exhibit.

Upon the filing of this petition, an order was issued upon the respondent to show cause why a writ of prohibition should not issue and be made perpetual, and a further order that the record of the proceedings had in the criminal cause be certified and transmitted to the Supreme Court.

To this order the respondent made answer, transmitting a certified copy of the proceedings, asserting the constitutionality of the law, and averring that, instead of pleading or admitting that he belonged to the colored race, the said Plessy declined and refused, either by pleading or otherwise, to admit that he was in any sense or in any proportion a colored man.

The case coming on for a hearing before the Supreme Court, that court was of opinion that the law under which the prosecution was had was constitutional, and denied the relief prayed for by the petitioner. *Ex parte Plessy*. Whereupon petitioner prayed for a writ of error from this court, which was allowed by the Chief Justice of the Supreme Court of Louisiana.

## Opinions

BROWN, Opinion of the Court

MR. JUSTICE BROWN, after stating the case, delivered the opinion of the court.

This case turns upon the constitutionality of an act of the General Assembly of the State of Louisiana, passed in 1890, providing for separate railway carriages for the white and colored races. Acts 1890, No. 111, p. 152.

The first section of the statute enacts

that all railway companies carrying passengers in their coaches in this State shall provide equal but separate accommodations for the white and colored races by providing two or more passenger coaches for each passenger train, or by dividing the passenger coaches by a partition so as to secure separate accommodations: Provided, That this section shall not be construed to apply to street railroads. No person or persons, shall be admitted to occupy seats in coaches other than the ones assigned to them on account of the race they belong to.

By the second section, it was enacted

that the officers of such passenger trains shall have power and are hereby required to assign each passenger to the coach or compartment used for the race to which such passenger belongs; any passenger insisting on going into a coach or compartment to which by race he does not belong shall be liable to a fine of twenty-five dollars, or in lieu thereof to imprisonment for a period of not more than twenty days in the parish prison, and any officer of any railroad insisting on assigning a passenger to a coach or compartment other than the one set aside for the race to which said passenger belongs shall be liable to a fine of twenty-five dollars, or in lieu thereof to imprisonment for a period of not more than twenty days in the parish prison; and should any passenger refuse to occupy the coach or compartment to which he or she is assigned by the officer of such railway, said officer shall have power to refuse to carry such passenger on his train, and for such refusal neither he nor the railway company which he represents shall be liable for damages in any of the courts of this State.

The third section provides penalties for the refusal or neglect of the officers, directors, conductors, and employees of railway companies to comply with the act, with a proviso that

“nothing in this act shall be construed as applying to nurses attending children of the other race.” The fourth section is immaterial.

The information filed in the criminal District Court charged in substance that Plessy, being a passenger between two stations within the State of Louisiana, was assigned by officers of the company to the coach used for the race to which he belonged, but he insisted upon going into a coach used by the race to which he did not belong. Neither in the information nor plea was his particular race or color averred. The petition for the writ of prohibition averred that petitioner was seven-eighths Caucasian and one eighth African blood; that the mixture of colored blood was not discernible in him, and that he was entitled to every right, privilege and immunity secured to citizens of the United States of the white race; and that, upon such theory, he took possession of a vacant seat in a coach where passengers of the white race were accommodated, and was ordered by the conductor to vacate said coach and take a seat in another assigned to persons of the colored race, and, having refused to comply with such demand, he was forcibly ejected with the aid of a police officer, and imprisoned in the parish jail to answer a charge of having violated the above act.

The constitutionality of this act is attacked upon the ground that it conflicts both with the Thirteenth Amendment of the Constitution, abolishing slavery, and the Fourteenth Amendment, which prohibits certain restrictive legislation on the part of the States.

1. That it does not conflict with the Thirteenth Amendment, which abolished slavery and involuntary servitude, except as a punishment for crime, is too clear for argument. Slavery implies involuntary servitude—a state of bondage; the ownership of mankind as a chattel, or at least the control of the labor and services of one man for the benefit of another, and the absence of a legal right to the disposal of his own person, property and services. This amendment was said in the Slaughterhouse Cases, to have been intended primarily to abolish slavery as it had been previously known in this country, and that it equally forbade Mexican peonage or the Chinese coolie trade when they amounted to slavery or involuntary servitude, and that the use of the word “servitude” was intended to prohibit the use of all forms of involuntary slavery, of whatever class or name. It was intimated, however, in that case that this amendment was regarded by the statesmen of that day as insufficient to protect the colored race from certain laws which had been enacted in the Southern States, imposing upon the colored race onerous disabilities and burdens and curtailing their rights in the pursuit of life, liberty and property to such an extent that their freedom was of little value; and that the Fourteenth Amendment was devised to meet this exigency.

So, too, in the Civil Rights Cases, it was said that the act of a mere individual, the owner of an inn, a public conveyance or place of amusement, refusing accommodations to colored people cannot be justly regarded as imposing any badge of slavery or servitude upon the applicant, but only as involving an ordinary civil injury, properly cognizable by the laws of the State and presumably subject to redress by those laws until the contrary appears. “It would be running the slavery argument into the ground,” said Mr. Justice Bradley,

to make it apply to every act of discrimination which a person may see fit to make as to the guests he will entertain, or as to the people he will take into his coach or cab or car, or admit to his concert or theatre, or deal with in other matters of intercourse or business.

A statute which implies merely a legal distinction between the white and colored races—a distinction which is founded in the color of the two races and which must always exist so long as white men are distinguished from the other race by color—has no tendency to destroy the legal equality of the two races, or reestablish a state of involuntary servitude. Indeed, we do not understand that the Thirteenth Amendment is strenuously relied upon by the plaintiff in error in this connection.

2. By the Fourteenth Amendment, all persons born or naturalized in the United States and subject to the jurisdiction thereof are made citizens of the United States and of the State where-

in they reside, and the States are forbidden from making or enforcing any law which shall abridge the privileges or immunities of citizens of the United States, or shall deprive any person of life, liberty, or property without due process of law, or deny to any person within their jurisdiction the equal protection of the laws.

The proper construction of this amendment was first called to the attention of this court in the *Slaughterhouse Cases*, 16 Wall. 36, which involved, however, not a question of race, but one of exclusive privileges. The case did not call for any expression of opinion as to the exact rights it was intended to secure to the colored race, but it was said generally that its main purpose was to establish the citizenship of the negro, to give definitions of citizenship of the United States and of the States, and to protect from the hostile legislation of the States the privileges and immunities of citizens of the United States, as distinguished from those of citizens of the States.

The object of the amendment was undoubtedly to enforce the absolute equality of the two races before the law, but, in the nature of things, it could not have been intended to abolish distinctions based upon color, or to enforce social, as distinguished from political, equality, or a commingling of the two races upon terms unsatisfactory to either. Laws permitting, and even requiring, their separation in places where they are liable to be brought into contact do not necessarily imply the inferiority of either race to the other, and have been generally, if not universally, recognized as within the competency of the state legislatures in the exercise of their police power. The most common instance of this is connected with the establishment of separate schools for white and colored children, which has been held to be a valid exercise of the legislative power even by courts of States where the political rights of the colored race have been longest and most earnestly enforced.

One of the earliest of these cases is that of *Roberts v. City of Boston*, in which the Supreme Judicial Court of Massachusetts held that the general school committee of Boston had power to make provision for the instruction of colored children in separate schools established exclusively for them, and to prohibit their attendance upon the other schools. "The great principle," said Chief Justice Shaw, "advanced by the learned and eloquent advocate for the plaintiff" (Mr. Charles Sumner),

is that, by the constitution and laws of Massachusetts, all persons without distinction of age or sex, birth or color, origin or condition, are equal before the law. . . . But when this great principle comes to be applied to the actual and various conditions of persons in society, it will not warrant the assertion that men and women are legally clothed with the same civil and political powers, and that children and adults are legally to have the same functions and be subject to the same treatment, but only that the rights of all, as they are settled and regulated by law, are equally entitled to the paternal consideration and protection of the law for their maintenance and security.

It was held that the powers of the committee extended to the establishment of separate schools for children of different ages, sexes and colors, and that they might also establish special schools for poor and neglected children, who have become too old to attend the primary school and yet have not acquired the rudiments of learning to enable them to enter the ordinary schools. Similar laws have been enacted by Congress under its general power of legislation over the District of Columbia, Rev.Stat.D.C. [Sections] 281, 282, 283, 310, 319, as well as by the legislatures of many of the States, and have been generally, if not uniformly, sustained by the courts. *State v. McCann*; *Lehew v. Brummell*; *Ward v. Flood*; *Bertonneau v. School Directors*; *People v. Gallagher*; *Cory v. Carter*; *Dawson v. Lee*.

Laws forbidding the intermarriage of the two races may be said in a technical sense to interfere with the freedom of contract, and yet have been universally recognized as within the police power of the State. *State v. Gibson*.

The distinction between laws interfering with the political equality of the negro and those requiring the separation of the two races in schools, theatres and railway carriages has been

frequently drawn by this court. Thus, in *Strauder v. West Virginia*, it was held that a law of West Virginia limiting to white male persons, 21 years of age and citizens of the State, the right to sit upon juries was a discrimination which implied a legal inferiority in civil society, which lessened the security of the right of the colored race, and was a step toward reducing them to a condition of servility. Indeed, the right of a colored man that, in the selection of jurors to pass upon his life, liberty and property, there shall be no exclusion of his race and no discrimination against them because of color has been asserted in a number of cases. *Virginia v. Rives*; *Neal v. Delaware*; *Bush v. Kentucky*; *Gibson v. Mississippi*. So, where the laws of a particular locality or the charter of a particular railway corporation has provided that no person shall be excluded from the cars on account of color, we have held that this meant that persons of color should travel in the same car as white ones, and that the enactment was not satisfied by the company's providing cars assigned exclusively to people of color, though they were as good as those which they assigned exclusively to white persons. *Railroad Company v. Brown*.

Upon the other hand, where a statute of Louisiana required those engaged in the transportation of passengers among the States to give to all persons traveling within that State, upon vessels employed in that business, equal rights and privileges in all parts of the vessel, without distinction on account of race or color, and subjected to an action for damages the owner of such a vessel, who excluded colored passengers on account of their color from the cabin set aside by him for the use of whites, it was held to be, so far as it applied to interstate commerce, unconstitutional and void. *Hall v. De Cuir*. The court in this case, however, expressly disclaimed that it had anything whatever to do with the statute as a regulation of internal commerce, or affecting anything else than commerce among the States.

In the Civil Rights Case, it was held that an act of Congress entitling all persons within the jurisdiction of the United States to the full and equal enjoyment of the accommodations, advantages, facilities and privileges of inns, public conveyances, on land or water, theatres and other places of public amusement, and made applicable to citizens of every race and color, regardless of any previous condition of servitude, was unconstitutional and void upon the ground that the Fourteenth Amendment was prohibitory upon the States only, and the legislation authorized to be adopted by Congress for enforcing it was not direct legislation on matters respecting which the States were prohibited from making or enforcing certain laws, or doing certain acts, but was corrective legislation such as might be necessary or proper for counteracting and redressing the effect of such laws or acts. In delivering the opinion of the court, Mr. Justice Bradley observed that the Fourteenth Amendment

does not invest Congress with power to legislate upon subjects that are within the domain of state legislation, but to provide modes of relief against state legislation or state action of the kind referred to. It does not authorize Congress to create a code of municipal law for the regulation of private rights, but to provide modes of redress against the operation of state laws and the action of state officers, executive or judicial, when these are subversive of the fundamental rights specified in the amendment. Positive rights and privileges are undoubtedly secured by the Fourteenth Amendment, but they are secured by way of prohibition against state laws and state proceedings affecting those rights and privileges, and by power given to Congress to legislate for the purpose of carrying such prohibition into effect, and such legislation must necessarily be predicated upon such supposed state laws or state proceedings, and be directed to the correction of their operation and effect.

Much nearer, and, indeed, almost directly in point is the case of the *Louisville, New Orleans &c. Railway v. Mississippi*, wherein the railway company was indicted for a violation of a statute of Mississippi enacting that all railroads carrying passengers should provide equal but separate accommodations for the white and colored races by providing two or more passenger

cars for each passenger train, or by dividing the passenger cars by a partition so as to secure separate accommodations. The case was presented in a different aspect from the one under consideration, inasmuch as it was an indictment against the railway company for failing to provide the separate accommodations, but the question considered was the constitutionality of the law. In that case, the Supreme Court of Mississippi, had held that the statute applied solely to commerce within the State, and that, being the construction of the state statute by its highest court, was accepted as conclusive. "If it be a matter," said the court,

respecting commerce wholly within a State, and not interfering with commerce between the States, then obviously there is no violation of the commerce clause of the Federal Constitution . . . . No question arises under this section as to the power of the State to separate in different compartments interstate passengers or affect in any manner the privileges and rights of such passengers. All that we can consider is whether the State has the power to require that railroad trains within her limits shall have separate accommodations for the two races; that affecting only commerce within the State is no invasion of the power given to Congress by the commerce clause.

A like course of reasoning applies to the case under consideration, since the Supreme Court of Louisiana in the case of the State *ex rel. Abbott v. Hicks*, Judge, et al., held that the statute in question did not apply to interstate passengers, but was confined in its application to passengers traveling exclusively within the borders of the State. The case was decided largely upon the authority of *Railway Co. v. State*, and affirmed by this court. In the present case, no question of interference with interstate commerce can possibly arise, since the East Louisiana Railway appears to have been purely a local line, with both its termini within the State of Louisiana. Similar statutes for the separation of the two races upon public conveyances were held to be constitutional in *West Chester &c. Railroad v. Miles*; *Day v. Owen*; *Chicago &c. Railway v. Williams*; *Chesapeake &c. Railroad v. Wells*; *Memphis &c. Railroad v. Benson*; *The Sue*; *Logwood v. Memphis &c. Railroad*; *McGuinn v. Forbes*; *People v. King*; *Houck v. South Pac. Railway*; *Heard v. Georgia Railroad Co.*

While we think the enforced separation of the races, as applied to the internal commerce of the State, neither abridges the privileges or immunities of the colored man, deprives him of his property without due process of law, nor denies him the equal protection of the laws within the meaning of the Fourteenth Amendment, we are not prepared to say that the conductor, in assigning passengers to the coaches according to their race, does not act at his peril, or that the provision of the second section of the act that denies to the passenger compensation in damages for a refusal to receive him into the coach in which he properly belongs is a valid exercise of the legislative power. Indeed, we understand it to be conceded by the State's Attorney that such part of the act as exempts from liability the railway company and its officers is unconstitutional. The power to assign to a particular coach obviously implies the power to determine to which race the passenger belongs, as well as the power to determine who, under the laws of the particular State, is to be deemed a white and who a colored person. This question, though indicated in the brief of the plaintiff in error, does not properly arise upon the record in this case, since the only issue made is as to the unconstitutionality of the act so far as it requires the railway to provide separate accommodations and the conductor to assign passengers according to their race.

It is claimed by the plaintiff in error that, in any mixed community, the reputation of belonging to the dominant race, in this instance the white race, is property in the same sense that a right of action or of inheritance is property. Conceding this to be so for the purposes of this case, we are unable to see how this statute deprives him of, or in any way affects his right to, such property. If he be a white man and assigned to a colored coach, he may have his action for damages against the company for being deprived of his so-called property. Upon the other hand, if he be a colored man and be so assigned, he has been deprived of no property, since he is not lawfully entitled to the reputation of being a white man.

In this connection, it is also suggested by the learned counsel for the plaintiff in error that the same argument that will justify the state legislature in requiring railways to provide separate accommodations for the two races will also authorize them to require separate cars to be provided for people whose hair is of a certain color, or who are aliens, or who belong to certain nationalities, or to enact laws requiring colored people to walk upon one side of the street and white people upon the other, or requiring white men's houses to be painted white and colored men's black, or their vehicles or business signs to be of different colors, upon the theory that one side of the street is as good as the other, or that a house or vehicle of one color is as good as one of another color. The reply to all this is that every exercise of the police power must be reasonable, and extend only to such laws as are enacted in good faith for the promotion for the public good, and not for the annoyance or oppression of a particular class. Thus, in *Yick Wo v. Hopkins*, it was held by this court that a municipal ordinance of the city of San Francisco to regulate the carrying on of public laundries within the limits of the municipality violated the provisions of the Constitution of the United States if it conferred upon the municipal authorities arbitrary power, at their own will and without regard to discretion, in the legal sense of the term, to give or withhold consent as to persons or places without regard to the competency of the persons applying or the propriety of the places selected for the carrying on of the business. It was held to be a covert attempt on the part of the municipality to make an arbitrary and unjust discrimination against the Chinese race. While this was the case of a municipal ordinance, a like principle has been held to apply to acts of a state legislature passed in the exercise of the police power. *Railroad Company v. Husen*; *Louisville & Nashville Railroad v. Kentucky*; *Duggett v. Hudson*; *Capen v. Foster*; *State ex rel. Wood v. Baker*; *Monroe v. Collins*; *Hulseman v. Rems*; *Orman v. Riley*.

So far, then, as a conflict with the Fourteenth Amendment is concerned, the case reduces itself to the question whether the statute of Louisiana is a reasonable regulation, and, with respect to this, there must necessarily be a large discretion on the part of the legislature. In determining the question of reasonableness, it is at liberty to act with reference to the established usages, customs, and traditions of the people, and with a view to the promotion of their comfort and the preservation of the public peace and good order. Gauged by this standard, we cannot say that a law which authorizes or even requires the separation of the two races in public conveyances is unreasonable, or more obnoxious to the Fourteenth Amendment than the acts of Congress requiring separate schools for colored children in the District of Columbia, the constitutionality of which does not seem to have been questioned, or the corresponding acts of state legislatures.

We consider the underlying fallacy of the plaintiff's argument to consist in the assumption that the enforced separation of the two races stamps the colored race with a badge of inferiority. If this be so, it is not by reason of anything found in the act, but solely because the colored race chooses to put that construction upon it. The argument necessarily assumes that if, as has been more than once the case and is not unlikely to be so again, the colored race should become the dominant power in the state legislature, and should enact a law in precisely similar terms, it would thereby relegate the white race to an inferior position. We imagine that the white race, at least, would not acquiesce in this assumption. The argument also assumes that social prejudices may be overcome by legislation, and that equal rights cannot be secured to the negro except by an enforced commingling of the two races. We cannot accept this proposition. If the two races are to meet upon terms of social equality, it must be the result of natural affinities, a mutual appreciation of each other's merits, and a voluntary consent of individuals. As was said by the Court of Appeals of New York in *People v. Gallagher*, this end can neither be accomplished nor promoted by laws which conflict with the general sentiment of the community upon whom they are designed to operate. When the government, therefore, has secured to each of its citizens equal rights before the law and equal opportunities for

improvement and progress, it has accomplished the end for which it was organized, and performed all of the functions respecting social advantages with which it is endowed.

Legislation is powerless to eradicate racial instincts or to abolish distinctions based upon physical differences, and the attempt to do so can only result in accentuating the difficulties of the present situation. If the civil and political rights of both races be equal, one cannot be inferior to the other civilly or politically. If one race be inferior to the other socially, the Constitution of the United States cannot put them upon the same plane.

It is true that the question of the proportion of colored blood necessary to constitute a colored person, as distinguished from a white person, is one upon which there is a difference of opinion in the different States, some holding that any visible admixture of black blood stamps the person as belonging to the colored race (*State v. Chaver*); others that it depends upon the preponderance of blood (*Gray v. State*; *Monroe v. Collins*); and still others that the predominance of white blood must only be in the proportion of three-fourths. (*People v. Dean*; *Jones v. Commonwealth*). But these are questions to be determined under the laws of each State, and are not properly put in issue in this case. Under the allegations of his petition, it may undoubtedly become a question of importance whether, under the laws of Louisiana, the petitioner belongs to the white or colored race.

The judgment of the court below is, therefore, Affirmed.

HARLAN, Dissenting Opinion

MR. JUSTICE HARLAN, dissenting.

By the Louisiana statute the validity of which is here involved, all railway companies (other than street railroad companies) carrying passengers in that State are required to have separate but equal accommodations for white and colored persons

by providing two or more passenger coaches for each passenger train, or by dividing the passenger coaches by a partition so as to secure separate accommodations.

Under this statute, no colored person is permitted to occupy a seat in a coach assigned to white persons, nor any white person to occupy a seat in a coach assigned to colored persons. The managers of the railroad are not allowed to exercise any discretion in the premises, but are required to assign each passenger to some coach or compartment set apart for the exclusive use of his race. If a passenger insists upon going into a coach or compartment not set apart for persons of his race, he is subject to be fined or to be imprisoned in the parish jail. Penalties are prescribed for the refusal or neglect of the officers, directors, conductors and employees of railroad companies to comply with the provisions of the act.

Only "nurses attending children of the other race" are excepted from the operation of the statute. No exception is made of colored attendants traveling with adults. A white man is not permitted to have his colored servant with him in the same coach, even if his condition of health requires the constant, personal assistance of such servant. If a colored maid insists upon riding in the same coach with a white woman whom she has been employed to serve, and who may need her personal attention while traveling, she is subject to be fined or imprisoned for such an exhibition of zeal in the discharge of duty.

While there may be in Louisiana persons of different races who are not citizens of the United States, the words in the act "white and colored races" necessarily include all citizens of the United States of both races residing in that State. So that we have before us a state enactment that compels, under penalties, the separation of the two races in railroad passenger coaches, and makes it a crime for a citizen of either race to enter a coach that has been assigned to citizens of the other race.

Thus, the State regulates the use of a public highway by citizens of the United States solely upon the basis of race.

However apparent the injustice of such legislation may be, we have only to consider whether it is consistent with the Constitution of the United States.

That a railroad is a public highway, and that the corporation which owns or operates it is in the exercise of public functions, is not, at this day, to be disputed. Mr. Justice Nelson, speaking for this court in *New Jersey Steam Navigation Co. v. Merchants' Bank*, said that a common carrier was in the exercise of a sort of public office, and has public duties to perform, from which he should not be permitted to exonerate himself without the assent of the parties concerned.

Mr. Justice Strong, delivering the judgment of this court in *Olcott v. The Supervisors*, said:

That railroads, though constructed by private corporations and owned by them, are public highways has been the doctrine of nearly all the courts ever since such conveniences for passage and transportation have had any existence. Very early the question arose whether a State's right of eminent domain could be exercised by a private corporation created for the purpose of constructing a railroad. Clearly it could not unless taking land for such a purpose by such an agency is taking land for public use. The right of eminent domain nowhere justifies taking property for a private use. Yet it is a doctrine universally accepted that a state legislature may authorize a private corporation to take land for the construction of such a road, making compensation to the owner. What else does this doctrine mean if not that building a railroad, though it be built by a private corporation, is an act done for a public use.

So, in *Township of Pine Grove v. Talcott*: "Though the corporation [a railroad company] was private, its work was public, as much so as if it were to be constructed by the State." So, in *Inhabitants of Worcester v. Western Railroad Corporation*:

The establishment of that great thoroughfare is regarded as a public work, established by public authority, intended for the public use and benefit, the use of which is secured to the whole community, and constitutes, therefore, like a canal, turnpike or highway, a public easement. It is true that the real and personal property necessary to the establishment and management of the railroad is vested in the corporation, but it is in trust for the public.

In respect of civil rights common to all citizens, the Constitution of the United States does not, I think, permit any public authority to know the race of those entitled to be protected in the enjoyment of such rights. Every true man has pride of race, and, under appropriate circumstances, when the rights of others, his equals before the law, are not to be affected, it is his privilege to express such pride and to take such action based upon it as to him seems proper. But I deny that any legislative body or judicial tribunal may have regard to the race of citizens when the civil rights of those citizens are involved. Indeed, such legislation as that here in question is inconsistent not only with that equality of rights which pertains to citizenship, National and State, but with the personal liberty enjoyed by everyone within the United States.

The Thirteenth Amendment does not permit the withholding or the deprivation of any right necessarily inhering in freedom. It not only struck down the institution of slavery as previously existing in the United States, but it prevents the imposition of any burdens or disabilities that constitute badges of slavery or servitude. It decreed universal civil freedom in this country. This court has so adjudged. But that amendment having been found inadequate to the protection of the rights of those who had been in slavery, it was followed by the Fourteenth Amendment, which added greatly to the dignity and glory of American citizenship and to the security of personal liberty by declaring that

all persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside,

and that

no State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liber-

ty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws.

These two amendments, if enforced according to their true intent and meaning, will protect all the civil rights that pertain to freedom and citizenship. Finally, and to the end that no citizen should be denied, on account of his race, the privilege of participating in the political control of his country, it was declared by the Fifteenth Amendment that

the right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color or previous condition of servitude.

These notable additions to the fundamental law were welcomed by the friends of liberty throughout the world. They removed the race line from our governmental systems. They had, as this court has said, a common purpose, namely to secure to a race recently emancipated, a race that through many generations have been held in slavery, all the civil rights that the superior race enjoy.

They declared, in legal effect, this court has further said, that the law in the States shall be the same for the black as for the white; that all persons, whether colored or white, shall stand equal before the laws of the States, and, in regard to the colored race, for whose protection the amendment was primarily designed, that no discrimination shall be made against them by law because of their color.

We also said:

The words of the amendment, it is true, are prohibitory, but they contain a necessary implication of a positive immunity, or right, most valuable to the colored race—the right to exemption from unfriendly legislation against them distinctively as colored—exemption from legal discriminations, implying inferiority in civil society, lessening the security of their enjoyment of the rights which others enjoy, and discriminations which are steps towards reducing them to the condition of a subject race.

It was, consequently, adjudged that a state law that excluded citizens of the colored race from juries, because of their race and however well qualified in other respects to discharge the duties of jurymen, was repugnant to the Fourteenth Amendment. *Strauder v. West Virginia*; *Virginia v. Rives*; *Ex parte Virginia*; *Neal v. Delaware*; *Bush v. Kentucky*. At the present term, referring to the previous adjudications, this court declared that

underlying all of those decisions is the principle that the Constitution of the United States, in its present form, forbids, so far as civil and political rights are concerned, discrimination by the General Government or the States against any citizen because of his race. All citizens are equal before the law. *Gibson v. Mississippi*.

The decisions referred to show the scope of the recent amendments of the Constitution. They also show that it is not within the power of a State to prohibit colored citizens, because of their race, from participating as jurors in the administration of justice.

It was said in argument that the statute of Louisiana does not discriminate against either race, but prescribes a rule applicable alike to white and colored citizens. But this argument does not meet the difficulty. Everyone knows that the statute in question had its origin in the purpose not so much to exclude white persons from railroad cars occupied by blacks as to exclude colored people from coaches occupied by or assigned to white persons. Railroad corporations of Louisiana did not make discrimination among whites in the matter of accommodation for travelers. The thing to accomplish was, under the guise of giving equal accommodation for whites and blacks, to compel the latter to keep to themselves while traveling in railroad passenger coaches. No one would be so wanting in candor as to assert the contrary. The fundamental objection, therefore, to the statute is that it interferes with the personal freedom of citizens. “Personal liberty,” it has been well said,

consists in the power of locomotion, of changing situation, or removing one's person to whatsoever places one's own inclination may direct, without imprisonment or restraint unless by due course of law.

1 Bl.Com. 134. If a white man and a black man choose to occupy the same public conveyance on a public highway, it is their right to do so, and no government, proceeding alone on grounds of race, can prevent it without infringing the personal liberty of each.

It is one thing for railroad carriers to furnish, or to be required by law to furnish, equal accommodations for all whom they are under a legal duty to carry. It is quite another thing for government to forbid citizens of the white and black races from traveling in the same public conveyance, and to punish officers of railroad companies for permitting persons of the two races to occupy the same passenger coach. If a State can prescribe, as a rule of civil conduct, that whites and blacks shall not travel as passengers in the same railroad coach, why may it not so regulate the use of the streets of its cities and towns as to compel white citizens to keep on one side of a street and black citizens to keep on the other? Why may it not, upon like grounds, punish whites and blacks who ride together in streetcars or in open vehicles on a public road or street? Why may it not require sheriffs to assign whites to one side of a courtroom and blacks to the other? And why may it not also prohibit the commingling of the two races in the galleries of legislative halls or in public assemblages convened for the consideration of the political questions of the day? Further, if this statute of Louisiana is consistent with the personal liberty of citizens, why may not the State require the separation in railroad coaches of native and naturalized citizens of the United States, or of Protestants and Roman Catholics?

The answer given at the argument to these questions was that regulations of the kind they suggest would be unreasonable, and could not, therefore, stand before the law. Is it meant that the determination of questions of legislative power depends upon the inquiry whether the statute whose validity is questioned is, in the judgment of the courts, a reasonable one, taking all the circumstances into consideration? A statute may be unreasonable merely because a sound public policy forbade its enactment. But I do not understand that the courts have anything to do with the policy or expediency of legislation. A statute may be valid and yet, upon grounds of public policy, may well be characterized as unreasonable. Mr. Sedgwick correctly states the rule when he says that, the legislative intention being clearly ascertained,

the courts have no other duty to perform than to execute the legislative will, without any regard to their views as to the wisdom or justice of the particular enactment.

Stat. & Const.Constr. 324. There is a dangerous tendency in these latter days to enlarge the functions of the courts by means of judicial interference with the will of the people as expressed by the legislature. Our institutions have the distinguishing characteristic that the three departments of government are coordinate and separate. Each must keep within the limits defined by the Constitution. And the courts best discharge their duty by executing the will of the lawmaking power, constitutionally expressed, leaving the results of legislation to be dealt with by the people through their representatives. Statutes must always have a reasonable construction. Sometimes they are to be construed strictly; sometimes liberally, in order to carry out the legislative will. But however construed, the intent of the legislature is to be respected, if the particular statute in question is valid, although the courts, looking at the public interests, may conceive the statute to be both unreasonable and impolitic. If the power exists to enact a statute, that ends the matter so far as the courts are concerned. The adjudged cases in which statutes have been held to be void because unreasonable are those in which the means employed by the legislature were not at all germane to the end to which the legislature was competent.

The white race deems itself to be the dominant race in this country. And so it is in prestige, in achievements, in education, in wealth and in power. So, I doubt not, it will continue to be for all time if it remains true to its great heritage and holds fast to the principles of constitu-

tional liberty. But in view of the Constitution, in the eye of the law, there is in this country no superior, dominant, ruling class of citizens. There is no caste here. Our Constitution is color-blind, and neither knows nor tolerates classes among citizens. In respect of civil rights, all citizens are equal before the law. The humblest is the peer of the most powerful. The law regards man as man, and takes no account of his surroundings or of his color when his civil rights as guaranteed by the supreme law of the land are involved. It is therefore to be regretted that this high tribunal, the final expositor of the fundamental law of the land, has reached the conclusion that it is competent for a State to regulate the enjoyment by citizens of their civil rights solely upon the basis of race.

In my opinion, the judgment this day rendered will, in time, prove to be quite as pernicious as the decision made by this tribunal in the *Dred Scott Case*. It was adjudged in that case that the descendants of Africans who were imported into this country and sold as slaves were not included nor intended to be included under the word "citizens" in the Constitution, and could not claim any of the rights and privileges which that instrument provided for and secured to citizens of the United States; that, at the time of the adoption of the Constitution, they were considered as a subordinate and inferior class of beings, who had been subjugated by the dominant race, and, whether emancipated or not, yet remained subject to their authority, and had no rights or privileges but such as those who held the power and the government might choose to grant them. 19 How. 393, 404. The recent amendments of the Constitution, it was supposed, had eradicated these principles from our institutions. But it seems that we have yet, in some of the States, a dominant race—a superior class of citizens, which assumes to regulate the enjoyment of civil rights, common to all citizens, upon the basis of race. The present decision, it may well be apprehended, will not only stimulate aggressions, more or less brutal and irritating, upon the admitted rights of colored citizens, but will encourage the belief that it is possible, by means of state enactments, to defeat the beneficent purposes which the people of the United States had in view when they adopted the recent amendments of the Constitution, by one of which the blacks of this country were made citizens of the United States and of the States in which they respectively reside, and whose privileges and immunities, as citizens, the States are forbidden to abridge. Sixty millions of whites are in no danger from the presence here of eight millions of blacks. The destinies of the two races in this country are indissolubly linked together, and the interests of both require that the common government of all shall not permit the seeds of race hate to be planted under the sanction of law. What can more certainly arouse race hate, what more certainly create and perpetuate a feeling of distrust between these races, than state enactments which, in fact, proceed on the ground that colored citizens are so inferior and degraded that they cannot be allowed to sit in public coaches occupied by white citizens. That, as all will admit, is the real meaning of such legislation as was enacted in Louisiana.

The sure guarantee of the peace and security of each race is the clear, distinct, unconditional recognition by our governments, National and State, of every right that inheres in civil freedom, and of the equality before the law of all citizens of the United States, without regard to race. State enactments regulating the enjoyment of civil rights upon the basis of race, and cunningly devised to defeat legitimate results of the war under the pretence of recognizing equality of rights, can have no other result than to render permanent peace impossible and to keep alive a conflict of races the continuance of which must do harm to all concerned. This question is not met by the suggestion that social equality cannot exist between the white and black races in this country. That argument, if it can be properly regarded as one, is scarcely worthy of consideration, for social equality no more exists between two races when traveling in a passenger coach or a public highway than when members of the same races sit by each other in a street car or in the jury box, or stand or sit with each other in a political assembly, or when they use in common the street of a city or town, or when they are in the same room

for the purpose of having their names placed on the registry of voters, or when they approach the ballot box in order to exercise the high privilege of voting.

There is a race so different from our own that we do not permit those belonging to it to become citizens of the United States. Persons belonging to it are, with few exceptions, absolutely excluded from our country. I allude to the Chinese race. But, by the statute in question, a Chinaman can ride in the same passenger coach with white citizens of the United States, while citizens of the black race in Louisiana, many of whom, perhaps, risked their lives for the preservation of the Union, who are entitled, by law, to participate in the political control of the State and nation, who are not excluded, by law or by reason of their race, from public stations of any kind, and who have all the legal rights that belong to white citizens, are yet declared to be criminals, liable to imprisonment, if they ride in a public coach occupied by citizens of the white race. It is scarcely just to say that a colored citizen should not object to occupying a public coach assigned to his own race. He does not object, nor, perhaps, would he object to separate coaches for his race if his rights under the law were recognized. But he is objecting, and ought never to cease objecting, to the proposition that citizens of the white and black race can be adjudged criminals because they sit, or claim the right to sit, in the same public coach on a public highway.

The arbitrary separation of citizens on the basis of race while they are on a public highway is a badge of servitude wholly inconsistent with the civil freedom and the equality before the law established by the Constitution. It cannot be justified upon any legal grounds.

If evils will result from the commingling of the two races upon public highways established for the benefit of all, they will be infinitely less than those that will surely come from state legislation regulating the enjoyment of civil rights upon the basis of race. We boast of the freedom enjoyed by our people above all other peoples. But it is difficult to reconcile that boast with a state of the law which, practically, puts the brand of servitude and degradation upon a large class of our fellow citizens, our equals before the law. The thin disguise of "equal" accommodations for passengers in railroad coaches will not mislead anyone, nor atone for the wrong this day done.

The result of the whole matter is that, while this court has frequently adjudged, and at the present term has recognized the doctrine, that a State cannot, consistently with the Constitution of the United States, prevent white and black citizens, having the required qualifications for jury service, from sitting in the same jury box, it is now solemnly held that a State may prohibit white and black citizens from sitting in the same passenger coach on a public highway, or may require that they be separated by a "partition," when in the same passenger coach. May it not now be reasonably expected that astute men of the dominant race, who affect to be disturbed at the possibility that the integrity of the white race may be corrupted, or that its supremacy will be imperiled, by contact on public highways with black people, will endeavor to procure statutes requiring white and black jurors to be separated in the jury box by a "partition," and that, upon retiring from the courtroom to consult as to their verdict, such partition, if it be a moveable one, shall be taken to their consultation room and set up in such way as to prevent black jurors from coming too close to their brother jurors of the white race. If the "partition" used in the courtroom happens to be stationary, provision could be made for screens with openings through which jurors of the two races could confer as to their verdict without coming into personal contact with each other. I cannot see but that, according to the principles this day announced, such state legislation, although conceived in hostility to, and enacted for the purpose of humiliating, citizens of the United States of a particular race, would be held to be consistent with the Constitution.

I do not deem it necessary to review the decisions of state courts to which reference was made in argument. Some, and the most important, of them are wholly inapplicable because rendered prior to the adoption of the last amendments of the Constitution, when colored peo-

ple had very few rights which the dominant race felt obliged to respect. Others were made at a time when public opinion in many localities was dominated by the institution of slavery, when it would not have been safe to do justice to the black man, and when, so far as the rights of blacks were concerned, race prejudice was, practically, the supreme law of the land. Those decisions cannot be guides in the era introduced by the recent amendments of the supreme law, which established universal civil freedom, gave citizenship to all born or naturalized in the United States and residing here, obliterated the race line from our systems of governments, National and State, and placed our free institutions upon the broad and sure foundation of the equality of all men before the law.

I am of opinion that the statute of Louisiana is inconsistent with the personal liberty of citizens, white and black, in that State, and hostile to both the spirit and letter of the Constitution of the United States. If laws of like character should be enacted in the several States of the Union, the effect would be in the highest degree mischievous. Slavery, as an institution tolerated by law would, it is true, have disappeared from our country, but there would remain a power in the States, by sinister legislation, to interfere with the full enjoyment of the blessings of freedom to regulate civil rights, common to all citizens, upon the basis of race, and to place in a condition of legal inferiority a large body of American citizens now constituting a part of the political community called the People of the United States, for whom and by whom, through representatives, our government is administered. Such a system is inconsistent with the guarantee given by the Constitution to each State of a republican form of government, and may be stricken down by Congressional action, or by the courts in the discharge of their solemn duty to maintain the supreme law of the land, anything in the constitution or laws of any State to the contrary notwithstanding.

For the reasons stated, I am constrained to withhold my assent from the opinion and judgment of the majority.

MR. JUSTICE BREWER did not hear the argument or participate in the decision of this case.

## **PIERCE V. SOCIETY OF THE SISTERS OF THE HOLY NAMES OF JESUS AND MARY, 268 U.S. 510 (1925)**

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SUPREME COURT OF THE UNITED STATES

PIERCE, GOVERNOR OF OREGON, ET AL. V. SOCIETY OF THE SISTERS OF THE  
HOLY NAMES OF JESUS AND MARY.

SAME V. HILL MILITARY ACADEMY.

ARGUED MARCH 16 AND 17, 1925. DECIDED JUNE 1, 1925.

Mr. Willis S. Moore, of Salem, Or., for other appellants.

Messrs. Wm. D. Guthrie, of New York City for appellee.

Mr. J. P. Kavanaugh, of Portland, Or., for appellee Society of the Sisters of the Holy Names of Jesus and Mary.

Messrs. George E. Chamberlain, of Portland, Or., and Albert H. Putney, of Washington, D. C., for appellant Pierce.

Mr. John C. Veatch, of Portland, Or., for appellee Hill Military Academy.

Mr. Justice McREYNOLDS delivered the opinion of the Court.

These appeals are from decrees, based upon undenied allegations, which granted preliminary orders restraining appellants from threatening or attempting to enforce the Compulsory Education Act<sup>1</sup> adopted November 7, 1922 (Laws Or. 1923, p. 9), under the initiative provision of her Constitution by the voters of Oregon. Judicial Code, 266 (Comp. St. 1243). They

present the same points of law; there are no controverted questions of fact. Rights said to be guaranteed by the federal Constitution were specially set up, and appropriate prayers asked for their protection.

The challenged act, effective September 1, 1926, requires every parent, guardian, or other person having control or charge or custody of a child between 8 and 16 years to send him 'to a public school for the period of time a public school shall be held during the current year' in the district where the child resides; and failure so to do is declared a misdemeanor. There are exemptions—not specially important here—for children who are not normal, or who have completed the eighth grade, or whose parents or private teachers reside at considerable distances from any public school, or who hold special permits from the county superintendent. The manifest purpose is to compel general attendance at public schools by normal children, between 8 and 16, who have not completed the eight grade. And without doubt enforcement of the statute would seriously impair, perhaps destroy, the profitable features of appellees' business and greatly diminish the value of their property.

Appellee the Society of Sisters is an Oregon corporation, organized in 1880, with power to care for orphans, educate and instruct the youth, establish and maintain academies or schools, and acquire necessary real and personal property. It has long devoted its property and effort to the secular and religious education and care of children, and has acquired the valuable good will of many parents and guardians. It conducts interdependent primary and high schools and junior colleges, and maintains orphanages for the custody and control of children between 8 and 16. In its primary schools many children between those ages are taught the subjects usually pursued in Oregon public schools during the first eight years. Systematic religious instruction and moral training according to the tenets of the Roman Catholic Church are also regularly provided. All courses of study, both temporal and religious, contemplate continuity of training under appellee's charge; the primary schools are essential to the system and the most profitable. It owns valuable buildings, especially constructed and equipped for school purposes. The business is remunerative—the annual income from primary schools exceeds \$30,000—and the successful conduct of this requires long time contracts with teachers and parents. The Compulsory Education Act of 1922 has already caused the withdrawal from its schools of children who would otherwise continue, and their income has steadily declined. The appellants, public officers, have proclaimed their purpose strictly to enforce the statute.

After setting out the above facts, the Society's bill alleges that the enactment conflicts with the right of parents to choose schools where their children will receive appropriate mental and religious training, the right of the child to influence the parents' choice of a school, the right of schools and teachers therein to engage in a useful business or profession, and is accordingly repugnant to the Constitution and void. And, further, that unless enforcement of the measure is enjoined the corporation's business and property will suffer irreparable injury.

Appellee Hill Military Academy is a private corporation organized in 1908 under the laws of Oregon, engaged in owning, operating, and conducting for profit an elementary, college preparatory, and military training school for boys between the ages of 5 and 21 years. The average attendance is 100, and the annual fees received for each student amount to some \$800. The elementary department is divided into eight grades, as in the public schools; the college preparatory department has four grades, similar to those of the public high schools; the courses of study conform to the requirements of the state board of education. Military instruction and training are also given, under the supervision of an army officer. It owns considerable real and personal property, some useful only for school purposes. The business and incident good will are very valuable. In order to conduct its affairs, long time contracts must be made for supplies, equipment, teachers, and pupils. Appellants, law officers of the state and county, have publicly announced that the Act of November 7, 1922, is valid and have declared their intention to enforce it. By reason of the statute and threat of enforcement appellee's business

is being destroyed and its property depreciated; parents and guardians are refusing to make contracts for the future instruction of their sons, and some are being withdrawn.

The Academy's bill states the foregoing facts and then alleges that the challenged act contravenes the corporation's rights guaranteed by the Fourteenth Amendment and that unless appellants are restrained from proclaiming its validity and threatening to enforce it irreparable injury will result. The prayer is for an appropriate injunction.

No answer was interposed in either cause, and after proper notices they were heard by three judges (Judicial Code, 266 [Comp. St. 1243]) on motions for preliminary injunctions upon the specifically alleged facts. The court ruled that the Fourteenth Amendment guaranteed appellees against the deprivation of their property without due process of law consequent upon the unlawful interference by appellants with the free choice of patrons, present and prospective. It declared the right to conduct schools was property and that parents and guardians, as a part of their liberty, might direct the education of children by selecting reputable teachers and places. Also, that appellees' schools were not unfit or harmful to the public, and that enforcement of the challenged statute would unlawfully deprive them of patronage and thereby destroy appellees' business and property. Finally, that the threats to enforce the act would continue to cause irreparable injury; and the suits were not premature.

No question is raised concerning the power of the state reasonably to regulate all schools, to inspect, supervise and examine them, their teachers and pupils; to require that all children of proper age attend some school, that teachers shall be of good moral character and patriotic disposition, that certain studies plainly essential to good citizenship must be taught, and that nothing be taught which is manifestly inimical to the public welfare.

The inevitable practical result of enforcing the act under consideration would be destruction of appellees' primary schools, and perhaps all other private primary schools for normal children within the state of Oregon. Appellees are engaged in a kind of undertaking not inherently harmful, but long regarded as useful and meritorious. Certainly there is nothing in the present records to indicate that they have failed to discharge their obligations to patrons, students, or the state. And there are no peculiar circumstances or present emergencies which demand extraordinary measures relative to primary education.

Under the doctrine of *Meyer v. Nebraska*, 43 S. Ct. 625, 29 A. L. R. 1146, we think it entirely plain that the Act of 1922 unreasonably interferes with the liberty of parents and guardians to direct the upbringing and education of children under their control. As often heretofore pointed out, rights guaranteed by the Constitution may not be abridged by legislation which has no reasonable relation to some purpose within the competency of the state. The fundamental theory of liberty upon which all governments in this Union repose excludes any general power of the state to standardize its children by forcing them to accept instruction from public teachers only. The child is not the mere creature of the state; those who nurture him and direct his destiny have the right, coupled with the high duty, to recognize and prepare him for additional obligations.

Appellees are corporations, and therefore, it is said, they cannot claim for themselves the liberty which the Fourteenth Amendment guarantees. Accepted in the proper sense, this is true. *Northwestern Life Ins. Co. v. Riggs*, 27 S. Ct. 126, 7 Ann. Cas. 1104; *Western Turf Association v. Greenberg*, 27 S. Ct. 384. But they have business and property for which they claim protection. These are threatened with destruction through the unwarranted compulsion which appellants are exercising over present and prospective patrons of their schools. And this court has gone very far to protect against loss threatened by such action. *Truax v. Raich*, 36 S. Ct. 7, L. R. A. 1916D, 543, Ann. Cas. 1917B, 283; *Truax v. Corrigan*, 42 S. Ct. 124, 27 A. L. R. 375; *Terrace v. Thompson*, 44 S. Ct. 15.

The courts of the state have not construed the act, and we must determine its meaning for ourselves. Evidently it was expected to have general application and cannot be construed

as though merely intended to amend the charters of certain private corporations, as in *Berea College v. Kentucky*, 29 S. Ct. 33. No argument in favor of such view has been advanced.

Generally, it is entirely true, as urged by counsel, that no person in any business has such an interest in possible customers as to enable him to restrain exercise of proper power of the state upon the ground that he will be deprived of patronage. But the injunctions here sought are not against the exercise of any proper power. Appellees asked protection against arbitrary, unreasonable, and unlawful interference with their patrons and the consequent destruction of their business and property. Their interest is clear and immediate, within the rule approved in *Truax v. Raich*, *Truax v. Corrigan*, and *Terrace v. Thompson*, *supra*, and many other cases where injunctions have issued to protect business enterprises against interference with the freedom of patrons or customers. *Hitchman Coal & Coke Co. v. Mitchell*, 38 S. Ct. 65, L. R. A. 1918C, 497, Ann. Cas. 1918B, 461; *Duplex Printing Press Co. v. Deering*, 41 S. Ct. 172, 16 A. L. R. 196; *American Steel Foundries v. Tri-City Central Trades Council*, 42 S. Ct. 72, 27 A. L. R. 360; *Nebraska District, etc., v. McKelvie*, 43 S. Ct. 628; *Truax v. Corrigan*, *supra*, and cases there cited.

The suits were not premature. The injury to appellees was present and very real, not a mere possibility in the remote future. If no relief had been possible prior to the effective date of the act, the injury would have become irreparable. Prevention of impending injury by unlawful action is a well-recognized function of courts of equity.

The decrees below are affirmed.

Be it enacted by the people of the state of Oregon:

Section 1. That section 5259, Oregon Laws, be and the same is hereby amended so as to read as follows:

Sec. 5259. Children Between the Ages of Eight and Sixteen Years. Any parent, guardian or other person in the state of Oregon, having control or charge or custody of a child under the age of sixteen years and of the age of eight years or over at the commencement of a term of public school of the district in which said child resides, who shall fail or neglect or refuse to send such child to a public school for the period of time a public school shall be held during the current year in said district, shall be guilty of a misdemeanor and each day's failure to send such child to a public school shall constitute a separate offense; provided, that in the following cases, children shall not be required to attend public schools:

- (a) Children Physically Unable. Any child who is abnormal, subnormal or physically unable to attend school.
- (b) Children Who Have Completed the Eighth Grade. Any child who has completed the eighth grade, in accordance with the provisions of the state course of study.
- (c) Distance from School. Children between the ages of eight and ten years, inclusive, whose place of residence is more than one and one-half miles, and children over ten years of age whose place of residence is more than three miles, by the nearest traveled road, from a public school; provided, however, that if transportation to and from school is furnished by the school district, this exemption shall not apply.
- (d) Private Instruction. Any child who is being taught for a like period of time by the parent or private teacher such subjects as are usually taught in the first eight years in the public school; but before such child can be taught by a parent or a private teacher, such parent or private teacher must receive written permission from the county superintendent, and such permission shall not extend longer than the end of the current school year. Such child must report to the county school superintendent or some person designated by him at least once every three months and take an examination in the work covered. If, after such examination, the county superintendent shall determine that such child is not being properly taught, then the

county superintendent shall order the parent, guardian or other person, to send such child to the public school the remainder of the school year.

If any parent, guardian or other person having control or charge or custody of any child between the ages of eight and sixteen years, shall fail to comply with any provision of this section, he shall be guilty of a misdemeanor, and shall, on conviction thereof, be subject to a fine of not less than \$5, nor more than \$100, or to imprisonment in the county jail not less than two nor more than thirty days, or by both such fine and imprisonment in the discretion of the court.

This act shall take effect and be and remain in force from and after the first day of September, 1926.

## **BROWN V. BOARD OF EDUCATION, 347 U.S. 483 (1954)**

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No. 1.

SUPREME COURT OF THE UNITED STATES

Argued December 9, 1952

Reargued December 8, 1953

Decided May 17, 1954

### **APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF KANSAS**

#### **Syllabus**

Segregation of white and Negro children in the public schools of a State solely on the basis of race, pursuant to state laws permitting or requiring such segregation, denies to Negro children the equal protection of the laws guaranteed by the Fourteenth Amendment—even though the physical facilities and other “tangible” factors of white and Negro schools may be equal.

- (a) The history of the Fourteenth Amendment is inconclusive as to its intended effect on public education.
- (b) The question presented in these cases must be determined not on the basis of conditions existing when the Fourteenth Amendment was adopted, but in the light of the full development of public education and its present place in American life throughout the Nation.
- (c) Where a State has undertaken to provide an opportunity for an education in its public schools, such an opportunity is a right which must be made available to all on equal terms.
- (d) Segregation of children in public schools solely on the basis of race deprives children of the minority group of equal educational opportunities, even though the physical facilities and other “tangible” factors may be equal.
- (e) The “separate but equal” doctrine adopted in *Plessy v. Ferguson* has no place in the field of public education.
- (f) The cases are restored to the docket for further argument on specified questions relating to the forms of the decrees.

#### **Opinions**

WARREN, Opinion of the Court

MR. CHIEF JUSTICE WARREN delivered the opinion of the Court.

These cases come to us from the States of Kansas, South Carolina, Virginia, and Delaware. They are premised on different facts and different local conditions, but a common legal question justifies their consideration together in this consolidated opinion.

In each of the cases, minors of the Negro race, through their legal representatives, seek the aid of the courts in obtaining admission to the public schools of their community on a nonsegregated basis. In each instance, they had been denied admission to schools attended by white children under laws requiring or permitting segregation according to race. This segregation was alleged to deprive the plaintiffs of the equal protection of the laws under the Fourteenth Amendment. In each of the cases other than the Delaware case, a three-judge federal district court denied relief to the plaintiffs on the so-called "separate but equal" doctrine announced by this Court in *Plessy v. Ferguson*. Under that doctrine, equality of treatment is accorded when the races are provided substantially equal facilities, even though these facilities be separate. In the Delaware case, the Supreme Court of Delaware adhered to that doctrine, but ordered that the plaintiffs be admitted to the white schools because of their superiority to the Negro schools.

The plaintiffs contend that segregated public schools are not "equal" and cannot be made "equal," and that hence they are deprived of the equal protection of the laws. Because of the obvious importance of the question presented, the Court took jurisdiction. Argument was heard in the 1952 Term, and reargument was heard this Term on certain questions propounded by the Court.

Reargument was largely devoted to the circumstances surrounding the adoption of the Fourteenth Amendment in 1868. It covered exhaustively consideration of the Amendment in Congress, ratification by the states, then-existing practices in racial segregation, and the views of proponents and opponents of the Amendment. This discussion and our own investigation convince us that, although these sources cast some light, it is not enough to resolve the problem with which we are faced. At best, they are inconclusive. The most avid proponents of the post-War Amendments undoubtedly intended them to remove all legal distinctions among "all persons born or naturalized in the United States." Their opponents, just as certainly, were antagonistic to both the letter and the spirit of the Amendments and wished them to have the most limited effect. What others in Congress and the state legislatures had in mind cannot be determined with any degree of certainty. An additional reason for the inconclusive nature of the Amendment's history with respect to segregated schools is the status of public education at that time. In the South, the movement toward free common schools, supported by general taxation, had not yet taken hold. Education of white children was largely in the hands of private groups. Education of Negroes was almost nonexistent, and practically all of the race were illiterate. In fact, any education of Negroes was forbidden by law in some states. Today, in contrast, many Negroes have achieved outstanding success in the arts and sciences, as well as in the business and professional world. It is true that public school education at the time of the Amendment had advanced further in the North, but the effect of the Amendment on Northern States was generally ignored in the congressional debates. Even in the North, the conditions of public education did not approximate those existing today. The curriculum was usually rudimentary; ungraded schools were common in rural areas; the school term was but three months a year in many states, and compulsory school attendance was virtually unknown. As a consequence, it is not surprising that there should be so little in the history of the Fourteenth Amendment relating to its intended effect on public education.

In the first cases in this Court construing the Fourteenth Amendment, decided shortly after its adoption, the Court interpreted it as proscribing all state-imposed discriminations against the Negro race. The doctrine of "separate but equal" did not make its appearance in this Court until 1896 in the case of *Plessy v. Ferguson*, supra, involving not education but trans-

portation. American courts have since labored with the doctrine for over half a century. In this Court, there have been six cases involving the “separate but equal” doctrine in the field of public education. In *Cumming v. County Board of Education*, and *Gong Lum v. Rice*, the validity of the doctrine itself was not challenged. In more recent cases, all on the graduate school level, inequality was found in that specific benefits enjoyed by white students were denied to Negro students of the same educational qualifications. *Missouri ex rel. Gaines v. Canada*; *Sipuel v. Oklahoma*; *Sweatt v. Painter*; *McLaurin v. Oklahoma State Regents*. In none of these cases was it necessary to reexamine the doctrine to grant relief to the Negro plaintiff. And in *Sweatt v. Painter*, supra, the Court expressly reserved decision on the question whether *Plessy v. Ferguson* should be held inapplicable to public education.

In the instant cases, that question is directly presented. Here, unlike *Sweatt v. Painter*, there are findings below that the Negro and white schools involved have been equalized, or are being equalized, with respect to buildings, curricula, qualifications and salaries of teachers, and other “tangible” factors. Our decision, therefore, cannot turn on merely a comparison of these tangible factors in the Negro and white schools involved in each of the cases. We must look instead to the effect of segregation itself on public education.

In approaching this problem, we cannot turn the clock back to 1868, when the Amendment was adopted, or even to 1896, when *Plessy v. Ferguson* was written. We must consider public education in the light of its full development and its present place in American life throughout the Nation. Only in this way can it be determined if segregation in public schools deprives these plaintiffs of the equal protection of the laws.

Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms.

We come then to the question presented: Does segregation of children in public schools solely on the basis of race, even though the physical facilities and other “tangible” factors may be equal, deprive the children of the minority group of equal educational opportunities? We believe that it does.

In *Sweatt v. Painter*, supra, in finding that a segregated law school for Negroes could not provide them equal educational opportunities, this Court relied in large part on “those qualities which are incapable of objective measurement but which make for greatness in a law school.” In *McLaurin v. Oklahoma State Regents*, the Court, in requiring that a Negro admitted to a white graduate school be treated like all other students, again resorted to intangible considerations: “. . . his ability to study, to engage in discussions and exchange views with other students, and, in general, to learn his profession.” Such considerations apply with added force to children in grade and high schools. To separate them from others of similar age and qualifications solely because of their race generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone. The effect of this separation on their educational opportunities was well stated by a finding in the Kansas case by a court which nevertheless felt compelled to rule against the Negro plaintiffs:

Segregation of white and colored children in public schools has a detrimental effect upon the colored children. The impact is greater when it has the sanction of the law, for the policy of separating the races is usually interpreted as denoting the inferiority of the negro group.

A sense of inferiority affects the motivation of a child to learn. Segregation with the sanction of law, therefore, has a tendency to [retard] the educational and mental development of negro children and to deprive them of some of the benefits they would receive in a racial[ly] integrated school system.

Whatever may have been the extent of psychological knowledge at the time of *Plessy v. Ferguson*, this finding is amply supported by modern authority. Any language in *Plessy v. Ferguson* contrary to this finding is rejected.

We conclude that, in the field of public education, the doctrine of “separate but equal” has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have been brought are, by reason of the segregation complained of, deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment. This disposition makes unnecessary any discussion whether such segregation also violates the Due Process Clause of the Fourteenth Amendment.

Because these are class actions, because of the wide applicability of this decision, and because of the great variety of local conditions, the formulation of decrees in these cases presents problems of considerable complexity. On reargument, the consideration of appropriate relief was necessarily subordinated to the primary question—the constitutionality of segregation in public education. We have now announced that such segregation is a denial of the equal protection of the laws. In order that we may have the full assistance of the parties in formulating decrees, the cases will be restored to the docket, and the parties are requested to present further argument on Questions 4 and 5 previously propounded by the Court for the reargument this Term. The Attorney General of the United States is again invited to participate. The Attorneys General of the states requiring or permitting segregation in public education will also be permitted to appear as amici curiae upon request to do so by September 15, 1954, and submission of briefs by October 1, 1954.

It is so ordered.

*Brown v. Board of Education*, 349 U.S. 294 (1955)

SUPREME COURT OF THE UNITED STATES

Reargued on the question of relief April 11–14, 1955

Opinion and judgments announced May 31, 1955

#### APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF KANSAS.

##### Syllabus

1. Racial discrimination in public education is unconstitutional, and all provisions of federal, state or local law requiring or permitting such discrimination must yield to this principle.
2. The judgments below (except that in the Delaware case) are reversed and the cases are remanded to the District Courts to take such proceedings and enter such orders and decrees consistent with this opinion as are necessary and proper to admit the parties to these cases to public schools on a racially nondiscriminatory basis with all deliberate speed.
  - (a) School authorities have the primary responsibility for elucidating, assessing and solving the varied local school problems which may require solution in fully implementing the governing constitutional principles.
  - (b) Courts will have to consider whether the action of school authorities constitutes good faith implementation of the governing constitutional principles.
  - (c) Because of their proximity to local conditions and the possible need for further hearings, the courts which originally heard these cases can best perform this judicial appraisal.

- (d) In fashioning and effectuating the decrees, the courts will be guided by equitable principles—characterized by a practical flexibility in shaping remedies and a facility for adjusting and reconciling public and private needs.
  - (e) At stake is the personal interest of the plaintiffs in admission to public schools as soon as practicable on a nondiscriminatory basis.
  - (f) Courts of equity may properly take into account the public interest in the elimination in a systematic and effective manner of a variety of obstacles in making the transition to school systems operated in accordance with the constitutional principles enunciated in [Brown I]; but the vitality of these constitutional principles cannot be allowed to yield simply because of disagreement with them.
  - (g) While giving weight to these public and private considerations, the courts will require that the defendants make a prompt and reasonable start toward full compliance with the ruling of this Court.
  - (h) Once such a start has been made, the courts may find that additional time is necessary to carry out the ruling in an effective manner.
  - (i) The burden rests on the defendants to establish that additional time is necessary in the public interest and is consistent with good faith compliance at the earliest practicable date.
  - (j) The courts may consider problems related to administration, arising from the physical condition of the school plant, the school transportation system, personnel, revision of school districts and attendance areas into compact units to achieve a system of determining admission to the public schools on a nonracial basis, and revision of local laws and regulations which may be necessary in solving the foregoing problems.
  - (k) The courts will also consider the adequacy of any plans the defendants may propose to meet these problems and to effectuate a transition to a racially nondiscriminatory school system.
  - (l) During the period of transition, the courts will retain jurisdiction of these cases.
3. The judgment in the Delaware case, ordering the immediate admission of the plaintiffs to schools previously attended only by white children, is affirmed on the basis of the principles stated by this Court in its opinion but the case is remanded to the Supreme Court of Delaware for such further proceedings as that Court may deem necessary in the light of this opinion.

98 F.Supp. 797, 103 F.Supp. 920, 103 F.Supp. 337 and judgment in No. 4, reversed and remanded.

91 A.2d 137, affirmed and remanded.

## Opinions

WARREN, Opinion of the Court

MR. CHIEF JUSTICE WARREN delivered the opinion of the Court.

These cases were decided on May 17, 1954. The opinions of that date, declaring the fundamental principle that racial discrimination in public education is unconstitutional, are incorporated herein by reference. All provisions of federal, state, or local law requiring or permitting such discrimination must yield to this principle. There remains for consideration the manner in which relief is to be accorded.

Because these cases arose under different local conditions and their disposition will involve a variety of local problems, we requested further argument on the question of relief. In

view of the nationwide importance of the decision, we invited the Attorney General of the United States and the Attorneys General of all states requiring or permitting racial discrimination in public education to present their views on that question. The parties, the United States, and the States of Florida, North Carolina, Arkansas, Oklahoma, Maryland, and Texas filed briefs and participated in the oral argument.

These presentations were informative and helpful to the Court in its consideration of the complexities arising from the transition to a system of public education freed of racial discrimination. The presentations also demonstrated that substantial steps to eliminate racial discrimination in public schools have already been taken, not only in some of the communities in which these cases arose, but in some of the states appearing as *amici curiae*, and in other states as well. Substantial progress has been made in the District of Columbia and in the communities in Kansas and Delaware involved in this litigation. The defendants in the cases coming to us from South Carolina and Virginia are awaiting the decision of this Court concerning relief.

Full implementation of these constitutional principles may require solution of varied local school problems. School authorities have the primary responsibility for elucidating, assessing, and solving these problems; courts will have to consider whether the action of school authorities constitutes good faith implementation of the governing constitutional principles. Because of their proximity to local conditions and the possible need for further hearings, the courts which originally heard these cases can best perform this judicial appraisal. Accordingly, we believe it appropriate to remand the cases to those courts.

In fashioning and effectuating the decrees, the courts will be guided by equitable principles. Traditionally, equity has been characterized by a practical flexibility in shaping its remedies and by a facility for adjusting and reconciling public and private needs. These cases call for the exercise of these traditional attributes of equity power. At stake is the personal interest of the plaintiffs in admission to public schools as soon as practicable on a nondiscriminatory basis. To effectuate this interest may call for elimination of a variety of obstacles in making the transition to school systems operated in accordance with the constitutional principles set forth in our May 17, 1954, decision. Courts of equity may properly take into account the public interest in the elimination of such obstacles in a systematic and effective manner. But it should go without saying that the vitality of these constitutional principles cannot be allowed to yield simply because of disagreement with them.

While giving weight to these public and private considerations, the courts will require that the defendants make a prompt and reasonable start toward full compliance with our May 17, 1954, ruling. Once such a start has been made, the courts may find that additional time is necessary to carry out the ruling in an effective manner. The burden rests upon the defendants to establish that such time is necessary in the public interest and is consistent with good faith compliance at the earliest practicable date. To that end, the courts may consider problems related to administration, arising from the physical condition of the school plant, the school transportation system, personnel, revision of school districts and attendance areas into compact units to achieve a system of determining admission to the public schools on a nonracial basis, and revision of local laws and regulations which may be necessary in solving the foregoing problems. They will also consider the adequacy of any plans the defendants may propose to meet these problems and to effectuate a transition to a racially nondiscriminatory school system. During this period of transition, the courts will retain jurisdiction of these cases.

The judgments below, except that, in the Delaware case, are accordingly reversed, and the cases are remanded to the District Courts to take such proceedings and enter such orders and decrees consistent with this opinion as are necessary and proper to admit to public schools on a racially nondiscriminatory basis with all deliberate speed the parties to these cases. The judgment in the Delaware case—ordering the immediate admission of the plaintiffs to schools

previously attended only by white children—is affirmed on the basis of the principles stated in our May 17, 1954, opinion, but the case is remanded to the Supreme Court of Delaware for such further proceedings as that Court may deem necessary in light of this opinion. It is so ordered.

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## ENGEL V. VITALE, 370 U.S. 421 (1962)

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**SUPREME COURT OF THE UNITED STATES  
CERTIORARI TO THE COURT OF APPEALS OF NEW YORK  
ARGUED APRIL 3, 1962. DECIDED JUNE 25, 1962.**

Because of the prohibition of the First Amendment against the enactment of any law “respecting an establishment of religion,” which is made applicable to the States by the Fourteenth Amendment, state officials may not compose an official state prayer and require that it be recited in the public schools of the State at the beginning of each school day—even if the prayer is denominationally neutral and pupils who wish to do so may remain silent or be excused from the room while the prayer is being recited.

10 N.Y.2d 174, 176 N.E.2d 579, reversed.

BLACK, Opinion of the Court

MR. JUSTICE BLACK delivered the opinion of the Court.

The respondent Board of Education of Union Free School District No. 9, New Hyde Park, New York, acting in its official capacity under state law, directed the School District’s principal to cause the following prayer to be said aloud by each class in the presence of a teacher at the beginning of each school day:

Almighty God, we acknowledge our dependence upon Thee, and we beg Thy blessings upon us, our parents, our teachers and our Country.

This daily procedure was adopted on the recommendation of the State Board of Regents, a governmental agency created by the State Constitution to which the New York Legislature has granted broad supervisory, executive, and legislative powers over the State’s public school system. These state officials composed the prayer which they recommended and published as a part of their “Statement on Moral and Spiritual Training in the Schools,” saying:

We believe that this Statement will be subscribed to by all men and women of good will, and we call upon all of them to aid in giving life to our program.

Shortly after the practice of reciting the Regents’ prayer was adopted by the School District, the parents of ten pupils brought this action in a New York State Court insisting that use of this official prayer in the public schools was contrary to the beliefs, religions, or religious practices of both themselves and their children. Among other things, these parents challenged the constitutionality of both the state law authorizing the School District to direct the use of prayer in public schools and the School District’s regulation ordering the recitation of this particular prayer on the ground that these actions of official governmental agencies violate that part of the First Amendment of the Federal Constitution which commands that “Congress shall make no law respecting an establishment of religion”—a command which was “made applicable to the State of New York by the Fourteenth Amendment of the said Constitution.” The New York Court of Appeals, over the dissents of Judges Dye and Fuld, sustained an order of the lower state courts which had upheld the power of New York to use the Regents’ prayer as a part of the daily procedures of its public schools so long as the schools did not compel any pupil to join in the prayer over his or his parents’ objection. We granted certiorari to review this important decision involving rights protected by the First and Fourteenth Amendments.

We think that, by using its public school system to encourage recitation of the Regents' prayer, the State of New York has adopted a practice wholly inconsistent with the Establishment Clause. There can, of course, be no doubt that New York's program of daily classroom invocation of God's blessings as prescribed in the Regents' prayer is a religious activity. It is a solemn avowal of divine faith and supplication for the blessings of the Almighty. The nature of such a prayer has always been religious, none of the respondents has denied this, and the trial court expressly so found:

The religious nature of prayer was recognized by Jefferson, and has been concurred in by theological writers, the United States Supreme Court, and State courts and administrative officials, including New York's Commissioner of Education. A committee of the New York Legislature has agreed.

The Board of Regents as *amicus curiae*, the respondents, and intervenors all concede the religious nature of prayer, but seek to distinguish this prayer because it is based on our spiritual heritage . . .

The petitioners contend, among other things, that the state laws requiring or permitting use of the Regents' prayer must be struck down as a violation of the Establishment Clause because that prayer was composed by governmental officials as a part of a governmental program to further religious beliefs. For this reason, petitioners argue, the State's use of the Regents' prayer in its public school system breaches the constitutional wall of separation between Church and State. We agree with that contention, since we think that the constitutional prohibition against laws respecting an establishment of religion must at least mean that, in this country, it is no part of the business of government to compose official prayers for any group of the American people to recite as a part of a religious program carried on by government.

It is a matter of history that this very practice of establishing governmentally composed prayers for religious services was one of the reasons which caused many of our early colonists to leave England and seek religious freedom in America. The Book of Common Prayer, which was created under governmental direction and which was approved by Acts of Parliament in 1548 and 1549, set out in minute detail the accepted form and content of prayer and other religious ceremonies to be used in the established, tax supported Church of England. The controversies over the Book and what should be its content repeatedly threatened to disrupt the peace of that country as the accepted forms of prayer in the established church changed with the views of the particular ruler that happened to be in control at the time. Powerful groups representing some of the varying religious views of the people struggled among themselves to impress their particular views upon the Government and obtain amendments of the Book more suitable to their respective notions of how religious services should be conducted in order that the official religious establishment would advance their particular religious beliefs. Other groups, lacking the necessary political power to influence the Government on the matter, decided to leave England and its established church and seek freedom in America from England's governmentally ordained and supported religion.

It is an unfortunate fact of history that, when some of the very groups which had most strenuously opposed the established Church of England found themselves sufficiently in control of colonial governments in this country to write their own prayers into law, they passed laws making their own religion the official religion of their respective colonies. Indeed, as late as the time of the Revolutionary War, there were established churches in at least eight of the thirteen former colonies and established religions in at least four of the other five. But the successful Revolution against English political domination was shortly followed by intense opposition to the practice of establishing religion by law. This opposition crystallized rapidly into an effective political force in Virginia, where the minority religious groups such as Presbyterians, Lutherans, Quakers and Baptists had gained such strength that the adherents to the established Episcopal Church were actually a minority themselves. In 1785-1786, those opposed to

the established Church, led by James Madison and Thomas Jefferson, who, though themselves not members of any of these dissenting religious groups, opposed all religious establishments by law on grounds of principle, obtained the enactment of the famous “Virginia Bill for Religious Liberty” by which all religious groups were placed on an equal footing so far as the State was concerned. Similar though less far-reaching legislation was being considered and passed in other states.

By the time of the adoption of the Constitution, our history shows that there was a widespread awareness among many Americans of the dangers of a union of Church and State. These people knew, some of them from bitter personal experience, that one of the greatest dangers to the freedom of the individual to worship in his own way lay in the Government’s placing its official stamp of approval upon one particular kind of prayer or one particular form of religious services. They knew the anguish, hardship and bitter strife that could come when zealous religious groups struggled with one another to obtain the Government’s stamp of approval from each King, Queen, or Protector that came to temporary power. The Constitution was intended to avert a part of this danger by leaving the government of this country in the hands of the people, rather than in the hands of any monarch. But this safeguard was not enough. Our Founders were no more willing to let the content of their prayers and their privilege of praying whenever they pleased be influenced by the ballot box than they were to let these vital matters of personal conscience depend upon the succession of monarchs. The First Amendment was added to the Constitution to stand as a guarantee that neither the power nor the prestige of the Federal Government would be used to control, support or influence the kinds of prayer the American people can say—that the people’s religions must not be subjected to the pressures of government for change each time a new political administration is elected to office. Under that Amendment’s prohibition against governmental establishment of religion, as reinforced by the provisions of the Fourteenth Amendment, government in this country, be it state or federal, is without power to prescribe by law any particular form of prayer which is to be used as an official prayer in carrying on any program of governmentally sponsored religious activity.

There can be no doubt that New York’s state prayer program officially establishes the religious beliefs embodied in the Regents’ prayer. The respondents’ argument to the contrary, which is largely based upon the contention that the Regents’ prayer is “nondenominational” and the fact that the program, as modified and approved by state courts, does not require all pupils to recite the prayer, but permits those who wish to do so to remain silent or be excused from the room, ignores the essential nature of the program’s constitutional defects. Neither the fact that the prayer may be denominationally neutral nor the fact that its observance on the part of the students is voluntary can serve to free it from the limitations of the Establishment Clause, as it might from the Free Exercise Clause, of the First Amendment, both of which are operative against the States by virtue of the Fourteenth Amendment. Although these two clauses may, in certain instances, overlap, they forbid two quite different kinds of governmental encroachment upon religious freedom. The Establishment Clause, unlike the Free Exercise Clause, does not depend upon any showing of direct governmental compulsion and is violated by the enactment of laws which establish an official religion whether those laws operate directly to coerce nonobserving individuals or not. This is not to say, of course, that laws officially prescribing a particular form of religious worship do not involve coercion of such individuals. When the power, prestige and financial support of government is placed behind a particular religious belief, the indirect coercive pressure upon religious minorities to conform to the prevailing officially approved religion is plain. But the purposes underlying the Establishment Clause go much further than that. Its first and most immediate purpose rested on the belief that a union of government and religion tends to destroy government and to degrade religion. The history of governmentally established religion, both in England and in this country, showed that whenever government had allied itself with one particular form of religion, the

inevitable result had been that it had incurred the hatred, disrespect and even contempt of those who held contrary beliefs. That same history showed that many people had lost their respect for any religion that had relied upon the support of government to spread its faith. The Establishment Clause thus stands as an expression of principle on the part of the Founders of our Constitution that religion is too personal, too sacred, too holy, to permit its “unhallowed perversion” by a civil magistrate. Another purpose of the Establishment Clause rested upon an awareness of the historical fact that governmentally established religions and religious persecutions go hand in hand. The Founders knew that, only a few years after the Book of Common Prayer became the only accepted form of religious services in the established Church of England, an Act of Uniformity was passed to compel all Englishmen to attend those services and to make it a criminal offense to conduct or attend religious gatherings of any other kind—a law which was consistently flouted by dissenting religious groups in England and which contributed to widespread persecutions of people like John Bunyan who persisted in holding “unlawful [religious] meetings . . . to the great disturbance and distraction of the good subjects of this kingdom . . .” And they knew that similar persecutions had received the sanction of law in several of the colonies in this country soon after the establishment of official religions in those colonies. It was in large part to get completely away from this sort of systematic religious persecution that the Founders brought into being our Nation, our Constitution, and our Bill of Rights, with its prohibition against any governmental establishment of religion. The New York laws officially prescribing the Regents’ prayer are inconsistent both with the purposes of the Establishment Clause and with the Establishment Clause itself.

It has been argued that to apply the Constitution in such a way as to prohibit state laws respecting an establishment of religious services in public schools is to indicate a hostility toward religion or toward prayer. Nothing, of course, could be more wrong. The history of man is inseparable from the history of religion. And perhaps it is not too much to say that, since the beginning of that history, many people have devoutly believed that “More things are wrought by prayer than this world dreams of.” It was doubtless largely due to men who believed this that there grew up a sentiment that caused men to leave the cross-currents of officially established state religions and religious persecution in Europe and come to this country filled with the hope that they could find a place in which they could pray when they pleased to the God of their faith in the language they chose. And there were men of this same faith in the power of prayer who led the fight for adoption of our Constitution and also for our Bill of Rights with the very guarantees of religious freedom that forbid the sort of governmental activity which New York has attempted here. These men knew that the First Amendment, which tried to put an end to governmental control of religion and of prayer, was not written to destroy either. They knew, rather, that it was written to quiet well justified fears which nearly all of them felt arising out of an awareness that governments of the past had shackled men’s tongues to make them speak only the religious thoughts that government wanted them to speak and to pray only to the God that government wanted them to pray to. It is neither sacrilegious nor anti-religious to say that each separate government in this country should stay out of the business of writing or sanctioning official prayers and leave that purely religious function to the people themselves and to those the people choose to look to for religious guidance.

It is true that New York’s establishment of its Regents’ prayer as an officially approved religious doctrine of that State does not amount to a total establishment of one particular religious sect to the exclusion of all others—that, indeed, the governmental endorsement of that prayer seems relatively insignificant when compared to the governmental encroachments upon religion which were commonplace 200 years ago. To those who may subscribe to the view that, because the Regents’ official prayer is so brief and general there can be no danger to religious freedom in its governmental establishment, however, it may be appropriate to say in the words of James Madison, the author of the First Amendment:

[I]t is proper to take alarm at the first experiment on our liberties. . . . Who does not see that the same authority which can establish Christianity, in exclusion of all other Religions,

may establish with the same ease any particular sect of Christians, in exclusion of all other Sects? That the same authority which can force a citizen to contribute three pence only of his property for the support of any one establishment may force him to conform to any other establishment in all cases whatsoever?

The judgment of the Court of Appeals of New York is reversed, and the cause remanded for further proceedings not inconsistent with this opinion.

Reversed and remanded.

MR. JUSTICE FRANKFURTER took no part in the decision of this case.

MR. JUSTICE WHITE took no part in the consideration or decision of this case.

DOUGLAS, Concurring Opinion

MR. JUSTICE DOUGLAS, concurring.

It is customary in deciding a constitutional question to treat it in its narrowest form. Yet at times the setting of the question gives it a form and content which no abstract treatment could give. The point for decision is whether the Government can constitutionally finance a religious exercise. Our system at the federal and state levels is presently honeycombed with such financing. Nevertheless, I think it is an unconstitutional undertaking whatever form it takes.

First, a word as to what this case does not involve.

Plainly, our Bill of Rights would not permit a State or the Federal Government to adopt an official prayer and penalize anyone who would not utter it. This, however, is not that case, for there is no element of compulsion or coercion in New York's regulation requiring that public schools be opened each day with the following prayer:

Almighty God, we acknowledge our dependence upon Thee, and we beg Thy blessings upon us, our parents, our teachers and our Country.

The prayer is said upon the commencement of the school day, immediately following the pledge of allegiance to the flag. The prayer is said aloud in the presence of a teacher, who either leads the recitation or selects a student to do so. No student, however, is compelled to take part. The respondents have adopted a regulation which provides that

Neither teachers nor any school authority shall comment on participation or non-participation . . . , nor suggest or request that any posture or language be used or dress be worn or be not used or not worn.

Provision is also made for excusing children, upon written request of a parent or guardian, from the saying of the prayer or from the room in which the prayer is said. A letter implementing and explaining this regulation has been sent to each taxpayer and parent in the school district. As I read this regulation, a child is free to stand or not stand, to recite or not recite, without fear of reprisal or even comment by the teacher or any other school official.

In short, the only one who need utter the prayer is the teacher, and no teacher is complaining of it. Students can stand mute, or even leave the classroom, if they desire.

McCollum v. Board of Education, does not decide this case. It involved the use of public school facilities for religious education of students. Students either had to attend religious instruction or go to some other place in the school building for pursuit of their secular studies . . . Reports of their presence or absence were to be made to their secular teachers.

Id. The influence of the teaching staff was therefore brought to bear on the student body to support the instilling of religious principles. In the present case, school facilities are used to say the prayer, and the teaching staff is employed to lead the pupils in it. There is, however, no effort at indoctrination, and no attempt at exposition. Prayers, of course, may be so long and of such a character as to amount to an attempt at the religious instruction that was denied the public schools by the McCollum case. But New York's prayer is of a character that does not involve any element of proselytizing, as in the McCollum case.

The question presented by this case is therefore an extremely narrow one.

It is whether New York oversteps the bounds when it finances a religious exercise.

What New York does on the opening of its public schools is what we do when we open court. Our Crier has from the beginning announced the convening of the Court and then added “God save the United States and this Honorable Court.” That utterance is a supplication, a prayer in which we, the judges, are free to join, but which we need not recite any more than the students need recite the New York prayer.

What New York does on the opening of its public schools is what each House of Congress does at the opening of each day’s business. Reverend Frederick B. Harris is Chaplain of the Senate; Reverend Bernard Braskamp is Chaplain of the House. Guest chaplains of various denominations also officiate.

In New York, the teacher who leads in prayer is on the public payroll, and the time she takes seems minuscule as compared with the salaries appropriated by state legislatures and Congress for chaplains to conduct prayers in the legislative halls. Only a bare fraction of the teacher’s time is given to reciting this short 22-word prayer, about the same amount of time that our Crier spends announcing the opening of our sessions and offering a prayer for this Court. Yet, for me, the principle is the same, no matter how briefly the prayer is said, for, in each of the instances given, the person praying is a public official on the public payroll, performing a religious exercise in a governmental institution. It is said that the element of coercion is inherent in the giving of this prayer. If that is true here, it is also true of the prayer with which this Court is convened, and of those that open the Congress. Few adults, let alone children, would leave our courtroom or the Senate or the House while those prayers are being given. Every such audience is in a sense a “captive” audience.

At the same time, I cannot say that to authorize this prayer is to establish a religion in the strictly historic meaning of those words. A religion is not established in the usual sense merely by letting those who choose to do so say the prayer that the public school teacher leads. Yet once government finances a religious exercise, it inserts a divisive influence into our communities. The New York Court said that the prayer given does not conform to all of the tenets of the Jewish, Unitarian, and Ethical Culture groups. One of the petitioners is an agnostic.

“We are a religious people whose institutions presuppose a Supreme Being.” *Zorach v. Clauson*. Under our Bill of Rights, free play is given for making religion an active force in our lives. But “if a religious leaven is to be worked into the affairs of our people, it is to be done by individuals and groups, not by the Government.” *McGowan v. Maryland* (dissenting opinion). By reason of the First Amendment, government is commanded “to have no interest in theology or ritual” (*id.*), for on those matters “government must be neutral.” *Ibid.* The First Amendment leaves the Government in a position not of hostility to religion, but of neutrality. The philosophy is that the atheist or agnostic—the nonbeliever—is entitled to go his own way. The philosophy is that, if government interferes in matters spiritual, it will be a divisive force. The First Amendment teaches that a government neutral in the field of religion better serves all religious interests.

My problem today would be uncomplicated but for *Everson v. Board of Education*, which allowed taxpayers’ money to be used to pay “the bus fares of parochial school pupils as a part of a general program under which” the fares of pupils attending public and other schools were also paid. The *Everson* case seems in retrospect to be out of line with the First Amendment. Its result is appealing, as it allows aid to be given to needy children. Yet, by the same token, public funds could be used to satisfy other needs of children in parochial schools—lunches, books, and tuition being obvious examples. Mr. Justice Rutledge stated in dissent what I think is durable First Amendment philosophy:

The reasons underlying the Amendment’s policy have not vanished with time or diminished in force. Now, as when it was adopted, the price of religious freedom is dou-

ble. It is that the church and religion shall live both within and upon that freedom. There cannot be freedom of religion, safeguarded by the state, and intervention by the church or its agencies in the state's domain or dependency on its largesse. Madison's Remonstrance, Par. 6, 8. The great condition of religious liberty is that it be maintained free from sustenance, as also from other interferences, by the state. For when it comes to rest upon that secular foundation, it vanishes with the resting. *Id.*, Par. 7, 8. Public money devoted to payment of religious costs, educational or other, brings the quest for more. It brings too the struggle of sect against sect for the larger share or for any. Here one by numbers alone will benefit most, there another. That is precisely the history of societies which have had an established religion and dissident groups. *Id.* Par. 8, 11. It is the very thing Jefferson and Madison experienced and sought to guard against, whether in its blunt or in its more screened forms. *Ibid.* The end of such strife cannot be other than to destroy the cherished liberty. The dominating group will achieve the dominant benefit; or all will embroil the state in their dissensions. *Id.*, Par. 11. *Id.* pp. 53-54.

What New York does with this prayer is a break with that tradition. I therefore join the Court in reversing the judgment below.

STEWART, Dissenting Opinion

MR. JUSTICE STEWART, dissenting.

A local school board in New York has provided that those pupils who wish to do so may join in a brief prayer at the beginning of each school day, acknowledging their dependence upon God and asking His blessing upon them and upon their parents, their teachers, and their country. The Court today decides that, in permitting this brief nondenominational prayer, the school board has violated the Constitution of the United States. I think this decision is wrong.

The Court does not hold, nor could it, that New York has interfered with the free exercise of anybody's religion. For the state courts have made clear that those who object to reciting the prayer must be entirely free of any compulsion to do so, including any "embarrassments and pressures." Cf. *West Virginia State Board of Education v. Barnette*. But the Court says that, in permitting school children to say this simple prayer, the New York authorities have established "an official religion."

With all respect, I think the Court has misapplied a great constitutional principle. I cannot see how an "official religion" is established by letting those who want to say a prayer say it. On the contrary, I think that to deny the wish of these school children to join in reciting this prayer is to deny them the opportunity of sharing in the spiritual heritage of our Nation.

The Court's historical review of the quarrels over the Book of Common Prayer in England throws no light for me on the issue before us in this case. England had then and has now an established church. Equally unenlightening, I think, is the history of the early establishment and later rejection of an official church in our own States. For we deal here not with the establishment of a state church, which would, of course, be constitutionally impermissible, but with whether school children who want to begin their day by joining in prayer must be prohibited from doing so. Moreover, I think that the Court's task, in this as in all areas of constitutional adjudication is not responsibly aided by the uncritical invocation of metaphors like the "wall of separation," a phrase nowhere to be found in the Constitution. What is relevant to the issue here is not the history of an established church in sixteenth century England or in eighteenth century America, but the history of the religious traditions of our people, reflected in countless practices of the institutions and officials of our government.

At the opening of each day's Session of this Court we stand, while one of our officials invokes the protection of God. Since the days of John Marshall, our Crier has said, "God save the United States and this Honorable Court." Both the Senate and the House of Representatives open their daily Sessions with prayer. Each of our Presidents, from George Washington to John F. Kennedy, has, upon assuming his Office, asked the protection and help of God.

The Court today says that the state and federal governments are without constitutional power to prescribe any particular form of words to be recited by any group of the American people on any subject touching religion. One of the stanzas of “The Star-Spangled Banner” made our National Anthem by Act of Congress in 1931, contains these verses:

Blest with victory and peace, may the heav’n rescued land  
Praise the Pow’r that hath made and preserved us a nation,  
Then conquer we must, when our cause it is just.  
And this be our motto “In God is our Trust.”

In 1954, Congress added a phrase to the Pledge of Allegiance to the Flag so that it now contains the words “one Nation under God, indivisible, with liberty and justice for all.” In 1952, Congress enacted legislation calling upon the President each year to proclaim a National Day of Prayer. Since 1865, the words “IN GOD WE TRUST” have been impressed on our coins.

Countless similar examples could be listed, but there is no need to belabor the obvious. It was all summed up by this Court just ten years ago in a single sentence: “We are a religious people whose institutions presuppose a Supreme Being.” *Zorach v. Clauson*.

I do not believe that this Court, or the Congress, or the President has, by the actions and practices I have mentioned, established an “official religion” in violation of the Constitution. And I do not believe the State of New York has done so in this case. What each has done has been to recognize and to follow the deeply entrenched and highly cherished spiritual traditions of our Nation—traditions which come down to us from those who almost two hundred years ago avowed their “firm Reliance on the Protection of divine Providence” when they proclaimed the freedom and independence of this brave new world.

I dissent.

## ABINGTON SCHOOL DISTRICT V. SCHEMPP, 374 U.S. 203 (1963)

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SUPREME COURT OF THE UNITED STATES  
SCHOOL DISTRICT OF ABINGTON TOWNSHIP, PENNSYLVANIA, ET AL. V.  
SCHEMPP ET AL.  
APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE EASTERN  
DISTRICT OF PENNSYLVANIA. NO. 142.  
ARGUED FEBRUARY 27–28, 1963. DECIDED JUNE 17, 1963.

MR. JUSTICE CLARK delivered the opinion of the Court.

Once again we are called upon to consider the scope of the provision of the First Amendment to the United States Constitution which declares that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof . . .” These companion cases present the issues in the context of state action requiring that schools begin each day with readings from the Bible. While raising the basic questions under slightly different factual situations, the cases permit of joint treatment. In light of the history of the First Amendment and of our cases interpreting and applying its requirements, we hold that the practices at issue and the laws requiring them are unconstitutional under the Establishment Clause, as applied to the States through the Fourteenth Amendment.

### I.

The Facts in Each Case: No. 142. The Commonwealth of Pennsylvania by law, 24 Pa. Stat. 15-1516, as amended, Pub. Law 1928 (Supp. 1960) Dec. 17, 1959, requires that “At least ten verses

from the Holy Bible shall be read, without comment, at the opening of each public school on each school day. Any child shall be excused from such Bible reading, or attending such Bible reading, upon the written request of his parent or guardian.” The Schempp family, husband and wife and two of their three children, brought suit to enjoin enforcement of the statute, contending that their rights under the Fourteenth Amendment to the Constitution of the United States are, have been, and will continue to be violated unless this statute be declared unconstitutional as violative of these provisions of the First Amendment. They sought to enjoin the appellant school district, wherein the Schempp children attend school, and its officers and the Superintendent of Public Instruction of the Commonwealth from continuing to conduct such readings and recitation of the Lord’s Prayer in the public schools of the district pursuant to the statute. A three-judge statutory District Court for the Eastern District of Pennsylvania held that the statute is violative of the Establishment Clause of the First Amendment as applied to the States by the Due Process Clause of the Fourteenth Amendment and directed that appropriate injunctive relief issue. 201 F. Supp. 815. On appeal by the District, its officials and the Superintendent, under 28 U.S.C. 1253, we noted probable jurisdiction.

The appellees Edward Lewis Schempp, his wife Sidney, and their children, Roger and Donna, are of the Unitarian faith and are members of the Unitarian church in Germantown, Philadelphia, Pennsylvania, where they, as well as another son, Ellory, regularly attend religious services. The latter was originally a party but having graduated from the school system *pendente lite* was voluntarily dismissed from the action. The other children attend the Abington Senior High School, which is a public school operated by appellant district.

On each school day at the Abington Senior High School between 8:15 and 8:30 a. m., while the pupils are attending their home rooms or advisory sections, opening exercises are conducted pursuant to the statute. The exercises are broadcast into each room in the school building through an intercommunications system and are conducted under the supervision of a teacher by students attending the school’s radio and television workshop. Selected students from this course gather each morning in the school’s workshop studio for the exercises, which include readings by one of the students of 10 verses of the Holy Bible, broadcast to each room in the building. This is followed by the recitation of the Lord’s Prayer, likewise over the intercommunications system, but also by the students in the various classrooms, who are asked to stand and join in repeating the prayer in unison. The exercises are closed with the flag salute and such pertinent announcements as are of interest to the students. Participation in the opening exercises, as directed by the statute, is voluntary. The student reading the verses from the Bible may select the passages and read from any version he chooses, although the only copies furnished by the school are the King James version, copies of which were circulated to each teacher by the school district. During the period in which the exercises have been conducted the King James, the Douay and the Revised Standard versions of the Bible have been used, as well as the Jewish Holy Scriptures. There are no prefatory statements, no questions asked or solicited, no comments or explanations made and no interpretations given at or during the exercises. The students and parents are advised that the student may absent himself from the classroom or, should he elect to remain, not participate in the exercises.

It appears from the record that in schools not having an intercommunications system the Bible reading and the recitation of the Lord’s Prayer were conducted by the home-room teacher, who chose the text of the verses and read them herself or had students read them in rotation or by volunteers. This was followed by a standing recitation of the Lord’s Prayer, together with the Pledge of Allegiance to the Flag by the class in unison and a closing announcement of routine school items of interest.

At the first trial Edward Schempp and the children testified as to specific religious doctrines purveyed by a literal reading of the Bible “which were contrary to the religious beliefs which they held and to their familial teaching.” 177 F. Supp. 398, 400. The children testified

that all of the doctrines to which they referred were read to them at various times as part of the exercises. Edward Schempp testified at the second trial that he had considered having Roger and Donna excused from attendance at the exercises but decided against it for several reasons, including his belief that the children's relationships with their teachers and classmates would be adversely affected.

Expert testimony was introduced by both appellants and appellees at the first trial, which testimony was summarized by the trial court as follows:

“Dr. Solomon Grayzel testified that there were marked differences between the Jewish Holy Scriptures and the Christian Holy Bible, the most obvious of which was the absence of the New Testament in the Jewish Holy Scriptures. Dr. Grayzel testified that portions of the New Testament were offensive to Jewish tradition and that, from the standpoint of Jewish faith, the concept of Jesus Christ as the Son of God was ‘practically blasphemous.’ He cited instances in the New Testament which, assertedly, were not only sectarian in nature but tended to bring the Jews into ridicule or scorn. Dr. Grayzel gave as his expert opinion that such material from the New Testament could be explained to Jewish children in such a way as to do no harm to them. But if portions of the New Testament were read without explanation, they could be, and in his specific experience with children Dr. Grayzel observed, had been, psychologically harmful to the child and had caused a divisive force within the social media of the school.

“Dr. Grayzel also testified that there was significant difference in attitude with regard to the respective Books of the Jewish and Christian Religions in that Judaism attaches no special significance to the reading of the Bible per se and that the Jewish Holy Scriptures are source materials to be studied. But Dr. Grayzel did state that many portions of the New, as well as of the Old, Testament contained passages of great literary and moral value.

“Dr. Luther A. Weigle, an expert witness for the defense, testified in some detail as to the reasons for and the methods employed in developing the King James and the Revised Standard Versions of the Bible. On direct examination, Dr. Weigle stated that the Bible was non-sectarian. He later stated that the phrase ‘non-sectarian’ meant to him non-sectarian within the Christian faiths. Dr. Weigle stated that his definition of the Holy Bible would include the Jewish Holy Scriptures, but also stated that the ‘Holy Bible’ would not be complete without the New Testament. He stated that the New Testament ‘conveyed the message of Christians.’ In his opinion, reading of the Holy Scriptures to the exclusion of the New Testament would be a sectarian practice. Dr. Weigle stated that the Bible was of great moral, historical and literary value. This is conceded by all the parties and is also the view of the court.” 177 F. Supp. 398, 401-402.

The trial court, in striking down the practices and the statute requiring them, made specific findings of fact that the children's attendance at Abington Senior High School is compulsory and that the practice of reading 10 verses from the Bible is also compelled by law. It also found that:

“The reading of the verses, even without comment, possesses a devotional and religious character and constitutes in effect a religious observance. The devotional and religious nature of the morning exercises is made all the more apparent by the fact that the Bible reading is followed immediately by a recital in unison by the pupils of the Lord's Prayer. The fact that some pupils, or theoretically all pupils, might be excused from attendance at the exercises does not mitigate the obligatory nature of the ceremony for . . . Section 1516 . . . unequivocally requires the exercises to be held every school day in every school in the Commonwealth. The exercises are held in the

school buildings and perforce are conducted by and under the authority of the local school authorities and during school sessions. Since the statute requires the reading of the 'Holy Bible,' a Christian document, the practice . . . prefers the Christian religion. The record demonstrates that it was the intention of . . . the Commonwealth . . . to introduce a religious ceremony into the public schools of the Commonwealth." 201 F. Supp., at 819.

No. 119. In 1905 the Board of School Commissioners of Baltimore City adopted a rule pursuant to Art. 77, 202 of the Annotated Code of Maryland. The rule provided for the holding of opening exercises in the schools of the city, consisting primarily of the "reading, without comment, of a chapter in the Holy Bible and/or the use of the Lord's Prayer." The petitioners, Mrs. Madalyn Murray and her son, William J. Murray III, are both professed atheists. Following unsuccessful attempts to have the respondent school board rescind the rule, this suit was filed for mandamus to compel its rescission and cancellation. It was alleged that William was a student in a public school of the city and Mrs. Murray, his mother, was a taxpayer therein; that it was the practice under the rule to have a reading on each school morning from the King James version of the Bible; that at petitioners' insistence the rule was amended to permit children to be excused from the exercise on request of the parent and that William had been excused pursuant thereto; that nevertheless the rule as amended was in violation of the petitioners' rights "to freedom of religion under the First and Fourteenth Amendments" and in violation of "the principle of separation between church and state, contained therein . . ." The petition particularized the petitioners' atheistic beliefs and stated that the rule, as practiced, violated their rights

"in that it threatens their religious liberty by placing a premium on belief as against non-belief and subjects their freedom of conscience to the rule of the majority; it pronounces belief in God as the source of all moral and spiritual values, equating these values with religious values, and thereby renders sinister, alien and suspect the beliefs and ideals of your Petitioners, promoting doubt and question of their morality, good citizenship and good faith."

The respondents demurred and the trial court, recognizing that the demurrer admitted all facts well pleaded, sustained it without leave to amend. The Maryland Court of Appeals affirmed, the majority of four justices holding the exercise not in violation of the First and Fourteenth Amendments, with three justices dissenting. 228 Md. 239, 179 A. 2d 698. We granted certiorari.

## II.

It is true that religion has been closely identified with our history and government. As we said in *Engel v. Vitale*, (1962), "The history of man is inseparable from the history of religion. And . . . since the beginning of that history many people have devoutly believed that 'More things are wrought by prayer than this world dreams of.'" In *Zorach v. Clauson*, (1952), we gave specific recognition to the proposition that "[w]e are a religious people whose institutions presuppose a Supreme Being." The fact that the Founding Fathers believed devotedly that there was a God and that the unalienable rights of man were rooted in Him is clearly evidenced in their writings, from the Mayflower Compact to the Constitution itself. This background is evidenced today in our public life through the continuance in our oaths of office from the Presidency to the Alderman of the final supplication, "So help me God." Likewise each House of the Congress provides through its Chaplain an opening prayer, and the sessions of this Court are declared open by the crier in a short ceremony, the final phrase of which invokes the grace of God. Again, there are such manifestations in our military forces, where those of our citizens who are under the restrictions of military service wish to engage in voluntary worship. Indeed, only last year an official survey of the country indicated that 64% of our people have church membership, Bureau of the Census, U.S. Department of Commerce, Statistical

Abstract of the United States (83d ed. 1962), 48, while less than 3% profess no religion whatever. *Id.*, at p. 46. It can be truly said, therefore, that today, as in the beginning, our national life reflects a religious people who, in the words of Madison, are “earnestly praying, as . . . in duty bound, that the Supreme Lawgiver of the Universe . . . guide them into every measure which may be worthy of his [blessing . . .]” Memorial and Remonstrance Against Religious Assessments, quoted in *Everson v. Board of Education*, (1947) (Appendix to dissenting opinion of Rutledge, J.).

This is not to say, however, that religion has been so identified with our history and government that religious freedom is not likewise as strongly imbedded in our public and private life. Nothing but the most telling of personal experiences in religious persecution suffered by our forebears, see *Everson v. Board of Education*, *supra*, at 8-11, could have planted our belief in liberty of religious opinion any more deeply in our heritage. It is true that this liberty frequently was not realized by the colonists, but this is readily accountable by their close ties to the Mother Country. However, the views of Madison and Jefferson, preceded by Roger Williams, came to be incorporated not only in the Federal Constitution but likewise in those of most of our States. This freedom to worship was indispensable in a country whose people came from the four quarters of the earth and brought with them a diversity of religious opinion. Today authorities list 83 separate religious bodies, each with membership exceeding 50,000, existing among our people, as well as innumerable smaller groups. Bureau of the Census. *op. cit.*, *supra*, at 46-47.

### III.

Almost a hundred years ago in *Minor v. Board of Education of Cincinnati*, Judge Alphonso Taft, father of the revered Chief Justice, in an unpublished opinion stated the ideal of our people as to religious freedom as one of “absolute equality before the law, of all religious opinions and sects . . .” “The government is neutral, and, while protecting all, it prefers none, and it disparages none.”

Before examining this “neutral” position in which the Establishment and Free Exercise Clauses of the First Amendment place our Government it is well that we discuss the reach of the Amendment under the cases of this Court.

First, this Court has decisively settled that the First Amendment’s mandate that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof” has been made wholly applicable to the States by the Fourteenth Amendment. Twenty-three years ago in *Cantwell v. Connecticut*, (1940), this Court, through Mr. Justice Roberts, said:

“The fundamental concept of liberty embodied in that [Fourteenth] Amendment embraces the liberties guaranteed by the First Amendment. The First Amendment declares that Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof. The Fourteenth Amendment has rendered the legislatures of the states as incompetent as Congress to enact such laws . . .”

In a series of cases since *Cantwell* the Court has repeatedly reaffirmed that doctrine, and we do so now. *Murdock v. Pennsylvania*, (1943); *Everson v. Board of Education*, *supra*; *Illinois ex rel. McCollum v. Board of Education*, (1948); *Zorach v. Clauson*, *supra*; *McGowan v. Maryland*, (1961); *Torcaso v. Watkins*, (1961); and *Engel v. Vitale*, *supra*.

Second, this Court has rejected unequivocally the contention that the Establishment Clause forbids only governmental preference of one religion over another. Almost 20 years ago in *Everson*, *supra*, at 15, the Court said that “[n]either a state nor the Federal Government can set up a church. Neither can pass laws which aid one religion, aid all religions, or prefer one religion over another.” And Mr. Justice Jackson, dissenting, agreed:

“There is no answer to the proposition . . . that the effect of the religious freedom Amendment to our Constitution was to take every form of propagation of religion

out of the realm of things which could directly or indirectly be made public business and thereby be supported in whole or in part at taxpayers' expense. . . . This freedom was first in the Bill of Rights because it was first in the forefathers' minds; it was set forth in absolute terms, and its strength is its rigidity." *Id.*, at 26.

Further, Mr. Justice Rutledge, joined by Justices Frankfurter, Jackson and Burton, declared:

"The [First] Amendment's purpose was not to strike merely at the official establishment of a single sect, creed or religion, outlawing only a formal relation such as had prevailed in England and some of the colonies. Necessarily it was to uproot all such relationships. But the object was broader than separating church and state in this narrow sense. It was to create a complete and permanent separation of the spheres of religious activity and civil authority by comprehensively forbidding every form of public aid or support for religion." *Id.*, at 31-32.

The same conclusion has been firmly maintained ever since that time, see *Illinois ex rel. McCollum*, *supra*, at pp. 210-211; *McGowan v. Maryland*, *supra*, at 442-443; *Torcaso v. Watkins*, *supra*, at 492-493, 495, and we reaffirm it now.

While none of the parties to either of these cases has questioned these basic conclusions of the Court, both of which have been long established, recognized and consistently reaffirmed, others continue to question their history, logic and efficacy. Such contentions, in the light of the consistent interpretation in cases of this Court, seem entirely untenable and of value only as academic exercises.

#### IV.

The interrelationship of the Establishment and the Free Exercise Clauses was first touched upon by Mr. Justice Roberts for the Court in *Cantwell v. Connecticut*, *supra*, at 303-304, where it was said that their "inhibition of legislation" had

"a double aspect. On the one hand, it forestalls compulsion by law of the acceptance of any creed or the practice of any form of worship. Freedom of conscience and freedom to adhere to such religious organization or form of worship as the individual may choose cannot be restricted by law. On the other hand, it safeguards the free exercise of the chosen form of religion. Thus the Amendment embraces two concepts—freedom to believe and freedom to act. The first is absolute but, in the nature of things, the second cannot be."

A half dozen years later in *Everson v. Board of Education*, *supra*, at 14-15, this Court, through MR. JUSTICE BLACK, stated that the "scope of the First Amendment . . . was designed forever to suppress" the establishment of religion or the prohibition of the free exercise thereof. In short, the Court held that the Amendment

"requires the state to be a neutral in its relations with groups of religious believers and non-believers; it does not require the state to be their adversary. State power is no more to be used so as to handicap religions than it is to favor them." *Id.*, at 18.

And Mr. Justice Jackson, in dissent, declared that public schools are organized

"on the premise that secular education can be isolated from all religious teaching so that the school can inculcate all needed temporal knowledge and also maintain a strict and lofty neutrality as to religion. The assumption is that after the individual has been instructed in worldly wisdom he will be better fitted to choose his religion." *Id.*, at 23-24.

Moreover, all of the four dissenters, speaking through Mr. Justice Rutledge, agreed that

"Our constitutional policy . . . does not deny the value or the necessity for religious training, teaching or observance. Rather it secures their free exercise. But to that end

it does deny that the state can undertake or sustain them in any form or degree. For this reason the sphere of religious activity, as distinguished from the secular intellectual liberties, has been given the twofold protection and, as the state cannot forbid, neither can it perform or aid in performing the religious function. The dual prohibition makes that function altogether private.” *Id.*, at 52.

Only one year later the Court was asked to reconsider and repudiate the doctrine of these cases in *McCullum v. Board of Education*. It was argued that “historically the First Amendment was intended to forbid only government preference of one religion over another . . . . In addition they ask that we distinguish or overrule our holding in the *Everson* case that the Fourteenth Amendment made the ‘establishment of religion’ clause of the First Amendment applicable as a prohibition against the States.” The Court, with Mr. Justice Reed alone dissenting, was unable to “accept either of these contentions.” *Ibid.* Mr. Justice Frankfurter, joined by Justices Jackson, Rutledge and Burton, wrote a very comprehensive and scholarly concurrence in which he said that “[s]eparation is a requirement to abstain from fusing functions of Government and of religious sects, not merely to treat them all equally.” *Id.*, at 227. Continuing, he stated that:

“the Constitution . . . prohibited the Government common to all from becoming embroiled, however innocently, in the destructive religious conflicts of which the history of even this country records some dark pages.” *Id.*, at 228.

In 1952 in *Zorach v. Clauson*, *supra*, MR. JUSTICE DOUGLAS for the Court reiterated:

“There cannot be the slightest doubt that the First Amendment reflects the philosophy that Church and State should be separated. And so far as interference with the ‘free exercise’ of religion and an ‘establishment’ of religion are concerned, the separation must be complete and unequivocal. The First Amendment within the scope of its coverage permits no exception; the prohibition is absolute. The First Amendment, however, does not say that in every and all respects there shall be a separation of Church and State. Rather, it studiously defines the manner, the specific ways, in which there shall be no concert or union or dependency one on the other. That is the common sense of the matter.”

And then in 1961 in *McGowan v. Maryland* and in *Torcaso v. Watkins* each of these cases was discussed and approved. CHIEF JUSTICE WARREN in *McGowan*, for a unanimous Court on this point, said:

“But, the First Amendment, in its final form, did not simply bar a congressional enactment establishing a church; it forbade all laws respecting an establishment of religion. Thus, this Court has given the Amendment a ‘broad interpretation . . . in the light of its history and the evils it was designed forever to suppress . . . .’”

And MR. JUSTICE BLACK for the Court in *Torcaso*, without dissent but with Justices Frankfurter and HARLAN concurring in the result, used this language:

“We repeat and again reaffirm that neither a State nor the Federal Government can constitutionally force a person ‘to profess a belief or disbelief in any religion.’ Neither can constitutionally pass laws or impose requirements which aid all religions as against non-believers, and neither can aid those religions based on a belief in the existence of God as against those religions founded on different beliefs.”

Finally, in *Engel v. Vitale*, only last year, these principles were so universally recognized that the Court, without the citation of a single case and over the sole dissent of MR. JUSTICE STEWART, reaffirmed them. The Court found the 22-word prayer used in “New York’s program of daily classroom invocation of God’s blessings as prescribed in the Regents’ prayer . . . [to be] a religious activity.” It held that “it is no part of the business of government to compose official prayers for any group of the American people to recite as a part of a religious program carried on by government.” *Id.*, at 425. In discussing the reach of the Establishment and Free Exercise Clauses of the First Amendment the Court said:

“Although these two clauses may in certain instances overlap, they forbid two quite different kinds of governmental encroachment upon religious freedom. The Establishment Clause, unlike the Free Exercise Clause, does not depend upon any showing of direct governmental compulsion and is violated by the enactment of laws which establish an official religion whether those laws operate directly to coerce non-observing individuals or not. This is not to say, of course, that laws officially prescribing a particular form of religious worship do not involve coercion of such individuals. When the power, prestige and financial support of government is placed behind a particular religious belief, the indirect coercive pressure upon religious minorities to conform to the prevailing officially approved religion is plain.” *Id.*, at 430-431.

And in further elaboration the Court found that the “first and most immediate purpose [of the Establishment Clause] rested on the belief that a union of government and religion tends to destroy government and to degrade religion.” *Id.*, at 431. When government, the Court said, allies itself with one particular form of religion, the inevitable result is that it incurs “the hatred, disrespect and even contempt of those who held contrary beliefs.” *Ibid.*

## V.

The wholesome “neutrality” of which this Court’s cases speak thus stems from a recognition of the teachings of history that powerful sects or groups might bring about a fusion of governmental and religious functions or a concert or dependency of one upon the other to the end that official support of the State or Federal Government would be placed behind the tenets of one or of all orthodoxies. This the Establishment Clause prohibits. And a further reason for neutrality is found in the Free Exercise Clause, which recognizes the value of religious training, teaching and observance and, more particularly, the right of every person to freely choose his own course with reference thereto, free of any compulsion from the state. This the Free Exercise Clause guarantees. Thus, as we have seen, the two clauses may overlap. As we have indicated, the Establishment Clause has been directly considered by this Court eight times in the past score of years and, with only one Justice dissenting on the point, it has consistently held that the clause withdrew all legislative power respecting religious belief or the expression thereof. The test may be stated as follows: what are the purpose and the primary effect of the enactment? If either is the advancement or inhibition of religion then the enactment exceeds the scope of legislative power as circumscribed by the Constitution. That is to say that to withstand the strictures of the Establishment Clause there must be a secular legislative purpose and a primary effect that neither advances nor inhibits religion. *Everson v. Board of Education*, *supra*; *McGowan v. Maryland*, *supra*, at 442. The Free Exercise Clause, likewise considered many times here, withdraws from legislative power, state and federal, the exertion of any restraint on the free exercise of religion. Its purpose is to secure religious liberty in the individual by prohibiting any invasions thereof by civil authority. Hence it is necessary in a free exercise case for one to show the coercive effect of the enactment as it operates against him in the practice of his religion. The distinction between the two clauses is apparent—a violation of the Free Exercise Clause is predicated on coercion while the Establishment Clause violation need not be so attended.

Applying the Establishment Clause principles to the cases at bar we find that the States are requiring the selection and reading at the opening of the school day of verses from the Holy Bible and the recitation of the Lord’s Prayer by the students in unison. These exercises are prescribed as part of the curricular activities of students who are required by law to attend school. They are held in the school buildings under the supervision and with the participation of teachers employed in those schools. None of these factors, other than compulsory school attendance, was present in the program upheld in *Zorach v. Clauson*. The trial court in No. 142 has found that such an opening exercise is a religious ceremony and was intended by the State to be so. We agree with the trial court’s finding as to the religious character of the exer-

cises. Given that finding, the exercises and the law requiring them are in violation of the Establishment Clause.

There is no such specific finding as to the religious character of the exercises in No. 119, and the State contends (as does the State in No. 142) that the program is an effort to extend its benefits to all public school children without regard to their religious belief. Included within its secular purposes, it says, are the promotion of moral values, the contradiction to the materialistic trends of our times, the perpetuation of our institutions and the teaching of literature. The case came up on demurrer, of course, to a petition which alleged that the uniform practice under the rule had been to read from the King James version of the Bible and that the exercise was sectarian. The short answer, therefore, is that the religious character of the exercise was admitted by the State. But even if its purpose is not strictly religious, it is sought to be accomplished through readings, without comment, from the Bible. Surely the place of the Bible as an instrument of religion cannot be gainsaid, and the State's recognition of the pervading religious character of the ceremony is evident from the rule's specific permission of the alternative use of the Catholic Douay version as well as the recent amendment permitting nonattendance at the exercises. None of these factors is consistent with the contention that the Bible is here used either as an instrument for nonreligious moral inspiration or as a reference for the teaching of secular subjects.

The conclusion follows that in both cases the laws require religious exercises and such exercises are being conducted in direct violation of the rights of the appellees and petitioners. Nor are these required exercises mitigated by the fact that individual students may absent themselves upon parental request, for that fact furnishes no defense to a claim of unconstitutionality under the Establishment Clause. See *Engel v. Vitale*, *supra*, at 430. Further, it is no defense to urge that the religious practices here may be relatively minor encroachments on the First Amendment. The breach of neutrality that is today a trickling stream may all too soon become a raging torrent and, in the words of Madison, "it is proper to take alarm at the first experiment on our liberties." Memorial and Remonstrance Against Religious Assessments, quoted in *Everson*, *supra*, at 65.

It is insisted that unless these religious exercises are permitted a "religion of secularism" is established in the schools. We agree of course that the State may not establish a "religion of secularism" in the sense of affirmatively opposing or showing hostility to religion, thus "preferring those who believe in no religion over those who do believe." *Zorach v. Clauson*, *supra*, at 314. We do not agree, however, that this decision in any sense has that effect. In addition, it might well be said that one's education is not complete without a study of comparative religion or the history of religion and its relationship to the advancement of civilization. It certainly may be said that the Bible is worthy of study for its literary and historic qualities. Nothing we have said here indicates that such study of the Bible or of religion, when presented objectively as part of a secular program of education, may not be effected consistently with the First Amendment. But the exercises here do not fall into those categories. They are religious exercises, required by the States in violation of the command of the First Amendment that the Government maintain strict neutrality, neither aiding nor opposing religion.

Finally, we cannot accept that the concept of neutrality, which does not permit a State to require a religious exercise even with the consent of the majority of those affected, collides with the majority's right to free exercise of religion. While the Free Exercise Clause clearly prohibits the use of state action to deny the rights of free exercise to anyone, it has never meant that a majority could use the machinery of the State to practice its beliefs. Such a contention was effectively answered by Mr. Justice Jackson for the Court in *West Virginia Board of Education v. Barnette*, (1943):

"The very purpose of a Bill of Rights was to withdraw certain subjects from the vicissitudes of political controversy, to place them beyond the reach of majorities and offi-

cial and to establish them as legal principles to be applied by the courts. One's right to . . . freedom of worship . . . and other fundamental rights may not be submitted to vote; they depend on the outcome of no elections."

The place of religion in our society is an exalted one, achieved through a long tradition of reliance on the home, the church and the inviolable citadel of the individual heart and mind. We have come to recognize through bitter experience that it is not within the power of government to invade that citadel, whether its purpose or effect be to aid or oppose, to advance or retard. In the relationship between man and religion, the State is firmly committed to a position of neutrality. Though the application of that rule requires interpretation of a delicate sort, the rule itself is clearly and concisely stated in the words of the First Amendment. Applying that rule to the facts of these cases, we affirm the judgment in No. 142. In No. 119, the judgment is reversed and the cause remanded to the Maryland Court of Appeals for further proceedings consistent with this opinion.

It is so ordered.

MR. JUSTICE DOUGLAS, concurring.

I join the opinion of the Court and add a few words in explanation.

While the Free Exercise Clause of the First Amendment is written in terms of what the State may not require of the individual, the Establishment Clause, serving the same goal of individual religious freedom, is written in different terms.

Establishment of a religion can be achieved in several ways. The church and state can be one; the church may control the state or the state may control the church; or the relationship may take one of several possible forms of a working arrangement between the two bodies. Under all of these arrangements the church typically has a place in the state's budget, and church law usually governs such matters as baptism, marriage, divorce and separation, at least for its members and sometimes for the entire body politic. Education too, is usually high on the priority list of church interests. In the past schools were often made the exclusive responsibility of the church. Today in some state-church countries the state runs the public schools, but compulsory religious exercises are often required of some or all students. Thus, under the agreement Franco made with the Holy See when he came to power in Spain, "The Church regained its place in the national budget. It insists on baptizing all children and has made the catechism obligatory in state schools."

The vice of all such arrangements under the Establishment Clause is that the state is lending its assistance to a church's efforts to gain and keep adherents. Under the First Amendment it is strictly a matter for the individual and his church as to what church he will belong to and how much support, in the way of belief, time, activity or money, he will give to it. "This pure Religious Liberty" "declared . . . [all forms of church-state relationships] and their fundamental idea to be oppressions of conscience and abridgments of that liberty which God and nature had conferred on every living soul."

In these cases we have no coercive religious exercise aimed at making the students conform. The prayers announced are not compulsory, though some may think they have that indirect effect because the nonconformist student may be induced to participate for fear of being called an "oddball." But that coercion, if it be present, has not been shown; so the vices of the present regimes are different.

These regimes violate the Establishment Clause in two different ways. In each case the State is conducting a religious exercise; and, as the Court holds, that cannot be done without violating the "neutrality" required of the State by the balance of power between individual, church and state that has been struck by the First Amendment. But the Establishment Clause is not limited to precluding the State itself from conducting religious exercises. It also forbids the State to employ its facilities or funds in a way that gives any church, or all churches, greater

strength in our society than it would have by relying on its members alone. Thus, the present regimes must fall under that clause for the additional reason that public funds, though small in amount, are being used to promote a religious exercise. Through the mechanism of the State, all of the people are being required to finance a religious exercise that only some of the people want and that violates the sensibilities of others.

The most effective way to establish any institution is to finance it; and this truth is reflected in the appeals by church groups for public funds to finance their religious schools. Financing a church either in its strictly religious activities or in its other activities is equally unconstitutional, as I understand the Establishment Clause. Budgets for one activity may be technically separable from budgets for others. But the institution is an inseparable whole, a living organism, which is strengthened in proselytizing when it is strengthened in any department by contributions from other than its own members.

Such contributions may not be made by the State even in a minor degree without violating the Establishment Clause. It is not the amount of public funds expended; as this case illustrates, it is the use to which public funds are put that is controlling. For the First Amendment does not say that some forms of establishment are allowed; it says that “no law respecting an establishment of religion” shall be made. What may not be done directly may not be done indirectly lest the Establishment Clause become a mockery.

MR. JUSTICE BRENNAN, concurring.

Almost a century and a half ago, John Marshall, in *M’Culloch v. Maryland*, enjoined: “. . . we must never forget, that it is a constitution we are expounding.” 4 Wheat. 316, 407. The Court’s historic duty to expound the meaning of the Constitution has encountered few issues more intricate or more demanding than that of the relationship between religion and the public schools. Since undoubtedly we are “a religious people whose institutions presuppose a Supreme Being,” *Zorach v. Clauson*, deep feelings are aroused when aspects of that relationship are claimed to violate the injunction of the First Amendment that government may make “no law respecting an establishment of religion, or prohibiting the free exercise thereof. . . .” Americans regard the public schools as a most vital civic institution for the preservation of a democratic system of government. It is therefore understandable that the constitutional prohibitions encounter their severest test when they are sought to be applied in the school classroom. Nevertheless it is this Court’s inescapable duty to declare whether exercises in the public schools of the States, such as those of Pennsylvania and Maryland questioned here, are involvements of religion in public institutions of a kind which offends the First and Fourteenth Amendments.

When John Locke ventured in 1689, “I esteem it above all things necessary to distinguish exactly the business of civil government from that of religion and to settle the just bounds that lie between the one and the other,” he anticipated the necessity which would be thought by the Framers to require adoption of a First Amendment, but not the difficulty that would be experienced in defining those “just bounds.” The fact is that the line which separates the secular from the sectarian in American life is elusive. The difficulty of defining the boundary with precision inheres in a paradox central to our scheme of liberty. While our institutions reflect a firm conviction that we are a religious people, those institutions by solemn constitutional injunction may not officially involve religion in such a way as to prefer, discriminate against, or oppress, a particular sect or religion. Equally the Constitution enjoins those involvements of religious with secular institutions which (a) serve the essentially religious activities of religious institutions; (b) employ the organs of government for essentially religious purposes; or (c) use essentially religious means to serve governmental ends where secular means would suffice. The constitutional mandate expresses a deliberate and considered judgment that such matters are to be left to the conscience of the citizen, and declares as a basic postulate of the relation between the citizen and his government that “the rights of conscience are, in their nature, of peculiar delicacy, and will little bear the gentlest touch of governmental hand . . . .”

I join fully in the opinion and the judgment of the Court. I see no escape from the conclusion that the exercises called in question in these two cases violate the constitutional mandate. The reasons we gave only last Term in *Engle v. Vitale*, for finding in the New York Regents' prayer an impermissible establishment of religion, compel the same judgment of the practices at bar. The involvement of the secular with the religious is no less intimate here; and it is constitutionally irrelevant that the State has not composed the material for the inspirational exercises presently involved. It should be unnecessary to observe that our holding does not declare that the First Amendment manifests hostility to the practice or teaching of religion, but only applies prohibitions incorporated in the Bill of Rights in recognition of historic needs shared by Church and State alike. While it is my view that not every involvement of religion in public life is unconstitutional, I consider the exercises at bar a form of involvement which clearly violates the Establishment Clause.

The importance of the issue and the deep conviction with which views on both sides are held seem to me to justify detailing at some length my reasons for joining the Court's judgment and opinion.

### I.

The First Amendment forbids both the abridgment of the free exercise of religion and the enactment of laws "respecting an establishment of religion." The two clauses, although distinct in their objectives and their applicability, emerged together from a common panorama of history. The inclusion of both restraints upon the power of Congress to legislate concerning religious matters shows unmistakably that the Framers of the First Amendment were not content to rest the protection of religious liberty exclusively upon either clause. "In assuring the free exercise of religion," Mr. Justice Frankfurter has said, "the Framers of the First Amendment were sensitive to the then recent history of those persecutions and impositions of civil disability with which sectarian majorities in virtually all of the Colonies had visited deviation in the matter of conscience. This protection of unpopular creeds, however, was not to be the full extent of the Amendment's guarantee of freedom from governmental intrusion in matters of faith. The battle in Virginia, hardly four years won, where James Madison had led the forces of disestablishment in successful opposition to Patrick Henry's proposed Assessment Bill levying a general tax for the support of Christian teachers, was a vital and compelling memory in 1789." *McGowan v. Maryland*.

It is true that the Framers' immediate concern was to prevent the setting up of an official federal church of the kind which England and some of the Colonies had long supported. But nothing in the text of the Establishment Clause supports the view that the prevention of the setting up of an official church was meant to be the full extent of the prohibitions against official involvements in religion. It has rightly been said:

"If the framers of the Amendment meant to prohibit Congress merely from the establishment of a 'church,' one may properly wonder why they didn't so state. That the words church and religion were regarded as synonymous seems highly improbable, particularly in view of the fact that the contemporary state constitutional provisions dealing with the subject of establishment used definite phrases such as 'religious sect,' 'sect,' or 'denomination.' . . . With such specific wording in contemporary state constitutions, why was not a similar wording adopted for the First Amendment if its framers intended to prohibit nothing more than what the States were prohibiting?" Lardner, *How Far Does the Constitution Separate Church and State?* 45 *Am. Pol. Sci. Rev.* 110, 112 (1951).

Plainly, the Establishment Clause, in the contemplation of the Framers, "did not limit the constitutional proscription to any particular, dated form of state-supported theological venture." "What Virginia had long practiced, and what Madison, Jefferson and others fought to

end, was the extension of civil government's support to religion in a manner which made the two in some degree interdependent, and thus threatened the freedom of each. The purpose of the Establishment Clause was to assure that the national legislature would not exert its power in the service of any purely religious end; that it would not, as Virginia and virtually all of the Colonies had done, make of religion, as religion, an object of legislation. . . . The Establishment Clause withdrew from the sphere of legitimate legislative concern and competence a specific, but comprehensive, area of human conduct: man's belief or disbelief in the verity of some transcendental idea and man's expression in action of that belief or disbelief." *McGowan v. Maryland*, *supra*, at 465-466 (opinion of Frankfurter, J.).

In sum, the history which our prior decisions have summoned to aid interpretation of the Establishment Clause permits little doubt that its prohibition was designed comprehensively to prevent those official involvements of religion which would tend to foster or discourage religious worship or belief.

But an awareness of history and an appreciation of the aims of the Founding Fathers do not always resolve concrete problems. The specific question before us has, for example, aroused vigorous dispute whether the architects of the First Amendment—James Madison and Thomas Jefferson particularly—understood the prohibition against any “law respecting an establishment of religion” to reach devotional exercises in the public schools. It may be that Jefferson and Madison would have held such exercises to be permissible—although even in Jefferson's case serious doubt is suggested by his admonition against “putting the Bible and Testament into the hands of the children at an age when their judgments are not sufficiently matured for religious inquiries . . .” But I doubt that their view, even if perfectly clear one way or the other, would supply a dispositive answer to the question presented by these cases. A more fruitful inquiry, it seems to me, is whether the practices here challenged threaten those consequences which the Framers deeply feared; whether, in short, they tend to promote that type of interdependence between religion and state which the First Amendment was designed to prevent. Our task is to translate “the majestic generalities of the Bill of Rights, conceived as part of the pattern of liberal government in the eighteenth century, into concrete restraints on officials dealing with the problems of the twentieth century . . .” *West Virginia State Board of Education v. Barnette*.

A too literal quest for the advice of the Founding Fathers upon the issues of these cases seems to me futile and misdirected for several reasons: First, on our precise problem the historical record is at best ambiguous, and statements can readily be found to support either side of the proposition. The ambiguity of history is understandable if we recall the nature of the problems uppermost in the thinking of the statesmen who fashioned the religious guarantees; they were concerned with far more flagrant intrusions of government into the realm of religion than any that our century has witnessed. While it is clear to me that the Framers meant the Establishment Clause to prohibit more than the creation of an established federal church such as existed in England, I have no doubt that, in their preoccupation with the imminent question of established churches, they gave no distinct consideration to the particular question whether the clause also forbade devotional exercises in public institutions.

Second, the structure of American education has greatly changed since the First Amendment was adopted. In the context of our modern emphasis upon public education available to all citizens, any views of the eighteenth century as to whether the exercises at bar are an “establishment” offer little aid to decision. Education, as the Framers knew it, was in the main confined to private schools more often than not under strictly sectarian supervision. Only gradually did control of education pass largely to public officials. It would, therefore, hardly be significant if the fact was that the nearly universal devotional exercises in the schools of the young Republic did not provoke criticism; even today religious ceremonies in church-supported private schools are constitutionally unobjectionable.

Third, our religious composition makes us a vastly more diverse people than were our forefathers. They knew differences chiefly among Protestant sects. Today the Nation is far

more heterogeneous religiously, including as it does substantial minorities not only of Catholics and Jews but as well of those who worship according to no version of the Bible and those who worship no God at all. See *Torcaso v. Watkins*. In the face of such profound changes, practices which may have been objectionable to no one in the time of Jefferson and Madison may today be highly offensive to many persons, the deeply devout and the nonbelievers alike.

Whatever Jefferson or Madison would have thought of Bible reading or the recital of the Lord's Prayer in what few public schools existed in their day, our use of the history of their time must limit itself to broad purposes, not specific practices. By such a standard, I am persuaded, as is the Court, that the devotional exercises carried on in the Baltimore and Abington schools offend the First Amendment because they sufficiently threaten in our day those substantive evils the fear of which called forth the Establishment Clause of the First Amendment. It is "a constitution we are expounding," and our interpretation of the First Amendment must necessarily be responsive to the much more highly charged nature of religious questions in contemporary society.

Fourth, the American experiment in free public education available to all children has been guided in large measure by the dramatic evolution of the religious diversity among the population which our public schools serve. The interaction of these two important forces in our national life has placed in bold relief certain positive values in the consistent application to public institutions generally, and public schools particularly, of the constitutional decree against official involvements of religion which might produce the evils the Framers meant the Establishment Clause to forestall. The public schools are supported entirely, in most communities, by public funds—funds exacted not only from parents, nor alone from those who hold particular religious views, nor indeed from those who subscribe to any creed at all. It is implicit in the history and character of American public education that the public schools serve a uniquely public function: the training of American citizens in an atmosphere free of parochial, divisive, or separatist influences of any sort—an atmosphere in which children may assimilate a heritage common to all American groups and religions. See *Illinois ex rel. McCollum v. Board of Education*. This is a heritage neither theistic nor atheistic, but simply civic and patriotic. See *Meyer v. Nebraska*.

Attendance at the public schools has never been compulsory; parents remain morally and constitutionally free to choose the academic environment in which they wish their children to be educated. The relationship of the Establishment Clause of the First Amendment to the public school system is preeminently that of reserving such a choice to the individual parent, rather than vesting it in the majority of voters of each State or school district. The choice which is thus preserved is between a public secular education with its uniquely democratic values, and some form of private or sectarian education, which offers values of its own. In my judgment the First Amendment forbids the State to inhibit that freedom of choice by diminishing the attractiveness of either alternative—either by restricting the liberty of the private schools to inculcate whatever values they wish, or by jeopardizing the freedom of the public schools from private or sectarian pressures. The choice between these very different forms of education is one—very much like the choice of whether or not to worship—which our Constitution leaves to the individual parent. It is no proper function of the state or local government to influence or restrict that election. The lesson of history—drawn more from the experiences of other countries than from our own—is that a system of free public education forfeits its unique contribution to the growth of democratic citizenship when that choice ceases to be freely available to each parent.

## II.

The exposition by this Court of the religious guarantees of the First Amendment has consistently reflected and reaffirmed the concerns which impelled the Framers to write those guarantees into the Constitution. It would be neither possible nor appropriate to review here the

entire course of our decisions on religious questions. There emerge from those decisions, however, three principles of particular relevance to the issue presented by the cases at bar, and some attention to those decisions is therefore appropriate.

First. One line of decisions derives from contests for control of a church property or other internal ecclesiastical disputes. This line has settled the proposition that in order to give effect to the First Amendment's purpose of requiring on the part of all organs of government a strict neutrality toward theological questions, courts should not undertake to decide such questions. These principles were first expounded in the case of *Watson v. Jones*, 13 Wall. 679, which declared that judicial intervention in such a controversy would open up "the whole subject of the doctrinal theology, the usages and customs, the written laws, and fundamental organization of every religious denomination . . ." 13 Wall., at 733. Courts above all must be neutral, for "[t]he law knows no heresy, and is committed to the support of no dogma, the establishment of no sect." 13 Wall., at 728. This principle has recently been reaffirmed in *Kedroff v. St. Nicholas Cathedral*; and *Kreshik v. St. Nicholas Cathedral*.

The mandate of judicial neutrality in theological controversies met its severest test in *United States v. Ballard*. That decision put in sharp relief certain principles which bear directly upon the questions presented in these cases. Ballard was indicted for fraudulent use of the mails in the dissemination of religious literature. He requested that the trial court submit to the jury the question of the truthfulness of the religious views he championed. The requested charge was refused, and we upheld that refusal, reasoning that the First Amendment foreclosed any judicial inquiry into the truth or falsity of the defendant's religious beliefs. We said: "Man's relation to his God was made no concern of the state. He was granted the right to worship as he pleased and to answer to no man for the verity of his religious views." "Men may believe what they cannot prove. They may not be put to the proof of their religious doctrines or beliefs. . . . Many take their gospel from the New Testament. But it would hardly be supposed that they could be tried before a jury charged with the duty of determining whether those teachings contained false representations."

The dilemma presented by the case was severe. While the alleged truthfulness of nonreligious publications could ordinarily have been submitted to the jury, Ballard was deprived of that defense only because the First Amendment forbids governmental inquiry into the verity of religious beliefs. In dissent Mr. Justice Jackson expressed the concern that under this construction of the First Amendment "[p]rosecutions of this character easily could degenerate into religious persecution." The case shows how elusive is the line which enforces the Amendment's injunction of strict neutrality, while manifesting no official hostility toward religion—a line which must be considered in the cases now before us. Some might view the result of the Ballard case as a manifestation of hostility—in that the conviction stood because the defense could not be raised. To others it might represent merely strict adherence to the principle of neutrality already expounded in the cases involving doctrinal disputes. Inevitably, insistence upon neutrality, vital as it surely is for untrammelled religious liberty, may appear to border upon religious hostility. But in the long view the independence of both church and state in their respective spheres will be better served by close adherence to the neutrality principle. If the choice is often difficult, the difficulty is endemic to issues implicating the religious guarantees of the First Amendment. Freedom of religion will be seriously jeopardized if we admit exceptions for no better reason than the difficulty of delineating hostility from neutrality in the closest cases.

Second. It is only recently that our decisions have dealt with the question whether issues arising under the Establishment Clause may be isolated from problems implicating the Free Exercise Clause. *Everson v. Board of Education*, is in my view the first of our decisions which treats a problem of asserted unconstitutional involvement as raising questions purely under the Establishment Clause. A scrutiny of several earlier decisions said by some to have etched

the contours of the clause shows that such cases neither raised nor decided any constitutional issues under the First Amendment. *Bradfield v. Roberts*, for example, involved challenges to a federal grant to a hospital administered by a Roman Catholic order. The Court rejected the claim for lack of evidence that any sectarian influence changed its character as a secular institution chartered as such by the Congress.

*Quick Bear v. Leupp*, is also illustrative. The immediate question there was one of statutory construction, although the issue had originally involved the constitutionality of the use of federal funds to support sectarian education on Indian reservations. Congress had already prohibited federal grants for that purpose, thereby removing the broader issue, leaving only the question whether the statute authorized the appropriation for religious teaching of Treaty funds held by the Government in trust for the Indians. Since these were the Indians' own funds, the Court held only that the Indians might direct their use for such educational purposes as they chose, and that the administration by the Treasury of the disbursement of the funds did not inject into the case any issue of the propriety of the use of federal moneys. Indeed, the Court expressly approved the reasoning of the Court of Appeals that to deny the Indians the right to spend their own moneys for religious purposes of their choice might well infringe the free exercise of their religion: "it seems inconceivable that Congress should have intended to prohibit them from receiving religious education at their own cost if they so desired it . . . ." This case forecast, however, an increasingly troublesome First Amendment paradox: that the logical interrelationship between the Establishment and Free Exercise Clauses may produce situations where an injunction against an apparent establishment must be withheld in order to avoid infringement of rights of free exercise. That paradox was not squarely presented in *Quick Bear*, but the care taken by the Court to avoid a constitutional confrontation discloses an awareness of possible conflicts between the two clauses. I shall come back to this problem later, *infra*, pp. 296-299.

A third case in this group is *Cochran v. Louisiana State Board*, which involved a challenge to a state statute providing public funds to support a loan of free textbooks to pupils of both public and private schools. The constitutional issues in this Court extended no further than the claim that this program amounted to a taking of private property for nonpublic use. The Court rejected the claim on the ground that no private use of property was involved; ". . . we can not doubt that the taxing power of the State is exerted for a public purpose." The case therefore raised no issue under the First Amendment.

In *Pierce v. Society of Sisters*, a Catholic parochial school and a private but nonsectarian military academy challenged a state law requiring all children between certain ages to attend the public schools. This Court held the law invalid as an arbitrary and unreasonable interference both with the rights of the schools and with the liberty of the parents of the children who attended them. The due process guarantee of the Fourteenth Amendment "excludes any general power of the State to standardize its children by forcing them to accept instruction from public teachers only." While one of the plaintiffs was indeed a parochial school, the case obviously decided no First Amendment question but recognized only the constitutional right to establish and patronize private schools—including parochial schools—which meet the state's reasonable minimum curricular requirements.

Third. It is true, as the Court says, that the "two clauses [Establishment and Free Exercise] may overlap." Because of the overlap, however, our decisions under the Free Exercise Clause bear considerable relevance to the problem now before us, and should be briefly reviewed. The early free exercise cases generally involved the objections of religious minorities to the application to them of general nonreligious legislation governing conduct. *Reynolds v. United States*, involved the claim that a belief in the sanctity of plural marriage precluded the conviction of members of a particular sect under nondiscriminatory legislation against such marriage. The Court rejected the claim, saying:

"Laws are made for the government of actions, and while they cannot interfere with mere religious beliefs and opinions, they may with practices . . . . Can a man excuse

his practices to the contrary because of his religious belief? To permit this would be to make the professed doctrines of religious belief superior to the law of the land, and in effect to permit every citizen to become a law unto himself. Government could exist only in name under such circumstances.”

Davis v. Beason, similarly involved the claim that the First Amendment insulated from civil punishment certain practices inspired or motivated by religious beliefs. The claim was easily rejected: “It was never intended or supposed that the amendment could be invoked as a protection against legislation for the punishment of acts inimical to the peace, good order and morals of society.” See also *Mormon Church v. United States*; *Jacobson v. Massachusetts*; *Prince v. Massachusetts*; *Cleveland v. United States*.

But we must not confuse the issue of governmental power to regulate or prohibit conduct motivated by religious beliefs with the quite different problem of governmental authority to compel behavior offensive to religious principles. In *Hamilton v. Regents of the University of California*, the question was that of the power of a State to compel students at the State University to participate in military training instruction against their religious convictions. The validity of the statute was sustained against claims based upon the First Amendment. But the decision rested on a very narrow principle: since there was neither a constitutional right nor a legal obligation to attend the State University, the obligation to participate in military training courses, reflecting a legitimate state interest, might properly be imposed upon those who chose to attend. Although the rights protected by the First and Fourteenth Amendments were presumed to include “the right to entertain the beliefs, to adhere to the principles and to teach the doctrines on which these students base their objections to the order prescribing military training,” those Amendments were construed not to free such students from the military training obligations if they chose to attend the University. Justices Brandeis, Cardozo and Stone, concurring separately, agreed that the requirement infringed no constitutionally protected liberties. They added, however, that the case presented no question under the Establishment Clause. The military instruction program was not an establishment since it in no way involved “instruction in the practice or tenets of a religion.” Since the only question was one of free exercise, they concluded, like the majority, that the strong state interest in training a citizen militia justified the restraints imposed, at least so long as attendance at the University was voluntary.

*Hamilton* has not been overruled, although *United States v. Schwimmer*, and *United States v. Macintosh*, upon which the Court in *Hamilton* relied, have since been overruled by *Girouard v. United States*. But if *Hamilton* retains any vitality with respect to higher education, we recognized its inapplicability to cognate questions in the public primary and secondary schools when we held in *West Virginia Board of Education v. Barnette*, *supra*, that a State had no power to expel from public schools students who refused on religious grounds to comply with a daily flag salute requirement. Of course, such a requirement was no more a law “respecting an establishment of religion” than the California law compelling the college students to take military training. The *Barnette* plaintiffs, moreover, did not ask that the whole exercise be enjoined, but only that an excuse or exemption be provided for those students whose religious beliefs forbade them to participate in the ceremony. The key to the holding that such a requirement abridged rights of free exercise lay in the fact that attendance at school was not voluntary but compulsory. The Court said:

“This issue is not prejudiced by the Court’s previous holding that where a State, without compelling attendance, extends college facilities to pupils who voluntarily enroll, it may prescribe military training as part of the course without offense to the Constitution. . . . *Hamilton v. Regents*. In the present case attendance is not optional.”

The *Barnette* decision made another significant point. The Court held that the State must make participation in the exercise voluntary for all students and not alone for those who found

participation obnoxious on religious grounds. In short, there was simply no need to “inquire whether non-conformist beliefs will exempt from the duty to salute” because the Court found no state “power to make the salute a legal duty.”

The distinctions between *Hamilton* and *Barnette* are, I think, crucial to the resolution of the cases before us. The different results of those cases are attributable only in part to a difference in the strength of the particular state interests which the respective statutes were designed to serve. Far more significant is the fact that *Hamilton* dealt with the voluntary attendance at college of young adults, while *Barnette* involved the compelled attendance of young children at elementary and secondary schools. This distinction warrants a difference in constitutional results. And it is with the involuntary attendance of young school children that we are exclusively concerned in the cases now before the Court.

### III.

No one questions that the Framers of the First Amendment intended to restrict exclusively the powers of the Federal Government. Whatever limitations that Amendment now imposes upon the States derive from the Fourteenth Amendment. The process of absorption of the religious guarantees of the First Amendment as protections against the States under the Fourteenth Amendment began with the Free Exercise Clause. In 1923 the Court held that the protections of the Fourteenth included at least a person’s freedom “to worship God according to the dictates of his own conscience . . .” *Meyer v. Nebraska*. See also *Hamilton v. Regents*, *supra*, at 262. *Cantwell v. Connecticut*, completed in 1940 the process of absorption of the Free Exercise Clause and recognized its dual aspect: the Court affirmed freedom of belief as an absolute liberty, but recognized that conduct, while it may also be comprehended by the Free Exercise Clause, “remains subject to regulation for the protection of society.” This was a distinction already drawn by *Reynolds v. United States*, *supra*. From the beginning this Court has recognized that while government may regulate the behavioral manifestations of religious beliefs, it may not interfere at all with the beliefs themselves.

The absorption of the Establishment Clause has, however, come later and by a route less easily charted. It has been suggested, with some support in history, that absorption of the First Amendment’s ban against congressional legislation “respecting an establishment of religion” is conceptually impossible because the Framers meant the Establishment Clause also to foreclose any attempt by Congress to disestablish the existing official state churches. Whether or not such was the understanding of the Framers and whether such a purpose would have inhibited the absorption of the Establishment Clause at the threshold of the Nineteenth Century are questions not dispositive of our present inquiry. For it is clear on the record of history that the last of the formal state establishments was dissolved more than three decades before the Fourteenth Amendment was ratified, and thus the problem of protecting official state churches from federal encroachments could hardly have been any concern of those who framed the post-Civil War Amendments. Any such objective of the First Amendment, having become historical anachronism by 1868, cannot be thought to have deterred the absorption of the Establishment Clause to any greater degree than it would, for example, have deterred the absorption of the Free Exercise Clause. That no organ of the Federal Government possessed in 1791 any power to restrain the interference of the States in religious matters is indisputable. See *Permoli v. New Orleans*, 3 How. 589. It is equally plain, on the other hand, that the Fourteenth Amendment created a panoply of new federal rights for the protection of citizens of the various States. And among those rights was freedom from such state governmental involvement in the affairs of religion as the Establishment Clause had originally foreclosed on the part of Congress.

It has also been suggested that the “liberty” guaranteed by the Fourteenth Amendment logically cannot absorb the Establishment Clause because that clause is not one of the provisions of the Bill of Rights which in terms protects a “freedom” of the individual. See Corwin,

A Constitution of Powers in a Secular State (1951), 113-116. The fallacy in this contention, I think, is that it underestimates the role of the Establishment Clause as co-guarantor, with the Free Exercise Clause, of religious liberty. The Framers did not entrust the liberty of religious beliefs to either clause alone. The Free Exercise Clause “was not to be the full extent of the Amendment’s guarantee of freedom from governmental intrusion in matters of faith.” *McGowan v. Maryland*, *supra*, at 464 (opinion of Frankfurter, J.).

Finally, it has been contended that absorption of the Establishment Clause is precluded by the absence of any intention on the part of the Framers of the Fourteenth Amendment to circumscribe the residual powers of the States to aid religious activities and institutions in ways which fell short of formal establishments. That argument relies in part upon the express terms of the abortive Blaine Amendment—proposed several years after the adoption of the Fourteenth Amendment—which would have added to the First Amendment a provision that “[n]o State shall make any law respecting an establishment of religion . . .” Such a restriction would have been superfluous, it is said, if the Fourteenth Amendment had already made the Establishment Clause binding upon the States.

The argument proves too much, for the Fourteenth Amendment’s protection of the free exercise of religion can hardly be questioned; yet the Blaine Amendment would also have added an explicit protection against state laws abridging that liberty. Even if we assume that the draftsmen of the Fourteenth Amendment saw no immediate connection between its protections against state action infringing personal liberty and the guarantees of the First Amendment, it is certainly too late in the day to suggest that their assumed inattention to the question dilutes the force of these constitutional guarantees in their application to the States. It is enough to conclude that the religious liberty embodied in the Fourteenth Amendment would not be viable if the Constitution were interpreted to forbid only establishments ordained by Congress.

The issue of what particular activities the Establishment Clause forbids the States to undertake is our more immediate concern. In *Everson v. Board of Education*, a careful study of the relevant history led the Court to the view, consistently recognized in decisions since *Everson*, that the Establishment Clause embodied the Framers’ conclusion that government and religion have discrete interests which are mutually best served when each avoids too close a proximity to the other. It is not only the nonbeliever who fears the injection of sectarian doctrines and controversies into the civil polity, but in as high degree it is the devout believer who fears the secularization of a creed which becomes too deeply involved with and dependent upon the government. It has rightly been said of the history of the Establishment Clause that “our tradition of civil liberty rests not only on the secularism of a Thomas Jefferson but also on the fervent sectarianism . . . of a Roger Williams.” Freund, *The Supreme Court of the United States* (1961), 84.

Our decisions on questions of religious education or exercises in the public schools have consistently reflected this dual aspect of the Establishment Clause. *Engel v. Vitale* unmistakably has its roots in three earlier cases which, on cognate issues, shaped the contours of the Establishment Clause. First, in *Everson* the Court held that reimbursement by the town of parents for the cost of transporting their children by public carrier to parochial (as well as public and private nonsectarian) schools did not offend the Establishment Clause. Such reimbursement, by easing the financial burden upon Catholic parents, may indirectly have fostered the operation of the Catholic schools, and may thereby indirectly have facilitated the teaching of Catholic principles, thus serving ultimately a religious goal. But this form of governmental assistance was difficult to distinguish from myriad other incidental if not insignificant government benefits enjoyed by religious institutions—fire and police protection, tax exemptions, and the pavement of streets and sidewalks, for example. “The State contributes no money to the schools. It does not support them. Its legislation, as applied, does no more than provide

a general program to help parents get their children, regardless of their religion, safely and expeditiously to and from accredited schools.” Yet even this form of assistance was thought by four Justices of the Everson Court to be barred by the Establishment Clause because too perilously close to that public support of religion forbidden by the First Amendment.

The other two cases, *Illinois ex rel. McCollum v. Board of Education*, and *Zorach v. Clauson*, can best be considered together. Both involved programs of released time for religious instruction of public school students. I reject the suggestion that *Zorach* overruled *McCollum* in silence. The distinction which the Court drew in *Zorach* between the two cases is, in my view, faithful to the function of the Establishment Clause.

I should first note, however, that *McCollum* and *Zorach* do not seem to me distinguishable in terms of the free exercise claims advanced in both cases. The nonparticipant in the *McCollum* program was given secular instruction in a separate room during the times his classmates had religious lessons; the nonparticipant in any *Zorach* program also received secular instruction, while his classmates repaired to a place outside the school for religious instruction.

The crucial difference, I think, was that the *McCollum* program offended the Establishment Clause while the *Zorach* program did not. This was not, in my view, because of the difference in public expenditures involved. True, the *McCollum* program involved the regular use of school facilities, classrooms, heat and light and time from the regular school day—even though the actual incremental cost may have been negligible. All religious instruction under the *Zorach* program, by contrast, was carried on entirely off the school premises, and the teacher’s part was simply to facilitate the children’s release to the churches. The deeper difference was that the *McCollum* program placed the religious instructor in the public school classroom in precisely the position of authority held by the regular teachers of secular subjects, while the *Zorach* program did not. The *McCollum* program, in lending to the support of sectarian instruction all the authority of the governmentally operated public school system, brought government and religion into that proximity which the Establishment Clause forbids. To be sure, a religious teacher presumably commands substantial respect and merits attention in his own right. But the Constitution does not permit that prestige and capacity for influence to be augmented by investiture of all the symbols of authority at the command of the lay teacher for the enhancement of secular instruction.

More recent decisions have further etched the contours of Establishment. In the Sunday Law Cases, we found in state laws compelling a uniform day of rest from worldly labor no violation of the Establishment Clause (*McGowan v. Maryland*). The basic ground of our decision was that, granted the Sunday Laws were first enacted for religious ends, they were continued in force for reasons wholly secular, namely, to provide a universal day of rest and ensure the health and tranquillity of the community. In other words, government may originally have decreed a Sunday day of rest for the impermissible purpose of supporting religion but abandoned that purpose and retained the laws for the permissible purpose of furthering overwhelmingly secular ends.

Such was the evolution of the contours of the Establishment Clause before *Engel v. Vitale*. There, a year ago, we held that the daily recital of the State-composed Regents’ Prayer constituted an establishment of religion because, although the prayer itself revealed no sectarian content or purpose, its nature and meaning were quite clearly religious. New York, in authorizing its recitation, had not maintained that distance between the public and the religious sectors commanded by the Establishment Clause when it placed the “power, prestige and financial support of government” behind the prayer. In *Engel*, as in *McCollum*, it did not matter that the amount of time and expense allocated to the daily recitation was small so long as the exercise itself was manifestly religious. Nor did it matter that few children had complained of the practice, for the measure of the seriousness of a breach of the Establishment Clause has never been thought to be the number of people who complain of it.

We also held two Terms ago in *Torcaso v. Watkins*, *supra*, that a State may not constitutionally require an applicant for the office of Notary Public to swear or affirm that he believes in God. The problem of that case was strikingly similar to the issue presented 18 years before in the flag salute case, *West Virginia Board of Education v. Barnette*, *supra*. In neither case was there any claim of establishment of religion, but only of infringement of the individual's religious liberty—in the one case, that of the nonbeliever who could not attest to a belief in God; in the other, that of the child whose creed forbade him to salute the flag. But *Torcaso* added a new element not present in *Barnette*. The Maryland test oath involved an attempt to employ essentially religious (albeit nonsectarian) means to achieve a secular goal to which the means bore no reasonable relationship. No one doubted the State's interest in the integrity of its Notaries Public, but that interest did not warrant the screening of applicants by means of a religious test. The Sunday Law Cases were different in that respect. Even if Sunday Laws retain certain religious vestiges, they are enforced today for essentially secular objectives which cannot be effectively achieved in modern society except by designating Sunday as the universal day of rest. The Court's opinions cited very substantial problems in selecting or enforcing an alternative day of rest. But the teaching of both *Torcaso* and the Sunday Law Cases is that government may not employ religious means to serve secular interests, however legitimate they may be, at least without the clearest demonstration that nonreligious means will not suffice.

#### IV.

I turn now to the cases before us. The religious nature of the exercises here challenged seems plain. Unless *Engel v. Vitale* is to be overruled, or we are to engage in wholly disingenuous distinction, we cannot sustain these practices. Daily recital of the Lord's Prayer and the reading of passages of Scripture are quite as clearly breaches of the command of the Establishment Clause as was the daily use of the rather bland Regents' Prayer in the New York public schools. Indeed, I would suppose that, if anything, the Lord's Prayer and the Holy Bible are more clearly sectarian, and the present violations of the First Amendment consequently more serious. But the religious exercises challenged in these cases have a long history. And almost from the beginning, Bible reading and daily prayer in the schools have been the subject of debate, criticism by educators and other public officials, and proscription by courts and legislative councils. At the outset, then, we must carefully canvass both aspects of this history.

The use of prayers and Bible readings at the opening of the school day long antedates the founding of our Republic. The Rules of the New Haven Hopkins Grammar School required in 1684 "[t]hat the Scholars being called together, the Mr. shall every morning begin his work with a short prayer for a blessing on his Laboures and their learning . . ." More rigorous was the provision in a 1682 contract with a Dutch schoolmaster in Flatbush, New York:

"When the school begins, one of the children shall read the morning prayer, as it stands in the catechism, and close with the prayer before dinner; in the afternoon it shall begin with the prayer after dinner, and end with the evening prayer. The evening school shall begin with the Lord's prayer, and close by singing a psalm."

After the Revolution, the new States uniformly continued these long-established practices in the private and the few public grammar schools. The school committee of Boston in 1789, for example, required the city's several schoolmasters "daily to commence the duties of their office by prayer and reading a portion of the Sacred Scriptures . . ." That requirement was mirrored throughout the original States, and exemplified the universal practice well into the nineteenth century. As the free public schools gradually supplanted the private academies and sectarian schools between 1800 and 1850, morning devotional exercises were retained with few alterations. Indeed, public pressures upon school administrators in many parts of the country would hardly have condoned abandonment of practices to which a century or more of private religious education had accustomed the American people. The controversy centered, in fact,

principally about the elimination of plainly sectarian practices and textbooks, and led to the eventual substitution of nonsectarian, though still religious, exercises and materials.

Statutory provision for daily religious exercises is, however, of quite recent origin. At the turn of this century, there was but one State—Massachusetts—which had a law making morning prayer or Bible reading obligatory. Statutes elsewhere either permitted such practices or simply left the question to local option. It was not until after 1910 that 11 more States, within a few years, joined Massachusetts in making one or both exercises compulsory. The Pennsylvania law with which we are concerned in the *Schempp* case, for example, took effect in 1913; and even the Rule of the Baltimore School Board involved in the *Murray* case dates only from 1905. In no State has there ever been a constitutional or statutory prohibition against the recital of prayers or the reading of Scripture, although a number of States have outlawed these practices by judicial decision or administrative order. What is noteworthy about the panoply of state and local regulations from which these cases emerge is the relative recency of the statutory codification of practices which have ancient roots, and the rather small number of States which have ever prescribed compulsory religious exercises in the public schools.

The purposes underlying the adoption and perpetuation of these practices are somewhat complex. It is beyond question that the religious benefits and values realized from daily prayer and Bible reading have usually been considered paramount, and sufficient to justify the continuation of such practices. To Horace Mann, embroiled in an intense controversy over the role of sectarian instruction and textbooks in the Boston public schools, there was little question that the regular use of the Bible—which he thought essentially nonsectarian—would bear fruit in the spiritual enlightenment of his pupils. A contemporary of Mann's, the Commissioner of Education of a neighboring State, expressed a view which many enlightened educators of that day shared:

“As a textbook of morals the Bible is pre-eminent, and should have a prominent place in our schools, either as a reading book or as a source of appeal and instruction. Sectarianism, indeed, should not be countenanced in the schools; but the Bible is not sectarian . . . . The Scriptures should at least be read at the opening of the school, if no more. Prayer may also be offered with the happiest effects.”

Wisconsin's Superintendent of Public Instruction, writing a few years later in 1858, reflected the attitude of his eastern colleagues, in that he regarded “with special favor the use of the Bible in public schools, as pre-eminently first in importance among text-books for teaching the noblest principles of virtue, morality, patriotism, and good order—love and reverence for God—charity and good will to man.”

Such statements reveal the understanding of educators that the daily religious exercises in the schools served broader goals than compelling formal worship of God or fostering church attendance. The religious aims of the educators who adopted and retained such exercises were comprehensive, and in many cases quite devoid of sectarian bias—but the crucial fact is that they were nonetheless religious. While it has been suggested, see pp. 278-281, *infra*, that daily prayer and reading of Scripture now serve secular goals as well, there can be no doubt that the origins of these practices were unambiguously religious, even where the educator's aim was not to win adherents to a particular creed or faith.

Almost from the beginning religious exercises in the public schools have been the subject of intense criticism, vigorous debate, and judicial or administrative prohibition. Significantly, educators and school boards early entertained doubts about both the legality and the soundness of opening the school day with compulsory prayer or Bible reading. Particularly in the large Eastern cities, where immigration had exposed the public schools to religious diversities and conflicts unknown to the homogeneous academies of the eighteenth century, local authorities found it necessary even before the Civil War to seek an accommodation. In 1843, the Philadelphia School Board adopted the following resolutions:

“RESOLVED, that no children be required to attend or unite in the reading of the Bible in the Public Schools, whose parents are conscientiously opposed thereto:

“RESOLVED, that those children whose parents conscientiously prefer and desire any particular version of the Bible, without note or comment, be furnished with same.”

A decade later, the Superintendent of Schools of New York State issued an even bolder decree that prayers could no longer be required as part of public school activities, and that where the King James Bible was read, Catholic students could not be compelled to attend. This type of accommodation was not restricted to the East Coast; the Cincinnati Board of Education resolved in 1869 that “religious instruction and the reading of religious books, including the Holy Bible, are prohibited in the common schools of Cincinnati, it being the true object and intent of this rule to allow the children of the parents of all sects and opinions, in matters of faith and worship, to enjoy alike the benefit of the common-school fund.” The Board repealed at the same time an earlier regulation which had required the singing of hymns and psalms to accompany the Bible reading at the start of the school day. And in 1889, one commentator ventured the view that “[t]here is not enough to be gained from Bible reading to justify the quarrel that has been raised over it.”

Thus a great deal of controversy over religion in the public schools had preceded the debate over the Blaine Amendment, precipitated by President Grant’s insistence that matters of religion should be left “to the family altar, the church, and the private school, supported entirely by private contributions.” There was ample precedent, too, for Theodore Roosevelt’s declaration that in the interest of “absolutely nonsectarian public schools” it was “not our business to have the Protestant Bible or the Catholic Vulgate or the Talmud read in those schools.” The same principle appeared in the message of an Ohio Governor who vetoed a compulsory Bible-reading bill in 1925:

“It is my belief that religious teaching in our homes, Sunday schools, churches, by the good mothers, fathers, and ministers of Ohio is far preferable to compulsory teaching of religion by the state. The spirit of our federal and state constitutions from the beginning . . . [has] been to leave religious instruction to the discretion of parents.”

The same theme has recurred in the opinions of the Attorneys General of several States holding religious exercises or instruction to be in violation of the state or federal constitutional command of separation of church and state. Thus the basic principle upon which our decision last year in *Engel v. Vitale* necessarily rested, and which we reaffirm today, can hardly be thought to be radical or novel.

Particularly relevant for our purposes are the decisions of the state courts on questions of religion in the public schools. Those decisions, while not, of course, authoritative in this Court, serve nevertheless to define the problem before us and to guide our inquiry. With the growth of religious diversity and the rise of vigorous dissent it was inevitable that the courts would be called upon to enjoin religious practices in the public schools which offended certain sects and groups. The earliest of such decisions declined to review the propriety of actions taken by school authorities, so long as those actions were within the purview of the administrators’ powers. Thus, where the local school board required religious exercises, the courts would not enjoin them; and where, as in at least one case, the school officials forbade devotional practices, the court refused on similar grounds to overrule that decision. Thus, whichever way the early cases came up, the governing principle of nearly complete deference to administrative discretion effectively foreclosed any consideration of constitutional questions.

The last quarter of the nineteenth century found the courts beginning to question the constitutionality of public school religious exercises. The legal context was still, of course, that of the state constitutions, since the First Amendment had not yet been held applicable to state action. And the state constitutional prohibitions against church-state cooperation or govern-

mental aid to religion were generally less rigorous than the Establishment Clause of the First Amendment. It is therefore remarkable that the courts of a half dozen States found compulsory religious exercises in the public schools in violation of their respective state constitutions. These courts attributed much significance to the clearly religious origins and content of the challenged practices, and to the impossibility of avoiding sectarian controversy in their conduct. The Illinois Supreme Court expressed in 1910 the principles which characterized these decisions:

“The public school is supported by the taxes which each citizen, regardless of his religion or his lack of it, is compelled to pay. The school, like the government, is simply a civil institution. It is secular, and not religious, in its purposes. The truths of the Bible are the truths of religion, which do not come within the province of the public school. . . . No one denies that they should be taught to the youth of the State. The constitution and the law do not interfere with such teaching, but they do banish theological polemics from the schools and the school districts. This is done, not from any hostility to religion, but because it is no part of the duty of the State to teach religion—to take the money of all and apply it to teaching the children of all the religion of a part, only. Instruction in religion must be voluntary.” *People ex rel. Ring v. Board of Education*, 245 Ill. 334, 349, 92 N. E. 251, 256 (1910).

The Supreme Court of South Dakota, in banning devotional exercises from the public schools of that State, also cautioned that “[t]he state as an educator must keep out of this field, and especially is this true in the common schools, where the child is immature, without fixed religious convictions . . . .” *State ex rel. Finger v. Weedman*, 55 S. D. 343, 357, 226 N. W. 348, 354 (1929).

Even those state courts which have sustained devotional exercises under state law have usually recognized the primarily religious character of prayers and Bible readings. If such practices were not for that reason unconstitutional, it was necessarily because the state constitution forbade only public expenditures for sectarian instruction, or for activities which made the school-house a “place of worship,” but said nothing about the subtler question of laws “respecting an establishment of religion.” Thus the panorama of history permits no other conclusion than that daily prayers and Bible readings in the public schools have always been designed to be, and have been regarded as, essentially religious exercises. Unlike the Sunday closing laws, these exercises appear neither to have been divorced from their religious origins nor deprived of their centrally religious character by the passage of time, cf. *McGowan v. Maryland*, *supra*, at 442-445. On this distinction alone we might well rest a constitutional decision. But three further contentions have been pressed in the argument of these cases. These contentions deserve careful consideration, for if the position of the school authorities were correct in respect to any of them, we would be misapplying the principles of *Engel v. Vitale*.

#### A.

First, it is argued that however clearly religious may have been the origins and early nature of daily prayer and Bible reading, these practices today serve so clearly secular educational purposes that their religious attributes may be overlooked. I do not doubt, for example, that morning devotional exercises may foster better discipline in the classroom, and elevate the spiritual level on which the school day opens. The Pennsylvania Superintendent of Public Instruction, testifying by deposition in the *Schempp* case, offered his view that daily Bible reading “places upon the children or those hearing the reading of this, and the atmosphere which goes on in the reading . . . one of the last vestiges of moral value that we have left in our school system.” The exercise thus affords, the Superintendent concluded, “a strong contradiction to the materialistic trends of our time.” Baltimore’s Superintendent of Schools expressed a similar view of the practices challenged in the *Murray* case, to the effect that “[t]he acknowledgement of the existence of God as symbolized in the opening exercises establishes a disci-

pline tone which tends to cause each individual pupil to constrain his overt acts and to consequently conform to accepted standards of behavior during his attendance at school.” These views are by no means novel, see, e. g., *Billard v. Board of Education*, 69 Kan. 53, 57-58, 76 P. 422, 423 (1904).

It is not the business of this Court to gainsay the judgments of experts on matters of pedagogy. Such decisions must be left to the discretion of those administrators charged with the supervision of the Nation’s public schools. The limited province of the courts is to determine whether the means which the educators have chosen to achieve legitimate pedagogical ends infringe the constitutional freedoms of the First Amendment. The secular purposes which devotional exercises are said to serve fall into two categories—those which depend upon an immediately religious experience shared by the participating children; and those which appear sufficiently divorced from the religious content of the devotional material that they can be served equally by nonreligious materials. With respect to the first objective, much has been written about the moral and spiritual values of infusing some religious influence or instruction into the public school classroom. To the extent that only religious materials will serve this purpose, it seems to me that the purpose as well as the means is so plainly religious that the exercise is necessarily forbidden by the Establishment Clause. The fact that purely secular benefits may eventually result does not seem to me to justify the exercises, for similar indirect nonreligious benefits could no doubt have been claimed for the released time program invalidated in *McCollum*.

The second justification assumes that religious exercises at the start of the school day may directly serve solely secular ends—for example, by fostering harmony and tolerance among the pupils, enhancing the authority of the teacher, and inspiring better discipline. To the extent that such benefits result not from the content of the readings and recitation, but simply from the holding of such a solemn exercise at the opening assembly or the first class of the day, it would seem that less sensitive materials might equally well serve the same purpose. I have previously suggested that *Torcaso* and the *Sunday Law Cases* forbid the use of religious means to achieve secular ends where nonreligious means will suffice. That principle is readily applied to these cases. It has not been shown that readings from the speeches and messages of great Americans, for example, or from the documents of our heritage of liberty, daily recitation of the Pledge of Allegiance, or even the observance of a moment of reverent silence at the opening of class, may not adequately serve the solely secular purposes of the devotional activities without jeopardizing either the religious liberties of any members of the community or the proper degree of separation between the spheres of religion and government. Such substitutes would, I think, be unsatisfactory or inadequate only to the extent that the present activities do in fact serve religious goals. While I do not question the judgment of experienced educators that the challenged practices may well achieve valuable secular ends, it seems to me that the State acts unconstitutionally if it either sets about to attain even indirectly religious ends by religious means, or if it uses religious means to serve secular ends where secular means would suffice.

## B.

Second, it is argued that the particular practices involved in the two cases before us are unobjectionable because they prefer no particular sect or sects at the expense of others. Both the *Baltimore* and *Abington* procedures permit, for example, the reading of any of several versions of the Bible, and this flexibility is said to ensure neutrality sufficiently to avoid the constitutional prohibition. One answer, which might be dispositive, is that any version of the Bible is inherently sectarian, else there would be no need to offer a system of rotation or alternation of versions in the first place, that is, to allow different sectarian versions to be used on different days. The sectarian character of the Holy Bible has been at the core of the whole controversy over religious practices in the public schools throughout its long and often bitter history. To vary the version as the *Abington* and *Baltimore* schools have done may well be less offensive

than to read from the King James version every day, as once was the practice. But the result even of this relatively benign procedure is that majority sects are preferred in approximate proportion to their representation in the community and in the student body, while the smaller sects suffer commensurate discrimination. So long as the subject matter of the exercise is sectarian in character, these consequences cannot be avoided.

The argument contains, however, a more basic flaw. There are persons in every community—often deeply devout—to whom any version of the Judaeo-Christian Bible is offensive. There are others whose reverence for the Holy Scriptures demands private study or reflection and to whom public reading or recitation is sacrilegious, as one of the expert witnesses at the trial of the *Schempp* case explained. To such persons it is not the fact of using the Bible in the public schools, nor the content of any particular version, that is offensive, but only the manner in which it is used. For such persons, the anathema of public communion is even more pronounced when prayer is involved. Many deeply devout persons have always regarded prayer as a necessarily private experience. One Protestant group recently commented, for example: “When one thinks of prayer as sincere outreach of a human soul to the Creator, ‘required prayer’ becomes an absurdity.” There is a similar problem with respect to comment upon the passages of Scripture which are to be read. Most present statutes forbid comment, and this practice accords with the views of many religious groups as to the manner in which the Bible should be read. However, as a recent survey discloses, scriptural passages read without comment frequently convey no message to the younger children in the school. Thus there has developed a practice in some schools of bridging the gap between faith and understanding by means of “definitions,” even where “comment” is forbidden by statute. The present practice therefore poses a difficult dilemma: While Bible reading is almost universally required to be without comment, since only by such a prohibition can sectarian interpretation be excluded from the classroom, the rule breaks down at the point at which rudimentary definitions of Biblical terms are necessary for comprehension if the exercise is to be meaningful at all.

It has been suggested that a tentative solution to these problems may lie in the fashioning of a “common core” of theology tolerable to all creeds but preferential to none. But as one commentator has recently observed, “[h]istory is not encouraging to” those who hope to fashion a “common denominator of religion detached from its manifestation in any organized church.” Sutherland, *Establishment According to Engel*, 76 Harv. L. Rev. 25, 51 (1962). Thus, the notion of a “common core” litany or supplication offends many deeply devout worshippers who do not find clearly sectarian practices objectionable. Father Gustave Weigel has recently expressed a widely shared view: “The moral code held by each separate religious community can reductively be unified, but the consistent particular believer wants no such reduction.” And, as the American Council on Education warned several years ago, “The notion of a common core suggests a watering down of the several faiths to the point where common essentials appear. This might easily lead to a new sect—a public school sect—which would take its place alongside the existing faiths and compete with them.” Engel is surely authority that nonsectarian religious practices, equally with sectarian exercises, violate the Establishment Clause. Moreover, even if the Establishment Clause were oblivious to nonsectarian religious practices, I think it quite likely that the “common core” approach would be sufficiently objectionable to many groups to be foreclosed by the prohibitions of the Free Exercise Clause.

### C.

A third element which is said to absolve the practices involved in these cases from the ban of the religious guarantees of the Constitution is the provision to excuse or exempt students who wish not to participate. Insofar as these practices are claimed to violate the Establishment Clause, I find the answer which the District Court gave after our remand of *Schempp* to be altogether dispositive:

“The fact that some pupils, or theoretically all pupils, might be excused from attendance at the exercises does not mitigate the obligatory nature of the ceremony . . . .

The exercises are held in the school buildings and perforce are conducted by and under the authority of the local school authorities and during school sessions. Since the statute requires the reading of the 'Holy Bible,' a Christian document, the practice, as we said in our first opinion, prefers the Christian religion. The record demonstrates that it was the intention of the General Assembly of the Commonwealth of Pennsylvania to introduce a religious ceremony into the public schools of the Commonwealth." 201 F. Supp., at 819.

Thus the short, and to me sufficient, answer is that the availability of excusal or exemption simply has no relevance to the establishment question, if it is once found that these practices are essentially religious exercises designed at least in part to achieve religious aims through the use of public school facilities during the school day.

The more difficult question, however, is whether the availability of excusal for the dissenting child serves to refute challenges to these practices under the Free Exercise Clause. While it is enough to decide these cases to dispose of the establishment questions, questions of free exercise are so inextricably interwoven into the history and present status of these practices as to justify disposition of this second aspect of the excusal issue. The answer is that the excusal procedure itself necessarily operates in such a way as to infringe the rights of free exercise of those children who wish to be excused. We have held in *Barnette* and *Torcaso*, respectively, that a State may require neither public school students nor candidates for an office of public trust to profess beliefs offensive to religious principles. By the same token the State could not constitutionally require a student to profess publicly his disbelief as the prerequisite to the exercise of his constitutional right of abstention. And apart from *Torcaso* and *Barnette*, I think *Speiser v. Randall*, suggests a further answer. We held there that a State may not condition the grant of a tax exemption upon the willingness of those entitled to the exemption to affirm their loyalty to the Government, even though the exemption was itself a matter of grace rather than of constitutional right. We concluded that to impose upon the eligible taxpayers the affirmative burden of proving their loyalty impermissibly jeopardized the freedom to engage in constitutionally protected activities close to the area to which the loyalty oath related. *Speiser v. Randall* seems to me to dispose of two aspects of the excusal or exemption procedure now before us. First, by requiring what is tantamount in the eyes of teachers and schoolmates to a profession of disbelief, or at least of nonconformity, the procedure may well deter those children who do not wish to participate for any reason based upon the dictates of conscience from exercising an indisputably constitutional right to be excused. Thus the excusal provision in its operation subjects them to a cruel dilemma. In consequence, even devout children may well avoid claiming their right and simply continue to participate in exercises distasteful to them because of an understandable reluctance to be stigmatized as atheists or nonconformists simply on the basis of their request.

Such reluctance to seek exemption seems all the more likely in view of the fact that children are disinclined at this age to step out of line or to flout "peer-group norms." Such is the widely held view of experts who have studied the behaviors and attitudes of children. This is also the basis of Mr. Justice Frankfurter's answer to a similar contention made in the *McCollum* case:

"That a child is offered an alternative may reduce the constraint; it does not eliminate the operation of influence by the school in matters sacred to conscience and outside the school's domain. The law of imitation operates, and non-conformity is not an outstanding characteristic of children. The result is an obvious pressure upon children to attend."

Also apposite is the answer given more than 70 years ago by the Supreme Court of Wisconsin to the argument that an excusal provision saved a public school devotional exercise from constitutional invalidation:

". . . the excluded pupil loses caste with his fellows, and is liable to be regarded with aversion, and subjected to reproach and insult. But it is a sufficient refutation of the

argument that the practice in question tends to destroy the equality of the pupils which the constitution seeks to establish and protect, and puts a portion of them to serious disadvantage in many ways with respect to the others.” *State ex rel. Weiss v. District Board of School District No. 8*, 76 Wis. 177, 200, 44 N. W. 967, 975.

And 50 years ago a like answer was offered by the Louisiana Supreme Court:

“Under such circumstances, the children would be excused from the opening exercises . . . because of their religious beliefs. And excusing such children on religious grounds, although the number excused might be very small, would be a distinct preference in favor of the religious beliefs of the majority, and would work a discrimination against those who were excused. The exclusion of a pupil under such circumstances puts him in a class by himself; it subjects him to a religious stigma; and all because of his religious belief. Equality in public education would be destroyed by such act, under a Constitution which seeks to establish equality and freedom in religious matters.” *Herold v. Parish Board of School Directors*, 136 La. 1034, 1049-1050, 68 So. 116, 121. See also *Tudor v. Board of Education*, 14 N. J. 31, 48-52, 100 A. 2d 857, 867-868; *Brown v. Orange County Board of Public Instruction*, 128 So.2d 181, 185 (Fla. App.).

*Speiser v. Randall* also suggests the answer to a further argument based on the excusal procedure. It has been suggested by the School Board, in *Schempp*, that we ought not pass upon the appellees’ constitutional challenge at least until the children have availed themselves of the excusal procedure and found it inadequate to redress their grievances. Were the right to be excused not itself of constitutional stature, I might have some doubt about this issue. But we held in *Speiser* that the constitutional vice of the loyalty oath procedure discharged any obligation to seek the exemption before challenging the constitutionality of the conditions upon which it might have been denied. Similarly, we have held that one need not apply for a permit to distribute constitutionally protected literature, *Lovell v. Griffin*, or to deliver a speech, *Thomas v. Collins*, before he may attack the constitutionality of a licensing system of which the defect is patent. Insofar as these cases implicate only questions of establishment, it seems to me that the availability of an excuse is constitutionally irrelevant. Moreover, the excusal procedure seems to me to operate in such a way as to discourage the free exercise of religion on the part of those who might wish to utilize it, thereby rendering it unconstitutional in an additional and quite distinct respect.

To summarize my views concerning the merits of these two cases: The history, the purpose and the operation of the daily prayer recital and Bible reading leave no doubt that these practices standing by themselves constitute an impermissible breach of the Establishment Clause. Such devotional exercises may well serve legitimate nonreligious purposes. To the extent, however, that such purposes are really without religious significance, it has never been demonstrated that secular means would not suffice. Indeed, I would suggest that patriotic or other nonreligious materials might provide adequate substitutes—inadequate only to the extent that the purposes now served are indeed directly or indirectly religious. Under such circumstances, the States may not employ religious means to reach a secular goal unless secular means are wholly unavailing. I therefore agree with the Court that the judgment in *Schempp*, No. 142, must be affirmed, and that in *Murray*, No. 119, must be reversed.

## V.

These considerations bring me to a final contention of the school officials in these cases: that the invalidation of the exercises at bar permits this Court no alternative but to declare unconstitutional every vestige, however slight, of cooperation or accommodation between religion and government. I cannot accept that contention. While it is not, of course, appropriate for this Court to decide questions not presently before it, I venture to suggest that religious exer-

cises in the public schools present a unique problem. For not every involvement of religion in public life violates the Establishment Clause. Our decision in these cases does not clearly forecast anything about the constitutionality of other types of interdependence between religious and other public institutions.

Specifically, I believe that the line we must draw between the permissible and the impermissible is one which accords with history and faithfully reflects the understanding of the Founding Fathers. It is a line which the Court has consistently sought to mark in its decisions expounding the religious guarantees of the First Amendment. What the Framers meant to foreclose, and what our decisions under the Establishment Clause have forbidden, are those involvements of religious with secular institutions which (a) serve the essentially religious activities of religious institutions; (b) employ the organs of government for essentially religious purposes; or (c) use essentially religious means to serve governmental ends, where secular means would suffice. When the secular and religious institutions become involved in such a manner, there inhere in the relationship precisely those dangers—as much to church as to state—which the Framers feared would subvert religious liberty and the strength of a system of secular government. On the other hand, there may be myriad forms of involvements of government with religion which do not import such dangers and therefore should not, in my judgment, be deemed to violate the Establishment Clause. Nothing in the Constitution compels the organs of government to be blind to what everyone else perceives—that religious differences among Americans have important and pervasive implications for our society. Likewise nothing in the Establishment Clause forbids the application of legislation having purely secular ends in such a way as to alleviate burdens upon the free exercise of an individual's religious beliefs. Surely the Framers would never have understood that such a construction sanctions that involvement which violates the Establishment Clause. Such a conclusion can be reached, I would suggest, only by using the words of the First Amendment to defeat its very purpose.

The line between permissible and impermissible forms of involvement between government and religion has already been considered by the lower federal and state courts. I think a brief survey of certain of these forms of accommodation will reveal that the First Amendment commands not official hostility toward religion, but only a strict neutrality in matters of religion. Moreover, it may serve to suggest that the scope of our holding today is to be measured by the special circumstances under which these cases have arisen, and by the particular dangers to church and state which religious exercises in the public schools present. It may be helpful for purposes of analysis to group these other practices and forms of accommodation into several rough categories.

A. *The Conflict Between Establishment and Free Exercise.*—There are certain practices, conceivably violative of the Establishment Clause, the striking down of which might seriously interfere with certain religious liberties also protected by the First Amendment. Provisions for churches and chaplains at military establishments for those in the armed services may afford one such example. The like provision by state and federal governments for chaplains in penal institutions may afford another example. It is argued that such provisions may be assumed to contravene the Establishment Clause, yet be sustained on constitutional grounds as necessary to secure to the members of the Armed Forces and prisoners those rights of worship guaranteed under the Free Exercise Clause. Since government has deprived such persons of the opportunity to practice their faith at places of their choice, the argument runs, government may, in order to avoid infringing the free exercise guarantees, provide substitutes where it requires such persons to be. Such a principle might support, for example, the constitutionality of draft exemptions for ministers and divinity students, cf. *Selective Draft Law Cases*; of the excusal of children from school on their respective religious holidays; and of the allowance by government of temporary use of public buildings by religious organizations when their own churches have become unavailable because of a disaster or emergency.

Such activities and practices seem distinguishable from the sponsorship of daily Bible reading and prayer recital. For one thing, there is no element of coercion present in the ap-

pointment of military or prison chaplains; the soldier or convict who declines the opportunities for worship would not ordinarily subject himself to the suspicion or obloquy of his peers. Of special significance to this distinction is the fact that we are here usually dealing with adults, not with impressionable children as in the public schools. Moreover, the school exercises are not designed to provide the pupils with general opportunities for worship denied them by the legal obligation to attend school. The student's compelled presence in school for five days a week in no way renders the regular religious facilities of the community less accessible to him than they are to others. The situation of the school child is therefore plainly unlike that of the isolated soldier or the prisoner.

The State must be steadfastly neutral in all matters of faith, and neither favor nor inhibit religion. In my view, government cannot sponsor religious exercises in the public schools without jeopardizing that neutrality. On the other hand, hostility, not neutrality, would characterize the refusal to provide chaplains and places of worship for prisoners and soldiers cut off by the State from all civilian opportunities for public communion, the withholding of draft exemptions for ministers and conscientious objectors, or the denial of the temporary use of an empty public building to a congregation whose place of worship has been destroyed by fire or flood. I do not say that government must provide chaplains or draft exemptions, or that the courts should intercede if it fails to do so.

B. Establishment and Exercises in Legislative Bodies.—The saying of invocational prayers in legislative chambers, state or federal, and the appointment of legislative chaplains, might well represent no involvements of the kind prohibited by the Establishment Clause. Legislators, federal and state, are mature adults who may presumably absent themselves from such public and ceremonial exercises without incurring any penalty, direct or indirect. It may also be significant that, at least in the case of the Congress, Art. I, 5, of the Constitution makes each House the monitor of the "Rules of its Proceedings" so that it is at least arguable whether such matters present "political questions" the resolution of which is exclusively confided to Congress. See *Baker v. Carr*. Finally, there is the difficult question of who may be heard to challenge such practices. See *Elliott v. White*, 23 F.2d 997.

C. Non-Devotional Use of the Bible in the Public Schools.—The holding of the Court today plainly does not foreclose teaching about the Holy Scriptures or about the differences between religious sects in classes in literature or history. Indeed, whether or not the Bible is involved, it would be impossible to teach meaningfully many subjects in the social sciences or the humanities without some mention of religion. To what extent, and at what points in the curriculum, religious materials should be cited are matters which the courts ought to entrust very largely to the experienced officials who superintend our Nation's public schools. They are experts in such matters, and we are not. We should heed Mr. Justice Jackson's caveat that any attempt by this Court to announce curricular standards would be "to decree a uniform, rigid and, if we are consistent, an unchanging standard for countless school boards representing and serving highly localized groups which not only differ from each other but which themselves from time to time change attitudes." *Illinois ex rel. McCollum v. Board of Education*, *supra*, at 237.

We do not, however, in my view usurp the jurisdiction of school administrators by holding as we do today that morning devotional exercises in any form are constitutionally invalid. But there is no occasion now to go further and anticipate problems we cannot judge with the material now before us. Any attempt to impose rigid limits upon the mention of God or references to the Bible in the classroom would be fraught with dangers. If it should sometime hereafter be shown that in fact religion can play no part in the teaching of a given subject without resurrecting the ghost of the practices we strike down today, it will then be time enough to consider questions we must now defer.

D. Uniform Tax Exemptions Incidentally Available to Religious Institutions.— Nothing we hold today questions the propriety of certain tax deductions or exemptions which inciden-

tally benefit churches and religious institutions, along with many secular charities and non-profit organizations. If religious institutions benefit, it is in spite of rather than because of their religious character. For religious institutions simply share benefits which government makes generally available to educational, charitable, and eleemosynary groups. There is no indication that taxing authorities have used such benefits in any way to subsidize worship or foster belief in God. And as among religious beneficiaries, the tax exemption or deduction can be truly nondiscriminatory, available on equal terms to small as well as large religious bodies, to popular and unpopular sects, and to those organizations which reject as well as those which accept a belief in God.

E. Religious Considerations in Public Welfare Programs.—Since government may not support or directly aid religious activities without violating the Establishment Clause, there might be some doubt whether nondiscriminatory programs of governmental aid may constitutionally include individuals who become eligible wholly or partially for religious reasons. For example, it might be suggested that where a State provides unemployment compensation generally to those who are unable to find suitable work, it may not extend such benefits to persons who are unemployed by reason of religious beliefs or practices without thereby establishing the religion to which those persons belong. Therefore, the argument runs, the State may avoid an establishment only by singling out and excluding such persons on the ground that religious beliefs or practices have made them potential beneficiaries. Such a construction would, it seems to me, require government to impose religious discriminations and disabilities, thereby jeopardizing the free exercise of religion, in order to avoid what is thought to constitute an establishment.

The inescapable flaw in the argument, I suggest, is its quite unrealistic view of the aims of the Establishment Clause. The Framers were not concerned with the effects of certain incidental aids to individual worshippers which come about as by-products of general and nondiscriminatory welfare programs. If such benefits serve to make easier or less expensive the practice of a particular creed, or of all religions, it can hardly be said that the purpose of the program is in any way religious, or that the consequence of its nondiscriminatory application is to create the forbidden degree of interdependence between secular and sectarian institutions. I cannot therefore accept the suggestion, which seems to me implicit in the argument outlined here, that every judicial or administrative construction which is designed to prevent a public welfare program from abridging the free exercise of religious beliefs, is for that reason *ipso facto* an establishment of religion.

F. Activities Which, Though Religious in Origin, Have Ceased to Have Religious Meaning.—As we noted in our Sunday Law decisions, nearly every criminal law on the books can be traced to some religious principle or inspiration. But that does not make the present enforcement of the criminal law in any sense an establishment of religion, simply because it accords with widely held religious principles. As we said in *McGowan v. Maryland*, “the ‘Establishment’ Clause does not ban federal or state regulation of conduct whose reason or effect merely happens to coincide or harmonize with the tenets of some or all religions.” This rationale suggests that the use of the motto “In God We Trust” on currency, on documents and public buildings and the like may not offend the clause. It is not that the use of those four words can be dismissed as “*de minimis*”—for I suspect there would be intense opposition to the abandonment of that motto. The truth is that we have simply interwoven the motto so deeply into the fabric of our civil polity that its present use may well not present that type of involvement which the First Amendment prohibits.

This general principle might also serve to insulate the various patriotic exercises and activities used in the public schools and elsewhere which, whatever may have been their origins, no longer have a religious purpose or meaning. The reference to divinity in the revised pledge of allegiance, for example, may merely recognize the historical fact that our Nation was be-

lieved to have been founded “under God.” Thus reciting the pledge may be no more of a religious exercise than the reading aloud of Lincoln’s Gettysburg Address, which contains an allusion to the same historical fact.

The principles which we reaffirm and apply today can hardly be thought novel or radical. They are, in truth, as old as the Republic itself, and have always been as integral a part of the First Amendment as the very words of that charter of religious liberty. No less applicable today than they were when first pronounced a century ago, one year after the very first court decision involving religious exercises in the public schools, are the words of a distinguished Chief Justice of the Commonwealth of Pennsylvania, Jeremiah S. Black:

“The manifest object of the men who framed the institutions of this country, was to have a State without religion, and a Church without politics— that is to say, they meant that one should never be used as an engine for any purpose of the other, and that no man’s rights in one should be tested by his opinions about the other. As the Church takes no note of men’s political differences, so the State looks with equal eye on all the modes of religious faith. . . . Our fathers seem to have been perfectly sincere in their belief that the members of the Church would be more patriotic, and the citizens of the State more religious, by keeping their respective functions entirely separate.” *Essay on Religious Liberty*, in Black, ed., *Essays and Speeches of Jeremiah S. Black* (1886), 53.

MR. JUSTICE GOLDBERG, with whom MR. JUSTICE HARLAN joins, concurring.

As is apparent from the opinions filed today, delineation of the constitutionally permissible relationship between religion and government is a most difficult and sensitive task, calling for the careful exercise of both judicial and public judgment and restraint. The considerations which lead the Court today to interdict the clearly religious practices presented in these cases are to me wholly compelling; I have no doubt as to the propriety of the decision and therefore join the opinion and judgment of the Court. The singular sensitivity and concern which surround both the legal and practical judgments involved impel me, however, to add a few words in further explication, while at the same time avoiding repetition of the carefully and ably framed examination of history and authority by my Brethren.

The First Amendment’s guarantees, as applied to the States through the Fourteenth Amendment, foreclose not only laws “respecting an establishment of religion” but also those “prohibiting the free exercise thereof.” These two proscriptions are to be read together, and in light of the single end which they are designed to serve. The basic purpose of the religion clause of the First Amendment is to promote and assure the fullest possible scope of religious liberty and tolerance for all and to nurture the conditions which secure the best hope of attainment of that end.

The fullest realization of true religious liberty requires that government neither engage in nor compel religious practices, that it effect no favoritism among sects or between religion and nonreligion, and that it work deterrence of no religious belief. But devotion even to these simply stated objectives presents no easy course, for the unavoidable accommodations necessary to achieve the maximum enjoyment of each and all of them are often difficult of discernment. There is for me no simple and clear measure which by precise application can readily and invariably demark the permissible from the impermissible.

It is said, and I agree, that the attitude of government toward religion must be one of neutrality. But untutored devotion to the concept of neutrality can lead to invocation or approval of results which partake not simply of that noninterference and noninvolvement with the religious which the Constitution commands, but of a brooding and pervasive devotion to the secular and a passive, or even active, hostility to the religious. Such results are not only not compelled by the Constitution, but, it seems to me, are prohibited by it.

Neither government nor this Court can or should ignore the significance of the fact that a vast portion of our people believe in and worship God and that many of our legal, political

and personal values derive historically from religious teachings. Government must inevitably take cognizance of the existence of religion and, indeed, under certain circumstances the First Amendment may require that it do so. And it seems clear to me from the opinions in the present and past cases that the Court would recognize the propriety of providing military chaplains and of the teaching about religion, as distinguished from the teaching of religion, in the public schools. The examples could readily be multiplied, for both the required and the permissible accommodations between state and church frame the relation as one free of hostility or favor and productive of religious and political harmony, but without undue involvement of one in the concerns or practices of the other. To be sure, the judgment in each case is a delicate one, but it must be made if we are to do loyal service as judges to the ultimate First Amendment objective of religious liberty.

The practices here involved do not fall within any sensible or acceptable concept of compelled or permitted accommodation and involve the state so significantly and directly in the realm of the sectarian as to give rise to those very divisive influences and inhibitions of freedom which both religion clauses of the First Amendment preclude. The state has ordained and has utilized its facilities to engage in unmistakably religious exercises—the devotional reading and recitation of the Holy Bible—in a manner having substantial and significant import and impact. That it has selected, rather than written, a particular devotional liturgy seems to me without constitutional import. The pervasive religiosity and direct governmental involvement inhering in the prescription of prayer and Bible reading in the public schools, during and as part of the curricular day, involving young impressionable children whose school attendance is statutorily compelled, and utilizing the prestige, power, and influence of school administration, staff, and authority, cannot realistically be termed simply accommodation, and must fall within the interdiction of the First Amendment. I find nothing in the opinion of the Court which says more than this. And, of course, today's decision does not mean that all incidents of government which import of the religious are therefore and without more banned by the strictures of the Establishment Clause. As the Court declared only last Term in *Engel v. Vitale*, n. 21:

“There is of course nothing in the decision reached here that is inconsistent with the fact that school children and others are officially encouraged to express love for our country by reciting historical documents such as the Declaration of Independence which contain references to the Deity or by singing officially espoused anthems which include the composer's professions of faith in a Supreme Being, or with the fact that there are many manifestations in our public life of belief in God. Such patriotic or ceremonial occasions bear no true resemblance to the unquestioned religious exercise that the State . . . has sponsored in this instance.”

The First Amendment does not prohibit practices which by any realistic measure create none of the dangers which it is designed to prevent and which do not so directly or substantially involve the state in religious exercises or in the favoring of religion as to have meaningful and practical impact. It is of course true that great consequences can grow from small beginnings, but the measure of constitutional adjudication is the ability and willingness to distinguish between real threat and mere shadow.

MR. JUSTICE STEWART, dissenting.

I think the records in the two cases before us are so fundamentally deficient as to make impossible an informed or responsible determination of the constitutional issues presented. Specifically, I cannot agree that on these records we can say that the Establishment Clause has necessarily been violated. But I think there exist serious questions under both that provision and the Free Exercise Clause—insofar as each is imbedded in the Fourteenth Amendment—which require the remand of these cases for the taking of additional evidence.

## I.

The First Amendment declares that “Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof. . . .” It is, I think, a fallacious oversimplification to regard these two provisions as establishing a single constitutional standard of “separation of church and state,” which can be mechanically applied in every case to delineate the required boundaries between government and religion. We err in the first place if we do not recognize, as a matter of history and as a matter of the imperatives of our free society, that religion and government must necessarily interact in countless ways. Secondly, the fact is that while in many contexts the Establishment Clause and the Free Exercise Clause fully complement each other, there are areas in which a doctrinaire reading of the Establishment Clause leads to irreconcilable conflict with the Free Exercise Clause.

A single obvious example should suffice to make the point. Spending federal funds to employ chaplains for the armed forces might be said to violate the Establishment Clause. Yet a lonely soldier stationed at some faraway outpost could surely complain that a government which did not provide him the opportunity for pastoral guidance was affirmatively prohibiting the free exercise of his religion. And such examples could readily be multiplied. The short of the matter is simply that the two relevant clauses of the First Amendment cannot accurately be reflected in a sterile metaphor which by its very nature may distort rather than illumine the problems involved in a particular case. Cf. *Sherbert v. Verner*, post, p. 398.

## II.

As a matter of history, the First Amendment was adopted solely as a limitation upon the newly created National Government. The events leading to its adoption strongly suggest that the Establishment Clause was primarily an attempt to insure that Congress not only would be powerless to establish a national church, but would also be unable to interfere with existing state establishments. See *McGowan v. Maryland*. Each State was left free to go its own way and pursue its own policy with respect to religion. Thus Virginia from the beginning pursued a policy of disestablishmentarianism. Massachusetts, by contrast, had an established church until well into the nineteenth century.

So matters stood until the adoption of the Fourteenth Amendment, or more accurately, until this Court’s decision in *Cantwell v. Connecticut*, in 1940. In that case the Court said: “The First Amendment declares that Congress shall make no law respecting an establishment of religion or prohibiting the free exercise thereof. The Fourteenth Amendment has rendered the legislatures of the states as incompetent as Congress to enact such laws.”

I accept without question that the liberty guaranteed by the Fourteenth Amendment against impairment by the States embraces in full the right of free exercise of religion protected by the First Amendment, and I yield to no one in my conception of the breadth of that freedom. See *Braunfeld v. Brown*, (dissenting opinion). I accept too the proposition that the Fourteenth Amendment has somehow absorbed the Establishment Clause, although it is not without irony that a constitutional provision evidently designed to leave the States free to go their own way should now have become a restriction upon their autonomy. But I cannot agree with what seems to me the insensitive definition of the Establishment Clause contained in the Court’s opinion, nor with the different but, I think, equally mechanistic definitions contained in the separate opinions which have been filed.

## III.

Since the *Cantwell* pronouncement in 1940, this Court has only twice held invalid state laws on the ground that they were laws “respecting an establishment of religion” in violation of the Fourteenth Amendment. *McCollum v. Board of Education*; *Engel v. Vitale*. On the other hand, the Court has upheld against such a challenge laws establishing Sunday as a compulsory

day of rest, *McGowan v. Maryland*, and a law authorizing reimbursement from public funds for the transportation of parochial school pupils. *Everson v. Board of Education*.

Unlike other First Amendment guarantees, there is an inherent limitation upon the applicability of the Establishment Clause's ban on state support to religion. That limitation was succinctly put in *Everson v. Board of Education*: "State power is no more to be used so as to handicap religions than it is to favor them." And in a later case, this Court recognized that the limitation was one which was itself compelled by the free exercise guarantee. "To hold that a state cannot consistently with the First and Fourteenth Amendments utilize its public school system to aid any or all religious faiths or sects in the dissemination of their doctrines and ideals does not . . . manifest a governmental hostility to religion or religious teachings. A manifestation of such hostility would be at war with our national tradition as embodied in the First Amendment's guaranty of the free exercise of religion." *McCollum v. Board of Education*.

That the central value embodied in the First Amendment—and, more particularly, in the guarantee of "liberty" contained in the Fourteenth—is the safeguarding of an individual's right to free exercise of his religion has been consistently recognized. Thus, in the case of *Hamilton v. Regents*, Mr. Justice Cardozo, concurring, assumed that it was ". . . the religious liberty protected by the First Amendment against invasion by the nation [which] is protected by the Fourteenth Amendment against invasion by the states." (Emphasis added.) And in *Cantwell v. Connecticut*, *supra*, the purpose of those guarantees was described in the following terms: "On the one hand, it forestalls compulsion by law of the acceptance of any creed or the practice of any form of worship. Freedom of conscience and freedom to adhere to such religious organization or form of worship as the individual may choose cannot be restricted by law. On the other hand, it safeguards the free exercise of the chosen form of religion."

It is this concept of constitutional protection embodied in our decisions which makes the cases before us such difficult ones for me. For there is involved in these cases a substantial free exercise claim on the part of those who affirmatively desire to have their children's school day open with the reading of passages from the Bible.

It has become accepted that the decision in *Pierce v. Society of Sisters*, upholding the right of parents to send their children to nonpublic schools, was ultimately based upon the recognition of the validity of the free exercise claim involved in that situation. It might be argued here that parents who wanted their children to be exposed to religious influences in school could, under *Pierce*, send their children to private or parochial schools. But the consideration which renders this contention too facile to be determinative has already been recognized by the Court: "Freedom of speech, freedom of the press, freedom of religion are available to all, not merely to those who can pay their own way." *Murdock v. Pennsylvania*.

It might also be argued that parents who want their children exposed to religious influences can adequately fulfill that wish off school property and outside school time. With all its surface persuasiveness, however, this argument seriously misconceives the basic constitutional justification for permitting the exercises at issue in these cases. For a compulsory state educational system so structures a child's life that if religious exercises are held to be an impermissible activity in schools, religion is placed at an artificial and state-created disadvantage. Viewed in this light, permission of such exercises for those who want them is necessary if the schools are truly to be neutral in the matter of religion. And a refusal to permit religious exercises thus is seen, not as the realization of state neutrality, but rather as the establishment of a religion of secularism, or at the least, as government support of the beliefs of those who think that religious exercises should be conducted only in private.

What seems to me to be of paramount importance, then, is recognition of the fact that the claim advanced here in favor of Bible reading is sufficiently substantial to make simple reference to the constitutional phrase "establishment of religion" as inadequate an analysis

of the cases before us as the ritualistic invocation of the nonconstitutional phrase “separation of church and state.” What these cases compel, rather, is an analysis of just what the “neutrality” is which is required by the interplay of the Establishment and Free Exercise Clauses of the First Amendment, as imbedded in the Fourteenth.

#### IV.

Our decisions make clear that there is no constitutional bar to the use of government property for religious purposes. On the contrary, this Court has consistently held that the discriminatory barring of religious groups from public property is itself a violation of First and Fourteenth Amendment guarantees. *Fowler v. Rhode Island*; *Niemotko v. Maryland*. A different standard has been applied to public school property, because of the coercive effect which the use by religious sects of a compulsory school system would necessarily have upon the children involved. *McCullum v. Board of Education*. But insofar as the *McCullum* decision rests on the Establishment rather than the Free Exercise Clause, it is clear that its effect is limited to religious instruction—to government support of proselytizing activities of religious sects by throwing the weight of secular authority behind the dissemination of religious tenets.

The dangers both to government and to religion inherent in official support of instruction in the tenets of various religious sects are absent in the present cases, which involve only a reading from the Bible unaccompanied by comments which might otherwise constitute instruction. Indeed, since, from all that appears in either record, any teacher who does not wish to do so is free not to participate, it cannot even be contended that some infinitesimal part of the salaries paid by the State are made contingent upon the performance of a religious function.

In the absence of evidence that the legislature or school board intended to prohibit local schools from substituting a different set of readings where parents requested such a change, we should not assume that the provisions before us—as actually administered—may not be construed simply as authorizing religious exercises, nor that the designations may not be treated simply as indications of the promulgating body’s view as to the community’s preference. We are under a duty to interpret these provisions so as to render them constitutional if reasonably possible. Compare *Two Guys v. McGinley*; *Everson v. Board of Education*, and n. 2. In the *Schempp* case there is evidence which indicates that variations were in fact permitted by the very school there involved, and that further variations were not introduced only because of the absence of requests from parents. And in the *Murray* case the Baltimore rule itself contains a provision permitting another version of the Bible to be substituted for the King James version.

If the provisions are not so construed, I think that their validity under the Establishment Clause would be extremely doubtful, because of the designation of a particular religious book and a denominational prayer. But since, even if the provisions are construed as I believe they must be, I think that the cases before us must be remanded for further evidence on other issues—thus affording the plaintiffs an opportunity to prove that local variations are not in fact permitted—I shall for the balance of this dissenting opinion treat the provisions before us as making the variety and content of the exercises, as well as a choice as to their implementation, matters which ultimately reflect the consensus of each local school community. In the absence of coercion upon those who do not wish to participate—because they hold less strong beliefs, other beliefs, or no beliefs at all—such provisions cannot, in my view, be held to represent the type of support of religion barred by the Establishment Clause. For the only support which such rules provide for religion is the withholding of state hostility—a simple acknowledgment on the part of secular authorities that the Constitution does not require extirpation of all expression of religious belief.

#### V.

I have said that these provisions authorizing religious exercises are properly to be regarded as measures making possible the free exercise of religion. But it is important to stress that,

strictly speaking, what is at issue here is a privilege rather than a right. In other words, the question presented is not whether exercises such as those at issue here are constitutionally compelled, but rather whether they are constitutionally invalid. And that issue, in my view, turns on the question of coercion.

It is clear that the dangers of coercion involved in the holding of religious exercises in a schoolroom differ qualitatively from those presented by the use of similar exercises or affirmations in ceremonies attended by adults. Even as to children, however, the duty laid upon government in connection with religious exercises in the public schools is that of refraining from so structuring the school environment as to put any kind of pressure on a child to participate in those exercises; it is not that of providing an atmosphere in which children are kept scrupulously insulated from any awareness that some of their fellows may want to open the school day with prayer, or of the fact that there exist in our pluralistic society differences of religious belief.

These are not, it must be stressed, cases like *Brown v. Board of Education*, in which this Court held that, in the sphere of public education, the Fourteenth Amendment's guarantee of equal protection of the laws required that race not be treated as a relevant factor. A segregated school system is not invalid because its operation is coercive; it is invalid simply because our Constitution presupposes that men are created equal, and that therefore racial differences cannot provide a valid basis for governmental action. Accommodation of religious differences on the part of the State, however, is not only permitted but required by that same Constitution.

The governmental neutrality which the First and Fourteenth Amendments require in the cases before us, in other words, is the extension of evenhanded treatment to all who believe, doubt, or disbelieve—a refusal on the part of the State to weight the scales of private choice. In these cases, therefore, what is involved is not state action based on impermissible categories, but rather an attempt by the State to accommodate those differences which the existence in our society of a variety of religious beliefs makes inevitable. The Constitution requires that such efforts be struck down only if they are proven to entail the use of the secular authority of government to coerce a preference among such beliefs.

It may well be, as has been argued to us, that even the supposed benefits to be derived from noncoercive religious exercises in public schools are incommensurate with the administrative problems which they would create. The choice involved, however, is one for each local community and its school board, and not for this Court. For, as I have said, religious exercises are not constitutionally invalid if they simply reflect differences which exist in the society from which the school draws its pupils. They become constitutionally invalid only if their administration places the sanction of secular authority behind one or more particular religious or irreligious beliefs.

To be specific, it seems to me clear that certain types of exercises would present situations in which no possibility of coercion on the part of secular officials could be claimed to exist. Thus, if such exercises were held either before or after the official school day, or if the school schedule were such that participation were merely one among a number of desirable alternatives, it could hardly be contended that the exercises did anything more than to provide an opportunity for the voluntary expression of religious belief. On the other hand, a law which provided for religious exercises during the school day and which contained no excusal provision would obviously be unconstitutionally coercive upon those who did not wish to participate. And even under a law containing an excusal provision, if the exercises were held during the school day, and no equally desirable alternative were provided by the school authorities, the likelihood that children might be under at least some psychological compulsion to participate would be great. In a case such as the latter, however, I think we would err if we assumed such coercion in the absence of any evidence.

## VI.

Viewed in this light, it seems to me clear that the records in both of the cases before us are wholly inadequate to support an informed or responsible decision. Both cases involve provisions which explicitly permit any student who wishes, to be excused from participation in the exercises. There is no evidence in either case as to whether there would exist any coercion of any kind upon a student who did not want to participate. No evidence at all was adduced in the Murray case, because it was decided upon a demurrer. All that we have in that case, therefore, is the conclusory language of a pleading. While such conclusory allegations are acceptable for procedural purposes, I think that the nature of the constitutional problem involved here clearly demands that no decision be made except upon evidence. In the Schempp case the record shows no more than a subjective prophecy by a parent of what he thought would happen if a request were made to be excused from participation in the exercises under the amended statute. No such request was ever made, and there is no evidence whatever as to what might or would actually happen, nor of what administrative arrangements the school actually might or could make to free from pressure of any kind those who do not want to participate in the exercises. There were no District Court findings on this issue, since the case under the amended statute was decided exclusively on Establishment Clause grounds. 201 F. Supp. 815.

What our Constitution indispensably protects is the freedom of each of us, be he Jew or Agnostic, Christian or Atheist, Buddhist or Freethinker, to believe or disbelieve, to worship or not worship, to pray or keep silent, according to his own conscience, uncoerced and unrestrained by government. It is conceivable that these school boards, or even all school boards, might eventually find it impossible to administer a system of religious exercises during school hours in such a way as to meet this constitutional standard—in such a way as completely to free from any kind of official coercion those who do not affirmatively want to participate. But I think we must not assume that school boards so lack the qualities of inventiveness and good will as to make impossible the achievement of that goal.

I would remand both cases for further hearings.

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**GREEN ET AL. V. COUNTY SCHOOL BOARD OF NEW KENT  
COUNTY ET AL., 391 U.S. 430 (1968)**

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SUPREME COURT OF THE UNITED STATES  
CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH  
CIRCUIT

ARGUED APRIL 3, 1968. DECIDED MAY 27, 1968.

Respondent School Board maintains two schools, one on the east side and one on the west side of New Kent County, Virginia. About one-half of the county's population are Negroes, who reside throughout the county since there is no residential segregation. Although this Court held in *Brown v. Board of Education*, (*Brown I*), that Virginia's constitutional and statutory provisions requiring racial segregation in schools were unconstitutional, the Board continued segregated operation of the schools, presumably pursuant to Virginia statutes enacted to resist that decision. In 1965, after this suit for injunctive relief against maintenance of allegedly segregated schools was filed, the Board, in order to remain eligible for federal financial aid, adopted a "freedom-of-choice" plan for desegregating the schools. The plan permits students, except those entering the first and eighth grades, to choose annually between the schools; those not choosing are assigned to the school previously attended; first and eighth graders must affirmatively choose a school. The District Court approved the plan, as amended, and the Court of Appeals approved the "freedom-of-choice" provisions although it remanded

for a more specific and comprehensive order concerning teachers. During the plan's three years of operation no white student has chosen to attend the all-Negro school, and although 115 Negro pupils enrolled in the formerly all-white school, 85% of the Negro students in the system still attend the all-Negro school. Held:

1. In 1955 this Court, in *Brown v. Board of Education*, (Brown II), ordered school boards operating dual school systems, part "white" and part "Negro," to "effectuate a transition to a racially nondiscriminatory school system," and it is in light of that command that the effectiveness of the "freedom-of-choice" plan to achieve that end is to be measured. Pp. 435-438.
2. The burden is on a school board to provide a plan that promises realistically to work now, and a plan that at this late date fails to provide meaningful assurance of prompt and effective disestablishment of a dual system is intolerable. Pp. 438-439.
3. A district court's obligation is to assess the effectiveness of the plan in light of the facts at hand and any alternatives which may be feasible and more promising, and to retain jurisdiction until it is clear that state-imposed segregation has been completely removed. P. 439.
4. Where a "freedom-of-choice" plan offers real promise of achieving a unitary, nonracial system there might be no objection to allowing it to prove itself in operation, but where there are reasonably available other ways, such as zoning, promising speedier and more effective conversion to a unitary school system, "freedom of choice" is not acceptable. Pp. 439-441.
5. The New Kent "freedom-of-choice" plan is not acceptable; it has not dismantled the dual system, but has operated simply to burden students and their parents with a responsibility which Brown II placed squarely on the School Board. Pp. 441-442.

382 F.2d 338, vacated in part and remanded.

MR. JUSTICE BRENNAN delivered the opinion of the Court.

The question for decision is whether, under all the circumstances here, respondent School Board's adoption of a "freedom-of-choice" plan which allows a pupil to choose his own public school constitutes adequate compliance with the Board's responsibility "to achieve a system of determining admission to the public schools on a nonracial basis . . ." *Brown v. Board of Education*, (Brown II).

Petitioners brought this action in March 1965 seeking injunctive relief against respondent's continued maintenance of an alleged racially segregated school system. New Kent County is a rural county in Eastern Virginia. About one-half of its population of some 4,500 are Negroes. There is no residential segregation in the county; persons of both races reside throughout. The school system has only two schools, the New Kent school on the east side of the county and the George W. Watkins school on the west side. In a memorandum filed May 17, 1966, the District Court found that the "school system serves approximately 1,300 pupils, of which 740 are Negro and 550 are White. The School Board operates one white combined elementary and high school [New Kent], and one Negro combined elementary and high school [George W. Watkins]. There are no attendance zones. Each school serves the entire county." The record indicates that 21 school buses—11 serving the Watkins school and 10 serving the New Kent school—travel overlapping routes throughout the county to transport pupils to and from the two schools.

The segregated system was initially established and maintained under the compulsion of Virginia constitutional and statutory provisions mandating racial segregation in public education, Va. Const., Art. IX, 140 (1902); Va. Code 22-221 (1950). These provisions were held to violate the Federal Constitution in *Davis v. County School Board of Prince Edward County*, decided with *Brown v. Board of Education*, (Brown I). The respondent School Board contin-

ued the segregated operation of the system after the Brown decisions, presumably on the authority of several statutes enacted by Virginia in resistance to those decisions. Some of these statutes were held to be unconstitutional on their face or as applied. One statute, the Pupil Placement Act, Va. Code 22-232.1 et seq. (1964), not repealed until 1966, divested local boards of authority to assign children to particular schools and placed that authority in a State Pupil Placement Board. Under that Act children were each year automatically reassigned to the school previously attended unless upon their application the State Board assigned them to another school; students seeking enrollment for the first time were also assigned at the discretion of the State Board. To September 1964, no Negro pupil had applied for admission to the New Kent school under this statute and no white pupil had applied for admission to the Watkins school.

The School Board initially sought dismissal of this suit on the ground that petitioners had failed to apply to the State Board for assignment to New Kent school. However on August 2, 1965, five months after the suit was brought, respondent School Board, in order to remain eligible for federal financial aid, adopted a “freedom-of-choice” plan for desegregating the schools. Under that plan, each pupil, except those entering the first and eighth grades, may annually choose between the New Kent and Watkins schools and pupils not making a choice are assigned to the school previously attended; first and eighth grade pupils must affirmatively choose a school. After the plan was filed the District Court denied petitioners’ prayer for an injunction and granted respondent leave to submit an amendment to the plan with respect to employment and assignment of teachers and staff on a racially nondiscriminatory basis. The amendment was duly filed and on June 28, 1966, the District Court approved the “freedom-of-choice” plan as so amended. The Court of Appeals for the Fourth Circuit, en banc, 382 F.2d 338, affirmed the District Court’s approval of the “freedom-of-choice” provisions of the plan but remanded the case to the District Court for entry of an order regarding faculty “which is much more specific and more comprehensive” and which would incorporate in addition to a “minimal, objective time table” some of the faculty provisions of the decree entered by the Court of Appeals for the Fifth Circuit in *United States v. Jefferson County Board of Education*, 372 F.2d 836, *aff’d en banc*, 380 F.2d 385 (1967). Judges Sobeloff and Winter concurred with the remand on the teacher issue but otherwise disagreed, expressing the view “that the District Court should be directed . . . also to set up procedures for periodically evaluating the effectiveness of the [Board’s] ‘freedom of choice’ [plan] in the elimination of other features of a segregated school system.” *Bowman v. County School Board of Charles City County*, 382 F.2d 326, at 330. We granted certiorari.

The pattern of separate “white” and “Negro” schools in the New Kent County school system established under compulsion of state laws is precisely the pattern of segregation to which Brown I and Brown II were particularly addressed, and which Brown I declared unconstitutionally denied Negro school children equal protection of the laws. Racial identification of the system’s schools was complete, extending not just to the composition of student bodies at the two schools but to every facet of school operations—faculty, staff, transportation, extracurricular activities and facilities. In short, the State, acting through the local school board and school officials, organized and operated a dual system, part “white” and part “Negro.”

It was such dual systems that 14 years ago Brown I held unconstitutional and a year later Brown II held must be abolished; school boards operating such school systems were required by Brown II “to effectuate a transition to a racially nondiscriminatory school system.” It is of course true that for the time immediately after Brown II the concern was with making an initial break in a long-established pattern of excluding Negro children from schools attended by white children. The principal focus was on obtaining for those Negro children courageous enough to break with tradition a place in the “white” schools. See, e. g., *Cooper v. Aaron*. Under Brown II that immediate goal was only the first step, however. The transition to a unitary, nonracial system of public education was and is the ultimate end to be brought about;

it was because of the “complexities arising from the transition to a system of public education freed of racial discrimination” that we provided for “all deliberate speed” in the implementation of the principles of *Brown I*. Thus we recognized the task would necessarily involve solution of “varied local school problems.” *Id.*, at 299. In referring to the “personal interest of the plaintiffs in admission to public schools as soon as practicable on a nondiscriminatory basis,” we also noted that “[t]o effectuate this interest may call for elimination of a variety of obstacles in making the transition . . .” *Id.*, at 300. Yet we emphasized that the constitutional rights of Negro children required school officials to bear the burden of establishing that additional time to carry out the ruling in an effective manner “is necessary in the public interest and is consistent with good faith compliance at the earliest practicable date.” *Ibid.* We charged the district courts in their review of particular situations to

“consider problems related to administration, arising from the physical condition of the school plant, the school transportation system, personnel, revision of school districts and attendance areas into compact units to achieve a system of determining admission to the public schools on a nonracial basis, and revision of local laws and regulations which may be necessary in solving the foregoing problems. They will also consider the adequacy of any plans the defendants may propose to meet these problems and to effectuate a transition to a racially nondiscriminatory school system.” *Id.*, at 300-301.

It is against this background that 13 years after *Brown II* commanded the abolition of dual systems we must measure the effectiveness of respondent School Board’s “freedom-of-choice” plan to achieve that end. The School Board contends that it has fully discharged its obligation by adopting a plan by which every student, regardless of race, may “freely” choose the school he will attend. The Board attempts to cast the issue in its broadest form by arguing that its “freedom-of-choice” plan may be faulted only by reading the Fourteenth Amendment as universally requiring “compulsory integration,” a reading it insists the wording of the Amendment will not support. But that argument ignores the thrust of *Brown II*. In the light of the command of that case, what is involved here is the question whether the Board has achieved the “racially nondiscriminatory school system” *Brown II* held must be effectuated in order to remedy the established unconstitutional deficiencies of its segregated system. In the context of the state-imposed segregated pattern of long standing, the fact that in 1965 the Board opened the doors of the former “white” school to Negro children and of the “Negro” school to white children merely begins, not ends, our inquiry whether the Board has taken steps adequate to abolish its dual, segregated system. *Brown II* was a call for the dismantling of well-entrenched dual systems tempered by an awareness that complex and multifaceted problems would arise which would require time and flexibility for a successful resolution. School boards such as the respondent then operating state-compelled dual systems were nevertheless clearly charged with the affirmative duty to take whatever steps might be necessary to convert to a unitary system in which racial discrimination would be eliminated root and branch. See *Cooper v. Aaron*, *supra*, at 7; *Bradley v. School Board*; cf. *Watson v. City of Memphis*. The constitutional rights of Negro school children articulated in *Brown I* permit no less than this; and it was to this end that *Brown II* commanded school boards to bend their efforts.

In determining whether respondent School Board met that command by adopting its “freedom-of-choice” plan, it is relevant that this first step did not come until some 11 years after *Brown I* was decided and 10 years after *Brown II* directed the making of a “prompt and reasonable start.” This deliberate perpetuation of the unconstitutional dual system can only have compounded the harm of such a system. Such delays are no longer tolerable, for “the governing constitutional principles no longer bear the imprint of newly enunciated doctrine.” *Watson v. City of Memphis*, *supra*, at 529; see *Bradley v. School Board*, *supra*; *Rogers v. Paul*. Moreover, a plan that at this late date fails to provide meaningful assurance of prompt and effective disestablishment of a dual system is also intolerable. “The time for mere ‘deliberate

speed' has run out," *Griffin v. County School Board*; "the context in which we must interpret and apply this language [of *Brown II*] to plans for desegregation has been significantly altered." *Goss v. Board of Education*. See *Calhoun v. Latimer*. The burden on a school board today is to come forward with a plan that promises realistically to work, and promises realistically to work now.

The obligation of the district courts, as it always has been, is to assess the effectiveness of a proposed plan in achieving desegregation. There is no universal answer to complex problems of desegregation; there is obviously no one plan that will do the job in every case. The matter must be assessed in light of the circumstances present and the options available in each instance. It is incumbent upon the school board to establish that its proposed plan promises meaningful and immediate progress toward disestablishing state-imposed segregation. It is incumbent upon the district court to weigh that claim in light of the facts at hand and in light of any alternatives which may be shown as feasible and more promising in their effectiveness. Where the court finds the board to be acting in good faith and the proposed plan to have real prospects for dismantling the state-imposed dual system "at the earliest practicable date," then the plan may be said to provide effective relief. Of course, the availability to the board of other more promising courses of action may indicate a lack of good faith; and at the least it places a heavy burden upon the board to explain its preference for an apparently less effective method. Moreover, whatever plan is adopted will require evaluation in practice, and the court should retain jurisdiction until it is clear that state-imposed segregation has been completely removed. See No. 805, *Raney v. Board of Education*, post, at 449.

We do not hold that "freedom of choice" can have no place in such a plan. We do not hold that a "freedom-of-choice" plan might of itself be unconstitutional, although that argument has been urged upon us. Rather, all we decide today is that in desegregating a dual system a plan utilizing "freedom of choice" is not an end in itself. As Judge Sobeloff has put it,

"Freedom of choice' is not a sacred talisman; it is only a means to a constitutionally required end—the abolition of the system of segregation and its effects. If the means prove effective, it is acceptable, but if it fails to undo segregation, other means must be used to achieve this end. The school officials have the continuing duty to take whatever action may be necessary to create a 'unitary, non-racial system.'" *Bowman v. County School Board*, 382 F.2d 326, 333 (C. A. 4th Cir. 1967) (concurring opinion).

Accord, *Kemp v. Beasley*, 389 F.2d 178 (C. A. 8th Cir. 1968); *United States v. Jefferson County Board of Education*, supra. Although the general experience under "freedom of choice" to date has been such as to indicate its ineffectiveness as a tool of desegregation, there may well be instances in which it can serve as an effective device. Where it offers real promise of aiding a desegregation program to effectuate conversion of a state-imposed dual system to a unitary, nonracial system there might be no objection to allowing such a device to prove itself in operation. On the other hand, if there are reasonably available other ways, such for illustration as zoning, promising speedier and more effective conversion to a unitary, nonracial school system, "freedom of choice" must be held unacceptable.

The New Kent School Board's "freedom-of-choice" plan cannot be accepted as a sufficient step to "effectuate a transition" to a unitary system. In three years of operation not a single white child has chosen to attend Watkins school and although 115 Negro children enrolled in New Kent school in 1967 (up from 35 in 1965 and 111 in 1966) 85% of the Negro children in the system still attend the all-Negro Watkins school. In other words, the school system remains a dual system. Rather than further the dismantling of the dual system, the plan has operated simply to burden children and their parents with a responsibility which *Brown II* placed squarely on the School Board. The Board must be required to formulate a new plan and, in light of other courses which appear open to the Board, such as zoning, fashion steps

which promise realistically to convert promptly to a system without a “white” school and a “Negro” school, but just schools.

The judgment of the Court of Appeals is vacated insofar as it affirmed the District Court and the case is remanded to the District Court for further proceedings consistent with this opinion.

It is so ordered.

## **TINKER ET AL. V. DES MOINES INDEPENDENT COMMUNITY SCHOOL DISTRICT ET AL., 393 U.S. 503 (1969)**

### **SUPREME COURT OF THE UNITED STATES CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT**

**ARGUED NOVEMBER 12, 1968. DECIDED FEBRUARY 24, 1969.**

Petitioners, three public school pupils in Des Moines, Iowa, were suspended from school for wearing black armbands to protest the Government’s policy in Vietnam. They sought nominal damages and an injunction against a regulation that the respondents had promulgated banning the wearing of armbands. The District Court dismissed the complaint on the ground that the regulation was within the Board’s power, despite the absence of any finding of substantial interference with the conduct of school activities. The Court of Appeals, sitting en banc, affirmed by an equally divided court. Held:

1. In wearing armbands, the petitioners were quiet and passive. They were not disruptive and did not impinge upon the rights of others. In these circumstances, their conduct was within the protection of the Free Speech Clause of the First Amendment and the Due Process Clause of the Fourteenth. Pp. 505-506.
2. First Amendment rights are available to teachers and students, subject to application in light of the special characteristics of the school environment. Pp. 506-507.
3. A prohibition against expression of opinion, without any evidence that the rule is necessary to avoid substantial interference with school discipline or the rights of others, is not permissible under the First and Fourteenth Amendments. Pp. 507-514.

383 F.2d 988, reversed and remanded.

MR. JUSTICE FORTAS delivered the opinion of the Court.

Petitioner John F. Tinker, 15 years old, and petitioner Christopher Eckhardt, 16 years old, attended high schools in Des Moines, Iowa. Petitioner Mary Beth Tinker, John’s sister, was a 13-year-old student in junior high school.

In December 1965, a group of adults and students in Des Moines held a meeting at the Eckhardt home. The group determined to publicize their objections to the hostilities in Vietnam and their support for a truce by wearing black armbands during the holiday season and by fasting on December 16 and New Year’s Eve. Petitioners and their parents had previously engaged in similar activities, and they decided to participate in the program.

The principals of the Des Moines schools became aware of the plan to wear armbands. On December 14, 1965, they met and adopted a policy that any student wearing an armband to school would be asked to remove it, and if he refused he would be suspended until he returned without the armband. Petitioners were aware of the regulation that the school authorities adopted.

On December 16, Mary Beth and Christopher wore black armbands to their schools. John Tinker wore his armband the next day. They were all sent home and suspended from school

until they would come back without their armbands. They did not return to school until after the planned period for wearing armbands had expired—that is, until after New Year’s Day.

This complaint was filed in the United States District Court by petitioners, through their fathers, under 1983 of Title 42 of the United States Code. It prayed for an injunction restraining the respondent school officials and the respondent members of the board of directors of the school district from disciplining the petitioners, and it sought nominal damages. After an evidentiary hearing the District Court dismissed the complaint. It upheld the constitutionality of the school authorities’ action on the ground that it was reasonable in order to prevent disturbance of school discipline. 258 F. Supp. 971 (1966). The court referred to but expressly declined to follow the Fifth Circuit’s holding in a similar case that the wearing of symbols like the armbands cannot be prohibited unless it “materially and substantially interfere[s] with the requirements of appropriate discipline in the operation of the school.” *Burnside v. Byars*, 363 F.2d 744, 749 (1966).

On appeal, the Court of Appeals for the Eighth Circuit considered the case en banc. The court was equally divided, and the District Court’s decision was accordingly affirmed, without opinion. 383 F.2d 988 (1967). We granted certiorari. (1968).

### I.

The District Court recognized that the wearing of an armband for the purpose of expressing certain views is the type of symbolic act that is within the Free Speech Clause of the First Amendment. See *West Virginia v. Barnette*, (1943); *Stromberg v. California*, (1931). Cf. *Thornhill v. Alabama*, (1940); *Edwards v. South Carolina*, (1963); *Brown v. Louisiana*, (1966). As we shall discuss, the wearing of armbands in the circumstances of this case was entirely divorced from actually or potentially disruptive conduct by those participating in it. It was closely akin to “pure speech” which, we have repeatedly held, is entitled to comprehensive protection under the First Amendment. Cf. *Cox v. Louisiana*, (1965); *Adderley v. Florida*, (1966).

First Amendment rights, applied in light of the special characteristics of the school environment, are available to teachers and students. It can hardly be argued that either students or teachers shed their constitutional rights to freedom of speech or expression at the school-house gate. This has been the unmistakable holding of this Court for almost 50 years. In *Meyer v. Nebraska*, (1923), and *Bartels v. Iowa*, (1923), this Court, in opinions by Mr. Justice McReynolds, held that the Due Process Clause of the Fourteenth Amendment prevents States from forbidding the teaching of a foreign language to young students. Statutes to this effect, the Court held, unconstitutionally interfere with the liberty of teacher, student, and parent. See also *Pierce v. Society of Sisters*, (1925); *West Virginia v. Barnette*, (1943); *McCollum v. Board of Education*, (1948); *Wieman v. Updegraff*, (1952) (concurring opinion); *Sweezy v. New Hampshire*, (1957); *Shelton v. Tucker*, (1960); *Engel v. Vitale*, (1962); *Keyishian v. Board of Regents*, (1967); *Epperson v. Arkansas*, ante, p. 97 (1968).

In *West Virginia v. Barnette*, supra, this Court held that under the First Amendment, the student in public school may not be compelled to salute the flag. Speaking through Mr. Justice Jackson, the Court said:

The Fourteenth Amendment, as now applied to the States, protects the citizen against the State itself and all of its creatures—Boards of Education not excepted. These have, of course, important, delicate, and highly discretionary functions, but none that they may not perform within the limits of the Bill of Rights. That they are educating the young for citizenship is reason for scrupulous protection of Constitutional freedoms of the individual, if we are not to strangle the free mind at its source and teach youth to discount important principles of our government as mere platitudes.

On the other hand, the Court has repeatedly emphasized the need for affirming the comprehensive authority of the States and of school officials, consistent with fundamental consti-

tutional safeguards, to prescribe and control conduct in the schools. See *Epperson v. Arkansas*, *supra*, at 104; *Meyer v. Nebraska*, *supra*, at 402. Our problem lies in the area where students in the exercise of First Amendment rights collide with the rules of the school authorities.

## II.

The problem posed by the present case does not relate to regulation of the length of skirts or the type of clothing, to hair style, or deportment. Cf. *Ferrell v. Dallas Independent School District*, 392 F.2d 697 (1968); *Pugsley v. Sellmeyer*, 158 Ark. 247, 250 S. W. 538 (1923). It does not concern aggressive, disruptive action or even group demonstrations. Our problem involves direct, primary First Amendment rights akin to “pure speech.”

The school officials banned and sought to punish petitioners for a silent, passive expression of opinion, unaccompanied by any disorder or disturbance on the part of petitioners. There is here no evidence whatever of petitioners’ interference, actual or nascent, with the schools’ work or of collision with the rights of other students to be secure and to be let alone. Accordingly, this case does not concern speech or action that intrudes upon the work of the schools or the rights of other students.

Only a few of the 18,000 students in the school system wore the black armbands. Only five students were suspended for wearing them. There is no indication that the work of the schools or any class was disrupted. Outside the classrooms, a few students made hostile remarks to the children wearing armbands, but there were no threats or acts of violence on school premises.

The District Court concluded that the action of the school authorities was reasonable because it was based upon their fear of a disturbance from the wearing of the armbands. But, in our system, undifferentiated fear or apprehension of disturbance is not enough to overcome the right to freedom of expression. Any departure from absolute regimentation may cause trouble. Any variation from the majority’s opinion may inspire fear. Any word spoken, in class, in the lunchroom, or on the campus, that deviates from the views of another person may start an argument or cause a disturbance. But our Constitution says we must take this risk, *Terminiello v. Chicago*, (1949); and our history says that it is this sort of hazardous freedom—that is the basis of our national strength and of the independence and vigor of Americans who grow up and live in this relatively permissive, often disputatious, society.

In order for the State in the person of school officials to justify prohibition of a particular expression of opinion, it must be able to show that its action was caused by something more than a mere desire to avoid the discomfort and unpleasantness that always accompany an unpopular viewpoint. Certainly where there is no finding and no showing that engaging in the forbidden conduct would “materially and substantially interfere with the requirements of appropriate discipline in the operation of the school,” the prohibition cannot be sustained. *Burnside v. Byars*, *supra*, at 749.

In the present case, the District Court made no such finding, and our independent examination of the record fails to yield evidence that the school authorities had reason to anticipate that the wearing of the armbands would substantially interfere with the work of the school or impinge upon the rights of other students. Even an official memorandum prepared after the suspension that listed the reasons for the ban on wearing the armbands made no reference to the anticipation of such disruption.

On the contrary, the action of the school authorities appears to have been based upon an urgent wish to avoid the controversy which might result from the expression, even by the silent symbol of armbands, of opposition to this Nation’s part in the conflagration in Vietnam. It is revealing, in this respect, that the meeting at which the school principals decided to issue the contested regulation was called in response to a student’s statement to the journalism

teacher in one of the schools that he wanted to write an article on Vietnam and have it published in the school paper. (The student was dissuaded.)

It is also relevant that the school authorities did not purport to prohibit the wearing of all symbols of political or controversial significance. The record shows that students in some of the schools wore buttons relating to national political campaigns, and some even wore the Iron Cross, traditionally a symbol of Nazism. The order prohibiting the wearing of armbands did not extend to these. Instead, a particular symbol—black armbands worn to exhibit opposition to this Nation’s involvement in Vietnam—was singled out for prohibition. Clearly, the prohibition of expression of one particular opinion, at least without evidence that it is necessary to avoid material and substantial interference with schoolwork or discipline, is not constitutionally permissible.

In our system, state-operated schools may not be enclaves of totalitarianism. School officials do not possess absolute authority over their students. Students in school as well as out of school are “persons” under our Constitution. They are possessed of fundamental rights which the State must respect, just as they themselves must respect their obligations to the State. In our system, students may not be regarded as closed-circuit recipients of only that which the State chooses to communicate. They may not be confined to the expression of those sentiments that are officially approved. In the absence of a specific showing of constitutionally valid reasons to regulate their speech, students are entitled to freedom of expression of their views. As Judge Gewin, speaking for the Fifth Circuit, said, school officials cannot suppress “expressions of feelings with which they do not wish to contend.” *Burnside v. Byars*, *supra*, at 749.

In *Meyer v. Nebraska*, *supra*, at 402, Mr. Justice McReynolds expressed this Nation’s repudiation of the principle that a State might so conduct its schools as to “foster a homogeneous people.” He said:

“In order to submerge the individual and develop ideal citizens, Sparta assembled the males at seven into barracks and intrusted their subsequent education and training to official guardians. Although such measures have been deliberately approved by men of great genius, their ideas touching the relation between individual and State were wholly different from those upon which our institutions rest; and it hardly will be affirmed that any legislature could impose such restrictions upon the people of a State without doing violence to both letter and spirit of the Constitution.”

This principle has been repeated by this Court on numerous occasions during the intervening years. In *Keyishian v. Board of Regents*, MR. JUSTICE BRENNAN, speaking for the Court, said:

“‘The vigilant protection of constitutional freedoms is nowhere more vital than in the community of American schools.’ *Shelton v. Tucker*, at 487. The classroom is peculiarly the ‘marketplace of ideas.’ The Nation’s future depends upon leaders trained through wide exposure to that robust exchange of ideas which discovers truth ‘out of a multitude of tongues, [rather] than through any kind of authoritative selection.’”

The principle of these cases is not confined to the supervised and ordained discussion which takes place in the classroom. The principal use to which the schools are dedicated is to accommodate students during prescribed hours for the purpose of certain types of activities. Among those activities is personal intercommunication among the students. This is not only an inevitable part of the process of attending school; it is also an important part of the educational process. A student’s rights, therefore, do not embrace merely the classroom hours. When he is in the cafeteria, or on the playing field, or on the campus during the authorized hours, he may express his opinions, even on controversial subjects like the conflict in Vietnam, if he does so without “materially and substantially interfer[ing] with the requirements of appropriate discipline in the operation of the school” and without colliding with the rights of others. *Burnside v. Byars*, *supra*, at 749. But conduct by the student, in class or out of it, which

for any reason—whether it stems from time, place, or type of behavior— materially disrupts classwork or involves substantial disorder or invasion of the rights of others is, of course, not immunized by the constitutional guarantee of freedom of speech. Cf. *Blackwell v. Issaquena County Board of Education*, 363 F.2d 749 (C. A. 5th Cir. 1966).

Under our Constitution, free speech is not a right that is given only to be so circumscribed that it exists in principle but not in fact. Freedom of expression would not truly exist if the right could be exercised only in an area that a benevolent government has provided as a safe haven for crackpots. The Constitution says that Congress (and the States) may not abridge the right to free speech. This provision means what it says. We properly read it to permit reasonable regulation of speech-connected activities in carefully restricted circumstances. But we do not confine the permissible exercise of First Amendment rights to a telephone booth or the four corners of a pamphlet, or to supervised and ordained discussion in a school classroom.

If a regulation were adopted by school officials forbidding discussion of the Vietnam conflict, or the expression by any student of opposition to it anywhere on school property except as part of a prescribed classroom exercise, it would be obvious that the regulation would violate the constitutional rights of students, at least if it could not be justified by a showing that the students' activities would materially and substantially disrupt the work and discipline of the school. Cf. *Hammond v. South Carolina State College*, 272 F. Supp. 947 (D.C. S. C. 1967) (orderly protest meeting on state college campus); *Dickey v. Alabama State Board of Education*, 273 F. Supp. 613 (D.C. M. D. Ala. 1967) (expulsion of student editor of college newspaper). In the circumstances of the present case, the prohibition of the silent, passive "witness of the armbands," as one of the children called it, is no less offensive to the Constitution's guarantees.

As we have discussed, the record does not demonstrate any facts which might reasonably have led school authorities to forecast substantial disruption of or material interference with school activities, and no disturbances or disorders on the school premises in fact occurred. These petitioners merely went about their ordained rounds in school. Their deviation consisted only in wearing on their sleeve a band of black cloth, not more than two inches wide. They wore it to exhibit their disapproval of the Vietnam hostilities and their advocacy of a truce, to make their views known, and, by their example, to influence others to adopt them. They neither interrupted school activities nor sought to intrude in the school affairs or the lives of others. They caused discussion outside of the classrooms, but no interference with work and no disorder. In the circumstances, our Constitution does not permit officials of the State to deny their form of expression.

We express no opinion as to the form of relief which should be granted, this being a matter for the lower courts to determine. We reverse and remand for further proceedings consistent with this opinion.

Reversed and remanded.

MR. JUSTICE STEWART, concurring.

Although I agree with much of what is said in the Court's opinion, and with its judgment in this case, I cannot share the Court's uncritical assumption that, school discipline aside, the First Amendment rights of children are co-extensive with those of adults. Indeed, I had thought the Court decided otherwise just last Term in *Ginsberg v. New York*. I continue to hold the view I expressed in that case: "[A] State may permissibly determine that, at least in some precisely delineated areas, a child—like someone in a captive audience—is not possessed of that full capacity for individual choice which is the presupposition of First Amendment guarantees." *Id.*, at 649-650 (concurring in result). Cf. *Prince v. Massachusetts*.

MR. JUSTICE WHITE, concurring.

While I join the Court's opinion, I deem it appropriate to note, first, that the Court continues to recognize a distinction between communicating by words and communicating by acts or conduct which sufficiently impinges on some valid state interest; and, second, that I do not subscribe to everything the Court of Appeals said about free speech in its opinion in *Burnside v. Byars*, 363 F.2d 744, 748 (C. A. 5th Cir. 1966), a case relied upon by the Court in the matter now before us.

MR. JUSTICE BLACK, dissenting.

The Court's holding in this case ushers in what I deem to be an entirely new era in which the power to control pupils by the elected "officials of state supported public schools . . ." in the United States is in ultimate effect transferred to the Supreme Court. The Court brought this particular case here on a petition for certiorari urging that the First and Fourteenth Amendments protect the right of school pupils to express their political views all the way "from kindergarten through high school." Here the constitutional right to "political expression" asserted was a right to wear black armbands during school hours and at classes in order to demonstrate to the other students that the petitioners were mourning because of the death of United States soldiers in Vietnam and to protest that war which they were against. Ordered to refrain from wearing the armbands in school by the elected school officials and the teachers vested with state authority to do so, apparently only seven out of the school system's 18,000 pupils deliberately refused to obey the order. One defying pupil was Paul Tinker, 8 years old, who was in the second grade; another, Hope Tinker, was 11 years old and in the fifth grade; a third member of the Tinker family was 13, in the eighth grade; and a fourth member of the same family was John Tinker, 15 years old, an 11th grade high school pupil. Their father, a Methodist minister without a church, is paid a salary by the American Friends Service Committee. Another student who defied the school order and insisted on wearing an armband in school was Christopher Eckhardt, an 11th grade pupil and a petitioner in this case. His mother is an official in the Women's International League for Peace and Freedom.

As I read the Court's opinion it relies upon the following grounds for holding unconstitutional the judgment of the Des Moines school officials and the two courts below. First, the Court concludes that the wearing of armbands is "symbolic speech" which is "akin to 'pure speech'" and therefore protected by the First and Fourteenth Amendments. Secondly, the Court decides that the public schools are an appropriate place to exercise "symbolic speech" as long as normal school functions are not "unreasonably" disrupted. Finally, the Court arrogates to itself, rather than to the State's elected officials charged with running the schools, the decision as to which school disciplinary regulations are "reasonable."

Assuming that the Court is correct in holding that the conduct of wearing armbands for the purpose of conveying political ideas is protected by the First Amendment, cf., e. g., *Giboney v. Empire Storage & Ice Co.*, (1949), the crucial remaining questions are whether students and teachers may use the schools at their whim as a platform for the exercise of free speech—"symbolic" or "pure"—and whether the courts will allocate to themselves the function of deciding how the pupils' school day will be spent. While I have always believed that under the First and Fourteenth Amendments neither the State nor the Federal Government has any authority to regulate or censor the content of speech, I have never believed that any person has a right to give speeches or engage in demonstrations where he pleases and when he pleases. This Court has already rejected such a notion. In *Cox v. Louisiana*, (1965), for example, the Court clearly stated that the rights of free speech and assembly "do not mean that everyone with opinions or beliefs to express may address a group at any public place and at any time."

While the record does not show that any of these armband students shouted, used profane language, or were violent in any manner, detailed testimony by some of them shows their armbands caused comments, warnings by other students, the poking of fun at them, and a warning

by an older football player that other, nonprotesting students had better let them alone. There is also evidence that a teacher of mathematics had his lesson period practically “wrecked” chiefly by disputes with Mary Beth Tinker, who wore her armband for her “demonstration.” Even a casual reading of the record shows that this armband did divert students’ minds from their regular lessons, and that talk, comments, etc., made John Tinker “self-conscious” in attending school with his armband. While the absence of obscene remarks or boisterous and loud disorder perhaps justifies the Court’s statement that the few armband students did not actually “disrupt” the classwork, I think the record overwhelmingly shows that the armbands did exactly what the elected school officials and principals foresaw they would, that is, took the students’ minds off their classwork and diverted them to thoughts about the highly emotional subject of the Vietnam war. And I repeat that if the time has come when pupils of state-supported schools, kindergartens, grammar schools, or high schools, can defy and flout orders of school officials to keep their minds on their own schoolwork, it is the beginning of a new revolutionary era of permissiveness in this country fostered by the judiciary. The next logical step, it appears to me, would be to hold unconstitutional laws that bar pupils under 21 or 18 from voting, or from being elected members of the boards of education.

The United States District Court refused to hold that the state school order violated the First and Fourteenth Amendments. 258 F. Supp. 971. Holding that the protest was akin to speech, which is protected by the First and Fourteenth Amendments, that court held that the school order was “reasonable” and hence constitutional. There was at one time a line of cases holding “reasonableness” as the court saw it to be the test of a “due process” violation. Two cases upon which the Court today heavily relies for striking down this school order used this test of reasonableness, *Meyer v. Nebraska*, (1923), and *Bartels v. Iowa*, (1923). The opinions in both cases were written by Mr. Justice McReynolds; Mr. Justice Holmes, who opposed this reasonableness test, dissented from the holdings as did Mr. Justice Sutherland. This constitutional test of reasonableness prevailed in this Court for a season. It was this test that brought on President Franklin Roosevelt’s well-known Court fight. His proposed legislation did not pass, but the fight left the “reasonableness” constitutional test dead on the battlefield, so much so that this Court in *Ferguson v. Skrupa*, 730, after a thorough review of the old cases, was able to conclude in 1963:

“There was a time when the Due Process Clause was used by this Court to strike down laws which were thought unreasonable, that is, unwise or incompatible with some particular economic or social philosophy.

. . . .

“The doctrine that prevailed in *Lochner*, *Coppage*, *Adkins*, *Burns*, and like cases—that due process authorizes courts to hold laws unconstitutional when they believe the legislature has acted unwisely—has long since been discarded.”

The *Ferguson* case totally repudiated the old reasonableness-due process test, the doctrine that judges have the power to hold laws unconstitutional upon the belief of judges that they “shock the conscience” or that they are “unreasonable,” “arbitrary,” “irrational,” “contrary to fundamental ‘decency,’” or some other such flexible term without precise boundaries. I have many times expressed my opposition to that concept on the ground that it gives judges power to strike down any law they do not like. If the majority of the Court today, by agreeing to the opinion of my Brother FORTAS, is resurrecting that old reasonableness-due process test, I think the constitutional change should be plainly, unequivocally, and forthrightly stated for the benefit of the bench and bar. It will be a sad day for the country, I believe, when the present-day Court returns to the McReynolds due process concept. Other cases cited by the Court do not, as implied, follow the McReynolds reasonableness doctrine. *West Virginia v. Barnette*, clearly rejecting the “reasonableness” test, held that the Fourteenth Amendment made the First applicable to the States, and that the two forbade a State to compel little school-

children to salute the United States flag when they had religious scruples against doing so. Neither *Thornhill v. Alabama*; *Stromberg v. California*; *Edwards v. South Carolina*; nor *Brown v. Louisiana*, related to schoolchildren at all, and none of these cases embraced Mr. Justice McReynolds' reasonableness test; and *Thornhill*, *Edwards*, and *Brown* relied on the vagueness of state statutes under scrutiny to hold them unconstitutional. *Cox v. Louisiana*, and *Adderley v. Florida*, cited by the Court as a "compare," indicating, I suppose, that these two cases are no longer the law, were not rested to the slightest extent on the Meyer and Bartels "reasonableness-due process-McReynolds" constitutional test.

I deny, therefore, that it has been the "unmistakable holding of this Court for almost 50 years" that "students" and "teachers" take with them into the "schoolhouse gate" constitutional rights to "freedom of speech or expression." Even Meyer did not hold that. It makes no reference to "symbolic speech" at all; what it did was to strike down as "unreasonable" and therefore unconstitutional a Nebraska law barring the teaching of the German language before the children reached the eighth grade. One can well agree with Mr. Justice Holmes and Mr. Justice Sutherland, as I do, that such a law was no more unreasonable than it would be to bar the teaching of Latin and Greek to pupils who have not reached the eighth grade. In fact, I think the majority's reason for invalidating the Nebraska law was that it did not like it or in legal jargon that it "shocked the Court's conscience," "offended its sense of justice," or was "contrary to fundamental concepts of the English-speaking world," as the Court has sometimes said. See, e. g., *Rochin v. California*, and *Irvine v. California*. The truth is that a teacher of kindergarten, grammar school, or high school pupils no more carries into a school with him a complete right to freedom of speech and expression than an anti-Catholic or anti-Semite carries with him a complete freedom of speech and religion into a Catholic church or Jewish synagogue. Nor does a person carry with him into the United States Senate or House, or into the Supreme Court, or any other court, a complete constitutional right to go into those places contrary to their rules and speak his mind on any subject he pleases. It is a myth to say that any person has a constitutional right to say what he pleases, where he pleases, and when he pleases. Our Court has decided precisely the opposite. See, e. g., *Cox v. Louisiana*; *Adderley v. Florida*.

In my view, teachers in state-controlled public schools are hired to teach there. Although Mr. Justice McReynolds may have intimated to the contrary in *Meyer v. Nebraska*, *supra*, certainly a teacher is not paid to go into school and teach subjects the State does not hire him to teach as a part of its selected curriculum. Nor are public school students sent to the schools at public expense to broadcast political or any other views to educate and inform the public. The original idea of schools, which I do not believe is yet abandoned as worthless or out of date, was that children had not yet reached the point of experience and wisdom which enabled them to teach all of their elders. It may be that the Nation has outworn the old-fashioned slogan that "children are to be seen not heard," but one may, I hope, be permitted to harbor the thought that taxpayers send children to school on the premise that at their age they need to learn, not teach.

The true principles on this whole subject were in my judgment spoken by Mr. Justice McKenna for the Court in *Waugh v. Mississippi University*. The State had there passed a law barring students from peaceably assembling in Greek letter fraternities and providing that students who joined them could be expelled from school. This law would appear on the surface to run afoul of the First Amendment's freedom of assembly clause. The law was attacked as violative of due process and of the privileges and immunities clause and as a deprivation of property and of liberty, under the Fourteenth Amendment. It was argued that the fraternity made its members more moral, taught discipline, and inspired its members to study harder and to obey better the rules of discipline and order. This Court rejected all the "fervid" pleas of the fraternities' advocates and decided unanimously against these Fourteenth Amendment

arguments. The Court in its next to the last paragraph made this statement which has complete relevance for us today:

“It is said that the fraternity to which complainant belongs is a moral and of itself a disciplinary force. This need not be denied. But whether such membership makes against discipline was for the State of Mississippi to determine. It is to be remembered that the University was established by the State and is under the control of the State, and the enactment of the statute may have been induced by the opinion that membership in the prohibited societies divided the attention of the students and distracted from that singleness of purpose which the State desired to exist in its public educational institutions. It is not for us to entertain conjectures in opposition to the views of the State and annul its regulations upon disputable considerations of their wisdom or necessity.” (Emphasis supplied.)

It was on the foregoing argument that this Court sustained the power of Mississippi to curtail the First Amendment’s right of peaceable assembly. And the same reasons are equally applicable to curtailing in the States’ public schools the right to complete freedom of expression. Iowa’s public schools, like Mississippi’s university, are operated to give students an opportunity to learn, not to talk politics by actual speech, or by “symbolic” speech. And, as I have pointed out before, the record amply shows that public protest in the school classes against the Vietnam war “distracted from that singleness of purpose which the State [here Iowa] desired to exist in its public educational institutions.” Here the Court should accord Iowa educational institutions the same right to determine for themselves to what extent free expression should be allowed in its schools as it accorded Mississippi with reference to freedom of assembly. But even if the record were silent as to protests against the Vietnam war distracting students from their assigned class work, members of this Court, like all other citizens, know, without being told, that the disputes over the wisdom of the Vietnam war have disrupted and divided this country as few other issues ever have. Of course students, like other people, cannot concentrate on lesser issues when black armbands are being ostentatiously displayed in their presence to call attention to the wounded and dead of the war, some of the wounded and the dead being their friends and neighbors. It was, of course, to distract the attention of other students that some students insisted up to the very point of their own suspension from school that they were determined to sit in school with their symbolic armbands.

Change has been said to be truly the law of life but sometimes the old and the tried and true are worth holding. The schools of this Nation have undoubtedly contributed to giving us tranquility and to making us a more law-abiding people. Uncontrolled and uncontrollable liberty is an enemy to domestic peace. We cannot close our eyes to the fact that some of the country’s greatest problems are crimes committed by the youth, too many of school age. School discipline, like parental discipline, is an integral and important part of training our children to be good citizens—to be better citizens. Here a very small number of students have crisply and summarily refused to obey a school order designed to give pupils who want to learn the opportunity to do so. One does not need to be a prophet or the son of a prophet to know that after the Court’s holding today some students in Iowa schools and indeed in all schools will be ready, able, and willing to defy their teachers on practically all orders. This is the more unfortunate for the schools since groups of students all over the land are already running loose, conducting break-ins, sit-ins, lie-ins, and smash-ins. Many of these student groups, as is all too familiar to all who read the newspapers and watch the television news programs, have already engaged in rioting, property seizures, and destruction. They have picketed schools to force students not to cross their picket lines and have too often violently attacked earnest but frightened students who wanted an education that the pickets did not want them to get. Students engaged in such activities are apparently confident that they know far more about how to operate public school systems than do their parents, teachers, and elected school officials. It is no answer to say that the particular students here have not yet reached such high points

in their demands to attend classes in order to exercise their political pressures. Turned loose with lawsuits for damages and injunctions against their teachers as they are here, it is nothing but wishful thinking to imagine that young, immature students will not soon believe it is their right to control the schools rather than the right of the States that collect the taxes to hire the teachers for the benefit of the pupils. This case, therefore, wholly without constitutional reasons in my judgment, subjects all the public schools in the country to the whims and caprices of their loudest-mouthed, but maybe not their brightest, students. I, for one, am not fully persuaded that school pupils are wise enough, even with this Court's expert help from Washington, to run the 23,390 public school systems in our 50 States. I wish, therefore, wholly to disclaim any purpose on my part to hold that the Federal Constitution compels the teachers, parents, and elected school officials to surrender control of the American public school system to public school students. I dissent.

MR. JUSTICE HARLAN, dissenting.

I certainly agree that state public school authorities in the discharge of their responsibilities are not wholly exempt from the requirements of the Fourteenth Amendment respecting the freedoms of expression and association. At the same time I am reluctant to believe that there is any disagreement between the majority and myself on the proposition that school officials should be accorded the widest authority in maintaining discipline and good order in their institutions. To translate that proposition into a workable constitutional rule, I would, in cases like this, cast upon those complaining the burden of showing that a particular school measure was motivated by other than legitimate school concerns—for example, a desire to prohibit the expression of an unpopular point of view, while permitting expression of the dominant opinion.

Finding nothing in this record which impugns the good faith of respondents in promulgating the armband regulation, I would affirm the judgment below.

**PENNSYLVANIA ASSOCIATION FOR RETARDED CHILDREN  
V. COMMONWEALTH OF PENNSYLVANIA, 334 F. SUPP.  
12471 (1971)**

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**UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF  
PENNSYLVANIA  
DECIDED OCTOBER 8, 1971**

And now, this 7th day of October, 1971, the parties having consented through their counsel to certain findings and conclusions and to the relief to be provided to the named plaintiffs and to the members of their class, the provisions of the Consent Agreement between the parties set out below are hereby approved and adopted and it is hereby so ordered.

And for the reasons set out below it is ordered that defendants the Commonwealth of Pennsylvania, the Secretary of the Department of Education, the State Board of Education, the Secretary of the Department of Public Welfare, the named defendant school districts and intermediate units and each of the School Districts and Intermediate Units in the Commonwealth of Pennsylvania, their officers, employees, agents and successors be and they hereby are enjoined as follows:

- (a) from applying Section 1304 of the Public School Code of 1949, 24 Purd. Stat. Sec. 13-1304, so as to postpone or in any way to deny to any mentally retarded child access to a free public program of education and training;
- (b) from applying Section 1326 or Section 1330(2) of the School Code of 1949, 24 Purd. Stat. Secs. 13-1326, 13-1330(2) so as to postpone, to terminate or in any way to deny

to any mentally retarded child access to a free public program of education and training;

- (c) from applying Section 1371(1) of the School Code of 1949, 24 Purd. Stat. Sec. 13-1371(1) so as to deny to any mentally retarded child access to a free public program of education and training;
- (d) from applying Section 1376 of the School Code of 1949, 24 Purd. Stat. Sec. 13-1376, so as to deny tuition or tuition and maintenance to any mentally retarded person except on the same terms as may be applied to other exceptional children, including brain damaged children generally;
- (e) from denying homebound instruction under Section 1372(3) of the School Code of 1949, 24 Purd. Stat. Sec. 13-1372(3) to any mentally retarded child merely because no physical disability accompanies the retardation or because retardation is not a short-term disability.
- (f) from applying Section 1375 of the School Code of 1949, 24 Purd. Stat. Sec. 13-1375, so as to deny to any mentally retarded child access to a free public program of education and training;
- (g) to immediately re-evaluate the named plaintiffs, and to accord to each of them, as soon as possible but in no event later than October 13, 1971, access to a free public program of education and training appropriate to his learning capacities;
- (h) to provide, as soon as possible but in no event later than September 1, 1972, to every retarded person between the ages of six and twenty-one years as of the date of this Order and thereafter, access to a free public program of education and training appropriate to his learning capacities;
- (i) to provide, as soon as possible but in no event later than September 1, 1972, wherever defendants provide a preschool program of education and training for children aged less than six years of age, access to a free public program of education and training appropriate to his learning capacities to every mentally retarded child of the same age.

The above Orders are entered as interim Orders only and without prejudice, pending notice, as described in Paragraph 3 below, to the class of plaintiffs and to the class of defendants determined in Paragraphs 1 and 2 below.

Any member of the classes so notified who may wish to be heard before permanent Orders are entered shall enter his appearance and file a written statement of objections with the Clerk of this Court on or before October 20, 1971. Any objections so entered will be heard by the Court at 10 o'clock on October 22, 1971.

### CONSENT AGREEMENT

The Complaint in this action having been filed on January 7, 1971, alleging the unconstitutionality of certain Pennsylvania statutes and practices under the Equal Protection Clause of the Fourteenth Amendment and certain pendent claims; a three-judge court having been constituted, after motion, briefing and argument thereon, on May 26, 1971; an Order and Stipulation having been entered on June 18, 1971, requiring notice and a due process hearing before the educational assignment of any retarded child may be changed; and evidence having been received at preliminary hearing on August 12, 1971;

Now, therefore, this 7th of October 1971, the parties being desirous of effecting an amicable settlement of this action, the parties by their counsel agree, subject to the approval and Order of this Court, as follows:

#### I.

1. This action may and hereby shall be maintained by plaintiffs as a class action on behalf of all mentally retarded persons, residents of the Commonwealth of

Pennsylvania, who have been, are being, or may be denied access to a free public program of education and training while they are, or were, less than twenty-one years of age.

It is expressly understood, subject to the provisions of Paragraph 44 below, that the immediate relief hereinafter provided shall be provided to those persons less than twenty-one years of age as of the date of the Order of the Court herein.

2. This action may and hereby shall be maintained against defendant school districts and intermediate units as a class action against all of the School Districts and Intermediate Units of the Commonwealth of Pennsylvania.
3. Pursuant to Rule 23, Fed. R. Civ. P., notice of the extent of the Consent Agreement and the proposed Order approving this Consent Agreement, in the form set out in Appendix A, shall be given as follows:
  - (a) to the class of defendants, by the Secretary of Education, by mailing immediately a copy of this proposed Order and Consent Agreement to the Superintendent and the Director of Special Education of each School District and Intermediate Unit in the Commonwealth of Pennsylvania;
  - (b) to the class of plaintiffs, (i) by the Pennsylvania Association for Retarded Children, by immediately mailing a copy of this proposed Order and Consent Agreement to each of its Chapters in fifty-four counties of Pennsylvania; (ii) by the Department of Justice, by causing an advertisement in the form set out in Appendix A, to be placed in one newspaper of general circulation in each County in the Commonwealth; and (iii) by delivery of a joint press release of the parties to the television and radio stations, newspapers, and wire services in the Commonwealth.

## II.

4. Expert testimony in this action indicates that all mentally retarded persons are capable of benefiting from a program of education and training; that the greatest number of retarded persons, given such education and training, are capable of achieving self-sufficiency, and the remaining few, with such education and training, are capable of achieving some degree of self-care; that the earlier such education and training begins, the more thoroughly and the more efficiently a mentally retarded person will benefit from it; and, whether begun early or not, that a mentally retarded person can benefit at any point in his life and development from a program of education and training.
5. The Commonwealth of Pennsylvania has undertaken to provide a free public education to all of its children between the ages of six and twenty-one years, and, even more specifically, has undertaken to provide education and training for all of its exceptional children.
6. Having undertaken to provide a free public education to all of its children, including its exceptional children, the Commonwealth of Pennsylvania may not deny any mentally retarded child access to a free public program of education and training.
7. It is the Commonwealth's obligation to place each mentally retarded child in a free, public program of education and training appropriate to the child's capacity, within the context of a presumption that, among the alternative programs of education and training required by statute to be available, placement in a regular public school class is preferable to placement in a special public school class and placement in a special public school class is preferable to placement in any other type of program of education and training.

### III.

#### Section 1304

8. Section 1304 of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1304, provides:

“Admission of beginners

The admission of beginners to the public schools shall be confined to the first two weeks of the annual school term in districts operating on an annual promotion basis, and to the first two weeks of either the first or the second semester of the school term to districts operating on a semi-annual promotion basis. Admission shall be limited to beginners who have attained the age of five years and seven months before the first day of September if they are to be admitted in the fall, and to those who have attained the age of five years and seven months before the first day of February if they are to be admitted at the beginning of the second semester. The board of school directors of any school district may admit beginners who are less than five years and seven months of age, in accordance with standards prescribed by the State Board of Education. The board of school directors may refuse to accept or retain beginners who have not attained a mental age of five years, as determined by the supervisor of special education or a properly certificated public school psychologist in accordance with standards prescribed by the State Board of Education.

“The term ‘beginners,’ as used in this section, shall mean any child that should enter the lowest grade of the primary school or the lowest primary class above the kindergarten level.”

9. The Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and Intermediate Units in the Commonwealth of Pennsylvania, each of them, for themselves, their officers, employees, agents, and successors agree that they shall cease and desist from applying Section 1304 so as to postpone or in any way to deny access to a free public program of education and training to any mentally retarded child.
10. The Attorney General of the Commonwealth of Pennsylvania (hereinafter “the Attorney General”) agrees to issue an Opinion declaring that Section 1304 means only that a school district may refuse to accept into or to retain in the lowest grade of the regular primary school or the lowest regular primary class above the kindergarten level, any child who has not attained a mental age of five years.
11. The Attorney General of the Commonwealth of Pennsylvania shall issue an Opinion thus construing Section 1304, and the State Board of Education (hereinafter “the Board”) shall issue regulations to implement said construction and to supersede Sections 5-200 of the Pupil Attendance Regulations, copies of which Opinion and Regulations shall be filed with the Court and delivered to counsel for plaintiffs on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.
12. The aforementioned Opinion and Regulations shall (a) provide for notice and an opportunity for a hearing as set out in this Court’s Order of June 18, 1971, before a child’s admission as a beginner in the lowest grade of a regular primary school, or the lowest regular primary class above kindergarten, may be postponed; (b) require the automatic re-evaluation every two years of any educational assignment other than to a regular class, and (c) provide for an annual re-evaluation at the request of the child’s parent or guardian, and (d) provide upon each such re-evaluation for notice and an opportunity for a hearing as set out in this Court’s Order of June 18, 1971.
13. The aforementioned Opinion and Regulations shall also require the timely placement of any child whose admission to regular primary school or to the lowest regular

primary class above kindergarten is postponed, or who is not retained in such school or class, in a free public program of education and training pursuant to Sections 1371 through 1382 of the School Code of 1949, as amended 24 Purd. Stat. Sec. 13-1371 through Sec. 13-1382.

### Section 1326

14. Section 1326 of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1326, provides:
 

“Definitions: The term ‘compulsory school age,’ as hereinafter used, shall mean the period of a child’s life from the time the child’s parents elect to have the child enter school, which shall be not later than at the age of eight (8) years, until the age of seventeen (17) years. The term shall not include any child who holds a certificate of graduation from a regularly accredited senior high school.”
15. The Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and Intermediate Units in the Commonwealth of Pennsylvania, each of them, for themselves, their officers, employees, agents and successors agree that they shall cease and desist from applying Section 1326 so as to postpone, to terminate, or in any way to deny access to a free public program of education and training to any mentally retarded child.
16. The Attorney General agrees to issue an Opinion declaring that Section 1326 means only that parents of a child have a compulsory duty while the child is between eight and seventeen years of age to assure his attendance in a program of education and training; and Section 1326 does not limit the ages between which a child must be granted access to a free, public program of education and training. Defendants are bound by Section 1301 of the School Code of 1949, 24 Purd. Stat. Sec. 13-1301, to provide free public education to all children six to twenty-one years of age. In the event that a parent elects to exercise the right of a child six through eight years and/or seventeen through twenty-one years of age to a free public education, defendants may not deny such child access to a program of education and training. Furthermore, if a parent does not discharge the duty of compulsory attendance with regard to any mentally retarded child between eight and seventeen years of age, defendants must and shall take those steps necessary to compel the child’s attendance pursuant to Section 1327 of the School Code of 1949, 24 Purd. Stat. Sec. 13-1327, and related provisions of the School Code, and to the relevant regulations with regard to compulsory attendance promulgated by the Board.
17. The Attorney General shall issue an Opinion thus construing Section 1326, and related Sections, and the Board shall promulgate Regulations to implement said construction, copies of which Opinion and Regulations shall be filed with the Court and delivered to plaintiffs’ counsel on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.

### Section 1330(2)

18. Section 1330(2) of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1330(2) provides:

“Exceptions to compulsory attendance.

The provisions of this act requiring regular attendance shall not apply to any child who:

. . .

- (2) Has been examined by an approved mental clinic or by a person certified as a public school psychologist or psychological examiner, and has been found to be unable to profit from fur-

ther public school attendance, and who has been reported to the board of school directors and excused, in accordance with regulations prescribed by the State Board of Education.”

19. The Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and Intermediate Units, each of them, for themselves, their officers, employees, agents, and successors agree that they shall cease and desist from applying Section 1330(2) so as to terminate or in any way to deny access to a free public program of education and training to any mentally retarded child.
20. The Attorney General agrees to issue an Opinion declaring that Section 1330(2) means only that a parent may be excused from liability under the compulsory attendance provisions of the School Code when, with the approval of the local school board and the Secretary of Education and a finding by an approved clinic or public school psychologist or psychological examiner, the parent elects to withdraw the child from attendance. Section 1330(2) may not be invoked by defendants, contrary to the parents' wishes, to terminate or in any way to deny access to a free public program of education and training to any mentally retarded child. Furthermore, if a parent does not discharge the duty of compulsory attendance with regards to any mentally retarded child between eight and seventeen years of age, defendants must and shall take those steps necessary to compel the child's attendance pursuant to Section 1327 and related provisions of the School Code and to the relevant regulations with regard to compulsory attendance promulgated by the Board.
21. The Attorney General shall issue an Opinion so construing Section 1330(2) and related provisions and the Board shall promulgate Regulations to implement said construction and to supersede Section 5-400 of the Pupil Attendance Regulations, a copy of which Opinion and Regulations shall be filed with the Court and delivered to counsel for plaintiff on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.

### **Pre-School Education**

22. Defendants, the Commonwealth of Pennsylvania, the Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and Intermediate Units in the Commonwealth of Pennsylvania, the Secretary of Public Welfare, each of them, for themselves, their officers, employees, agents and successors agree that they shall cease and desist from applying Section 1371(1) of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1371(1) so as to deny access to a free public program of education and training to any mentally retarded child, and they further agree that wherever the Department of Education through its instrumentalities, the School Districts and Intermediate Units, or the Department of Public Welfare through any of its instrumentalities provides a pre-school program of education and training to children below the age of six, they shall also provide a program of education and training appropriate to their learning capacities to all retarded children of the same age.
23. Section 1371(1) of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1371(1), provides:
 

“Definition of exceptional children; reports; examination

  - (1) The term ‘exceptional children’ shall mean children of school age who deviate from the average in physical, mental, emotional or social characteristics to such an extent that they require special educational facilities or services and shall include all children in detention homes.”
24. The Attorney General agrees to issue an Opinion declaring that the phrase “children of school age” as used in Section 1371 means children aged six to twenty-one and

also, whenever the Department of Education through any of its instrumentalities, the local School District, Intermediate Unit, or the Department of Public Welfare, through any of its instrumentalities, provides a pre-school program of education or training for children below the age of six, whether kindergarten or however so called, means all mentally retarded children who have reached the age less than six at which pre-school programs are available to others.

25. The Attorney General shall issue an Opinion thus construing Section 1371 and the Board shall issue regulations to implement said construction, copies of which Opinion and Regulations shall be filed with the Court and delivered to counsel for plaintiffs on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.

### **Tuition and Tuition and Maintenance**

26. The Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and Intermediate Units in the Commonwealth of Pennsylvania, each of them, for themselves, their officers, employees, agents and successors agree that they shall cease and desist from applying Section 1376 of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1376, so as to deny tuition or tuition and maintenance to any mentally retarded person.
27. The Attorney General agrees to issue an Opinion, and the Council of Basic Education of the State Board of Education agrees to promulgate Regulations, construing the term "brain damage" as used in Section 1376 and as defined in the Board's "Criteria for Approval . . . of Reimbursement" so as to include thereunder all mentally retarded persons, thereby making available to them tuition for day school and tuition and maintenance for residential school up to the maximum sum available for day school or residential school, whichever provides the more appropriate program of education and training. Copies of the aforesaid Opinion and Regulations shall be filed with the Court and delivered to counsel for plaintiff on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.
28. Defendants may deny or withdraw payments of tuition or tuition and maintenance whenever the school district or intermediate unit in which a mentally retarded child resides provides a program of special education and training appropriate to the child's learning capacities into which the child may be placed.
29. The decision of defendants to deny or withdraw payments of tuition or tuition and maintenance shall be deemed a change in educational assignment as to which notice shall be given and an opportunity for a hearing afforded as set out in this Court's order of June 18, 1971.

### **Homebound Instruction**

30. Section 1372(3) of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1372(3), provides in relevant part:

"Standards; plans; special classes or schools

. . .

- (3) Special Classes or Schools Established and Maintained by School Districts.

. . . If . . . it is not feasible to form a special class in any district or to provide such education for any [exceptional] child in the public schools of the district, the board of school directors of the district shall secure such proper education and training outside the public schools of the district or in special institutions, or by providing for teaching the child in his home. . . ."

31. The Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and

Intermediate Units in the Commonwealth of Pennsylvania, each of them, for themselves, their officials, employees, agents and successors agree that they shall cease and desist from denying homebound instruction under Section 1372(3) to mentally retarded children merely because no physical disability accompanies the retardation or because retardation is not a short-term disability.

32. The Attorney General agrees to issue an Opinion declaring that a mentally retarded child, whether or not physically disabled, may receive homebound instruction and the State Board of Education and/or the Secretary of Education agrees to promulgate revised Regulations and forms in accord therewith, superseding the "Homebound Instruction Manual" (1970) insofar as it concerns mentally retarded children.
33. The aforesaid Opinion and Regulations shall also provide:
  - (a) that homebound instruction is the least preferable of the programs of education and training administered by the Department of Education and a mentally retarded child shall not be assigned to it unless it is the program most appropriate to the child's capacities;
  - (b) that homebound instruction shall involve education and training for at least five hours a week;
  - (c) that an assignment to homebound instruction shall be re-evaluated not less than every three months, and notice of the re-evaluation and an opportunity for a hearing thereon shall be accorded to the parent or guardian, as set out in the Order of this Court dated June 18, 1971;
34. Copies of the aforementioned Opinion and Regulations shall be filed with the Court and delivered to counsel for plaintiffs on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.

### Section 1375

35. Section 1375 of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 13-1375, provides:
 

"Uneducable children provided for by Department of Public Welfare."

"The State Board of Education shall establish standards for temporary or permanent exclusion from the public school of children who are found to be uneducable and untrainable in the public schools. Any child who is reported by a person who is certified as a public school psychologist as being uneducable and untrainable in the public schools, may be reported by the board of school directors to the Superintendent of Public Instruction and when approved by him, in accordance with the standards of the State Board of Education, shall be certified to the Department of Public Welfare as a child who is uneducable and untrainable in the public schools. When a child is thus certified, the public schools shall be relieved of the obligation of providing education or training for such child. The Department of Public Welfare shall thereupon arrange for the care, training and supervision of such child in a manner not inconsistent with the laws governing mentally defective individuals."
36. Defendants the Commonwealth of Pennsylvania, the Secretary of Education, the State Board of Education, the named School Districts and Intermediate Units, on their own behalf and on behalf of all School Districts and Intermediate Units in the Commonwealth of Pennsylvania, and the Secretary of Public Welfare, each of them, for themselves, their officers, employees, agents and successors agree that they shall cease and desist from applying Section 1375 so as to deny access to a free public program of education and training to any mentally retarded child.
37. The Attorney General agrees to issue an Opinion declaring that since all children are capable of benefiting from a program of education and training, Section 1375 means

that insofar as the Department of Public Welfare is charged to “arrange for the care, training and supervision” of a child certified to it, the Department of Public Welfare must provide a program of education and training appropriate to the capacities of that child.

38. The Attorney General agrees to issue an Opinion declaring that Section 1375 means that when it is found, on the recommendation of a public school psychologist and upon the approval of the local board of school directors and the Secretary of Education, as reviewed in the due process hearing as set out in the Order of this Court dated June 18, 1971, that a mentally retarded child would benefit more from placement in a program of education and training administered by the Department of Public Welfare than he would from any program of education and training administered by the Department of Education, he shall be certified to the Department of Public Welfare for placement in a program of education and training.
39. To assure that any program of education and training administered by the Department of Public Welfare shall provide education and training appropriate to a child’s capacities the plan referred to in Paragraph 49 below shall specify, inter alia,
  - (a) the standards for hours of instruction, pupil-teacher ratios, curriculum, facilities, and teacher qualifications that shall be met in programs administered by the Department of Public Welfare;
  - (b) the standards which will qualify any mentally retarded person who completes a program administered by the Department of Public Welfare for a High School Certificate or a Certificate of Attendance as contemplated in Sections 8-132 and 8-133 of the Special Education Regulations;
  - (c) the reports which will be required in the continuing discharge by the Department of Education of its duty under Section 1302(1) of the Administrative Code of 1929, as amended, 71 P.S. Sec. 352(1), to inspect and to require reports of programs of education and training administered by the Department of Public Welfare, which reports shall include, for each child in such programs an annual statement of educational strategy (as defined in Section 8-123 of the Special Education Regulations) for the coming year and at the close of the year an evaluation of that strategy;
  - (d) that the Department of Education shall exercise the power under Section 1926 of the School Code of 1949, as amended, 24 Purd. Stat. Sec. 19-1926 to supervise the programs of education and training in all institutions wholly or partly supported by the Department of Public Welfare, and the procedures to be adopted therefor.
40. The Attorney General agrees to issue an Opinion so construing Section 1375 and the Board to promulgate Regulations implementing said construction, which Opinion and Regulations shall also provide:
  - (a) that the Secretary of Education shall be responsible for assuring that every mentally retarded child is placed in a program of education and training appropriate to his learning capacities, and to that end, by Rules of Procedure requiring that reports of the annual census and evaluation, under Section 1371(2) of the School Code of 1949, as amended, 24 Purd. Stat. 13-1371(2), be made to him, he shall be informed as to the identity, condition, and educational status of every mentally retarded child within the various school districts.
  - (b) that should it appear that the provisions of the School Code relating to the proper education and training of mentally retarded children have not been complied with or the needs of the mentally retarded child are not being adequately served in any program administered by the Department of Public Welfare, the Department of Education shall provide such education and training pursuant to Section 1372(5) of the School Code of 1949, as amended, 21 Purd. Stat. Sec. 13-1372(5).

- (c) that the same right to notice and an opportunity for a hearing as is set out in the Order of this Court of June 18, 1971, shall be accorded on any change in educational assignment among the programs of education and training administered by the Department of Public Welfare.
  - (d) that not less than every two years the assignment of any mentally retarded child to a program of education and training administered by the Department of Public Welfare shall be re-evaluated by the Department of Education and upon such re-evaluation, notice and an opportunity to be heard shall be accorded as set out in the Order of this Court, dated June 18, 1971.
40. Copies of the aforesaid Opinion and Regulations shall be filed with the Court and delivered to counsel for plaintiffs on or before October 25, 1971, and they shall be issued and promulgated respectively on or before October 27, 1971.

#### IV.

- 41. Each of the named plaintiffs shall be immediately re-evaluated by defendants and, as soon as possible, but in no event later than October 13, 1971, shall be accorded access to a free public program of education and training appropriate to his learning capacities.
- 42. Every retarded person between the ages of six and twenty-one years as of the date of this Order and thereafter shall be provided access to a free public program of education and training appropriate to his capacities as soon as possible but in no event later than September 1, 1972.
- 43. Wherever defendants provide a pre-school program of education and training for children less than six years of age, whether kindergarten or howsoever called, every mentally retarded child of the same age as of the date of this Order and hereafter shall be provided access to a free public program of education and training appropriate to his capacities as soon as possible but in no event later than September 1, 1972.
- 44. The parties explicitly reserve their right to hearing and argument on the question of the obligation of defendants to accord compensatory educational opportunity to members of the plaintiff class of whatever age who were denied access to a free public program of education and training without notice and without a due process hearing while they were aged six years to twenty-one years, for a period equal to the period of such wrongful denial.
- 45. To implement the aforementioned relief and to assure that it is extended to all members of the class entitled to it, Dr. Herbert Goldstein and Dennis E. Haggerty, Esquire are appointed Masters for the purpose of overseeing a process of identification, evaluation, notification, and compliance hereinafter described.
- 46. Notice of this Order and of the Order of June 18, 1971, in form to be agreed upon by counsel for the parties, shall be given by defendants to the parents and guardian of every mentally retarded person, and of every person thought by defendants to be mentally retarded, of the ages specified in Paragraphs 42 and 43 above, now resident in the Commonwealth of Pennsylvania, who while he was aged four years to twenty-one years was not accorded access to a free public program of education and training, whether as a result of exclusion, postponement, excusal, or in any other fashion, formal or informal.
- 47. Within thirty days of the date of this Order, defendants shall formulate and shall submit to the Masters for their approval a satisfactory plan to identify, locate, evaluate and give notice of all the persons described in the foregoing paragraph, and to

identify all persons described in Paragraph 44, which plan shall include, but not be limited to, a search of the records of the local school districts, of the intermediate units, of County MH/MR units, of the State Schools and Hospitals, including the waiting lists for admission thereto, and of interim care facilities, and, to the extent necessary, publication in newspapers and the use of radio and television in a manner calculated to reach the persons described in the foregoing paragraph. A copy of the proposed plan shall be delivered to counsel for plaintiffs who shall be accorded a right to be heard thereon.

48. Within ninety days of the date of this Order, defendants shall identify and locate all persons described in paragraph 46 above, give them notice and provide for their evaluation, and shall report to the Masters the names, circumstances, the educational histories and the educational diagnosis of all persons so identified.
49. By February 1, 1972, defendants shall formulate and submit to the Masters for their approval a plan, to be effectuated by September 1, 1972, to commence or recommence a free public program of education and training for all mentally retarded persons described in Paragraph 46 above and aged between four and twenty-one years as of the date of this Order, and for all mentally retarded persons of such ages hereafter. The plan shall specify the range of programs of education and training, their kind and number, necessary to provide an appropriate program of education and training to all mentally retarded children, where they shall be conducted, arrangements for their financing, and, if additional teachers are found to be necessary, the plan shall specify recruitment, hiring, and training arrangements. The plan shall specify such additional standards and procedures, including but not limited to those specified in Paragraph 39 above, as may be consistent with this Order and necessary to its effectuation. A copy of the proposed plan will be delivered to counsel for plaintiffs who shall be accorded a right to be heard thereon.
50. If by September 1, 1972, any local school district or intermediate unit is not providing a free public education to all mentally retarded persons 4 to 21 years of age within its responsibility, the Secretary of Education, pursuant to Section 1372(5) of the Public School Code of 1949, 24 Purd. Stat. 1372(5) shall directly provide, maintain, administer, supervise, and operate programs for the education and training of these children.
51. The Masters shall hear any members of the plaintiff class who may be aggrieved in the implementation of this Order.
52. The Masters shall be compensated by defendants.
53. This Court shall retain jurisdiction of the matter until it has heard the final report of the Masters on or before October 15, 1972.

## APPENDIX

### NOTICE

The bracketed portions below will appear in the Notice but not in the newspaper advertisement.

To: (1) All parents and guardians of mentally retarded persons resident in the Commonwealth of Pennsylvania

[(2) All School Districts and Intermediate Units in the Commonwealth of Pennsylvania]

Notice is hereby given (1) that a proposed Order approving a Consent Agreement and issuing certain Injunctions in Pennsylvania Association for Retarded Children et al. v. Commonwealth of Pennsylvania, E.D. Pa., C.A. No. 71-42, is on file with the Clerk of the United

States District Court and available for inspection there and in the offices of the Superintendent of each School District and Intermediate Unit in the Commonwealth of Pennsylvania and of each County Chapter of the Pennsylvania Association for Retarded Children.

(2) That the above mentioned action, on behalf of all mentally retarded persons who have been denied access to a free, public program of education and training, was begun on January 7, 1971, raising certain procedural and substantive claims against the laws and practices of the Commonwealth of Pennsylvania, the Department of Education, the Department of Public Welfare, 12 named School Districts and Intermediate Units and the class of all School Districts and Intermediate Units in the Commonwealth, because of their failure to provide a free public education to all mentally retarded children.

(3) That the proposed Order would approve a Consent Agreement entered into by the named parties on October 7, 1971, providing that each mentally retarded child shall be accorded access to a program of education and training, that notice and an opportunity for a hearing shall be accorded before any change in the educational assignment of mentally retarded children, that certain sections of the Public School Code shall be so construed, and that certain Regulations so providing shall be promulgated thereunder, and that a Special Master shall be appointed to oversee the identification by defendants of all mentally retarded children who have been denied an education and the formulation and implementation by defendants of a plan to provide a free, public program of education and training to all mentally retarded children as soon as possible and no later than September 1, 1972, and would also issue certain Injunctions consistent with the Consent Agreement.

(4) That the parents or guardian of any mentally retarded child [or any school district or intermediate unit] who may wish to make an objection to the Proposed Order approving the Consent Agreement may do so by entering an appearance and filing a statement of objections with the Clerk of the United States District Court for the Eastern District of Pennsylvania, 9th and Chestnut Streets, Philadelphia, on or before October 20, 1971. Hearing thereon shall be held before the Court at 10:00 o'clock A.M., October 22, 1971.

## **SWANN V. CHARLOTTE-MECKLENBURG BOARD OF EDUCATION, 402 U.S. 1 (1971)**

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SUPREME COURT OF THE UNITED STATES  
CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FOURTH  
CIRCUIT

ARGUED OCTOBER 12, 1970. DECIDED APRIL 20, 1971.

### **Syllabus**

The Charlotte-Mecklenburg school system, which includes the city of Charlotte, North Carolina, had more than 84,000 students in 107 schools in the 1968-1969 school year. Approximately 29 [percent] (24,000) of the pupils were Negro, about 14,000 of whom attended 21 schools that were at least 99 [percent] Negro. This resulted from a desegregation plan approved by the District Court in 1965, at the commencement of this litigation. In 1968, petitioner Swann moved for further relief based on *Green v. County School Board*, which required school boards to

“come forward with a plan that promises realistically to work . . . now . . . until it is clear that state-imposed segregation has been completely removed.”

The District Court ordered the school board in April 1969 to provide a plan for faculty and student desegregation. Finding the board's submission unsatisfactory, the District Court

appointed an expert to submit a desegregation plan. In February 1970, the expert and the board presented plans, and the court adopted the board's plan, as modified, for the junior and senior high schools, and the expert's proposed plan for the elementary schools. The Court of Appeals affirmed the District Court's order as to faculty desegregation and the secondary school plans, but vacated the order respecting elementary schools, fearing that the provisions for pairing and grouping of elementary schools would unreasonably burden the pupils and the board. The case was remanded to the District Court for reconsideration and submission of further plans. This Court granted certiorari and directed reinstatement of the District Court's order pending further proceedings in that court. On remand the District Court received two new plans, and ordered the board to adopt a plan, or the expert's plan would remain in effect. After the board "acquiesced" in the expert's plan, the District Court directed that it remain in effect.

Held:

1. Today's objective is to eliminate from the public schools all vestiges of state-imposed segregation that was held violative of equal protection guarantees by *Brown v. Board of Education*, in 1954.
2. In default by the school authorities of their affirmative obligation to proffer acceptable remedies, the district courts have broad power to fashion remedies that will assure unitary school systems.
3. Title IV of the Civil Rights Act of 1964 does not restrict or withdraw from the federal courts their historic equitable remedial powers. The proviso in 42 U.S.C. [Section] 2000c-6 was designed simply to foreclose any interpretation of the Act as expanding the existing powers of the federal courts to enforce the Equal Protection Clause.
4. Policy and practice with regard to faculty, staff, transportation, extracurricular activities, and facilities are among the most important indicia of a segregated system, and the first remedial responsibility of school authorities is to eliminate invidious racial distinctions in those respects. Normal administrative practice should then produce schools of like quality, facilities, and staffs.
5. The Constitution does not prohibit district courts from using their equity power to order assignment of teachers to achieve a particular degree of faculty desegregation. *United States v. Montgomery County Board of Education*, was properly followed by the lower courts in this case.
6. In devising remedies to eliminate legally imposed segregation, local authorities and district courts must see to it that future school construction and abandonment are not used and do not serve to perpetuate or reestablish a dual system.
7. Four problem areas exist on the issue of student assignment:
  - (1) Racial quotas. The constitutional command to desegregate schools does not mean that every school in the community must always reflect the racial composition of the system as a whole; here the District Court's very limited use of the racial ratio—not as an inflexible requirement, but as a starting point in shaping a remedy—was within its equitable discretion.
  - (2) One-race schools. While the existence of a small number of one-race, or virtually one-race, schools does not, in itself, denote a system that still practices segregation by law, the court should scrutinize such schools and require the school authorities to satisfy the court that the racial composition does not result from present or past discriminatory action on their part. An optional majority-to-minority transfer provision has long been recognized as a useful part of a desegregation plan, and to be effective such arrangement must provide the transferring student free transportation and available space in the school to which he desires to move.
  - (3) Attendance zones. The remedial altering of attendance zones is not, as an interim corrective measure, beyond the remedial powers of a district court. A student

assignment plan is not acceptable merely because it appears to be neutral, for such a plan may fail to counteract the continuing effects of past school segregation. The pairing and grouping of noncontiguous zones is a permissible tool; judicial steps going beyond contiguous zones should be examined in light of the objectives to be sought. No rigid rules can be laid down to govern conditions in different localities.

- (4) Transportation. The District Court's conclusion that assignment of children to the school nearest their home serving their grade would not effectively dismantle the dual school system is supported by the record, and the remedial technique of requiring bus transportation as a tool of school desegregation was within that court's power to provide equitable relief. An objection to transportation of students may have validity when the time or distance of travel is so great as to risk either the health of the children or significantly impinge on the educational process; limits on travel time will vary with many factors, but probably with none more than the age of the students.

8. Neither school authorities nor district courts are constitutionally required to make year-by-year adjustments of the racial composition of student bodies once a unitary system has been achieved.

431 F.2d 138, affirmed as to those parts in which it affirmed the District Court's judgment. The District Court's order of August 7, 1970, is also affirmed.

### Opinions

BURGER, C.J., delivered the opinion for a unanimous Court.

BURGER, Opinion of the Court

MR. CHIEF JUSTICE BURGER delivered the opinion of the Court.

We granted certiorari in this case to review important issues as to the duties of school authorities and the scope of powers of federal courts under this Court's mandates to eliminate racially separate public schools established and maintained by state action. *Brown v. Board of Education* (1954) (*Brown I*).

This case and those argued with it arose in States having a long history of maintaining two sets of schools in a single school system deliberately operated to carry out a governmental policy to separate pupils in schools solely on the basis of race. That was what *Brown v. Board of Education* was all about. These cases present us with the problem of defining in more precise terms than heretofore the scope of the duty of school authorities and district courts in implementing *Brown I* and the mandate to eliminate dual systems and establish unitary systems at once. Meanwhile, district courts and courts of appeals have struggled in hundreds of cases with a multitude and variety of problems under this Court's general directive. Understandably, in an area of evolving remedies, those courts had to improvise and experiment without detailed or specific guidelines. This Court, in *Brown I*, appropriately dealt with the large constitutional principles; other federal courts had to grapple with the flinty, intractable realities of day-to-day implementation of those constitutional commands. Their efforts, of necessity, embraced a process of "trial and error," and our effort to formulate guidelines must take into account their experience.

### I

The Charlotte-Mecklenburg school system, the 43d largest in the Nation, encompasses the city of Charlotte and surrounding Mecklenburg County, North Carolina. The area is large—550 square miles—spanning roughly 22 miles east-west and 36 miles north-south. During the 1968-1969 school year, the system served more than 84,000 pupils in 107 schools. Approximately 71 [percent] of the pupils were found to be white, and 29 [percent] Negro. As of June,

1969, there were approximately 24,000 Negro students in the system, of whom 21,000 attended schools within the city of Charlotte. Two-thirds of those 21,000—approximately 14,000 Negro students—attended 21 schools which were either totally Negro or more than 99 [percent] Negro.

This situation came about under a desegregation plan approved by the District Court at the commencement of the present litigation in 1965, 243 F.Supp. 667 (WDNC), *aff'd*, 369 F.2d 29 (1966), based upon geographic zoning with a free transfer provision. The present proceedings were initiated in September, 1968, by petitioner Swann's motion for further relief based on *Green v. County School Board* (1968), and its companion cases. All parties now agree that in 1969 the system fell short of achieving the unitary school system that those cases require.

The District Court held numerous hearings and received voluminous evidence. In addition to finding certain actions of the school board to be discriminatory, the court also found that residential patterns in the city and county resulted in part from federal, state, and local government action other than school board decisions. School board action based on these patterns, for example, by locating schools in Negro residential areas and fixing the size of the schools to accommodate the needs of immediate neighborhoods, resulted in segregated education. These findings were subsequently accepted by the Court of Appeals.

In April, 1969, the District Court ordered the school board to come forward with a plan for both faculty and student desegregation. Proposed plans were accepted by the court in June and August, 1969, on an interim basis only, and the board was ordered to file a third plan by November, 1969. In November, the board moved for an extension of time until February, 1970, but when that was denied the board submitted a partially completed plan. In December, 1969, the District Court held that the board's submission was unacceptable and appointed an expert in education administration, Dr. John Finger, to prepare a desegregation plan. Thereafter in February, 1970, the District Court was presented with two alternative pupil assignment plans—the finalized "board plan" and the "Finger plan."

**The Board Plan.** As finally submitted, the school board plan closed seven schools and reasigned their pupils. It restructured school attendance zones to achieve greater racial balance but maintained existing grade structures and rejected techniques such as pairing and clustering as part of a desegregation effort. The plan created a single athletic league, eliminated the previously racial basis of the school bus system, provided racially mixed faculties and administrative staffs, and modified its free-transfer plan into an optional majority-to-minority transfer system.

The board plan proposed substantial assignment of Negroes to nine of the system's 10 high schools, producing 17 [percent] to 36 [percent] Negro population in each. The projected Negro attendance at the 10th school, Independence, was 2 [percent]. The proposed attendance zones for the high schools were typically shaped like wedges of a pie, extending outward from the center of the city to the suburban and rural areas of the county in order to afford residents of the center city area access to outlying schools.

As for junior high schools, the board plan rezoned the 21 school areas so that, in 20, the Negro attendance would range from 0 [percent] to 38 [percent]. The other school, located in the heart of the Negro residential area, was left with an enrollment of 90 [percent] Negro.

The board plan with respect to elementary schools relied entirely upon gerrymandering of geographic zones. More than half of the Negro elementary pupils were left in nine schools that were 86 [percent] to 100 [percent] Negro; approximately half of the white elementary pupils were assigned to schools 86 [percent] to 100 [percent] white.

**The Finger Plan.** The plan submitted by the court-appointed expert, Dr. Finger, adopted the school board zoning plan for senior high schools with one modification: it required that an additional 300 Negro students be transported from the Negro residential area of the city to the nearly all-white Independence High School.

The Finger plan for the junior high schools employed much of the rezoning plan of the board, combined with the creation of nine “satellite” zones. Under the satellite plan, inner-city Negro students were assigned by attendance zones to nine outlying predominantly white junior high schools, thereby substantially desegregating every junior high school in the system.

The Finger plan departed from the board plan chiefly in its handling of the system’s 76 elementary schools. Rather than relying solely upon geographic zoning, Dr. Finger proposed use of zoning, pairing, and grouping techniques, with the result that student bodies throughout the system would range from 9 [percent] to 38 [percent] Negro.

The District Court described the plan thus:

Like the board plan, the Finger plan does as much by rezoning school attendance lines as can reasonably be accomplished. However, unlike the board plan, it does not stop there. It goes further and desegregates all the rest of the elementary schools by the technique of grouping two or three outlying schools with one black inner city school; by transporting black students from grades one through four to the outlying white schools; and by transporting white students from the fifth and sixth grades from the outlying white schools to the inner city black school.

Under the Finger plan, nine inner-city Negro schools were grouped in this manner with 24 suburban white schools.

On February 5, 1970, the District Court adopted the board plan, as modified by Dr. Finger, for the junior and senior high schools. The court rejected the board elementary school plan and adopted the Finger plan as presented. Implementation was partially stayed by the Court of Appeals for the Fourth Circuit on March 5, and this Court declined to disturb the Fourth Circuit’s order (1970).

On appeal, the Court of Appeals affirmed the District Court’s order as to faculty desegregation and the secondary school plans, but vacated the order respecting elementary schools. While agreeing that the District Court properly disapproved the board plan concerning these schools, the Court of Appeals feared that the pairing and grouping of elementary schools would place an unreasonable burden on the board and the system’s pupils. The case was remanded to the District Court for reconsideration and submission of further plans. This Court granted certiorari, and directed reinstatement of the District Court’s order pending further proceedings in that court.

On remand, the District Court received two new plans for the elementary schools: a plan prepared by the United States Department of Health, Education, and Welfare (the HEW plan) based on contiguous grouping and zoning of schools, and a plan prepared by four members of the nine-member school board (the minority plan) achieving substantially the same results as the Finger plan but apparently with slightly less transportation. A majority of the school board declined to amend its proposal. After a lengthy evidentiary hearing, the District Court concluded that its own plan (the Finger plan), the minority plan, and an earlier draft of the Finger plan were all reasonable and acceptable. It directed the board to adopt one of the three or, in the alternative, to come forward with a new, equally effective plan of its own; the court ordered that the Finger plan would remain in effect in the event the school board declined to adopt a new plan. On August 7, the board indicated it would “acquiesce” in the Finger plan, reiterating its view that the plan was unreasonable. The District Court, by order dated August 7, 1970, directed that the Finger plan remain in effect.

## II

Nearly 17 years ago, this Court held, in explicit terms, that state-imposed segregation by race in public schools denies equal protection of the laws. At no time has the Court deviated in the slightest degree from that holding or its constitutional underpinnings. None of the parties before us challenges the Court’s decision of May 17, 1954, that,

in the field of public education, the doctrine of “separate but equal” has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated . . . are, by reason of the segregation complained of, deprived of the equal protection of the laws guaranteed by the Fourteenth Amendment. . . .

Because these are class actions, because of the wide applicability of this decision, and because of the great variety of local conditions, the formulation of decrees in these cases presents problems of considerable complexity.

**Brown v. Board of Education.** None of the parties before us questions the Court’s 1955 holding in *Brown II*, that school authorities have the primary responsibility for elucidating, assessing, and solving these problems; courts will have to consider whether the action of school authorities constitutes good faith implementation of the governing constitutional principles. Because of their proximity to local conditions and the possible need for further hearings, the courts which originally heard these cases can best perform this judicial appraisal. Accordingly, we believe it appropriate to remand the cases to those courts.

In fashioning and effectuating the decrees, the courts will be guided by equitable principles. Traditionally, equity has been characterized by a practical flexibility in shaping its remedies and by a facility for adjusting and reconciling public and private needs. These cases call for the exercise of these traditional attributes of equity power. At stake is the personal interest of the plaintiffs in admission to public schools as soon as practicable on a nondiscriminatory basis. To effectuate this interest may call for elimination of a variety of obstacles in making the transition to school systems operated in accordance with the constitutional principles set forth in our May 17, 1954, decision. Courts of equity may properly take into account the public interest in the elimination of such obstacles in a systematic and effective manner. But it should go without saying that the vitality of these constitutional principles cannot be allowed to yield simply because of disagreement with them.

**Brown v. Board of Education (1955).** Over the 16 years since *Brown II*, many difficulties were encountered in implementation of the basic constitutional requirement that the State not discriminate between public school children on the basis of their race. Nothing in our national experience prior to 1955 prepared anyone for dealing with changes and adjustments of the magnitude and complexity encountered since then. Deliberate resistance of some to the Court’s mandates has impeded the good faith efforts of others to bring school systems into compliance. The detail and nature of these dilatory tactics have been noted frequently by this Court and other courts. By the time the Court considered *Green v. County School Board*, in 1968, very little progress had been made in many areas where dual school systems had historically been maintained by operation of state laws. In *Green*, the Court was confronted with a record of a freedom of choice program that the District Court had found to operate, in fact, to preserve a dual system more than a decade after *Brown II*. While acknowledging that a freedom of choice concept could be a valid remedial measure in some circumstances, its failure to be effective in *Green* required that:

The burden on a school board today is to come forward with a plan that promises realistically to work . . . now . . . until it is clear that state-imposed segregation has been completely removed.

**Green.** This was plain language, yet the 1969 Term of Court brought fresh evidence of the dilatory tactics of many school authorities. *Alexander v. Holmes County Board of Education*, restated the basic obligation asserted in *Griffin v. School Board* (1964), and *Green*, *supra*, that the remedy must be implemented forthwith.

The problems encountered by the district courts and courts of appeals make plain that we should now try to amplify guidelines, however incomplete and imperfect, for the assistance of school authorities and courts. The failure of local authorities to meet their constitutional

obligations aggravated the massive problem of converting from the state-enforced discrimination of racially separate school systems. This process has been rendered more difficult by changes since 1954 in the structure and patterns of communities, the growth of student population, movement of families, and other changes, some of which had marked impact on school planning, sometimes neutralizing or negating remedial action before it was fully implemented. Rural areas accustomed for half a century to the consolidated school systems implemented by bus transportation could make adjustments more readily than metropolitan areas with dense and shifting population, numerous schools, congested and complex traffic patterns.

### III

The objective today remains to eliminate from the public schools all vestiges of state-imposed segregation. Segregation was the evil struck down by *Brown I* as contrary to the equal protection guarantees of the Constitution. That was the violation sought to be corrected by the remedial measures of *Brown II*. That was the basis for the holding in *Green* that school authorities are clearly charged with the affirmative duty to take whatever steps might be necessary to convert to a unitary system in which racial discrimination would be eliminated root and branch.

If school authorities fail in their affirmative obligations under these holdings, judicial authority may be invoked. Once a right and a violation have been shown, the scope of a district court's equitable powers to remedy past wrongs is broad, for breadth and flexibility are inherent in equitable remedies.

The essence of equity jurisdiction has been the power of the Chancellor to do equity and to mould each decree to the necessities of the particular case. Flexibility, rather than rigidity, has distinguished it. The qualities of mercy and practicality have made equity the instrument for nice adjustment and reconciliation between the public interest and private needs as well as between competing private claims.

**Hecht Co. v. Bowles (1944), cited in *Brown II*.** This allocation of responsibility once made, the Court attempted from time to time to provide some guidelines for the exercise of the district judge's discretion and for the reviewing function of the courts of appeals. However, a school desegregation case does not differ fundamentally from other cases involving the framing of equitable remedies to repair the denial of a constitutional right. The task is to correct, by a balancing of the individual and collective interests, the condition that offends the Constitution.

In seeking to define even in broad and general terms how far this remedial power extends, it is important to remember that judicial powers may be exercised only on the basis of a constitutional violation. Remedial judicial authority does not put judges automatically in the shoes of school authorities whose powers are plenary. Judicial authority enters only when local authority defaults.

School authorities are traditionally charged with broad power to formulate and implement educational policy, and might well conclude, for example, that, in order to prepare students to live in a pluralistic society, each school should have a prescribed ratio of Negro to white students reflecting the proportion for the district as a whole. To do this as an educational policy is within the broad discretionary powers of school authorities; absent a finding of a constitutional violation, however, that would not be within the authority of a federal court. As with any equity case, the nature of the violation determines the scope of the remedy. In default by the school authorities of their obligation to proffer acceptable remedies, a district court has broad power to fashion a remedy that will assure a unitary school system.

The school authorities argue that the equity powers of federal district courts have been limited by Title IV of the Civil Rights Act of 1964, 42 U.S.C. [Section] 2000c. The language and the history of Title IV show that it was enacted not to limit, but to define, the role of the Federal Government in the implementation of the *Brown I* decision. It authorizes the Com-

missioner of Education to provide technical assistance to local boards in the preparation of desegregation plans, to arrange “training institutes” for school personnel involved in desegregation efforts, and to make grants directly to schools to ease the transition to unitary systems. It also authorizes the Attorney General, in specified circumstances, to initiate federal desegregation suits. Section 2000c(b) defines “desegregation” as it is used in Title IV:

“Desegregation” means the assignment of students to public schools and within such schools without regard to their race, color, religion, or national origin, but “desegregation” shall not mean the assignment of students to public schools in order to overcome racial imbalance.

Section 2000c-6, authorizing the Attorney General to institute federal suits, contains the following proviso:

nothing herein shall empower any official or court of the United States to issue any order seeking to achieve a racial balance in any school by requiring the transportation of pupils or students from one school to another or one school district to another in order to achieve such racial balance, or otherwise enlarge the existing power of the court to insure compliance with constitutional standard.

On their face, the sections quoted purport only to insure that the provisions of Title IV of the Civil Rights Act of 1964 will not be read as granting new powers. The proviso in [Section] 2000c-6 is, in terms, designed to foreclose any interpretation of the Act as expanding the existing powers of federal courts to enforce the Equal Protection Clause. There is no suggestion of an intention to restrict those powers or withdraw from courts their historic equitable remedial powers. The legislative history of Title IV indicates that Congress was concerned that the Act might be read as creating a right of action under the Fourteenth Amendment in the situation of so-called “de facto segregation,” where racial imbalance exists in the schools but with no showing that this was brought about by discriminatory action of state authorities. In short, there is nothing in the Act that provides us material assistance in answering the question of remedy for state-imposed segregation in violation of *Brown I*. The basis of our decision must be the prohibition of the Fourteenth Amendment that no State shall “deny to any person within its jurisdiction the equal protection of the laws.”

#### IV

We turn now to the problem of defining with more particularity the responsibilities of school authorities in desegregating a state-enforced dual school system in light of the Equal Protection Clause. Although the several related cases before us are primarily concerned with problems of student assignment, it may be helpful to begin with a brief discussion of other aspects of the process.

In *Green*, we pointed out that existing policy and practice with regard to faculty, staff, transportation, extracurricular activities, and facilities were among the most important indicia of a segregated system. Independent of student assignment, where it is possible to identify a “white school” or a “Negro school” simply by reference to the racial composition of teachers and staff, the quality of school buildings and equipment, or the organization of sports activities, a *prima facie* case of violation of substantive constitutional rights under the Equal Protection Clause is shown.

When a system has been dual in these respects, the first remedial responsibility of school authorities is to eliminate invidious racial distinctions. With respect to such matters as transportation, supporting personnel, and extracurricular activities, no more than this may be necessary. Similar corrective action must be taken with regard to the maintenance of buildings and the distribution of equipment. In these areas, normal administrative practice should produce schools of like quality, facilities, and staffs. Something more must be said, however, as to faculty assignment and new school construction.

In the companion *Davis* case, the Mobile school board has argued that the Constitution requires that teachers be assigned on a “color blind” basis. It also argues that the Constitution

prohibits district courts from using their equity power to order assignment of teachers to achieve a particular degree of faculty desegregation. We reject that contention.

In *United States v. Montgomery County Board of Education* (1969), the District Court set as a goal a plan of faculty assignment in each school with a ratio of white to Negro faculty members substantially the same throughout the system. This order was predicated on the District Court finding that:

The evidence does not reflect any real administrative problems involved in immediately desegregating the substitute teachers, the student teachers, the night school faculties, and in the evolvment of a really legally adequate program for the substantial desegregation of the faculties of all schools in the system commencing with the school year 1968-69.

Quoted at 395 U.S. at 232.

The District Court, in *Montgomery*, then proceeded to set an initial ratio for the whole system of at least two Negro teachers out of each 12 in any given school. The Court of Appeals modified the order by eliminating what it regarded as “fixed mathematical” ratios of faculty and substituted an initial requirement of “substantially or approximately” a five-to-one ratio. With respect to the future, the Court of Appeals held that the numerical ratio should be eliminated and that compliance should not be tested solely by the achievement of specified proportions. *Id.*

We reversed the Court of Appeals and restored the District Court’s order in its entirety, holding that the order of the District Judge

was adopted in the spirit of this Court’s opinion in *Green* . . . in that his plan “promises realistically to work, and promises realistically to work now.” The modifications ordered by the panel of the Court of Appeals, while of course not intended to do so, would, we think, take from the order some of its capacity to expedite, by means of specific commands, the day when a completely unified, unitary, nondiscriminatory school system becomes a reality instead of a hope. . . . We also believe that, under all the circumstances of this case, we follow the original plan outlined in *Brown II* . . . by accepting the more specific and expeditious order of [District] Judge Johnson . . .

395 U.S. at 235-236. The principles of *Montgomery* have been properly followed by the District Court and the Court of Appeals in this case.

The construction of new schools and the closing of old ones are two of the most important functions of local school authorities and also two of the most complex. They must decide questions of location and capacity in light of population growth, finances, land values, site availability, through an almost endless list of factors to be considered. The result of this will be a decision which, when combined with one technique or another of student assignment, will determine the racial composition of the student body in each school in the system. Over the long run, the consequences of the choices will be far-reaching. People gravitate toward school facilities, just as schools are located in response to the needs of people. The location of schools may thus influence the patterns of residential development of a metropolitan area and have important impact on composition of inner-city neighborhoods.

In the past, choices in this respect have been used as a potent weapon for creating or maintaining a state-segregated school system. In addition to the classic pattern of building schools specifically intended for Negro or white students, school authorities have sometimes, since *Brown*, closed schools which appeared likely to become racially mixed through changes in neighborhood residential patterns. This was sometimes accompanied by building new schools in the areas of white suburban expansion farthest from Negro population centers in order to maintain the separation of the races with a minimum departure from the formal principles

of “neighborhood zoning.” Such a policy does more than simply influence the short-run composition of the student body of a new school. It may well promote segregated residential patterns which, when combined with “neighborhood zoning,” further lock the school system into the mold of separation of the races. Upon a proper showing, a district court may consider this in fashioning a remedy.

In ascertaining the existence of legally imposed school segregation, the existence of a pattern of school construction and abandonment is thus a factor of great weight. In devising remedies where legally imposed segregation has been established, it is the responsibility of local authorities and district courts to see to it that future school construction and abandonment are not used and do not serve to perpetuate or reestablish the dual system. When necessary, district courts should retain jurisdiction to assure that these responsibilities are carried out. Cf. *United States v. Board of Public Instruction* (1968); *Brewer v. School Board* (1968).

## V

The central issue in this case is that of student assignment, and there are essentially four problem areas:

- (1) to what extent racial balance or racial quotas may be used as an implement in a remedial order to correct a previously segregated system;
- (2) whether every all-Negro and all-white school must be eliminated as an indispensable part of a remedial process of desegregation;
- (3) what the limits are, if any, on the rearrangement of school districts and attendance zones, as a remedial measure; and
- (4) what the limits are, if any, on the use of transportation facilities to correct state-enforced racial school segregation.

**Racial Balances or Racial Quotas.** The constant theme and thrust of every holding from *Brown I* to date is that state-enforced separation of races in public schools is discrimination that violates the Equal Protection Clause. The remedy commanded was to dismantle dual school systems.

We are concerned in these cases with the elimination of the discrimination inherent in the dual school systems, not with myriad factors of human existence which can cause discrimination in a multitude of ways on racial, religious, or ethnic grounds. The target of the cases from *Brown I* to the present was the dual school system. The elimination of racial discrimination in public schools is a large task, and one that should not be retarded by efforts to achieve broader purposes lying beyond the jurisdiction of school authorities. One vehicle can carry only a limited amount of baggage. It would not serve the important objective of *Brown I* to seek to use school desegregation cases for purposes beyond their scope, although desegregation of schools ultimately will have impact on other forms of discrimination. We do not reach in this case the question whether a showing that school segregation is a consequence of other types of state action, without any discriminatory action by the school authorities, is a constitutional violation requiring remedial action by a school desegregation decree. This case does not present that question and we therefore do not decide it.

Our objective in dealing with the issues presented by these cases is to see that school authorities exclude no pupil of a racial minority from any school, directly or indirectly, on account of race; it does not and cannot embrace all the problems of racial prejudice, even when those problems contribute to disproportionate racial concentrations in some schools.

In this case, it is urged that the District Court has imposed a racial balance requirement of 71 [percent]-29 [percent] on individual schools. The fact that no such objective was actually achieved—and would appear to be impossible—tends to blunt that claim, yet in the opinion and order of the District Court of December 1, 1969, we find that court directing that efforts

should be made to reach a 71-29 ratio in the various schools so that there will be no basis for contending that one school is racially different from the others . . . , [t]hat no school [should] be operated with an all-black or predominantly black student body, [and] [t]hat pupils of all grades [should] be assigned in such a way that as nearly as practicable the various schools at various grade levels have about the same proportion of black and white students.

The District Judge went on to acknowledge that variation “from that norm may be unavoidable.” This contains intimations that the “norm” is a fixed mathematical racial balance reflecting the pupil constituency of the system. If we were to read the holding of the District Court to require, as a matter of substantive constitutional right, any particular degree of racial balance or mixing, that approach would be disapproved and we would be obliged to reverse. The constitutional command to desegregate schools does not mean that every school in every community must always reflect the racial composition of the school system as a whole.

As the voluminous record in this case shows, the predicate for the District Court’s use of the 71 [percent]-29 [percent] ratio was twofold: first, its express finding, approved by the Court of Appeals and not challenged here, that a dual school system had been maintained by the school authorities at least until 1969; second, its finding, also approved by the Court of Appeals, that the school board had totally defaulted in its acknowledged duty to come forward with an acceptable plan of its own, notwithstanding the patient efforts of the District Judge who, on at least three occasions, urged the board to submit plans. As the statement of facts shows, these findings are abundantly supported by the record. It was because of this total failure of the school board that the District Court was obliged to turn to other qualified sources, and Dr. Finger was designated to assist the District Court to do what the board should have done.

We see therefore that the use made of mathematical ratios was no more than a starting point in the process of shaping a remedy, rather than an inflexible requirement. From that starting point, the District Court proceeded to frame a decree that was within its discretionary powers, as an equitable remedy for the particular circumstances. As we said in *Green*, a school authority’s remedial plan or a district court’s remedial decree is to be judged by its effectiveness. Awareness of the racial composition of the whole school system is likely to be a useful starting point in shaping a remedy to correct past constitutional violations. In sum, the very limited use made of mathematical ratios was within the equitable remedial discretion of the District Court.

**One-race Schools.** The record in this case reveals the familiar phenomenon that, in metropolitan areas, minority groups are often found concentrated in one part of the city. In some circumstances, certain schools may remain all or largely of one race until new schools can be provided or neighborhood patterns change. Schools all or predominantly of one race in a district of mixed population will require close scrutiny to determine that school assignments are not part of state-enforced segregation.

In light of the above, it should be clear that the existence of some small number of one-race, or virtually one-race, schools within a district is not, in and of itself, the mark of a system that still practices segregation by law. The district judge or school authorities should make every effort to achieve the greatest possible degree of actual desegregation, and will thus necessarily be concerned with the elimination of one-race schools. No per se rule can adequately embrace all the difficulties of reconciling the competing interests involved; but, in a system with a history of segregation, the need for remedial criteria of sufficient specificity to assure a school authority’s compliance with its constitutional duty warrants a presumption against schools that are substantially disproportionate in their racial composition. Where the school authority’s proposed plan for conversion from a dual to a unitary system contemplates the continued existence of some schools that are all or predominantly of one race, they have the burden of showing that such school assignments are genuinely nondiscriminatory. The court

should scrutinize such schools, and the burden upon the school authorities will be to satisfy the court that their racial composition is not the result of present or past discriminatory action on their part.

An optional majority-to-minority transfer provision has long been recognized as a useful part of every desegregation plan. Provision for optional transfer of those in the majority racial group of a particular school to other schools where they will be in the minority is an indispensable remedy for those students willing to transfer to other schools in order to lessen the impact on them of the state-imposed stigma of segregation. In order to be effective, such a transfer arrangement must grant the transferring student free transportation and space must be made available in the school to which he desires to move. Cf. *Ellis v. Board of Public Instruction* (1970). The court orders in this and the companion *Davis* case now provide such an option.

**Remedial Altering of Attendance Zones.** The maps submitted in these cases graphically demonstrate that one of the principal tools employed by school planners and by courts to break up the dual school system has been a frank—and sometimes drastic—gerrymandering of school districts and attendance zones. An additional step was pairing, “clustering,” or “grouping” of schools with attendance assignments made deliberately to accomplish the transfer of Negro students out of formerly segregated Negro schools and transfer of white students to formerly all-Negro schools. More often than not, these zones are neither compact nor contiguous; indeed they may be on opposite ends of the city. As an interim corrective measure, this cannot be said to be beyond the broad remedial powers of a court.

Absent a constitutional violation, there would be no basis for judicially ordering assignment of students on a racial basis. All things being equal, with no history of discrimination, it might well be desirable to assign pupils to schools nearest their homes. But all things are not equal in a system that has been deliberately constructed and maintained to enforce racial segregation. The remedy for such segregation may be administratively awkward, inconvenient, and even bizarre in some situations, and may impose burdens on some; but all awkwardness and inconvenience cannot be avoided in the interim period when remedial adjustments are being made to eliminate the dual school systems.

No fixed or even substantially fixed guidelines can be established as to how far a court can go, but it must be recognized that there are limits. The objective is to dismantle the dual school system. “Racially neutral” assignment plans proposed by school authorities to a district court may be inadequate; such plans may fail to counteract the continuing effects of past school segregation resulting from discriminatory location of school sites or distortion of school size in order to achieve or maintain an artificial racial separation. When school authorities present a district court with a “loaded game board,” affirmative action in the form of remedial altering of attendance zones is proper to achieve truly nondiscriminatory assignments. In short, an assignment plan is not acceptable simply because it appears to be neutral.

In this area, we must of necessity rely to a large extent, as this Court has for more than 16 years, on the informed judgment of the district courts in the first instance and on courts of appeals.

We hold that the pairing and grouping of noncontiguous school zones is a permissible tool, and such action is to be considered in light of the objectives sought. Judicial steps in shaping such zones going beyond combinations of contiguous areas should be examined in light of what is said in subdivisions (1), (2), and (3) of this opinion concerning the objectives to be sought. Maps do not tell the whole story, since noncontiguous school zones may be more accessible to each other in terms of the critical travel time, because of traffic patterns and good highways, than schools geographically closer together. Conditions in different localities will vary so widely that no rigid rules can be laid down to govern all situations.

**Transportation of Students.** The scope of permissible transportation of students as an implement of a remedial decree has never been defined by this Court, and, by the very nature of

the problem, it cannot be defined with precision. No rigid guidelines as to student transportation can be given for application to the infinite variety of problems presented in thousands of situations. Bus transportation has been an integral part of the public education system for years, and was perhaps the single most important factor in the transition from the one-room schoolhouse to the consolidated school. Eighteen million of the Nation's public school children, approximately 39 [percent], were transported to their schools by bus in 1969-1970 in all parts of the country.

The importance of bus transportation as a normal and accepted tool of educational policy is readily discernible in this and the companion case, *Davis*, *supra*. The Charlotte school authorities did not purport to assign students on the basis of geographically drawn zones until 1965, and then they allowed almost unlimited transfer privileges. The District Court's conclusion that assignment of children to the school nearest their home serving their grade would not produce an effective dismantling of the dual system is supported by the record.

Thus, the remedial techniques used in the District Court's order were within that court's power to provide equitable relief; implementation of the decree is well within the capacity of the school authority.

The decree provided that the buses used to implement the plan would operate on direct routes. Students would be picked up at schools near their homes and transported to the schools they were to attend. The trips for elementary school pupils average about seven miles, and the District Court found that they would take "not over 35 minutes, at the most." This system compares favorably with the transportation plan previously operated in Charlotte, under which, each day, 23,600 students on all grade levels were transported an average of 15 miles one way for an average trip requiring over an hour. In these circumstances, we find no basis for holding that the local school authorities may not be required to employ bus transportation as one tool of school desegregation. Desegregation plans cannot be limited to the walk-in school.

An objection to transportation of students may have validity when the time or distance of travel is so great as to either risk the health of the children or significantly impinge on the educational process. District courts must weigh the soundness of any transportation plan in light of what is said in subdivisions (1), (2), and (3) above. It hardly needs stating that the limits on time of travel will vary with many factors, but probably with none more than the age of the students. The reconciliation of competing values in a desegregation case is, of course, a difficult task with many sensitive facets, but fundamentally no more so than remedial measures courts of equity have traditionally employed.

## VI

The Court of Appeals, searching for a term to define the equitable remedial power of the district courts, used the term "reasonableness." In *Green*, *supra*, this Court used the term "feasible," and, by implication, "workable," "effective," and "realistic" in the mandate to develop "a plan that promises realistically to work, and . . . to work now." On the facts of this case, we are unable to conclude that the order of the District Court is not reasonable, feasible and workable. However, in seeking to define the scope of remedial power or the limits on remedial power of courts in an area as sensitive as we deal with here, words are poor instruments to convey the sense of basic fairness inherent in equity. Substance, not semantics, must govern, and we have sought to suggest the nature of limitations without frustrating the appropriate scope of equity.

At some point, these school authorities and others like them should have achieved full compliance with this Court's decision in *Brown I*. The systems would then be "unitary" in the sense required by our decisions in *Green* and *Alexander*.

It does not follow that the communities served by such systems will remain demographically stable, for, in a growing, mobile society, few will do so. Neither school authorities nor

district courts are constitutionally required to make year-by-year adjustments of the racial composition of student bodies once the affirmative duty to desegregate has been accomplished and racial discrimination through official action is eliminated from the system. This does not mean that federal courts are without power to deal with future problems; but, in the absence of a showing that either the school authorities or some other agency of the State has deliberately attempted to fix or alter demographic patterns to affect the racial composition of the schools, further intervention by a district court should not be necessary.

For the reasons herein set forth, the judgment of the Court of Appeals is affirmed as to those parts in which it affirmed the judgment of the District Court. The order of the District Court, dated August 7, 1970, is also affirmed.

It is so ordered.

## **MILLS V. BOARD OF EDUCATION OF THE DISTRICT OF COLUMBIA, 348 F. SUPP. 866 (1972)**

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**UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA  
AUGUST 1, 1972**

WADDY, District Judge.

### **MEMORANDUM OPINION, and JUDGMENT AND DECREE**

This is a civil action brought on behalf of seven children of school age by their next friends in which they seek a declaration of rights and to enjoin the defendants from excluding them from the District of Columbia Public Schools and/or denying them publicly supported education and to compel the defendants to provide them with immediate and adequate education and educational facilities in the public schools or alternative placement at public expense. They also seek additional and ancillary relief to effectuate the primary relief. They allege that although they can profit from an education either in regular classrooms with supportive services or in special classes adopted to their needs, they have been labelled as behavioral problems, mentally retarded, emotionally disturbed or hyperactive, and denied admission to the public schools or excluded therefrom after admission, with no provision for alternative educational placement or periodic review. The action was certified as a class action under Rule 23(b)(1) and (2) of Federal Rules of Civil Procedure by order of the Court dated December 17, 1971.

The defendants are the Board of Education of the District of Columbia and its members, the Superintendent of Schools for the District of Columbia and subordinate school officials, the Commissioner of the District of Columbia and certain subordinate officials and the District of Columbia.

### **THE PROBLEM**

The genesis of this case is found (1) in the failure of the District of Columbia to provide publicly supported education and training to plaintiffs and other "exceptional" children, members of their class, and (2) the excluding, suspending, expelling, reassigning and transferring of "exceptional" children from regular public school classes without affording them due process of law.

The problem of providing special education for "exceptional" children (mentally retarded, emotionally disturbed, physically handicapped, hyperactive and other children with behavioral problems) is one of major proportions in the District of Columbia. The precise number of such children cannot be stated because the District has continuously failed to comply with Section 31-208 of the District of Columbia Code which requires a census of all children aged

3 to 18 in the District to be taken. Plaintiffs estimate that there are “. . . 22,000 retarded, emotionally disturbed, blind, deaf, and speech or learning disabled children, and perhaps as many as 18,000 of these children are not being furnished with programs of specialized education.” According to data prepared by the Board of Education, Division of Planning, Research and Evaluation, the District of Columbia provides publicly supported special education programs of various descriptions to at least 3880 school age children. However, in a 1971 report to the Department of Health, Education and Welfare, the District of Columbia Public Schools admitted that an estimated 12,340 handicapped children were not to be served in the 1971-72 school year.

Each of the minor plaintiffs in this case qualifies as an “exceptional” child.

Plaintiffs allege in their complaint and defendants admit as follows:

“PETER MILLS is twelve years old, black, and a committed dependent ward of the District of Columbia resident at Junior Village. He was excluded from the Brent Elementary School on March 23, 1971, at which time he was in the fourth grade. Peter allegedly was a ‘behavior problem’ and was recommended and approved for exclusion by the principal. Defendants have not provided him with a full hearing or with a timely and adequate review of his status. Furthermore, Defendants have failed to provide for his reenrollment in the District of Columbia Public Schools or enrollment in private school. On information and belief, numerous other dependent children of school attendance age at Junior Village are denied a publicly-supported education. Peter remains excluded from any publicly-supported education.

“DUANE BLACKSHEARE is thirteen years old, black, resident at Saint Elizabeth’s Hospital, Washington, D.C., and a dependent committed child. He was excluded from the Giddings Elementary School in October, 1967, at which time he was in the third grade. Duane allegedly was a “behavior problem.” Defendants have not provided him with a full hearing or with a timely and adequate review of his status. Despite repeated efforts by his mother, Duane remained largely excluded from all publicly-supported education until February, 1971. Education experts at the Child Study Center examined Duane and found him to be capable of returning to regular class if supportive services were provided. Following several articles in the Washington Post and Washington Star, Duane was placed in a regular seventh grade classroom on a two-hour a day basis without any catch-up assistance and without an evaluation or diagnostic interview of any kind. Duane has remained on a waiting list for a tuition grant and is now excluded from all publicly-supported education.

“GEORGE LIDDELL, JR., is eight years old, black, resident with his mother, Daisy Liddell, at 601 Morton Street, N.W., Washington, D.C., and an AFDC recipient. George has never attended public school because of the denial of his application to the Maury Elementary School on the ground that he required a special class. George allegedly was retarded. Defendants have not provided him with a full hearing or with a timely and adequate review of his status. George remains excluded from all publicly-supported education, despite a medical opinion that he is capable of profiting from schooling, and despite his mother’s efforts to secure a tuition grant from Defendants.

“STEVEN GASTON is eight years old, black, resident with his mother, Ina Gaston, at 714 9th Street, N.E., Washington, D.C. and unable to afford private instruction. He has been excluded from the Taylor Elementary School since September, 1969, at which time he was in the first grade. Steven allegedly was slightly brain-damaged and hyperactive, and was excluded because he wandered around the classroom. Defendants have not provided him with a full hearing or with a timely and adequate review of his status. Steven was accepted in the Contemporary School, a private school, provided that tuition was paid in full in advance. Despite the efforts of his parents, Steven

has remained on a waiting list for the requisite tuition grant from Defendant school system and excluded from all publicly-supported education.

“MICHAEL WILLIAMS is sixteen years old, black, resident at Saint Elizabeth’s Hospital, Washington, D.C., and unable to afford private instruction. Michael is epileptic and allegedly slightly retarded. He has been excluded from the Sharpe Health School since October, 1969, at which time he was temporarily hospitalized. Thereafter Michael was excluded from school because of health problems and school absences. Defendants have not provided him with a full hearing or with a timely and adequate review of his status. Despite his mother’s efforts, and his attending physician’s medical opinion that he could attend school, Michael has remained on a waiting list for a tuition grant and excluded from all publicly-supported education.

“JANICE KING is thirteen years old, black, resident with her father, Andrew King, at 233 Anacostia Avenue, N.E., Washington, D.C., and unable to afford private instruction. She has been denied access to public schools since reaching compulsory school attendance age, as a result of the rejection of her application, based on the lack of an appropriate educational program. Janice is brain-damaged and retarded, with right hemiplegia, resulting from a childhood illness. Defendants have not provided her with a full hearing or with a timely and adequate review of her status. Despite repeated efforts by her parents, Janice has been excluded from all publicly-supported education.

“JEROME JAMES is twelve years old, black, resident with his mother, Mary James, at 2512 Ontario Avenue, N.W., Washington, D.C., and an AFDC recipient. Jerome is a retarded child and has been totally excluded from public school. Defendants have not given him a full hearing or a timely and adequate review of his status. Despite his mother’s efforts to secure either public school placement or a tuition grant, Jerome has remained on a waiting list for a tuition grant and excluded from all publicly supported education.”

Although all of the named minor plaintiffs are identified as Negroes the class they represent is not limited by their race. They sue on behalf of and represent all other District of Columbia residents of school age who are eligible for a free public education and who have been, or may be, excluded from such education or otherwise deprived by defendants of access to publicly supported education.

Minor plaintiffs are poor and without financial means to obtain private instruction. There has been no determination that they may not benefit from specialized instruction adapted to their needs. Prior to the beginning of the 1971-72 school year minor plaintiffs, through their representatives, sought to obtain publicly supported education and certain of them were assured by the school authorities that they would be placed in programs of publicly supported education and certain others would be recommended for special tuition grants at private schools. However, none of the plaintiff children were placed for the 1971 Fall term and they continued to be entirely excluded from all publicly supported education. After thus trying unsuccessfully to obtain relief from the Board of Education the plaintiffs filed this action on September 24, 1971.

### **THERE IS NO GENUINE ISSUE OF MATERIAL FACT**

Congress has decreed a system of publicly supported education for the children of the District of Columbia. The Board of Education has the responsibility of administering that system in accordance with law and of providing such publicly supported education to all of the children of the District, including these “exceptional” children.

Defendants have admitted in these proceedings that they are under an affirmative duty to provide plaintiffs and their class with publicly supported education suited to each child’s

needs, including special education and tuition grants, and also, a constitutionally adequate prior hearing and periodic review. They have also admitted that they failed to supply plaintiffs with such publicly supported education and have failed to afford them adequate prior hearing and periodic review. On December 20, 1971 the plaintiffs and defendants agreed to and the Court signed an interim stipulation and order which provided in part as follows:

“Upon consent and stipulation of the parties, it is hereby ORDERED that:

“1. Defendants shall provide plaintiffs Peter Mills, Duane Blacksheare, Steven Gaston and Michael Williams with a publicly-supported education suited to their (plaintiffs’) needs by January 3, 1972.”

“2. Defendants shall provide counsel for plaintiffs, by January 3, 1972, a list showing, for every child of school age then known not to be attending a publicly-supported educational program because of suspension, expulsion, exclusion, or any other denial of placement, the name of the child’s parent or guardian, the child’s name, age, address and telephone number, the date of his suspension, expulsion, exclusion or denial of placement and, without attributing a particular characteristic to any specific child, a breakdown of such list, showing the alleged causal characteristics for such nonattendance and the number of children possessing such alleged characteristics.”

“3. By January 3, 1972, defendants shall initiate efforts to identify remaining members of the class not presently known to them, and also by that date, shall notify counsel for plaintiffs of the nature and extent of such efforts. Such efforts shall include, at a minimum, a system-wide survey of elementary and secondary schools, use of the mass written and electronic media, and a survey of District of Columbia agencies who may have knowledge pertaining to such remaining members of the class. By February 1, 1972, defendants shall provide counsel for plaintiffs with the names, addresses and telephone numbers of such remaining members of the class then known to them.”

“4. Pending further action by the Court herein, the parties shall consider the selection and compensation of a master for determination of special questions arising out of this action with regard to the placement of children in a publicly-supported educational program suited to their needs.”

On February 9, 1972, the Board of Education passed a Resolution which included the following:

#### Special Education

“7. All vacant authorized special education positions, whether in the regular, Impact Aid, or other Federal budgets, shall be filled as rapidly as possible within the capability of the Special Education Department. Regardless of the capability of the Department to fill vacant positions, all funds presently appropriated or allotted for special education, whether in the regular, Impact Aid, or other Federal budgets, shall be spent solely for special education.”

“8. The Board requests the Corporation Counsel to ask the United States District Court for an extension of time within which to file a response to plaintiffs’ motion for summary judgment in *Mills v. Board of Education* on the grounds that (a) the Board intends to enter into a consent judgment declaring the rights of children in the District of Columbia to a public education; and (b) the Board needs time (not in excess of 30 days) to obtain from the Associate Superintendent for Special Education a precise projection on a monthly basis the cost of fulfilling those budgets.”

“9. The Board directs the Rules Committee to devise as soon as possible for the purpose of *Mills v. Board of Education* rules defining and providing for due process and fair hearings; and requests the Corporation Counsel to lend such assistance to the Board as may be necessary in devising such rules in a form which will meet the requirements of *Mills v. Board of Education*.”

“10. It is the intention of the Board to submit for approval by the Court in *Mills v. Board of Education* a Memorandum of Understanding setting forth a comprehensive plan for the education, treatment and care of physically or mentally impaired children in the age range from three to twenty-one years. It is hoped that the various other District of Columbia agencies concerned will join with the Board in the submission of this plan.

“It is the further intention of the Board to establish procedures to implement the finding that all children can benefit from education and, have a right to it, by providing for comprehensive health and psychological appraisal of children and the provision for each child of any special education which he may need. The Board will further require that no change in the kind of education provided for a child will be made against his wishes or the wishes of his parent or guardian unless he has been accorded a full hearing on the matter consistent with due process.”

Defendants failed to comply with that consent order and there is now pending before the Court a motion of the plaintiffs to require defendants to show cause why they should not be held in contempt for such failure to comply.

On January 21, 1972 the plaintiffs filed a motion for summary judgment and a proposed order and decree for implementation of the proposed judgment and requested a hearing. On March 1, 1972 the defendants responded as follows:

“1. The District of Columbia and its officers who are named defendants to this complaint consent to the entrance of a judgment declaring the rights of the plaintiff class to the effect prayed for in the complaint, as specified below, such rights to be prospectively effective as of March 1, 1972:”

That no child eligible for a publicly supported education in the District of Columbia public schools shall be excluded from a regular public school assignment by a Rule, policy, or practice of the Board of Education of the District of Columbia or its agents unless such child is provided (a) adequate alternative educational services suited to the child's needs, which may include special education or tuition grants, and (b) a constitutionally adequate prior hearing and periodic review of the child's status, progress, and the adequacy of any educational alternative.

It is submitted that the entrance of a declaratory judgment to this effect renders plaintiffs' motion for summary judgment moot.

“2. For response to plaintiffs' motion for a hearing, defendants respectfully request that this Court hold a hearing as soon as practicable at which defendants will present a plan to implement the above declaratory judgment and at which the Court may decide whether further relief is appropriate.”

The Court set the date of March 24, 1972, for the hearing that both parties had requested and specifically ordered the defendants to submit a copy of their proposed implementation plan no later than March 20, 1972.

On March 24, 1972, the date of the hearing, the defendants not only had failed to submit their implementation plan as ordered but were also continuing in their violation of the provisions of the Court's order of December 20, 1971. At the close of the hearing on March 24, 1972, the Court found that there existed no genuine issue of a material fact; orally granted plaintiffs' motion for summary judgment, and directed defendants to submit to the Court any proposed plan they might have on or before March 31, 1972. The defendants, other than Cassell, failed to file any proposal within the time directed. However, on April 7, 1972, there was sent to the Clerk of the Court on behalf of the Board of Education and its employees who are defendants in this case the following documents:

1. A proposed form of Order to be entered by the Court.

2. An abstract of a document titled "A District of Columbia Plan for Identification, Assessment, Evaluation, and Placement of Exceptional Children".
3. A document titled "A District of Columbia Plan for Identification, Assessment, Evaluation, and Placement of Exceptional Children".
4. Certain Attachments and Appendices to this Plan.

The letter accompanying the documents contained the following paragraph:

"These documents express the position of the Board of Education and its employees as to what should be done to implement the judgment of the Honorable Joseph C. Waddy, the District Judge presiding over this civil action. The contents of these documents have not been endorsed by the other defendants in this case."

None of the other defendants have filed a proposed order or plan. Nor has any of them adopted the proposal submitted by the Board of Education. Throughout these proceedings it has been obvious to the Court that the defendants have no common program or plan for the alleviation of the problems posed by this litigation and that this lack of communication, cooperation and plan is typical and contributes to the problem.

### **PLAINTIFFS ARE ENTITLED TO RELIEF**

Plaintiffs' entitlement to relief in this case is clear. The applicable statutes and regulations and the Constitution of the United States require it.

### **Statutes and Regulations**

Section 31-201 of the District of Columbia Code requires that:

"Every parent, guardian, or other person residing [permanently or temporarily] in the District of Columbia who has custody or control of a child between the ages of seven and sixteen years shall cause said child to be regularly instructed in a public school or in a private or parochial school or instructed privately during the period of each year in which the public schools of the District of Columbia are in session . . ."

Under Section 31-203, a child may be "excused" from attendance only when

". . . upon examination ordered by . . . [the Board of Education of the District of Columbia], [the child] is found to be unable mentally or physically to profit from attendance at school: Provided, however, That if such examination shows that such child may benefit from specialized instruction adapted to his needs, he shall attend upon such instruction."

Failure of a parent to comply with Section 31-201 constitutes a criminal offense. D.C. Code 31-207. The Court need not belabor the fact that requiring parents to see that their children attend school under pain of criminal penalties presupposes that an educational opportunity will be made available to the children. The Board of Education is required to make such opportunity available. It has adopted rules and regulations consonant with the statutory direction. Chapter XIII of the Board Rules contains the following:

1.1—All children of the ages hereinafter prescribed who are bona fide residents of the District of Columbia are entitled to admission and free tuition in the Public Schools of the District of Columbia, subject to the rules, regulations, and orders of the Board of Education and the applicable statutes.

14.1—Every parent, guardian, or other person residing permanently or temporarily in the District of Columbia who has custody or control of a child residing in the District of Columbia between the ages of seven and sixteen years shall cause said child to be regularly instructed in a public school or in a private or parochial school or in-

structed privately during the period of each year in which the Public Schools of the District of Columbia are in session, provided that instruction given in such private or parochial school, or privately, is deemed reasonably equivalent by the Board of Education to the instruction given in the Public Schools.

14.3—The Board of Education of the District of Columbia may, upon written recommendation of the Superintendent of Schools, issue a certificate excusing from attendance at school a child who, upon examination by the Department of Pupil Appraisal, Study and Attendance or by the Department of Public Health of the District of Columbia, is found to be unable mentally or physically to profit from attendance at school: Provided, however, that if such examination shows that such child may benefit from specialized instruction adapted to his needs, he shall be required to attend such classes.

Thus the Board of Education has an obligation to provide whatever specialized instruction that will benefit the child. By failing to provide plaintiffs and their class the publicly supported specialized education to which they are entitled, the Board of Education violates the above statutes and its own regulations.

### **The Constitution—Equal Protection and Due Process**

The Supreme Court in *Brown v. Board of Education*, 347 U.S. 483, 493, 74 S. Ct. 686, 691, 98 L. Ed. 873 (1954) stated:

“Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms.” (emphasis supplied)

*Bolling v. Sharpe*, 347 U.S. 497, 74 S. Ct. 693, 98 L. Ed. 884, Decided the same day as *Brown*, applied the *Brown* rationale to the District of Columbia public schools by finding that:

“Segregation in public education is not reasonably related to any proper governmental objective, and thus it imposes on Negro children of the District of Columbia a burden that constitutes an arbitrary deprivation of their liberty in violation of the Due Process Clause.”

In *Hobson v. Hansen*, 269 F. Supp. 401 (D.C.D.C. 1967) Circuit Judge J. Skelly Wright considered the pronouncements of the Supreme Court in the intervening years and stated that “. . . the Court has found the due process clause of the Fourteenth Amendment elastic enough to embrace not only the First and Fourth Amendments, but the self-incrimination clause of the Fifth, the speedy trial, confrontation and assistance of counsel clauses of the Sixth, and the cruel and unusual clause of the Eighth.” (269 F. Supp. 401 at 493, citations omitted). Judge Wright concluded “From these considerations the court draws the conclusion that the doctrine of equal educational opportunity—the equal protection clause in its application to public school education—is in its full sweep a component of due process binding on the District under the due process clause of the Fifth Amendment.”

In *Hobson v. Hansen*, *supra*, Judge Wright found that denying poor public school children educational opportunities equal to that available to more affluent public school children

was violative of the Due Process Clause of the Fifth Amendment. A fortiori, the defendants' conduct here, denying plaintiffs and their class not just an equal publicly supported education but all publicly supported education while providing such education to other children, is violative of the Due Process Clause.

Not only are plaintiffs and their class denied the publicly supported education to which they are entitled many are suspended or expelled from regular schooling or specialized instruction or reassigned without any prior hearing and are given no periodic review thereafter. Due process of law requires a hearing prior to exclusion, termination of classification into a special program.

*Vought v. Van Buren Public Schools*, 306 F. Supp. 1388 (E.D. Mich. 1969); *Williams v. Dade County School Board*, 441 F.2d 299 (5th Cir. 1971); Cf. *Soglin v. Kauffman*, 295 F. Supp. 978 (W.D. Wis. 1968); *Dixon v. Alabama State Board of Education*, 294 F.2d 150 (5th Cir. 1961), cert. den., 368 U.S. 930, 82 S. Ct. 368, 7 L. Ed. 2d 193 (1961); *Goldberg v. Kelly*, 397 U.S. 254, 90 S. Ct. 1011, 25 L. Ed. 2d 287 (1970).

### The Defense

The Answer of the defendants to the Complaint contains the following:

“These defendants say that it is impossible to afford plaintiffs the relief they request unless:

- (a) The Congress of the United States appropriates millions of dollars to improve special education services in the District of Columbia; or
- (b) These defendants divert millions of dollars from funds already specifically appropriated for other educational services in order to improve special educational services. These defendants suggest that to do so would violate an Act of Congress and would be inequitable to children outside the alleged plaintiff class.”

This Court is not persuaded by that contention.

The defendants are required by the Constitution of the United States, the District of Columbia Code, and their own regulations to provide a publicly-supported education for these “exceptional” children. Their failure to fulfill this clear duty to include and retain these children in the public school system, or otherwise provide them with publicly-supported education, and their failure to afford them due process hearing and periodical review, cannot be excused by the claim that there are insufficient funds. In *Goldberg v. Kelly*, 397 U.S. 254, 90 S. Ct. 1011, 25 L. Ed. 2d 287 (1969) the Supreme Court, in a case that involved the right of a welfare recipient to a hearing before termination of his benefits, held that Constitutional rights must be afforded citizens despite the greater expense involved. The Court stated at page 266, 90 S. Ct. at page 1019, that “the State’s interest that his [welfare recipient] payments not be erroneously terminated, clearly outweighs the State’s competing concern to prevent any increase in its fiscal and administrative burdens.” Similarly the District of Columbia’s interest in educating the excluded children clearly must outweigh its interest in preserving its financial resources. If sufficient funds are not available to finance all of the services and programs that are needed and desirable in the system then the available funds must be expended equitably in such a manner that no child is entirely excluded from a publicly supported education consistent with his needs and ability to benefit therefrom. The inadequacies of the District of Columbia Public School System whether occasioned by insufficient funding or administrative inefficiency, certainly cannot be permitted to bear more heavily on the “exceptional” or handicapped child than on the normal child.

### IMPLEMENTATION OF JUDGMENT

This Court has pointed out that Section 31-201 of the District of Columbia Code requires that every person residing in the District of Columbia “. . . who has custody or control of a child

between the ages of seven and sixteen years shall cause said child to be regularly instructed in a public school or in a private or parochial school or instructed privately . . .” It is the responsibility of the Board of Education to provide the opportunities and facilities for such instruction.

The Court has determined that the Board likewise has the responsibility for implementation of the judgment and decree of this Court in this case. Section 31-103 of the District of Columbia Code clearly places this responsibility upon the Board. It provides:

“The Board shall determine all questions of general policy relating to the schools, shall appoint the executive officers hereinafter provided for, define their duties, and direct expenditures.”

The lack of communication and cooperation between the Board of Education and the other defendants in this action shall not be permitted to deprive plaintiffs and their class of publicly supported education. Section 31-104b of the District of Columbia Code dictates that the Board of Education and the District of Columbia Government must coordinate educational and municipal functions:

“(a) The Board of Education and the Commissioner of the District of Columbia shall jointly develop procedures to assure the maximum coordination of educational and other municipal programs and services in achieving the most effective educational system and utilization of educational facilities and services to serve broad community needs. Such procedures shall cover such matters as—

“(1) design and construction of educational facilities to accommodate civic and community activities such as recreation, adult and vocational education and training, and other community purposes;

“(2) full utilization of educational facilities during nonschool hours for community purposes;

“(3) utilization of municipal services such as police, sanitation, recreational, maintenance services to enhance the effectiveness and stature of the school in the community;

“(4) arrangements for cost-sharing and reimbursements on school and community programs involving utilization of educational facilities and services; and

“(5) other matters of mutual interest and concern.

“(b) The Board of Education may invite the Commissioner of the District of Columbia or his designee to attend and participate in meetings of the Board on matters pertaining to co-ordination of educational and other municipal programs and services and on such other matters as may be of mutual interest.” (Emphasis supplied).

If the District of Columbia Government and the Board of Education cannot jointly develop the procedures and programs necessary to implement this Court’s order then it shall be the responsibility of the Board of Education to present the irresolvable issue to the Court for resolution in a timely manner so that plaintiffs and their class may be afforded their constitutional and statutory rights. If any dispute should arise between the defendants which requires for its resolution a degree of expertise in the field of education not possessed by the Court, the Court will appoint a special master pursuant to the provisions of Rule 53 of the Federal Rules of Civil Procedure to assist the Court in resolving the issue.

Inasmuch as the Board of Education has presented for adoption by the Court a proposed “Order and Decree” embodying its present plans for the identification of “exceptional” children and providing for their publicly supported education, including a time table, and further requiring the Board to formulate and file with the Court a more comprehensive plan, the Court will not now appoint a special master as was requested by plaintiffs. Despite the defen-

dants' failure to abide by the provisions of the Court's previous orders in this case and despite the defendants' continuing failure to provide an education for these children, the Court is reluctant to arrogate to itself the responsibility of administering this or any other aspect of the Public School System of the District of Columbia through the vehicle of a special master. Nevertheless, inaction or delay on the part of the defendants, or failure by the defendants to implement the judgment and decree herein within the time specified therein will result in the immediate appointment of a special master to oversee and direct such implementation under the direction of this Court. The Court will include as a part of its judgment the proposed "Order and Decree" submitted by the Board of Education, as modified in minor part by the Court, and will retain jurisdiction of the cause to assure prompt implementation of the judgment. Plaintiffs' motion to require certain defendants to show cause why they should not be adjudged in contempt will be held in abeyance for 45 days.

### **JUDGMENT AND DECREE**

Plaintiffs having filed their verified complaint seeking an injunction and declaration of rights as set forth more fully in the verified complaint and the prayer for relief contained therein; and having moved this Court for summary judgment pursuant to Rule 56 of the Federal Rules of Civil Procedure, and this Court having reviewed the record of this cause including plaintiffs' Motion, pleadings, affidavits, and evidence and arguments in support thereof, and defendants' affidavit, pleadings, and evidence and arguments in support thereof, and the proceedings of pre-trial conferences on December 17, 1971, and January 14, 1972, it is hereby ordered, adjudged and decreed that summary judgment in favor of plaintiffs and against defendants be, and hereby is, granted, and judgment is entered in this action as follows:

1. That no child eligible for a publicly supported education in the District of Columbia public schools shall be excluded from a regular public school assignment by a Rule, policy, or practice of the Board of Education of the District of Columbia or its agents unless such child is provided (a) adequate alternative educational services suited to the child's needs, which may include special education or tuition grants, and (b) a constitutionally adequate prior hearing and periodic review of the child's status, progress, and the adequacy of any educational alternative.

2. The defendants, their officers, agents, servants, employees, and attorneys and all those in active concert or participation with them are hereby enjoined from maintaining, enforcing or otherwise continuing in effect any and all rules, policies and practices which exclude plaintiffs and the members of the class they represent from a regular public school assignment without providing them at public expense (a) adequate and immediate alternative education or tuition grants, consistent with their needs, and (b) a constitutionally adequate prior hearing and periodic review of their status, progress and the adequacy of any educational alternatives; and it is further ORDERED that:

3. The District of Columbia shall provide to each child of school age a free and suitable publicly-supported education regardless of the degree of the child's mental, physical or emotional disability or impairment. Furthermore, defendants shall not exclude any child resident in the District of Columbia from such publicly-supported education on the basis of a claim of insufficient resources.

4. Defendants shall not suspend a child from the public schools for disciplinary reasons for any period in excess of two days without affording him a hearing pursuant to the provisions of Paragraph 13.f., below, and without providing for his education during the period of any such suspension.

5. Defendants shall provide each identified member of plaintiff class with a publicly-supported education suited to his needs within thirty (30) days of the entry of this order. With regard to children who later come to the attention of any defendant, within twenty (20) days

after he becomes known, the evaluation (case study approach) called for in paragraph 9 below shall be completed and within 30 days after completion of the evaluation, placement shall be made so as to provide the child with a publicly supported education suited to his needs.

In either case, if the education to be provided is not of a kind generally available during the summer vacation, the thirty-day limit may be extended for children evaluated during summer months to allow their educational programs to begin at the opening of school in September.

6. Defendants shall cause announcements and notices to be placed in the Washington Post, Washington Star-Daily News, and the Afro-American, in all issues published for a three week period commencing within five (5) days of the entry of this order, and thereafter at quarterly intervals, and shall cause spot announcements to be made on television and radio stations for twenty (20) consecutive days, commencing within five (5) days of the entry of this order, and thereafter at quarterly intervals, advising residents of the District of Columbia that all children, regardless of any handicap or other disability, have a right to a publicly-supported education suited to their needs, and informing the parents or guardians of such children of the procedures required to enroll their children in an appropriate educational program. Such announcements should include the listing of a special answering service telephone number to be established by defendants in order to (a) compile the names, addresses, phone numbers of such children who are presently not attending school and (b) provide further information to their parents or guardians as to the procedures required to enroll their children in an appropriate educational program.

7. Within twenty-five (25) days of the entry of this order, defendants shall file with the Clerk of this Court, an up-to-date list showing, for every additional identified child, the name of the child's parent or guardian, the child's name, age, address and telephone number, the date of his suspension, expulsion, exclusion or denial of placement and, without attributing a particular characteristic to any specific child, a breakdown of such list, showing the alleged causal characteristics for such nonattendance (e.g., educable mentally retarded, trainable mentally retarded, emotionally disturbed, specific learning disability, crippled/other health impaired, hearing impaired, visually impaired, multiple handicapped) and the number of children possessing each such alleged characteristic.

8. Notice of this order shall be given by defendants to the parent or guardian of each child resident in the District of Columbia who is now, or was during the 1971-72 school year or the 1970-71 school year, excluded, suspended or expelled from publicly-supported educational programs or otherwise denied a full and suitable publicly-supported education for any period in excess of two days. Such notice shall include a statement that each such child has the right to receive a free educational assessment and to be placed in a publicly-supported educational program suited to his needs. Such notice shall be sent by registered mail within five (5) days of the entry of this order, or within five (5) days after such child first becomes known to any defendant. Provision of notification for non-reading parents or guardians will be made.

9. a. Defendants shall utilize public or private agencies to evaluate the educational needs of all identified "exceptional" children and, within twenty (20) days of the entry of this order, shall file with the Clerk of this Court their proposal for each individual placement in a suitable educational program, including the provision of compensatory educational services where required.

b. Defendants, within twenty (20) days of the entry of this order, shall, also submit such proposals to each parent or guardian of such child, respectively, along with a notification that if they object to such proposed placement within a period of time to be fixed by the parties or by the Court, they may have their objection heard by a Hearing Officer in accordance with procedures required in Paragraph 13.e., below.

10. a. Within forty-five (45) days of the entry of this order, defendants shall file with the Clerk of the Court, with copy to plaintiffs' counsel, a comprehensive plan which provides for

the identification, notification, assessment, and placement of class members. Such plan shall state the nature and extent of efforts which defendants have undertaken or propose to undertake to

- (1) describe the curriculum, educational objectives, teacher qualifications, and ancillary services for the publicly-supported educational programs to be provided to class members; and,
- (2) formulate general plans of compensatory education suitable to class members in order to overcome the present effects of prior educational deprivations,
- (3) institute any additional steps and proposed modifications designed to implement the matters decreed in paragraph 5 through 7 hereof and other requirements of this judgment.

11. The defendants shall make an interim report to this Court on their performance within forty-five (45) days of the entry of this order. Such report shall show:

- (1) The adequacy of Defendants' implementation of plans to identify, locate, evaluate and give notice to all members of the class.
- (2) The number of class members who have been placed, and the nature of their placements.
- (3) The number of contested hearings before the Hearing Officers, if any, and the findings and determinations resulting therefrom.

12. Within forty-five (45) days of the entry of this order, defendants shall file with this Court a report showing the expunction from or correction of all official records of any plaintiff with regard to past expulsions, suspensions, or exclusions effected in violation of the procedural rights set forth in Paragraph 13 together with a plan for procedures pursuant to which parents, guardians, or their counsel may attach to such students' records any clarifying or explanatory information which the parent, guardian or counsel may deem appropriate.

### 13. Hearing Procedures.

a. Each member of the plaintiff class is to be provided with a publicly-supported educational program suited to his needs, within the context of a presumption that among the alternative programs of education, placement in a regular public school class with appropriate ancillary services is preferable to placement in a special school class.

b. Before placing a member of the class in such a program, defendants shall notify his parent or guardian of the proposed educational placement, the reasons therefor, and the right to a hearing before a Hearing Officer if there is an objection to the placement proposed. Any such hearing shall be held in accordance with the provisions of Paragraph 13.e., below.

c. Hereinafter, children who are residents of the District of Columbia and are thought by any of the defendants, or by officials, parents or guardians, to be in need of a program of special education, shall neither be placed in, transferred from or to, nor denied placement in such a program unless defendants shall have first notified their parents or guardians of such proposed placement, transfer or denial, the reasons therefor, and of the right to a hearing before a Hearing Officer if there is an objection to the placement, transfer or denial of placement. Any such hearings shall be held in accordance with the provisions of Paragraph 13.e., below.

d. Defendants shall not, on grounds of discipline, cause the exclusion, suspension, expulsion, postponement, interschool transfer, or any other denial of access to regular instruction in the public schools to any child for more than two days without first notifying the child's parent or guardian of such proposed action, the reasons therefor, and of the hearing before a Hearing Officer in accordance with the provisions of Paragraph 13.f., below.

e. Whenever defendants take action regarding a child's placement, denial of placement, or transfer, as described in Paragraphs 13.b. or 13.c., above, the following procedures shall be followed.

(1) Notice required hereinbefore shall be given in writing by registered mail to the parent or guardian of the child.

(2) Such notice shall:

(a) describe the proposed action in detail;

(b) clearly state the specific and complete reasons for the proposed action, including the specification of any tests or reports upon which such action is proposed;

(c) describe any alternative educational opportunities available on a permanent or temporary basis;

(d) inform the parent or guardian of the right to object to the proposed action at a hearing before the Hearing Officer;

(e) inform the parent or guardian that the child is eligible to receive, at no charge, the services of a federally or locally funded diagnostic center for an independent medical, psychological and educational evaluation and shall specify the name, address and telephone number of an appropriate local diagnostic center;

(f) inform the parent or guardian of the right to be represented at the hearing by legal counsel; to examine the child's school records before the hearing, including any tests or reports upon which the proposed action may be based, to present evidence, including expert medical, psychological and educational testimony; and, to confront and cross-examine any school official, employee, or agent of the school district or public department who may have evidence upon which the proposed action was based.

(3) The hearing shall be at a time and place reasonably convenient to such parent or guardian.

(4) The hearing shall be scheduled not sooner than twenty (20) days waivable by parent or child, nor later than forty-five (45) days after receipt of a request from the parent or guardian.

(5) The hearing shall be a closed hearing unless the parent or guardian requests an open hearing.

(6) The child shall have the right to a representative of his own choosing, including legal counsel. If a child is unable, through financial inability, to retain counsel, defendants shall advise child's parents or guardians of available voluntary legal assistance including the Neighborhood Legal Services Organization, the Legal Aid Society, the Young Lawyers Section of the D.C. Bar Association, or from some other organization.

(7) The decision of the Hearing Officer shall be based solely upon the evidence presented at the hearing.

(8) Defendants shall bear the burden of proof as to all facts and as to the appropriateness of any placement, denial of placement or transfer.

(9) A tape recording or other record of the hearing shall be made and transcribed and, upon request, made available to the parent or guardian or his representative.

(10) At a reasonable time prior to the hearing, the parent or guardian, or his counsel, shall be given access to all public school system and other public office records pertaining to the child, including any tests or reports upon which the proposed action may be based.

(11) The independent Hearing Officer shall be an employee of the District of Columbia, but shall not be an officer, employee or agent of the Public School System.

(12) The parent or guardian, or his representative, shall have the right to have the attendance of any official, employee or agent of the public school system or any public employee

who may have evidence upon which the proposed action may be based and to confront, and to cross-examine any witness testifying for the public school system.

(13) The parent or guardian, or his representative, shall have the right to present evidence and testimony, including expert medical, psychological or educational testimony.

(14) Within thirty (30) days after the hearing, the Hearing Officer shall render a decision in writing. Such decision shall include findings of fact and conclusions of law and shall be filed with the Board of Education and the Department of Human Resources and sent by registered mail to the parent or guardian and his counsel.

(15) Pending a determination by the Hearing Officer, defendants shall take no action described in Paragraphs 13.b. or 13.c., above, if the child's parent or guardian objects to such action. Such objection must be in writing and postmarked within five (5) days of the date of receipt of notification hereinabove described.

f. Whenever defendants propose to take action described in Paragraph 13.d., above, the following procedures shall be followed.

(1) Notice required hereinabove shall be given in writing and shall be delivered in person or by registered mail to both the child and his parent or guardian.

(2) Such notice shall

(a) describe the proposed disciplinary action in detail, including the duration thereof;

(b) state specific, clear and full reasons for the proposed action, including the specification of the alleged act upon which the disciplinary action is to be based and the reference to the regulation subsection under which such action is proposed;

(c) describe alternative educational opportunities to be available to the child during the proposed suspension period;

(d) inform the child and the parent or guardian of the time and place at which the hearing shall take place;

(e) inform the parent or guardian that if the child is thought by the parent or guardian to require special education services, that such child is eligible to receive, at no charge, the services of a public or private agency for a diagnostic medical, psychological or educational evaluation;

(f) inform the child and his parent or guardian of the right to be represented at the hearing by legal counsel; to examine the child's school records before the hearing, including any tests or reports upon which the proposed action may be based; to present evidence of his own; and to confront and cross-examine any witnesses or any school officials, employees or agents who may have evidence upon which the proposed action may be based.

(3) The hearing shall be at a time and place reasonably convenient to such parent or guardian.

(4) The hearing shall take place within four (4) school days of the date upon which written notice is given, and may be postponed at the request of the child's parent or guardian for no more than five (5) additional school days where necessary for preparation.

(5) The hearing shall be a closed hearing unless the child, his parent or guardian requests an open hearing.

(6) The child is guaranteed the right to a representative of his own choosing, including legal counsel. If a child is unable, through financial inability, to retain counsel, defendants shall advise child's parents or guardians of available voluntary legal assistance including the Neighborhood Legal Services Organization, the Legal Aid Society, the Young Lawyers Section of the D.C. Bar Association, or from some other organization.

(7) The decision of the Hearing Officer shall be based solely upon the evidence presented at the hearing.

(8) Defendants shall bear the burden of proof as to all facts and as to the appropriateness of any disposition and of the alternative educational opportunity to be provided during any suspension.

(9) A tape recording or other record of the hearing shall be made and transcribed and, upon request, made available to the parent or guardian or his representative.

(10) At a reasonable time prior to the hearing, the parent or guardian, or the child's counsel or representative, shall be given access to all records of the public school system and any other public office pertaining to the child, including any tests or reports upon which the proposed action may be based.

(11) The independent Hearing Officer shall be an employee of the District of Columbia, but shall not be an officer, employee or agent of the Public School System.

(12) The parent or guardian, or the child's counsel or representative, shall have the right to have the attendance of any public employee who may have evidence upon which the proposed action may be based and to confront and to cross-examine any witness testifying for the public school system.

(13) The parent or guardian, or the child's counsel or representative, shall have the right to present evidence and testimony.

(14) Pending the hearing and receipt of notification of the decision, there shall be no change in the child's educational placement unless the principal (responsible to the Superintendent) shall warrant that the continued presence of the child in his current program would endanger the physical well-being of himself or others. In such exceptional cases, the principal shall be responsible for insuring that the child receives some form of educational assistance and/or diagnostic examination during the interim period prior to the hearing.

(15) No finding that disciplinary action is warranted shall be made unless the Hearing Officer first finds, by clear and convincing evidence, that the child committed a prohibited act upon which the proposed disciplinary action is based. After this finding has been made, the Hearing Officer shall take such disciplinary action as he shall deem appropriate. This action shall not be more severe than that recommended by the school official initiating the suspension proceedings.

(16) No suspension shall continue for longer than ten (10) school days after the date of the hearing, or until the end of the school year, whichever comes first. In such cases, the principal (responsible to the Superintendent) shall be responsible for insuring that the child receives some form of educational assistance and/or diagnostic examination during the suspension period.

(17) If the Hearing Officer determines that disciplinary action is not warranted, all school records of the proposed disciplinary action, including those relating to the incidents upon which such proposed action was predicated, shall be destroyed.

(18) If the Hearing Officer determines that disciplinary action is warranted, he shall give written notification of his findings and of the child's right to appeal his decision to the Board of Education, to the child, the parent or guardian, and the counsel or representative of the child, within three (3) days of such determination.

(19) An appeal from the decision of the Hearing Officer shall be heard by the Student Life and Community Involvement Committee of the Board of Education which shall provide the child and his parent or guardian with the opportunity for an oral hearing, at which the child may be represented by legal counsel, to review the findings of the Hearing Officer. At the conclusion of such hearing, the Committee shall determine the appropriateness of and may modify such decision. However, in no event may such Committee impose added or more severe restrictions on the child.

14. Whenever the foregoing provisions require notice to a parent or guardian, and the child in question has no parent or duly appointed guardian, notice is to be given to any adult

with whom the child is actually living, as well as to the child himself, and every effort will be made to assure that no child's rights are denied for lack of a parent or duly appointed guardian. Again provision for such notice to non-readers will be made.

15. Jurisdiction of this matter is retained to allow for implementation, modification and enforcement of this Judgment and Decree as may be required.

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## WISCONSIN V. YODER, 406 U.S. 205 (1972)

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### SUPREME COURT OF THE UNITED STATES CERTIORARI TO THE SUPREME COURT OF WISCONSIN ARGUED DECEMBER 8, 1971. DECIDED MAY 15, 1972.

Respondents, members of the Old Order Amish religion and the Conservative Amish Mennonite Church, were convicted of violating Wisconsin's compulsory school-attendance law (which requires a child's school attendance until age 16) by declining to send their children to public or private school after they had graduated from the eighth grade. The evidence showed that the Amish provide continuing informal vocational education to their children designed to prepare them for life in the rural Amish community. The evidence also showed that respondents sincerely believed that high school attendance was contrary to the Amish religion and way of life and that they would endanger their own salvation and that of their children by complying with the law. The State Supreme Court sustained respondents' claim that application of the compulsory school-attendance law to them violated their rights under the Free Exercise Clause of the First Amendment, made applicable to the States by the Fourteenth Amendment.

Held:

1. The State's interest in universal education is not totally free from a balancing process when it impinges on other fundamental rights, such as those specifically protected by the Free Exercise Clause of the First Amendment and the traditional interest of parents with respect to the religious upbringing of their children. Pp. 213–215.
2. Respondents have amply supported their claim that enforcement of the compulsory formal education requirement after the eighth grade would gravely endanger if not destroy the free exercise of their religious beliefs. Pp. 215–219.
3. Aided by a history of three centuries as an identifiable religious sect and a long history as a successful and self-sufficient segment of American society, the Amish have demonstrated the sincerity of their religious beliefs, the interrelationship of belief with their mode of life, the vital role that belief and daily conduct play in the continuing survival of Old Order Amish communities, and the hazards presented by the State's enforcement of a statute generally valid as to others. Beyond this, they have carried the difficult burden of demonstrating the adequacy of their alternative mode of continuing informal vocational education in terms of the overall interests that the State relies on in support of its program of compulsory high school education. In light of this showing, and weighing the minimal difference between what the State would require and what the Amish already accept, it was incumbent on the State to show with more particularity how its admittedly strong interest in compulsory education would be adversely affected by granting an exemption to the Amish. Pp. 219–229, 234–236.
4. The State's claim that it is empowered, as *parens patriae*, to extend the benefit of secondary education to children regardless of the wishes of their parents cannot be sustained against a free exercise claim of the nature revealed by this record, for the

Amish have introduced convincing evidence that accommodating their religious objections by forgoing one or two additional years of compulsory education will not impair the physical or mental health of the child, or result in an inability to be self-supporting or to discharge the duties and responsibilities of citizenship, or in any other way materially detract from the welfare of society. Pp. 229-234.

49 Wis. 2d 430, 182 N. W. 2d 539, affirmed.

BURGER, C. J., delivered the opinion of the Court, in which BRENNAN, STEWART, WHITE, MARSHALL, and BLACKMUN, JJ., joined. STEWART, J., filed a concurring opinion, in which BRENNAN, J., joined, post, p. 237. WHITE, J., filed a concurring opinion, in which BRENNAN and STEWART, JJ., joined, post, p. 237. DOUGLAS, J., filed an opinion dissenting in part, post, p. 241. POWELL and REHNQUIST, JJ., took no part in the consideration or decision of the case.

John W. Calhoun, Assistant Attorney General of Wisconsin, argued the cause for petitioner. With him on the briefs were Robert W. Warren, Attorney General, and William H. Wilker, Assistant Attorney General.

William B. Ball argued the cause for respondents. With him on the brief was Joseph G. Skelly.

Briefs of amici curiae urging affirmance were filed by Donald E. Showalter for the Mennonite Central Committee; by Boardman Noland and Lee Boothby for the General Conference of Seventh-Day Adventists; by William S. Ellis for the National Council of the Churches of Christ; by Nathan Lewin for the National Jewish Commission on Law and Public Affairs; and by Leo Pfeffer for the Synagogue Council of America et al.

MR. CHIEF JUSTICE BURGER delivered the opinion of the Court.

On petition of the State of Wisconsin, we granted the writ of certiorari in this case to review a decision of the Wisconsin Supreme Court holding that respondents' convictions of violating the State's compulsory school-attendance law were invalid under the Free Exercise Clause of the First Amendment to the United States Constitution made applicable to the States by the Fourteenth Amendment. For the reasons hereafter stated we affirm the judgment of the Supreme Court of Wisconsin.

Respondents Jonas Yoder and Wallace Miller are members of the Old Order Amish religion, and respondent Adin Yutzy is a member of the Conservative Amish Mennonite Church. They and their families are residents of Green County, Wisconsin. Wisconsin's compulsory school-attendance law required them to cause their children to attend public or private school until reaching age 16 but the respondents declined to send their children, ages 14 and 15, to public school after they completed the eighth grade. The children were not enrolled in any private school, or within any recognized exception to the compulsory-attendance law, and they are conceded to be subject to the Wisconsin statute.

On complaint of the school district administrator for the public schools, respondents were charged, tried, and convicted of violating the compulsory-attendance law in Green County Court and were fined the sum of \$5 each. Respondents defended on the ground that the application of the compulsory-attendance law violated their rights under the First and Fourteenth Amendments. The trial testimony showed that respondents believed, in accordance with the tenets of Old Order Amish communities generally, that their children's attendance at high school, public or private, was contrary to the Amish religion and way of life. They believed that by sending their children to high school, they would not only expose themselves to the danger of the censure of the church community, but, as found by the county court, also endanger their own salvation and that of their children. The State stipulated that respondents' religious beliefs were sincere.

In support of their position, respondents presented as expert witnesses scholars on religion and education whose testimony is uncontradicted. They expressed their opinions on the

relationship of the Amish belief concerning school attendance to the more general tenets of their religion, and described the impact that compulsory high school attendance could have on the continued survival of Amish communities as they exist in the United States today. The history of the Amish sect was given in some detail, beginning with the Swiss Anabaptists of the 16th century who rejected institutionalized churches and sought to return to the early, simple, Christian life de-emphasizing material success, rejecting the competitive spirit, and seeking to insulate themselves from the modern world. As a result of their common heritage, Old Order Amish communities today are characterized by a fundamental belief that salvation requires life in a church community separate and apart from the world and worldly influence. This concept of life aloof from the world and its values is central to their faith.

A related feature of Old Order Amish communities is their devotion to a life in harmony with nature and the soil, as exemplified by the simple life of the early Christian era that continued in America during much of our early national life. Amish beliefs require members of the community to make their living by farming or closely related activities. Broadly speaking, the Old Order Amish religion pervades and determines the entire mode of life of its adherents. Their conduct is regulated in great detail by the *Ordnung*, or rules, of the church community. Adult baptism, which occurs in late adolescence, is the time at which Amish young people voluntarily undertake heavy obligations, not unlike the Bar Mitzvah of the Jews, to abide by the rules of the church community.

Amish objection to formal education beyond the eighth grade is firmly grounded in these central religious concepts. They object to the high school, and higher education generally, because the values they teach are in marked variance with Amish values and the Amish way of life; they view secondary school education as an impermissible exposure of their children to a “worldly” influence in conflict with their beliefs. The high school tends to emphasize intellectual and scientific accomplishments, self-distinction, competitiveness, worldly success, and social life with other students. Amish society emphasizes informal learning-through-doing; a life of “goodness,” rather than a life of intellect; wisdom, rather than technical knowledge; community welfare, rather than competition; and separation from, rather than integration with, contemporary worldly society.

Formal high school education beyond the eighth grade is contrary to Amish beliefs, not only because it places Amish children in an environment hostile to Amish beliefs with increasing emphasis on competition in class work and sports and with pressure to conform to the styles, manners, and ways of the peer group, but also because it takes them away from their community, physically and emotionally, during the crucial and formative adolescent period of life. During this period, the children must acquire Amish attitudes favoring manual work and self-reliance and the specific skills needed to perform the adult role of an Amish farmer or housewife. They must learn to enjoy physical labor. Once a child has learned basic reading, writing, and elementary mathematics, these traits, skills, and attitudes admittedly fall within the category of those best learned through example and “doing” rather than in a classroom. And, at this time in life, the Amish child must also grow in his faith and his relationship to the Amish community if he is to be prepared to accept the heavy obligations imposed by adult baptism. In short, high school attendance with teachers who are not of the Amish faith—and may even be hostile to it—interposes a serious barrier to the integration of the Amish child into the Amish religious community. Dr. John Hostetler, one of the experts on Amish society, testified that the modern high school is not equipped, in curriculum or social environment, to impart the values promoted by Amish society.

The Amish do not object to elementary education through the first eight grades as a general proposition because they agree that their children must have basic skills in the “three R’s” in order to read the Bible, to be good farmers and citizens, and to be able to deal with non-Amish people when necessary in the course of daily affairs. They view such a basic education

as acceptable because it does not significantly expose their children to worldly values or interfere with their development in the Amish community during the crucial adolescent period. While Amish accept compulsory elementary education generally, wherever possible they have established their own elementary schools in many respects like the small local schools of the past. In the Amish belief higher learning tends to develop values they reject as influences that alienate man from God.

On the basis of such considerations, Dr. Hostetler testified that compulsory high school attendance could not only result in great psychological harm to Amish children, because of the conflicts it would produce, but would also, in his opinion, ultimately result in the destruction of the Old Order Amish church community as it exists in the United States today. The testimony of Dr. Donald A. Erickson, an expert witness on education, also showed that the Amish succeed in preparing their high school age children to be productive members of the Amish community. He described their system of learning through doing the skills directly relevant to their adult roles in the Amish community as “ideal” and perhaps superior to ordinary high school education. The evidence also showed that the Amish have an excellent record as law-abiding and generally self-sufficient members of society.

Although the trial court in its careful findings determined that the Wisconsin compulsory school-attendance law “does interfere with the freedom of the Defendants to act in accordance with their sincere religious belief” it also concluded that the requirement of high school attendance until age 16 was a “reasonable and constitutional” exercise of governmental power, and therefore denied the motion to dismiss the charges. The Wisconsin Circuit Court affirmed the convictions. The Wisconsin Supreme Court, however, sustained respondents’ claim under the Free Exercise Clause of the First Amendment and reversed the convictions. A majority of the court was of the opinion that the State had failed to make an adequate showing that its interest in “establishing and maintaining an educational system overrides the defendants’ right to the free exercise of their religion.” 49 Wis. 2d 430, 447, 182 N. W. 2d 539, 547 (1971).

## I

There is no doubt as to the power of a State, having a high responsibility for education of its citizens, to impose reasonable regulations for the control and duration of basic education. See, e. g., *Pierce v. Society of Sisters*, (1925). Providing public schools ranks at the very apex of the function of a State. Yet even this paramount responsibility was, in *Pierce*, made to yield to the right of parents to provide an equivalent education in a privately operated system. There the Court held that Oregon’s statute compelling attendance in a public school from age eight to age 16 unreasonably interfered with the interest of parents in directing the rearing of their offspring, including their education in church-operated schools. As that case suggests, the values of parental direction of the religious upbringing and education of their children in their early and formative years have a high place in our society. See also *Ginsberg v. New York*, (1968); *Meyer v. Nebraska*, (1923); cf. *Rowan v. Post Office Dept.*, (1970). Thus, a State’s interest in universal education, however highly we rank it, is not totally free from a balancing process when it impinges on fundamental rights and interests, such as those specifically protected by the Free Exercise Clause of the First Amendment, and the traditional interest of parents with respect to the religious upbringing of their children so long as they, in the words of *Pierce*, “prepare [them] for additional obligations.”

It follows that in order for Wisconsin to compel school attendance beyond the eighth grade against a claim that such attendance interferes with the practice of a legitimate religious belief, it must appear either that the State does not deny the free exercise of religious belief by its requirement, or that there is a state interest of sufficient magnitude to override the interest claiming protection under the Free Exercise Clause. Long before there was general acknowledgment of the need for universal formal education, the Religion Clauses had specifically and firmly fixed the right to free exercise of religious beliefs, and buttressing this

fundamental right was an equally firm, even if less explicit, prohibition against the establishment of any religion by government. The values underlying these two provisions relating to religion have been zealously protected, sometimes even at the expense of other interests of admittedly high social importance. The invalidation of financial aid to parochial schools by government grants for a salary subsidy for teachers is but one example of the extent to which courts have gone in this regard, notwithstanding that such aid programs were legislatively determined to be in the public interest and the service of sound educational policy by States and by Congress. *Lemon v. Kurtzman*, (1971); *Tilton v. Richardson*, (1971). See also *Everson v. Board of Education*, (1947).

The essence of all that has been said and written on the subject is that only those interests of the highest order and those not otherwise served can overbalance legitimate claims to the free exercise of religion. We can accept it as settled, therefore, that, however strong the State's interest in universal compulsory education, it is by no means absolute to the exclusion or subordination of all other interests. E. g., *Sherbert v. Verner*, (1963); *McGowan v. Maryland*, (1961) (separate opinion of Frankfurter, J.); *Prince v. Massachusetts*, (1944).

## II

We come then to the quality of the claims of the respondents concerning the alleged encroachment of Wisconsin's compulsory school-attendance statute on their rights and the rights of their children to the free exercise of the religious beliefs they and their forebears have adhered to for almost three centuries. In evaluating those claims we must be careful to determine whether the Amish religious faith and their mode of life are, as they claim, inseparable and interdependent. A way of life, however virtuous and admirable, may not be interposed as a barrier to reasonable state regulation of education if it is based on purely secular considerations; to have the protection of the Religion Clauses, the claims must be rooted in religious belief. Although a determination of what is a "religious" belief or practice entitled to constitutional protection may present a most delicate question, the very concept of ordered liberty precludes allowing every person to make his own standards on matters of conduct in which society as a whole has important interests. Thus, if the Amish asserted their claims because of their subjective evaluation and rejection of the contemporary secular values accepted by the majority, much as Thoreau rejected the social values of his time and isolated himself at Walden Pond, their claims would not rest on a religious basis. Thoreau's choice was philosophical and personal rather than religious, and such belief does not rise to the demands of the Religion Clauses.

Giving no weight to such secular considerations, however, we see that the record in this case abundantly supports the claim that the traditional way of life of the Amish is not merely a matter of personal preference, but one of deep religious conviction, shared by an organized group, and intimately related to daily living. That the Old Order Amish daily life and religious practice stem from their faith is shown by the fact that it is in response to their literal interpretation of the Biblical injunction from the Epistle of Paul to the Romans, "be not conformed to this world . . . ." This command is fundamental to the Amish faith. Moreover, for the Old Order Amish, religion is not simply a matter of theocratic belief. As the expert witnesses explained, the Old Order Amish religion pervades and determines virtually their entire way of life, regulating it with the detail of the Talmudic diet through the strictly enforced rules of the church community.

The record shows that the respondents' religious beliefs and attitude toward life, family, and home have remained constant—perhaps some would say static—in a period of unparalleled progress in human knowledge generally and great changes in education. The respondents freely concede, and indeed assert as an article of faith, that their religious beliefs and what we would today call "life style" have not altered in fundamentals for centuries. Their way of life in a church-oriented community, separated from the outside world and "worldly" influences,

their attachment to nature and the soil, is a way inherently simple and uncomplicated, albeit difficult to preserve against the pressure to conform. Their rejection of telephones, automobiles, radios, and television, their mode of dress, of speech, their habits of manual work do indeed set them apart from much of contemporary society; these customs are both symbolic and practical.

As the society around the Amish has become more populous, urban, industrialized, and complex, particularly in this century, government regulation of human affairs has correspondingly become more detailed and pervasive. The Amish mode of life has thus come into conflict increasingly with requirements of contemporary society exerting a hydraulic insistence on conformity to majoritarian standards. So long as compulsory education laws were confined to eight grades of elementary basic education imparted in a nearby rural schoolhouse, with a large proportion of students of the Amish faith, the Old Order Amish had little basis to fear that school attendance would expose their children to the worldly influence they reject. But modern compulsory secondary education in rural areas is now largely carried on in a consolidated school, often remote from the student's home and alien to his daily home life. As the record so strongly shows, the values and programs of the modern secondary school are in sharp conflict with the fundamental mode of life mandated by the Amish religion; modern laws requiring compulsory secondary education have accordingly engendered great concern and conflict. The conclusion is inescapable that secondary schooling, by exposing Amish children to worldly influences in terms of attitudes, goals, and values contrary to beliefs, and by substantially interfering with the religious development of the Amish child and his integration into the way of life of the Amish faith community at the crucial adolescent stage of development, contravenes the basic religious tenets and practice of the Amish faith, both as to the parent and the child.

The impact of the compulsory-attendance law on respondents' practice of the Amish religion is not only severe, but inescapable, for the Wisconsin law affirmatively compels them, under threat of criminal sanction, to perform acts undeniably at odds with fundamental tenets of their religious beliefs. See *Braunfeld v. Brown*, (1961). Nor is the impact of the compulsory-attendance law confined to grave interference with important Amish religious tenets from a subjective point of view. It carries with it precisely the kind of objective danger to the free exercise of religion that the First Amendment was designed to prevent. As the record shows, compulsory school attendance to age 16 for Amish children carries with it a very real threat of undermining the Amish community and religious practice as they exist today; they must either abandon belief and be assimilated into society at large, or be forced to migrate to some other and more tolerant region.

In sum, the unchallenged testimony of acknowledged experts in education and religious history, almost 300 years of consistent practice, and strong evidence of a sustained faith pervading and regulating respondents' entire mode of life support the claim that enforcement of the State's requirement of compulsory formal education after the eighth grade would gravely endanger if not destroy the free exercise of respondents' religious beliefs.

### III

Neither the findings of the trial court nor the Amish claims as to the nature of their faith are challenged in this Court by the State of Wisconsin. Its position is that the State's interest in universal compulsory formal secondary education to age 16 is so great that it is paramount to the undisputed claims of respondents that their mode of preparing their youth for Amish life, after the traditional elementary education, is an essential part of their religious belief and practice. Nor does the State undertake to meet the claim that the Amish mode of life and education is inseparable from and a part of the basic tenets of their religion—indeed, as much a part of their religious belief and practices as baptism, the confessional, or a sabbath may be for others.

Wisconsin concedes that under the Religion Clauses religious beliefs are absolutely free from the State's control, but it argues that "actions," even though religiously grounded, are

outside the protection of the First Amendment. But our decisions have rejected the idea that religiously grounded conduct is always outside the protection of the Free Exercise Clause. It is true that activities of individuals, even when religiously based, are often subject to regulation by the States in the exercise of their undoubted power to promote the health, safety, and general welfare, or the Federal Government in the exercise of its delegated powers. See, e. g., *Gillette v. United States*, (1971); *Braunfeld v. Brown*, (1961); *Prince v. Massachusetts*, (1944); *Reynolds v. United States*, (1879). But to agree that religiously grounded conduct must often be subject to the broad police power of the State is not to deny that there are areas of conduct protected by the Free Exercise Clause of the First Amendment and thus beyond the power of the State to control, even under regulations of general applicability. E. g., *Sherbert v. Verner*, (1963); *Murdock v. Pennsylvania*, (1943); *Cantwell v. Connecticut*, (1940). This case, therefore, does not become easier because respondents were convicted for their “actions” in refusing to send their children to the public high school; in this context belief and action cannot be neatly confined in logic-tight compartments. Cf. *Lemon v. Kurtzman*.

Nor can this case be disposed of on the grounds that Wisconsin’s requirement for school attendance to age 16 applies uniformly to all citizens of the State and does not, on its face, discriminate against religions or a particular religion, or that it is motivated by legitimate secular concerns. A regulation neutral on its face may, in its application, nonetheless offend the constitutional requirement for governmental neutrality if it unduly burdens the free exercise of religion. *Sherbert v. Verner*, *supra*; cf. *Walz v. Tax Commission*, (1970). The Court must not ignore the danger that an exception from a general obligation of citizenship on religious grounds may run afoul of the Establishment Clause, but that danger cannot be allowed to prevent any exception no matter how vital it may be to the protection of values promoted by the right of free exercise. By preserving doctrinal flexibility and recognizing the need for a sensible and realistic application of the Religion Clauses

“we have been able to chart a course that preserved the autonomy and freedom of religious bodies while avoiding any semblance of established religion. This is a ‘tight rope’ and one we have successfully traversed.” *Walz v. Tax Commission*, *supra*, at 672.

We turn, then, to the State’s broader contention that its interest in its system of compulsory education is so compelling that even the established religious practices of the Amish must give way. Where fundamental claims of religious freedom are at stake, however, we cannot accept such a sweeping claim; despite its admitted validity in the generality of cases, we must searchingly examine the interests that the State seeks to promote by its requirement for compulsory education to age 16, and the impediment to those objectives that would flow from recognizing the claimed Amish exemption. See, e. g., *Sherbert v. Verner*, *supra*; *Martin v. City of Struthers*, (1943); *Schneider v. State*, (1939).

The State advances two primary arguments in support of its system of compulsory education. It notes, as Thomas Jefferson pointed out early in our history, that some degree of education is necessary to prepare citizens to participate effectively and intelligently in our open political system if we are to preserve freedom and independence. Further, education prepares individuals to be self-reliant and self-sufficient participants in society. We accept these propositions.

However, the evidence adduced by the Amish in this case is persuasively to the effect that an additional one or two years of formal high school for Amish children in place of their long-established program of informal vocational education would do little to serve those interests. Respondents’ experts testified at trial, without challenge, that the value of all education must be assessed in terms of its capacity to prepare the child for life. It is one thing to say that compulsory education for a year or two beyond the eighth grade may be necessary when its goal is the preparation of the child for life in modern society as the majority live, but it is quite

another if the goal of education be viewed as the preparation of the child for life in the separated agrarian community that is the keystone of the Amish faith. See *Meyer v. Nebraska*.

The State attacks respondents' position as one fostering "ignorance" from which the child must be protected by the State. No one can question the State's duty to protect children from ignorance but this argument does not square with the facts disclosed in the record. Whatever their idiosyncrasies as seen by the majority, this record strongly shows that the Amish community has been a highly successful social unit within our society, even if apart from the conventional "mainstream." Its members are productive and very law-abiding members of society; they reject public welfare in any of its usual modern forms. The Congress itself recognized their self-sufficiency by authorizing exemption of such groups as the Amish from the obligation to pay social security taxes.

It is neither fair nor correct to suggest that the Amish are opposed to education beyond the eighth grade level. What this record shows is that they are opposed to conventional formal education of the type provided by a certified high school because it comes at the child's crucial adolescent period of religious development. Dr. Donald Erickson, for example, testified that their system of learning-by-doing was an "ideal system" of education in terms of preparing Amish children for life as adults in the Amish community, and that "I would be inclined to say they do a better job in this than most of the rest of us do." As he put it, "These people aren't purporting to be learned people, and it seems to me the self-sufficiency of the community is the best evidence I can point to—whatever is being done seems to function well."

We must not forget that in the Middle Ages important values of the civilization of the Western World were preserved by members of religious orders who isolated themselves from all worldly influences against great obstacles. There can be no assumption that today's majority is "right" and the Amish and others like them are "wrong." A way of life that is odd or even erratic but interferes with no rights or interests of others is not to be condemned because it is different.

The State, however, supports its interest in providing an additional one or two years of compulsory high school education to Amish children because of the possibility that some such children will choose to leave the Amish community, and that if this occurs they will be ill-equipped for life. The State argues that if Amish children leave their church they should not be in the position of making their way in the world without the education available in the one or two additional years the State requires. However, on this record, that argument is highly speculative. There is no specific evidence of the loss of Amish adherents by attrition, nor is there any showing that upon leaving the Amish community Amish children, with their practical agricultural training and habits of industry and self-reliance, would become burdens on society because of educational short-comings. Indeed, this argument of the State appears to rest primarily on the State's mistaken assumption, already noted, that the Amish do not provide any education for their children beyond the eighth grade, but allow them to grow in "ignorance." To the contrary, not only do the Amish accept the necessity for formal schooling through the eighth grade level, but continue to provide what has been characterized by the undisputed testimony of expert educators as an "ideal" vocational education for their children in the adolescent years.

There is nothing in this record to suggest that the Amish qualities of reliability, self-reliance, and dedication to work would fail to find ready markets in today's society. Absent some contrary evidence supporting the State's position, we are unwilling to assume that persons possessing such valuable vocational skills and habits are doomed to become burdens on society should they determine to leave the Amish faith, nor is there any basis in the record to warrant a finding that an additional one or two years of formal school education beyond the eighth grade would serve to eliminate any such problem that might exist.

Inssofar as the State's claim rests on the view that a brief additional period of formal education is imperative to enable the Amish to participate effectively and intelligently in our demo-

cratic process, it must fall. The Amish alternative to formal secondary school education has enabled them to function effectively in their day-to-day life under self-imposed limitations on relations with the world, and to survive and prosper in contemporary society as a separate, sharply identifiable and highly self-sufficient community for more than 200 years in this country. In itself this is strong evidence that they are capable of fulfilling the social and political responsibilities of citizenship without compelled attendance beyond the eighth grade at the price of jeopardizing their free exercise of religious belief. When Thomas Jefferson emphasized the need for education as a bulwark of a free people against tyranny, there is nothing to indicate he had in mind compulsory education through any fixed age beyond a basic education. Indeed, the Amish communities singularly parallel and reflect many of the virtues of Jefferson's ideal of the "sturdy yeoman" who would form the basis of what he considered as the ideal of a democratic society. Even their idiosyncratic separateness exemplifies the diversity we profess to admire and encourage.

The requirement for compulsory education beyond the eighth grade is a relatively recent development in our history. Less than 60 years ago, the educational requirements of almost all of the States were satisfied by completion of the elementary grades, at least where the child was regularly and lawfully employed. The independence and successful social functioning of the Amish community for a period approaching almost three centuries and more than 200 years in this country are strong evidence that there is at best a speculative gain, in terms of meeting the duties of citizenship, from an additional one or two years of compulsory formal education. Against this background it would require a more particularized showing from the State on this point to justify the severe interference with religious freedom such additional compulsory attendance would entail.

We should also note that compulsory education and child labor laws find their historical origin in common humanitarian instincts, and that the age limits of both laws have been coordinated to achieve their related objectives. In the context of this case, such considerations, if anything, support rather than detract from respondents' position. The origins of the requirement for school attendance to age 16, an age falling after the completion of elementary school but before completion of high school, are not entirely clear. But to some extent such laws reflected the movement to prohibit most child labor under age 16 that culminated in the provisions of the Federal Fair Labor Standards Act of 1938. It is true, then, that the 16-year child labor age limit may to some degree derive from a contemporary impression that children should be in school until that age. But at the same time, it cannot be denied that, conversely, the 16-year education limit reflects, in substantial measure, the concern that children under that age not be employed under conditions hazardous to their health, or in work that should be performed by adults.

The requirement of compulsory schooling to age 16 must therefore be viewed as aimed not merely at providing educational opportunities for children, but as an alternative to the equally undesirable consequence of unhealthful child labor displacing adult workers, or, on the other hand, forced idleness. The two kinds of statutes—compulsory school attendance and child labor laws—tend to keep children of certain ages off the labor market and in school; this regimen in turn provides opportunity to prepare for a livelihood of a higher order than that which children could pursue without education and protects their health in adolescence.

In these terms, Wisconsin's interest in compelling the school attendance of Amish children to age 16 emerges as somewhat less substantial than requiring such attendance for children generally. For, while agricultural employment is not totally outside the legitimate concerns of the child labor laws, employment of children under parental guidance and on the family farm from age 14 to age 16 is an ancient tradition that lies at the periphery of the objectives of such laws. There is no intimation that the Amish employment of their children on family farms is in any way deleterious to their health or that Amish parents exploit children

at tender years. Any such inference would be contrary to the record before us. Moreover, employment of Amish children on the family farm does not present the undesirable economic aspects of eliminating jobs that might otherwise be held by adults.

#### IV

Finally, the State, on authority of *Prince v. Massachusetts*, argues that a decision exempting Amish children from the State's requirement fails to recognize the substantive right of the Amish child to a secondary education, and fails to give due regard to the power of the State as *parens patriae* to extend the benefit of secondary education to children regardless of the wishes of their parents. Taken at its broadest sweep, the Court's language in *Prince*, might be read to give support to the State's position. However, the Court was not confronted in *Prince* with a situation comparable to that of the Amish as revealed in this record; this is shown by the Court's severe characterization of the evils that it thought the legislature could legitimately associate with child labor, even when performed in the company of an adult. The Court later took great care to confine *Prince* to a narrow scope in *Sherbert v. Verner*, when it stated:

“On the other hand, the Court has rejected challenges under the Free Exercise Clause to governmental regulation of certain overt acts prompted by religious beliefs or principles, for ‘even when the action is in accord with one’s religious convictions, [it] is not totally free from legislative restrictions.’ *Braunfeld v. Brown*. The conduct or actions so regulated have invariably posed some substantial threat to public safety, peace or order. See, e. g., *Reynolds v. United States*; *Jacobson v. Massachusetts*; *Prince v. Massachusetts*.

This case, of course, is not one in which any harm to the physical or mental health of the child or to the public safety, peace, order, or welfare has been demonstrated or may be properly inferred. The record is to the contrary, and any reliance on that theory would find no support in the evidence.

Contrary to the suggestion of the dissenting opinion of MR. JUSTICE DOUGLAS, our holding today in no degree depends on the assertion of the religious interest of the child as contrasted with that of the parents. It is the parents who are subject to prosecution here for failing to cause their children to attend school, and it is their right of free exercise, not that of their children, that must determine Wisconsin's power to impose criminal penalties on the parent. The dissent argues that a child who expresses a desire to attend public high school in conflict with the wishes of his parents should not be prevented from doing so. There is no reason for the Court to consider that point since it is not an issue in the case. The children are not parties to this litigation. The State has at no point tried this case on the theory that respondents were preventing their children from attending school against their expressed desires, and indeed the record is to the contrary. The State's position from the outset has been that it is empowered to apply its compulsory-attendance law to Amish parents in the same manner as to other parents—that is, without regard to the wishes of the child. That is the claim we reject today.

Our holding in no way determines the proper resolution of possible competing interests of parents, children, and the State in an appropriate state court proceeding in which the power of the State is asserted on the theory that Amish parents are preventing their minor children from attending high school despite their expressed desires to the contrary. Recognition of the claim of the State in such a proceeding would, of course, call into question traditional concepts of parental control over the religious up-bringing and education of their minor children recognized in this Court's past decisions. It is clear that such an intrusion by a State into family decisions in the area of religious training would give rise to grave questions of religious freedom comparable to those raised here and those presented in *Pierce v. Society of Sisters*, (1925). On this record we neither reach nor decide those issues.

The State's argument proceeds without reliance on any actual conflict between the wishes of parents and children. It appears to rest on the potential that exemption of Amish parents

from the requirements of the compulsory-education law might allow some parents to act contrary to the best interests of their children by foreclosing their opportunity to make an intelligent choice between the Amish way of life and that of the outside world. The same argument could, of course, be made with respect to all church schools short of college. There is nothing in the record or in the ordinary course of human experience to suggest that non-Amish parents generally consult with children of ages 14-16 if they are placed in a church school of the parents' faith.

Indeed it seems clear that if the State is empowered, as *parens patriae*, to "save" a child from himself or his Amish parents by requiring an additional two years of compulsory formal high school education, the State will in large measure influence, if not determine, the religious future of the child. Even more markedly than in *Prince*, therefore, this case involves the fundamental interest of parents, as contrasted with that of the State, to guide the religious future and education of their children. The history and culture of Western civilization reflect a strong tradition of parental concern for the nurture and upbringing of their children. This primary role of the parents in the upbringing of their children is now established beyond debate as an enduring American tradition. If not the first, perhaps the most significant statements of the Court in this area are found in *Pierce v. Society of Sisters*, in which the Court observed:

"Under the doctrine of *Meyer v. Nebraska*, we think it entirely plain that the Act of 1922 unreasonably interferes with the liberty of parents and guardians to direct the upbringing and education of children under their control. As often heretofore pointed out, rights guaranteed by the Constitution may not be abridged by legislation which has no reasonable relation to some purpose within the competency of the State. The fundamental theory of liberty upon which all governments in this Union repose excludes any general power of the State to standardize its children by forcing them to accept instruction from public teachers only. The child is not the mere creature of the State; those who nurture him and direct his destiny have the right, coupled with the high duty, to recognize and prepare him for additional obligations."

The duty to prepare the child for "additional obligations," referred to by the Court, must be read to include the inculcation of moral standards, religious beliefs, and elements of good citizenship. *Pierce*, of course, recognized that where nothing more than the general interest of the parent in the nurture and education of his children is involved, it is beyond dispute that the State acts "reasonably" and constitutionally in requiring education to age 16 in some public or private school meeting the standards prescribed by the State.

However read, the Court's holding in *Pierce* stands as a charter of the rights of parents to direct the religious up-bringing of their children. And, when the interests of parenthood are combined with a free exercise claim of the nature revealed by this record, more than merely a "reasonable relation to some purpose within the competency of the State" is required to sustain the validity of the State's requirement under the First Amendment. To be sure, the power of the parent, even when linked to a free exercise claim, may be subject to limitation under *Prince* if it appears that parental decisions will jeopardize the health or safety of the child, or have a potential for significant social burdens. But in this case, the Amish have introduced persuasive evidence undermining the arguments the State has advanced to support its claims in terms of the welfare of the child and society as a whole. The record strongly indicates that accommodating the religious objections of the Amish by forgoing one, or at most two, additional years of compulsory education will not impair the physical or mental health of the child, or result in an inability to be self-supporting or to discharge the duties and responsibilities of citizenship, or in any other way materially detract from the welfare of society.

In the face of our consistent emphasis on the central values underlying the Religion Clauses in our constitutional scheme of government, we cannot accept a *parens patriae* claim of such all-encompassing scope and with such sweeping potential for broad and unforeseeable application as that urged by the State.

## V

For the reasons stated we hold, with the Supreme Court of Wisconsin, that the First and Fourteenth Amendments prevent the State from compelling respondents to cause their children to attend formal high school to age 16. Our disposition of this case, however, in no way alters our recognition of the obvious fact that courts are not school boards or legislatures, and are ill-equipped to determine the “necessity” of discrete aspects of a State’s program of compulsory education. This should suggest that courts must move with great circumspection in performing the sensitive and delicate task of weighing a State’s legitimate social concern when faced with religious claims for exemption from generally applicable educational requirements. It cannot be overemphasized that we are not dealing with a way of life and mode of education by a group claiming to have recently discovered some “progressive” or more enlightened process for rearing children for modern life.

Aided by a history of three centuries as an identifiable religious sect and a long history as a successful and self-sufficient segment of American society, the Amish in this case have convincingly demonstrated the sincerity of their religious beliefs, the interrelationship of belief with their mode of life, the vital role that belief and daily conduct play in the continued survival of Old Order Amish communities and their religious organization, and the hazards presented by the State’s enforcement of a statute generally valid as to others. Beyond this, they have carried the even more difficult burden of demonstrating the adequacy of their alternative mode of continuing informal vocational education in terms of precisely those overall interests that the State advances in support of its program of compulsory high school education. In light of this convincing showing, one that probably few other religious groups or sects could make, and weighing the minimal difference between what the State would require and what the Amish already accept, it was incumbent on the State to show with more particularity how its admittedly strong interest in compulsory education would be adversely affected by granting an exemption to the Amish. *Sherbert v. Verner*, supra.

Nothing we hold is intended to undermine the general applicability of the State’s compulsory school-attendance statutes or to limit the power of the State to promulgate reasonable standards that, while not impairing the free exercise of religion, provide for continuing agricultural vocational education under parental and church guidance by the Old Order Amish or others similarly situated. The States have had a long history of amicable and effective relationships with church-sponsored schools, and there is no basis for assuming that, in this related context, reasonable standards cannot be established concerning the content of the continuing vocational education of Amish children under parental guidance, provided always that state regulations are not inconsistent with what we have said in this opinion.

Affirmed.

MR. JUSTICE POWELL and MR. JUSTICE REHNQUIST took no part in the consideration or decision of this case.

MR. JUSTICE STEWART, with whom MR. JUSTICE BRENNAN joins, concurring.

This case involves the constitutionality of imposing criminal punishment upon Amish parents for their religiously based refusal to compel their children to attend public high schools. Wisconsin has sought to brand these parents as criminals for following their religious beliefs, and the Court today rightly holds that Wisconsin cannot constitutionally do so.

This case in no way involves any questions regarding the right of the children of Amish parents to attend public high schools, or any other institutions of learning, if they wish to do so. As the Court points out, there is no suggestion whatever in the record that the religious beliefs of the children here concerned differ in any way from those of their parents. Only one of the children testified. The last two questions and answers on her cross-examination accurately sum up her testimony:

Q. “So I take it then, Frieda, the only reason you are not going to school, and did not go to school since last September, is because of your religion?”

A. “Yes.”

Q. “That is the only reason?”

A. “Yes.” (Emphasis supplied.)

It is clear to me, therefore, that this record simply does not present the interesting and important issue discussed in Part II of the dissenting opinion of MR. JUSTICE DOUGLAS. With this observation, I join the opinion and the judgment of the Court.

MR. JUSTICE WHITE, with whom MR. JUSTICE BRENNAN and MR. JUSTICE STEWART join, concurring.

Cases such as this one inevitably call for a delicate balancing of important but conflicting interests. I join the opinion and judgment of the Court because I cannot say that the State’s interest in requiring two more years of compulsory education in the ninth and tenth grades outweighs the importance of the concededly sincere Amish religious practice to the survival of that sect.

This would be a very different case for me if respondent’s claim were that their religion forbade their children from attending any school at any time and from complying in any way with the educational standards set by the State. Since the Amish children are permitted to acquire the basic tools of literacy to survive in modern society by attending grades one through eight and since the deviation from the State’s compulsory-education law is relatively slight, I conclude that respondents’ claim must prevail, largely because “religious freedom—the freedom to believe and to practice strange and, it may be, foreign creeds—has classically been one of the highest values of our society.” *Braunfeld v. Brown*, (1961) (BRENNAN, J., concurring and dissenting).

The importance of the state interest asserted here cannot be denigrated, however:

“Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment.” *Brown v. Board of Education*, (1954).

As recently as last Term, the Court re-emphasized the legitimacy of the State’s concern for enforcing minimal educational standards, *Lemon v. Kurtzman*, (1971). *Pierce v. Society of Sisters*, (1925), lends no support to the contention that parents may replace state educational requirements with their own idiosyncratic views of what knowledge a child needs to be a productive and happy member of society; in *Pierce*, both the parochial and military schools were in compliance with all the educational standards that the State had set, and the Court held simply that while a State may posit such standards, it may not pre-empt the educational process by requiring children to attend public schools. In the present case, the State is not concerned with the maintenance of an educational system as an end in itself, it is rather attempting to nurture and develop the human potential of its children, whether Amish or non-Amish: to expand their knowledge, broaden their sensibilities, kindle their imagination, foster a spirit of free inquiry, and increase their human understanding and tolerance. It is possible that most Amish children will wish to continue living the rural life of their parents, in which case their training at home will adequately equip them for their future role. Others, however, may wish to become nuclear physicists, ballet dancers, computer programmers, or historians, and for these occupations, formal training will be necessary. There is evidence in the record that many

children desert the Amish faith when they come of age. A State has a legitimate interest not only in seeking to develop the latent talents of its children but also in seeking to prepare them for the life style that they may later choose, or at least to provide them with an option other than the life they have led in the past. In the circumstances of this case, although the question is close, I am unable to say that the State has demonstrated that Amish children who leave school in the eighth grade will be intellectually stultified or unable to acquire new academic skills later. The statutory minimum school attendance age set by the State is, after all, only 16.

Decision in cases such as this and the administration of an exemption for Old Order Amish from the State's compulsory school-attendance laws will inevitably involve the kind of close and perhaps repeated scrutiny of religious practices, as is exemplified in today's opinion, which the Court has heretofore been anxious to avoid. But such entanglement does not create a forbidden establishment of religion where it is essential to implement free exercise values threatened by an otherwise neutral program instituted to foster some permissible, nonreligious state objective. I join the Court because the sincerity of the Amish religious policy here is uncontested, because the potentially adverse impact of the state requirement is great, and because the State's valid interest in education has already been largely satisfied by the eight years the children have already spent in school.

MR. JUSTICE DOUGLAS, dissenting in part.

## I

I agree with the Court that the religious scruples of the Amish are opposed to the education of their children beyond the grade schools, yet I disagree with the Court's conclusion that the matter is within the dispensation of parents alone. The Court's analysis assumes that the only interests at stake in the case are those of the Amish parents on the one hand, and those of the State on the other. The difficulty with this approach is that, despite the Court's claim, the parents are seeking to vindicate not only their own free exercise claims, but also those of their high-school-age children.

It is argued that the right of the Amish children to religious freedom is not presented by the facts of the case, as the issue before the Court involves only the Amish parents' religious freedom to defy a state criminal statute imposing upon them an affirmative duty to cause their children to attend high school.

First, respondents' motion to dismiss in the trial court expressly asserts, not only the religious liberty of the adults, but also that of the children, as a defense to the prosecutions. It is, of course, beyond question that the parents have standing as defendants in a criminal prosecution to assert the religious interests of their children as a defense. Although the lower courts and a majority of this Court assume an identity of interest between parent and child, it is clear that they have treated the religious interest of the child as a factor in the analysis.

Second, it is essential to reach the question to decide the case, not only because the question was squarely raised in the motion to dismiss, but also because no analysis of religious-liberty claims can take place in a vacuum. If the parents in this case are allowed a religious exemption, the inevitable effect is to impose the parents' notions of religious duty upon their children. Where the child is mature enough to express potentially conflicting desires, it would be an invasion of the child's rights to permit such an imposition without canvassing his views. As in *Prince v. Massachusetts*, it is an imposition resulting from this very litigation. As the child has no other effective forum, it is in this litigation that his rights should be considered. And, if an Amish child desires to attend high school, and is mature enough to have that desire respected, the State may well be able to override the parents' religiously motivated objections.

Religion is an individual experience. It is not necessary, nor even appropriate, for every Amish child to express his views on the subject in a prosecution of a single adult. Crucial, how-

ever, are the views of the child whose parent is the subject of the suit. Frieda Yoder has in fact testified that her own religious views are opposed to high-school education. I therefore join the judgment of the Court as to respondent Jonas Yoder. But Frieda Yoder's views may not be those of Vernon Yutzy or Barbara Miller. I must dissent, therefore, as to respondents Adin Yutzy and Wallace Miller as their motion to dismiss also raised the question of their children's religious liberty.

## II

This issue has never been squarely presented before today. Our opinions are full of talk about the power of the parents over the child's education. See *Pierce v. Society of Sisters*; *Meyer v. Nebraska*. And we have in the past analyzed similar conflicts between parent and State with little regard for the views of the child. See *Prince v. Massachusetts*, *supra*. Recent cases, however, have clearly held that the children themselves have constitutionally protectible interests.

These children are "persons" within the meaning of the Bill of Rights. We have so held over and over again. In *Haley v. Ohio*, we extended the protection of the Fourteenth Amendment in a state trial of a 15-year-old boy. In *In re Gault*, we held that "neither the Fourteenth Amendment nor the Bill of Rights is for adults alone." In *In re Winship*, we held that a 12-year-old boy, when charged with an act which would be a crime if committed by an adult, was entitled to procedural safeguards contained in the Sixth Amendment.

In *Tinker v. Des Moines School District*, we dealt with 13-year-old, 15-year-old, and 16-year-old students who wore armbands to public schools and were disciplined for doing so. We gave them relief, saying that their First Amendment rights had been abridged.

"Students in school as well as out of school are 'persons' under our Constitution. They are possessed of fundamental rights which the State must respect, just as they themselves must respect their obligations to the State." *Id.*, at 511.

In *Board of Education v. Barnette*, we held that schoolchildren, whose religious beliefs collided with a school rule requiring them to salute the flag, could not be required to do so. While the sanction included expulsion of the students and prosecution of the parents, *id.*, at 630, the vice of the regime was its interference with the child's free exercise of religion. We said: "Here . . . we are dealing with a compulsion of students to declare a belief." *Id.*, at 631. In emphasizing the important and delicate task of boards of education we said:

"That they are educating the young for citizenship is reason for scrupulous protection of Constitutional freedoms of the individual, if we are not to strangle the free mind at its source and teach youth to discount important principles of our government as mere platitudes." *Id.*, at 637.

On this important and vital matter of education, I think the children should be entitled to be heard. While the parents, absent dissent, normally speak for the entire family, the education of the child is a matter on which the child will often have decided views. He may want to be a pianist or an astronaut or an oceanographer. To do so he will have to break from the Amish tradition.

It is the future of the student, not the future of the parents, that is imperiled by today's decision. If a parent keeps his child out of school beyond the grade school, then the child will be forever barred from entry into the new and amazing world of diversity that we have today. The child may decide that that is the preferred course, or he may rebel. It is the student's judgment, not his parents', that is essential if we are to give full meaning to what we have said about the Bill of Rights and of the right of students to be masters of their own destiny. If he is harnessed to the Amish way of life by those in authority over him and if his education is truncated, his entire life may be stunted and deformed. The child, therefore, should be given an opportunity to be heard before the State gives the exemption which we honor today.

The views of the two children in question were not canvassed by the Wisconsin courts. The matter should be explicitly reserved so that new hearings can be held on remand of the case.

### III

I think the emphasis of the Court on the “law and order” record of this Amish group of people is quite irrelevant. A religion is a religion irrespective of what the misdemeanor or felony records of its members might be. I am not at all sure how the Catholics, Episcopalians, the Baptists, Jehovah’s Witnesses, the Unitarians, and my own Presbyterians would make out if subjected to such a test. It is, of course, true that if a group or society was organized to perpetuate crime and if that is its motive, we would have rather startling problems akin to those that were raised when some years back a particular sect was challenged here as operating on a fraudulent basis. *United States v. Ballard*. But no such factors are present here, and the Amish, whether with a high or low criminal record, certainly qualify by all historic standards as a religion within the meaning of the First Amendment.

The Court rightly rejects the notion that actions, even though religiously grounded, are always outside the protection of the Free Exercise Clause of the First Amendment. In so ruling, the Court departs from the teaching of *Reynolds v. United States*, where it was said concerning the reach of the Free Exercise Clause of the First Amendment, “Congress was deprived of all legislative power over mere opinion, but was left free to reach actions which were in violation of social duties or subversive of good order.” In that case it was conceded that polygamy was a part of the religion of the Mormons. Yet the Court said, “It matters not that his belief [in polygamy] was a part of his professed religion: it was still belief, and belief only.” *Id.*, at 167.

Action, which the Court deemed to be antisocial, could be punished even though it was grounded on deeply held and sincere religious convictions. What we do today, at least in this respect, opens the way to give organized religion a broader base than it has ever enjoyed; and it even promises that in time *Reynolds* will be overruled.

In another way, however, the Court retreats when in reference to Henry Thoreau it says his “choice was philosophical and personal rather than religious, and such belief does not rise to the demands of the Religion Clauses.” That is contrary to what we held in *United States v. Seeger*, where we were concerned with the meaning of the words “religious training and belief” in the Selective Service Act, which were the basis of many conscientious objector claims. We said:

“Within that phrase would come all sincere religious beliefs which are based upon a power or being, or upon a faith, to which all else is subordinate or upon which all else is ultimately dependent. The test might be stated in these words: A sincere and meaningful belief which occupies in the life of its possessor a place parallel to that filled by the God of those admittedly qualifying for the exemption comes within the statutory definition. This construction avoids imputing to Congress an intent to classify different religious beliefs, exempting some and excluding others, and is in accord with the well-established congressional policy of equal treatment for those whose opposition to service is grounded in their religious tenets.” *Id.*, at 176.

*Welsh v. United States*, was in the same vein, the Court saying:

“In this case, *Welsh*’s conscientious objection to war was undeniably based in part on his perception of world politics. In a letter to his local board, he wrote:

“I can only act according to what I am and what I see. And I see that the military complex wastes both human and material resources, that it fosters disregard for (what I consider a paramount concern) human needs and ends; I see that the means we employ to “defend” our “way of life” profoundly change that way of life. I see that in our failure to recognize the political, social, and economic realities of the world, we, as a nation, fail our responsibility as a nation.” *Id.*, at 342.

The essence of Welsh's philosophy, on the basis of which we held he was entitled to an exemption, was in these words:

"I believe that human life is valuable in and of itself; in its living; therefore I will not injure or kill another human being. This belief (and the corresponding "duty" to abstain from violence toward another person) is not "superior to those arising from any human relation." On the contrary: it is essential to every human relation. I cannot, therefore, conscientiously comply with the Government's insistence that I assume duties which I feel are immoral and totally repugnant." *Id.*, at 343.

I adhere to these exalted views of "religion" and see no acceptable alternative to them now that we have become a Nation of many religions and sects, representing all of the diversities of the human race. *United States v. Seeger*, (concurring opinion).

## **SAN ANTONIO INDEPENDENT SCHOOL DISTRICT ET AL. V. RODRIGUEZ ET AL., 411 U.S. 1 (1973)**

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**SUPREME COURT OF THE UNITED STATES  
APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE WESTERN  
DISTRICT OF TEXAS**

**ARGUED OCTOBER 12, 1972. DECIDED MARCH 21, 1973.**

The financing of public elementary and secondary schools in Texas is a product of state and local participation. Almost half of the revenues are derived from a largely state-funded program designed to provide a basic minimum educational offering in every school. Each district supplements state aid through an ad valorem tax on property within its jurisdiction. Appellees brought this class action on behalf of schoolchildren said to be members of poor families who reside in school districts having a low property tax base, making the claim that the Texas system's reliance on local property taxation favors the more affluent and violates equal protection requirements because of substantial interdistrict disparities in per-pupil expenditures resulting primarily from differences in the value of assessable property among the districts. The District Court, finding that wealth is a "suspect" classification and that education is a "fundamental" right, concluded that the system could be upheld only upon a showing, which appellants failed to make, that there was a compelling state interest for the system. The court also concluded that appellants failed even to demonstrate a reasonable or rational basis for the State's system. Held:

1. This is not a proper case in which to examine a State's laws under standards of strict judicial scrutiny, since that test is reserved for cases involving laws that operate to the disadvantage of suspect classes or interfere with the exercise of fundamental rights and liberties explicitly or implicitly protected by the Constitution.
  - (a) The Texas system does not disadvantage any suspect class. It has not been shown to discriminate against any definable class of "poor" people or to occasion discriminations depending on the relative wealth of the families in any district. And, insofar as the financing system disadvantages those who, disregarding their individual income characteristics, reside in comparatively poor school districts, the resulting class cannot be said to be suspect.
  - (b) Nor does the Texas school-financing system impermissibly interfere with the exercise of a "fundamental" right or liberty. Though education is one of the most important services performed by the State, it is not within the limited category of rights recognized by this Court as guaranteed by the Constitution. Even if some identifiable quantum of education is arguably entitled to constitutional protection

to make meaningful the exercise of other constitutional rights, here there is no showing that the Texas system fails to provide the basic minimal skills necessary for that purpose.

(c) Moreover, this is an inappropriate case in which to invoke strict scrutiny since it involves the most delicate and difficult questions of local taxation, fiscal planning, educational policy, and federalism, considerations counseling a more restrained form of review.

2. The Texas system does not violate the Equal Protection Clause of the Fourteenth Amendment. Though concededly imperfect, the system bears a rational relationship to a legitimate state purpose. While assuring a basic education for every child in the State, it permits and encourages participation in and significant control of each district's schools at the local level.

MR. JUSTICE POWELL delivered the opinion of the Court.

This suit attacking the Texas system of financing public education was initiated by Mexican-American parents whose children attend the elementary and secondary schools in the Edgewood Independent School District, an urban school district in San Antonio, Texas. They brought a class action on behalf of schoolchildren throughout the State who are members of minority groups or who are poor and reside in school districts having a low property tax base. Named as defendants were the State Board of Education, the Commissioner of Education, the State Attorney General, and the Bexar County (San Antonio) Board of Trustees. The complaint was filed in the summer of 1968 and a three-judge court was impaneled in January 1969. In December 1971 the panel rendered its judgment in a per curiam opinion holding the Texas school finance system unconstitutional under the Equal Protection Clause of the Fourteenth Amendment. The State appealed, and we noted probable jurisdiction to consider the far-reaching constitutional questions presented. (1972). For the reasons stated in this opinion, we reverse the decision of the District Court.

## I

The first Texas State Constitution, promulgated upon Texas' entry into the Union in 1845, provided for the establishment of a system of free schools. Early in its history, Texas adopted a dual approach to the financing of its schools, relying on mutual participation by the local school districts and the State. As early as 1883, the state constitution was amended to provide for the creation of local school districts empowered to levy ad valorem taxes with the consent of local taxpayers for the "erection . . . of school buildings" and for the "further maintenance of public free schools." Such local funds as were raised were supplemented by funds distributed to each district from the State's Permanent and Available School Funds. The Permanent School Fund, its predecessor established in 1854 with \$2,000,000 realized from an annexation settlement, was thereafter endowed with millions of acres of public land set aside to assure a continued source of income for school support. The Available School Fund, which received income from the Permanent School Fund as well as from a state ad valorem property tax and other designated taxes, served as the disbursing arm for most state educational funds throughout the late 1800's and first half of this century. Additionally, in 1918 an increase in state property taxes was used to finance a program providing free textbooks throughout the State.

Until recent times, Texas was a predominantly rural State and its population and property wealth were spread relatively evenly across the State. Sizable differences in the value of assessable property between local school districts became increasingly evident as the State became more industrialized and as rural-to-urban population shifts became more pronounced. The location of commercial and industrial property began to play a significant role in determining the amount of tax resources available to each school district. These growing disparities in population and taxable property between districts were responsible in part for increasingly notable differences in levels of local expenditure for education.

In due time it became apparent to those concerned with financing public education that contributions from the Available School Fund were not sufficient to ameliorate these disparities. Prior to 1939, the Available School Fund contributed money to every school district at a rate of \$17.50 per school-age child. Although the amount was increased several times in the early 1940's, the Fund was providing only \$46 per student by 1945.

Recognizing the need for increased state funding to help offset disparities in local spending and to meet Texas' changing educational requirements, the state legislature in the late 1940's undertook a thorough evaluation of public education with an eye toward major reform. In 1947, an 18-member committee, composed of educators and legislators, was appointed to explore alternative systems in other States and to propose a funding scheme that would guarantee a minimum or basic educational offering to each child and that would help overcome interdistrict disparities in taxable resources. The Committee's efforts led to the passage of the Gilmer-Aikin bills, named for the Committee's co-chairmen, establishing the Texas Minimum Foundation School Program. Today, this Program accounts for approximately half of the total educational expenditures in Texas.

The Program calls for state and local contributions to a fund earmarked specifically for teacher salaries, operating expenses, and transportation costs. The State, supplying funds from its general revenues, finances approximately 80% of the Program, and the school districts are responsible—as a unit—for providing the remaining 20%. The districts' share, known as the Local Fund Assignment, is apportioned among the school districts under a formula designed to reflect each district's relative taxpaying ability. The Assignment is first divided among Texas' 254 counties pursuant to a complicated economic index that takes into account the relative value of each county's contribution to the State's total income from manufacturing, mining, and agricultural activities. It also considers each county's relative share of all payrolls paid within the State and, to a lesser extent, considers each county's share of all property in the State. Each county's assignment is then divided among its school districts on the basis of each district's share of assessable property within the county. The district, in turn, finances its share of the Assignment out of revenues from local property taxation.

The design of this complex system was twofold. First, it was an attempt to assure that the Foundation Program would have an equalizing influence on expenditure levels between school districts by placing the heaviest burden on the school districts most capable of paying. Second, the Program's architects sought to establish a Local Fund Assignment that would force every school district to contribute to the education of its children but that would not by itself exhaust any district's resources. Today every school district does impose a property tax from which it derives locally expendable funds in excess of the amount necessary to satisfy its Local Fund Assignment under the Foundation Program.

In the years since this program went into operation in 1949, expenditures for education—from state as well as local sources—have increased steadily. Between 1949 and 1967, expenditures increased approximately 500%. In the last decade alone the total public school budget rose from \$750 million to \$2.1 billion and these increases have been reflected in consistently rising per-pupil expenditures throughout the State. Teacher salaries, by far the largest item in any school's budget, have increased dramatically—the state-supported minimum salary for teachers possessing college degrees has risen from \$2,400 to \$6,000 over the last 20 years.

The school district in which appellees reside, the Edgewood Independent School District, has been compared throughout this litigation with the Alamo Heights Independent School District. This comparison between the least and most affluent districts in the San Antonio area serves to illustrate the manner in which the dual system of finance operates and to indicate the extent to which substantial disparities exist despite the State's impressive progress in recent years. Edgewood is one of seven public school districts in the metropolitan area. Approximately 22,000 students are enrolled in its 25 elementary and secondary schools. The district is situ-

ated in the core-city sector of San Antonio in a residential neighborhood that has little commercial or industrial property. The residents are predominantly of Mexican-American descent: approximately 90% of the student population is Mexican-American and over 6% is Negro. The average assessed property value per pupil is \$5,960—the lowest in the metropolitan area—and the median family income (\$4,686) is also the lowest. At an equalized tax rate of \$1.05 per \$100 of assessed property—the highest in the metropolitan area—the district contributed \$26 to the education of each child for the 1967-1968 school year above its Local Fund Assignment for the Minimum Foundation Program. The Foundation Program contributed \$222 per pupil for a state-local total of \$248. Federal funds added another \$108 for a total of \$356 per pupil.

Alamo Heights is the most affluent school district in San Antonio. Its six schools, housing approximately 5,000 students, are situated in a residential community quite unlike the Edgewood District. The school population is predominantly “Anglo,” having only 18% Mexican-Americans and less than 1% Negroes. The assessed property value per pupil exceeds \$49,000, and the median family income is \$8,001. In 1967-1968 the local tax rate of \$.85 per \$100 of valuation yielded \$333 per pupil over and above its contribution to the Foundation Program. Coupled with the \$225 provided from that Program, the district was able to supply \$558 per student. Supplemented by a \$36 per-pupil grant from federal sources, Alamo Heights spent \$594 per pupil.

Although the 1967–1968 school year figures provide the only complete statistical breakdown for each category of aid, more recent partial statistics indicate that the previously noted trend of increasing state aid has been significant. For the 1970-1971 school year, the Foundation School Program allotment for Edgewood was \$356 per pupil, a 62% increase over the 1967–1968 school year. Indeed, state aid alone in 1970–1971 equaled Edgewood’s entire 1967–1968 school budget from local, state, and federal sources. Alamo Heights enjoyed a similar increase under the Foundation Program, netting \$491 per pupil in 1970-1971. These recent figures also reveal the extent to which these two districts’ allotments were funded from their own required contributions to the Local Fund Assignment. Alamo Heights, because of its relative wealth, was required to contribute out of its local property tax collections approximately \$100 per pupil, or about 20% of its Foundation grant. Edgewood, on the other hand, paid only \$8.46 per pupil, which is about 2.4% of its grant. It appears then that, at least as to these two districts, the Local Fund Assignment does reflect a rough approximation of the relative taxpaying potential of each.

Despite these recent increases, substantial interdistrict disparities in school expenditures found by the District Court to prevail in San Antonio and in varying degrees throughout the State still exist. And it was these disparities, largely attributable to differences in the amounts of money collected through local property taxation, that led the District Court to conclude that Texas’ dual system of public school financing violated the Equal Protection Clause. The District Court held that the Texas system discriminates on the basis of wealth in the manner in which education is provided for its people. 337 F. Supp., at 282. Finding that wealth is a “suspect” classification and that education is a “fundamental” interest, the District Court held that the Texas system could be sustained only if the State could show that it was premised upon some compelling state interest. *Id.*, at 282-284. On this issue the court concluded that “[n]ot only are defendants unable to demonstrate compelling state interests . . . they fail even to establish a reasonable basis for these classifications.” *Id.*, at 284.

Texas virtually concedes that its historically rooted dual system of financing education could not withstand the strict judicial scrutiny that this Court has found appropriate in reviewing legislative judgments that interfere with fundamental constitutional rights or that involve suspect classifications. If, as previous decisions have indicated, strict scrutiny means that the State’s system is not entitled to the usual presumption of validity, that the State rather than

the complainants must carry a “heavy burden of justification,” that the State must demonstrate that its educational system has been structured with “precision,” and is “tailored” narrowly to serve legitimate objectives and that it has selected the “less drastic means” for effectuating its objectives, the Texas financing system and its counterpart in virtually every other State will not pass muster. The State candidly admits that “[n]o one familiar with the Texas system would contend that it has yet achieved perfection.” Apart from its concession that educational financing in Texas has “defects” and “imperfections,” the State defends the system’s rationality with vigor and disputes the District Court’s finding that it lacks a “reasonable basis.”

This, then, establishes the framework for our analysis. We must decide, first, whether the Texas system of financing public education operates to the disadvantage of some suspect class or impinges upon a fundamental right explicitly or implicitly protected by the Constitution, thereby requiring strict judicial scrutiny. If so, the judgment of the District Court should be affirmed. If not, the Texas scheme must still be examined to determine whether it rationally furthers some legitimate, articulated state purpose and therefore does not constitute an invidious discrimination in violation of the Equal Protection Clause of the Fourteenth Amendment.

## II

The District Court’s opinion does not reflect the novelty and complexity of the constitutional questions posed by appellees’ challenge to Texas’ system of school financing. In concluding that strict judicial scrutiny was required, that court relied on decisions dealing with the rights of indigents to equal treatment in the criminal trial and appellate processes, and on cases disapproving wealth restrictions on the right to vote. Those cases, the District Court concluded, established wealth as a suspect classification. Finding that the local property tax system discriminated on the basis of wealth, it regarded those precedents as controlling. It then reasoned, based on decisions of this Court affirming the undeniable importance of education, that there is a fundamental right to education and that, absent some compelling state justification, the Texas system could not stand.

We are unable to agree that this case, which in significant aspects is *sui generis*, may be so neatly fitted into the conventional mosaic of constitutional analysis under the Equal Protection Clause. Indeed, for the several reasons that follow, we find neither the suspect-classification nor the fundamental-interest analysis persuasive.

### A

The wealth discrimination discovered by the District Court in this case, and by several other courts that have recently struck down school-financing laws in other States, is quite unlike any of the forms of wealth discrimination heretofore reviewed by this Court. Rather than focusing on the unique features of the alleged discrimination, the courts in these cases have virtually assumed their findings of a suspect classification through a simplistic process of analysis: since, under the traditional systems of financing public schools, some poorer people receive less expensive educations than other more affluent people, these systems discriminate on the basis of wealth. This approach largely ignores the hard threshold questions, including whether it makes a difference for purposes of consideration under the Constitution that the class of disadvantaged “poor” cannot be identified or defined in customary equal protection terms, and whether the relative—rather than absolute—nature of the asserted deprivation is of significant consequence. Before a State’s laws and the justifications for the classifications they create are subjected to strict judicial scrutiny, we think these threshold considerations must be analyzed more closely than they were in the court below.

The case comes to us with no definitive description of the classifying facts or delineation of the disfavored class. Examination of the District Court’s opinion and of appellees’ com-

plaint, briefs, and contentions at oral argument suggests, however, at least three ways in which the discrimination claimed here might be described. The Texas system of school financing might be regarded as discriminating (1) against “poor” persons whose incomes fall below some identifiable level of poverty or who might be characterized as functionally “indigent,” or (2) against those who are relatively poorer than others, or (3) against all those who, irrespective of their personal incomes, happen to reside in relatively poorer school districts. Our task must be to ascertain whether, in fact, the Texas system has been shown to discriminate on any of these possible bases and, if so, whether the resulting classification may be regarded as suspect.

The precedents of this Court provide the proper starting point. The individuals, or groups of individuals, who constituted the class discriminated against in our prior cases shared two distinguishing characteristics: because of their impecuniness they were completely unable to pay for some desired benefit, and as a consequence, they sustained an absolute deprivation of a meaningful opportunity to enjoy that benefit. In *Griffin v. Illinois*, (1956), and its progeny, the Court invalidated state laws that prevented an indigent criminal defendant from acquiring a transcript, or an adequate substitute for a transcript, for use at several stages of the trial and appeal process. The payment requirements in each case were found to occasion *de facto* discrimination against those who, because of their indigency, were totally unable to pay for transcripts. And the Court in each case emphasized that no constitutional violation would have been shown if the State had provided some “adequate substitute” for a full stenographic transcript. *Britt v. North Carolina*, (1971); *Gardner v. California*, (1969); *Draper v. Washington*, (1963); *Eskridge v. Washington Prison Board*, (1958).

Likewise, in *Douglas v. California*, (1963), a decision establishing an indigent defendant’s right to court-appointed counsel on direct appeal, the Court dealt only with defendants who could not pay for counsel from their own resources and who had no other way of gaining representation. *Douglas* provides no relief for those on whom the burdens of paying for a criminal defense are, relatively speaking, great but not insurmountable. Nor does it deal with relative differences in the quality of counsel acquired by the less wealthy.

*Williams v. Illinois*, (1970), and *Tate v. Short*, (1971), struck down criminal penalties that subjected indigents to incarceration simply because of their inability to pay a fine. Again, the disadvantaged class was composed only of persons who were totally unable to pay the demanded sum. Those cases do not touch on the question whether equal protection is denied to persons with relatively less money on whom designated fines impose heavier burdens. The Court has not held that fines must be structured to reflect each person’s ability to pay in order to avoid disproportionate burdens. Sentencing judges may, and often do, consider the defendant’s ability to pay, but in such circumstances they are guided by sound judicial discretion rather than by constitutional mandate.

Finally, in *Bullock v. Carter*, (1972), the Court invalidated the Texas filing-fee requirement for primary elections. Both of the relevant classifying facts found in the previous cases were present there. The size of the fee, often running into the thousands of dollars and, in at least one case, as high as \$8,900, effectively barred all potential candidates who were unable to pay the required fee. As the system provided “no reasonable alternative means of access to the ballot” (*id.*, at 149), inability to pay occasioned an absolute denial of a position on the primary ballot.

Only appellees’ first possible basis for describing the class disadvantaged by the Texas school-financing system—discrimination against a class of definably “poor” persons—might arguably meet the criteria established in these prior cases. Even a cursory examination, however, demonstrates that neither of the two distinguishing characteristics of wealth classifications can be found here. First, in support of their charge that the system discriminates against the “poor,” appellees have made no effort to demonstrate that it operates to the peculiar disadvan-

tage of any class fairly definable as indigent, or as composed of persons whose incomes are beneath any designated poverty level. Indeed, there is reason to believe that the poorest families are not necessarily clustered in the poorest property districts. A recent and exhaustive study of school districts in Connecticut concluded that “[i]t is clearly incorrect . . . to contend that the ‘poor’ live in ‘poor’ districts. . . . Thus, the major factual assumption of Serrano—that the educational financing system discriminates against the ‘poor’—is simply false in Connecticut.” Defining “poor” families as those below the Bureau of the Census “poverty level,” the Connecticut study found, not surprisingly, that the poor were clustered around commercial and industrial areas—those same areas that provide the most attractive sources of property tax income for school districts. Whether a similar pattern would be discovered in Texas is not known, but there is no basis on the record in this case for assuming that the poorest people—defined by reference to any level of absolute impecuniosity—are concentrated in the poorest districts.

Second, neither appellees nor the District Court addressed the fact that, unlike each of the foregoing cases, lack of personal resources has not occasioned an absolute deprivation of the desired benefit. The argument here is not that the children in districts having relatively low assessable property values are receiving no public education; rather, it is that they are receiving a poorer quality education than that available to children in districts having more assessable wealth. Apart from the unsettled and disputed question whether the quality of education may be determined by the amount of money expended for it, a sufficient answer to appellees’ argument is that, at least where wealth is involved, the Equal Protection Clause does not require absolute equality or precisely equal advantages. Nor, indeed, in view of the infinite variables affecting the educational process, can any system assure equal quality of education except in the most relative sense. Texas asserts that the Minimum Foundation Program provides an “adequate” education for all children in the State. By providing 12 years of free public-school education, and by assuring teachers, books, transportation, and operating funds, the Texas Legislature has endeavored to “guarantee, for the welfare of the state as a whole, that all people shall have at least an adequate program of education. This is what is meant by ‘A Minimum Foundation Program of Education.’” The State repeatedly asserted in its briefs in this Court that it has fulfilled this desire and that it now assures “every child in every school district an adequate education.” No proof was offered at trial persuasively discrediting or refuting the State’s assertion.

For these two reasons—the absence of any evidence that the financing system discriminates against any definable category of “poor” people or that it results in the absolute deprivation of education—the disadvantaged class is not susceptible of identification in traditional terms.

As suggested above, appellees and the District Court may have embraced a second or third approach, the second of which might be characterized as a theory of relative or comparative discrimination based on family income. Appellees sought to prove that a direct correlation exists between the wealth of families within each district and the expenditures therein for education. That is, along a continuum, the poorer the family the lower the dollar amount of education received by the family’s children.

The principal evidence adduced in support of this comparative-discrimination claim is an affidavit submitted by Professor Joel S. Berke of Syracuse University’s Educational Finance Policy Institute. The District Court, relying in major part upon this affidavit and apparently accepting the substance of appellees’ theory, noted, first, a positive correlation between the wealth of school districts, measured in terms of assessable property per pupil, and their levels of per-pupil expenditures. Second, the court found a similar correlation between district wealth and the personal wealth of its residents, measured in terms of median family income. 337 F. Supp., at 282 n. 3.

If, in fact, these correlations could be sustained, then it might be argued that expenditures on education—equated by appellees to the quality of education—are dependent on personal

wealth. Appellees' comparative-discrimination theory would still face serious unanswered questions, including whether a bare positive correlation or some higher degree of correlation is necessary to provide a basis for concluding that the financing system is designed to operate to the peculiar disadvantage of the comparatively poor, and whether a class of this size and diversity could ever claim the special protection accorded "suspect" classes. These questions need not be addressed in this case, however, since appellees' proof fails to support their allegations or the District Court's conclusions.

Professor Berke's affidavit is based on a survey of approximately 10% of the school districts in Texas. His findings, previously set out in the margin, show only that the wealthiest few districts in the sample have the highest median family incomes and spend the most on education, and that the several poorest districts have the lowest family incomes and devote the least amount of money to education. For the remainder of the districts—96 districts composing almost 90% of the sample—the correlation is inverted, i. e., the districts that spend next to the most money on education are populated by families having next to the lowest median family incomes while the districts spending the least have the highest median family incomes. It is evident that, even if the conceptual questions were answered favorably to appellees, no factual basis exists upon which to found a claim of comparative wealth discrimination.

This brings us, then, to the third way in which the classification scheme might be defined—district wealth discrimination. Since the only correlation indicated by the evidence is between district property wealth and expenditures, it may be argued that discrimination might be found without regard to the individual income characteristics of district residents. Assuming a perfect correlation between district property wealth and expenditures from top to bottom, the disadvantaged class might be viewed as encompassing every child in every district except the district that has the most assessable wealth and spends the most on education. Alternatively, as suggested in MR. JUSTICE MARSHALL'S dissenting opinion, post, at 96, the class might be defined more restrictively to include children in districts with assessable property which falls below the statewide average, or median, or below some other artificially defined level.

However described, it is clear that appellees' suit asks this Court to extend its most exacting scrutiny to review a system that allegedly discriminates against a large, diverse, and amorphous class, unified only by the common factor of residence in districts that happen to have less taxable wealth than other districts. The system of alleged discrimination and the class it defines have none of the traditional indicia of suspectness: the class is not saddled with such disabilities, or subjected to such a history of purposeful unequal treatment, or relegated to such a position of political powerlessness as to command extraordinary protection from the majoritarian political process.

We thus conclude that the Texas system does not operate to the peculiar disadvantage of any suspect class. But in recognition of the fact that this Court has never heretofore held that wealth discrimination alone provides an adequate basis for invoking strict scrutiny, appellees have not relied solely on this contention. They also assert that the State's system impermissibly interferes with the exercise of a "fundamental" right and that accordingly the prior decisions of this Court require the application of the strict standard of judicial review. *Graham v. Richardson*, (1971); *Kramer v. Union School District*, (1969); *Shapiro v. Thompson*, (1969). It is this question—whether education is a fundamental right, in the sense that it is among the rights and liberties protected by the Constitution—which has so consumed the attention of courts and commentators in recent years.

## B

In *Brown v. Board of Education*, (1954), a unanimous Court recognized that "education is perhaps the most important function of state and local governments." *Id.*, at 493. What was

said there in the context of racial discrimination has lost none of its vitality with the passage of time:

“Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment. In these days, it is doubtful that any child may reasonably be expected to succeed in life if he is denied the opportunity of an education. Such an opportunity, where the state has undertaken to provide it, is a right which must be made available to all on equal terms.” *Ibid.*

This theme, expressing an abiding respect for the vital role of education in a free society, may be found in numerous opinions of Justices of this Court writing both before and after *Brown* was decided. *Wisconsin v. Yoder*, (BURGER, C. J.), 237, 238-239 (WHITE, J.), (1972); *Abington School Dist. v. Schempp*, (1963) (BRENNAN, J.); *McCollum v. Board of Education*, (1948) (Frankfurter, J.); *Pierce v. Society of Sisters*, (1925); *Meyer v. Nebraska*, (1923); *Interstate Consolidated Street R. Co. v. Massachusetts*, (1907).

Nothing this Court holds today in any way detracts from our historic dedication to public education. We are in complete agreement with the conclusion of the three-judge panel below that “the grave significance of education both to the individual and to our society” cannot be doubted. But the importance of a service performed by the State does not determine whether it must be regarded as fundamental for purposes of examination under the Equal Protection Clause. Mr. Justice Harlan, dissenting from the Court’s application of strict scrutiny to a law impinging upon the right of interstate travel, admonished that “[v]irtually every state statute affects important rights.” *Shapiro v. Thompson*, 661. In his view, if the degree of judicial scrutiny of state legislation fluctuated, depending on a majority’s view of the importance of the interest affected, we would have gone “far toward making this Court a ‘super-legislature.’” *Ibid.* We would, indeed, then be assuming a legislative role and one for which the Court lacks both authority and competence. But MR. JUSTICE STEWART’S response in *Shapiro* to Mr. Justice Harlan’s concern correctly articulates the limits of the fundamental-rights rationale employed in the Court’s equal protection decisions:

“The Court today does not ‘pick out particular human activities, characterize them as ‘fundamental,’ and give them added protection . . . .’ To the contrary, the Court simply recognizes, as it must, an established constitutional right, and gives to that right no less protection than the Constitution itself demands.” *Id.*, at 642. (Emphasis in original.)

MR. JUSTICE STEWART’S statement serves to underline what the opinion of the Court in *Shapiro* makes clear. In subjecting to strict judicial scrutiny state welfare eligibility statutes that imposed a one-year durational residency requirement as a precondition to receiving AFDC benefits, the Court explained:

“[I]n moving from State to State . . . appellees were exercising a constitutional right, and any classification which serves to penalize the exercise of that right, unless shown to be necessary to promote a compelling governmental interest, is unconstitutional.” *Id.*, at 634. (Emphasis in original.)

The right to interstate travel had long been recognized as a right of constitutional significance, and the Court’s decision, therefore, did not require an ad hoc determination as to the social or economic importance of that right.

*Lindsey v. Normet*, (1972), decided only last Term, firmly reiterates that social importance is not the critical determinant for subjecting state legislation to strict scrutiny. The complain-

ants in that case, involving a challenge to the procedural limitations imposed on tenants in suits brought by landlords under Oregon's Forcible Entry and Wrongful Detainer Law, urged the Court to examine the operation of the statute under "a more stringent standard than mere rationality." *Id.*, at 73. The tenants argued that the statutory limitations implicated "fundamental interests which are particularly important to the poor," such as the "need for decent shelter" and the "right to retain peaceful possession of one's home." *Ibid.* MR. JUSTICE WHITE'S analysis, in his opinion for the Court, is instructive:

"We do not denigrate the importance of decent, safe, and sanitary housing. But the Constitution does not provide judicial remedies for every social and economic ill. We are unable to perceive in that document any constitutional guarantee of access to dwellings of a particular quality or any recognition of the right of a tenant to occupy the real property of his landlord beyond the term of his lease, without the payment of rent . . . Absent constitutional mandate, the assurance of adequate housing and the definition of landlord-tenant relationships are legislative, not judicial, functions." *Id.*, at 74. (Emphasis supplied.)

Similarly, in *Dandridge v. Williams*, (1970), the Court's explicit recognition of the fact that the "administration of public welfare assistance . . . involves the most basic economic needs of impoverished human beings," *id.*, at 485, provided no basis for departing from the settled mode of constitutional analysis of legislative classifications involving questions of economic and social policy. As in the case of housing, the central importance of welfare benefits to the poor was not an adequate foundation for requiring the State to justify its law by showing some compelling state interest. See also *Jefferson v. Hackney*, (1972); *Richardson v. Belcher*, (1971).

The lesson of these cases in addressing the question now before the Court is plain. It is not the province of this Court to create substantive constitutional rights in the name of guaranteeing equal protection of the laws. Thus, the key to discovering whether education is "fundamental" is not to be found in comparisons of the relative societal significance of education as opposed to subsistence or housing. Nor is it to be found by weighing whether education is as important as the right to travel. Rather, the answer lies in assessing whether there is a right to education explicitly or implicitly guaranteed by the Constitution. *Eisenstadt v. Baird*, (1972); *Dunn v. Blumstein*, (1972); *Police Dept. of Chicago v. Mosley*, (1972); *Skinner v. Oklahoma*, (1942).

Education, of course, is not among the rights afforded explicit protection under our Federal Constitution. Nor do we find any basis for saying it is implicitly so protected. As we have said, the undisputed importance of education will not alone cause this Court to depart from the usual standard for reviewing a State's social and economic legislation. It is appellees' contention, however, that education is distinguishable from other services and benefits provided by the State because it bears a peculiarly close relationship to other rights and liberties accorded protection under the Constitution. Specifically, they insist that education is itself a fundamental personal right because it is essential to the effective exercise of First Amendment freedoms and to intelligent utilization of the right to vote. In asserting a nexus between speech and education, appellees urge that the right to speak is meaningless unless the speaker is capable of articulating his thoughts intelligently and persuasively. The "marketplace of ideas" is an empty forum for those lacking basic communicative tools. Likewise, they argue that the corollary right to receive information becomes little more than a hollow privilege when the recipient has not been taught to read, assimilate, and utilize available knowledge.

A similar line of reasoning is pursued with respect to the right to vote. Exercise of the franchise, it is contended, cannot be divorced from the educational foundation of the voter. The electoral process, if reality is to conform to the democratic ideal, depends on an informed electorate: a voter cannot cast his ballot intelligently unless his reading skills and thought processes have been adequately developed.

We need not dispute any of these propositions. The Court has long afforded zealous protection against unjustifiable governmental interference with the individual's rights to speak and to vote. Yet we have never presumed to possess either the ability or the authority to guarantee to the citizenry the most effective speech or the most informed electoral choice. That these may be desirable goals of a system of freedom of expression and of a representative form of government is not to be doubted. These are indeed goals to be pursued by a people whose thoughts and beliefs are freed from governmental interference. But they are not values to be pursued by a implemented by judicial intrusion into otherwise legitimate state activities.

Even if it were conceded that some identifiable quantum of education is a constitutionally protected prerequisite to the meaningful exercise of either right, we have no indication that the present levels of educational expenditures in Texas provide an education that falls short. Whatever merit appellees' argument might have if a State's financing system occasioned an absolute denial of educational opportunities to any of its children, that argument provides no basis for finding an interference with fundamental rights where only relative differences in spending levels are involved and where—as is true in the present case—no charge fairly could be made that the system fails to provide each child with an opportunity to acquire the basic minimal skills necessary for the enjoyment of the rights of speech and of full participation in the political process.

Furthermore, the logical limitations on appellees' nexus theory are difficult to perceive. How, for instance, is education to be distinguished from the significant personal interests in the basics of decent food and shelter? Empirical examination might well buttress an assumption that the ill-fed, ill-clothed, and ill-housed are among the most ineffective participants in the political process, and that they derive the least enjoyment from the benefits of the First Amendment. If so, appellees' thesis would cast serious doubt on the authority of *Dandridge v. Williams*, *supra*, and *Lindsey v. Normet*, *supra*.

We have carefully considered each of the arguments supportive of the District Court's finding that education is a fundamental right or liberty and have found those arguments unpersuasive. In one further respect we find this a particularly inappropriate case in which to subject state action to strict judicial scrutiny. The present case, in another basic sense, is significantly different from any of the cases in which the Court has applied strict scrutiny to state or federal legislation touching upon constitutionally protected rights. Each of our prior cases involved legislation which "deprived," "infringed," or "interfered" with the free exercise of some such fundamental personal right or liberty. See *Skinner v. Oklahoma*, *supra*, at 536; *Shapiro v. Thompson*, *supra*, at 634; *Dunn v. Blumstein*, *supra*, at 338-343. A critical distinction between those cases and the one now before us lies in what Texas is endeavoring to do with respect to education. MR. JUSTICE BRENNAN, writing for the Court in *Katzenbach v. Morgan*, (1966), expresses well the salient point:

"This is not a complaint that Congress . . . has unconstitutionally denied or diluted anyone's right to vote but rather that Congress violated the Constitution by not extending the relief effected [to others similarly situated] . . . ."

"[The federal law in question] does not restrict or deny the franchise but in effect extends the franchise to persons who otherwise would be denied it by state law. . . . We need only decide whether the challenged limitation on the relief effected . . . was permissible. In deciding that question, the principle that calls for the closest scrutiny of distinctions in laws denying fundamental rights . . . is inapplicable; for the distinction challenged by appellees is presented only as a limitation on a reform measure aimed at eliminating an existing barrier to the exercise of the franchise. Rather, in deciding the constitutional propriety of the limitations in such a reform measure we are guided by the familiar principles that a 'statute is not invalid under the Constitution because it might have gone farther than it did,' . . . that a leg-

islature need not ‘strike at all evils at the same time,’ . . . and that ‘reform may take one step at a time, addressing itself to the phase of the problem which seems most acute to the legislative mind . . . .’” *Id.*, at 656-657. (Emphasis in original.)

The Texas system of school financing is not unlike the federal legislation involved in *Katzenbach* in this regard. Every step leading to the establishment of the system Texas utilizes today—including the decisions permitting localities to tax and expend locally, and creating and continuously expanding state aid—was implemented in an effort to extend public education and to improve its quality. Of course, every reform that benefits some more than others may be criticized for what it fails to accomplish. But we think it plain that, in substance, the thrust of the Texas system is affirmative and reformatory and, therefore, should be scrutinized under judicial principles sensitive to the nature of the State’s efforts and to the rights reserved to the States under the Constitution.

## C

It should be clear, for the reasons stated above and in accord with the prior decisions of this Court, that this is not a case in which the challenged state action must be subjected to the searching judicial scrutiny reserved for laws that create suspect classifications or impinge upon constitutionally protected rights.

We need not rest our decision, however, solely on the inappropriateness of the strict-scrutiny test. A century of Supreme Court adjudication under the Equal Protection Clause affirmatively supports the application of the traditional standard of review, which requires only that the State’s system be shown to bear some rational relationship to legitimate state purposes. This case represents far more than a challenge to the manner in which Texas provides for the education of its children. We have here nothing less than a direct attack on the way in which Texas has chosen to raise and disburse state and local tax revenues. We are asked to condemn the State’s judgment in conferring on political subdivisions the power to tax local property to supply revenues for local interests. In so doing, appellees would have the Court intrude in an area in which it has traditionally deferred to state legislatures. This Court has often admonished against such interferences with the State’s fiscal policies under the Equal Protection Clause:

“The broad discretion as to classification possessed by a legislature in the field of taxation has long been recognized. . . . [T]he passage of time has only served to underscore the wisdom of that recognition of the large area of discretion which is needed by a legislature in formulating sound tax policies. . . . It has . . . been pointed out that in taxation, even more than in other fields, legislatures possess the greatest freedom in classification. Since the members of a legislature necessarily enjoy a familiarity with local conditions which this Court cannot have, the presumption of constitutionality can be overcome only by the most explicit demonstration that a classification is a hostile and oppressive discrimination against particular persons and classes . . . .” *Madden v. Kentucky*, (1940).

See also *Lehnhausen v. Lake Shore Auto Parts Co.*, (1973); *Wisconsin v. J. C. Penney Co.*, (1940).

Thus, we stand on familiar ground when we continue to acknowledge that the Justices of this Court lack both the expertise and the familiarity with local problems so necessary to the making of wise decisions with respect to the raising and disposition of public revenues. Yet, we are urged to direct the States either to alter drastically the present system or to throw out the property tax altogether in favor of some other form of taxation. No scheme of taxation, whether the tax is imposed on property, income, or purchases of goods and services, has yet been devised which is free of all discriminatory impact. In such a complex arena in which no perfect alternatives exist, the Court does well not to impose too rigorous a standard of scrutiny lest all local fiscal schemes become subjects of criticism under the Equal Protection Clause.

In addition to matters of fiscal policy, this case also involves the most persistent and difficult questions of educational policy, another area in which this Court's lack of specialized knowledge and experience counsels against premature interference with the informed judgments made at the state and local levels. Education, perhaps even more than welfare assistance, presents a myriad of "intractable economic, social, and even philosophical problems." *Dan-dridge v. Williams*. The very complexity of the problems of financing and managing a state-wide public school system suggests that "there will be more than one constitutionally permissible method of solving them," and that, within the limits of rationality, "the legislature's efforts to tackle the problems" should be entitled to respect. *Jefferson v. Hackney*. On even the most basic questions in this area the scholars and educational experts are divided. Indeed, one of the major sources of controversy concerns the extent to which there is a demonstrable correlation between educational expenditures and the quality of education an assumed correlation underlying virtually every legal conclusion drawn by the District Court in this case. Related to the questioned relationship between cost and quality is the equally unsettled controversy as to the proper goals of a system of public education. And the question regarding the most effective relationship between state boards of education and local school boards, in terms of their respective responsibilities and degrees of control, is now undergoing searching re-examination. The ultimate wisdom as to these and related problems of education is not likely to be divined for all time even by the scholars who now so earnestly debate the issues. In such circumstances, the judiciary is well advised to refrain from imposing on the States inflexible constitutional restraints that could circumscribe or handicap the continued research and experimentation so vital to finding even partial solutions to educational problems and to keeping abreast of ever-changing conditions.

It must be remembered, also, that every claim arising under the Equal Protection Clause has implications for the relationship between national and state power under our federal system. Questions of federalism are always inherent in the process of determining whether a State's laws are to be accorded the traditional presumption of constitutionality, or are to be subjected instead to rigorous judicial scrutiny. While "[t]he maintenance of the principles of federalism is a foremost consideration in interpreting any of the pertinent constitutional provisions under which this Court examines state action," it would be difficult to imagine a case having a greater potential impact on our federal system than the one now before us, in which we are urged to abrogate systems of financing public education presently in existence in virtually every State.

The foregoing considerations buttress our conclusion that Texas' system of public school finance is an inappropriate candidate for strict judicial scrutiny. These same considerations are relevant to the determination whether that system, with its conceded imperfections, nevertheless bears some rational relationship to a legitimate state purpose. It is to this question that we next turn our attention.

### III

The basic contours of the Texas school finance system have been traced at the outset of this opinion. We will now describe in more detail that system and how it operates, as these facts bear directly upon the demands of the Equal Protection Clause.

Apart from federal assistance, each Texas school receives its funds from the State and from its local school district. On a statewide average, a roughly comparable amount of funds is derived from each source. The State's contribution, under the Minimum Foundation Program, was designed to provide an adequate minimum educational offering in every school in the State. Funds are distributed to assure that there will be one teacher— compensated at the state-supported minimum salary—for every 25 students. Each school district's other supportive personnel are provided for: one principal for every 30 teachers; one "special service" teacher—

librarian, nurse, doctor, etc.— for every 20 teachers; superintendents, vocational instructors, counselors, and educators for exceptional children are also provided. Additional funds are earmarked for current operating expenses, for student transportation, and for free textbooks.

The program is administered by the State Board of Education and by the Central Education Agency, which also have responsibility for school accreditation and for monitoring the statutory teacher-qualification standards. As reflected by the 62% increase in funds allotted to the Edgewood School District over the last three years, the State's financial contribution to education is steadily increasing. None of Texas' school districts, however, has been content to rely alone on funds from the Foundation Program.

By virtue of the obligation to fulfill its Local Fund Assignment, every district must impose an ad valorem tax on property located within its borders. The Fund Assignment was designed to remain sufficiently low to assure that each district would have some ability to provide a more enriched educational program. Every district supplements its Foundation grant in this manner. In some districts, the local property tax contribution is insubstantial, as in Edgewood where the supplement was only \$26 per pupil in 1967. In other districts, the local share may far exceed even the total Foundation grant. In part, local differences are attributable to differences in the rates of taxation or in the degree to which the market value for any category of property varies from its assessed value. The greatest interdistrict disparities, however, are attributable to differences in the amount of assessable property available within any district. Those districts that have more property, or more valuable property, have a greater capability for supplementing state funds. In large measure, these additional local revenues are devoted to paying higher salaries to more teachers. Therefore, the primary distinguishing attributes of schools in property-affluent districts are lower pupil-teacher ratios and higher salary schedules.

This, then, is the basic outline of the Texas school financing structure. Because of differences in expenditure levels occasioned by disparities in property tax income, appellees claim that children in less affluent districts have been made the subject of invidious discrimination. The District Court found that the State had failed even "to establish a reasonable basis" for a system that results in different levels of per-pupil expenditure. 337 F. Supp., at 284. We disagree.

In its reliance on state as well as local resources, the Texas system is comparable to the systems employed in virtually every other State. The power to tax local property for educational purposes has been recognized in Texas at least since 1883. When the growth of commercial and industrial centers and accompanying shifts in population began to create disparities in local resources, Texas undertook a program calling for a considerable investment of state funds.

The "foundation grant" theory upon which Texas legislators and educators based the Gilmer-Aikin bills, was a product of the pioneering work of two New York educational reformers in the 1920's, George D. Strayer and Robert M. Haig. Their efforts were devoted to establishing a means of guaranteeing a minimum statewide educational program without sacrificing the vital element of local participation. The Strayer-Haig thesis represented an accommodation between these two competing forces. As articulated by Professor Coleman:

"The history of education since the industrial revolution shows a continual struggle between two forces: the desire by members of society to have educational opportunity for all children, and the desire of each family to provide the best education it can afford for its own children."

The Texas system of school finance is responsive to these two forces. While assuring a basic education for every child in the State, it permits and encourages a large measure of participation in and control of each district's schools at the local level. In an era that has witnessed a consistent trend toward centralization of the functions of government, local sharing of respon-

sibility for public education has survived. The merit of local control was recognized last Term in both the majority and dissenting opinions in *Wright v. Council of the City of Emporia*, (1972). MR. JUSTICE STEWART stated there that “[d]irect control over decisions vitally affecting the education of one’s children is a need that is strongly felt in our society.” *Id.*, at 469. THE CHIEF JUSTICE, in his dissent, agreed that “[l]ocal control is not only vital to continued public support of the schools, but it is of overriding importance from an educational standpoint as well.” *Id.*, at 478.

The persistence of attachment to government at the lowest level where education is concerned reflects the depth of commitment of its supporters. In part, local control means, as Professor Coleman suggests, the freedom to devote more money to the education of one’s children. Equally important, however, is the opportunity it offers for participation in the decisionmaking process that determines how those local tax dollars will be spent. Each locality is free to tailor local programs to local needs. Pluralism also affords some opportunity for experimentation, innovation, and a healthy competition for educational excellence. An analogy to the Nation-State relationship in our federal system seems uniquely appropriate. Mr. Justice Brandeis identified as one of the peculiar strengths of our form of government each State’s freedom to “serve as a laboratory; and try novel social and economic experiments.” No area of social concern stands to profit more from a multiplicity of viewpoints and from a diversity of approaches than does public education.

Appellees do not question the propriety of Texas’ dedication to local control of education. To the contrary, they attack the school-financing system precisely because, in their view, it does not provide the same level of local control and fiscal flexibility in all districts. Appellees suggest that local control could be preserved and promoted under other financing systems that resulted in more equality in educational expenditures. While it is no doubt true that reliance on local property taxation for school revenues provides less freedom of choice with respect to expenditures for some districts than for others, the existence of “some inequality” in the manner in which the State’s rationale is achieved is not alone a sufficient basis for striking down the entire system. *McGowan v. Maryland*, (1961). It may not be condemned simply because it imperfectly effectuates the State’s goals. *Dandridge v. Williams*. Nor must the financing system fail because, as appellees suggest, other methods of satisfying the State’s interest, which occasion “less drastic” disparities in expenditures, might be conceived. Only where state action impinges on the exercise of fundamental constitutional rights or liberties must it be found to have chosen the least restrictive alternative. *Cf. Dunn v. Blumstein; Shelton v. Tucker*, (1960). It is also well to remember that even those districts that have reduced ability to make free decisions with respect to how much they spend on education still retain under the present system a large measure of authority as to how available funds will be allocated. They further enjoy the power to make numerous other decisions with respect to the operation of the schools. The people of Texas may be justified in believing that other systems of school financing, which place more of the financial responsibility in the hands of the State, will result in a comparable lessening of desired local autonomy. That is, they may believe that along with increased control of the purse strings at the state level will go increased control over local policies.

Appellees further urge that the Texas system is unconstitutionally arbitrary because it allows the availability of local taxable resources to turn on “happenstance.” They see no justification for a system that allows, as they contend, the quality of education to fluctuate on the basis of the fortuitous positioning of the boundary lines of political subdivisions and the location of valuable commercial and industrial property. But any scheme of local taxation—indeed the very existence of identifiable local governmental units—requires the establishment of jurisdictional boundaries that are inevitably arbitrary. It is equally inevitable that some localities are going to be blessed with more taxable assets than others. Nor is local wealth a static quantity. Changes in the level of taxable wealth within any district may result from any number of

events, some of which local residents can and do influence. For instance, commercial and industrial enterprises may be encouraged to locate within a district by various actions—public and private.

Moreover, if local taxation for local expenditures were an unconstitutional method of providing for education then it might be an equally impermissible means of providing other necessary services customarily financed largely from local property taxes, including local police and fire protection, public health and hospitals, and public utility facilities of various kinds. We perceive no justification for such a severe denigration of local property taxation and control as would follow from appellees' contentions. It has simply never been within the constitutional prerogative of this Court to nullify statewide measures for financing public services merely because the burdens or benefits thereof fall unevenly depending upon the relative wealth of the political subdivisions in which citizens live.

In sum, to the extent that the Texas system of school financing results in unequal expenditures between children who happen to reside in different districts, we cannot say that such disparities are the product of a system that is so irrational as to be invidiously discriminatory. Texas has acknowledged its shortcomings and has persistently endeavored—not without some success—to ameliorate the differences in levels of expenditures without sacrificing the benefits of local participation. The Texas plan is not the result of hurried, ill-conceived legislation. It certainly is not the product of purposeful discrimination against any group or class. On the contrary, it is rooted in decades of experience in Texas and elsewhere, and in major part is the product of responsible studies by qualified people. In giving substance to the presumption of validity to which the Texas system is entitled, *Lindsley v. Natural Carbonic Gas Co.*, (1911), it is important to remember that at every stage of its development it has constituted a “rough accommodation” of interests in an effort to arrive at practical and workable solutions. *Metropolis Theatre Co. v. City of Chicago*, (1913). One also must remember that the system here challenged is not peculiar to Texas or to any other State. In its essential characteristics, the Texas plan for financing public education reflects what many educators for a half century have thought was an enlightened approach to a problem for which there is no perfect solution. We are unwilling to assume for ourselves a level of wisdom superior to that of legislators, scholars, and educational authorities in 50 States, especially where the alternatives proposed are only recently conceived and nowhere yet tested. The constitutional standard under the Equal Protection Clause is whether the challenged state action rationally furthers a legitimate state purpose or interest. *McGinnis v. Royster*, (1973). We hold that the Texas plan abundantly satisfies this standard.

#### IV

In light of the considerable attention that has focused on the District Court opinion in this case and on its California predecessor, *Serrano v. Priest*, 5 Cal. 3d 584, 487 P.2d 1241 (1971), a cautionary postscript seems appropriate. It cannot be questioned that the constitutional judgment reached by the District Court and approved by our dissenting Brothers today would occasion in Texas and elsewhere an unprecedented upheaval in public education. Some commentators have concluded that, whatever the contours of the alternative financing programs that might be devised and approved, the result could not avoid being a beneficial one. But, just as there is nothing simple about the constitutional issues involved in these cases, there is nothing simple or certain about predicting the consequences of massive change in the financing and control of public education. Those who have devoted the most thoughtful attention to the practical ramifications of these cases have found no clear or dependable answers and their scholarship reflects no such unqualified confidence in the desirability of completely uprooting the existing system.

The complexity of these problems is demonstrated by the lack of consensus with respect to whether it may be said with any assurance that the poor, the racial minorities, or the chil-

dren in overburdened core-city school districts would be benefited by abrogation of traditional modes of financing education. Unless there is to be a substantial increase in state expenditures on education across the board—an event the likelihood of which is open to considerable question—these groups stand to realize gains in terms of increased per-pupil expenditures only if they reside in districts that presently spend at relatively low levels, i. e., in those districts that would benefit from the redistribution of existing resources. Yet, recent studies have indicated that the poorest families are not invariably clustered in the most impecunious school districts. Nor does it now appear that there is any more than a random chance that racial minorities are concentrated in property-poor districts. Additionally, several research projects have concluded that any financing alternative designed to achieve a greater equality of expenditures is likely to lead to higher taxation and lower educational expenditures in the major urban centers, a result that would exacerbate rather than ameliorate existing conditions in those areas.

These practical considerations, of course, play no role in the adjudication of the constitutional issues presented here. But they serve to highlight the wisdom of the traditional limitations on this Court's function. The consideration and initiation of fundamental reforms with respect to state taxation and education are matters reserved for the legislative processes of the various States, and we do no violence to the values of federalism and separation of powers by staying our hand. We hardly need add that this Court's action today is not to be viewed as placing its judicial imprimatur on the status quo. The need is apparent for reform in tax systems which may well have relied too long and too heavily on the local property tax. And certainly innovative thinking as to public education, its methods, and its funding is necessary to assure both a higher level of quality and greater uniformity of opportunity. These matters merit the continued attention of the scholars who already have contributed much by their challenges. But the ultimate solutions must come from the lawmakers and from the democratic pressures of those who elect them.

Reversed.

MR. JUSTICE STEWART, concurring.

The method of financing public schools in Texas, as in almost every other State, has resulted in a system of public education that can fairly be described as chaotic and unjust. It does not follow, however, and I cannot find, that this system violates the Constitution of the United States. I join the opinion and judgment of the Court because I am convinced that any other course would mark an extraordinary departure from principled adjudication under the Equal Protection Clause of the Fourteenth Amendment. The uncharted directions of such a departure are suggested, I think, by the imaginative dissenting opinion my Brother MARSHALL has filed today.

Unlike other provisions of the Constitution, the Equal Protection Clause confers no substantive rights and creates no substantive liberties. The function of the Equal Protection Clause, rather, is simply to measure the validity of classifications created by state laws.

There is hardly a law on the books that does not affect some people differently from others. But the basic concern of the Equal Protection Clause is with state legislation whose purpose or effect is to create discrete and objectively identifiable classes. And with respect to such legislation, it has long been settled that the Equal Protection Clause is offended only by laws that are invidiously discriminatory—only by classifications that are wholly arbitrary or capricious. See, e. g., *Rinaldi v. Yeager*. This settled principle of constitutional law was compendiously stated in Mr. Chief Justice Warren's opinion for the Court in *McGowan v. Maryland*, in the following words:

“Although no precise formula has been developed, the Court has held that the Fourteenth Amendment permits the States a wide scope of discretion in enacting laws which affect some groups of citizens differently than others. The constitutional safeguard is offended only if the classification rests on grounds wholly irrelevant to the

achievement of the State's objective. State legislatures are presumed to have acted within their constitutional power despite the fact that, in practice, their laws result in some inequality. A statutory discrimination will not be set aside if any state of facts reasonably may be conceived to justify it."

This doctrine is no more than a specific application of one of the first principles of constitutional adjudication—the basic presumption of the constitutional validity of a duly enacted state or federal law. See Thayer, *The Origin and Scope of the American Doctrine of Constitutional Law*, 7 *Harv. L. Rev.* 129 (1893).

Under the Equal Protection Clause, this presumption of constitutional validity disappears when a State has enacted legislation whose purpose or effect is to create classes based upon criteria that, in a constitutional sense, are inherently "suspect." Because of the historic purpose of the Fourteenth Amendment, the prime example of such a "suspect" classification is one that is based upon race. See, e. g., *Brown v. Board of Education*; *McLaughlin v. Florida*. But there are other classifications that, at least in some settings, are also "suspect"—for example, those based upon national origin, alienage, indigency, or illegitimacy.

Moreover, quite apart from the Equal Protection Clause, a state law that impinges upon a substantive right or liberty created or conferred by the Constitution is, of course, presumptively invalid, whether or not the law's purpose or effect is to create any classifications. For example, a law that provided that newspapers could be published only by people who had resided in the State for five years could be superficially viewed as invidiously discriminating against an identifiable class in violation of the Equal Protection Clause. But, more basically, such a law would be invalid simply because it abridged the freedom of the press. Numerous cases in this Court illustrate this principle.

In refusing to invalidate the Texas system of financing its public schools, the Court today applies with thoughtfulness and understanding the basic principles I have so sketchily summarized. First, as the Court points out, the Texas system has hardly created the kind of objectively identifiable classes that are cognizable under the Equal Protection Clause. Second, even assuming the existence of such discernible categories, the classifications are in no sense based upon constitutionally "suspect" criteria. Third, the Texas system does not rest "on grounds wholly irrelevant to the achievement of the State's objective." Finally, the Texas system impinges upon no substantive constitutional rights or liberties. It follows, therefore, under the established principle reaffirmed in *Mr. Chief Justice Warren's* opinion for the Court in *McGowan v. Maryland*, *supra*, that the judgment of the District Court must be reversed.

MR. JUSTICE BRENNAN, dissenting.

Although I agree with my Brother WHITE that the Texas statutory scheme is devoid of any rational basis, and for that reason is violative of the Equal Protection Clause, I also record my disagreement with the Court's rather distressing assertion that a right may be deemed "fundamental" for the purposes of equal protection analysis only if it is "explicitly or implicitly guaranteed by the Constitution." *Ante*, at 33-34. As my Brother MARSHALL convincingly demonstrates, our prior cases stand for the proposition that "fundamentality" is, in large measure, a function of the right's importance in terms of the effectuation of those rights which are in fact constitutionally guaranteed. Thus, "[a]s the nexus between the specific constitutional guarantee and the non-constitutional interest draws closer, the nonconstitutional interest becomes more fundamental and the degree of judicial scrutiny applied when the interest is infringed on a discriminatory basis must be adjusted accordingly." *Post*, at 102-103.

Here, there can be no doubt that education is inextricably linked to the right to participate in the electoral process and to the rights of free speech and association guaranteed by the First Amendment. See *post*, at 111-115. This being so, any classification affecting education must

be subjected to strict judicial scrutiny, and since even the State concedes that the statutory scheme now before us cannot pass constitutional muster under this stricter standard of review, I can only conclude that the Texas school-financing scheme is constitutionally invalid.

MR. JUSTICE WHITE, with whom MR. JUSTICE DOUGLAS and MR. JUSTICE BRENNAN join, dissenting.

The Texas public schools are financed through a combination of state funding, local property tax revenue, and some federal funds. Concededly, the system yields wide disparity in per-pupil revenue among the various districts. In a typical year, for example, the Alamo Heights district had total revenues of \$594 per pupil, while the Edgewood district had only \$356 per pupil. The majority and the State concede, as they must, the existence of major disparities in spendable funds. But the State contends that the disparities do not invidiously discriminate against children and families in districts such as Edgewood, because the Texas scheme is designed “to provide an adequate education for all, with local autonomy to go beyond that as individual school districts desire and are able . . . . It leaves to the people of each district the choice whether to go beyond the minimum and, if so, by how much.” The majority advances this rationalization: “While assuring a basic education for every child in the State, it permits and encourages a large measure of participation in and control of each district’s schools at the local level.”

I cannot disagree with the proposition that local control and local decisionmaking play an important part in our democratic system of government. Cf. *James v. Valtierra*, (1971). Much may be left to local option, and this case would be quite different if it were true that the Texas system, while insuring minimum educational expenditures in every district through state funding, extended a meaningful option to all local districts to increase their per-pupil expenditures and so to improve their children’s education to the extent that increased funding would achieve that goal. The system would then arguably provide a rational and sensible method of achieving the stated aim of preserving an area for local initiative and decision.

The difficulty with the Texas system, however, is that it provides a meaningful option to Alamo Heights and like school districts but almost none to Edgewood and those other districts with a low per-pupil real estate tax base. In these latter districts, no matter how desirous parents are of supporting their schools with greater revenues, it is impossible to do so through the use of the real estate property tax. In these districts, the Texas system utterly fails to extend a realistic choice to parents because the property tax, which is the only revenue-raising mechanism extended to school districts, is practically and legally unavailable. That this is the situation may be readily demonstrated.

Local school districts in Texas raise their portion of the Foundation School Program—the Local Fund Assignment—by levying ad valorem taxes on the property located within their boundaries. In addition, the districts are authorized, by the state constitution and by statute, to levy ad valorem property taxes in order to raise revenues to support educational spending over and above the expenditure of Foundation School Program funds.

Both the Edgewood and Alamo Heights districts are located in Bexar County, Texas. Student enrollment in Alamo Heights is 5,432, in Edgewood 22,862. The per-pupil market value of the taxable property in Alamo Heights is \$49,078, in Edgewood \$5,960. In a typical, relevant year, Alamo Heights had a maintenance tax rate of \$1.20 and a debt service (bond) tax rate of 20 cents per \$100 assessed evaluation, while Edgewood had a maintenance rate of 52 cents and a bond rate of 67 cents. These rates, when applied to the respective tax bases, yielded Alamo Heights \$1,433,473 in maintenance dollars and \$236,074 in bond dollars, and Edgewood \$223,034 in maintenance dollars and \$279,023 in bond dollars. As is readily apparent, because of the variance in tax bases between the districts, results, in terms of revenues, do not correlate with effort, in terms of tax rate. Thus, Alamo Heights, with a tax base approximately twice the size of Edgewood’s base, realized approximately six times as many maintenance dol-

lars as Edgewood by using a tax rate only approximately two and one-half times larger. Similarly, Alamo Heights realized slightly fewer bond dollars by using a bond tax rate less than one-third of that used by Edgewood.

Nor is Edgewood's revenue-raising potential only deficient when compared with Alamo Heights. North East District has taxable property with a per-pupil market value of approximately \$31,000, but total taxable property approximately four and one-half times that of Edgewood. Applying a maintenance rate of \$1, North East yielded \$2,818,148. Thus, because of its superior tax base, North East was able to apply a tax rate slightly less than twice that applied by Edgewood and yield more than 10 times the maintenance dollars. Similarly, North East, with a bond rate of 45 cents, yielded \$1,249,159—more than four times Edgewood's yield with two-thirds the rate.

Plainly, were Alamo Heights or North East to apply the Edgewood tax rate to its tax base, it would yield far greater revenues than Edgewood is able to yield applying those same rates to its base. Conversely, were Edgewood to apply the Alamo Heights or North East rates to its base, the yield would be far smaller than the Alamo Heights or North East yields. The disparity is, therefore, currently operative and its impact on Edgewood is undeniably serious. It is evident from statistics in the record that show that, applying an equalized tax rate of 85 cents per \$100 assessed valuation, Alamo Heights was able to provide approximately \$330 per pupil in local revenues over and above the Local Fund Assignment. In Edgewood, on the other hand, with an equalized tax rate of \$1.05 per \$100 of assessed valuation, \$26 per pupil was raised beyond the Local Fund Assignment. As previously noted, in Alamo Heights, total per-pupil revenues from local, state, and federal funds was \$594 per pupil, in Edgewood \$356.

In order to equal the highest yield in any other Bexar County district, Alamo Heights would be required to tax at the rate of 68 cents per \$100 of assessed valuation. Edgewood would be required to tax at the prohibitive rate of \$5.76 per \$100. But state law places a \$1.50 per \$100 ceiling on the maintenance tax rate, a limit that would surely be reached long before Edgewood attained an equal yield. Edgewood is thus precluded in law, as well as in fact, from achieving a yield even close to that of some other districts.

The Equal Protection Clause permits discriminations between classes but requires that the classification bear some rational relationship to a permissible object sought to be attained by the statute. It is not enough that the Texas system before us seeks to achieve the valid, rational purpose of maximizing local initiative; the means chosen by the State must also be rationally related to the end sought to be achieved. As the Court stated just last Term in *Weber v. Aetna Casualty & Surety Co.*, (1972):

“The tests to determine the validity of state statutes under the Equal Protection Clause have been variously expressed, but this Court requires, at a minimum, that a statutory classification bear some rational relationship to a legitimate state purpose. *Morey v. Doud*, (1957); *Williamson v. Lee Optical Co.*, (1955); *Gulf, Colorado & Santa Fe R. Co. v. Ellis*, (1897); *Yick Wo v. Hopkins*, (1886).”

Neither Texas nor the majority heeds this rule. If the State aims at maximizing local initiative and local choice, by permitting school districts to resort to the real property tax if they choose to do so, it utterly fails in achieving its purpose in districts with property tax bases so low that there is little if any opportunity for interested parents, rich or poor, to augment school district revenues. Requiring the State to establish only that unequal treatment is in furtherance of a permissible goal, without also requiring the State to show that the means chosen to effectuate that goal are rationally related to its achievement, makes equal protection analysis no more than an empty gesture. In my view, the parents and children in Edgewood, and in like districts, suffer from an invidious discrimination violative of the Equal Protection Clause.

This does not, of course, mean that local control may not be a legitimate goal of a school-financing system. Nor does it mean that the State must guarantee each district an equal per-

pupil revenue from the state school-financing system. Nor does it mean, as the majority appears to believe, that, by affirming the decision below, this Court would be “imposing on the States inflexible constitutional restraints that could circumscribe or handicap the continued research and experimentation so vital to finding even partial solutions to educational problems and to keeping abreast of ever-changing conditions.” On the contrary, it would merely mean that the State must fashion a financing scheme which provides a rational basis for the maximization of local control, if local control is to remain a goal of the system, and not a scheme with “different treatment be[ing] accorded to persons placed by a statute into different classes on the basis of criteria wholly unrelated to the objective of that statute.” *Reed v. Reed*, (1971).

Perhaps the majority believes that the major disparity in revenues provided and permitted by the Texas system is inconsequential. I cannot agree, however, that the difference of the magnitude appearing in this case can sensibly be ignored, particularly since the State itself considers it so important to provide opportunities to exceed the minimum state educational expenditures.

There is no difficulty in identifying the class that is subject to the alleged discrimination and that is entitled to the benefits of the Equal Protection Clause. I need go no farther than the parents and children in the Edgewood district, who are plaintiffs here and who assert that they are entitled to the same choice as Alamo Heights to augment local expenditures for schools but are denied that choice by state law. This group constitutes a class sufficiently definite to invoke the protection of the Constitution. They are as entitled to the protection of the Equal Protection Clause as were the voters in allegedly under represented counties in the reapportionment cases. See, e. g., *Baker v. Carr*, (1962); *Gray v. Sanders*, (1963); *Reynolds v. Sims*, (1964). And in *Bullock v. Carter*, (1972), where a challenge to the Texas candidate filing fee on equal protection grounds was upheld, we noted that the victims of alleged discrimination wrought by the filing fee “cannot be described by reference to discrete and precisely defined segments of the community as is typical of inequities challenged under the Equal Protection Clause,” but concluded that “we would ignore reality were we not to recognize that this system falls with unequal weight on voters, as well as candidates, according to their economic status.” *Id.*, at 144. Similarly, in the present case we would blink reality to ignore the fact that school districts, and students in the end, are differentially affected by the Texas school-financing scheme with respect to their capability to supplement the Minimum Foundation School Program. At the very least, the law discriminates against those children and their parents who live in districts where the per-pupil tax base is sufficiently low to make impossible the provision of comparable school revenues by resort to the real property tax which is the only device the State extends for this purpose.

MR. JUSTICE MARSHALL, with whom MR. JUSTICE DOUGLAS concurs, dissenting.

The Court today decides, in effect, that a State may constitutionally vary the quality of education which it offers its children in accordance with the amount of taxable wealth located in the school districts within which they reside. The majority’s decision represents an abrupt departure from the mainstream of recent state and federal court decisions concerning the unconstitutionality of state educational financing schemes dependent upon taxable local wealth. More unfortunately, though, the majority’s holding can only be seen as a retreat from our historic commitment to equality of educational opportunity and as unsupportable acquiescence in a system which deprives children in their earliest years of the chance to reach their full potential as citizens. The Court does this despite the absence of any substantial justification for a scheme which arbitrarily channels educational resources in accordance with the fortuity of the amount of taxable wealth within each district.

In my judgment, the right of every American to an equal start in life, so far as the provision of a state service as important as education is concerned, is far too vital to permit state discrimination on grounds as tenuous as those presented by this record. Nor can I accept the notion

that it is sufficient to remit these appellees to the vagaries of the political process which, contrary to the majority's suggestion, has proved singularly unsuited to the task of providing a remedy for this discrimination. I, for one, am unsatisfied with the hope of an ultimate "political" solution sometime in the indefinite future while, in the meantime, countless children unjustifiably receive inferior educations that "may affect their hearts and minds in a way unlikely ever to be undone." *Brown v. Board of Education*, (1954). I must therefore respectfully dissent.

## I

The Court acknowledges that "substantial interdistrict disparities in school expenditures" exist in Texas, ante, at 15, and that these disparities are "largely attributable to differences in the amounts of money collected through local property taxation," ante, at 16. But instead of closely examining the seriousness of these disparities and the invidiousness of the Texas financing scheme, the Court undertakes an elaborate exploration of the efforts Texas has purportedly made to close the gaps between its districts in terms of levels of district wealth and resulting educational funding. Yet, however praiseworthy Texas' equalizing efforts, the issue in this case is not whether Texas is doing its best to ameliorate the worst features of a discriminatory scheme but, rather, whether the scheme itself is in fact unconstitutionally discriminatory in the face of the Fourteenth Amendment's guarantee of equal protection of the laws. When the Texas financing scheme is taken as a whole, I do not think it can be doubted that it produces a discriminatory impact on substantial numbers of the school-age children of the State of Texas.

## A

Funds to support public education in Texas are derived from three sources: local ad valorem property taxes; the Federal Government; and the state government. It is enlightening to consider these in order.

Under Texas law, the only mechanism provided the local school district for raising new, unencumbered revenues is the power to tax property located within its boundaries. At the same time, the Texas financing scheme effectively restricts the use of monies raised by local property taxation to the support of public education within the boundaries of the district in which they are raised, since any such taxes must be approved by a majority of the property-taxpaying voters of the district.

The significance of the local property tax element of the Texas financing scheme is apparent from the fact that it provides the funds to meet some 40% of the cost of public education for Texas as a whole. Yet the amount of revenue that any particular Texas district can raise is dependent on two factors—its tax rate and its amount of taxable property. The first factor is determined by the property-taxpaying voters of the district. But, regardless of the enthusiasm of the local voters for public education, the second factor—the taxable property wealth of the district—necessarily restricts the district's ability to raise funds to support public education. Thus, even though the voters of two Texas districts may be willing to make the same tax effort, the results for the districts will be substantially different if one is property rich while the other is property poor. The necessary effect of the Texas local property tax is, in short, to favor property-rich districts and to disfavor property-poor ones.

The seriously disparate consequences of the Texas local property tax, when that tax is considered alone, are amply illustrated by data presented to the District Court by appellees. These data included a detailed study of a sample of 110 Texas school districts for the 1967-1968 school year conducted by Professor Joel S. Berke of Syracuse University's Educational Finance Policy Institute. Among other things, this study revealed that the 10 richest districts examined, each of which had more than \$100,000 in taxable property per pupil, raised through local ef-

fort an average of \$610 per pupil, whereas the four poorest districts studied, each of which had less than \$10,000 in taxable property per pupil, were able to raise only an average of \$63 per pupil. And, as the Court effectively recognizes, ante, at 27, this correlation between the amount of taxable property per pupil and the amount of local revenues per pupil holds true for the 96 districts in between the richest and poorest districts.

It is clear, moreover, that the disparity of per-pupil revenues cannot be dismissed as the result of lack of local effort—that is, lower tax rates—by property-poor districts. To the contrary, the data presented below indicate that the poorest districts tend to have the highest tax rates and the richest districts tend to have the lowest tax rates. Yet, despite the apparent extra effort being made by the poorest districts, they are unable even to begin to match the richest districts in terms of the production of local revenues. For example, the 10 richest districts studied by Professor Berke were able to produce \$585 per pupil with an equalized tax rate of 31 cents on \$100 of equalized valuation, but the four poorest districts studied, with an equalized rate of 70 cents on \$100 of equalized valuation, were able to produce only \$60 per pupil. Without more, this state-imposed system of educational funding presents a serious picture of widely varying treatment of Texas school districts, and thereby of Texas schoolchildren, in terms of the amount of funds available for public education.

Nor are these funding variations corrected by the other aspects of the Texas financing scheme. The Federal Government provides funds sufficient to cover only some 10% of the total cost of public education in Texas. Furthermore, while these federal funds are not distributed in Texas solely on a per-pupil basis, appellants do not here contend that they are used in such a way as to ameliorate significantly the widely varying consequences for Texas school districts and schoolchildren of the local property tax element of the state financing scheme.

State funds provide the remaining some 50% of the monies spent on public education in Texas. Technically, they are distributed under two programs. The first is the Available School Fund, for which provision is made in the Texas Constitution. The Available School Fund is composed of revenues obtained from a number of sources, including receipts from the state ad valorem property tax, one-fourth of all monies collected by the occupation tax, annual contributions by the legislature from general revenues, and the revenues derived from the Permanent School Fund. For the 1970-1971 school year the Available School Fund contained \$296,000,000. The Texas Constitution requires that this money be distributed annually on a per capita basis to the local school districts. Obviously, such a flat grant could not alone eradicate the funding differentials attributable to the local property tax. Moreover, today the Available School Fund is in reality simply one facet of the second state financing program, the Minimum Foundation School Program, since each district's annual share of the Fund is deducted from the sum to which the district is entitled under the Foundation Program.

The Minimum Foundation School Program provides funds for three specific purposes: professional salaries, current operating expenses, and transportation expenses. The State pays, on an overall basis, for approximately 80% of the cost of the Program; the remaining 20% is distributed among the local school districts under the Local Fund Assignment. Each district's share of the Local Fund Assignment is determined by a complex "economic index" which is designed to allocate a larger share of the costs to property-rich districts than to property-poor districts. Each district pays its share with revenues derived from local property taxation.

The stated purpose of the Minimum Foundation School Program is to provide certain basic funding for each local Texas school district. At the same time, the Program was apparently intended to improve, to some degree, the financial position of property-poor districts relative to property-rich districts, since—through the use of the economic index—an effort is made to charge a disproportionate share of the costs of the Program to rich districts. It bears noting, however, that substantial criticism has been leveled at the practical effectiveness of the

economic index system of local cost allocation. In theory, the index is designed to ascertain the relative ability of each district to contribute to the Local Fund Assignment from local property taxes. Yet the index is not developed simply on the basis of each district's taxable wealth. It also takes into account the district's relative income from manufacturing, mining, and agriculture, its payrolls, and its scholastic population. It is difficult to discern precisely how these latter factors are predictive of a district's relative ability to raise revenues through local property taxes. Thus, in 1966, one of the consultants who originally participated in the development of the Texas economic index adopted in 1949 told the Governor's Committee on Public School Education: "The Economic Index approach to evaluating local ability offers a little better measure than sheer chance, but not much."

Moreover, even putting aside these criticisms of the economic index as a device for achieving meaningful district wealth equalization through cost allocation, poor districts still do not necessarily receive more state aid than property-rich districts. For the standards which currently determine the amount received from the Foundation School Program by any particular district favor property-rich districts. Thus, focusing on the same Edgewood Independent and Alamo Heights School Districts which the majority uses for purposes of illustration, we find that in 1967-1968 property-rich Alamo Heights, which raised \$333 per pupil on an equalized tax rate of 85 cents per \$100 valuation, received \$225 per pupil from the Foundation School Program, while property-poor Edgewood, which raised only \$26 per pupil with an equalized tax rate of \$1.05 per \$100 valuation, received only \$222 per pupil from the Foundation School Program. And, more recent data, which indicate that for the 1970-1971 school year Alamo Heights received \$491 per pupil from the Program while Edgewood received only \$356 per pupil, hardly suggest that the wealth gap between the districts is being narrowed by the State Program. To the contrary, whereas in 1967-1968 Alamo Heights received only \$3 per pupil, or about 1%, more than Edgewood in state aid, by 1970-1971 the gap had widened to a difference of \$135 per pupil, or about 38%. It was data of this character that prompted the District Court to observe that "the current [state aid] system tends to subsidize the rich at the expense of the poor, rather than the other way around." 337 F. Supp. 280, 282. And even the appellants go no further here than to venture that the Minimum Foundation School Program has "a mildly equalizing effect."

Despite these facts, the majority continually emphasizes how much state aid has, in recent years, been given to property-poor Texas school districts. What the Court fails to emphasize is the cruel irony of how much more state aid is being given to property-rich Texas school districts on top of their already substantial local property tax revenues. Under any view, then, it is apparent that the state aid provided by the Foundation School Program fails to compensate for the large funding variations attributable to the local property tax element of the Texas financing scheme. And it is these stark differences in the treatment of Texas school districts and school children inherent in the Texas financing scheme, not the absolute amount of state aid provided to any particular school district, that are the crux of this case. There can, moreover, be no escaping the conclusion that the local property tax which is dependent upon taxable district property wealth is an essential feature of the Texas scheme for financing public education.

## **B**

The appellants do not deny the disparities in educational funding caused by variations in taxable district property wealth. They do contend, however, that whatever the differences in per-pupil spending among Texas districts, there are no discriminatory consequences for the children of the disadvantaged districts. They recognize that what is at stake in this case is the quality of the public education provided Texas children in the districts in which they live. But appellants reject the suggestion that the quality of education in any particular district is determined by money—beyond some minimal level of funding which they believe to be assured

every Texas district by the Minimum Foundation School Program. In their view, there is simply no denial of equal educational opportunity to any Texas schoolchildren as a result of the widely varying per-pupil spending power provided districts under the current financing scheme.

In my view, though, even an unadorned restatement of this contention is sufficient to reveal its absurdity. Authorities concerned with educational quality no doubt disagree as to the significance of variations in per-pupil spending. Indeed, conflicting expert testimony was presented to the District Court in this case concerning the effect of spending variations on educational achievement. We sit, however, not to resolve disputes over educational theory but to enforce our Constitution. It is an inescapable fact that if one district has more funds available per pupil than another district, the former will have greater choice in educational planning than will the latter. In this regard, I believe the question of discrimination in educational quality must be deemed to be an objective one that looks to what the State provides its children, not to what the children are able to do with what they receive. That a child forced to attend an underfunded school with poorer physical facilities, less experienced teachers, larger classes, and a narrower range of courses than a school with substantially more funds—and thus with greater choice in educational planning—may nevertheless excel is to the credit of the child, not the State, cf. *Missouri ex rel. Gaines v. Canada*, (1938). Indeed, who can ever measure for such a child the opportunities lost and the talents wasted for want of a broader, more enriched education? Discrimination in the opportunity to learn that is afforded a child must be our standard.

Hence, even before this Court recognized its duty to tear down the barriers of state-enforced racial segregation in public education, it acknowledged that inequality in the educational facilities provided to students may be discriminatory state action as contemplated by the Equal Protection Clause. As a basis for striking down state-enforced segregation of a law school, the Court in *Sweatt v. Painter*, (1950), stated:

“[W]e cannot find substantial equality in the educational opportunities offered white and Negro law students by the State. In terms of number of the faculty, variety of courses and opportunity for specialization, size of the student body, scope of the library, availability of law review and similar activities, the [whites-only] Law School is superior. . . . It is difficult to believe that one who had a free choice between these law schools would consider the question close.”

See also *McLaurin v. Oklahoma State Regents for Higher Education*, (1950). Likewise, it is difficult to believe that if the children of Texas had a free choice, they would choose to be educated in districts with fewer resources, and hence with more antiquated plants, less experienced teachers, and a less diversified curriculum. In fact, if financing variations are so insignificant to educational quality, it is difficult to understand why a number of our country's wealthiest school districts, which have no legal obligation to argue in support of the constitutionality of the Texas legislation, have nevertheless zealously pursued its cause before this Court.

The consequences, in terms of objective educational input, of the variations in district funding caused by the Texas financing scheme are apparent from the data introduced before the District Court. For example, in 1968-1969, 100% of the teachers in the property-rich Alamo Heights School District had college degrees. By contrast, during the same school year only 80.02% of the teachers had college degrees in the property poor Edgewood Independent School District. Also, in 1968-1969, approximately 47% of the teachers in the Edgewood District were on emergency teaching permits, whereas only 11% of the teachers in Alamo Heights were on such permits. This is undoubtedly a reflection of the fact that the top of Edgewood's teacher salary scale was approximately 80% of Alamo Heights'. And, not surprisingly, the teacher-student ratio varies significantly between the two districts. In other words, as might be expected, a difference in the funds available to districts results in a difference in educational

inputs available for a child's public education in Texas. For constitutional purposes, I believe this situation, which is directly attributable to the Texas financing scheme, raises a grave question of state-created discrimination in the provision of public education. Cf. *Gaston County v. United States*, (1969).

At the very least, in view of the substantial interdistrict disparities in funding and in resulting educational inputs shown by appellees to exist under the Texas financing scheme, the burden of proving that these disparities do not in fact affect the quality of children's education must fall upon the appellants. Cf. *Hobson v. Hansen*, 327 F. Supp. 844, 860-861 (DC 1971). Yet appellants made no effort in the District Court to demonstrate that educational quality is not affected by variations in funding and in resulting inputs. And, in this Court, they have argued no more than that the relationship is ambiguous. This is hardly sufficient to overcome appellees' prima facie showing of state-created discrimination between the schoolchildren of Texas with respect to objective educational opportunity.

Nor can I accept the appellants' apparent suggestion that the Texas Minimum Foundation School Program effectively eradicates any discriminatory effects otherwise resulting from the local property tax element of the Texas financing scheme. Appellants assert that, despite its imperfections, the Program "does guarantee an adequate education to every child." The majority, in considering the constitutionality of the Texas financing scheme, seems to find substantial merit in this contention, for it tells us that the Foundation Program "was designed to provide an adequate minimum educational offering in every school in the State," ante, at 45, and that the Program "assur[es] a basic education for every child," ante, at 49. But I fail to understand how the constitutional problems inherent in the financing scheme are eased by the Foundation Program. Indeed, the precise thrust of the appellants' and the Court's remarks are not altogether clear to me.

The suggestion may be that the state aid received via the Foundation Program sufficiently improves the position of property-poor districts vis-a-vis property-rich districts—in terms of educational funds—to eliminate any claim of interdistrict discrimination in available educational resources which might otherwise exist if educational funding were dependent solely upon local property taxation. Certainly the Court has recognized that to demand precise equality of treatment is normally unrealistic, and thus minor differences inherent in any practical context usually will not make out a substantial equal protection claim. See, e. g., *Mayer v. City of Chicago*, (1971); *Draper v. Washington*, (1963); *Bain Peanut Co. v. Pinson*, (1931). But, as has already been seen, we are hardly presented here with some de minimis claim of discrimination resulting from the play necessary in any functioning system; to the contrary, it is clear that the Foundation Program utterly fails to ameliorate the seriously discriminatory effects of the local property tax.

Alternatively, the appellants and the majority may believe that the Equal Protection Clause cannot be offended by substantially unequal state treatment of persons who are similarly situated so long as the State provides everyone with some unspecified amount of education which evidently is "enough." The basis for such a novel view is far from clear. It is, of course, true that the Constitution does not require precise equality in the treatment of all persons. As Mr. Justice Frankfurter explained:

"The equality at which the 'equal protection' clause aims is not a disembodied equality. The Fourteenth Amendment enjoins 'the equal protection of the laws,' and laws are not abstract propositions. . . . The Constitution does not require things which are different in fact or opinion to be treated in law as though they were the same." *Tigner v. Texas*, (1940). See also *Douglas v. California*, (1963); *Goesaert v. Cleary*, (1948).

But this Court has never suggested that because some "adequate" level of benefits is provided to all, discrimination in the provision of services is therefore constitutionally excusable.

The Equal Protection Clause is not addressed to the minimal sufficiency but rather to the unjustifiable inequalities of state action. It mandates nothing less than that “all persons similarly circumstanced shall be treated alike.” *F. S. Royster Guano Co. v. Virginia*, (1920).

Even if the Equal Protection Clause encompassed some theory of constitutional adequacy, discrimination in the provision of educational opportunity would certainly seem to be a poor candidate for its application. Neither the majority nor appellants inform us how judicially manageable standards are to be derived for determining how much education is “enough” to excuse constitutional discrimination. One would think that the majority would heed its own fervent affirmation of judicial self-restraint before undertaking the complex task of determining at large what level of education is constitutionally sufficient. Indeed, the majority’s apparent reliance upon the adequacy of the educational opportunity assured by the Texas Minimum Foundation School Program seems fundamentally inconsistent with its own recognition that educational authorities are unable to agree upon what makes for educational quality, see ante, at 42-43 and n. 86 and at 47 n. 101. If, as the majority stresses, such authorities are uncertain as to the impact of various levels of funding on educational quality, I fail to see where it finds the expertise to divine that the particular levels of funding provided by the Program assure an adequate educational opportunity—much less an education substantially equivalent in quality to that which a higher level of funding might provide. Certainly appellants’ mere assertion before this Court of the adequacy of the education guaranteed by the Minimum Foundation School Program cannot obscure the constitutional implications of the discrimination in educational funding and objective educational inputs resulting from the local property tax—particularly since the appellees offered substantial uncontroverted evidence before the District Court impugning the now much-touted “adequacy” of the education guaranteed by the Foundation Program.

In my view, then, it is inequality—not some notion of gross inadequacy—of educational opportunity that raises a question of denial of equal protection of the laws. I find any other approach to the issue unintelligible and without directing principle. Here, appellees have made a substantial showing of wide variations in educational funding and the resulting educational opportunity afforded to the schoolchildren of Texas. This discrimination is, in large measure, attributable to significant disparities in the taxable wealth of local Texas school districts. This is a sufficient showing to raise a substantial question of discriminatory state action in violation of the Equal Protection Clause.

### C

Despite the evident discriminatory effect of the Texas financing scheme, both the appellants and the majority raise substantial questions concerning the precise character of the disadvantaged class in this case. The District Court concluded that the Texas financing scheme draws “distinction between groups of citizens depending upon the wealth of the district in which they live” and thus creates a disadvantaged class composed of persons living in property-poor districts. See 337 F. Supp., at 282. See also *id.*, at 281. In light of the data introduced before the District Court, the conclusion that the schoolchildren of property-poor districts constitute a sufficient class for our purposes seems indisputable to me.

Appellants contend, however, that in constitutional terms this case involves nothing more than discrimination against local school districts, not against individuals, since on its face the state scheme is concerned only with the provision of funds to local districts. The result of the Texas financing scheme, appellants suggest, is merely that some local districts have more available revenues for education; others have less. In that respect, they point out, the States have broad discretion in drawing reasonable distinctions between their political subdivisions. See *Griffin v. County School Board of Prince Edward County*, (1964); *McGowan v. Maryland*, (1961); *Salsburg v. Maryland*, (1954).

But this Court has consistently recognized that where there is in fact discrimination against individual interests, the constitutional guarantee of equal protection of the laws is not

inapplicable simply because the discrimination is based upon some group characteristic such as geographic location. See *Gordon v. Lance*, (1971); *Reynolds v. Sims*, (1964); *Gray v. Sanders* (1963). Texas has chosen to provide free public education for all its citizens, and it has embodied that decision in its constitution. Yet, having established public education for its citizens, the State, as a direct consequence of the variations in local property wealth endemic to Texas' financing scheme, has provided some Texas schoolchildren with substantially less resources for their education than others. Thus, while on its face the Texas scheme may merely discriminate between local districts, the impact of that discrimination falls directly upon the children whose educational opportunity is dependent upon where they happen to live. Consequently, the District Court correctly concluded that the Texas financing scheme discriminates, from a constitutional perspective, between schoolchildren on the basis of the amount of taxable property located within their local districts.

In my Brother STEWART'S view, however, such a description of the discrimination inherent in this case is apparently not sufficient, for it fails to define the "kind of objectively identifiable classes" that he evidently perceives to be necessary for a claim to be "cognizable under the Equal Protection Clause," ante, at 62. He asserts that this is also the view of the majority, but he is unable to cite, nor have I been able to find, any portion of the Court's opinion which remotely suggests that there is no objectively identifiable or definable class in this case. In any event, if he means to suggest that an essential predicate to equal protection analysis is the precise identification of the particular individuals who compose the disadvantaged class, I fail to find the source from which he derives such a requirement. Certainly such precision is not analytically necessary. So long as the basis of the discrimination is clearly identified, it is possible to test it against the State's purpose for such discrimination—whatever the standard of equal protection analysis employed. This is clear from our decision only last Term in *Bullock v. Carter*, (1972), where the Court, in striking down Texas' primary filing fees as violative of equal protection, found no impediment to equal protection analysis in the fact that the members of the disadvantaged class could not be readily identified. The Court recognized that the filing-fee system tended "to deny some voters the opportunity to vote for a candidate of their choosing; at the same time it gives the affluent the power to place on the ballot their own names or the names of persons they favor." *Id.*, at 144. The Court also recognized that "[t]his disparity in voting power based on wealth cannot be described by reference to discrete and precisely defined segments of the community as is typical of inequities challenged under the Equal Protection Clause . . ." *Ibid.* Nevertheless, it concluded that "we would ignore reality were we not to recognize that this system falls with unequal weight on voters . . . according to their economic status." *Ibid.* The nature of the classification in *Bullock* was clear, although the precise membership of the disadvantaged class was not. This was enough in *Bullock* for purposes of equal protection analysis. It is enough here.

It may be, though, that my Brother STEWART is not in fact demanding precise identification of the membership of the disadvantaged class for purposes of equal protection analysis, but is merely unable to discern with sufficient clarity the nature of the discrimination charged in this case. Indeed, the Court itself displays some uncertainty as to the exact nature of the discrimination and the resulting disadvantaged class alleged to exist in this case. See ante, at 19-20. It is, of course, essential to equal protection analysis to have a firm grasp upon the nature of the discrimination at issue. In fact, the absence of such a clear, articulable understanding of the nature of alleged discrimination in a particular instance may well suggest the absence of any real discrimination. But such is hardly the case here.

A number of theories of discrimination have, to be sure, been considered in the course of this litigation. Thus, the District Court found that in Texas the poor and minority group members tend to live in property-poor districts, suggesting discrimination on the basis of both personal wealth and race. See 337 F. Supp., at 282 and n. 3. The Court goes to great lengths to discredit the data upon which the District Court relied, and thereby its conclusion that poor

people live in property-poor districts. Although I have serious doubts as to the correctness of the Court's analysis in rejecting the data submitted below, I have no need to join issue on these factual disputes.

I believe it is sufficient that the overarching form of discrimination in this case is between the schoolchildren of Texas on the basis of the taxable property wealth of the districts in which they happen to live. To understand both the precise nature of this discrimination and the parameters of the disadvantaged class it is sufficient to consider the constitutional principle which appellees contend is controlling in the context of educational financing. In their complaint appellees asserted that the Constitution does not permit local district wealth to be determinative of educational opportunity. This is simply another way of saying, as the District Court concluded, that consistent with the guarantee of equal protection of the laws, "the quality of public education may not be a function of wealth, other than the wealth of the state as a whole." 337 F. Supp., at 284. Under such a principle, the children of a district are excessively advantaged if that district has more taxable property per pupil than the average amount of taxable property per pupil considering the State as a whole. By contrast, the children of a district are disadvantaged if that district has less taxable property per pupil than the state average. The majority attempts to disparage such a definition of the disadvantaged class as the product of an "artificially defined level" of district wealth. Ante. at 28. But such is clearly not the case, for this is the definition unmistakably dictated by the constitutional principle for which appellees have argued throughout the course of this litigation. And I do not believe that a clearer definition of either the disadvantaged class of Texas schoolchildren or the allegedly unconstitutional discrimination suffered by the members of that class under the present Texas financing scheme could be asked for, much less needed. Whether this discrimination, against the schoolchildren of property-poor districts, inherent in the Texas financing scheme, is violative of the Equal Protection Clause is the question to which we must now turn.

## II

To avoid having the Texas financing scheme struck down because of the interdistrict variations in taxable property wealth, the District Court determined that it was insufficient for appellants to show merely that the State's scheme was rationally related to some legitimate state purpose; rather, the discrimination inherent in the scheme had to be shown necessary to promote a "compelling state interest" in order to withstand constitutional scrutiny. The basis for this determination was twofold: first, the financing scheme divides citizens on a wealth basis, a classification which the District Court viewed as highly suspect; and second, the discriminatory scheme directly affects what it considered to be a "fundamental interest," namely, education.

This Court has repeatedly held that state discrimination which either adversely affects a "fundamental interest," see, e. g., *Dunn v. Blumstein*, (1972); *Shapiro v. Thompson*, (1969), or is based on a distinction of a suspect character, see, e. g., *Graham v. Richardson*, (1971); *McLaughlin v. Florida*, (1964), must be carefully scrutinized to ensure that the scheme is necessary to promote a substantial, legitimate state interest. See, e. g., *Dunn v. Blumstein*, supra, at 342-343; *Shapiro v. Thompson*, supra, at 634. The majority today concludes, however, that the Texas scheme is not subject to such a strict standard of review under the Equal Protection Clause. Instead, in its view, the Texas scheme must be tested by nothing more than that lenient standard of rationality which we have traditionally applied to discriminatory state action in the context of economic and commercial matters. See, e. g., *McGowan v. Maryland*; *Morey v. Doud*, (1957); *F. S. Royster Guano Co. v. Virginia*; *Lindsley v. Natural Carbonic Gas Co.*, (1911). By so doing, the Court avoids the telling task of searching for a substantial state interest which the Texas financing scheme, with its variations in taxable district property wealth, is necessary to further. I cannot accept such an emasculation of the Equal Protection Clause in the context of this case.

## A

To begin, I must once more voice my disagreement with the Court's rigidified approach to equal protection analysis. See *Dandridge v. Williams*, (1970) (dissenting opinion); *Richardson v. Belcher*, (1971) (dissenting opinion). The Court apparently seeks to establish today that equal protection cases fall into one of two neat categories which dictate the appropriate standard of review—strict scrutiny or mere rationality. But this Court's decisions in the field of equal protection defy such easy categorization. A principled reading of what this Court has done reveals that it has applied a spectrum of standards in reviewing discrimination allegedly violative of the Equal Protection Clause. This spectrum clearly comprehends variations in the degree of care with which the Court will scrutinize particular classifications, depending, I believe, on the constitutional and societal importance of the interest adversely affected and the recognized invidiousness of the basis upon which the particular classification is drawn. I find in fact that many of the Court's recent decisions embody the very sort of reasoned approach to equal protection analysis for which I previously argued—that is, an approach in which “concentration [is] placed upon the character of the classification in question, the relative importance to individuals in the class discriminated against of the governmental benefits that they do not receive, and the asserted state interests in support of the classification.” *Dandridge v. Williams*, *supra*, at 520-521 (dissenting opinion).

I therefore cannot accept the majority's labored efforts to demonstrate that fundamental interests, which call for strict scrutiny of the challenged classification, encompass only established rights which we are somehow bound to recognize from the text of the Constitution itself. To be sure, some interests which the Court has deemed to be fundamental for purposes of equal protection analysis are themselves constitutionally protected rights. Thus, discrimination against the guaranteed right of freedom of speech has called for strict judicial scrutiny. See *Police Dept. of Chicago v. Mosley*, (1972). Further, every citizen's right to travel interstate, although nowhere expressly mentioned in the Constitution, has long been recognized as implicit in the premises underlying that document: the right “was conceived from the beginning to be a necessary concomitant of the stronger Union the Constitution created.” *United States v. Guest*, (1966). See also *Crandall v. Nevada*, 6 Wall. 35, 48 (1868). Consequently, the Court has required that a state classification affecting the constitutionally protected right to travel must be “shown to be necessary to promote a compelling governmental interest.” *Shapiro v. Thompson*. But it will not do to suggest that the “answer” to whether an interest is fundamental for purposes of equal protection analysis is always determined by whether that interest “is a right . . . explicitly or implicitly guaranteed by the Constitution,” *ante*, at 33-34.

I would like to know where the Constitution guarantees the right to procreate, *Skinner v. Oklahoma*, (1942), or the right to vote in state elections, e. g., *Reynolds v. Sims*, (1964), or the right to an appeal from a criminal conviction, e. g., *Griffin v. Illinois*, (1956). These are instances in which, due to the importance of the interests at stake, the Court has displayed a strong concern with the existence of discriminatory state treatment. But the Court has never said or indicated that these are interests which independently enjoy full-blown constitutional protection.

Thus, in *Buck v. Bell*, (1927), the Court refused to recognize a substantive constitutional guarantee of the right to procreate. Nevertheless, in *Skinner v. Oklahoma*, *supra*, at 541, the Court, without impugning the continuing validity of *Buck v. Bell*, held that “strict scrutiny” of state discrimination affecting procreation “is essential,” for “[m]arriage and procreation are fundamental to the very existence and survival of the race.” Recently, in *Roe v. Wade*, (1973), the importance of procreation has, indeed, been explained on the basis of its intimate relationship with the constitutional right of privacy which we have recognized. Yet the limited stature thereby accorded any “right” to procreate is evident from the fact that at the same time the Court reaffirmed its initial decision in *Buck v. Bell*. See *Roe v. Wade*, *supra*, at 154.

Similarly, the right to vote in state elections has been recognized as a “fundamental political right,” because the Court concluded very early that it is “preservative of all rights.” *Yick*

Wo v. Hopkins, (1886); see, e. g., Reynolds v. Sims, *supra*, at 561-562. For this reason, “this Court has made clear that a citizen has a constitutionally protected right to participate in elections on an equal basis with other citizens in the jurisdiction.” *Dunn v. Blumstein* (emphasis added). The final source of such protection from inequality in the provision of the state franchise is, of course, the Equal Protection Clause. Yet it is clear that whatever degree of importance has been attached to the state electoral process when unequally distributed, the right to vote in state elections has itself never been accorded the stature of an independent constitutional guarantee. See *Oregon v. Mitchell*, (1970); *Kramer v. Union School District*, (1969); *Harper v. Virginia Bd. of Elections*, (1966).

Finally, it is likewise “true that a State is not required by the Federal Constitution to provide appellate courts or a right to appellate review at all.” *Griffin v. Illinois*. Nevertheless, discrimination adversely affecting access to an appellate process which a State has chosen to provide has been considered to require close judicial scrutiny. See, e. g., *Griffin v. Illinois*, *supra*; *Douglas v. California*, (1963).

The majority is, of course, correct when it suggests that the process of determining which interests are fundamental is a difficult one. But I do not think the problem is insurmountable. And I certainly do not accept the view that the process need necessarily degenerate into an unprincipled, subjective “picking-and-choosing” between various interests or that it must involve this Court in creating “substantive constitutional rights in the name of guaranteeing equal protection of the laws,” *ante*, at 33. Although not all fundamental interests are constitutionally guaranteed, the determination of which interests are fundamental should be firmly rooted in the text of the Constitution. The task in every case should be to determine the extent to which constitutionally guaranteed rights are dependent on interests not mentioned in the Constitution. As the nexus between the specific constitutional guarantee and the nonconstitutional interest draws closer, the nonconstitutional interest becomes more fundamental and the degree of judicial scrutiny applied when the interest is infringed on a discriminatory basis must be adjusted accordingly. Thus, it cannot be denied that interests such as procreation, the exercise of the state franchise, and access to criminal appellate processes are not fully guaranteed to the citizen by our Constitution. But these interests have nonetheless been afforded special judicial consideration in the face of discrimination because they are, to some extent, interrelated with constitutional guarantees. Procreation is now understood to be important because of its interaction with the established constitutional right of privacy. The exercise of the state franchise is closely tied to basic civil and political rights inherent in the First Amendment. And access to criminal appellate processes enhances the integrity of the range of rights implicit in the Fourteenth Amendment guarantee of due process of law. Only if we closely protect the related interests from state discrimination do we ultimately ensure the integrity of the constitutional guarantee itself. This is the real lesson that must be taken from our previous decisions involving interests deemed to be fundamental.

The effect of the interaction of individual interests with established constitutional guarantees upon the degree of care exercised by this Court in reviewing state discrimination affecting such interests is amply illustrated by our decision last Term in *Eisenstadt v. Baird*, (1972). In *Baird*, the Court struck down as violative of the Equal Protection Clause a state statute which denied unmarried persons access to contraceptive devices on the same basis as married persons. The Court purported to test the statute under its traditional standard whether there is some rational basis for the discrimination effected. *Id.*, at 446-447. In the context of commercial regulation, the Court has indicated that the Equal Protection Clause “is offended only if the classification rests on grounds wholly irrelevant to the achievement of the State’s objective.” See, e. g., *McGowan v. Maryland*; *Kotch v. Board of River Port Pilot Comm’rs*, (1947). And this lenient standard is further weighted in the State’s favor by the fact that “[a] statutory discrimination will not be set aside if any state of facts reasonably may be conceived [by the Court] to justify it.” *McGowan v. Maryland*, *supra*, at 426. But in *Baird* the Court clearly did

not adhere to these highly tolerant standards of traditional rational review. For although there were conceivable state interests intended to be advanced by the statute—e. g., deterrence of premarital sexual activity and regulation of the dissemination of potentially dangerous articles—the Court was not prepared to accept these interests on their face, but instead proceeded to test their substantiality by independent analysis. Such close scrutiny of the State's interests was hardly characteristic of the deference shown state classifications in the context of economic interests. See, e. g., *Goesaert v. Cleary*, (1948); *Kotch v. Board of River Port Pilot Comm'rs*, *supra*. Yet I think the Court's action was entirely appropriate, for access to and use of contraceptives bears a close relationship to the individual's constitutional right of privacy. See also *Roe v. Wade*.

A similar process of analysis with respect to the invidiousness of the basis on which a particular classification is drawn has also influenced the Court as to the appropriate degree of scrutiny to be accorded any particular case. The highly suspect character of classifications based on race, nationality, or alienage is well established. The reasons why such classifications call for close judicial scrutiny are manifold. Certain racial and ethnic groups have frequently been recognized as “discrete and insular minorities” who are relatively powerless to protect their interests in the political process. See *Graham, v. Richardson*; cf. *United States v. Carolene Products Co.*, n. 4 (1938). Moreover, race, nationality, or alienage is “‘in most circumstances irrelevant’ to any constitutionally acceptable legislative purpose, *Hirabayashi v. United States*.” *McLaughlin v. Florida*. Instead, lines drawn on such bases are frequently the reflection of historic prejudices rather than legislative rationality. It may be that all of these considerations, which make for particular judicial solicitude in the face of discrimination on the basis of race, nationality, or alienage, do not coalesce—or at least not to the same degree—in other forms of discrimination. Nevertheless, these considerations have undoubtedly influenced the care with which the Court has scrutinized other forms of discrimination.

In *James v. Strange*, (1972), the Court held unconstitutional a state statute which provided for recoupment from indigent convicts of legal defense fees paid by the State. The Court found that the statute impermissibly differentiated between indigent criminals in debt to the State and civil judgment debtors, since criminal debtors were denied various protective exemptions afforded civil judgment debtors. The Court suggested that in reviewing the statute under the Equal Protection Clause, it was merely applying the traditional requirement that there be “‘some rationality’” in the line drawn between the different types of debtors. *Id.*, at 140. Yet it then proceeded to scrutinize the statute with less than traditional deference and restraint. Thus, the Court recognized “‘that state recoupment statutes may betoken legitimate state interests’” in recovering expenses and discouraging fraud. Nevertheless, MR. JUSTICE POWELL, speaking for the Court, concluded that:

“these interests are not thwarted by requiring more even treatment of indigent criminal defendants with other classes of debtors to whom the statute itself repeatedly makes reference. State recoupment laws, notwithstanding the state interests they may serve, need not blight in such discriminatory fashion the hopes of indigents for self-sufficiency and self-respect.” *Id.*, at 141-142.

The Court, in short, clearly did not consider the problems of fraud and collection that the state legislature might have concluded were peculiar to indigent criminal defendants to be either sufficiently important or at least sufficiently substantiated to justify denial of the protective exemptions afforded to all civil judgment debtors, to a class composed exclusively of indigent criminal debtors.

Similarly, in *Reed v. Reed*, (1971), the Court, in striking down a state statute which gave men preference over women when persons of equal entitlement apply for assignment as an administrator of a particular estate, resorted to a more stringent standard of equal protection review than that employed in cases involving commercial matters. The Court indicated that

it was testing the claim of sex discrimination by nothing more than whether the line drawn bore “a rational relationship to a state objective,” which it recognized as a legitimate effort to reduce the work of probate courts in choosing between competing applications for letters of administration. *Id.*, at 76. Accepting such a purpose, the Idaho Supreme Court had thought the classification to be sustainable on the basis that the legislature might have reasonably concluded that, as a rule, men have more experience than women in business matters relevant to the administration of an estate. 93 Idaho 511, 514, 465 P.2d 635, 638 (1970). This Court, however, concluded that “[t]o give a mandatory preference to members of either sex over members of the other, merely to accomplish the elimination of hearings on the merits, is to make the very kind of arbitrary legislative choice forbidden by the Equal Protection Clause of the Fourteenth Amendment . . .” This Court, in other words, was unwilling to consider a theoretical and unsubstantiated basis for distinction—however reasonable it might appear—sufficient to sustain a statute discriminating on the basis of sex.

James and Reed can only be understood as instances in which the particularly invidious character of the classification caused the Court to pause and scrutinize with more than traditional care the rationality of state discrimination. Discrimination on the basis of past criminality and on the basis of sex posed for the Court the specter of forms of discrimination which it implicitly recognized to have deep social and legal roots without necessarily having any basis in actual differences. Still, the Court’s sensitivity to the invidiousness of the basis for discrimination is perhaps most apparent in its decisions protecting the interests of children born out of wedlock from discriminatory state action. See *Weber v. Aetna Casualty & Surety Co.*, (1972); *Levy v. Louisiana*, (1968).

In *Weber*, the Court struck down a portion of a state workmen’s compensation statute that relegated unacknowledged illegitimate children of the deceased to a lesser status with respect to benefits than that occupied by legitimate children of the deceased. The Court acknowledged the true nature of its inquiry in cases such as these: “What legitimate state interest does the classification promote? What fundamental personal rights might the classification endanger?” *Id.*, at 173. Embarking upon a determination of the relative substantiality of the State’s justifications for the classification, the Court rejected the contention that the classifications reflected what might be presumed to have been the deceased’s preference of beneficiaries as “not compelling . . . where dependency on the deceased is a prerequisite to anyone’s recovery . . .” *Ibid.* Likewise, it deemed the relationship between the State’s interest in encouraging legitimate family relationships and the burden placed on the illegitimates too tenuous to permit the classification to stand. *Ibid.* A clear insight into the basis of the Court’s action is provided by its conclusion:

“[I]mposing disabilities on the illegitimate child is contrary to the basic concept of our system that legal burdens should bear some relationship to individual responsibility or wrongdoing. Obviously, no child is responsible for his birth and penalizing the illegitimate child is an ineffectual—as well as an unjust—way of deterring the parent. Courts are powerless to prevent the social opprobrium suffered by these hapless children, but the Equal Protection Clause does enable us to strike down discriminatory laws relating to status of birth . . .” *Id.*, at 175-176.

Status of birth, like the color of one’s skin, is something which the individual cannot control, and should generally be irrelevant in legislative considerations. Yet illegitimacy has long been stigmatized by our society. Hence, discrimination on the basis of birth—particularly when it affects innocent children—warrants special judicial consideration.

In summary, it seems to me inescapably clear that this Court has consistently adjusted the care with which it will review state discrimination in light of the constitutional significance of the interests affected and the invidiousness of the particular classification. In the context of economic interests, we find that discriminatory state action is almost always sustained, for

such interests are generally far removed from constitutional guarantees. Moreover, “[t]he extremes to which the Court has gone in dreaming up rational bases for state regulation in that area may in many instances be ascribed to a healthy revulsion from the Court’s earlier excesses in using the Constitution to protect interests that have more than enough power to protect themselves in the legislative halls.” *Dandridge v. Williams*, (dissenting opinion). But the situation differs markedly when discrimination against important individual interests with constitutional implications and against particularly disadvantaged or powerless classes is involved. The majority suggests, however, that a variable standard of review would give this Court the appearance of a “superlegislature.” *Ante*, at 31. I cannot agree. Such an approach seems to me a part of the guarantees of our Constitution and of the historic experiences with oppression of and discrimination against discrete, powerless minorities which underlie that document. In truth, the Court itself will be open to the criticism raised by the majority so long as it continues on its present course of effectively selecting in private which cases will be afforded special consideration without acknowledging the true basis of its action. Opinions such as those in *Reed* and *James* seem drawn more as efforts to shield rather than to reveal the true basis of the Court’s decisions. Such obfuscated action may be appropriate to a political body such as a legislature, but it is not appropriate to this Court. Open debate of the bases for the Court’s action is essential to the rationality and consistency of our decisionmaking process. Only in this way can we avoid the label of legislature and ensure the integrity of the judicial process.

Nevertheless, the majority today attempts to force this case into the same category for purposes of equal protection analysis as decisions involving discrimination affecting commercial interests. By so doing, the majority singles this case out for analytic treatment at odds with what seems to me to be the clear trend of recent decisions in this Court, and thereby ignores the constitutional importance of the interest at stake and the invidiousness of the particular classification, factors that call for far more than the lenient scrutiny of the Texas financing scheme which the majority pursues. Yet if the discrimination inherent in the Texas scheme is scrutinized with the care demanded by the interest and classification present in this case, the unconstitutionality of that scheme is unmistakable.

## B

Since the Court now suggests that only interests guaranteed by the Constitution are fundamental for purposes of equal protection analysis, and since it rejects the contention that public education is fundamental, it follows that the Court concludes that public education is not constitutionally guaranteed. It is true that this Court has never deemed the provision of free public education to be required by the Constitution. Indeed, it has on occasion suggested that state-supported education is a privilege bestowed by a State on its citizens. See *Missouri ex rel. Gaines v. Canada*. Nevertheless, the fundamental importance of education is amply indicated by the prior decisions of this Court, by the unique status accorded public education by our society, and by the close relationship between education and some of our most basic constitutional values.

The special concern of this Court with the educational process of our country is a matter of common knowledge. Undoubtedly, this Court’s most famous statement on the subject is that contained in *Brown v. Board of Education*:

“Today, education is perhaps the most important function of state and local governments. Compulsory school attendance laws and the great expenditures for education both demonstrate our recognition of the importance of education to our democratic society. It is required in the performance of our most basic public responsibilities, even service in the armed forces. It is the very foundation of good citizenship. Today it is a principal instrument in awakening the child to cultural values, in preparing him for later professional training, and in helping him to adjust normally to his environment . . . .”

Only last Term, the Court recognized that “[p]roviding public schools ranks at the very apex of the function of a State.” *Wisconsin v. Yoder*, (1972). This is clearly borne out by the

fact that in 48 of our 50 States the provision of public education is mandated by the state constitution. No other state function is so uniformly recognized as an essential element of our society's well-being. In large measure, the explanation for the special importance attached to education must rest, as the Court recognized in *Yoder, id.*, at 221, on the facts that "some degree of education is necessary to prepare citizens to participate effectively and intelligently in our open political system . . .," and that "education prepares individuals to be self-reliant and self-sufficient participants in society." Both facets of this observation are suggestive of the substantial relationship which education bears to guarantees of our Constitution.

Education directly affects the ability of a child to exercise his First Amendment rights, both as a source and as a receiver of information and ideas, whatever interests he may pursue in life. This Court's decision in *Sweezy v. New Hampshire*, (1957), speaks of the right of students "to inquire, to study and to evaluate, to gain new maturity and understanding . . ." Thus, we have not casually described the classroom as the "marketplace of ideas." *Keyishian v. Board of Regents*, (1967). The opportunity for formal education may not necessarily be the essential determinant of an individual's ability to enjoy throughout his life the rights of free speech and association guaranteed to him by the First Amendment. But such an opportunity may enhance the individual's enjoyment of those rights, not only during but also following school attendance. Thus, in the final analysis, "the pivotal position of education to success in American society and its essential role in opening up to the individual the central experiences of our culture lend it an importance that is undeniable."

Of particular importance is the relationship between education and the political process. "Americans regard the public schools as a most vital civic institution for the preservation of a democratic system of government." *Abington School Dist. v. Schempp*, (1963) (BRENNAN, J., concurring). Education serves the essential function of instilling in our young an understanding of and appreciation for the principles and operation of our governmental processes. Education may instill the interest and provide the tools necessary for political discourse and debate. Indeed, it has frequently been suggested that education is the dominant factor affecting political consciousness and participation. A system of "[c]ompetition in ideas and governmental policies is at the core of our electoral process and of the First Amendment freedoms." *Williams v. Rhodes*, (1968). But of most immediate and direct concern must be the demonstrated effect of education on the exercise of the franchise by the electorate. The right to vote in federal elections is conferred by Art. I, 2, and the Seventeenth Amendment of the Constitution, and access to the state franchise has been afforded special protection because it is "preservative of other basic civil and political rights," *Reynolds v. Sims*. Data from the Presidential Election of 1968 clearly demonstrate a direct relationship between participation in the electoral process and level of educational attainment; and, as this Court recognized in *Gaston County v. United States*, (1969), the quality of education offered may influence a child's decision to "enter or remain in school." It is this very sort of intimate relationship between a particular personal interest and specific constitutional guarantees that has heretofore caused the Court to attach special significance, for purposes of equal protection analysis, to individual interests such as procreation and the exercise of the state franchise.

While ultimately disputing little of this, the majority seeks refuge in the fact that the Court has "never presumed to possess either the ability or the authority to guarantee to the citizenry the most effective speech or the most informed electoral choice." *Ante*, at 36. This serves only to blur what is in fact at stake. With due respect, the issue is neither provision of the most effective speech nor of the most informed vote. Appellees do not now seek the best education Texas might provide. They do seek, however, an end to state discrimination resulting from the unequal distribution of taxable district property wealth that directly impairs the ability of some districts to provide the same educational opportunity that other districts can provide with the same or even substantially less tax effort. The issue is, in other words, one of discrimination that affects the quality of the education which Texas has chosen to provide its children;

and, the precise question here is what importance should attach to education for purposes of equal protection analysis of that discrimination. As this Court held in *Brown v. Board of Education*, the opportunity of education, “where the state has undertaken to provide it, is a right which must be made available to all on equal terms.” The factors just considered, including the relationship between education and the social and political interests enshrined within the Constitution, compel us to recognize the fundamentality of education and to scrutinize with appropriate care the bases for state discrimination affecting equality of educational opportunity in Texas’ school districts—a conclusion which is only strengthened when we consider the character of the classification in this case.

## C

The District Court found that in discriminating between Texas schoolchildren on the basis of the amount of taxable property wealth located in the district in which they live, the Texas financing scheme created a form of wealth discrimination. This Court has frequently recognized that discrimination on the basis of wealth may create a classification of a suspect character and thereby call for exacting judicial scrutiny. See e. g., *Griffin v. Illinois*, (1956); *Douglas v. California*, (1963); *McDonald v. Board of Election Comm’rs of Chicago*, (1969). The majority, however, considers any wealth classification in this case to lack certain essential characteristics which it contends are common to the instances of wealth discrimination that this Court has heretofore recognized. We are told that in every prior case involving a wealth classification, the members of the disadvantaged class have “shared two distinguishing characteristics: because of their impecunity they were completely unable to pay for some desired benefit, and as a consequence, they sustained an absolute deprivation of a meaningful opportunity to enjoy that benefit.” *Ante*, at 20. I cannot agree. The Court’s distinctions may be sufficient to explain the decisions in *Williams v. Illinois*, (1970); *Tate v. Short*, (1971); and even *Bullock v. Carter*, (1972). But they are not in fact consistent with the decisions in *Harper v. Virginia Bd. of Elections*, (1966), or *Griffin v. Illinois*, *supra*, or *Douglas v. California*, *supra*.

In *Harper*, the Court struck down as violative of the Equal Protection Clause an annual Virginia poll tax of \$1.50, payment of which by persons over the age of 21 was a prerequisite to voting in Virginia elections. In part, the Court relied on the fact that the poll tax interfered with a fundamental interest—the exercise of the state franchise. In addition, though, the Court emphasized that “[l]ines drawn on the basis of wealth or property . . . are traditionally disfavored.” Under the first part of the theory announced by the majority, the disadvantaged class in *Harper*, in terms of a wealth analysis, should have consisted only of those too poor to afford the \$1.50 necessary to vote. But the *Harper* Court did not see it that way. In its view, the Equal Protection Clause “bars a system which excludes [from the franchise] those unable to pay a fee to vote or who fail to pay.” *Ibid.* (Emphasis added.) So far as the Court was concerned, the “degree of the discrimination [was] irrelevant.” *Ibid.* Thus, the Court struck down the poll tax in toto; it did not order merely that those too poor to pay the tax be exempted; complete impecunity clearly was not determinative of the limits of the disadvantaged class, nor was it essential to make an equal protection claim.

Similarly, *Griffin* and *Douglas* refute the majority’s contention that we have in the past required an absolute deprivation before subjecting wealth classifications to strict scrutiny. The Court characterizes *Griffin* as a case concerned simply with the denial of a transcript or an adequate substitute therefore, and *Douglas* as involving the denial of counsel. But in both cases the question was in fact whether “a State that [grants] appellate review can do so in a way that discriminates against some convicted defendants on account of their poverty.” *Griffin v. Illinois*, *supra*, at 18 (emphasis added). In that regard, the Court concluded that inability to purchase a transcript denies “the poor an adequate appellate review accorded to all who have money enough to pay the costs in advance,” *ibid.* (emphasis added), and that “the type of an appeal a person is afforded . . . hinges upon whether or not he can pay for the assistance of

counsel,” *Douglas v. California*, *supra*, at 355-356 (emphasis added). The right of appeal itself was not absolutely denied to those too poor to pay; but because of the cost of a transcript and of counsel, the appeal was a substantially less meaningful right for the poor than for the rich. It was on these terms that the Court found a denial of equal protection, and those terms clearly encompassed degrees of discrimination on the basis of wealth which do not amount to outright denial of the affected right or interest.

This is not to say that the form of wealth classification in this case does not differ significantly from those recognized in the previous decisions of this Court. Our prior cases have dealt essentially with discrimination on the basis of personal wealth. Here, by contrast, the children of the disadvantaged Texas school districts are being discriminated against not necessarily because of their personal wealth or the wealth of their families, but because of the taxable property wealth of the residents of the district in which they happen to live. The appropriate question, then, is whether the same degree of judicial solicitude and scrutiny that has previously been afforded wealth classifications is warranted here.

As the Court points out, *ante*, at 28-29, no previous decision has deemed the presence of just a wealth classification to be sufficient basis to call forth rigorous judicial scrutiny of allegedly discriminatory state action. Compare, e. g., *Harper v. Virginia Bd. of Elections*, *supra*, with, e. g., *James v. Valtierra*, (1971). That wealth classifications alone have not necessarily been considered to bear the same high degree of suspectness as have classifications based on, for instance, race or alienage may be explainable on a number of grounds. The “poor” may not be seen as politically powerless as certain discrete and insular minority groups. Personal poverty may entail much the same social stigma as historically attached to certain racial or ethnic groups. But personal poverty is not a permanent disability; its shackles may be escaped. Perhaps most importantly, though, personal wealth may not necessarily share the general irrelevance as a basis for legislative action that race or nationality is recognized to have. While the “poor” have frequently been a legally disadvantaged group, it cannot be ignored that social legislation must frequently take cognizance of the economic status of our citizens. Thus, we have generally gauged the invidiousness of wealth classifications with an awareness of the importance of the interests being affected and the relevance of personal wealth to those interests. See *Harper v. Virginia Bd. of Elections*, *supra*.

When evaluated with these considerations in mind, it seems to me that discrimination on the basis of group wealth in this case likewise calls for careful judicial scrutiny. First, it must be recognized that while local district wealth may serve other interests, it bears no relationship whatsoever to the interest of Texas schoolchildren in the educational opportunity afforded them by the State of Texas. Given the importance of that interest, we must be particularly sensitive to the invidious characteristics of any form of discrimination that is not clearly intended to serve it, as opposed to some other distinct state interest. Discrimination on the basis of group wealth may not, to be sure, reflect the social stigma frequently attached to personal poverty. Nevertheless, insofar as group wealth discrimination involves wealth over which the disadvantaged individual has no significant control, it represents in fact a more serious basis of discrimination than does personal wealth. For such discrimination is no reflection of the individual’s characteristics or his abilities. And thus—particularly in the context of a disadvantaged class composed of children—we have previously treated discrimination on a basis which the individual cannot control as constitutionally disfavored. Cf. *Weber v. Aetna Casualty & Surety Co.*, (1972); *Levy v. Louisiana*, (1968).

The disability of the disadvantaged class in this case extends as well into the political processes upon which we ordinarily rely as adequate for the protection and promotion of all interests. Here legislative reallocation of the State’s property wealth must be sought in the face of inevitable opposition from significantly advantaged districts that have a strong vested interest in the preservation of the status quo, a problem not completely dissimilar to that faced by un-

derrepresented districts prior to the Court's intervention in the process of reapportionment, see *Baker v. Carr*, (1962).

Nor can we ignore the extent to which, in contrast to our prior decisions, the State is responsible for the wealth discrimination in this instance. *Griffin*, *Douglas*, *Williams*, *Tate*, and our other prior cases have dealt with discrimination on the basis of indigency which was attributable to the operation of the private sector. But we have no such simple de facto wealth discrimination here. The means for financing public education in Texas are selected and specified by the State. It is the State that has created local school districts, and tied educational funding to the local property tax and thereby to local district wealth. At the same time, governmentally imposed land use controls have undoubtedly encouraged and rigidified natural trends in the allocation of particular areas for residential or commercial use, and thus determined each district's amount of taxable property wealth. In short, this case, in contrast to the Court's previous wealth discrimination decisions, can only be seen as "unusual in the extent to which governmental action is the cause of the wealth classification."

In the final analysis, then, the invidious characteristics of the group wealth classification present in this case merely serve to emphasize the need for careful judicial scrutiny of the State's justifications for the resulting interdistrict discrimination in the educational opportunity afforded to the schoolchildren of Texas.

#### D

The nature of our inquiry into the justification for state discrimination is essentially the same in all equal protection cases: We must consider the substantiality of the state interests sought to be served, and we must scrutinize the reasonableness of the means by which the State has sought to advance its interest. See *Police Dept. of Chicago v. Mosley*. Differences in the application of this test are, in my view, a function of the constitutional importance of the interests at stake and the invidiousness of the particular classification. In terms of the asserted state interests, the Court has indicated that it will require, for instance, a "compelling," *Shapiro v. Thompson*, or a "substantial" or "important," *Dunn v. Blumstein*, state interest to justify discrimination affecting individual interests of constitutional significance. Whatever the differences, if any, in these descriptions of the character of the state interest necessary to sustain such discrimination, basic to each is, I believe, a concern with the legitimacy and the reality of the asserted state interests. Thus, when interests of constitutional importance are at stake, the Court does not stand ready to credit the State's classification with any conceivable legitimate purpose, but demands a clear showing that there are legitimate state interests which the classification was in fact intended to serve. Beyond the question of the adequacy of the State's purpose for the classification, the Court traditionally has become increasingly sensitive to the means by which a State chooses to act as its action affects more directly interests of constitutional significance. See, e. g., *United States v. Robel*, (1967); *Shelton v. Tucker*, (1960). Thus, by now, "less restrictive alternatives" analysis is firmly established in equal protection jurisprudence. See *Dunn v. Blumstein*, *supra* at 343; *Kramer v. Union School District*. It seems to me that the range of choice we are willing to accord the State in selecting the means by which it will act, and the care with which we scrutinize the effectiveness of the means which the State selects, also must reflect the constitutional importance of the interest affected and the invidiousness of the particular classification. Here, both the nature of the interest and the classification dictate close judicial scrutiny of the purposes which Texas seeks to serve with its present educational financing scheme and of the means it has selected to serve that purpose.

The only justification offered by appellants to sustain the discrimination in educational opportunity caused by the Texas financing scheme is local educational control. Presented with this justification, the District Court concluded that "[n]ot only are defendants unable to demonstrate compelling state interests for their classifications based upon wealth, they fail even

to establish a reasonable basis for these classifications.” 337 F. Supp., at 284. I must agree with this conclusion.

At the outset, I do not question that local control of public education, as an abstract matter, constitutes a very substantial state interest. We observed only last Term that “[d]irect control over decisions vitally affecting the education of one’s children is a need that is strongly felt in our society.” *Wright v. Council of the City of Emporia*, (1972). See also *id.*, at 477-478 (BURGER, C. J., dissenting). The State’s interest in local educational control—which certainly includes questions of educational funding—has deep roots in the inherent benefits of community support for public education. Consequently, true state dedication to local control would present, I think, a substantial justification to weigh against simply interdistrict variations in the treatment of a State’s schoolchildren. But I need not now decide how I might ultimately strike the balance were we confronted with a situation where the State’s sincere concern for local control inevitably produced educational inequality. For, on this record, it is apparent that the State’s purported concern with local control is offered primarily as an excuse rather than as a justification for interdistrict inequality.

In Texas, statewide laws regulate in fact the most minute details of local public education. For example, the State prescribes required courses. All textbooks must be submitted for state approval, and only approved textbooks may be used. The State has established the qualifications necessary for teaching in Texas public schools and the procedures for obtaining certification. The State has even legislated on the length of the school day. Texas’ own courts have said:

“As a result of the acts of the Legislature our school system is not of mere local concern but it is statewide. While a school district is local in territorial limits, it is an integral part of the vast school system which is coextensive with the confines of the State of Texas.” (*Treadaway v. Whitney Independent School District*, 205 S. W. 2d 97, 99 Tex. Ct. Civ. App. 1947).

See also *El Dorado Independent School District v. Tisdale*, 3 S. W. 2d 420, 422 (Tex. Comm’n App. 1928).

Moreover, even if we accept Texas’ general dedication to local control in educational matters, it is difficult to find any evidence of such dedication with respect to fiscal matters. It ignores reality to suggest—as the Court does, *ante*, at 49-50—that the local property tax element of the Texas financing scheme reflects a conscious legislative effort to provide school districts with local fiscal control. If Texas had a system truly dedicated to local fiscal control, one would expect the quality of the educational opportunity provided in each district to vary with the decision of the voters in that district as to the level of sacrifice they wish to make for public education. In fact, the Texas scheme produces precisely the opposite result. Local school districts cannot choose to have the best education in the State by imposing the highest tax rate. Instead, the quality of the educational opportunity offered by any particular district is largely determined by the amount of taxable property located in the district—a factor over which local voters can exercise no control.

The study introduced in the District Court showed a direct inverse relationship between equalized taxable district property wealth and district tax effort with the result that the property-poor districts making the highest tax effort obtained the lowest per-pupil yield. The implications of this situation for local choice are illustrated by again comparing the Edgewood and Alamo Heights School Districts. In 1967-1968, Edgewood, after contributing its share to the Local Fund Assignment, raised only \$26 per pupil through its local property tax, whereas Alamo Heights was able to raise \$333 per pupil. Since the funds received through the Minimum Foundation School Program are to be used only for minimum professional salaries, transportation costs, and operating expenses, it is not hard to see the lack of local choice—with respect to higher teacher salaries to attract more and better teachers, physical facilities, library

books, and facilities, special courses, or participation in special state and federal matching funds programs—under which a property-poor district such as Edgewood is forced to labor. In fact, because of the difference in taxable local property wealth, Edgewood would have to tax itself almost nine times as heavily to obtain the same yield as Alamo Heights. At present, then, local control is a myth for many of the local school districts in Texas. As one district court has observed, “rather than reposing in each school district the economic power to fix its own level of per pupil expenditure, the State has so arranged the structure as to guarantee that some districts will spend low (with high taxes) while others will spend high (with low taxes).” *Van Dusartz v. Hatfield*, 334 F. Supp. 870, 876 (Minn. 1971).

In my judgment, any substantial degree of scrutiny of the operation of the Texas financing scheme reveals that the State has selected means wholly inappropriate to secure its purported interest in assuring its school districts local fiscal control. At the same time, appellees have pointed out a variety of alternative financing schemes which may serve the State’s purported interest in local control as well as, if not better than, the present scheme without the current impairment of the educational opportunity of vast numbers of Texas schoolchildren. I see no need, however, to explore the practical or constitutional merits of those suggested alternatives at this time for, whatever their positive or negative features, experience with the present financing scheme impugns any suggestion that it constitutes a serious effort to provide local fiscal control. If, for the sake of local education control, this Court is to sustain interdistrict discrimination in the educational opportunity afforded Texas school children, it should require that the State present something more than the mere sham now before us.

### III

In conclusion, it is essential to recognize that an end to the wide variations in taxable district property wealth inherent in the Texas financing scheme would entail none of the untoward consequences suggested by the Court or by the appellants.

First, affirmance of the District Court’s decisions would hardly sound the death knell for local control of education. It would mean neither centralized decisionmaking nor federal court intervention in the operation of public schools. Clearly, this suit has nothing to do with local decisionmaking with respect to educational policy or even educational spending. It involves only a narrow aspect of local control—namely, local control over the raising of educational funds. In fact, in striking down interdistrict disparities in taxable local wealth, the District Court took the course which is most likely to make true local control over educational decisionmaking a reality for all Texas school districts.

Nor does the District Court’s decision even necessarily eliminate local control of educational funding. The District Court struck down nothing more than the continued interdistrict wealth discrimination inherent in the present property tax. Both centralized and decentralized plans for educational funding not involving such interdistrict discrimination have been put forward. The choice among these or other alternatives would remain with the State, not with the federal courts. In this regard, it should be evident that the degree of federal intervention in matters of local concern would be substantially less in this context than in previous decisions in which we have been asked effectively to impose a particular scheme upon the States under the guise of the Equal Protection Clause. See, e. g., *Dandridge v. Williams*, (1970); cf. *Richardson v. Belcher*, (1971).

Still, we are told that this case requires us “to condemn the State’s judgment in conferring on political subdivisions the power to tax local property to supply revenues for local interest.” *Ante*, at 40. Yet no one in the course of this entire litigation has ever questioned the constitutionality of the local property tax as a device for raising educational funds. The District Court’s decision, at most, restricts the power of the State to make educational funding dependent exclusively upon local property taxation so long as there exists interdistrict disparities in taxable

property wealth. But it hardly eliminates the local property tax as a source of educational funding or as a means of providing local fiscal control.

The Court seeks solace for its action today in the possibility of legislative reform. The Court's suggestions of legislative redress and experimentation will doubtless be of great comfort to the schoolchildren of Texas' disadvantaged districts, but considering the vested interests of wealthy school districts in the preservation of the status quo, they are worth little more. The possibility of legislative action is, in all events, no answer to this Court's duty under the Constitution to eliminate unjustified state discrimination. In this case we have been presented with an instance of such discrimination, in a particularly invidious form, against an individual interest of large constitutional and practical importance. To support the demonstrated discrimination in the provision of educational opportunity the State has offered a justification which, on analysis, takes on at best an ephemeral character. Thus, I believe that the wide disparities in taxable district property wealth inherent in the local property tax element of the Texas financing scheme render that scheme violative of the Equal Protection Clause. I would therefore affirm the judgment of the District Court.

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## LAU ET AL. V. NICHOLS ET AL., 414 U.S. 563 (1974)

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### SUPREME COURT OF THE UNITED STATES CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

ARGUED DECEMBER 10, 1973. DECIDED JANUARY 21, 1974.

The failure of the San Francisco school system to provide English language instruction to approximately 1,800 students of Chinese ancestry who do not speak English, or to provide them with other adequate instructional procedures, denies them a meaningful opportunity to participate in the public educational program and thus violates 601 of the Civil Rights Act of 1964, which bans discrimination based "on the ground of race, color, or national origin," in "any program or activity receiving Federal financial assistance," and the implementing regulations of the Department of Health, Education, and Welfare.

MR. JUSTICE DOUGLAS delivered the opinion of the Court.

The San Francisco, California, school system was integrated in 1971 as a result of a federal court decree, 339 F. Supp. 1315. See *Lee v. Johnson*. The District Court found that there are 2,856 students of Chinese ancestry in the school system who do not speak English. Of those who have that language deficiency, about 1,000 are given supplemental courses in the English language. About 1,800, however, do not receive that instruction.

This class suit brought by non-English-speaking Chinese students against officials responsible for the operation of the San Francisco Unified School District seeks relief against the unequal educational opportunities, which are alleged to violate, inter alia, the Fourteenth Amendment. No specific remedy is urged upon us. Teaching English to the students of Chinese ancestry who do not speak the language is one choice. Giving instructions to this group in Chinese is another. There may be others. Petitioners ask only that the Board of Education be directed to apply its expertise to the problem and rectify the situation.

The District Court denied relief. The Court of Appeals affirmed, holding that there was no violation of the Equal Protection Clause of the Fourteenth Amendment or of 601 of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d, which excludes from participation in federal financial assistance, recipients of aid which discriminate against racial groups, 483 F.2d 791. One judge dissented. A hearing en banc was denied, two judges dissenting. *Id.*, at 805.

We granted the petition for certiorari because of the public importance of the question presented.

The Court of Appeals reasoned that “[e]very student brings to the starting line of his educational career different advantages and disadvantages caused in part by social, economic and cultural background, created and continued completely apart from any contribution by the school system,” 483 F.2d, at 797. Yet in our view the case may not be so easily decided. This is a public school system of California and 71 of the California Education Code states that “English shall be the basic language of instruction in all schools.” That section permits a school district to determine “when and under what circumstances instruction may be given bilingually.” That section also states as “the policy of the state” to insure “the mastery of English by all pupils in the schools.” And bilingual instruction is authorized “to the extent that it does not interfere with the systematic, sequential, and regular instruction of all pupils in the English language.”

Moreover, 8573 of the Education Code provides that no pupil shall receive a diploma of graduation from grade 12 who has not met the standards of proficiency in “English,” as well as other prescribed subjects. Moreover, by 12101 of the Education Code (Supp. 1973) children between the ages of six and 16 years are (with exceptions not material here) “subject to compulsory full-time education.”

Under these state-imposed standards there is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education.

Basic English skills are at the very core of what these public schools teach. Imposition of a requirement that, before a child can effectively participate in the educational program, he must already have acquired those basic skills is to make a mockery of public education. We know that those who do not understand English are certain to find their classroom experiences wholly incomprehensible and in no way meaningful.

We do not reach the Equal Protection Clause argument which has been advanced but rely solely on 601 of the Civil Rights Act of 1964, 42 U.S.C. 2000d, to reverse the Court of Appeals.

That section bans discrimination based “on the ground of race, color, or national origin,” in “any program or activity receiving Federal financial assistance.” The school district involved in this litigation receives large amounts of federal financial assistance. The Department of Health, Education, and Welfare (HEW), which has authority to promulgate regulations prohibiting discrimination in federally assisted school systems, 42 U.S.C. 2000d-1, in 1968 issued one guideline that “[s]chool systems are responsible for assuring that students of a particular race, color, or national origin are not denied the opportunity to obtain the education generally obtained by other students in the system.” 33 Fed. Reg. 4956. In 1970 HEW made the guidelines more specific, requiring school districts that were federally funded “to rectify the language deficiency in order to open” the instruction to students who had “linguistic deficiencies,” 35 Fed. Reg. 11595.

By 602 of the Act HEW is authorized to issue rules, regulations, and orders to make sure that recipients of federal aid under its jurisdiction conduct any federally financed projects consistently with 601. HEW’s regulations, 45 CFR 80.3 (b) (1), specify that the recipients may not

“(ii) Provide any service, financial aid, or other benefit to an individual which is different, or is provided in a different manner, from that provided to others under the program;

. . . .

“(iv) Restrict an individual in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program.”

Discrimination among students on account of race or national origin that is prohibited includes “discrimination . . . in the availability or use of any academic . . . or other facilities of the grantee or other recipient.” *Id.*, 80.5 (b).

Discrimination is barred which has that effect even though no purposeful design is present: a recipient “may not . . . utilize criteria or methods of administration which have the effect of subjecting individuals to discrimination” or have “the effect of defeating or substantially impairing accomplishment of the objectives of the program as respect individuals of a particular race, color, or national origin.” *Id.*, 80.3 (b) (2).

It seems obvious that the Chinese-speaking minority receive fewer benefits than the English-speaking majority from respondents’ school system which denies them a meaningful opportunity to participate in the educational program—all earmarks of the discrimination banned by the regulations. In 1970 HEW issued clarifying guidelines, 35 Fed. Reg. 11595, which include the following:

“Where inability to speak and understand the English language excludes national origin-minority group children from effective participation in the educational program offered by a school district, the district must take affirmative steps to rectify the language deficiency in order to open its instructional program to these students.”

“Any ability grouping or tracking system employed by the school system to deal with the special language skill needs of national origin-minority group children must be designed to meet such language skill needs as soon as possible and must not operate as an educational deadend or permanent track.”

Respondent school district contractually agreed to “comply with title VI of the Civil Rights Act of 1964 . . . and all requirements imposed by or pursuant to the Regulation” of HEW (45 CFR pt. 80) which are “issued pursuant to that title . . . “ and also immediately to “take any measures necessary to effectuate this agreement.” The Federal Government has power to fix the terms on which its money allotments to the States shall be disbursed. *Oklahoma v. CSC*. Whatever may be the limits of that power, *Steward Machine Co. v. Davis, et seq.*, they have not been reached here. Senator Humphrey, during the floor debates on the Civil Rights Act of 1964, said:

“Simple justice requires that public funds, to which all taxpayers of all races contribute, not be spent in any fashion which encourages, entrenches, subsidizes, or results in racial discrimination.”

We accordingly reverse the judgment of the Court of Appeals and remand the case for the fashioning of appropriate relief.

Reversed and remanded.

MR. JUSTICE WHITE concurs in the result.

MR. JUSTICE STEWART, with whom THE CHIEF JUSTICE and MR. JUSTICE BLACKMUN join, concurring in the result.

It is uncontested that more than 2,800 schoolchildren of Chinese ancestry attend school in the San Francisco Unified School District system even though they do not speak, understand, read, or write the English language, and that as to some 1,800 of these pupils the respondent school authorities have taken no significant steps to deal with this language deficiency. The petitioners do not contend, however, that the respondents have affirmatively or intentionally contributed to this inadequacy, but only that they have failed to act in the face of changing social and linguistic patterns. Because of this *laissezfaire* attitude on the part of the school administrators, it is not entirely clear that 601 of the Civil Rights Act of 1964, 42 U.S.C. 2000d, standing alone, would render illegal the expenditure of federal funds on these schools. For that section provides that “[n]o person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

On the other hand, the interpretive guidelines published by the Office for Civil Rights of the Department of Health, Education, and Welfare in 1970, 35 Fed. Reg. 11595, clearly indicate

that affirmative efforts to give special training for non-English-speaking pupils are required by Tit. VI as a condition to receipt of federal aid to public schools:

“Where inability to speak and understand the English language excludes national origin-minority group children from effective participation in the educational program offered by a school district, the district must take affirmative steps to rectify the language deficiency in order to open its instructional program to these students.”

The critical question is, therefore, whether the regulations and guidelines promulgated by HEW go beyond the authority of 601. Last Term, in *Mourning v. Family Publications Service, Inc.*, we held that the validity of a regulation promulgated under a general authorization provision such as 602 of Tit. VI “will be sustained so long as it is ‘reasonably related to the purposes of the enabling legislation.’ *Thorpe v. Housing Authority of the City of Durham*, (1969).” I think the guidelines here fairly meet that test. Moreover, in assessing the purposes of remedial legislation we have found that departmental regulations and “consistent administrative construction” are “entitled to great weight.” *Trafficante v. Metropolitan Life Insurance Co.*; *Griggs v. Duke Power Co.*; *Udall v. Tallman*. The Department has reasonably and consistently interpreted 601 to require affirmative remedial efforts to give special attention to linguistically deprived children.

For these reasons I concur in the result reached by the Court.

MR. JUSTICE BLACKMUN, with whom THE CHIEF JUSTICE joins, concurring in the result.

I join MR. JUSTICE STEWART’S opinion and thus I, too, concur in the result. Against the possibility that the Court’s judgment may be interpreted too broadly, I stress the fact that the children with whom we are concerned here number about 1,800. This is a very substantial group that is being deprived of any meaningful schooling because the children cannot understand the language of the classroom. We may only guess as to why they have had no exposure to English in their preschool years. Earlier generations of American ethnic groups have overcome the language barrier by earnest parental endeavor or by the hard fact of being pushed out of the family or community nest and into the realities of broader experience.

I merely wish to make plain that when, in another case, we are concerned with a very few youngsters, or with just a single child who speaks only German or Polish or Spanish or any language other than English, I would not regard today’s decision, or the separate concurrence, as conclusive upon the issue whether the statute and the guidelines require the funded school district to provide special instruction. For me, numbers are at the heart of this case and my concurrence is to be understood accordingly.

## UNIVERSITY OF CALIFORNIA REGENTS V. BAKKE, 438 U.S. 265 (1978)

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SUPREME COURT OF THE UNITED STATES  
ARGUED OCTOBER 12, 1977. DECIDED JUNE 28, 1978.

The Medical School of the University of California at Davis (hereinafter Davis) had two admissions programs for the entering class of 100 students—the regular admissions program and the special admissions program. Under the regular procedure, candidates whose overall under-graduate grade point averages fell below 2.5 on a scale of 4.0 were summarily rejected. About one out of six applicants was then given an interview, following which he was rated on a scale of 1 to 100 by each of the committee members (five in 1973 and six in 1974), his rating being based on the interviewers’ summaries, his overall grade point average, his science courses grade point average, his Medical College Admissions Test (MCAT) scores, letters of recommendation, extracurricular activities, and other biographical data, all of which resulted

in a total “benchmark score.” The full admissions committee then made offers of admission on the basis of their review of the applicant’s file and his score, considering and acting upon applications as they were received. The committee chairman was responsible for placing names on the waiting list and had discretion to include persons with “special skills.” A separate committee, a majority of whom were members of minority groups, operated the special admissions program. The 1973 and 1974 application forms, respectively, asked candidates whether they wished to be considered as “economically and/or educationally disadvantaged” applicants and members of a “minority group” (blacks, Chicanos, Asians, American Indians). If an applicant of a minority group was found to be “disadvantaged,” he would be rated in a manner similar to the one employed by the general admissions committee. Special candidates, however, did not have to meet the 2.5 grade point cutoff and were not ranked against candidates in the general admissions process. About one-fifth of the special applicants were invited for interviews in 1973 and 1974, following which they were given benchmark scores, and the top choices were then given to the general admissions committee, which could reject special candidates for failure to meet course requirements or other specific deficiencies. The special committee continued to recommend candidates until 16 special admission selections had been made. During a four-year period 63 minority students were admitted to Davis under the special program and 44 under the general program. No disadvantaged whites were admitted under the special program, though many applied. Respondent, a white male, applied to Davis in 1973 and 1974, in both years being considered only under the general admissions program. Though he had a 468 out of 500 score in 1973, he was rejected since no general applicants with scores less than 470 were being accepted after respondent’s application, which was filed late in the year, had been processed and completed. At that time four special admission slots were still unfilled. In 1974 respondent applied early, and though he had a total score of 549 out of 600, he was again rejected. In neither year was his name placed on the discretionary waiting list. In both years special applicants were admitted with significantly lower scores than respondent’s. After his second rejection, respondent filed this action in state court for mandatory, injunctive, and declaratory relief to compel his admission to Davis, alleging that the special admissions program operated to exclude him on the basis of his race in violation of the Equal Protection Clause of the Fourteenth Amendment, a provision of the California Constitution, and 601 of Title VI of the Civil Rights Act of 1964, which provides, *inter alia*, that no person shall on the ground of race or color be excluded from participating in any program receiving federal financial assistance. Petitioner cross-claimed for a declaration that its special admissions program was lawful. The trial court found that the special program operated as a racial quota, because minority applicants in that program were rated only against one another, and 16 places in the class of 100 were reserved for them. Declaring that petitioner could not take race into account in making admissions decisions, the program was held to violate the Federal and State Constitutions and Title VI. Respondent’s admission was not ordered, however, for lack of proof that he would have been admitted but for the special program. The California Supreme Court, applying a strict-scrutiny standard, concluded that the special admissions program was not the least intrusive means of achieving the goals of the admittedly compelling state interests of integrating the medical profession and increasing the number of doctors willing to serve minority patients. Without passing on the state constitutional or federal statutory grounds the court held that petitioner’s special admissions program violated the Equal Protection Clause. Since petitioner could not satisfy its burden of demonstrating that respondent, absent the special program, would not have been admitted, the court ordered his admission to Davis.

Held: The judgment below is affirmed insofar as it orders respondent’s admission to Davis and invalidates petitioner’s special admissions program, but is reversed insofar as it prohibits petitioner from taking race into account as a factor in its future admissions decisions.

MR. JUSTICE POWELL, concluded:

1. Title VI proscribes only those racial classifications that would violate the Equal Protection Clause if employed by a State or its agencies.
2. Racial and ethnic classifications of any sort are inherently suspect and call for the most exacting judicial scrutiny. While the goal of achieving a diverse student body is sufficiently compelling to justify consideration of race in admissions decisions under some circumstances, petitioner's special admissions program, which forecloses consideration to persons like respondent, is unnecessary to the achievement of this compelling goal and therefore invalid under the Equal Protection Clause.
3. Since petitioner could not satisfy its burden of proving that respondent would not have been admitted even if there had been no special admissions program, he must be admitted.

MR. JUSTICE BRENNAN, MR. JUSTICE WHITE, MR. JUSTICE MARSHALL, and MR. JUSTICE BLACKMUN concluded:

1. Title VI proscribes only those racial classifications that would violate the Equal Protection Clause if employed by a State or its agencies.
2. Racial classifications call for strict judicial scrutiny. Nonetheless, the purpose of overcoming substantial, chronic minority underrepresentation in the medical profession is sufficiently important to justify petitioner's remedial use of race. Thus, the judgment below must be reversed in that it prohibits race from being used as a factor in university admissions.

MR. JUSTICE STEVENS, joined by THE CHIEF JUSTICE, MR. JUSTICE STEWART, and MR. JUSTICE REHNQUIST, being of the view that whether race can ever be a factor in an admissions policy is not an issue here; that Title VI applies; and that respondent was excluded from Davis in violation of Title VI, concurs in the Court's judgment insofar as it affirms the judgment of the court below ordering respondent admitted to Davis.

POWELL, J., announced the Court's judgment and filed an opinion expressing his views of the case, in Parts I, III-A, and V-C of which WHITE, J., joined; and in Parts I and V-C of which BRENNAN, MARSHALL, and BLACKMUN, JJ., joined. BRENNAN, WHITE, MARSHALL, and BLACKMUN, JJ., filed an opinion concurring in the judgment in part and dissenting in part, post, p. 324. WHITE, J., post, p. 379, MARSHALL, J., post, p. 387, and BLACKMUN, J., post, p. 402, filed separate opinions. STEVENS, J., filed an opinion concurring in the judgment in part and dissenting in part, in which BURGER, C. J., and STEWART and REHNQUIST, JJ., joined, post, p. 408.

Archibald Cox argued the cause for petitioner. With him on the briefs were Paul J. Mishkin, Jack B. Owens, and Donald L. Reidhaar.

Reynold H. Colvin argued the cause and filed briefs for respondent.

Solicitor General McCree argued the cause for the United States as *amicus curiae*. With him on the briefs were Attorney General Bell, Assistant Attorney General Days, Deputy Solicitor General Wallace, Brian K. Landsberg, Jessica Dunsay Silver, Miriam R. Eisenstein, and Vincent F. O'Rourke.

MR. JUSTICE POWELL announced the judgment of the Court.

This case presents a challenge to the special admissions program of the petitioner, the Medical School of the University of California at Davis, which is designed to assure the admission of a specified number of students from certain minority groups. The Superior Court of California sustained respondent's challenge, holding that petitioner's program violated the California Constitution, Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq., and the Equal Protection Clause of the Fourteenth Amendment. The court enjoined petitioner

from considering respondent's race or the race of any other applicant in making admissions decisions. It refused, however, to order respondent's admission to the Medical School, holding that he had not carried his burden of proving that he would have been admitted but for the constitutional and statutory violations. The Supreme Court of California affirmed those portions of the trial court's judgment declaring the special admissions program unlawful and enjoining petitioner from considering the race of any applicant. It modified that portion of the judgment denying respondent's requested injunction and directed the trial court to order his admission.

For the reasons stated in the following opinion, I believe that so much of the judgment of the California court as holds petitioner's special admissions program unlawful and directs that respondent be admitted to the Medical School must be affirmed. For the reasons expressed in a separate opinion, my Brothers THE CHIEF JUSTICE, MR. JUSTICE STEWART, MR. JUSTICE REHNQUIST, and MR. JUSTICE STEVENS concur in this judgment.

I also conclude for the reasons stated in the following opinion that the portion of the court's judgment enjoining petitioner from according any consideration to race in its admissions process must be reversed. For reasons expressed in separate opinions, my Brothers MR. JUSTICE BRENNAN, MR. JUSTICE WHITE, MR. JUSTICE MARSHALL, and MR. JUSTICE BLACKMUN concur in this judgment.

Affirmed in part and reversed in part.

## I

The Medical School of the University of California at Davis opened in 1968 with an entering class of 50 students. In 1971, the size of the entering class was increased to 100 students, a level at which it remains. No admissions program for disadvantaged or minority students existed when the school opened, and the first class contained three Asians but no blacks, no Mexican-Americans, and no American Indians. Over the next two years, the faculty devised a special admissions program to increase the representation of "disadvantaged" students in each Medical School class. The special program consisted of a separate admissions system operating in coordination with the regular admissions process.

Under the regular admissions procedure, a candidate could submit his application to the Medical School beginning in July of the year preceding the academic year for which admission was sought. Record 149. Because of the large number of applications, the admissions committee screened each one to select candidates for further consideration. Candidates whose overall undergraduate grade point averages fell below 2.5 on a scale of 4.0 were summarily rejected. *Id.*, at 63. About one out of six applicants was invited for a personal interview. *Ibid.* Following the interviews, each candidate was rated on a scale of 1 to 100 by his interviewers and four other members of the admissions committee. The rating embraced the interviewers' summaries, the candidate's overall grade point average, grade point average in science courses, scores on the Medical College Admissions Test (MCAT), letters of recommendation, extracurricular activities, and other biographical data. *Id.*, at 62. The ratings were added together to arrive at each candidate's "benchmark" score. Since five committee members rated each candidate in 1973, a perfect score was 500; in 1974, six members rated each candidate, so that a perfect score was 600. The full committee then reviewed the file and scores of each applicant and made offers of admission on a "rolling" basis. The chairman was responsible for placing names on the waiting list. They were not placed in strict numerical order; instead, the chairman had discretion to include persons with "special skills." *Id.*, at 63-64.

The special admissions program operated with a separate committee, a majority of whom were members of minority groups. *Id.*, at 163. On the 1973 application form, candidates were asked to indicate whether they wished to be considered as "economically and/or educationally disadvantaged" applicants; on the 1974 form the question was whether they wished to be con-

sidered as members of a “minority group,” which the Medical School apparently viewed as “Blacks,” “Chicanos,” “Asians,” and “American Indians.” *Id.*, at 65-66, 146, 197, 203-205, 216-218. If these questions were answered affirmatively, the application was forwarded to the special admissions committee. No formal definition of “disadvantaged” was ever produced, *id.*, at 163-164, but the chairman of the special committee screened each application to see whether it reflected economic or educational deprivation. Having passed this initial hurdle, the applications then were rated by the special committee in a fashion similar to that used by the general admissions committee, except that special candidates did not have to meet the 2.5 grade point average cutoff applied to regular applicants. About one-fifth of the total number of special applicants were invited for interviews in 1973 and 1974. Following each interview, the special committee assigned each special applicant a benchmark score. The special committee then presented its top choices to the general admissions committee. The latter did not rate or compare the special candidates against the general applicants, *id.*, at 388, but could reject recommended special candidates for failure to meet course requirements or other specific deficiencies. *Id.*, at 171-172. The special committee continued to recommend special applicants until a number prescribed by faculty vote were admitted. While the overall class size was still 50, the prescribed number was 8; in 1973 and 1974, when the class size had doubled to 100, the prescribed number of special admissions also doubled, to 16. *Id.*, at 164, 166.

From the year of the increase in class size—1971—through 1974, the special program resulted in the admission of 21 black students, 30 Mexican-Americans, and 12 Asians, for a total of 63 minority students. Over the same period, the regular admissions program produced 1 black, 6 Mexican-Americans, and 37 Asians, for a total of 44 minority students. Although disadvantaged whites applied to the special program in large numbers, see n. 5, *supra*, none received an offer of admission through that process. Indeed, in 1974, at least, the special committee explicitly considered only “disadvantaged” special applicants who were members of one of the designated minority groups. Record 171.

Allan Bakke is a white male who applied to the Davis Medical School in both 1973 and 1974. In both years Bakke’s application was considered under the general admissions program, and he received an interview. His 1973 interview was with Dr. Theodore C. West, who considered Bakke “a very desirable applicant to [the] medical school.” *Id.*, at 225. Despite a strong benchmark score of 468 out of 500, Bakke was rejected. His application had come late in the year, and no applicants in the general admissions process with scores below 470 were accepted after Bakke’s application was completed. *Id.*, at 69. There were four special admissions slots unfilled at that time, however, for which Bakke was not considered. *Id.*, at 70. After his 1973 rejection, Bakke wrote to Dr. George H. Lowrey, Associate Dean and Chairman of the Admissions Committee, protesting that the special admissions program operated as a racial and ethnic quota. *Id.*, at 259.

Bakke’s 1974 application was completed early in the year. *Id.*, at 70. His student interviewer gave him an overall rating of 94, finding him “friendly, well tempered, conscientious and delightful to speak with.” *Id.*, at 229. His faculty interviewer was, by coincidence, the same Dr. Lowrey to whom he had written in protest of the special admissions program. Dr. Lowrey found Bakke “rather limited in his approach” to the problems of the medical profession and found disturbing Bakke’s “very definite opinions which were based more on his personal viewpoints than upon a study of the total problem.” *Id.*, at 226. Dr. Lowrey gave Bakke the lowest of his six ratings, an 86; his total was 549 out of 600. *Id.*, at 230. Again, Bakke’s application was rejected. In neither year did the chairman of the admissions committee, Dr. Lowrey, exercise his discretion to place Bakke on the waiting list. *Id.*, at 64. In both years, applicants were admitted under the special program with grade point averages, MCAT scores, and benchmark scores significantly lower than Bakke’s.

After the second rejection, Bakke filed the instant suit in the Superior Court of California. He sought mandatory, injunctive, and declaratory relief compelling his admission to the Medi-

cal School. He alleged that the Medical School's special admissions program operated to exclude him from the school on the basis of his race, in violation of his rights under the Equal Protection Clause of the Fourteenth Amendment, Art. I, 21, of the California Constitution, and 601 of Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d. The University cross-complained for a declaration that its special admissions program was lawful. The trial court found that the special program operated as a racial quota, because minority applicants in the special program were rated only against one another, Record 388, and 16 places in the class of 100 were reserved for them. *Id.*, at 295-296. Declaring that the University could not take race into account in making admissions decisions, the trial court held the challenged program violative of the Federal Constitution, the State Constitution, and Title VI. The court refused to order Bakke's admission, however, holding that he had failed to carry his burden of proving that he would have been admitted but for the existence of the special program.

Bakke appealed from the portion of the trial court judgment denying him admission, and the University appealed from the decision that its special admissions program was unlawful and the order enjoining it from considering race in the processing of applications. The Supreme Court of California transferred the case directly from the trial court, "because of the importance of the issues involved." 18 Cal. 3d 34, 39, 553 P.2d 1152, 1156 (1976). The California court accepted the findings of the trial court with respect to the University's program. Because the special admissions program involved a racial classification, the Supreme Court held itself bound to apply strict scrutiny. *Id.*, at 49, 553 P.2d, at 1162-1163. It then turned to the goals the University presented as justifying the special program. Although the court agreed that the goals of integrating the medical profession and increasing the number of physicians willing to serve members of minority groups were compelling state interests, *id.*, at 53, 553 P.2d, at 1165, it concluded that the special admissions program was not the least intrusive means of achieving those goals. Without passing on the state constitutional or the federal statutory grounds cited in the trial court's judgment, the California court held that the Equal Protection Clause of the Fourteenth Amendment required that "no applicant may be rejected because of his race, in favor of another who is less qualified, as measured by standards applied without regard to race." *Id.*, at 55, 553 P.2d, at 1166.

Turning to Bakke's appeal, the court ruled that since Bakke had established that the University had discriminated against him on the basis of his race, the burden of proof shifted to the University to demonstrate that he would not have been admitted even in the absence of the special admissions program. *Id.*, at 63-64, 553 P.2d, at 1172. The court analogized Bakke's situation to that of a plaintiff under Title VII of the Civil Rights Act of 1964, 42 U.S.C. 2000e-17 (1970 ed., Supp. V), see, e. g., *Franks v. Bowman Transportation Co.*, (1976). 18 Cal. 3d, at 63-64, 553 P.2d, at 1172. On this basis, the court initially ordered a remand for the purpose of determining whether, under the newly allocated burden of proof, Bakke would have been admitted to either the 1973 or the 1974 entering class in the absence of the special admissions program. App. A to Application for Stay 48. In its petition for rehearing below, however, the University conceded its inability to carry that burden. App. B to Application for Stay A19-A20. The California court thereupon amended its opinion to direct that the trial court enter judgment ordering Bakke's admission to the Medical School. 18 Cal. 3d, at 64, 553 P.2d, at 1172. That order was stayed pending review in this Court. We granted certiorari to consider the important constitutional issue.

## II

In this Court the parties neither briefed nor argued the applicability of Title VI of the Civil Rights Act of 1964. Rather, as had the California court, they focused exclusively upon the validity of the special admissions program under the Equal Protection Clause. Because it was possible, however, that a decision on Title VI might obviate resort to constitutional interpreta-

tion, see *Ashwander v. TVA*, (1936) (concurring opinion), we requested supplementary briefing on the statutory issue.

## A

At the outset we face the question whether a right of action for private parties exists under Title VI. Respondent argues that there is a private right of action, invoking the test set forth in *Cort v. Ash*, (1975). He contends that the statute creates a federal right in his favor, that legislative history reveals an intent to permit private actions, that such actions would further the remedial purposes of the statute, and that enforcement of federal rights under the Civil Rights Act generally is not relegated to the States. In addition, he cites several lower court decisions which have recognized or assumed the existence of a private right of action. Petitioner denies the existence of a private right of action, arguing that the sole function of 601, see n. 11, *supra*, was to establish a predicate for administrative action under 602, 78 Stat. 252, 42 U.S.C. 2000d-1. In its view, administrative curtailment of federal funds under that section was the only sanction to be imposed upon recipients that violated 601. Petitioner also points out that Title VI contains no explicit grant of a private right of action, in contrast to Titles II, III, IV, and VII, of the same statute, 42 U.S.C. 2000a-3 (a), 2000b-2, 2000c-8, and 2000e-5 (f) (1970 ed. and Supp. V).

We find it unnecessary to resolve this question in the instant case. The question of respondent's right to bring an action under Title VI was neither argued nor decided in either of the courts below, and this Court has been hesitant to review questions not addressed below. *McGoldrick v. Compagnie Generale Transatlantique*, (1940). See also *Massachusetts v. Westcott*, (1977); *Cardinale v. Louisiana*, (1969). Cf. *Singleton v. Wulff*, (1976). We therefore do not address this difficult issue. Similarly, we need not pass upon petitioner's claim that private plaintiffs under Title VI must exhaust administrative remedies. We assume, only for the purposes of this case, that respondent has a right of action under Title VI. See *Lau v. Nichols*, n. 2 (1974) (STEWART, J., concurring in result).

## B

The language of 601, 78 Stat. 252, like that of the Equal Protection Clause, is majestic in its sweep:

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

The concept of “discrimination,” like the phrase “equal protection of the laws,” is susceptible of varying interpretations, for as Mr. Justice Holmes declared, “[a] word is not a crystal, transparent and unchanged, it is the skin of a living thought and may vary greatly in color and content according to the circumstances and the time in which it is used.” *Towne v. Eisner*, (1918). We must, therefore, seek whatever aid is available in determining the precise meaning of the statute before us. *Train v. Colorado Public Interest Research Group*, (1976), quoting *United States v. American Trucking Assns.*, (1940). Examination of the voluminous legislative history of Title VI reveals a congressional intent to halt federal funding of entities that violate a prohibition of racial discrimination similar to that of the Constitution. Although isolated statements of various legislators, taken out of context, can be marshaled in support of the proposition that 601 enacted a purely color-blind scheme, without regard to the reach of the Equal Protection Clause, these comments must be read against the background of both the problem that Congress was addressing and the broader view of the statute that emerges from a full examination of the legislative debates.

The problem confronting Congress was discrimination against Negro citizens at the hands of recipients of federal moneys. Indeed, the color blindness pronouncements cited in the mar-

gin at n. 19, generally occur in the midst of extended remarks dealing with the evils of segregation in federally funded programs. Over and over again, proponents of the bill detailed the plight of Negroes seeking equal treatment in such programs. There simply was no reason for Congress to consider the validity of hypothetical preferences that might be accorded minority citizens; the legislators were dealing with the real and pressing problem of how to guarantee those citizens equal treatment.

In addressing that problem, supporters of Title VI repeatedly declared that the bill enacted constitutional principles. For example, Representative Celler, the Chairman of the House Judiciary Committee and floor manager of the legislation in the House, emphasized this in introducing the bill:

“The bill would offer assurance that hospitals financed by Federal money would not deny adequate care to Negroes. It would prevent abuse of food distribution programs whereby Negroes have been known to be denied surplus supplies when white persons were given such food. It would assure Negroes the benefits now accorded only white students in programs of high[er] education financed by Federal funds. It would, in short, assure the existing right to equal treatment in the enjoyment of Federal funds. It would not destroy any rights of private property or freedom of association.” 110 Cong. Rec. 1519 (1964) (emphasis added).

Other sponsors shared Representative Celler’s view that Title VI embodied constitutional principles.

In the Senate, Senator Humphrey declared that the purpose of Title VI was “to insure that Federal funds are spent in accordance with the Constitution and the moral sense of the Nation.” *Id.*, at 6544. Senator Ribicoff agreed that Title VI embraced the constitutional standard: “Basically, there is a constitutional restriction against discrimination in the use of federal funds; and title VI simply spells out the procedure to be used in enforcing that restriction.” *Id.*, at 13333. Other Senators expressed similar views.

Further evidence of the incorporation of a constitutional standard into Title VI appears in the repeated refusals of the legislation’s supporters precisely to define the term “discrimination.” Opponents sharply criticized this failure, but proponents of the bill merely replied that the meaning of “discrimination” would be made clear by reference to the Constitution or other existing law. For example, Senator Humphrey noted the relevance of the Constitution:

“As I have said, the bill has a simple purpose. That purpose is to give fellow citizens—Negroes—the same rights and opportunities that white people take for granted. This is no more than what was preached by the prophets, and by Christ Himself. It is no more than what our Constitution guarantees.” *Id.*, at 6553.

In view of the clear legislative intent, Title VI must be held to proscribe only those racial classifications that would violate the Equal Protection Clause or the Fifth Amendment.

### III

#### A

Petitioner does not deny that decisions based on race or ethnic origin by faculties and administrations of state universities are reviewable under the Fourteenth Amendment. See, e. g., *Missouri ex rel. Gaines v. Canada*, (1938); *Sipuel v. Board of Regents*, (1948); *Sweatt v. Painter*, (1950); *McLaurin v. Oklahoma State Regents*, (1950). For his part, respondent does not argue that all racial or ethnic classifications are per se invalid. See, e. g., *Hirabayashi v. United States*, (1943); *Korematsu v. United States*, (1944); *Lee v. Washington*, (1968) (Black, Harlan, and STEWART, JJ., concurring); *United Jewish Organizations v. Carey*, (1977). The parties do disagree as to the level of judicial scrutiny to be applied to the special admissions program. Petitioner argues that the court below erred in applying strict scrutiny, as this inexact term has

been applied in our cases. That level of review, petitioner asserts, should be reserved for classifications that disadvantage “discrete and insular minorities.” See *United States v. Carolene Products Co.*, n. 4 (1938). Respondent, on the other hand, contends that the California court correctly rejected the notion that the degree of judicial scrutiny accorded a particular racial or ethnic classification hinges upon membership in a discrete and insular minority and duly recognized that the “rights established [by the Fourteenth Amendment] are personal rights.” *Shelley v. Kraemer*, (1948).

En route to this crucial battle over the scope of judicial review, the parties fight a sharp preliminary action over the proper characterization of the special admissions program. Petitioner prefers to view it as establishing a “goal” of minority representation in the Medical School. Respondent, echoing the courts below, labels it a racial quota.

This semantic distinction is beside the point: The special admissions program is undeniably a classification based on race and ethnic background. To the extent that there existed a pool of at least minimally qualified minority applicants to fill the 16 special admissions seats, white applicants could compete only for 84 seats in the entering class, rather than the 100 open to minority applicants. Whether this limitation is described as a quota or a goal, it is a line drawn on the basis of race and ethnic status.

The guarantees of the Fourteenth Amendment extend to all persons. Its language is explicit: “No State shall . . . deny to any person within its jurisdiction the equal protection of the laws.” It is settled beyond question that the “rights created by the first section of the Fourteenth Amendment are, by its terms, guaranteed to the individual. The rights established are personal rights,” *Shelley v. Kraemer*, *supra*, at 22. *Accord*, *Missouri ex rel. Gaines v. Canada*, *supra*, at 351; *McCabe v. Atchison, T. & S. F. R. Co.*, (1914). The guarantee of equal protection cannot mean one thing when applied to one individual and something else when applied to a person of another color. If both are not accorded the same protection, then it is not equal.

Nevertheless, petitioner argues that the court below erred in applying strict scrutiny to the special admissions program because white males, such as respondent, are not a “discrete and insular minority” requiring extraordinary protection from the majoritarian political process. *Carolene Products Co.*, *supra*, at 152-153, n. 4. This rationale, however, has never been invoked in our decisions as a prerequisite to subjecting racial or ethnic distinctions to strict scrutiny. Nor has this Court held that discreteness and insularity constitute necessary preconditions to a holding that a particular classification is invidious. See, e. g., *Skinner v. Oklahoma ex rel. Williamson*, (1942); *Carrington v. Rash*, (1965). These characteristics may be relevant in deciding whether or not to add new types of classifications to the list of “suspect” categories or whether a particular classification survives close examination. See, e. g., *Massachusetts Board of Retirement v. Murgia*, (1976) (age); *San Antonio Independent School Dist. v. Rodriguez*, (1973) (wealth); *Graham v. Richardson*, (1971) (aliens). Racial and ethnic classifications, however, are subject to stringent examination without regard to these additional characteristics. We declared as much in the first cases explicitly to recognize racial distinctions as suspect:

“Distinctions between citizens solely because of their ancestry are by their very nature odious to a free people whose institutions are founded upon the doctrine of equality.” *Hirabayashi*.

“[A]ll legal restrictions which curtail the civil rights of a single racial group are immediately suspect. That is not to say that all such restrictions are unconstitutional. It is to say that courts must subject them to the most rigid scrutiny.” *Korematsu*.

The Court has never questioned the validity of those pronouncements. Racial and ethnic distinctions of any sort are inherently suspect and thus call for the most exacting judicial examination.

## B

This perception of racial and ethnic distinctions is rooted in our Nation’s constitutional and demographic history. The Court’s initial view of the Fourteenth Amendment was that its “one

pervading purpose” was “the freedom of the slave race, the security and firm establishment of that freedom, and the protection of the newly-made freeman and citizen from the oppressions of those who had formerly exercised dominion over him.” *Slaughter-House Cases*, 16 Wall. 36, 71 (1873). The Equal Protection Clause, however, was “[v]irtually strangled in infancy by post-civil-war judicial reactionism.” It was relegated to decades of relative desuetude while the Due Process Clause of the Fourteenth Amendment, after a short germinal period, flourished as a cornerstone in the Court’s defense of property and liberty of contract. See, e. g., *Mugler v. Kansas*, (1887); *Allgeyer v. Louisiana*, (1897); *Lochner v. New York*, (1905). In that cause, the Fourteenth Amendment’s “one pervading purpose” was displaced. See, e. g., *Plessy v. Ferguson*, (1896). It was only as the era of substantive due process came to a close, see, e. g., *Nebbia v. New York*, (1934); *West Coast Hotel Co. v. Parrish*, (1937), that the Equal Protection Clause began to attain a genuine measure of vitality, see, e. g., *United States v. Caroleone Products*, (1938); *Skinner v. Oklahoma ex rel. Williamson*, *supra*.

By that time it was no longer possible to peg the guarantees of the Fourteenth Amendment to the struggle for equality of one racial minority. During the dormancy of the Equal Protection Clause, the United States had become a Nation of minorities. Each had to struggle—and to some extent struggles still—to overcome the prejudices not of a monolithic majority, but of a “majority” composed of various minority groups of whom it was said—perhaps unfairly in many cases—that a shared characteristic was a willingness to disadvantage other groups. As the Nation filled with the stock of many lands, the reach of the Clause was gradually extended to all ethnic groups seeking protection from official discrimination. See *Strauder v. West Virginia*, (1880) (Celtic Irishmen) (dictum); *Yick Wo v. Hopkins*, (1886) (Chinese); *Truax v. Raich*, (1915) (Austrian resident aliens); *Korematsu*, *supra* (Japanese); *Hernandez v. Texas*, (1954) (Mexican-Americans). The guarantees of equal protection, said the Court in *Yick Wo*, “are universal in their application, to all persons within the territorial jurisdiction, without regard to any differences of race, of color, or of nationality; and the equal protection of the laws is a pledge of the protection of equal laws.”

Although many of the Framers of the Fourteenth Amendment conceived of its primary function as bridging the vast distance between members of the Negro race and the white “majority,” *Slaughter-House Cases*, *supra*, the Amendment itself was framed in universal terms, without reference to color, ethnic origin, or condition of prior servitude. As this Court recently remarked in interpreting the 1866 Civil Rights Act to extend to claims of racial discrimination against white persons, “the 39th Congress was intent upon establishing in the federal law a broader principle than would have been necessary simply to meet the particular and immediate plight of the newly freed Negro slaves.” *McDonald v. Santa Fe Trail Transportation Co.*, (1976). And that legislation was specifically broadened in 1870 to ensure that “all persons,” not merely “citizens,” would enjoy equal rights under the law. See *Runyon v. McCrary*, (1976) (WHITE, J., dissenting). Indeed, it is not unlikely that among the Framers were many who would have applauded a reading of the Equal Protection Clause that states a principle of universal application and is responsive to the racial, ethnic, and cultural diversity of the Nation. See, e. g., *Cong. Globe*, 39th Cong., 1st Sess., 1056 (1866) (remarks of Rep. Niblack); *id.*, at 2891-2892 (remarks of Sen. Conness); *id.*, 40th Cong., 2d Sess., 883 (1868) (remarks of Sen. Howe) (Fourteenth Amendment “protect[s] classes from class legislation”). See also Bickel, *The Original Understanding and the Segregation Decision*, 69 *Harv. L. Rev.* 1, 60-63 (1955).

Over the past 30 years, this Court has embarked upon the crucial mission of interpreting the Equal Protection Clause with the view of assuring to all persons “the protection of equal laws,” *Yick Wo*, *supra*, at 369, in a Nation confronting a legacy of slavery and racial discrimination. See, e. g., *Shelley v. Kraemer*, (1948); *Brown v. Board of Education*, (1954); *Hills v. Gautreaux*, (1976). Because the landmark decisions in this area arose in response to the continued exclusion of Negroes from the mainstream of American society, they could be characterized as involving discrimination by the “majority” white race against the Negro minority. But

they need not be read as depending upon that characterization for their results. It suffices to say that “[o]ver the years, this Court has consistently repudiated ‘[d]istinctions between citizens solely because of their ancestry’ as being ‘odious to a free people whose institutions are founded upon the doctrine of equality.’” *Loving v. Virginia*, (1967), quoting *Hirabayashi*.

Petitioner urges us to adopt for the first time a more restrictive view of the Equal Protection Clause and hold that discrimination against members of the white “majority” cannot be suspect if its purpose can be characterized as “benign.” The clock of our liberties, however, cannot be turned back to 1868. *Brown v. Board of Education*, *supra*, at 492; accord, *Loving v. Virginia*, *supra*, at 9. It is far too late to argue that the guarantee of equal protection to all persons permits the recognition of special wards entitled to a degree of protection greater than that accorded others. “The Fourteenth Amendment is not directed solely against discrimination due to a ‘two-class theory’—that is, based upon differences between ‘white’ and Negro.” *Hernandez*.

Once the artificial line of a “two-class theory” of the Fourteenth Amendment is put aside, the difficulties entailed in varying the level of judicial review according to a perceived “preferred” status of a particular racial or ethnic minority are intractable. The concepts of “majority” and “minority” necessarily reflect temporary arrangements and political judgments. As observed above, the white “majority” itself is composed of various minority groups, most of which can lay claim to a history of prior discrimination at the hands of the State and private individuals. Not all of these groups can receive preferential treatment and corresponding judicial tolerance of distinctions drawn in terms of race and nationality, for then the only “majority” left would be a new minority of white Anglo-Saxon Protestants. There is no principled basis for deciding which groups would merit “heightened judicial solicitude” and which would not. Courts would be asked to evaluate the extent of the prejudice and consequent harm suffered by various minority groups. Those whose societal injury is thought to exceed some arbitrary level of tolerability then would be entitled to preferential classifications at the expense of individuals belonging to other groups. Those classifications would be free from exacting judicial scrutiny. As these preferences began to have their desired effect, and the consequences of past discrimination were undone, new judicial rankings would be necessary. The kind of variable sociological and political analysis necessary to produce such rankings simply does not lie within the judicial competence—even if they otherwise were politically feasible and socially desirable.

Moreover, there are serious problems of justice connected with the idea of preference itself. First, it may not always be clear that a so-called preference is in fact benign. Courts may be asked to validate burdens imposed upon individual members of a particular group in order to advance the group’s general interest. See *United Jewish Organizations v. Carey*, (BRENNAN, J., concurring in part). Nothing in the Constitution supports the notion that individuals may be asked to suffer otherwise impermissible burdens in order to enhance the societal standing of their ethnic groups. Second, preferential programs may only reinforce common stereotypes holding that certain groups are unable to achieve success without special protection based on a factor having no relationship to individual worth. See *DeFunis v. Odegaard*, (1974) (Douglas, J., dissenting). Third, there is a measure of inequity in forcing innocent persons in respondent’s position to bear the burdens of redressing grievances not of their making.

By hitching the meaning of the Equal Protection Clause to these transitory considerations, we would be holding, as a constitutional principle, that judicial scrutiny of classifications touching on racial and ethnic background may vary with the ebb and flow of political forces. Disparate constitutional tolerance of such classifications well may serve to exacerbate racial and ethnic antagonisms rather than alleviate them. *United Jewish Organizations*, *supra*, at 173-174 (BRENNAN, J., concurring in part). Also, the mutability of a constitutional principle, based upon shifting political and social judgments, undermines the chances for consistent ap-

plication of the Constitution from one generation to the next, a critical feature of its coherent interpretation. *Pollock v. Farmers' Loan & Trust Co.*, (1895) (White, J., dissenting). In expounding the Constitution, the Court's role is to discern "principles sufficiently absolute to give them roots throughout the community and continuity over significant periods of time, and to lift them above the level of the pragmatic political judgments of a particular time and place." A. Cox, *The Role of the Supreme Court in American Government* 114 (1976).

If it is the individual who is entitled to judicial protection against classifications based upon his racial or ethnic background because such distinctions impinge upon personal rights, rather than the individual only because of his membership in a particular group, then constitutional standards may be applied consistently. Political judgments regarding the necessity for the particular classification may be weighed in the constitutional balance, *Korematsu v. United States*, (1944), but the standard of justification will remain constant. This is as it should be, since those political judgments are the product of rough compromise struck by contending groups within the democratic process. When they touch upon an individual's race or ethnic background, he is entitled to a judicial determination that the burden he is asked to bear on that basis is precisely tailored to serve a compelling governmental interest. The Constitution guarantees that right to every person regardless of his background. *Shelley v. Kraemer*; *Missouri ex rel. Gaines v. Canada*.

## C

Petitioner contends that on several occasions this Court has approved preferential classifications without applying the most exacting scrutiny. Most of the cases upon which petitioner relies are drawn from three areas: school desegregation, employment discrimination, and sex discrimination. Each of the cases cited presented a situation materially different from the facts of this case.

The school desegregation cases are inapposite. Each involved remedies for clearly determined constitutional violations. E. g., *Swann v. Charlotte-Mecklenburg Board of Education*, (1971); *McDaniel v. Barresi*, (1971); *Green v. County School Board*, (1968). Racial classifications thus were designed as remedies for the vindication of constitutional entitlement. Moreover, the scope of the remedies was not permitted to exceed the extent of the violations. E. g., *Dayton Board of Education v. Brinkman*, (1977); *Milliken v. Bradley*, (1974); see *Pasadena City Board of Education v. Spangler*, (1976). See also *Austin Independent School Dist. v. United States*, (1976) (POWELL, J., concurring). Here, there was no judicial determination of constitutional violation as a predicate for the formulation of a remedial classification.

The employment discrimination cases also do not advance petitioner's cause. For example, in *Franks v. Bowman Transportation Co.*, (1976), we approved a retroactive award of seniority to a class of Negro truckdrivers who had been the victims of discrimination—not just by society at large, but by the respondent in that case. While this relief imposed some burdens on other employees, it was held necessary "to make [the victims] whole for injuries suffered on account of unlawful employment discrimination." *Id.*, at 763, quoting *Albemarle Paper Co. v. Moody*, (1975). The Courts of Appeals have fashioned various types of racial preferences as remedies for constitutional or statutory violations resulting in identified, race-based injuries to individuals held entitled to the preference. E. g., *Bridgeport Guardians, Inc. v. Bridgeport Civil Service Commission*, 482 F.2d 1333 (CA2 1973); *Carter v. Gallagher*, 452 F.2d 315 (CA8 1972), modified on rehearing en banc, *id.*, at 327. Such preferences also have been upheld where a legislative or administrative body charged with the responsibility made determinations of past discrimination by the industries affected, and fashioned remedies deemed appropriate to rectify the discrimination. E. g., *Contractors Association of Eastern Pennsylvania v. Secretary of Labor*, 442 F.2d 159 (CA3), cert. denied, (1971); *Associated General Contractors of Massachusetts, Inc. v. Altshuler*, 490 F.2d 9 (CA1 1973), cert. denied, (1974); cf. *Katzenbach*

v. Morgan, (1966). But we have never approved preferential classifications in the absence of proved constitutional or statutory violations.

Nor is petitioner's view as to the applicable standard supported by the fact that gender-based classifications are not subjected to this level of scrutiny. E. g., *Califano v. Webster*, (1977); *Craig v. Boren*, n. (1976) (POWELL, J., concurring). Gender-based distinctions are less likely to create the analytical and practical problems present in preferential programs premised on racial or ethnic criteria. With respect to gender there are only two possible classifications. The incidence of the burdens imposed by preferential classifications is clear. There are no rival groups which can claim that they, too, are entitled to preferential treatment. Classwide questions as to the group suffering previous injury and groups which fairly can be burdened are relatively manageable for reviewing courts. See, e. g., *Califano v. Goldfarb*, (1977); *Weinberger v. Wiesenfeld*, (1975). The resolution of these same questions in the context of racial and ethnic preferences presents far more complex and intractable problems than gender-based classifications. More importantly, the perception of racial classifications as inherently odious stems from a lengthy and tragic history that gender-based classifications do not share. In sum, the Court has never viewed such classification as inherently suspect or as comparable to racial or ethnic classifications for the purpose of equal protection analysis.

Petitioner also cites *Lau v. Nichols*, (1974), in support of the proposition that discrimination favoring racial or ethnic minorities has received judicial approval without the exacting inquiry ordinarily accorded "suspect" classifications. In *Lau*, we held that the failure of the San Francisco school system to provide remedial English instruction for some 1,800 students of oriental ancestry who spoke no English amounted to a violation of Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d, and the regulations promulgated thereunder. Those regulations required remedial instruction where inability to understand English excluded children of foreign ancestry from participation in educational programs. Because we found that the students in *Lau* were denied "a meaningful opportunity to participate in the educational program," *ibid.*, we remanded for the fashioning of a remedial order.

*Lau* provides little support for petitioner's argument. The decision rested solely on the statute, which had been construed by the responsible administrative agency to reach educational practices "which have the effect of subjecting individuals to discrimination," *ibid.* We stated: "Under these state-imposed standards there is no equality of treatment merely by providing students with the same facilities, textbooks, teachers, and curriculum; for students who do not understand English are effectively foreclosed from any meaningful education." *Id.*, at 566. Moreover, the "preference" approved did not result in the denial of the relevant benefit—"meaningful opportunity to participate in the educational program"—to anyone else. No other student was deprived by that preference of the ability to participate in San Francisco's school system, and the applicable regulations required similar assistance for all students who suffered similar linguistic deficiencies. *Id.*, at 570-571 (STEWART, J., concurring in result).

In a similar vein, petitioner contends that our recent decision in *United Jewish Organizations v. Carey*, (1977), indicates a willingness to approve racial classifications designed to benefit certain minorities, without denominating the classifications as "suspect." The State of New York had redrawn its reapportionment plan to meet objections of the Department of Justice under 5 of the Voting Rights Act of 1965, 42 U.S.C. 1973c (1970 ed., Supp. V). Specifically, voting districts were redrawn to enhance the electoral power of certain "nonwhite" voters found to have been the victims of unlawful "dilution" under the original reapportionment plan. *United Jewish Organizations*, like *Lau*, properly is viewed as a case in which the remedy for an administrative finding of discrimination encompassed measures to improve the previously disadvantaged group's ability to participate, without excluding individuals belonging to any other group from enjoyment of the relevant opportunity—meaningful participation in the electoral process.

In this case, unlike *Lau* and *United Jewish Organizations*, there has been no determination by the legislature or a responsible administrative agency that the University engaged in a dis-

criminary practice requiring remedial efforts. Moreover, the operation of petitioner's special admissions program is quite different from the remedial measures approved in those cases. It prefers the designated minority groups at the expense of other individuals who are totally foreclosed from competition for the 16 special admissions seats in every Medical School class. Because of that foreclosure, some individuals are excluded from enjoyment of a state-provided benefit—admission to the Medical School—they otherwise would receive. When a classification denies an individual opportunities or benefits enjoyed by others solely because of his race or ethnic background, it must be regarded as suspect. E. g., *McLaurin v. Oklahoma State Regents*.

#### IV

We have held that in “order to justify the use of a suspect classification, a State must show that its purpose or interest is both constitutionally permissible and substantial, and that its use of the classification is ‘necessary . . . to the accomplishment’ of its purpose or the safeguarding of its interest.” In *re Griffiths*, (1973) (footnotes omitted); *Loving v. Virginia*; *McLaughlin v. Florida*, (1964). The special admissions program purports to serve the purposes of: (i) “reducing the historic deficit of traditionally disfavored minorities in medical schools and in the medical profession,” Brief for Petitioner 32; (ii) countering the effects of societal discrimination; (iii) increasing the number of physicians who will practice in communities currently underserved; and (iv) obtaining the educational benefits that flow from an ethnically diverse student body. It is necessary to decide which, if any, of these purposes is substantial enough to support the use of a suspect classification.

#### A

If petitioner's purpose is to assure within its student body some specified percentage of a particular group merely because of its race or ethnic origin, such a preferential purpose must be rejected not as insubstantial but as facially invalid. Preferring members of any one group for no reason other than race or ethnic origin is discrimination for its own sake. This the Constitution forbids. E. g., *Loving v. Virginia*, *supra*, at 11; *McLaughlin v. Florida*, *supra*, at 196; *Brown v. Board of Education*, (1954).

#### B

The State certainly has a legitimate and substantial interest in ameliorating, or eliminating where feasible, the disabling effects of identified discrimination. The line of school desegregation cases, commencing with *Brown*, attests to the importance of this state goal and the commitment of the judiciary to affirm all lawful means toward its attainment. In the school cases, the States were required by court order to redress the wrongs worked by specific instances of racial discrimination. That goal was far more focused than the remedying of the effects of “societal discrimination,” an amorphous concept of injury that may be ageless in its reach into the past.

We have never approved a classification that aids persons perceived as members of relatively victimized groups at the expense of other innocent individuals in the absence of judicial, legislative, or administrative findings of constitutional or statutory violations. See, e. g., *Teamsters v. United States*, (1977); *United Jewish Organizations*; *South Carolina v. Katzenbach*, (1966). After such findings have been made, the governmental interest in preferring members of the injured groups at the expense of others is substantial, since the legal rights of the victims must be vindicated. In such a case, the extent of the injury and the consequent remedy will have been judicially, legislatively, or administrative defined. Also, the remedial action usually remains subject to continuing oversight to assure that it will work the least harm possible to other innocent persons competing for the benefit. Without such findings of constitutional or statutory violations, it cannot be said that the government has any greater interest in helping

one individual than in refraining from harming another. Thus, the government has no compelling justification for inflicting such harm.

Petitioner does not purport to have made, and is in no position to make, such findings. Its broad mission is education, not the formulation of any legislative policy or the adjudication of particular claims of illegality. For reasons similar to those stated in Part III of this opinion, isolated segments of our vast governmental structures are not competent to make those decisions, at least in the absence of legislative mandates and legislatively determined criteria. Cf. *Hampton v. Mow Sun Wong*, (1976); n. 41, *supra*. Before relying upon these sorts of findings in establishing a racial classification, a governmental body must have the authority and capability to establish, in the record, that the classification is responsive to identified discrimination. See, e. g., *Califano v. Webster*; *Califano v. Goldfarb*. Lacking this capability, petitioner has not carried its burden of justification on this issue.

Hence, the purpose of helping certain groups whom the faculty of the Davis Medical School perceived as victims of “societal discrimination” does not justify a classification that imposes disadvantages upon persons like respondent, who bear no responsibility for whatever harm the beneficiaries of the special admissions program are thought to have suffered. To hold otherwise would be to convert a remedy heretofore reserved for violations of legal rights into a privilege that all institutions throughout the Nation could grant at their pleasure to whatever groups are perceived as victims of societal discrimination. That is a step we have never approved. Cf. *Pasadena City Board of Education v. Spangler*, (1976).

## C

Petitioner identifies, as another purpose of its program, improving the delivery of health-care services to communities currently underserved. It may be assumed that in some situations a State’s interest in facilitating the health care of its citizens is sufficiently compelling to support the use of a suspect classification. But there is virtually no evidence in the record indicating that petitioner’s special admissions program is either needed or geared to promote that goal. The court below addressed this failure of proof:

“The University concedes it cannot assure that minority doctors who entered under the program, all of whom expressed an ‘interest’ in practicing in a disadvantaged community, will actually do so. It may be correct to assume that some of them will carry out this intention, and that it is more likely they will practice in minority communities than the average white doctor. (See Sandalow, *Racial Preferences in Higher Education: Political Responsibility and the Judicial Role* (1975) 42 U. Chi. L. Rev. 653, 688.) Nevertheless, there are more precise and reliable ways to identify applicants who are genuinely interested in the medical problems of minorities than by race. An applicant of whatever race who has demonstrated his concern for disadvantaged minorities in the past and who declares that practice in such a community is his primary professional goal would be more likely to contribute to alleviation of the medical shortage than one who is chosen entirely on the basis of race and disadvantage. In short, there is no empirical data to demonstrate that any one race is more selflessly socially oriented or by contrast that another is more selfishly acquisitive.” 18 Cal. 3d, at 56, 553 P.2d, at 1167.

Petitioner simply has not carried its burden of demonstrating that it must prefer members of particular ethnic groups over all other individuals in order to promote better health-care delivery to deprived citizens. Indeed, petitioner has not shown that its preferential classification is likely to have any significant effect on the problem.

## D

The fourth goal asserted by petitioner is the attainment of a diverse student body. This clearly is a constitutionally permissible goal for an institution of higher education. Academic freedom,

though not a specifically enumerated constitutional right, long has been viewed as a special concern of the First Amendment. The freedom of a university to make its own judgments as to education includes the selection of its student body. Mr. Justice Frankfurter summarized the “four essential freedoms” that constitute academic freedom:

“It is the business of a university to provide that atmosphere which is most conducive to speculation, experiment and creation. It is an atmosphere in which there prevail “the four essential freedoms” of a university—to determine for itself on academic grounds who may teach, what may be taught, how it shall be taught, and who may be admitted to study.” *Sweezy v. New Hampshire*, (1957) (concurring in result).

Our national commitment to the safeguarding of these freedoms within university communities was emphasized in *Keyishian v. Board of Regents*, (1967):

“Our Nation is deeply committed to safeguarding academic freedom which is of transcendent value to all of us and not merely to the teachers concerned. That freedom is therefore a special concern of the First Amendment . . . The Nation’s future depends upon leaders trained through wide exposure to that robust exchange of ideas which discovers truth ‘out of a multitude of tongues, [rather] than through any kind of authoritative selection.’ *United States v. Associated Press*, 52 F. Supp. 362, 372.”

The atmosphere of “speculation, experiment and creation”—so essential to the quality of higher education—is widely believed to be promoted by a diverse student body. As the Court noted in *Keyishian*, it is not too much to say that the “nation’s future depends upon leaders trained through wide exposure” to the ideas and mores of students as diverse as this Nation of many peoples.

Thus, in arguing that its universities must be accorded the right to select those students who will contribute the most to the “robust exchange of ideas,” petitioner invokes a countervailing constitutional interest, that of the First Amendment. In this light, petitioner must be viewed as seeking to achieve a goal that is of paramount importance in the fulfillment of its mission.

It may be argued that there is greater force to these views at the undergraduate level than in a medical school where the training is centered primarily on professional competency. But even at the graduate level, our tradition and experience lend support to the view that the contribution of diversity is substantial. In *Sweatt v. Painter*, the Court made a similar point with specific reference to legal education:

“The law school, the proving ground for legal learning and practice, cannot be effective in isolation from the individuals and institutions with which the law interacts. Few students and no one who has practiced law would choose to study in an academic vacuum, removed from the interplay of ideas and the exchange of views with which the law is concerned.”

Physicians serve a heterogeneous population. An otherwise qualified medical student with a particular background—whether it be ethnic, geographic, culturally advantaged or disadvantaged—may bring to a professional school of medicine experiences, outlooks, and ideas that enrich the training of its student body and better equip its graduates to render with understanding their vital service to humanity.

Ethnic diversity, however, is only one element in a range of factors a university properly may consider in attaining the goal of a heterogeneous student body. Although a university must have wide discretion in making the sensitive judgments as to who should be admitted, constitutional limitations protecting individual rights may not be disregarded. Respondent urges—and the courts below have held—that petitioner’s dual admissions program is a racial classification that impermissibly infringes his rights under the Fourteenth Amendment. As the interest of diversity is compelling in the context of a university’s admissions program, the question remains whether the program’s racial classification is necessary to promote this interest. In *re Griffiths*.

## V

## A

It may be assumed that the reservation of a specified number of seats in each class for individuals from the preferred ethnic groups would contribute to the attainment of considerable ethnic diversity in the student body. But petitioner's argument that this is the only effective means of serving the interest of diversity is seriously flawed. In a most fundamental sense the argument misconceives the nature of the state interest that would justify consideration of race or ethnic background. It is not an interest in simple ethnic diversity, in which a specified percentage of the student body is in effect guaranteed to be members of selected ethnic groups, with the remaining percentage an undifferentiated aggregation of students. The diversity that furthers a compelling state interest encompasses a far broader array of qualifications and characteristics of which racial or ethnic origin is but a single though important element. Petitioner's special admissions program, focused solely on ethnic diversity, would hinder rather than further attainment of genuine diversity.

Nor would the state interest in genuine diversity be served by expanding petitioner's two-track system into a multitrack program with a prescribed number of seats set aside for each identifiable category of applicants. Indeed, it is inconceivable that a university would thus pursue the logic of petitioner's two-track program to the illogical end of insulating each category of applicants with certain desired qualifications from competition with all other applicants.

The experience of other university admissions programs, which take race into account in achieving the educational diversity valued by the First Amendment, demonstrates that the assignment of a fixed number of places to a minority group is not a necessary means toward that end. An illuminating example is found in the Harvard College program:

"In recent years Harvard College has expanded the concept of diversity to include students from disadvantaged economic, racial and ethnic groups. Harvard College now recruits not only Californians or Louisianans but also blacks and Chicanos and other minority students. . . ."

"In practice, this new definition of diversity has meant that race has been a factor in some admission decisions. When the Committee on Admissions reviews the large middle group of applicants who are 'admissible' and deemed capable of doing good work in their courses, the race of an applicant may tip the balance in his favor just as geographic origin or a life spent on a farm may tip the balance in other candidates' cases. A farm boy from Idaho can bring something to Harvard College that a Bostonian cannot offer. Similarly, a black student can usually bring something that a white person cannot offer. . . ."

"In Harvard College admissions the Committee has not set target-quotas for the number of blacks, or of musicians, football players, physicists or Californians to be admitted in a given year. . . . But that awareness [of the necessity of including more than a token number of black students] does not mean that the Committee sets a minimum number of blacks or of people from west of the Mississippi who are to be admitted. It means only that in choosing among thousands of applicants who are not only 'admissible' academically but have other strong qualities, the Committee, with a number of criteria in mind, pays some attention to distribution among many types and categories of students." App. to Brief for Columbia University, Harvard University, Stanford University, and the University of Pennsylvania, as Amici Curiae 2-3.

In such an admissions program, race or ethnic background may be deemed a "plus" in a particular applicant's file, yet it does not insulate the individual from comparison with all other candidates for the available seats. The file of a particular black applicant may be examined for his potential contribution to diversity without the factor of race being decisive when com-

pared, for example, with that of an applicant identified as an Italian-American if the latter is thought to exhibit qualities more likely to promote beneficial educational pluralism. Such qualities could include exceptional personal talents, unique work or service experience, leadership potential, maturity, demonstrated compassion, a history of overcoming disadvantage, ability to communicate with the poor, or other qualifications deemed important. In short, an admissions program operated in this way is flexible enough to consider all pertinent elements of diversity in light of the particular qualifications of each applicant, and to place them on the same footing for consideration, although not necessarily according them the same weight. Indeed, the weight attributed to a particular quality may vary from year to year depending upon the “mix” both of the student body and the applicants for the incoming class.

This kind of program treats each applicant as an individual in the admissions process. The applicant who loses out on the last available seat to another candidate receiving a “plus” on the basis of ethnic background will not have been foreclosed from all consideration for that seat simply because he was not the right color or had the wrong surname. It would mean only that his combined qualifications, which may have included similar nonobjective factors, did not outweigh those of the other applicant. His qualifications would have been weighed fairly and competitively, and he would have no basis to complain of unequal treatment under the Fourteenth Amendment.

It has been suggested that an admissions program which considers race only as one factor is simply a subtle and more sophisticated—but no less effective—means of according racial preference than the Davis program. A facial intent to discriminate, however, is evident in petitioner’s preference program and not denied in this case. No such facial infirmity exists in an admissions program where race or ethnic background is simply one element—to be weighed fairly against other elements—in the selection process. “A boundary line,” as Mr. Justice Frankfurter remarked in another connection, “is none the worse for being narrow.” *McLeod v. Dilworth*, (1944). And a court would not assume that a university, professing to employ a facially nondiscriminatory admissions policy, would operate it as a cover for the functional equivalent of a quota system. In short, good faith would be presumed in the absence of a showing to the contrary in the manner permitted by our cases. See, e. g., *Arlington Heights v. Metropolitan Housing Dev. Corp.*, (1977); *Washington v. Davis*, (1976); *Swain v. Alabama*, (1965).

## B

In summary, it is evident that the Davis special admissions program involves the use of an explicit racial classification never before countenanced by this Court. It tells applicants who are not Negro, Asian, or Chicano that they are totally excluded from a specific percentage of the seats in an entering class. No matter how strong their qualifications, quantitative and extra-curricular, including their own potential for contribution to educational diversity, they are never afforded the chance to compete with applicants from the preferred groups for the special admissions seats. At the same time, the preferred applicants have the opportunity to compete for every seat in the class.

The fatal flaw in petitioner’s preferential program is its disregard of individual rights as guaranteed by the Fourteenth Amendment. *Shelley v. Kraemer*. Such rights are not absolute. But when a State’s distribution of benefits or imposition of burdens hinges on ancestry or the color of a person’s skin, that individual is entitled to a demonstration that the challenged classification is necessary to promote a substantial state interest. Petitioner has failed to carry this burden. For this reason, that portion of the California court’s judgment holding petitioner’s special admissions program invalid under the Fourteenth Amendment must be affirmed.

## C

In enjoining petitioner from ever considering the race of any applicant, however, the courts below failed to recognize that the State has a substantial interest that legitimately may be served

by a properly devised admissions program involving the competitive consideration of race and ethnic origin. For this reason, so much of the California court's judgment as enjoins petitioner from any consideration of the race of any applicant must be reversed.

## VI

With respect to respondent's entitlement to an injunction directing his admission to the Medical School, petitioner has conceded that it could not carry its burden of proving that, but for the existence of its unlawful special admissions program, respondent still would not have been admitted. Hence, respondent is entitled to the injunction, and that portion of the judgment must be affirmed.

### APPENDIX TO OPINION OF POWELL, J.

#### Harvard College Admissions Program

For the past 30 years Harvard College has received each year applications for admission that greatly exceed the number of places in the freshman class. The number of applicants who are deemed to be not "qualified" is comparatively small. The vast majority of applicants demonstrate through test scores, high school records and teachers' recommendations that they have the academic ability to do adequate work at Harvard, and perhaps to do it with distinction. Faced with the dilemma of choosing among a large number of "qualified" candidates, the Committee on Admissions could use the single criterion of scholarly excellence and attempt to determine who among the candidates were likely to perform best academically. But for the past 30 years the Committee on Admissions has never adopted this approach. The belief has been that if scholarly excellence were the sole or even predominant criterion, Harvard College would lose a great deal of its vitality and intellectual excellence and that the quality of the educational experience offered to all students would suffer. Final Report of W. J. Bender, Chairman of the Admission and Scholarship Committee and Dean of Admissions and Financial Aid, pp. 20 et seq. (Cambridge, 1960). Consequently, after selecting those students whose intellectual potential will seem extraordinary to the faculty—perhaps 150 or so out of an entering class of over 1,100—the Committee seeks—

variety in making its choices. This has seemed important . . . in part because it adds a critical ingredient to the effectiveness of the educational experience [in Harvard College]. . . . The effectiveness of our students' educational experience has seemed to the Committee to be affected as importantly by a wide variety of interests, talents, backgrounds and career goals as it is by a fine faculty and our libraries, laboratories and housing arrangements. (Dean of Admissions Fred L. Glimp, Final Report to the Faculty of Arts and Sciences, 65 Official Register of Harvard University No. 25, 93, 104-105 (1968) (emphasis supplied).

The belief that diversity adds an essential ingredient to the educational process has long been a tenet of Harvard College admissions. Fifteen or twenty years ago, however, diversity meant students from California, New York, and Massachusetts; city dwellers and farm boys; violinists, painters and football players; biologists, historians and classicists; potential stockbrokers, academics and politicians. The result was that very few ethnic or racial minorities attended Harvard College. In recent years Harvard College has expanded the concept of diversity to include students from disadvantaged economic, racial and ethnic groups. Harvard College now recruits not only Californians or Louisianans but also blacks and Chicanos and other minority students. Contemporary conditions in the United States mean that if Harvard College is to continue to offer a first-rate education to its students, minority representation in the undergraduate body cannot be ignored by the Committee on Admissions.

In practice, this new definition of diversity has meant that race has been a factor in some admission decisions. When the Committee on Admissions reviews the large middle group of

applicants who are “admissible” and deemed capable of doing good work in their courses, the race of an applicant may tip the balance in his favor just as geographic origin or a life spent on a farm may tip the balance in other candidates’ cases. A farm boy from Idaho can bring something to Harvard College that a Bostonian cannot offer. Similarly, a black student can usually bring something that a white person cannot offer. The quality of the educational experience of all the students in Harvard College depends in part on these differences in the background and outlook that students bring with them.

In Harvard College admissions the Committee has not set target-quotas for the number of blacks, or of musicians, football players, physicists or Californians to be admitted in a given year. At the same time the Committee is aware that if Harvard College is to provide a truly heterogen[e]ous environment that reflects the rich diversity of the United States, it cannot be provided without some attention to numbers. It would not make sense, for example, to have 10 or 20 students out of 1,100 whose homes are west of the Mississippi. Comparably, 10 or 20 black students could not begin to bring to their classmates and to each other the variety of points of view, backgrounds and experiences of blacks in the United States. Their small numbers might also create a sense of isolation among the black students themselves and thus make it more difficult for them to develop and achieve their potential. Consequently, when making its decisions, the Committee on Admissions is aware that there is some relationship between numbers and achieving the benefits to be derived from a diverse student body, and between numbers and providing a reasonable environment for those students admitted. But that awareness does not mean that the Committee sets a minimum number of blacks or of people from west of the Mississippi who are to be admitted. It means only that in choosing among thousands of applicants who are not only “admissible” academically but have other strong qualities, the Committee, with a number of criteria in mind, pays some attention to distribution among many types and categories of students.

The further refinements sometimes required help to illustrate the kind of significance attached to race. The Admissions Committee, with only a few places left to fill, might find itself forced to choose between A, the child of a successful black physician in an academic community with promise of superior academic performance, and B, a black who grew up in an inner-city ghetto of semi-literate parents whose academic achievement was lower but who had demonstrated energy and leadership as well as an apparently-abiding interest in black power. If a good number of black students much like A but few like B had already been admitted, the Committee might prefer B; and vice versa. If C, a white student with extraordinary artistic talent, were also seeking one of the remaining places, his unique quality might give him an edge over both A and B. Thus, the critical criteria are often individual qualities or experience not dependent upon race but sometimes associated with it.

2 MR. JUSTICE BRENNAN, MR. JUSTICE WHITE, MR. JUSTICE MARSHALL, and MR. JUSTICE BLACKMUN join Parts I and V-C of this opinion. MR. JUSTICE WHITE also joins Part III-A of this opinion.

Opinion of MR. JUSTICE BRENNAN, MR. JUSTICE WHITE, MR. JUSTICE MARSHALL, and MR. JUSTICE BLACKMUN, concurring in the judgment in part and dissenting in part.

The Court today, in reversing in part the judgment of the Supreme Court of California, affirms the constitutional power of Federal and State Governments to act affirmatively to achieve equal opportunity for all. The difficulty of the issue presented—whether government may use race-conscious programs to redress the continuing effects of past discrimination—and the mature consideration which each of our Brethren has brought to it have resulted in many opinions, no single one speaking for the Court. But this should not and must not mask the central meaning of today’s opinions: Government may take race into account when it acts not to demean or insult any racial group, but to remedy disadvantages cast on minorities by

past racial prejudice, at least when appropriate findings have been made by judicial, legislative, or administrative bodies with competence to act in this area.

THE CHIEF JUSTICE and our Brothers STEWART, REHNQUIST, and STEVENS, have concluded that Title VI of the Civil Rights Act of 1964, 78 Stat. 252, as amended, 42 U.S.C. 2000d et seq., prohibits programs such as that at the Davis Medical School. On this statutory theory alone, they would hold that respondent Allan Bakke's rights have been violated and that he must, therefore, be admitted to the Medical School. Our Brother POWELL, reaching the Constitution, concludes that, although race may be taken into account in university admissions, the particular special admissions program used by petitioner, which resulted in the exclusion of respondent Bakke, was not shown to be necessary to achieve petitioner's stated goals. Accordingly, these Members of the Court form a majority of five affirming the judgment of the Supreme Court of California insofar as it holds that respondent Bakke "is entitled to an order that he be admitted to the University." 18 Cal. 3d 34, 64, 553 P.2d 1152, 1172 (1976).

We agree with MR. JUSTICE POWELL that, as applied to the case before us, Title VI goes no further in prohibiting the use of race than the Equal Protection Clause of the Fourteenth Amendment itself. We also agree that the effect of the California Supreme Court's affirmance of the judgment of the Superior Court of California would be to prohibit the University from establishing in the future affirmative-action programs that take race into account. See ante, at 271 n. Since we conclude that the affirmative admissions program at the Davis Medical School is constitutional, we would reverse the judgment below in all respects. MR. JUSTICE POWELL agrees that some uses of race in university admissions are permissible and, therefore, he joins with us to make five votes reversing the judgment below insofar as it prohibits the University from establishing race-conscious programs in the future.

## I

Our Nation was founded on the principle that "all Men are created equal." Yet candor requires acknowledgment that the Framers of our Constitution, to forge the 13 Colonies into one Nation, openly compromised this principle of equality with its antithesis: slavery. The consequences of this compromise are well known and have aptly been called our "American Dilemma." Still, it is well to recount how recent the time has been, if it has yet come, when the promise of our principles has flowered into the actuality of equal opportunity for all regardless of race or color.

The Fourteenth Amendment, the embodiment in the Constitution of our abiding belief in human equality, has been the law of our land for only slightly more than half its 200 years. And for half of that half, the Equal Protection Clause of the Amendment was largely moribund so that, as late as 1927, Mr. Justice Holmes could sum up the importance of that Clause by remarking that it was the "last resort of constitutional arguments." *Buck v. Bell*, (1927). Worse than desuetude, the Clause was early turned against those whom it was intended to set free, condemning them to a "separate but equal" status before the law, a status always separate but seldom equal. Not until 1954—only 24 years ago—was this odious doctrine interred by our decision in *Brown v. Board of Education*, (Brown I), and its progeny, which proclaimed that separate schools and public facilities of all sorts were inherently unequal and forbidden under our Constitution. Even then inequality was not eliminated with "all deliberate speed." *Brown v. Board of Education*, (1955). In 1968 and again in 1971, for example, we were forced to remind school boards of their obligation to eliminate racial discrimination root and branch. And a glance at our docket and at dockets of lower courts will show that even today officially sanctioned discrimination is not a thing of the past.

Against this background, claims that law must be "color-blind" or that the datum of race is no longer relevant to public policy must be seen as aspiration rather than as description of reality. This is not to denigrate aspiration; for reality rebukes us that race has too often been

used by those who would stigmatize and oppress minorities. Yet we cannot—and, as we shall demonstrate, need not under our Constitution or Title VI, which merely extends the constraints of the Fourteenth Amendment to private parties who receive federal funds—let color blindness become myopia which masks the reality that many “created equal” have been treated within our lifetimes as inferior both by the law and by their fellow citizens.

## II

The threshold question we must decide is whether Title VI of the Civil Rights Act of 1964 bars recipients of federal funds from giving preferential consideration to disadvantaged members of racial minorities as part of a program designed to enable such individuals to surmount the obstacles imposed by racial discrimination. We join Parts I and V-C of our Brother POWELL'S opinion and three of us agree with his conclusion in Part II that this case does not require us to resolve the question whether there is a private right of action under Title VI.

In our view, Title VI prohibits only those uses of racial criteria that would violate the Fourteenth Amendment if employed by a State or its agencies; it does not bar the preferential treatment of racial minorities as a means of remedying past societal discrimination to the extent that such action is consistent with the Fourteenth Amendment. The legislative history of Title VI, administrative regulations interpreting the statute, subsequent congressional and executive action, and the prior decisions of this Court compel this conclusion. None of these sources lends support to the proposition that Congress intended to bar all race-conscious efforts to extend the benefits of federally financed programs to minorities who have been historically excluded from the full benefits of American life.

### A

The history of Title VI—from President Kennedy's request that Congress grant executive departments and agencies authority to cut off federal funds to programs that discriminate against Negroes through final enactment of legislation incorporating his proposals—reveals one fixed purpose: to give the Executive Branch of Government clear authority to terminate federal funding of private programs that use race as a means of disadvantaging minorities in a manner that would be prohibited by the Constitution if engaged in by government.

This purpose was first expressed in President Kennedy's June 19, 1963, message to Congress proposing the legislation that subsequently became the Civil Rights Act of 1964. Representative Celler, the Chairman of the House Judiciary Committee, and the floor manager of the legislation in the House, introduced Title VI in words unequivocally expressing the intent to provide the Federal Government with the means of assuring that its funds were not used to subsidize racial discrimination inconsistent with the standards imposed by the Fourteenth and Fifth Amendments upon state and federal action.

“The bill would offer assurance that hospitals financed by Federal money would not deny adequate care to Negroes. It would prevent abuse of food distribution programs whereby Negroes have been known to be denied food surplus supplies when white persons were given such food. It would assure Negroes the benefits now accorded only white students in programs of high[er] education financed by Federal funds. It would, in short, assure the existing right to equal treatment in the enjoyment of Federal funds. It would not destroy any rights of private property or freedom of association.” 110 Cong. Rec. 1519 (1964).

It was clear to Representative Celler that Title VI, apart from the fact that it reached all federally funded activities even in the absence of sufficient state or federal control to invoke the Fourteenth or Fifth Amendments, was not placing new substantive limitations upon the use of racial criteria, but rather was designed to extend to such activities “the existing right to equal treatment” enjoyed by Negroes under those Amendments, and he later specifically defined the purpose of Title VI in this way:

“In general, it seems rather anomalous that the Federal Government should aid and abet discrimination on the basis of race, color, or national origin by granting money and other kinds of financial aid. It seems rather shocking, moreover, that while we have on the one hand the 14th amendment, which is supposed to do away with discrimination since it provides for equal protection of the laws, on the other hand, we have the Federal Government aiding and abetting those who persist in practicing racial discrimination.

“It is for these reasons that we bring forth title VI. The enactment of title VI will serve to override specific provisions of law which contemplate Federal assistance to racially segregated institutions.” *Id.*, at 2467.

Representative Celler also filed a memorandum setting forth the legal basis for the enactment of Title VI which reiterated the theme of his oral remarks: “In exercising its authority to fix the terms on which Federal funds will be disbursed . . . , Congress clearly has power to legislate so as to insure that the Federal Government does not become involved in a violation of the Constitution.” *Id.*, at 1528.

Other sponsors of the legislation agreed with Representative Celler that the function of Title VI was to end the Federal Government’s complicity in conduct, particularly the segregation or exclusion of Negroes, inconsistent with the standards to be found in the antidiscrimination provisions of the Constitution. Representative Lindsay, also a member of the Judiciary Committee, candidly acknowledged, in the course of explaining why Title VI was necessary, that it did not create any new standard of equal treatment beyond that contained in the Constitution:

“Both the Federal Government and the States are under constitutional mandates not to discriminate. Many have raised the question as to whether legislation is required at all. Does not the Executive already have the power in the distribution of Federal funds to apply those conditions which will enable the Federal Government itself to live up to the mandate of the Constitution and to require States and local government entities to live up to the Constitution, most especially the 5th and 14th amendments?” *Id.*, at 2467.

He then explained that legislation was needed to authorize the termination of funding by the Executive Branch because existing legislation seemed to contemplate the expenditure of funds to support racially segregated institutions. *Ibid.* The views of Representatives Celler and Lindsay concerning the purpose and function of Title VI were shared by other sponsors and proponents of the legislation in the House. Nowhere is there any suggestion that Title VI was intended to terminate federal funding for any reason other than consideration of race or national origin by the recipient institution in a manner inconsistent with the standards incorporated in the Constitution.

The Senate’s consideration of Title VI reveals an identical understanding concerning the purpose and scope of the legislation. Senator Humphrey, the Senate floor manager, opened the Senate debate with a section-by-section analysis of the Civil Rights Act in which he succinctly stated the purpose of Title VI:

“The purpose of title VI is to make sure that funds of the United States are not used to support racial discrimination. In many instances the practices of segregation or discrimination, which title VI seeks to end, are unconstitutional. This is clearly so wherever Federal funds go to a State agency which engages in racial discrimination. It may also be so where Federal funds go to support private, segregated institutions, under the decision in *Simkins v. Moses H. Cone Memorial Hospital*, 323 F.2d 959 (C. A. 4, 1963), [cert. denied, (1964)]. In all cases, such discrimination is contrary to national policy, and to the moral sense of the Nation. Thus, title VI is simply designed to insure that Federal funds are spent in accordance with the Constitution and the moral sense of the Nation.” *Id.*, at 6544.

Senator Humphrey, in words echoing statements in the House, explained that legislation was needed to accomplish this objective because it was necessary to eliminate uncertainty concerning the power of federal agencies to terminate financial assistance to programs engaging in racial discrimination in the face of various federal statutes which appeared to authorize grants to racially segregated institutions. *Ibid.* Although Senator Humphrey realized that Title VI reached conduct which, because of insufficient governmental action, might be beyond the reach of the Constitution, it was clear to him that the substantive standard imposed by the statute was that of the Fifth and Fourteenth Amendments.

Senate supporters of Title VI repeatedly expressed agreement with Senator Humphrey's description of the legislation as providing the explicit authority and obligation to apply the standards of the Constitution to all recipients of federal funds. Senator Ribicoff described the limited function of Title VI:

“Basically, there is a constitutional restriction against discrimination in the use of Federal funds; and title VI simply spells out the procedure to be used in enforcing that restriction.” *Id.*, at 13333.

Other strong proponents of the legislation in the Senate repeatedly expressed their intent to assure that federal funds would only be spent in accordance with constitutional standards. See remarks of Senator Pastore, *id.*, at 7057, 7062; Senator Clark, *id.*, at 5243; Senator Allott, *id.*, at 12675, 12677.

Respondent's contention that Congress intended Title VI to bar affirmative-action programs designed to enable minorities disadvantaged by the effects of discrimination to participate in federally financed programs is also refuted by an examination of the type of conduct which Congress thought it was prohibiting by means of Title VI. The debates reveal that the legislation was motivated primarily by a desire to eradicate a very specific evil: federal financial support of programs which disadvantaged Negroes by excluding them from participation or providing them with separate facilities. Again and again supporters of Title VI emphasized that the purpose of the statute was to end segregation in federally funded activities and to end other discriminatory uses of race disadvantaging Negroes. Senator Humphrey set the theme in his speech presenting Title VI to the Senate:

“Large sums of money are contributed by the United States each year for the construction, operation, and maintenance of segregated schools.

. . . .

“Similarly, under the Hill-Burton Act, Federal grants are made to hospitals which admit whites only or Negroes only . . . .

“In higher education also, a substantial part of the Federal grants to colleges, medical schools and so forth, in the South is still going to segregated institutions.

“Nor is this all. In several States, agricultural extension services, supported by Federal funds, maintain racially segregated offices for Negroes and whites . . . .

“ . . . Vocational training courses, supported with Federal funds, are given in segregated schools and institutions and often limit Negroes to training in less skilled occupations. In particular localities it is reported that Negroes have been cut off from relief rolls, or denied surplus agricultural commodities, or otherwise deprived of the benefit of federally assisted programs, in retaliation for their participation in voter registration drives, sit-in demonstrations and the like.” *Id.*, at 6543-6544.

See also the remarks of Senator Pastore (*id.*, at 7054-7055); Senator Ribicoff (*id.*, at 7064-7065); Senator Clark (*id.*, at 5243, 9086); Senator Javits (*id.*, at 6050, 7102).

The conclusion to be drawn from the foregoing is clear. Congress recognized that Negroes, in some cases with congressional acquiescence, were being discriminated against in the

administration of programs and denied the full benefits of activities receiving federal financial support. It was aware that there were many federally funded programs and institutions which discriminated against minorities in a manner inconsistent with the standards of the Fifth and Fourteenth Amendments but whose activities might not involve sufficient state or federal action so as to be in violation of these Amendments. Moreover, Congress believed that it was questionable whether the Executive Branch possessed legal authority to terminate the funding of activities on the ground that they discriminated racially against Negroes in a manner violative of the standards contained in the Fourteenth and Fifth Amendments. Congress' solution was to end the Government's complicity in constitutionally forbidden racial discrimination by providing the Executive Branch with the authority and the obligation to terminate its financial support of any activity which employed racial criteria in a manner condemned by the Constitution.

Of course, it might be argued that the Congress which enacted Title VI understood the Constitution to require strict racial neutrality or color blindness, and then enshrined that concept as a rule of statutory law. Later interpretation and clarification of the Constitution to permit remedial use of race would then not dislodge Title VI's prohibition of race-conscious action. But there are three compelling reasons to reject such a hypothesis.

First, no decision of this Court has ever adopted the proposition that the Constitution must be colorblind. See *infra*, at 355-356.

Second, even if it could be argued in 1964 that the Constitution might conceivably require color blindness, Congress surely would not have chosen to codify such a view unless the Constitution clearly required it. The legislative history of Title VI, as well as the statute itself, reveals a desire to induce voluntary compliance with the requirement of nondiscriminatory treatment. See 602 of the Act, 42 U.S.C. 2000d-1 (no funds shall be terminated unless and until it has been "determined that compliance cannot be secured by voluntary means"); H. R. Rep. No. 914, 88th Cong., 1st Sess., pt. 1, p. 25 (1963); 110 Cong. Rec. 13700 (1964) (Sen. Pastore); *id.*, at 6546 (Sen. Humphrey). It is inconceivable that Congress intended to encourage voluntary efforts to eliminate the evil of racial discrimination while at the same time forbidding the voluntary use of race-conscious remedies to cure acknowledged or obvious statutory violations. Yet a reading of Title VI as prohibiting all action predicated upon race which adversely affects any individual would require recipients guilty of discrimination to await the imposition of such remedies by the Executive Branch. Indeed, such an interpretation of Title VI would prevent recipients of federal funds from taking race into account even when necessary to bring their programs into compliance with federal constitutional requirements. This would be a remarkable reading of a statute designed to eliminate constitutional violations, especially in light of judicial decisions holding that under certain circumstances the remedial use of racial criteria is not only permissible but is constitutionally required to eradicate constitutional violations. For example, in *Board of Education v. Swann*, (1971), the Court held that a statute forbidding the assignment of students on the basis of race was unconstitutional because it would hinder the implementation of remedies necessary to accomplish the desegregation of a school system: "Just as the race of students must be considered in determining whether a constitutional violation has occurred, so also must race be considered in formulating a remedy." *Id.*, at 46. Surely Congress did not intend to prohibit the use of racial criteria when constitutionally required or to terminate the funding of any entity which implemented such a remedy. It clearly desired to encourage all remedies, including the use of race, necessary to eliminate racial discrimination in violation of the Constitution rather than requiring the recipient to await a judicial adjudication of unconstitutionality and the judicial imposition of a racially oriented remedy.

Third, the legislative history shows that Congress specifically eschewed any static definition of discrimination in favor of broad language that could be shaped by experience, administrative necessity, and evolving judicial doctrine. Although it is clear from the debates that the

supporters of Title VI intended to ban uses of race prohibited by the Constitution and, more specifically, the maintenance of segregated facilities, they never precisely defined the term “discrimination,” or what constituted an exclusion from participation or a denial of benefits on the ground of race. This failure was not lost upon its opponents. Senator Ervin complained:

“The word ‘discrimination,’ as used in this reference, has no contextual explanation whatever, other than the provision that the discrimination ‘is to be against’ individuals participating in or benefiting from federally assisted programs and activities on the ground specified. With this context, the discrimination condemned by this reference occurs only when an individual is treated unequally or unfairly because of his race, color, religion, or national origin. What constitutes unequal or unfair treatment? Section 601 and section 602 of title VI do not say. They leave the determination of that question to the executive department or agencies administering each program, without any guideline whatever to point out what is the congressional intent.” 110 Cong. Rec. 5612 (1964).

See also remarks of Representative Abernethy (*id.*, at 1619); Representative Dowdy (*id.*, at 1632); Senator Talmadge (*id.*, at 5251); Senator Sparkman (*id.*, at 6052). Despite these criticisms, the legislation’s supporters refused to include in the statute or even provide in debate a more explicit definition of what Title VI prohibited.

The explanation for this failure is clear. Specific definitions were undesirable, in the views of the legislation’s principal backers, because Title VI’s standard was that of the Constitution and one that could and should be administratively and judicially applied. See remarks of Senator Humphrey (*id.*, at 5253, 6553); Senator Ribicoff (*id.*, at 7057, 13333); Senator Pastore (*id.*, at 7057); Senator Javits (*id.*, at 5606-5607, 6050). Indeed, there was a strong emphasis throughout Congress’ consideration of Title VI on providing the Executive Branch with considerable flexibility in interpreting and applying the prohibition against racial discrimination. Attorney General Robert Kennedy testified that regulations had not been written into the legislation itself because the rules and regulations defining discrimination might differ from one program to another so that the term would assume different meanings in different contexts. This determination to preserve flexibility in the administration of Title VI was shared by the legislation’s supporters. When Senator Johnston offered an amendment that would have expressly authorized federal grantees to take race into account in placing children in adoptive and foster homes, Senator Pastore opposed the amendment, which was ultimately defeated by a 56-29 vote, on the ground that federal administrators could be trusted to act reasonably and that there was no danger that they would prohibit the use of racial criteria under such circumstances. *Id.*, at 13695.

Congress’ resolve not to incorporate a static definition of discrimination into Title VI is not surprising. In 1963 and 1964, when Title VI was drafted and debated, the courts had only recently applied the Equal Protection Clause to strike down public racial discrimination in America, and the scope of that Clause’s nondiscrimination principle was in a state of flux and rapid evolution. Many questions, such as whether the Fourteenth Amendment barred only *de jure* discrimination or in at least some circumstances reached *de facto* discrimination, had not yet received an authoritative judicial resolution. The congressional debate reflects an awareness of the evolutionary change that constitutional law in the area of racial discrimination was undergoing in 1964.

In sum, Congress’ equating of Title VI’s prohibition with the commands of the Fifth and Fourteenth Amendments, its refusal precisely to define that racial discrimination which it intended to prohibit, and its expectation that the statute would be administered in a flexible manner, compel the conclusion that Congress intended the meaning of the statute’s prohibition to evolve with the interpretation of the commands of the Constitution. Thus, any claim that the use of racial criteria is barred by the plain language of the statute must fail in light

of the remedial purpose of Title VI and its legislative history. The cryptic nature of the language employed in Title VI merely reflects Congress' concern with the then-prevalent use of racial standards as a means of excluding or disadvantaging Negroes and its determination to prohibit absolutely such discrimination. We have recently held that "[w]hen aid to construction of the meaning of words, as used in the statute, is available, there certainly can be no 'rule of law' which forbids its use, however clear the words may appear on 'superficial examination.'" *Train v. Colorado Public Interest Research Group*, (1976), quoting *United States v. American Trucking Assns.*, (1940). This is especially so when, as is the case here, the literal application of what is believed to be the plain language of the statute, assuming that it is so plain, would lead to results in direct conflict with Congress' unequivocally expressed legislative purpose.

## B

Section 602 of Title VI, 42 U.S.C. 2000d-1, instructs federal agencies to promulgate regulations interpreting Title VI. These regulations, which, under the terms of the statute, require Presidential approval, are entitled to considerable deference in construing Title VI. See, e. g., *Lau v. Nichols*, (1974); *Mourning v. Family Publications Service, Inc.*, (1973); *Red Lion Broadcasting Co. v. FCC*, (1969). Consequently, it is most significant that the Department of Health, Education, and Welfare (HEW), which provides much of the federal assistance to institutions of higher education, has adopted regulations requiring affirmative measures designed to enable racial minorities which have been previously discriminated against by a federally funded institution or program to overcome the effects of such actions and authorizing the voluntary undertaking of affirmative-action programs by federally funded institutions that have not been guilty of prior discrimination in order to overcome the effects of conditions which have adversely affected the degree of participation by persons of a particular race.

Title 45 CFR 80.3 (b) (6) (i) (1977) provides:

"In administering a program regarding which the recipient has previously discriminated against persons on the ground of race, color, or national origin, the recipient must take affirmative action to overcome the effects of prior discrimination."

Title 45 CFR 80.5 (i) (1977) elaborates upon this requirement:

"In some situations, even though past discriminatory practices attributable to a recipient or applicant have been abandoned, the consequences of such practices continue to impede the full availability of a benefit. If the efforts required of the applicant or recipient under 80.6 (d), to provide information as to the availability of the program or activity and the rights of beneficiaries under this regulation, have failed to overcome these consequences, it will become necessary under the requirement stated in (i) of 80.3 (b) (6) for such applicant or recipient to take additional steps to make the benefits fully available to racial and nationality groups previously subject to discrimination. This action might take the form, for example, of special arrangements for obtaining referrals or making selections which will insure that groups previously subjected to discrimination are adequately served."

These regulations clearly establish that where there is a need to overcome the effects of past racially discriminatory or exclusionary practices engaged in by a federally funded institution, race-conscious action is not only permitted but required to accomplish the remedial objectives of Title VI. Of course, there is no evidence that the Medical School has been guilty of past discrimination and consequently these regulations would not compel it to employ a program of preferential admissions in behalf of racial minorities. It would be difficult to explain from the language of Title VI, however, much less from its legislative history, why the statute compels race-conscious remedies where a recipient institution has engaged in past discrimination but prohibits such remedial action where racial minorities, as a result of the effects

of past discrimination imposed by entities other than the recipient, are excluded from the benefits of federally funded programs. HEW was fully aware of the incongruous nature of such an interpretation of Title VI.

Title 45 CFR 80.3 (b) (6) (ii) (1977) provides:

“Even in the absence of such prior discrimination, a recipient in administering a program may take affirmative action to overcome the effects of conditions which resulted in limiting participation by persons of a particular race, color, or national origin.”

An explanatory regulation explicitly states that the affirmative action which 80.3 (b) (6) (ii) contemplates includes the use of racial preferences:

“Even though an applicant or recipient has never used discriminatory policies, the services and benefits of the program or activity it administers may not in fact be equally available to some racial or nationality groups. In such circumstances, an applicant or recipient may properly give special consideration to race, color, or national origin to make the benefits of its program more widely available to such groups, not then being adequately served. For example, where a university is not adequately serving members of a particular racial or nationality group, it may establish special recruitment policies to make its program better known and more readily available to such group, and take other steps to provide that group with more adequate service.” 45 CFR 80.5 (j) (1977).

This interpretation of Title VI is fully consistent with the statute’s emphasis upon voluntary remedial action and reflects the views of an agency responsible for achieving its objectives.

The Court has recognized that the construction of a statute by those charged with its execution is particularly deserving of respect where Congress has directed its attention to the administrative construction and left it unaltered. Cf. *Red Lion Broadcasting Co. v. FCC*; *Zemel v. Rusk*, (1965). Congress recently took just this kind of action when it considered an amendment to the Departments of Labor and Health, Education, and Welfare appropriation bill for 1978, which would have restricted significantly the remedial use of race in programs funded by the appropriation. The amendment, as originally submitted by Representative Ashbrook, provided that “[n]one of the funds appropriated in this Act may be used to initiate, carry out or enforce any program of affirmative action or any other system of quotas or goals in regard to admission policies or employment practices which encourage or require any discrimination on the basis of race, creed, religion, sex or age.” 123 Cong. Rec. 19715 (1977). In support of the measure, Representative Ashbrook argued that the 1964 Civil Rights Act never authorized the imposition of affirmative action and that this was a creation of the bureaucracy. *Id.*, at 19722. He explicitly stated, however, that he favored permitting universities to adopt affirmative-action programs giving consideration to racial identity but opposed the imposition of such programs by the Government. *Id.*, at 19715. His amendment was itself amended to reflect this position by only barring the imposition of race-conscious remedies by HEW:

“None of the funds appropriated in this Act may be obligated or expended in connection with the issuance, implementation, or enforcement of any rule, regulation, standard, guideline, recommendation, or order issued by the Secretary of Health, Education, and Welfare which for purposes of compliance with any ratio, quota, or other numerical requirement related to race, creed, color, national origin, or sex requires any individual or entity to take any action with respect to (1) the hiring or promotion policies or practices of such individual or entity, or (2) the admissions policies or practices of such individual or entity.” *Id.*, at 19722.

This amendment was adopted by the House. *Ibid.* The Senate bill, however, contained no such restriction upon HEW’s authority to impose race-conscious remedies and the Conference Committee, upon the urging of the Secretary of HEW, deleted the House provision from the

bill. More significant for present purposes, however, is the fact that even the proponents of imposing limitations upon HEW's implementation of Title VI did not challenge the right of federally funded educational institutions voluntarily to extend preferences to racial minorities.

Finally, congressional action subsequent to the passage of Title VI eliminates any possible doubt about Congress' views concerning the permissibility of racial preferences for the purpose of assisting disadvantaged racial minorities. It confirms that Congress did not intend to prohibit and does not now believe that Title VI prohibits the consideration of race as part of a remedy for societal discrimination even where there is no showing that the institution extending the preference has been guilty of past discrimination nor any judicial finding that the particular beneficiaries of the racial preference have been adversely affected by societal discrimination.

Just last year Congress enacted legislation explicitly requiring that no grants shall be made "for any local public works project unless the applicant gives satisfactory assurance to the Secretary [of Commerce] that at least 10 per centum of the amount of each grant shall be expended for minority business enterprises." The statute defines the term "minority business enterprise" as "a business, at least 50 per centum of which is owned by minority group members or, in case of a publicly owned business, at least 51 per centum of the stock of which is owned by minority group members." The term "minority group members" is defined in explicitly racial terms: "citizens of the United States who are Negroes, Spanish-speaking, Orientals, Indians, Eskimos, and Aleuts." Although the statute contains an exemption from this requirement "to the extent that the Secretary determines otherwise," this escape clause was provided only to deal with the possibility that certain areas of the country might not contain sufficient qualified "minority business enterprises" to permit compliance with the quota provisions of the legislation.

The legislative history of this race-conscious legislation reveals that it represents a deliberate attempt to deal with the excessive rate of unemployment among minority citizens and to encourage the development of viable minority controlled enterprises. It was believed that such a "set-aside" was required in order to enable minorities, still "new on the scene" and "relatively small," to compete with larger and more established companies which would always be successful in underbidding minority enterprises. 123 Cong. Rec. 5327 (1977) (Rep. Mitchell). What is most significant about the congressional consideration of the measure is that although the use of a racial quota or "set-aside" by a recipient of federal funds would constitute a direct violation of Title VI if that statute were read to prohibit race-conscious action, no mention was made during the debates in either the House or the Senate of even the possibility that the quota provisions for minority contractors might in any way conflict with or modify Title VI. It is inconceivable that such a purported conflict would have escaped congressional attention through an inadvertent failure to recognize the relevance of Title VI. Indeed, the Act of which this affirmative-action provision is a part also contains a provision barring discrimination on the basis of sex which states that this prohibition "will be enforced through agency provisions and rules similar to those already established, with respect to racial and other discrimination under Title VI of the Civil Rights Act of 1964." 42 U.S.C. 6709 (1976 ed.). Thus Congress was fully aware of the applicability of Title VI to the funding of public works projects. Under these circumstances, the enactment of the 10% "set-aside" for minority enterprises reflects a congressional judgment that the remedial use of race is permissible under Title VI. We have repeatedly recognized that subsequent legislation reflecting an interpretation of an earlier Act is entitled to great weight in determining the meaning of the earlier statute. *Red Lion Broadcasting Co. v. FCC*; *Erlenbaugh v. United States*, (1972). See also *United States v. Stewart*, (1940).

## C

Prior decisions of this Court also strongly suggest that Title VI does not prohibit the remedial use of race where such action is constitutionally permissible. In *Lau v. Nichols*, (1974), the

Court held that the failure of the San Francisco school system to provide English-language instruction to students of Chinese ancestry who do not speak English, or to provide them with instruction in Chinese, constituted a violation of Title VI. The Court relied upon an HEW regulation which stipulates that a recipient of federal funds “may not . . . utilize criteria or methods of administration which have the effect of subjecting individuals to discrimination” or have “the effect of defeating or substantially impairing accomplishment of the objectives of the program as respect individuals of a particular race, color, or national origin.” 45 CFR 80.3 (b) (2) (1977). It interpreted this regulation as requiring San Francisco to extend the same educational benefits to Chinese-speaking students as to English-speaking students, even though there was no finding or allegation that the city’s failure to do so was a result of a purposeful design to discriminate on the basis of race.

Lau is significant in two related respects. First, it indicates that in at least some circumstances agencies responsible for the administration of Title VI may require recipients who have not been guilty of any constitutional violations to depart from a policy of color blindness and to be cognizant of the impact of their actions upon racial minorities. Secondly, Lau clearly requires that institutions receiving federal funds be accorded considerable latitude in voluntarily undertaking race-conscious action designed to remedy the exclusion of significant numbers of minorities from the benefits of federally funded programs. Although this Court has not yet considered the question, presumably, by analogy to our decisions construing Title VII, a medical school would not be in violation of Title VI under Lau because of the serious under representation of racial minorities in its student body as long as it could demonstrate that its entrance requirements correlated sufficiently with the performance of minority students in medical school and the medical profession. It would be inconsistent with Lau and the emphasis of Title VI and the HEW regulations on voluntary action, however, to require that an institution wait to be adjudicated to be in violation of the law before being permitted to voluntarily undertake corrective action based upon a good-faith and reasonable belief that the failure of certain racial minorities to satisfy entrance requirements is not a measure of their ultimate performance as doctors but a result of the lingering effects of past societal discrimination.

We recognize that Lau, especially when read in light of our subsequent decision in *Washington v. Davis*, (1976), which rejected the general proposition that governmental action is unconstitutional solely because it has a racially disproportionate impact, may be read as being predicated upon the view that, at least under some circumstances, Title VI proscribes conduct which might not be prohibited by the Constitution. Since we are now of the opinion, for the reasons set forth above, that Title VI’s standard, applicable alike to public and private recipients of federal funds, is no broader than the Constitution’s, we have serious doubts concerning the correctness of what appears to be the premise of that decision. However, even accepting Lau’s implication that impact alone is in some contexts sufficient to establish a prima facie violation of Title VI, contrary to our view that Title VI’s definition of racial discrimination is absolutely coextensive with the Constitution’s, this would not assist the respondent in the least. First, for the reasons discussed supra, at 336-350, regardless of whether Title VI’s prohibitions extend beyond the Constitution’s the evidence fails to establish, and, indeed, compels the rejection of, the proposition that Congress intended to prohibit recipients of federal funds from voluntarily employing race-conscious measures to eliminate the effects of past societal discrimination against racial minorities such as Negroes. Secondly, Lau itself, for the reasons set forth in the immediately preceding paragraph, strongly supports the view that voluntary race-conscious remedial action is permissible under Title VI. If discriminatory racial impact alone is enough to demonstrate at least a prima facie Title VI violation, it is difficult to believe that the Title would forbid the Medical School from attempting to correct the racially exclusionary effects of its initial admissions policy during the first two years of the School’s operation.

The Court has also declined to adopt a “colorblind” interpretation of other statutes containing nondiscrimination provisions similar to that contained in Title VI. We have held under

Title VII that where employment requirements have a disproportionate impact upon racial minorities they constitute a statutory violation, even in the absence of discriminatory intent, unless the employer is able to demonstrate that the requirements are sufficiently related to the needs of the job. More significantly, the Court has required that preferences be given by employers to members of racial minorities as a remedy for past violations of Title VII, even where there has been no finding that the employer has acted with a discriminatory intent. Finally, we have construed the Voting Rights Act of 1965, 42 U.S.C. 1973 et seq. (1970 ed. and Supp. V), which contains a provision barring any voting procedure or qualification that denies or abridges “the right of any citizen of the United States to vote on account of race or color,” as permitting States to voluntarily take race into account in a way that fairly represents the voting strengths of different racial groups in order to comply with the commands of the statute, even where the result is a gain for one racial group at the expense of others.

These prior decisions are indicative of the Court’s unwillingness to construe remedial statutes designed to eliminate discrimination against racial minorities in a manner which would impede efforts to attain this objective. There is no justification for departing from this course in the case of Title VI and frustrating the clear judgment of Congress that race-conscious remedial action is permissible.

We turn, therefore, to our analysis of the Equal Protection Clause of the Fourteenth Amendment.

### III

#### A

The assertion of human equality is closely associated with the proposition that differences in color or creed, birth or status, are neither significant nor relevant to the way in which persons should be treated. Nonetheless, the position that such factors must be “constitutionally an irrelevance,” *Edwards v. California*, (1941) (Jackson, J., concurring), summed up by the shorthand phrase “[o]ur Constitution is color-blind,” *Plessy v. Ferguson*, (1896) (Harlan, J., dissenting), has never been adopted by this Court as the proper meaning of the Equal Protection Clause. Indeed, we have expressly rejected this proposition on a number of occasions.

Our cases have always implied that an “overriding statutory purpose,” *McLaughlin v. Florida*, (1964), could be found that would justify racial classifications. See, e. g., *ibid.*; *Loving v. Virginia*, (1967); *Korematsu v. United States*, (1944); *Hirabayashi v. United States*, (1943). More recently, in *McDaniel v. Barresi*, (1971), this Court unanimously reversed the Georgia Supreme Court which had held that a desegregation plan voluntarily adopted by a local school board, which assigned students on the basis of race, was per se invalid because it was not color-blind. And in *North Carolina Board of Education v. Swann* we held, again unanimously, that a statute mandating colorblind school-assignment plans could not stand “against the background of segregation,” since such a limit on remedies would “render illusory the promise of *Brown* [I].”

We conclude, therefore, that racial classifications are not per se invalid under the Fourteenth Amendment. Accordingly, we turn to the problem of articulating what our role should be in reviewing state action that expressly classifies by race.

#### B

Respondent argues that racial classifications are always suspect and, consequently, that this Court should weigh the importance of the objectives served by Davis’ special admissions program to see if they are compelling. In addition, he asserts that this Court must inquire whether, in its judgment, there are alternatives to racial classifications which would suit Davis’ purposes. Petitioner, on the other hand, states that our proper role is simply to accept petitioner’s deter-

mination that the racial classifications used by its program are reasonably related to what it tells us are its benign purposes. We reject petitioner's view, but, because our prior cases are in many respects in apposite to that before us now, we find it necessary to define with precision the meaning of that inexact term, "strict scrutiny."

Unquestionably we have held that a government practice or statute which restricts "fundamental rights" or which contains "suspect classifications" is to be subjected to "strict scrutiny" and can be justified only if it furthers a compelling government purpose and, even then, only if no less restrictive alternative is available. See, e. g., *San Antonio Independent School District v. Rodriguez*, (1973); *Dunn v. Blumstein*, (1972). But no fundamental right is involved here. See *San Antonio*, supra, at 29-36. Nor do whites as a class have any of the "traditional indicia of suspectness: the class is not saddled with such disabilities, or subjected to such a history of purposeful unequal treatment, or relegated to such a position of political powerlessness as to command extraordinary protection from the majoritarian political process." *Id.*, at 28; see *United States v. Carolene Products Co.*, n. 4 (1938).

Moreover, if the University's representations are credited, this is not a case where racial classifications are "irrelevant and therefore prohibited." *Hirabayashi*, supra, at 100. Nor has anyone suggested that the University's purposes contravene the cardinal principle that racial classifications that stigmatize—because they are drawn on the presumption that one race is inferior to another or because they put the weight of government behind racial hatred and separatism—are invalid without more. See *Yick Wo v. Hopkins*, (1886); accord, *Strauder v. West Virginia*, (1880); *Korematsu v. United States*, supra, at 223; *Oyama v. California*, (1948) (Murphy, J., concurring); *Brown I*, (1954); *McLaughlin v. Florida*, supra, at 191-192; *Loving v. Virginia*, supra, at 11-12; *Reitman v. Mulkey*, (1967); *United Jewish Organizations v. Carey*, (1977) (UJO) (opinion of WHITE, J., joined by REHNQUIST and STEVENS, JJ.); *id.*, at 169 (opinion concurring in part).

On the other hand, the fact that this case does not fit neatly into our prior analytic framework for race cases does not mean that it should be analyzed by applying the very loose rational-basis standard of review that is the very least that is always applied in equal protection cases. "[T]he mere recitation of a benign, compensatory purpose is not an automatic shield which protects against any inquiry into the actual purposes underlying a statutory scheme." *Califano v. Webster*, (1977), quoting *Weinberger v. Wiesenfeld*, (1975). Instead, a number of considerations—developed in gender-discrimination cases but which carry even more force when applied to racial classifications—lead us to conclude that racial classifications designed to further remedial purposes "must serve important governmental objectives and must be substantially related to achievement of those objectives." *Califano v. Webster*, supra, at 317, quoting *Craig v. Boren*, (1976).

First, race, like, "gender-based classifications too often [has] been inexcusably utilized to stereotype and stigmatize politically powerless segments of society." *Kahn v. Shevin*, (1974) (dissenting opinion). While a carefully tailored statute designed to remedy past discrimination could avoid these vices, see *Califano v. Webster*, supra; *Schlesinger v. Ballard*, (1975); *Kahn v. Shevin*, supra, we nonetheless have recognized that the line between honest and thoughtful appraisal of the effects of past discrimination and paternalistic stereotyping is not so clear and that a statute based on the latter is patently capable of stigmatizing all women with a badge of inferiority. Cf. *Schlesinger v. Ballard*, supra, at 508; UJO, supra, at 174, and n. 3 (opinion concurring in part); *Califano v. Goldfarb*, (1977) (STEVENS, J., concurring in judgment). See also *Stanton v. Stanton*, (1975). State programs designed ostensibly to ameliorate the effects of past racial discrimination obviously create the same hazard of stigma, since they may promote racial separatism and reinforce the views of those who believe that members of racial minorities are inherently incapable of succeeding on their own. See UJO, supra, at 172 (opinion concurring in part); ante, at 298 (opinion of POWELL, J.).

Second, race, like gender and illegitimacy, see *Weber v. Aetna Casualty & Surety Co.*, (1972), is an immutable characteristic which its possessors are powerless to escape or set aside.

While a classification is not per se invalid because it divides classes on the basis of an immutable characteristic, see *supra*, at 355-356, it is nevertheless true that such divisions are contrary to our deep belief that “legal burdens should bear some relationship to individual responsibility or wrongdoing.” *Weber, supra*, at 175; *Frontiero v. Richardson*, (1973) (opinion of BRENNAN, WHITE, and MARSHALL, JJ.), and that advancement sanctioned, sponsored, or approved by the State should ideally be based on individual merit or achievement, or at the least on factors within the control of an individual. See *UJO*, (opinion concurring in part); *Kotch v. Board of River Port Pilot Comm’rs*, (1947) (Rutledge, J., dissenting).

Because this principle is so deeply rooted it might be supposed that it would be considered in the legislative process and weighed against the benefits of programs preferring individuals because of their race. But this is not necessarily so: The “natural consequence of our governing processes [may well be] that the most ‘discrete and insular’ of whites . . . will be called upon to bear the immediate, direct costs of benign discrimination.” *UJO, supra*, at 174 (opinion concurring in part). Moreover, it is clear from our cases that there are limits beyond which majorities may not go when they classify on the basis of immutable characteristics. See, e. g., *Weber, supra*. Thus, even if the concern for individualism is weighed by the political process, that weighing cannot waive the personal rights of individuals under the Fourteenth Amendment. See *Lucas v. Colorado General Assembly*, (1964).

In sum, because of the significant risk that racial classifications established for ostensibly benign purposes can be misused, causing effects not unlike those created by invidious classifications, it is inappropriate to inquire only whether there is any conceivable basis that might sustain such a classification. Instead, to justify such a classification an important and articulated purpose for its use must be shown. In addition, any statute must be stricken that stigmatizes any group or that singles out those least well represented in the political process to bear the brunt of a benign program. Thus, our review under the Fourteenth Amendment should be strict—not “‘strict’ in theory and fatal in fact,” because it is stigma that causes fatality—but strict and searching nonetheless.

#### IV

Davis’ articulated purpose of remedying the effects of past societal discrimination is, under our cases, sufficiently important to justify the use of race-conscious admissions programs where there is a sound basis for concluding that minority underrepresentation is substantial and chronic, and that the handicap of past discrimination is impeding access of minorities to the Medical School.

#### A

At least since *Green v. County School Board*, (1968), it has been clear that a public body which has itself been adjudged to have engaged in racial discrimination cannot bring itself into compliance with the Equal Protection Clause simply by ending its unlawful acts and adopting a neutral stance. Three years later, *Swann v. Charlotte-Mecklenburg Board of Education*, (1971), and its companion cases, *Davis v. School Comm’rs of Mobile County*, (1971); *McDaniel v. Barresi*, (1971); and *North Carolina Board of Education v. Swann*, (1971), reiterated that racially neutral remedies for past discrimination were inadequate where consequences of past discriminatory acts influence or control present decisions. See, e. g., *Charlotte-Mecklenburg, supra*, at 28. And the Court further held both that courts could enter desegregation orders which assigned students and faculty by reference to race, *Charlotte-Mecklenburg, supra*; *Davis, supra*; *United States v. Montgomery County Board of Ed.*, (1969), and that local school boards could voluntarily adopt desegregation plans which made express reference to race if this was necessary to remedy the effects of past discrimination. *McDaniel v. Barresi, supra*. Moreover, we stated that school boards, even in the absence of a judicial finding of past discrimination, could voluntarily adopt plans which assigned students with the end of creating

racial pluralism by establishing fixed ratios of black and white students in each school. *Charlotte-Mecklenburg*, *supra*, at 16. In each instance, the creation of unitary school systems, in which the effects of past discrimination had been “eliminated root and branch,” *Green*, *supra*, at 438, was recognized as a compelling social goal justifying the overt use of race.

Finally, the conclusion that state educational institutions may constitutionally adopt admissions programs designed to avoid exclusion of historically disadvantaged minorities, even when such programs explicitly take race into account, finds direct support in our cases construing congressional legislation designed to overcome the present effects of past discrimination. Congress can and has outlawed actions which have a disproportionately adverse and unjustified impact upon members of racial minorities and has required or authorized race-conscious action to put individuals disadvantaged by such impact in the position they otherwise might have enjoyed. See *Franks v. Bowman Transportation Co.*, (1976); *Teamsters v. United States*, (1977). Such relief does not require as a predicate proof that recipients of preferential advancement have been individually discriminated against; it is enough that each recipient is within a general class of persons likely to have been the victims of discrimination. See *id.*, at 357-362. Nor is it an objection to such relief that preference for minorities will upset the settled expectations of nonminorities. See *Franks*, *supra*. In addition, we have held that Congress, to remove barriers to equal opportunity, can and has required employers to use test criteria that fairly reflect the qualifications of minority applicants vis-a-vis nonminority applicants, even if this means interpreting the qualifications of an applicant in light of his race. See *Albemarle Paper Co. v. Moody*, (1975).

These cases cannot be distinguished simply by the presence of judicial findings of discrimination, for race-conscious remedies have been approved where such findings have not been made. *McDaniel v. Barresi*, *supra*; *UJO*; see *Califano v. Webster*, (1977); *Schlesinger v. Ballard*, (1975); *Kahn v. Shevin*, (1974). See also *Katzenbach v. Morgan*, (1966). Indeed, the requirement of a judicial determination of a constitutional or statutory violation as a predicate for race-conscious remedial actions would be self-defeating. Such a requirement would severely undermine efforts to achieve voluntary compliance with the requirements of law. And our society and jurisprudence have always stressed the value of voluntary efforts to further the objectives of the law. Judicial intervention is a last resort to achieve cessation of illegal conduct or the remedying of its effects rather than a prerequisite to action.

Nor can our cases be distinguished on the ground that the entity using explicit racial classifications itself had violated 1 of the Fourteenth Amendment or an antidiscrimination regulation, for again race-conscious remedies have been approved where this is not the case. See *UJO*, (opinion of WHITE, J., joined by BRENNAN, BLACKMUN, and STEVENS, JJ.); *id.*, at 167 (opinion of WHITE, J., joined by REHNQUIST and STEVENS, JJ.); cf. *Califano v. Webster*, *supra*, at 317; *Kahn v. Shevin*, *supra*. Moreover, the presence or absence of past discrimination by universities or employers is largely irrelevant to resolving respondent’s constitutional claims. The claims of those burdened by the race-conscious actions of a university or employer who has never been adjudged in violation of an antidiscrimination law are not any more or less entitled to deference than the claims of the burdened nonminority workers in *Franks v. Bowman Transportation Co.*, *supra*, in which the employer had violated Title VII, for in each case the employees are innocent of past discrimination. And, although it might be argued that, where an employer has violated an antidiscrimination law, the expectations of nonminority workers are themselves products of discrimination and hence “tainted,” see *Franks*, *supra*, at 776, and therefore more easily upset, the same argument can be made with respect to respondent. If it was reasonable to conclude—as we hold that it was—that the failure of minorities to qualify for admission at Davis under regular procedures was due principally to the effects of past discrimination, than there is a reasonable likelihood that, but for pervasive racial discrimination, respondent would have failed to qualify for admission even in the absence of Davis’ special admissions program.

Thus, our cases under Title VII of the Civil Rights Act have held that, in order to achieve minority participation in previously segregated areas of public life, Congress may require or

authorize preferential treatment for those likely disadvantaged by societal racial discrimination. Such legislation has been sustained even without a requirement of findings of intentional racial discrimination by those required or authorized to accord preferential treatment, or a case-by-case determination that those to be benefited suffered from racial discrimination. These decisions compel the conclusion that States also may adopt race-conscious programs designed to overcome substantial, chronic minority under representation where there is reason to believe that the evil addressed is a product of past racial discrimination.

Title VII was enacted pursuant to Congress' power under the Commerce Clause and 5 of the Fourteenth Amendment. To the extent that Congress acted under the Commerce Clause power, it was restricted in the use of race in governmental decisionmaking by the equal protection component of the Due Process Clause of the Fifth Amendment precisely to the same extent as are the States by 1 of the Fourteenth Amendment. Therefore, to the extent that Title VII rests on the Commerce Clause power, our decisions such as *Franks and Teamsters v. United States*, (1977), implicitly recognize that the affirmative use of race is consistent with the equal protection component of the Fifth Amendment and therefore with the Fourteenth Amendment. To the extent that Congress acted pursuant to 5 of the Fourteenth Amendment, those cases impliedly recognize that Congress was empowered under that provision to accord preferential treatment to victims of past discrimination in order to overcome the effects of segregation, and we see no reason to conclude that the States cannot voluntarily accomplish under 1 of the Fourteenth Amendment what Congress under 5 of the Fourteenth Amendment validly may authorize or compel either the States or private persons to do. A contrary position would conflict with the traditional understanding recognizing the competence of the States to initiate measures consistent with federal policy in the absence of congressional pre-emption of the subject matter. Nothing whatever in the legislative history of either the Fourteenth Amendment or the Civil Rights Acts even remotely suggests that the States are foreclosed from furthering the fundamental purpose of equal opportunity to which the Amendment and those Acts are addressed. Indeed, voluntary initiatives by the States to achieve the national goal of equal opportunity have been recognized to be essential to its attainment. "To use the Fourteenth Amendment as a sword against such State power would stultify that Amendment." *Railway Mail Assn. v. Corsi*, (1945) (Frankfurter, J., concurring). We therefore conclude that Davis' goal of admitting minority students disadvantaged by the effects of past discrimination is sufficiently important to justify use of race-conscious admissions criteria.

## B

Properly construed, therefore, our prior cases unequivocally show that a state government may adopt race-conscious programs if the purpose of such programs is to remove the disparate racial impact its actions might otherwise have and if there is reason to believe that the disparate impact is itself the product of past discrimination, whether its own or that of society at large. There is no question that Davis' program is valid under this test.

Certainly, on the basis of the undisputed factual submissions before this Court, Davis had a sound basis for believing that the problem of under representation of minorities was substantial and chronic and that the problem was attributable to handicaps imposed on minority applicants by past and present racial discrimination. Until at least 1973, the practice of medicine in this country was, in fact, if not in law, largely the prerogative of whites. In 1950, for example, while Negroes constituted 10% of the total population, Negro physicians constituted only 2.2% of the total number of physicians. The overwhelming majority of these, moreover, were educated in two predominantly Negro medical schools, Howard and Meharry. By 1970, the gap between the proportion of Negroes in medicine and their proportion in the population had widened: The number of Negroes employed in medicine remained frozen at 2.2% while the Negro population had increased to 11.1%. The number of Negro admittees to predomi-

nantly white medical schools, moreover, had declined in absolute numbers during the years 1955 to 1964. Odegaard 19.

Moreover, Davis had very good reason to believe that the national pattern of underrepresentation of minorities in medicine would be perpetuated if it retained a single admissions standard. For example, the entering classes in 1968 and 1969, the years in which such a standard was used, included only 1 Chicano and 2 Negroes out of the 50 admittees for each year. Nor is there any relief from this pattern of underrepresentation in the statistics for the regular admissions program in later years.

Davis clearly could conclude that the serious and persistent underrepresentation of minorities in medicine depicted by these statistics is the result of handicaps under which minority applicants labor as a consequence of a background of deliberate, purposeful discrimination against minorities in education and in society generally, as well as in the medical profession. From the inception of our national life, Negroes have been subjected to unique legal disabilities impairing access to equal educational opportunity. Under slavery, penal sanctions were imposed upon anyone attempting to educate Negroes. After enactment of the Fourteenth Amendment the States continued to deny Negroes equal educational opportunity, enforcing a strict policy of segregation that itself stamped Negroes as inferior, *Brown I*, (1954), that relegated minorities to inferior educational institutions, and that denied them intercourse in the mainstream of professional life necessary to advancement. See *Sweatt v. Painter*, (1950). Segregation was not limited to public facilities, moreover, but was enforced by criminal penalties against private action as well. Thus, as late as 1908, this Court enforced a state criminal conviction against a private college for teaching Negroes together with whites. *Berea College v. Kentucky*. See also *Plessy v. Ferguson*, (1896).

*Green v. County School Board*, (1968), gave explicit recognition to the fact that the habit of discrimination and the cultural tradition of race prejudice cultivated by centuries of legal slavery and segregation were not immediately dissipated when *Brown I*, supra, announced the constitutional principle that equal educational opportunity and participation in all aspects of American life could not be denied on the basis of race. Rather, massive official and private resistance prevented, and to a lesser extent still prevents, attainment of equal opportunity in education at all levels and in the professions. The generation of minority students applying to Davis Medical School since it opened in 1968— most of whom were born before or about the time *Brown I* was decided— clearly have been victims of this discrimination. Judicial decrees recognizing discrimination in public education in California testify to the fact of widespread discrimination suffered by California-born minority applicants; many minority group members living in California, moreover, were born and reared in school districts in Southern States segregated by law. Since separation of schoolchildren by race “generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone,” *Brown I*, supra, at 494, the conclusion is inescapable that applicants to medical school must be few indeed who endured the effects of de jure segregation, the resistance to *Brown I*, or the equally debilitating pervasive private discrimination fostered by our long history of official discrimination, cf. *Reitman v. Mulkey*, (1967), and yet come to the starting line with an education equal to whites.

Moreover, we need not rest solely on our own conclusion that Davis had sound reason to believe that the effects of past discrimination were handicapping minority applicants to the Medical School, because the Department of Health, Education, and Welfare, the expert agency charged by Congress with promulgating regulations enforcing Title VI of the Civil Rights Act of 1964, see supra, at 341-343, has also reached the conclusion that race may be taken into account in situations where a failure to do so would limit participation by minorities in federally funded programs, and regulations promulgated by the Department expressly contemplate that appropriate race-conscious programs may be adopted by universities to remedy unequal

access to university programs caused by their own or by past societal discrimination. See *supra*, at 344-345, discussing 45 CFR 80.3 (b) (6) (ii) and 80.5 (j) (1977). It cannot be questioned that, in the absence of the special admissions program, access of minority students to the Medical School would be severely limited and, accordingly, race-conscious admissions would be deemed an appropriate response under these federal regulations. Moreover, the Department's regulatory policy is not one that has gone unnoticed by Congress. See *supra*, at 346-347. Indeed, although an amendment to an appropriations bill was introduced just last year that would have prevented the Secretary of Health, Education, and Welfare from mandating race-conscious programs in university admissions, proponents of this measure, significantly, did not question the validity of voluntary implementation of race-conscious admissions criteria. See *ibid*. In these circumstances, the conclusion implicit in the regulations—that the lingering effects of past discrimination continue to make race-conscious remedial programs appropriate means for ensuring equal educational opportunity in universities—deserves considerable judicial deference. See, e. g., *Katzenbach v. Morgan*, (1966); *UJO*, (opinion concurring in part).

### C

The second prong of our test—whether the Davis program stigmatizes any discrete group or individual and whether race is reasonably used in light of the program's objectives—is clearly satisfied by the Davis program.

It is not even claimed that Davis' program in any way operates to stigmatize or single out any discrete and insular, or even any identifiable, nonminority group. Nor will harm comparable to that imposed upon racial minorities by exclusion or separation on grounds of race be the likely result of the program. It does not, for example, establish an exclusive preserve for minority students apart from and exclusive of whites. Rather, its purpose is to overcome the effects of segregation by bringing the races together. True, whites are excluded from participation in the special admissions program, but this fact only operates to reduce the number of whites to be admitted in the regular admissions program in order to permit admission of a reasonable percentage—less than their proportion of the California population—of otherwise underrepresented qualified minority applicants.

Nor was Bakke in any sense stamped as inferior by the Medical School's rejection of him. Indeed, it is conceded by all that he satisfied those criteria regarded by the school as generally relevant to academic performance better than most of the minority members who were admitted. Moreover, there is absolutely no basis for concluding that Bakke's rejection as a result of Davis' use of racial preference will affect him throughout his life in the same way as the segregation of the Negro school children in *Brown I* would have affected them. Unlike discrimination against racial minorities, the use of racial preferences for remedial purposes does not inflict a pervasive injury upon individual whites in the sense that wherever they go or whatever they do there is a significant likelihood that they will be treated as second-class citizens because of their color. This distinction does not mean that the exclusion of a white resulting from the preferential use of race is not sufficiently serious to require justification; but it does mean that the injury inflicted by such a policy is not distinguishable from disadvantages caused by a wide range of government actions, none of which has ever been thought impermissible for that reason alone.

In addition, there is simply no evidence that the Davis program discriminates intentionally or unintentionally against any minority group which it purports to benefit. The program does not establish a quota in the invidious sense of a ceiling on the number of minority applicants to be admitted. Nor can the program reasonably be regarded as stigmatizing the program's beneficiaries or their race as inferior. The Davis program does not simply advance less qualified applicants; rather, it compensates applicants, who it is uncontested are fully qualified to study medicine, for educational disadvantages which it was reasonable to conclude were a product of state-fostered discrimination. Once admitted, these students must satisfy the

same degree requirements as regularly admitted students; they are taught by the same faculty in the same classes; and their performance is evaluated by the same standards by which regularly admitted students are judged. Under these circumstances, their performance and degrees must be regarded equally with the regularly admitted students with whom they compete for standing. Since minority graduates cannot justifiably be regarded as less well qualified than nonminority graduates by virtue of the special admissions program, there is no reasonable basis to conclude that minority graduates at schools using such programs would be stigmatized as inferior by the existence of such programs.

#### D

We disagree with the lower courts' conclusion that the Davis program's use of race was unreasonable in light of its objectives. First, as petitioner argues, there are no practical means by which it could achieve its ends in the foreseeable future without the use of race-conscious measures. With respect to any factor (such as poverty or family educational background) that may be used as a substitute for race as an indicator of past discrimination, whites greatly outnumber racial minorities simply because whites make up a far larger percentage of the total population and therefore far outnumber minorities in absolute terms at every socio-economic level. For example, of a class of recent medical school applicants from families with less than \$10,000 income, at least 71% were white. Of all 1970 families headed by a person not a high school graduate which included related children under 18, 80% were white and 20% were racial minorities. Moreover, while race is positively correlated with differences in GPA and MCAT scores, economic disadvantage is not. Thus, it appears that economically disadvantaged whites do not score less well than economically advantaged whites, while economically advantaged blacks score less well than do disadvantaged whites. These statistics graphically illustrate that the University's purpose to integrate its classes by compensating for past discrimination could not be achieved by a general preference for the economically disadvantaged or the children of parents of limited education unless such groups were to make up the entire class.

Second, the Davis admissions program does not simply equate minority status with disadvantage. Rather, Davis considers on an individual basis each applicant's personal history to determine whether he or she has likely been disadvantaged by racial discrimination. The record makes clear that only minority applicants likely to have been isolated from the mainstream of American life are considered in the special program; other minority applicants are eligible only through the regular admissions program. True, the procedure by which disadvantage is detected is informal, but we have never insisted that educators conduct their affairs through adjudicatory proceedings, and such insistence here is misplaced. A case-by-case inquiry into the extent to which each individual applicant has been affected, either directly or indirectly, by racial discrimination, would seem to be, as a practical matter, virtually impossible, despite the fact that there are excellent reasons for concluding that such effects generally exist. When individual measurement is impossible or extremely impractical, there is nothing to prevent a State from using categorical means to achieve its ends, at least where the category is closely related to the goal. Cf. *Gaston County v. United States*, (1969); *Katzenbach v. Morgan*, (1966). And it is clear from our cases that specific proof that a person has been victimized by discrimination is not a necessary predicate to offering him relief where the probability of victimization is great. See *Teamsters v. United States*, (1977).

#### E

Finally, Davis' special admissions program cannot be said to violate the Constitution simply because it has set aside a predetermined number of places for qualified minority applicants rather than using minority status as a positive factor to be considered in evaluating the applications of disadvantaged minority applicants. For purposes of constitutional adjudication, there is no difference between the two approaches. In any admissions program which accords special

consideration to disadvantaged racial minorities, a determination of the degree of preference to be given is unavoidable, and any given preference that results in the exclusion of a white candidate is no more or less constitutionally acceptable than a program such as that at Davis. Furthermore, the extent of the preference inevitably depends on how many minority applicants the particular school is seeking to admit in any particular year so long as the number of qualified minority applicants exceeds that number. There is no sensible, and certainly no constitutional, distinction between, for example, adding a set number of points to the admissions rating of disadvantaged minority applicants as an expression of the preference with the expectation that this will result in the admission of an approximately determined number of qualified minority applicants and setting a fixed number of places for such applicants as was done here.

The “Harvard” program, see ante, at 316-318, as those employing it readily concede, openly and successfully employs a racial criterion for the purpose of ensuring that some of the scarce places in institutions of higher education are allocated to disadvantaged minority students. That the Harvard approach does not also make public the extent of the preference and the precise workings of the system while the Davis program employs a specific, openly stated number, does not condemn the latter plan for purposes of Fourteenth Amendment adjudication. It may be that the Harvard plan is more acceptable to the public than is the Davis “quota.” If it is, any State, including California, is free to adopt it in preference to a less acceptable alternative, just as it is generally free, as far as the Constitution is concerned, to abjure granting any racial preferences in its admissions program. But there is no basis for preferring a particular preference program simply because in achieving the same goals that the Davis Medical School is pursuing, it proceeds in a manner that is not immediately apparent to the public.

## V

Accordingly, we would reverse the judgment of the Supreme Court of California holding the Medical School’s special admissions program unconstitutional and directing respondent’s admission, as well as that portion of the judgment enjoining the Medical School from according any consideration to race in the admissions process.

MR. JUSTICE WHITE.

I write separately concerning the question of whether Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq., provides for a private cause of action. Four Justices are apparently of the view that such a private cause of action exists, and four Justices assume it for purposes of this case. I am unwilling merely to assume an affirmative answer. If in fact no private cause of action exists, this Court and the lower Courts as well are without jurisdiction to consider respondent’s Title VI claim. As I see it, if we are not obliged to do so, it is at least advisable to address this threshold jurisdictional issue. See *United States v. Griffin*, (1938). Furthermore, just as it is inappropriate to address constitutional issues without determining whether statutory grounds urged before us are dispositive, it is at least questionable practice to adjudicate a novel and difficult statutory issue without first considering whether we have jurisdiction to decide it. Consequently, I address the question of whether respondent may bring suit under Title VI.

A private cause of action under Title VI, in terms both of the Civil Rights Act as a whole and that Title, would not be “consistent with the underlying purposes of the legislative scheme” and would be contrary to the legislative intent. *Cort v. Ash*, (1975). Title II, 42 U.S.C. 2000a et seq., dealing with public accommodations, and Title VII, 42 U.S.C. 2000e et seq. (1970 ed. and Supp. V), dealing with employment, proscribe private discriminatory conduct that as of 1964 neither the Constitution nor other federal statutes had been construed to forbid. Both Titles carefully provided for private actions as well as for official participation in en-

forcement. Title III, 42 U.S.C. 2000b et seq., and Title IV, 42 U.S.C. 2000c et seq. (1970 ed. and Supp. V), dealing with public facilities and public education, respectively, authorize suits by the Attorney General to eliminate racial discrimination in these areas. Because suits to end discrimination in public facilities and public education were already available under 42 U.S.C. 1983, it was, of course, unnecessary to provide for private actions under Titles III and IV. But each Title carefully provided that its provisions for public actions would not adversely affect pre-existing private remedies. 2000b-2 and 2000c-8.

The role of Title VI was to terminate federal financial support for public and private institutions or programs that discriminated on the basis of race. Section 601, 42 U.S.C. 2000d, imposed the proscription that no person, on the grounds of race, color, or national origin, was to be excluded from or discriminated against under any program or activity receiving federal financial assistance. But there is no express provision for private actions to enforce Title VI, and it would be quite incredible if Congress, after so carefully attending to the matter of private actions in other Titles of the Act, intended silently to create a private cause of action to enforce Title VI.

It is also evident from the face of 602, 42 U.S.C. 2000d-1, that Congress intended the departments and agencies to define and to refine, by rule or regulation, the general proscription of 601, subject only to judicial review of agency action in accordance with established procedures. Section 602 provides for enforcement: Every federal department or agency furnishing financial support is to implement the proscription by appropriate rule or regulation, each of which requires approval by the President. Termination of funding as a sanction for noncompliance is authorized, but only after a hearing and after the failure of voluntary means to secure compliance. Moreover, termination may not take place until the department or agency involved files with the appropriate committees of the House and Senate a full written report of the circumstances and the grounds for such action and 30 days have elapsed thereafter. Judicial review was provided, at least for actions terminating financial assistance.

Termination of funding was regarded by Congress as a serious enforcement step, and the legislative history is replete with assurances that it would not occur until every possibility for conciliation had been exhausted. To allow a private individual to sue to cut off funds under Title VI would compromise these assurances and short circuit the procedural preconditions provided in Title VI. If the Federal Government may not cut off funds except pursuant to an agency rule, approved by the President, and presented to the appropriate committee of Congress for a layover period, and after voluntary means to achieve compliance have failed, it is inconceivable that Congress intended to permit individuals to circumvent these administrative prerequisites themselves.

Furthermore, although Congress intended Title VI to end federal financial support for racially discriminatory policies of not only public but also private institutions and programs, it is extremely unlikely that Congress, without a word indicating that it intended to do so, contemplated creating an independent, private statutory cause of action against all private as well as public agencies that might be in violation of the section. There is no doubt that Congress regarded private litigation as an important tool to attack discriminatory practices. It does not at all follow, however, that Congress anticipated new private actions under Title VI itself. Wherever a discriminatory program was a public undertaking, such as a public school, private remedies were already available under other statutes, and a private remedy under Title VI was unnecessary. Congress was well aware of this fact. Significantly, there was frequent reference to *Simkins v. Moses H. Cone Memorial Hospital*, 323 F.2d 959 (CA4 1963), cert. denied, (1964), throughout the congressional deliberations. See, e. g., 110 Cong. Rec. 6544 (1964) (Sen. Humphrey). *Simkins* held that under appropriate circumstances, the operation of a private hospital with "massive use of public funds and extensive state-federal sharing in the common plan" constituted "state action" for the purposes of the Fourteenth Amendment. 323

F.2d, at 967. It was unnecessary, of course, to create a Title VI private action against private discriminators where they were already within the reach of existing private remedies. But when they were not—and Simkins carefully disclaimed holding that “every subvention by the federal or state government automatically involves the beneficiary in ‘state action,’” *ibid.*—it is difficult to believe that Congress silently created a private remedy to terminate conduct that previously had been entirely beyond the reach of federal law.

For those who believe, contrary to my views, that Title VI was intended to create a stricter standard of color blindness than the Constitution itself requires, the result of no private cause of action follows even more readily. In that case Congress must be seen to have banned degrees of discrimination, as well as types of discriminators, not previously reached by law. A Congress careful enough to provide that existing private causes of action would be preserved (in Titles III and IV) would not leave for inference a vast new extension of private enforcement power. And a Congress so exceptionally concerned with the satisfaction of procedural preliminaries before confronting fund recipients with the choice of a cutoff or of stopping discriminating would not permit private parties to pose precisely that same dilemma in a greatly widened category of cases with no procedural requirements whatsoever.

Significantly, in at least three instances legislators who played a major role in the passage of Title VI explicitly stated that a private right of action under Title VI does not exist. As an “indication of legislative intent, explicit or implicit, either to create such a remedy or to deny one,” *Cort v. Ash*, clearer statements cannot be imagined, and under *Cort*, “an explicit purpose to deny such cause of action [is] controlling.” *Id.*, at 82. Senator Keating, for example, proposed a private “right to sue” for the “person suffering from discrimination”; but the Department of Justice refused to include it, and the Senator acquiesced. These are not neutral, ambiguous statements. They indicate the absence of a legislative intent to create a private remedy. Nor do any of these statements make nice distinctions between a private cause of action to enjoin discrimination and one to cut off funds, as MR. JUSTICE STEVENS and the three Justices who join his opinion apparently would. See *post*, at 419-420, n. 26. Indeed, it would be odd if they did, since the practical effect of either type of private cause of action would be identical. If private suits to enjoin conduct allegedly violative of 601 were permitted, recipients of federal funds would be presented with the choice of either ending what the court, rather than the agency, determined to be a discriminatory practice within the meaning of Title VI or refusing federal funds and thereby escaping from the statute’s jurisdictional predicate. This is precisely the same choice as would confront recipients if suit were brought to cut off funds. Both types of actions would equally jeopardize the administrative processes so carefully structured into the law.

This Court has always required “that the inference of such a private cause of action not otherwise authorized by the statute must be consistent with the evident legislative intent and, of course, with the effectuation of the purposes intended to be served by the Act.” *National Railroad Passenger Corp. v. National Association of Railroad Passengers*, (1974). See also *Securities Investor Protection Corp. v. Barbour*, (1975). A private cause of action under Title VI is unable to satisfy either prong of this test.

Because each of my colleagues either has a different view or assumes a private cause of action, however, the merits of the Title VI issue must be addressed. My views in that regard, as well as my views with respect to the equal protection issue, are included in the joint opinion that my Brothers BRENNAN, MARSHALL, and BLACKMUN and I have filed.

MR. JUSTICE MARSHALL.

I agree with the judgment of the Court only insofar as it permits a university to consider the race of an applicant in making admissions decisions. I do not agree that petitioner’s admissions program violates the Constitution. For it must be remembered that, during most of the past 200 years, the Constitution as interpreted by this Court did not prohibit the most inge-

nious and pervasive forms of discrimination against the Negro. Now, when a state acts to remedy the effects of that legacy of discrimination, I cannot believe that this same Constitution stands as a barrier.

## I

### A

Three hundred and fifty years ago, the Negro was dragged to this country in chains to be sold into slavery. Uprooted from his homeland and thrust into bondage for forced labor, the slave was deprived of all legal rights. It was unlawful to teach him to read; he could be sold away from his family and friends at the whim of his master; and killing or maiming him was not a crime. The system of slavery brutalized and dehumanized both master and slave.

The denial of human rights was etched into the American Colonies' first attempts at establishing self-government. When the colonists determined to seek their independence from England, they drafted a unique document cataloguing their grievances against the King and proclaiming as "self-evident" that "all men are created equal" and are endowed "with certain unalienable Rights," including those to "Life, Liberty and the pursuit of Happiness." The self-evident truths and the unalienable rights were intended, however, to apply only to white men. An earlier draft of the Declaration of Independence, submitted by Thomas Jefferson to the Continental Congress, had included among the charges against the King that

"[h]e has waged cruel war against human nature itself, violating its most sacred rights of life and liberty in the persons of a distant people who never offended him, captivating and carrying them into slavery in another hemisphere, or to incur miserable death in their transportation thither." Franklin 88.

The Southern delegation insisted that the charge be deleted; the colonists themselves were implicated in the slave trade, and inclusion of this claim might have made it more difficult to justify the continuation of slavery once the ties to England were severed. Thus, even as the colonists embarked on a course to secure their own freedom and equality, they ensured perpetuation of the system that deprived a whole race of those rights.

The implicit protection of slavery embodied in the Declaration of Independence was made explicit in the Constitution, which treated a slave as being equivalent to three-fifths of a person for purposes of apportioning representatives and taxes among the States. Art. I, 2. The Constitution also contained a clause ensuring that the "Migration or Importation" of slaves into the existing States would be legal until at least 1808, Art. I, 9, and a fugitive slave clause requiring that when a slave escaped to another State, he must be returned on the claim of the master, Art. IV, 2. In their declaration of the principles that were to provide the cornerstone of the new Nation, therefore, the Framers made it plain that "we the people," for whose protection the Constitution was designed, did not include those whose skins were the wrong color. As Professor John Hope Franklin has observed, Americans "proudly accepted the challenge and responsibility of their new political freedom by establishing the machinery and safeguards that insured the continued enslavement of blacks." Franklin 100.

The individual States likewise established the machinery to protect the system of slavery through the promulgation of the Slave Codes, which were designed primarily to defend the property interest of the owner in his slave. The position of the Negro slave as mere property was confirmed by this Court in *Dred Scott v. Sandford*, 19 How. 393 (1857), holding that the Missouri Compromise—which prohibited slavery in the portion of the Louisiana Purchase Territory north of Missouri—was unconstitutional because it deprived slave owners of their property without due process. The Court declared that under the Constitution a slave was property, and "[t]he right to traffic in it, like an ordinary article of merchandise and property, was guarantied to the citizens of the United States . . . ." *Id.*, at 451. The Court further con-

cluded that Negroes were not intended to be included as citizens under the Constitution but were “regarded as beings of an inferior order . . . altogether unfit to associate with the white race, either in social or political relations; and so far inferior, that they had no rights which the white man was bound to respect . . .” *Id.*, at 407.

## B

The status of the Negro as property was officially erased by his emancipation at the end of the Civil War. But the long-awaited emancipation, while freeing the Negro from slavery, did not bring him citizenship or equality in any meaningful way. Slavery was replaced by a system of “laws which imposed upon the colored race onerous disabilities and burdens, and curtailed their rights in the pursuit of life, liberty, and property to such an extent that their freedom was of little value.” *Slaughter-House Cases*, 16 Wall. 36, 70 (1873). Despite the passage of the Thirteenth, Fourteenth, and Fifteenth Amendments, the Negro was systematically denied the rights those Amendments were supposed to secure. The combined actions and inactions of the State and Federal Governments maintained Negroes in a position of legal inferiority for another century after the Civil War.

The Southern States took the first steps to re-enslave the Negroes. Immediately following the end of the Civil War, many of the provisional legislatures passed Black Codes, similar to the Slave Codes, which, among other things, limited the rights of Negroes to own or rent property and permitted imprisonment for breach of employment contracts. Over the next several decades, the South managed to disenfranchise the Negroes in spite of the Fifteenth Amendment by various techniques, including poll taxes, deliberately complicated balloting processes, property and literacy qualifications, and finally the white primary.

Congress responded to the legal disabilities being imposed in the Southern States by passing the Reconstruction Acts and the Civil Rights Acts. Congress also responded to the needs of the Negroes at the end of the Civil War by establishing the Bureau of Refugees, Freedmen, and Abandoned Lands, better known as the Freedmen’s Bureau, to supply food, hospitals, land, and education to the newly freed slaves. Thus, for a time it seemed as if the Negro might be protected from the continued denial of his civil rights and might be relieved of the disabilities that prevented him from taking his place as a free and equal citizen.

That time, however, was short-lived. Reconstruction came to a close, and, with the assistance of this Court, the Negro was rapidly stripped of his new civil rights. In the words of C. Vann Woodward: “By narrow and ingenious interpretation [the Supreme Court’s] decisions over a period of years had whittled away a great part of the authority presumably given the government for protection of civil rights.” Woodward 139.

The Court began by interpreting the Civil War Amendments in a manner that sharply curtailed their substantive protections. See, e. g., *Slaughter-House Cases*, *supra*; *United States v. Reese*, (1876); *United States v. Cruikshank*, (1876). Then in the notorious Civil Rights Cases, (1883), the Court strangled Congress’ efforts to use its power to promote racial equality. In those cases the Court invalidated sections of the Civil Rights Act of 1875 that made it a crime to deny equal access to “inns, public conveyances, theaters and other places of public amusement.” *Id.*, at 10. According to the Court, the Fourteenth Amendment gave Congress the power to proscribe only discriminatory action by the State. The Court ruled that the Negroes who were excluded from public places suffered only an invasion of their social rights at the hands of private individuals, and Congress had no power to remedy that. *Id.*, at 24-25. “When a man has emerged from slavery, and by the aid of beneficent legislation has shaken off the inseparable concomitants of that state,” the Court concluded, “there must be some stage in the progress of his elevation when he takes the rank of a mere citizen, and ceases to be the special favorite of the laws . . .” *Id.*, at 25. As Mr. Justice Harlan noted in dissent, however, the Civil War Amendments and Civil Rights Acts did not make the Negroes the “special favor-

ite” of the laws but instead “sought to accomplish in reference to that race . . . —what had already been done in every State of the Union for the white race—to secure and protect rights belonging to them as freemen and citizens; nothing more.” *Id.*, at 61.

The Court’s ultimate blow to the Civil War Amendments and to the equality of Negroes came in *Plessy v. Ferguson*, (1896). In upholding a Louisiana law that required railway companies to provide “equal but separate” accommodations for whites and Negroes, the Court held that the Fourteenth Amendment was not intended “to abolish distinctions based upon color, or to enforce social, as distinguished from political equality, or a commingling of the two races upon terms unsatisfactory to either.” *Id.*, at 544. Ignoring totally the realities of the positions of the two races, the Court remarked:

“We consider the underlying fallacy of the plaintiff’s argument to consist in the assumption that the enforced separation of the two races stamps the colored race with a badge of inferiority. If this be so, it is not by reason of anything found in the act, but solely because the colored race chooses to put that construction upon it.” *Id.*, at 551.

Mr. Justice Harlan’s dissenting opinion recognized the bankruptcy of the Court’s reasoning. He noted that the “real meaning” of the legislation was “that colored citizens are so inferior and degraded that they cannot be allowed to sit in public coaches occupied by white citizens.” *Id.*, at 560. He expressed his fear that if like laws were enacted in other States, “the effect would be in the highest degree mischievous.” *Id.*, at 563. Although slavery would have disappeared, the States would retain the power “to interfere with the full enjoyment of the blessings of freedom; to regulate civil rights, common to all citizens, upon the basis of race; and to place in a condition of legal inferiority a large body of American citizens . . .” *Ibid.*

The fears of Mr. Justice Harlan were soon to be realized. In the wake of *Plessy*, many States expanded their Jim Crow laws, which had up until that time been limited primarily to passenger trains and schools. The segregation of the races was extended to residential areas, parks, hospitals, theaters, waiting rooms, and bathrooms. There were even statutes and ordinances which authorized separate phone booths for Negroes and whites, which required that textbooks used by children of one race be kept separate from those used by the other, and which required that Negro and white prostitutes be kept in separate districts. In 1898, after *Plessy*, the *Charlestown News and Courier* printed a parody of Jim Crow laws:

“If there must be Jim Crow cars on the railroads, there should be Jim Crow cars on the street railways. Also on all passenger boats. . . . If there are to be Jim Crow cars, moreover, there should be Jim Crow waiting saloons at all stations, and Jim Crow eating houses. . . . There should be Jim Crow sections of the jury box, and a separate Jim Crow dock and witness stand in every court—and a Jim Crow Bible for colored witnesses to kiss.” Woodward 68.

The irony is that before many years had passed, with the exception of the Jim Crow witness stand, “all the improbable applications of the principle suggested by the editor in derision had been put into practice—down to and including the Jim Crow Bible.” *Id.*, at 69.

Nor were the laws restricting the rights of Negroes limited solely to the Southern States. In many of the Northern States, the Negro was denied the right to vote, prevented from serving on juries, and excluded from theaters, restaurants, hotels, and inns. Under President Wilson, the Federal Government began to require segregation in Government buildings; desks of Negro employees were curtained off; separate bathrooms and separate tables in the cafeterias were provided; and even the galleries of the Congress were segregated. When his segregationist policies were attacked, President Wilson responded that segregation was “not humiliating but a benefit” and that he was “rendering [the Negroes] more safe in their possession of office and less likely to be discriminated against.” Kluger 91.

The enforced segregation of the races continued into the middle of the 20th century. In both World Wars, Negroes were for the most part confined to separate military units; it was

not until 1948 that an end to segregation in the military was ordered by President Truman. And the history of the exclusion of Negro children from white public schools is too well known and recent to require repeating here. That Negroes were deliberately excluded from public graduate and professional schools—and thereby denied the opportunity to become doctors, lawyers, engineers, and the like—is also well established. It is of course true that some of the Jim Crow laws (which the decisions of this Court had helped to foster) were struck down by this Court in a series of decisions leading up to *Brown v. Board of Education*, (1954). See, e. g., *Morgan v. Virginia*, (1946); *Sweatt v. Painter*, (1950); *McLaurin v. Oklahoma State Regents*, (1950). Those decisions, however, did not automatically end segregation, nor did they move Negroes from a position of legal inferiority to one of equality. The legacy of years of slavery and of years of second-class citizenship in the wake of emancipation could not be so easily eliminated.

## II

The position of the Negro today in America is the tragic but inevitable consequence of centuries of unequal treatment. Measured by any benchmark of comfort or achievement, meaningful equality remains a distant dream for the Negro.

A Negro child today has a life expectancy which is shorter by more than five years than that of a white child. The Negro child's mother is over three times more likely to die of complications in childbirth, and the infant mortality rate for Negroes is nearly twice that for whites. The median income of the Negro family is only 60% that of the median of a white family, and the percentage of Negroes who live in families with incomes below the poverty line is nearly four times greater than that of whites.

When the Negro child reaches working age, he finds that America offers him significantly less than it offers his white counterpart. For Negro adults, the unemployment rate is twice that of whites, and the unemployment rate for Negro teenagers is nearly three times that of white teenagers. A Negro male who completes four years of college can expect a median annual income of merely \$110 more than a white male who has only a high school diploma. Although Negroes represent 11.5% of the population, they are only 1.2% of the lawyers and judges, 2% of the physicians, 2.3% of the dentists, 1.1% of the engineers and 2.6% of the college and university professors.

The relationship between those figures and the history of unequal treatment afforded to the Negro cannot be denied. At every point from birth to death the impact of the past is reflected in the still disfavored position of the Negro.

In light of the sorry history of discrimination and its devastating impact on the lives of Negroes, bringing the Negro into the mainstream of American life should be a state interest of the highest order. To fail to do so is to ensure that America will forever remain a divided society.

## III

I do not believe that the Fourteenth Amendment requires us to accept that fate. Neither its history nor our past cases lend any support to the conclusion that a university may not remedy the cumulative effects of society's discrimination by giving consideration to race in an effort to increase the number and percentage of Negro doctors.

### A

This Court long ago remarked that

“in any fair and just construction of any section or phrase of these [Civil War] amendments, it is necessary to look to the purpose which we have said was the pervading spirit of them all, the evil which they were designed to remedy . . .” *Slaughter-House Cases*, 16 Wall., at 72.

It is plain that the Fourteenth Amendment was not intended to prohibit measures designed to remedy the effects of the Nation's past treatment of Negroes. The Congress that passed the Fourteenth Amendment is the same Congress that passed the 1866 Freedmen's Bureau Act, an Act that provided many of its benefits only to Negroes. Act of July 16, 1866, ch. 200, 14 Stat. 173; see *supra*, at 391. Although the Freedmen's Bureau legislation provided aid for refugees, thereby including white persons within some of the relief measures, 14 Stat. 174; see also Act of Mar. 3, 1865, ch. 90, 13 Stat. 507, the bill was regarded, to the dismay of many Congressmen, as "solely and entirely for the freedmen, and to the exclusion of all other persons . . ." Cong. Globe, 39th Cong., 1st Sess., 544 (1866) (remarks of Rep. Taylor). See also *id.*, at 634-635 (remarks of Rep. Ritter); *id.*, at App. 78, 80-81 (remarks of Rep. Chanler). Indeed, the bill was bitterly opposed on the ground that it "undertakes to make the negro in some respects . . . superior . . . and gives them favors that the poor white boy in the North cannot get." *Id.*, at 401 (remarks of Sen. McDougall). See also *id.*, at 319 (remarks of Sen. Hendricks); *id.*, at 362 (remarks of Sen. Saulsbury); *id.*, at 397 (remarks of Sen. Willey); *id.*, at 544 (remarks of Rep. Taylor). The bill's supporters defended it—not by rebutting the claim of special treatment—but by pointing to the need for such treatment:

"The very discrimination it makes between 'destitute and suffering' negroes, and destitute and suffering white paupers, proceeds upon the distinction that, in the omitted case, civil rights and immunities are already sufficiently protected by the possession of political power, the absence of which in the case provided for necessitates governmental protection." *Id.*, at App. 75 (remarks of Rep. Phelps).

Despite the objection to the special treatment the bill would provide for Negroes, it was passed by Congress. *Id.*, at 421, 688. President Johnson vetoed this bill and also a subsequent bill that contained some modifications; one of his principal objections to both bills was that they gave special benefits to Negroes. 8 Messages and Papers of the Presidents 3596, 3599, 3620, 3623 (1897). Rejecting the concerns of the President and the bill's opponents, Congress overrode the President's second veto. Cong. Globe, 39th Cong., 1st Sess., 3842, 3850 (1866).

Since the Congress that considered and rejected the objections to the 1866 Freedmen's Bureau Act concerning special relief to Negroes also proposed the Fourteenth Amendment, it is inconceivable that the Fourteenth Amendment was intended to prohibit all race-conscious relief measures. It "would be a distortion of the policy manifested in that amendment, which was adopted to prevent state legislation designed to perpetuate discrimination on the basis of race or color," *Railway Mail Assn. v. Corsi*, (1945), to hold that it barred state action to remedy the effects of that discrimination. Such a result would pervert the intent of the Framers by substituting abstract equality for the genuine equality the Amendment was intended to achieve.

## B

As has been demonstrated in our joint opinion, this Court's past cases establish the constitutionality of race-conscious remedial measures. Beginning with the school desegregation cases, we recognized that even absent a judicial or legislative finding of constitutional violation, a school board constitutionally could consider the race of students in making school-assignment decisions. See *Swann v. Charlotte-Mecklenburg Board of Education*, (1971); *McDaniel v. Barresi*, (1971). We noted, moreover, that a

"flat prohibition against assignment of students for the purpose of creating a racial balance must inevitably conflict with the duty of school authorities to disestablish dual school systems. As we have held in *Swann*, the Constitution does not compel any particular degree of racial balance or mixing, but when past and continuing constitutional violations are found, some ratios are likely to be useful as starting points in shaping a remedy. An absolute prohibition against use of such a device—even as a starting point—contravenes the implicit command of *Green v. Country School*

Board, (1968), that all reasonable methods be available to formulate an effective remedy.” *Board of Education v. Swann*, (1971).

As we have observed, “[a]ny other approach would freeze the status quo that is the very target of all desegregation processes.” *McDaniel v. Barresi*, *supra*, at 41.

Only last Term, in *United Jewish Organizations v. Carey*, (1977), we upheld a New York reapportionment plan that was deliberately drawn on the basis of race to enhance the electoral power of Negroes and Puerto Ricans; the plan had the effect of diluting the electoral strength of the Hasidic Jewish community. We were willing in *UJO* to sanction the remedial use of a racial classification even though it disadvantaged otherwise “innocent” individuals. In another case last Term, *Califano v. Webster*, (1977), the Court upheld a provision in the Social Security laws that discriminated against men because its purpose was “the permissible one of redressing our society’s longstanding disparate treatment of women.” *Id.*, at 317, quoting *Califano v. Goldfarb*, n. 8 (1977) (plurality opinion). We thus recognized the permissibility of remedying past societal discrimination through the use of otherwise disfavored classifications.

Nothing in those cases suggests that a university cannot similarly act to remedy past discrimination. It is true that in both *UJO* and *Webster* the use of the disfavored classification was predicated on legislative or administrative action, but in neither case had those bodies made findings that there had been constitutional violations or that the specific individuals to be benefited had actually been the victims of discrimination. Rather, the classification in each of those cases was based on a determination that the group was in need of the remedy because of some type of past discrimination. There is thus ample support for the conclusion that a university can employ race-conscious measures to remedy past societal discrimination, without the need for a finding that those benefited were actually victims of that discrimination.

#### IV

While I applaud the judgment of the Court that a university may consider race in its admissions process, it is more than a little ironic that, after several hundred years of class-based discrimination against Negroes, the Court is unwilling to hold that a class-based remedy for that discrimination is permissible. In declining to so hold, today’s judgment ignores the fact that for several hundred years Negroes have been discriminated against, not as individuals, but rather solely because of the color of their skins. It is unnecessary in 20th-century America to have individual Negroes demonstrate that they have been victims of racial discrimination; the racism of our society has been so pervasive that none, regardless of wealth or position, has managed to escape its impact. The experience of Negroes in America has been different in kind, not just in degree, from that of other ethnic groups. It is not merely the history of slavery alone but also that a whole people were marked as inferior by the law. And that mark has endured. The dream of America as the great melting pot has not been realized for the Negro; because of his skin color he never even made it into the pot.

These differences in the experience of the Negro make it difficult for me to accept that Negroes cannot be afforded greater protection under the Fourteenth Amendment where it is necessary to remedy the effects of past discrimination. In the *Civil Rights Cases*, *supra*, the Court wrote that the Negro emerging from slavery must cease “to be the special favorite of the laws.” See *supra*, at 392. We cannot in light of the history of the last century yield to that view. Had the Court in that decision and others been willing to “do for human liberty and the fundamental rights of American citizenship, what it did . . . for the protection of slavery and the rights of the masters of fugitive slaves,” (Harlan, J., dissenting), we would not need now to permit the recognition of any “special wards.”

Most importantly, had the Court been willing in 1896, in *Plessy v. Ferguson*, to hold that the Equal Protection Clause forbids differences in treatment based on race, we would not be faced with this dilemma in 1978. We must remember, however, that the principle that the

“Constitution is color-blind” appeared only in the opinion of the lone dissenter. The majority of the Court rejected the principle of color blindness, and for the next 60 years, from *Plessy* to *Brown v. Board of Education*, ours was a Nation where, by law, an individual could be given “special” treatment based on the color of his skin.

It is because of a legacy of unequal treatment that we now must permit the institutions of this society to give consideration to race in making decisions about who will hold the positions of influence, affluence, and prestige in America. For far too long, the doors to those positions have been shut to Negroes. If we are ever to become a fully integrated society, one in which the color of a person’s skin will not determine the opportunities available to him or her, we must be willing to take steps to open those doors. I do not believe that anyone can truly look into America’s past and still find that a remedy for the effects of that past is impermissible.

It has been said that this case involves only the individual, Bakke, and this University. I doubt, however, that there is a computer capable of determining the number of persons and institutions that may be affected by the decision in this case. For example, we are told by the Attorney General of the United States that at least 27 federal agencies have adopted regulations requiring recipients of federal funds to take “affirmative action to overcome the effects of conditions which resulted in limiting participation . . . by persons of a particular race, color, or national origin.” Supplemental Brief for United States as Amicus Curiae 16 (emphasis added). I cannot even guess the number of state and local governments that have set up affirmative-action programs, which may be affected by today’s decision.

I fear that we have come full circle. After the Civil War our Government started several “affirmative action” programs. This Court in the Civil Rights Cases and *Plessy v. Ferguson* destroyed the movement toward complete equality. For almost a century no action was taken, and this nonaction was with the tacit approval of the courts. Then we had *Brown v. Board of Education* and the Civil Rights Acts of Congress, followed by numerous affirmative-action programs. Now, we have this Court again stepping in, this time to stop affirmative-action programs of the type used by the University of California.

MR. JUSTICE BLACKMUN.

I participate fully, of course, in the opinion, ante, p. 324, that bears the names of my Brothers BRENNAN, WHITE, MARSHALL, and myself. I add only some general observations that hold particular significance for me, and then a few comments on equal protection.

## I

At least until the early 1970’s, apparently only a very small number, less than 2%, of the physicians, attorneys, and medical and law students in the United States were members of what we now refer to as minority groups. In addition, approximately three-fourths of our Negro physicians were trained at only two medical schools. If ways are not found to remedy that situation, the country can never achieve its professed goal of a society that is not race conscious.

I yield to no one in my earnest hope that the time will come when an “affirmative action” program is unnecessary and is, in truth, only a relic of the past. I would hope that we could reach this stage within a decade at the most. But the story of *Brown v. Board of Education*, (1954), decided almost a quarter of a century ago, suggests that that hope is a slim one. At some time, however, beyond any period of what some would claim is only transitional inequality, the United States must and will reach a stage of maturity where action along this line is no longer necessary. Then persons will be regarded as persons, and discrimination of the type we address today will be an ugly feature of history that is instructive but that is behind us.

The number of qualified, indeed highly qualified, applicants for admission to existing medical schools in the United States far exceeds the number of places available. Wholly apart

from racial and ethnic considerations, therefore, the selection process inevitably results in the denial of admission to many qualified persons, indeed, to far more than the number of those who are granted admission. Obviously, it is a denial to the deserving. This inescapable fact is brought into sharp focus here because Allan Bakke is not himself charged with discrimination and yet is the one who is disadvantaged, and because the Medical School of the University of California at Davis itself is not charged with historical discrimination.

One theoretical solution to the need for more minority members in higher education would be to enlarge our graduate schools. Then all who desired and were qualified could enter, and talk of discrimination would vanish. Unfortunately, this is neither feasible nor realistic. The vast resources that apparently would be required simply are not available. And the need for more professional graduates, in the strict numerical sense, perhaps has not been demonstrated at all.

There is no particular or real significance in the 84-16 division at Davis. The same theoretical, philosophical, social, legal, and constitutional considerations would necessarily apply to the case if Davis' special admissions program had focused on any lesser number, that is, on 12 or 8 or 4 places or, indeed, on only 1.

It is somewhat ironic to have us so deeply disturbed over a program where race is an element of consciousness, and yet to be aware of the fact, as we are, that institutions of higher learning, albeit more on the undergraduate than the graduate level, have given conceded preferences up to a point to those possessed of athletic skills, to the children of alumni, to the affluent who may bestow their largess on the institutions, and to those having connections with celebrities, the famous, and the powerful.

Programs of admission to institutions of higher learning are basically a responsibility for academicians and for administrators and the specialists they employ. The judiciary, in contrast, is ill-equipped and poorly trained for this. The administration and management of educational institutions are beyond the competence of judges and are within the special competence of educators, provided always that the educators perform within legal and constitutional bounds. For me, therefore, interference by the judiciary must be the rare exception and not the rule.

## II

I, of course, accept the propositions that (a) Fourteenth Amendment rights are personal; (b) racial and ethnic distinctions where they are stereotypes are inherently suspect and call for exacting judicial scrutiny; (c) academic freedom is a special concern of the First Amendment; and (d) the Fourteenth Amendment has expanded beyond its original 1868 concept and now is recognized to have reached a point where, as MR. JUSTICE POWELL states, ante, at 293, quoting from the Court's opinion in *McDonald v. Santa Fe Trail Transp. Co.*, (1976), it embraces a "broader principle."

This enlargement does not mean for me, however, that the Fourteenth Amendment has broken away from its moorings and its original intended purposes. Those original aims persist. And that, in a distinct sense, is what "affirmative action," in the face of proper facts, is all about. If this conflicts with idealistic equality, that tension is original Fourteenth Amendment tension, constitutionally conceived and constitutionally imposed, and it is part of the Amendment's very nature until complete equality is achieved in the area. In this sense, constitutional equal protection is a shield.

I emphasize in particular that the decided cases are not easily to be brushed aside. Many, of course, are not precisely on point, but neither are they off point. Racial factors have been given consideration in the school desegregation cases, in the employment cases, in *Lau v. Nichols*, (1974), and in *United Jewish Organizations v. Carey*, (1977). To be sure, some of these may be "distinguished" on the ground that victimization was directly present. But who is to

say that victimization is not present for some members of today's minority groups, although it is of a lesser and perhaps different degree. The petitioners in *United Jewish Organizations* certainly complained bitterly of their reapportionment treatment, and I rather doubt that they regard the "remedy" there imposed as one that was "to improve" the group's ability to participate, as MR. JUSTICE POWELL describes it, ante, at 305. And surely in *Lau v. Nichols* we looked to ethnicity.

I am not convinced, as MR. JUSTICE POWELL seems to be, that the difference between the Davis program and the one employed by Harvard is very profound or constitutionally significant. The line between the two is a thin and indistinct one. In each, subjective application is at work. Because of my conviction that admission programs are primarily for the educators, I am willing to accept the representation that the Harvard program is one where good faith in its administration is practiced as well as professed. I agree that such a program, where race or ethnic background is only one of many factors, is a program better formulated than Davis' two-track system. The cynical, of course, may say that under a program such as Harvard's one may accomplish covertly what Davis concedes it does openly. I need not go that far, for despite its two-track aspect, the Davis program, for me, is within constitutional bounds, though perhaps barely so. It is surely free of stigma, and, as in *United Jewish Organizations*, I am not willing to infer a constitutional violation.

It is worth noting, perhaps, that governmental preference has not been a stranger to our legal life. We see it in veterans' preferences. We see it in the aid-to-the-handicapped programs. We see it in the progressive income tax. We see it in the Indian programs. We may excuse some of these on the ground that they have specific constitutional protection or, as with Indians, that those benefited are wards of the Government. Nevertheless, these preferences exist and may not be ignored. And in the admissions field, as I have indicated, educational institutions have always used geography, athletic ability, anticipated financial largess, alumni pressure, and other factors of that kind.

I add these only as additional components on the edges of the central question as to which I join my Brothers BRENNAN, WHITE, and MARSHALL in our more general approach. It is gratifying to know that the Court at least finds it constitutional for an academic institution to take race and ethnic background into consideration as one factor, among many, in the administration of its admissions program. I presume that that factor always has been there, though perhaps not conceded or even admitted. It is a fact of life, however, and a part of the real world of which we are all a part. The sooner we get down the road toward accepting and being a part of the real world, and not shutting it out and away from us, the sooner will these difficulties vanish from the scene.

I suspect that it would be impossible to arrange an affirmative-action program in a racially neutral way and have it successful. To ask that this be so is to demand the impossible. In order to get beyond racism, we must first take account of race. There is no other way. And in order to treat some persons equally, we must treat them differently. We cannot—we dare not—let the Equal Protection Clause perpetuate racial supremacy.

So the ultimate question, as it was at the beginning of this litigation, is: Among the qualified, how does one choose?

A long time ago, as time is measured for this Nation, a Chief Justice, both wise and far-sighted, said:

"In considering this question, then, we must never forget, that it is a constitution we are expounding." *McCulloch v. Maryland*, 4 Wheat. 316, 407 (1819) (emphasis in original).

In the same opinion, the Great Chief Justice further observed:

"Let the end be legitimate, let it be within the scope of the constitution, and all means which are appropriate, which are plainly adapted to that end, which are not prohibit-

ed, but consist with the letter and spirit of the constitution, are constitutional.” *Id.*, at 421.

More recently, one destined to become a Justice of this Court observed:

“The great generalities of the constitution have a content and a significance that vary from age to age.” B. Cardozo, *The Nature of the Judicial Process* 17 (1921).

And an educator who became a President of the United States said:

“But the Constitution of the United States is not a mere lawyers’ document: it is a vehicle of life, and its spirit is always the spirit of the age.” W. Wilson, *Constitutional Government in the United States* 69 (1911).

These percepts of breadth and flexibility and ever-present modernity are basic to our constitutional law. Today, again, we are expounding a Constitution. The same principles that governed *McCulloch’s* case in 1819 govern *Bakke’s* case in 1978. There can be no other answer. MR. JUSTICE STEVENS, with whom THE CHIEF JUSTICE, MR. JUSTICE STEWART, and MR. JUSTICE REHNQUIST join, concurring in the judgment in part and dissenting in part.

It is always important at the outset to focus precisely on the controversy before the Court. It is particularly important to do so in this case because correct identification of the issues will determine whether it is necessary or appropriate to express any opinion about the legal status of any admissions program other than petitioner’s.

## I

This is not a class action. The controversy is between two specific litigants. Allan Bakke challenged petitioner’s special admissions program, claiming that it denied him a place in medical school because of his race in violation of the Federal and California Constitutions and of Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq. The California Supreme Court upheld his challenge and ordered him admitted. If the state court was correct in its view that the University’s special program was illegal, and that Bakke was therefore unlawfully excluded from the Medical School because of his race, we should affirm its judgment, regardless of our views about the legality of admissions programs that are not now before the Court.

The judgment as originally entered by the trial court contained four separate paragraphs, two of which are of critical importance. Paragraph 3 declared that the University’s special admissions program violated the Fourteenth Amendment, the State Constitution, and Title VI. The trial court did not order the University to admit Bakke because it concluded that Bakke had not shown that he would have been admitted if there had been no special program. Instead, in paragraph 2 of its judgment it ordered the University to consider Bakke’s application for admission without regard to his race or the race of any other applicant. The order did not include any broad prohibition against any use of race in the admissions process; its terms were clearly limited to the University’s consideration of Bakke’s application. Because the University has since been ordered to admit Bakke, paragraph 2 of the trial court’s order no longer has any significance.

The California Supreme Court, in a holding that is not challenged, ruled that the trial court incorrectly placed the burden on Bakke of showing that he would have been admitted in the absence of discrimination. The University then conceded “that it [could] not meet the burden of proving that the special admissions program did not result in Mr. Bakke’s failure to be admitted.” Accordingly, the California Supreme Court directed the trial court to enter judgment ordering Bakke’s admission. Since that order superseded paragraph 2 of the trial court’s judgment, there is no outstanding injunction forbidding any consideration of racial criteria in processing applications.

It is therefore perfectly clear that the question whether race can ever be used as a factor in an admissions decision is not an issue in this case, and that discussion of that issue is inappropriate.

## II

Both petitioner and respondent have asked us to determine the legality of the University's special admissions program by reference to the Constitution. Our settled practice, however, is to avoid the decision of a constitutional issue if a case can be fairly decided on a statutory ground. "If there is one doctrine more deeply rooted than any other in the process of constitutional adjudication, it is that we ought not to pass on questions of constitutionality . . . unless such adjudication is unavoidable." *Spector Motor Co. v. McLaughlin*, The more important the issue, the more force there is to this doctrine. In this case, we are presented with a constitutional question of undoubted and unusual importance. Since, however, a dispositive statutory claim was raised at the very inception of this case, and squarely decided in the portion of the trial court judgment affirmed by the California Supreme Court, it is our plain duty to confront it. Only if petitioner should prevail on the statutory issue would it be necessary to decide whether the University's admissions program violated the Equal Protection Clause of the Fourteenth Amendment.

## III

Section 601 of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d, provides:

"No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

The University, through its special admissions policy, excluded Bakke from participation in its program of medical education because of his race. The University also acknowledges that it was, and still is, receiving federal financial assistance. The plain language of the statute therefore requires affirmance of the judgment below. A different result cannot be justified unless that language misstates the actual intent of the Congress that enacted the statute or the statute is not enforceable in a private action. Neither conclusion is warranted.

Title VI is an integral part of the far-reaching Civil Rights Act of 1964. No doubt, when this legislation was being debated, Congress was not directly concerned with the legality of "reverse discrimination" or "affirmative action" programs. Its attention was focused on the problem at hand, the "glaring . . . discrimination against Negroes which exists throughout our Nation," and, with respect to Title VI, the federal funding of segregated facilities. The genesis of the legislation, however, did not limit the breadth of the solution adopted. Just as Congress responded to the problem of employment discrimination by enacting a provision that protects all races, see *McDonald v. Santa Fe Trail Transp. Co.*, so, too, its answer to the problem of federally funding of segregated facilities stands as a broad prohibition against the exclusion of any individual from a federally funded program "on the ground of race." In the words of the House Report, Title VI stands for "the general principle that no person . . . be excluded from participation . . . on the ground of race, color, or national origin under any program or activity receiving Federal financial assistance." H. R. Rep. No. 914, 88th Cong., 1st Sess., pt. 1, p. 25 (1963) (emphasis added). This same broad view of Title VI and 601 was echoed throughout the congressional debate and was stressed by every one of the major spokesmen for the Act.

Petitioner contends, however, that exclusion of applicants on the basis of race does not violate Title VI if the exclusion carries with it no racial stigma. No such qualification or limitation of 601's categorical prohibition of "exclusion" is justified by the statute or its history. The language of the entire section is perfectly clear; the words that follow "excluded from" do not modify or qualify the explicit outlawing of any exclusion on the stated grounds.

The legislative history reinforces this reading. The only suggestion that 601 would allow exclusion of non minority applicants came from opponents of the legislation and then only by way of a discussion of the meaning of the word "discrimination." The opponents feared

that the term “discrimination” would be read as mandating racial quotas and “racially balanced” colleges and universities, and they pressed for a specific definition of the term in order to avoid this possibility. In response, the proponents of the legislation gave repeated assurances that the Act would be “colorblind” in its application. Senator Humphrey, the Senate floor manager for the Act, expressed this position as follows:

“[T]he word ‘discrimination’ has been used in many a court case. What it really means in the bill is a distinction in treatment . . . given to different individuals because of their different race, religion or national origin . . . .

“The answer to this question [what was meant by ‘discrimination’] is that if race is not a factor, we do not have to worry about discrimination because of race. . . . The Internal Revenue Code does not provide that colored people do not have to pay taxes, or that they can pay their taxes 6 months later than everyone else.” 110 Cong. Rec. 5864 (1964).

“[I]f we started to treat Americans as Americans, not as fat ones, thin ones, short ones, tall ones, brown ones, green ones, yellow ones, or white ones, but as Americans. If we did that we would not need to worry about discrimination.” *Id.*, at 5866.

In giving answers such as these, it seems clear that the proponents of Title VI assumed that the Constitution itself required a colorblind standard on the part of government, but that does not mean that the legislation only codifies an existing constitutional prohibition. The statutory prohibition against discrimination in federally funded projects contained in 601 is more than a simple paraphrasing of what the Fifth or Fourteenth Amendment would require. The Act’s proponents plainly considered Title VI consistent with their view of the Constitution and they sought to provide an effective weapon to implement that view. As a distillation of what the supporters of the Act believed the Constitution demanded of State and Federal Governments, 601 has independent force, with language and emphasis in addition to that found in the Constitution.

As with other provisions of the Civil Rights Act, Congress’ expression of its policy to end racial discrimination may independently proscribe conduct that the Constitution does not. However, we need not decide the Congruence—or lack of congruence—of the controlling statute and the Constitution since the meaning of the Title VI ban on exclusion is crystal clear: Race cannot be the basis of excluding anyone from participation in a federally funded program.

In short, nothing in the legislative history justifies the conclusion that the broad language of 601 should not be given its natural meaning. We are dealing with a distinct statutory prohibition, enacted at a particular time with particular concerns in mind; neither its language nor any prior interpretation suggests that its place in the Civil Rights Act, won after long debate, is simply that of a constitutional appendage. In unmistakable terms the Act prohibits the exclusion of individuals from federally funded programs because of their race. As succinctly phrased during the Senate debate, under Title VI it is not “permissible to say ‘yes’ to one person; but to say ‘no’ to another person, only because of the color of his skin.”

Belatedly, however, petitioner argues that Title VI cannot be enforced by a private litigant. The claim is unpersuasive in the context of this case. Bakke requested injunctive and declaratory relief under Title VI; petitioner itself then joined issue on the question of the legality of its program under Title VI by asking for a declaratory judgment that it was in compliance with the statute. Its view during state-court litigation was that a private cause of action does exist under Title VI. Because petitioner questions the availability of a private cause of action for the first time in this Court, the question is not properly before us. See *McGoldrick v. Compagnie Generale Transatlantique*. Even if it were, petitioner’s original assumption is in accord with the federal courts’ consistent interpretation of the Act. To date, the courts, including this Court, have unanimously concluded or assumed that a private action may be maintained

under Title VI. The United States has taken the same position; in its *amicus curiae* brief directed to this specific issue, it concluded that such a remedy is clearly available, and Congress has repeatedly enacted legislation predicated on the assumption that Title VI may be enforced in a private action. The conclusion that an individual may maintain a private cause of action is amply supported in the legislative history of Title VI itself. In short, a fair consideration of petitioner's tardy attack on the propriety of Bakke's suit under Title VI requires that it be rejected.

The University's special admissions program violated Title VI of the Civil Rights Act of 1964 by excluding Bakke from the Medical School because of his race. It is therefore our duty to affirm the judgment ordering Bakke admitted to the University.

Accordingly, I concur in the Court's judgment insofar as it affirms the judgment of the Supreme Court of California. To the extent that it purports to do anything else, I respectfully dissent.

## REPORTS AND OTHER SOURCES

### MY PEDAGOGIC CREED

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BY JOHN DEWEY (1897)

#### ARTICLE ONE. WHAT EDUCATION IS

I believe that all education proceeds by the participation of the individual in the social consciousness of the race. This process begins unconsciously almost at birth, and is continually shaping the individual's powers, saturating his consciousness, forming his habits, training his ideas, and arousing his feelings and emotions. Through this unconscious education the individual gradually comes to share in the intellectual and moral resources which humanity has succeeded in getting together. He becomes an inheritor of the funded capital of civilization. The most formal and technical education in the world cannot safely depart from this general process. It can only organize it; or differentiate it in some particular direction.

I believe that the only true education comes through the stimulation of the child's powers by the demands of the social situations in which he finds himself. Through these demands he is stimulated to act as a member of a unity, to emerge from his original narrowness of action and feeling and to conceive of himself from the standpoint of the welfare of the group to which he belongs. Through the responses which others make to his own activities he comes to know what these mean in social terms. The value which they have is reflected back into them. For instance, through the response which is made to the child's instinctive babblings the child comes to know what those babblings mean; they are transformed into articulate language and thus the child is introduced into the consolidated wealth of ideas and emotions which are now summed up in language.

I believe that this educational process has two sides—one psychological and one sociological; and that neither can be subordinated to the other or neglected without evil results following. Of these two sides, the psychological is the basis. The child's own instincts and powers furnish the material and give the starting point for all education. Save as the efforts of the educator connect with some activity which the child is carrying on of his own initiative independent of the educator, education becomes reduced to a pressure from without. It may, indeed, give certain external results but cannot truly be called educative. Without insight into the psychological structure and activities of the individual, the educative process will, therefore, be haphazard and arbitrary. If it chances to coincide with the child's activity it will get a leverage; if it does not, it will result in friction, or disintegration, or arrest of the child nature.

I believe that knowledge of social conditions, of the present state of civilization, is necessary in order properly to interpret the child's powers. The child has his own instincts and tendencies, but we do not know what these mean until we can translate them into their social equivalents. We must be able to carry them back into a social past and see them as the inheritance of previous race activities. We must also be able to project them into the future to see what their outcome and end will be. In the illustration just used, it is the ability to see in the child's babblings the promise and potency of a future social intercourse and conversation which enables one to deal in the proper way with that instinct.

I believe that the psychological and social sides are organically related and that education cannot be regarded as a compromise between the two, or a superimposition of one upon the other. We are told that the psychological definition of education is barren and formal—that it gives us only the idea of a development of all the mental powers without giving us any idea of the use to which these powers are put. On the other hand, it is urged that the social definition of education, as getting adjusted to civilization, makes of it a forced and external process, and results in subordinating the freedom of the individual to a preconceived social and political status.

I believe each of these objections is true when urged against one side isolated from the other. In order to know what a power really is we must know what its end, use, or function is; and this we cannot know save as we conceive of the individual as active in social relationships. But, on the other hand, the only possible adjustment which we can give to the child under existing conditions, is that which arises through putting him in complete possession of all his powers. With the advent of democracy and modern industrial conditions, it is impossible to foretell definitely just what civilization will be twenty years from now. Hence it is impossible to prepare the child for any precise set of conditions. To prepare him for the future life means to give him command of himself; it means so to train him that he will have the full and ready use of all his capacities; that his eye and ear and hand may be tools ready to command, that his judgment may be capable of grasping the conditions under which it has to work, and the executive forces be trained to act economically and efficiently. It is impossible to reach this sort of adjustment save as constant regard is had to the individual's own powers, tastes, and interests—say, that is, as education is continually converted into psychological terms. In sum, I believe that the individual who is to be educated is a social individual and that society is an organic union of individuals. If we eliminate the social factor from the child we are left only with an abstraction; if we eliminate the individual factor from society, we are left only with an inert and lifeless mass. Education, therefore, must begin with a psychological insight into the child's capacities, interests, and habits. It must be controlled at every point by reference to these same considerations. These powers, interests, and habits must be continually interpreted—we must know what they mean. They must be translated into terms of their social equivalents—into terms of what they are capable of in the way of social service.

## **ARTICLE TWO. WHAT THE SCHOOL IS**

I believe that the school is primarily a social institution. Education being a social process, the school is simply that form of community life in which all those agencies are concentrated that will be most effective in bringing the child to share in the inherited resources of the race, and to use his own powers for social ends.

I believe that education, therefore, is a process of living and not a preparation for future living.

I believe that the school must represent present life—life as real and vital to the child as that which he carries on in the home, in the neighborhood, or on the play-ground.

I believe that education which does not occur through forms of life, forms that are worth living for their own sake, is always a poor substitute for the genuine reality and tends to cramp and to deaden.

I believe that the school, as an institution, should simplify existing social life; should reduce it, as it were, to an embryonic form. Existing life is so complex that the child cannot be brought into contact with it without either confusion or distraction; he is either overwhelmed by multiplicity of activities which are going on, so that he loses his own power of orderly reaction, or he is so stimulated by these various activities that his powers are prematurely called into play and he becomes either unduly specialized or else disintegrated.

I believe that, as such simplified social life, the school life should grow gradually out of the home life; that it should take up and continue the activities with which the child is already familiar in the home.

I believe that it should exhibit these activities to the child, and reproduce them in such ways that the child will gradually learn the meaning of them, and be capable of playing his own part in relation to them.

I believe that this is a psychological necessity, because it is the only way of securing continuity in the child's growth, the only way of giving a background of past experience to the new ideas given in school.

I believe it is also a social necessity because the home is the form of social life in which the child has been nurtured and in connection with which he has had his moral training. It is the business of the school to deepen and extend his sense of the values bound up in his home life.

I believe that much of present education fails because it neglects this fundamental principle of the school as a form of community life. It conceives the school as a place where certain information is to be given, where certain lessons are to be learned, or where certain habits are to be formed. The value of these is conceived as lying largely in the remote future; the child must do these things for the sake of something else he is to do; they are mere preparation. As a result they do not become a part of the life experience of the child and so are not truly educative.

I believe that moral education centres about this conception of the school as a mode of social life, that the best and deepest moral training is precisely that which one gets through having to enter into proper relations with others in a unity of work and thought. The present educational systems, so far as they destroy or neglect this unity, render it difficult or impossible to get any genuine, regular moral training.

I believe that the child should be stimulated and controlled in his work through the life of the community.

I believe that under existing conditions far too much of the stimulus and control proceeds from the teacher, because of neglect of the idea of the school as a form of social life.

I believe that the teacher's place and work in the school is to be interpreted from this same basis. The teacher is not in the school to impose certain ideas or to form certain habits in the child, but is there as a member of the community to select the influences which shall affect the child and to assist him in properly responding to these influences.

I believe that the discipline of the school should proceed from the life of the school as a whole and not directly from the teacher.

I believe that the teacher's business is simply to determine on the basis of larger experience and riper wisdom, how the discipline of life shall come to the child.

I believe that all questions of the grading of the child and his promotion should be determined by reference to the same standard. Examinations are of use only so far as they test the child's fitness for social life and reveal the place in which he can be of most service and where he can receive the most help.

**ARTICLE THREE. THE SUBJECT-MATTER OF EDUCATION**

I believe that the social life of the child is the basis of concentration, or correlation, in all his training or growth. The social life gives the unconscious unity and the background of all his efforts and of all his attainments.

I believe that the subject-matter of the school curriculum should mark a gradual differentiation out of the primitive unconscious unity of social life.

I believe that we violate the child's nature and render difficult the best ethical results, by introducing the child too abruptly to a number of special studies, of reading, writing, geography, etc., out of relation to this social life.

I believe, therefore, that the true centre of correlation of the school subjects is not science, nor literature, nor history, nor geography, but the child's own social activities.

I believe that education cannot be unified in the study of science, or so-called nature study, because apart from human activity, nature itself is not a unity; nature in itself is a number of diverse objects in space and time, and to attempt to make it the centre of work by itself, is to introduce a principle of radiation rather than one of concentration.

I believe that literature is the reflex expression and interpretation of social experience; that hence it must follow upon and not precede such experience. It, therefore, cannot be made the basis, although it may be made the summary of unification.

I believe once more that history is of educative value in so far as it presents phases of social life and growth. It must be controlled by reference to social life. When taken simply as history it is thrown into the distant past and becomes dead and inert. Taken as the record of man's social life and progress it becomes full of meaning. I believe, however, that it cannot be so taken excepting as the child is also introduced directly into social life.

I believe accordingly that the primary basis of education is in the child's powers at work along the same general constructive lines as those which have brought civilization into being.

I believe that the only way to make the child conscious of his social heritage is to enable him to perform those fundamental types of activity which makes civilization what it is.

I believe, therefore, in the so-called expressive or constructive activities as the centre of correlation.

I believe that this gives the standard for the place of cooking, sewing, manual training, etc., in the school.

I believe that they are not special studies which are to be introduced over and above a lot of others in the way of relaxation or relief, or as additional accomplishments. I believe rather that they represent, as types, fundamental forms of social activity; and that it is possible and desirable that the child's introduction into the more formal subjects of the curriculum be through the medium of these activities.

I believe that the study of science is educational in so far as it brings out the materials and processes which make social life what it is.

I believe that one of the greatest difficulties in the present teaching of science is that the material is presented in purely objective form, or is treated as a new peculiar kind of experience which the child can add to that which he has already had. In reality, science is of value because it gives the ability to interpret and control the experience already had. It should be introduced, not as so much new subject-matter, but as showing the factors already involved in previous experience and as furnishing tools by which that experience can be more easily and effectively regulated.

I believe that at present we lose much of the value of literature and language studies because of our elimination of the social element. Language is almost always treated in the books

of pedagogy simply as the expression of thought. It is true that language is a logical instrument, but it is fundamentally and primarily a social instrument. Language is the device for communication; it is the tool through which one individual comes to share the ideas and feelings of others. When treated simply as a way of getting individual information, or as a means of showing off what one has learned, it loses its social motive and end.

I believe that there is, therefore, no succession of studies in the ideal school curriculum. If education is life, all life has, from the outset, a scientific aspect; an aspect of art and culture and an aspect of communication. It cannot, therefore, be true that the proper studies for one grade are mere reading and writing, and that at a later grade, reading, or literature, or science, may be introduced. The progress is not in the succession of studies but in the development of new attitudes towards, and new interests in, experience.

I believe finally, that education must be conceived as a continuing reconstruction of experience; that the process and the goal of education are one and the same thing.

I believe that to set up any end outside of education, as furnishing its goal and standard, is to deprive the educational process of much of its meaning and tends to make us rely upon false and external stimuli in dealing with the child.

#### **ARTICLE FOUR. THE NATURE OF METHOD**

I believe that the question of method is ultimately reducible to the question of the order of development of the child's powers and interests. The law for presenting and treating material is the law implicit within the child's own nature. Because this is so I believe the following statements are of supreme importance as determining the spirit in which education is carried on:

1. I believe that the active side precedes the passive in the development of the child nature; that expression comes before conscious impression; that the muscular development precedes the sensory; that movements come before conscious sensations; I believe that consciousness is essentially motor or impulsive; that conscious states tend to project themselves in action.

I believe that the neglect of this principle is the cause of a large part of the waste of time and strength in school work. The child is thrown into a passive, receptive or absorbing attitude. The conditions are such that he is not permitted to follow the law of his nature; the result is friction and waste.

I believe that ideas (intellectual and rational processes) also result from action and devolve for the sake of the better control of action. What we term reason is primarily the law of orderly or effective action. To attempt to develop the reasoning powers, the powers of judgment, without reference to the selection and arrangement of means in action, is the fundamental fallacy in our present methods of dealing with this matter. As a result we present the child with arbitrary symbols. Symbols are a necessity in mental development, but they have their place as tools for economizing effort; presented by themselves they are a mass of meaningless and arbitrary ideas imposed from without.

2. I believe that the image is the great instrument of instruction. What a child gets out of any subject presented to him is simply the images which he himself forms with regard to it.

I believe that if nine-tenths of the energy at present directed towards making the child learn certain things, were spent in seeing to it that the child was forming proper images, the work of instruction would be indefinitely facilitated.

I believe that much of the time and attention now given to the preparation and presentation of lessons might be more wisely and profitably expended in training the child's power of imagery and in seeing to it that he was continually forming definite, vivid, and growing images of the various subjects with which he comes in contact in his experience.

3. I believe that interests are the signs and symptoms of growing power. I believe that they represent dawning capacities. Accordingly the constant and careful observation of interests is of the utmost importance for the educator.

I believe that these interests are to be observed as showing the state of development which the child has reached.

I believe that they prophesy the stage upon which he is about to enter.

I believe that only through the continual and sympathetic observation of childhood's interests can the adult enter into the child's life and see what it is ready for, and upon what material it could work most readily and fruitfully.

I believe that these interests are neither to be humored nor repressed. To repress interest is to substitute the adult for the child, and so to weaken intellectual curiosity and alertness, to suppress initiative, and to deaden interest. To humor the interests is to substitute the transient for the permanent. The interest is always the sign of some power below; the important thing is to discover this power. To humor the interest is to fail to penetrate below the surface and its sure result is to substitute caprice and whim for genuine interest.

4. I believe that the emotions are the reflex of actions.

I believe that to endeavor to stimulate or arouse the emotions apart from their corresponding activities, is to introduce an unhealthy and morbid state of mind.

I believe that if we can only secure right habits of action and thought, with reference to the good, the true, and the beautiful, the emotions will for the most part take care of themselves.

I believe that next to deadness and dullness, formalism and routine, our education is threatened with no greater evil than sentimentalism.

I believe that this sentimentalism is the necessary result of the attempt to divorce feeling from action.

#### **ARTICLE FIVE. THE SCHOOL AND SOCIAL PROGRESS**

I believe that education is the fundamental method of social progress and reform.

I believe that all reforms which rest simply upon the enactment of law, or the threatening of certain penalties, or upon changes in mechanical or outward arrangements, are transitory and futile.

I believe that education is a regulation of the process of coming to share in the social consciousness; and that the adjustment of individual activity on the basis of this social consciousness is the only sure method of social reconstruction.

I believe that this conception has due regard for both the individualistic and socialistic ideals. It is duly individual because it recognizes the formation of a certain character as the only genuine basis of right living. It is socialistic because it recognizes that this right character is not to be formed by merely individual precept, example, or exhortation, but rather by the influence of a certain form of institutional or community life upon the individual, and that the social organism through the school, as its organ, may determine ethical results.

I believe that in the ideal school we have the reconciliation of the individualistic and the institutional ideals.

I believe that the community's duty to education is, therefore, its paramount moral duty. By law and punishment, by social agitation and discussion, society can regulate and form itself in a more or less haphazard and chance way. But through education society can formulate its own purposes, can organize its own means and resources, and thus shape itself with definiteness and economy in the direction in which it wishes to move.

I believe that when society once recognizes the possibilities in this direction, and the obligations which these possibilities impose, it is impossible to conceive of the resources of time, attention, and money which will be put at the disposal of the educator.

I believe it is the business of every one interested in education to insist upon the school as the primary and most effective instrument of social progress and reform in order that soci-

ety may be awakened to realize what the school stands for, and aroused to the necessity of endowing the educator with sufficient equipment properly to perform his task.

I believe that education thus conceived marks the most perfect and intimate union of science and art conceivable in human experience.

I believe that the art of thus giving shape to human powers and adapting them to social service, is the supreme art; one calling into its service the best of artists; that no insight, sympathy, tact, executive power is too great for such service.

I believe that with the growth of psychological science, giving added insight into individual structure and laws of growth; and with growth of social science, adding to our knowledge of the right organization of individuals, all scientific resources can be utilized for the purposes of education.

I believe that when science and art thus join hands the most commanding motive for human action will be reached; the most genuine springs of human conduct aroused and the best service that human nature is capable of guaranteed.

I believe, finally, that the teacher is engaged, not simply in the training of individuals, but in the formation of the proper social life.

I believe that every teacher should realize the dignity of his calling; that he is a social servant set apart for the maintenance of proper social order and the securing of the right social growth.

I believe that in this way the teacher always is the prophet of the true God and the usherer in of the true kingdom of God.

## **A NATION AT RISK: THE IMPERATIVE FOR EDUCATIONAL REFORM (ABBREVIATED) (1983)**

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*All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgement needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself.*

Our Nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. This report is concerned with only one of the many causes and dimensions of the problem, but it is the one that undergirds American prosperity, security, and civility. We report to the American people that while we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to the United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a Nation and a people. What was unimaginable a generation ago has begun to occur—others are matching and surpassing our educational attainments.

If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to happen to ourselves. We have even squandered the gains in student achievement made in the wake of the Sputnik challenge. Moreover, we have dismantled essential support systems which helped make those gains possible. We have, in effect, been committing an act of unthinking, unilateral educational disarmament.

Our society and its educational institutions seem to have lost sight of the basic purposes of schooling, and of the high expectations and disciplined effort needed to attain them. This

report, the result of 18 months of study, seeks to generate reform of our educational system in fundamental ways and to renew the Nation's commitment to schools and colleges of high quality throughout the length and breadth of our land.

That we have compromised this commitment is, upon reflection, hardly surprising, given the multitude of often conflicting demands we have placed on our Nation's schools and colleges. They are routinely called on to provide solutions to personal, social, and political problems that the home and other institutions either will not or cannot resolve. We must understand that these demands on our schools and colleges often exact an educational cost as well as a financial one.

On the occasion of the Commission's first meeting, President Reagan noted the central importance of education in American life when he said: "Certainly there are few areas of American life as important to our society, to our people, and to our families as our schools and colleges." This report, therefore, is as much an open letter to the American people as it is a report to the Secretary of Education. We are confident that the American people, properly informed, will do what is right for their children and for the generations to come.

### **The Risk**

History is not kind to idlers. The time is long past when America's destiny was assured simply by an abundance of natural resources and inexhaustible human enthusiasm, and by our relative isolation from the malignant problems of older civilizations. The world is indeed one global village. We live among determined, well-educated, and strongly motivated competitors. We compete with them for international standing and markets, not only with products but also with the ideas of our laboratories and neighborhood workshops. America's position in the world may once have been reasonably secure with only a few exceptionally well-trained men and women. It is no longer.

The risk is not only that the Japanese make automobiles more efficiently than Americans and have government subsidies for development and export. It is not just that the South Koreans recently built the world's most efficient steel mill, or that American machine tools, once the pride of the world, are being displaced by German products. It is also that these developments signify a redistribution of trained capability throughout the globe. Knowledge, learning, information, and skilled intelligence are the new raw materials of international commerce and are today spreading throughout the world as vigorously as miracle drugs, synthetic fertilizers, and blue jeans did earlier. If only to keep and improve on the slim competitive edge we still retain in world markets, we must dedicate ourselves to the reform of our educational system for the benefit of all—old and young alike, affluent and poor, majority and minority. Learning is the indispensable investment required for success in the "information age" we are entering.

Our concern, however, goes well beyond matters such as industry and commerce. It also includes the intellectual, moral, and spiritual strengths of our people which knit together the very fabric of our society. The people of the United States need to know that individuals in our society who do not possess the levels of skill, literacy, and training essential to this new era will be effectively disenfranchised, not simply from the material rewards that accompany competent performance, but also from the chance to participate fully in our national life. A high level of shared education is essential to a free, democratic society and to the fostering of a common culture, especially in a country that prides itself on pluralism and individual freedom.

For our country to function, citizens must be able to reach some common understandings on complex issues, often on short notice and on the basis of conflicting or incomplete evidence. Education helps form these common understandings, a point Thomas Jefferson made long ago in his justly famous dictum:

I know no safe depository of the ultimate powers of the society but the people themselves; and if we think them not enlightened enough to exercise their control with

a wholesome discretion, the remedy is not to take it from them but to inform their discretion.

Part of what is at risk is the promise first made on this continent: All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interests but also the progress of society itself.

### **Indicators of the Risk**

The educational dimensions of the risk before us have been amply documented in testimony received by the Commission. For example:

- International comparisons of student achievement, completed a decade ago, reveal that on 19 academic tests American students were never first or second and, in comparison with other industrialized nations, were last seven times.
- Some 23 million American adults are functionally illiterate by the simplest tests of everyday reading, writing, and comprehension.
- About 13 percent of all 17-year-olds in the United States can be considered functionally illiterate. Functional illiteracy among minority youth may run as high as 40 percent.
- Average achievement of high school students on most standardized tests is now lower than 26 years ago when Sputnik was launched.
- Over half the population of gifted students do not match their tested ability with comparable achievement in school.
- The College Board's Scholastic Aptitude Tests (SAT) demonstrate a virtually unbroken decline from 1963 to 1980. Average verbal scores fell over 50 points and average mathematics scores dropped nearly 40 points.
- College Board achievement tests also reveal consistent declines in recent years in such subjects as physics and English.
- Both the number and proportion of students demonstrating superior achievement on the SATs (i.e., those with scores of 650 or higher) have also dramatically declined.
- Many 17-year-olds do not possess the "higher order" intellectual skills we should expect of them. Nearly 40 percent cannot draw inferences from written material; only one-fifth can write a persuasive essay; and only one-third can solve a mathematics problem requiring several steps.
- There was a steady decline in science achievement scores of U.S. 17-year-olds as measured by national assessments of science in 1969, 1973, and 1977.
- Between 1975 and 1980, remedial mathematics courses in public 4-year colleges increased by 72 percent and now constitute one-quarter of all mathematics courses taught in those institutions.
- Average tested achievement of students graduating from college is also lower.
- Business and military leaders complain that they are required to spend millions of dollars on costly remedial education and training programs in such basic skills as reading, writing, spelling, and computation. The Department of the Navy, for example, reported to the Commission that one-quarter of its recent recruits cannot read at the ninth grade level, the minimum needed simply to understand written safety instructions. Without remedial work they cannot even begin, much less complete, the sophisticated training essential in much of the modern military.

These deficiencies come at a time when the demand for highly skilled workers in new fields is accelerating rapidly. For example:

- Computers and computer-controlled equipment are penetrating every aspect of our lives—homes, factories, and offices.
- One estimate indicates that by the turn of the century millions of jobs will involve laser technology and robotics.
- Technology is radically transforming a host of other occupations. They include health care, medical science, energy production, food processing, construction, and the building, repair, and maintenance of sophisticated scientific, educational, military, and industrial equipment.

Analysts examining these indicators of student performance and the demands for new skills have made some chilling observations. Educational researcher Paul Hurd concluded at the end of a thorough national survey of student achievement that within the context of the modern scientific revolution, “We are raising a new generation of Americans that is scientifically and technologically illiterate.” In a similar vein, John Slaughter, a former Director of the National Science Foundation, warned of “a growing chasm between a small scientific and technological elite and a citizenry ill-informed, indeed uninformed, on issues with a science component.”

But the problem does not stop there, nor do all observers see it the same way. Some worry that schools may emphasize such rudiments as reading and computation at the expense of other essential skills such as comprehension, analysis, solving problems, and drawing conclusions. Still others are concerned that an over-emphasis on technical and occupational skills will leave little time for studying the arts and humanities that so enrich daily life, help maintain civility, and develop a sense of community. Knowledge of the humanities, they maintain, must be harnessed to science and technology if the latter are to remain creative and humane, just as the humanities need to be informed by science and technology if they are to remain relevant to the human condition. Another analyst, Paul Copperman, has drawn a sobering conclusion. Until now, he has noted:

Each generation of Americans has outstripped its parents in education, in literacy, and in economic attainment. For the first time in the history of our country, the educational skills of one generation will not surpass, will not equal, will not even approach, those of their parents.

It is important, of course, to recognize that *the average citizen* today is better educated and more knowledgeable than the average citizen of a generation ago—more literate, and exposed to more mathematics, literature, and science. The positive impact of this fact on the well-being of our country and the lives of our people cannot be overstated. Nevertheless, *the average graduate* of our schools and colleges today is not as well-educated as the average graduate of 25 or 35 years ago, when a much smaller proportion of our population completed high school and college. The negative impact of this fact likewise cannot be overstated.

### **Hope and Frustration**

Statistics and their interpretation by experts show only the surface dimension of the difficulties we face. Beneath them lies a tension between hope and frustration that characterizes current attitudes about education at every level.

We have heard the voices of high school and college students, school board members, and teachers; of leaders of industry, minority groups, and higher education; of parents and State officials. We could hear the hope evident in their commitment to quality education and in their descriptions of outstanding programs and schools. We could also hear the intensity of their frustration, a growing impatience with shoddiness in many walks of American life, and the complaint that this shoddiness is too often reflected in our schools and colleges. Their frustration threatens to overwhelm their hope.

What lies behind this emerging national sense of frustration can be described as both a dimming of personal expectations and the fear of losing a shared vision for America.

On the personal level the student, the parent, and the caring teacher all perceive that a basic promise is not being kept. More and more young people emerge from high school ready neither for college nor for work. This predicament becomes more acute as the knowledge base continues its rapid expansion, the number of traditional jobs shrinks, and new jobs demand greater sophistication and preparation.

On a broader scale, we sense that this undertone of frustration has significant political implications, for it cuts across ages, generations, races, and political and economic groups. We have come to understand that the public will demand that educational and political leaders act forcefully and effectively on these issues. Indeed, such demands have already appeared and could well become a unifying national preoccupation. This unity, however, can be achieved only if we avoid the unproductive tendency of some to search for scapegoats among the victims, such as the beleaguered teachers.

On the positive side is the significant movement by political and educational leaders to search for solutions—so far centering largely on the nearly desperate need for increased support for the teaching of mathematics and science. This movement is but a start on what we believe is a larger and more educationally encompassing need to improve teaching and learning in fields such as English, history, geography, economics, and foreign languages. We believe this movement must be broadened and directed toward reform and excellence throughout education.

### **Excellence in Education**

We define “excellence” to mean several related things. At the level of the *individual learner*, it means performing on the boundary of individual ability in ways that test and push back personal limits, in school and in the workplace. Excellence characterizes a *school or college* that sets high expectations and goals for all learners, then tries in every way possible to help students reach them. Excellence characterizes a *society* that has adopted these policies, for it will then be prepared through the education and skill of its people to respond to the challenges of a rapidly changing world. Our Nation’s people and its schools and colleges must be committed to achieving excellence in all these senses.

We do not believe that a public commitment to excellence and educational reform must be made at the expense of a strong public commitment to the equitable treatment of our diverse population. The twin goals of equity and high-quality schooling have profound and practical meaning for our economy and society, and we cannot permit one to yield to the other either in principle or in practice. To do so would deny young people their chance to learn and live according to their aspirations and abilities. It also would lead to a generalized accommodation to mediocrity in our society on the one hand or the creation of an undemocratic elitism on the other.

Our goal must be to develop the talents of all to their fullest. Attaining that goal requires that we expect and assist all students to work to the limits of their capabilities. We should expect schools to have genuinely high standards rather than minimum ones, and parents to support and encourage their children to make the most of their talents and abilities.

The search for solutions to our educational problems must also include a commitment to life-long learning. The task of rebuilding our system of learning is enormous and must be properly understood and taken seriously: Although a million and a half new workers enter the economy each year from our schools and colleges, the adults working today will still make up about 75 percent of the workforce in the year 2000. These workers, and new entrants into the workforce, will need further education and retraining if they—and we as a Nation—are to thrive and prosper.

### **The Learning Society**

In a world of ever-accelerating competition and change in the conditions of the workplace, of ever-greater danger, and of ever-larger opportunities for those prepared to meet them, edu-

cational reform should focus on the goal of creating a Learning Society. At the heart of such a society is the commitment to a set of values and to a system of education that affords all members the opportunity to stretch their minds to full capacity, from early childhood through adulthood, learning more as the world itself changes. Such a society has as a basic foundation the idea that education is important not only because of what it contributes to one's career goals but also because of the value it adds to the general quality of one's life. Also at the heart of the Learning Society are educational opportunities extending far beyond the traditional institutions of learning, our schools and colleges. They extend into homes and workplaces; into libraries, art galleries, museums, and science centers; indeed, into every place where the individual can develop and mature in work and life. In our view, formal schooling in youth is the essential foundation for learning throughout one's life. But without life-long learning, one's skills will become rapidly dated.

In contrast to the ideal of the Learning Society, however, we find that for too many people education means doing the minimum work necessary for the moment, then coasting through life on what may have been learned in its first quarter. But this should not surprise us because we tend to express our educational standards and expectations largely in terms of "minimum requirements." And where there should be a coherent continuum of learning, we have none, but instead an often incoherent, outdated patchwork quilt. Many individual, sometimes heroic, examples of schools and colleges of great merit do exist. Our findings and testimony confirm the vitality of a number of notable schools and programs, but their very distinction stands out against a vast mass shaped by tensions and pressures that inhibit systematic academic and vocational achievement for the majority of students. In some metropolitan areas basic literacy has become the goal rather than the starting point. In some colleges maintaining enrollments is of greater day-to-day concern than maintaining rigorous academic standards. And the ideal of academic excellence as the primary goal of schooling seems to be fading across the board in American education.

Thus, we issue this call to all who care about America and its future: to parents and students; to teachers, administrators, and school board members; to colleges and industry; to union members and military leaders; to governors and State legislators; to the President; to members of Congress and other public officials; to members of learned and scientific societies; to the print and electronic media; to concerned citizens everywhere. America is at risk.

We are confident that America can address this risk. If the tasks we set forth are initiated now and our recommendations are fully realized over the next several years, we can expect reform of our Nation's schools, colleges, and universities. This would also reverse the current declining trend—a trend that stems more from weakness of purpose, confusion of vision, underuse of talent, and lack of leadership, than from conditions beyond our control.

### **The Tools at Hand**

It is our conviction that the essential raw materials needed to reform our educational system are waiting to be mobilized through effective leadership:

- the natural abilities of the young that cry out to be developed and the undiminished concern of parents for the well-being of their children;
- the commitment of the Nation to high retention rates in schools and colleges and to full access to education for all;
- the persistent and authentic American dream that superior performance can raise one's state in life and shape one's own future;
- the dedication, against all odds, that keeps teachers serving in schools and colleges, even as the rewards diminish;
- our better understanding of learning and teaching and the implications of this knowledge for school practice, and the numerous examples of local success as a result of superior effort and effective dissemination;

- the ingenuity of our policymakers, scientists, State and local educators, and scholars in formulating solutions once problems are better understood;
- the traditional belief that paying for education is an investment in ever-renewable human resources that are more durable and flexible than capital plant and equipment, and the availability in this country of sufficient financial means to invest in education;
- the equally sound tradition, from the Northwest Ordinance of 1787 until today, that the Federal Government should supplement State, local, and other resources to foster key national educational goals; and
- the voluntary efforts of individuals, businesses, and parent and civic groups to cooperate in strengthening educational programs.

These raw materials, combined with the unparalleled array of educational organizations in America, offer us the possibility to create a Learning Society, in which public, private, and parochial schools; colleges and universities; vocational and technical schools and institutes; libraries; science centers, museums, and other cultural institutions; and corporate training and retraining programs offer opportunities and choices for all to learn throughout life.

### **The Public's Commitment**

Of all the tools at hand, the public's support for education is the most powerful. In a message to a National Academy of Sciences meeting in May 1982, President Reagan commented on this fact when he said:

This public awareness—and I hope public action—is long overdue . . . This country was built on American respect for education . . . Our challenge now is to create a resurgence of that thirst for education that typifies our Nation's history.

The most recent (1982) Gallup Poll of the *Public's Attitudes Toward the Public Schools* strongly supported a theme heard during our hearings: People are steadfast in their belief that education is the major foundation for the future strength of this country. They even considered education more important than developing the best industrial system or the strongest military force, perhaps because they understood education as the cornerstone of both. They also held that education is "extremely important" to one's future success, and that public education should be the top priority for additional Federal funds. Education occupied first place among 12 funding categories considered in the survey—above health care, welfare, and military defense, with 55 percent selecting public education as one of their first three choices. Very clearly, the public understands the primary importance of education as the foundation for a satisfying life, an enlightened and civil society, a strong economy, and a secure Nation.

At the same time, the public has no patience with undemanding and superfluous high school offerings. In another survey, more than 75 percent of all those questioned believed every student planning to go to college should take 4 years of mathematics, English, history/U.S. government, and science, with more than 50 percent adding 2 years each of a foreign language and economics or business. The public even supports requiring much of this curriculum for students who do not plan to go to college. These standards far exceed the strictest high school graduation requirements of any State today, and they also exceed the admission standards of all but a handful of our most selective colleges and universities.

Another dimension of the public's support offers the prospect of constructive reform. The best term to characterize it may simply be the honorable word "patriotism." Citizens know intuitively what some of the best economists have shown in their research, that education is one of the chief engines of a society's material well-being. They know, too, that education is the common bond of a pluralistic society and helps tie us to other cultures around the globe. Citizens also know in their bones that the safety of the United States depends principally on the wit, skill, and spirit of a self-confident people, today and tomorrow. It is, therefore, essential—especially in a period of long-term decline in educational achievement—for government at all levels to affirm its responsibility for nurturing the Nation's intellectual capital.

And perhaps most important, citizens know and believe that the meaning of America to the rest of the world must be something better than it seems to many today. Americans like to think of this Nation as the preeminent country for generating the great ideas and material benefits for all mankind. The citizen is dismayed at a steady 15-year decline in industrial productivity, as one great American industry after another falls to world competition. The citizen wants the country to act on the belief, expressed in our hearings and by the large majority in the Gallup Poll, that education should be at the top of the Nation's agenda.

**National Commission on Excellence in Education**

April 1983

## **JOINT STATEMENT ON THE EDUCATION SUMMIT WITH THE NATION'S GOVERNORS IN CHARLOTTESVILLE, VIRGINIA**

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**SEPTEMBER 28, 1989**

The President and the nation's Governors agree that a better educated citizenry is the key to the continued growth and prosperity of the United States. Education has historically been, and should remain, a state responsibility and a local function, which works best when there is also strong parental involvement in the schools. And, as [a] Nation we must have an educated workforce, second to none, in order to succeed in an increasingly competitive world economy.

Education has always been important, but never this important because the stakes have changed: Our competitors for opportunity are also working to educate their people. As they continue to improve, they make the future a moving target. We believe that the time has come, for the first time in U.S. history, to establish clear, national performance goals, goals that will make us internationally competitive.

The President and the nation's Governors have agreed at this summit to:

- establish a process for setting national educational goals;
- to seek greater flexibility and enhanced accountability in the use of Federal resources to meet the goals, through both regulatory and legislative changes;
- to undertake a major state-by-state effort to restructure our education system; and
- to report annually on progress in achieving our goals.

This agreement represents the first step in a long-term commitment to reorient the education system and to marshal widespread support for the needed reforms.

### **National Education Goals**

The first step in restructuring our education system is to build a broad-based consensus around a defined set of national education goals. The National Governors Association Task Force on Education will work with the President's designees to recommend goals to the President and the Nation's Governors. The process to develop the goals will involve teachers, parents, local school administrators, school board members, elected officials, business and labor communities, and the public at large. The overriding objective is to develop an ambitious, realistic set of performance goals that reflect the views of those with a stake in the performance of our education system. To succeed we need a common understanding and a common mission. National goals will allow us to plan effectively, to set priorities, and to establish clear lines of accountability and authority. These goals will lead to the development of detailed strategies that will allow us to meet these objectives.

The process for establishing these goals should be completed and the goals announced in early 1990.

By performance we mean goals that will, if achieved, guarantee that we are internationally competitive, such as goals related to:

- the readiness of children to start school;
- the performance of students on international achievement tests, especially in math and science;
- the reduction of the dropout rate and the improvement of academic performance, especially among at-risk students;
- the functional literacy of adult Americans;
- the level of training necessary to guarantee a competitive workforce;
- the supply of qualified teachers and up-to-date technology; and
- the establishment of safe, disciplined, and drug-free schools.

## **THE FEDERAL/STATE PARTNERSHIP**

### **Flexibility and Accountability**

The President and the Governors are committed to achieving the maximum return possible from our investments in the Nation's education system. We define maximum return as the following: significant and sustained educational improvement for all children. Nothing less will meet the Nation's needs for a strong, competitive workforce; nothing less will meet our children's needs for successful citizenship and economic opportunity.

Federal funds, which represent only a small part of total education spending, are directed particularly toward services for young people most at risk. Federal laws and regulations control where and for whom states and localities spend this money. State and local laws and regulations control what is taught, and how, for all students.

At present, neither Federal nor State and local laws and regulations focus sufficiently on results, or on real educational improvement for all children. Federal and State executives need authority to waive statutory and regulatory provisions in return for greater accountability for results.

The President and the Governors have agreed:

- to examine Federal regulations under current law and to move in the direction of greater flexibility;
- to take parallel steps in each state with respect to State laws and administrative rules;
- to submit legislation to Congress early next year that would provide State and local recipients greater flexibility in the use of Federal funds, in return for firm commitments to improved levels of education and skill training.

The President and the Governors have agreed to establish a working group of Governors and the President's designees to begin work immediately to accomplish these tasks.

We know that other voices need to be heard in this discussion — voices of educators, parents, and those whose primary interest is the protection of the disadvantaged, minorities, and the handicapped. We need to work with the Congress. The processes we will set up immediately following this conference will involve all parties.

The urgent need for flexibility in using Federal funds can best be illustrated by a few examples.

First, the Federal Vocational Education Act, which mandates specific set-asides that often result in individual awards that are too small to be meaningful and that prohibit the money from being spent to achieve its purpose. One state reported being required to divide \$300,000 in aid among far too many categories and set-asides.

Second, similarly, the Chapter 1 program requires that equipment purchased to provide remedial education services cannot be used for non-Chapter 1 institutions in areas such as

adult education. Several States report that large numbers of computers purchased by Federal funds are idle at night, while adult education classes that need them either do without or use scarce tax dollars to buy other equipment.

Third, the requirements that children who benefit from Federal funds for compensatory and special education be taught separately often undermines their achievement. Waivers that permit these students to return to regular classes and receive extra help have produced large increases in their test scores. This option should be available for all school districts.

These commitments are historic steps toward ensuring that young people with the greatest needs receive the best our schools and training programs can give them, and that all children reach their highest educational potential.

In a phrase, we want to swap redtape for results.

### **The Federal Government's Financial Role**

State and local Governments provide more than 90 percent of education funding. They should continue to bear that lion's share of the load. The Federal financial role is limited and has even declined, but it is still important. That role is:

- to promote National education equity by helping our poor children get off to a good start in school, giving disadvantaged and handicapped children extra help to assist them in their school years, ensuring accessibility to a college education, and preparing the workforce for jobs;
- and second, to provide research and development for programs that work, good information on the real performance of students, schools, and states, and assistance in replicating successful state and local initiatives all across the United States.

We understand the limits imposed on new spending by the Federal deficit and the budget process. However, we urge that priority for any further funding increases be given to prepare young children to succeed in school. This is consistent with the President's recommendation for an increase in the number of children served by Head Start in this year's budget. If we are ever to develop a system that ensures that our children are healthy and succeed in school, the Federal Government will have to play a leading role.

Further, we urge that the Congress not impose new Federal mandates that are unrelated to children, but that require States to spend state tax money that could otherwise go to education.

### **Commitment to Restructuring**

Virtually every State has substantially increased its investment in education, increased standards, and improved learning. Real gains have occurred. However, we still have a long way to go. We must make dramatic improvements in our education system. This cannot be done without a genuine, National, Bipartisan commitment to excellence and without a willingness to dramatically alter our system of education.

The President and the Nation's Governors agree that significant steps must be taken to restructure education in all states. We share the view that simply more of the same will not achieve the results we need. We must find ways to deploy the resources we commit to education more effectively.

A similar process has been going on in American manufacturing industry over the last decade with astonishing results: An increase in productivity of nearly 4 percent a year.

There are many promising new ideas and strategies for restructuring education. These include greater choice for parents and students, greater authority and accountability for teachers and principals, alternative certification programs for teachers, and programs that systematically reward excellence and performance. Most successful restructuring efforts seem to have certain common characteristics:

- a system of accountability that focuses on results, rather than on compliance with rules and regulations;
- decentralization of authority and decision-making responsibility to the school site, so that educators are empowered to determine the means for achieving the goals and to be held accountable for accomplishing them;
- a rigorous program of instruction designed to ensure that every child can acquire the knowledge and skills required in an economy in which our citizens must be able to think for a living;
- an education system that develops first-rate teachers and creates a professional environment that provides real rewards for success with students, real consequences for failure, and the tools and flexibility required to get the job done; and
- active, sustained parental and business community involvement.

Restructuring efforts are now underway in many states. The Nation's Governors are committed to a major restructuring effort in every state. The Governors will give this task high priority and will report on their programs in one year.

### **Assuring Accountability**

As elected chief executives, we expect to be held accountable for progress in meeting the new additional goals and we expect to hold others accountable as well.

When goals are set and strategies for achieving them are adopted, we must establish clear measures of performance and then issue annual Report Cards on the progress of students, schools, the states, and the Federal Government.

Over the last few days we have humbly walked in the footsteps of Thomas Jefferson. We have started down a promising path. We have entered into a compact—a Jeffersonian compact to enlighten our children and the children of generations to come.

The time for rhetoric is past; the time for performance is now.

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## **STATE CONSTITUTIONS AND PUBLIC EDUCATION GOVERNANCE**

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**FIRST COMPLETED IN OCTOBER 1998  
LAST UPDATED IN OCTOBER 2000**

### **Introduction**

Each state constitution articulates, to varying degrees of detail, the state's responsibilities for providing an education to its citizens. This *ECS StateNote* outlines and compares the provisions in each state's constitution that concern public education governance.

For the purposes of this *ECS StateNote*, governance is defined as who makes what decisions, and in what manner. In public education, the "who" part of this definition is everybody from state legislators to parents. The "what" part of this definition covers everything from standards to professional development. The "in what manner" or "how" part of this definition is everything from decisions made autonomously to decisions made within a framework established by others.

### **Summary**

Each state constitution contain at least one of the following provisions:

- Establishing and maintaining a free system of public schools open to all children of the state

- Financing schools (in varying degrees of detail)
- Separating church and state, often in at least one of the following two ways:
  - Forbidding any public funds to be appropriated to or used for the support of any sectarian school
  - Requiring public schools to be free from sectarian control
- Creating certain decisionmaking entities (e.g., state board of education, state superintendent of education, local board of education, local superintendent of education); although most state constitutions require at least some of these entities to be in place, they usually do not specify their qualifications, powers and duties.

### **State-by-State Review**

This section presents some of the details within each state constitution that relate to public education governance.

#### **Alabama**

- Requires the legislature to establish, organize and maintain a liberal system of public schools throughout the state for the benefit of the children of the state between the ages of 7 and 21 years.
- Prohibits any money raised for the support of public schools to be appropriated to or used for the support of any sectarian or denominational school.
- Provides that no religion be established by law; that no preference be given by law to any religious sect, society, denomination, or mode of worship; and that no one be compelled by law to attend any place of worship, nor to pay any tithes, taxes, or other rate for building or repairing any place of worship, or for maintaining any minister or ministry.
- Forbids any more than 4% of all moneys raised or appropriated for the support of public schools to be used for the payment of teachers. Allows the legislature, by a vote of two-thirds of each house, to suspend this provision.
- Vests general supervision of the state's public schools in a state board of education. Charges the legislature with establishing the method of state board member election. Charges the state board with appointing the state superintendent of education, who shall be the chief state school officer.
- Allows the legislature to provide for the election of local board of education members in certain counties.
- Provides for the election of the superintendent of education in a certain county.

#### **Alaska**

- Requires the legislature to establish and maintain a system of public schools open to all children of the state.
- Prohibits any money to be paid from public funds for the direct benefit of any religious or other private education institution.
- Requires that no law be made respecting an establishment of religion, or prohibiting the free exercise thereof.
- Requires that public schools be free from sectarian control.

#### **Arizona**

- Requires the legislature to provide for the establishment and maintenance of a general and uniform public school system, which includes kindergarten schools, common schools, high schools, normal schools, industrial schools and a university.
- Requires the legislature to provide for a system of common schools by which a free school is established and maintained in every school district for at least six months in each year and is open to all pupils between the ages of 6 and 21 years.

- Requires that public schools be free from sectarian instruction.
- Requires that no public money or property be appropriated for or applied to any religious worship, exercise, or instruction, or to the support of any religious establishment.
- Vests general conduct and supervision of the state's public schools in an appointed state board of education, a state superintendent of public instruction and county school superintendents.
- Establishes the composition and method of appointment of the state board.
- Requires that the state superintendent be a member, and secretary, of the state board.

### **Arkansas**

- Requires the state to maintain a general, suitable and efficient system of free public schools.
- Forbids any money or property belonging to the public school fund, or to the state for the benefit of schools or universities, to be used for any other than for the respective purposes for which it belongs.
- Provides that no man can, of right, be compelled to attend, erect or support any place of worship; or to maintain any ministry against his consent. Requires that no preference ever be given, by law, to any religious establishment, denomination or mode of worship above any other.

### **California**

- Requires the legislature to provide for a system of common schools by which a free school is kept up and supported in each district at least six months in every year.
- Prohibits any public money to ever be appropriated for the support of any sectarian or denominational school or any school not under the exclusive control of the officers of the public schools.
- Forbids any sectarian or denominational doctrine to be taught, or instruction to be permitted (directly or indirectly), in any common schools.
- Provides that free exercise and enjoyment of religion without discrimination or preference are guaranteed. Prohibits the legislature from making any laws respecting an establishment of religion.
- Charges the legislature with providing for the appointment or election of a state board of education and a board of education for each county or for the election of a joint county board of education in two or more counties.
- Creates an elected state superintendent of public instruction. Establishes the method of election and the terms of office for the state superintendent of public instruction.
- Charges the state board of education, on nomination from the superintendent, with appointing one deputy superintendent and three associate superintendents.
- Authorizes the legislature to provide for the incorporation and organization of school districts and high school districts.
- Allows the legislature to authorize the governing boards of all school districts to initiate and carry on any programs or activities which are not in conflict with the laws and purposes for which school districts are established.
- Allows each county to decide how to choose its local superintendent, either through voter election or county school board appointment.
- Requires the county board of education to fix the salary of the county superintendent.
- Allows two or more counties to unite and establish one joint board of education and one joint county superintendent of schools.
- Requires the state board of education to adopt textbooks for use in grades 1 through 8 throughout the state, to be furnished without cost.

## Colorado

- Requires the legislature to provide for the establishment and maintenance of a thorough and uniform system of free public schools throughout the state, so that all state residents, between the ages of 6 and 21 years, may be educated gratuitously.
- Forbids any appropriation or payment from any public fund in aid of any church or sectarian society, for any sectarian purpose or to help support or sustain any school, academy, seminary, college, university or other literary or scientific institution controlled by any church or sectarian denomination. Forbids any grant or donation of land, money or other personal property to be made by the state to any church or for any sectarian purpose.
- Requires public schools to be free from sectarian instruction.
- Provides that the free exercise and enjoyment of religious profession and worship, without discrimination, are guaranteed; that no person be required to attend or support any ministry or place of worship, religious sect or denomination against his consent; and that no preference be given by law to any religious denomination or mode of worship.
- Vests general supervision of the public schools in an elected board of education. Specifies the composition of the state board. Charges the state board with appointing a state commissioner of education.
- Charges the legislature with providing for the organization of school districts, in each of which shall be established a board of education to consist of three or more elected directors, who will have control of instruction in the public schools of their respective districts.
- Requires one or more public schools to be maintained in each school district for at least three months in each year. Allows the legislature to require that every child of sufficient mental and physical ability between the ages of 6 and 18 attend the public school for a time equivalent to three years, unless educated by other means.
- Allows for a superintendent of schools in each county. Establishes the terms of office for county superintendents of schools. Allows each county's electors to abolish this office.
- Forbids the legislature or the state board from prescribing textbooks to be used in the public schools.

## Connecticut

- Requires the legislature to provide free public elementary and secondary schools.
- Prohibits any laws to ever be made which authorize the school fund to be diverted to any other use than the encouragement and support of public schools.
- Requires that no person by law be compelled to join or support, be classed or associated with, any congregation, church or religious association; that no preference be given by law to any religious society or denomination in the state; and that each religious society or denomination has and enjoys the same and equal powers, rights and privileges, and may support and maintain the ministers or teachers of its society or denomination, and may build and repair houses for public worship.

## Delaware

- Requires the legislature to provide for the establishment and maintenance of a general and efficient system of free public schools.
- Prohibits any property tax receipts received by a public school district as a result of a property tax levied for a particular purpose to be used for any other purpose except upon the favorable vote of a majority of the eligible voters in the district voting on the question.
- Forbids any funds raised for educational purposes to be appropriated to or used by or in aid of any sectarian, church or denominational school.
- Requires that no man be compelled to attend any religious worship, to contribute to the erection or support of any place of worship, or to the maintenance of any ministry, against

his own free will and consent; that no power be vested in or assumed by any magistrate that interferes with, or in any manner controls the rights of conscience, in the free exercise of religious worship; and that no preference be given by law to any religious societies, denominations or modes of worship.

- Allows the legislature to provide for the transportation of students of nonpublic, non-profit elementary and high schools.
- Allows the legislature to require that every child attend public school, unless educated by other means.

### **Florida**

- Provides that a paramount duty of the state is to make adequate provision for the education of all children residing within its borders, and that adequate provision be made by law for a uniform, efficient, safe, secure and high-quality system of free public schools that allows students to obtain a high-quality education and for the establishment, maintenance, and operation of institutions of higher learning and other public education programs that the needs of the people may require.
- Provides that the income derived from the state school fund, and the principal of the fund, be appropriated but only to the support and maintenance of free public schools.
- Provides that there be no law respecting the establishment of religion or prohibiting or penalizing the free exercise thereof, and that no revenue of the state or any political subdivision or agency thereof ever be taken from the public treasury directly or indirectly in aid of any church, sect, or religious denomination, or in aid of any sectarian institution.
- Provides that the governor and the members of his or her cabinet constitute the state board of education, which shall be a body corporate and have supervision of the system of public education. As of January 7, 2003, requires that the state board of education be a body corporate and have such supervision of the system of free public education as is provided by law, and that the state board of education consist of seven members appointed by the governor to staggered 4-year terms, subject to confirmation by the senate.
- Creates an elected state commissioner of education, who shall supervise the public education system and be a member of the governor's cabinet. As of January 7, 2003, requires that the state board of education appoint the commissioner of education.
- Provides that each county constitutes a school district. Allows two or more contiguous counties, upon vote of the electors of each county, to be combined into one school district.
- Requires that there be, in each school district, a school board composed of five or more members chosen by vote of the electors for appropriately staggered terms of four years. Charges the school board with operating, controlling and supervising all free public schools within the school district and determining the rate of school district taxes within prescribed limits. Allows two or more school districts to operate and finance joint educational programs.
- Provides for an elected superintendent of schools in each school district. Allows a school district, either through a district school board resolution, special law or vote of the electors, to change from an elected superintendent to an appointed superintendent. Establishes the terms of office for the district school superintendents.

### **Georgia**

- Requires that the provision of an adequate public education for the state's citizens be a primary obligation of the state, free and provided for by taxation.
- Requires that school tax funds be expended only for the support and maintenance of public schools, public vocational-technical schools and public education.
- Provides that no money ever be taken from the public treasury, directly or indirectly, in aid of any church, sect or denomination of religionists, or of any sectarian institution.

- Provides for a state board of education, to be appointed by the governor and confirmed by the senate. Establishes the terms of office for state board members.
- Provides for an elected state school superintendent, who shall be the executive officer of the state board.
- Requires each school system to be under the management and control of an elected board of education. Charges each local board of education with appointing a school superintendent, who shall be the executive officer of the local board of education.
- Grants authority to county and area boards of education to establish and maintain public schools within their limits.
- Allows the legislature to provide for the consolidation of two or more school systems, although no consolidation becomes effective until a majority of voters in each school system approves it.
- Allows two or more boards of education to contract with each other for the care, education and transportation of pupils.
- Allows the legislature to provide for the sharing of facilities or services by and between local boards of education under such joint administrative authority as may be authorized.
- Allows the legislature to provide for special schools and the participation of local boards of education in the establishment of such schools, although a majority of the voters must approve any bonded indebtedness or school tax levy.

### **Hawaii**

- Requires the state to provide for the establishment, support and control of a statewide system of public schools.
- Prohibits public funds to be appropriated for the support or benefit of any sectarian or private educational institution, with certain exceptions.
- Requires that public schools be free from sectarian control.
- Provides that no law be enacted respecting an establishment of religion or prohibiting the free exercise thereof.
- Creates an elected state board of education. Specifies the composition and the method of election of the state board. Charges the state board with formulating statewide educational policy and appointing the state superintendent of education, who shall be the chief executive officer of the public school system.
- Requires the state to provide for a Hawaiian education program consisting of language, culture and history in the public schools. Encourages the use of community expertise as a suitable and essential means in furtherance of the Hawaiian education program.

### **Idaho**

- Requires the legislature to establish and maintain a general, uniform and thorough system of public, free common schools.
- Forbids any appropriation or payment from any public fund in aid of any church or sectarian or religious society, for any sectarian or religious purpose or to help support or sustain any school, academy, seminary, college, university or other literary or scientific institution controlled by any church, sectarian or religious denomination. Forbids any grant or donation of land, money or other personal property by the state to any church or for any sectarian or religious purpose.
- Requires that public schools be free from sectarian instruction.
- Provides that the exercise and enjoyment of religious faith and worship forever be guaranteed; that no person be required to attend or support any ministry or place of worship, religious sect or denomination, or pay tithes against his consent; and that no preference be given by law to any religious denomination or mode of worship.

- Vests general supervision of state educational institutions and the public school system in a state board of education. Requires that the state superintendent of public instruction be an ex officio member of the state board.
- Allows the legislature to require that every child attend the public schools throughout the period between the ages of 6 and 18, unless educated by other means.

### **Illinois**

- Requires the state to provide for an efficient system of high-quality public educational institutions and services, and a free education in public schools through the secondary level.
- Provides that the state has the primary responsibility for financing the system of public education.
- Forbids any appropriation or payment from any public fund in aid of any church or sectarian purpose or to help support or sustain any school, academy, seminary, college, university or other literary or scientific institution controlled by any church or sectarian denomination. Forbids any grant or donation of land, money or other personal property by the state to any church or for any sectarian purpose.
- Provides that the free exercise and enjoyment of religious profession and worship, without discrimination, forever be guaranteed; that no person be required to attend or support any ministry or place of worship against his consent; and that no preference be given by law to any religious denomination or mode of worship.
- Creates a state board of education. Allows the state board to establish goals, determine policies, provide for planning and evaluating education programs and recommend financing. Charges the state board with appointing the chief state educational officer.

### **Indiana**

- Requires the legislature to provide for a general and uniform system of common schools, which shall be free and equally open to all.
- Requires that the income of the common school fund be inviolably appropriated to the support of common schools and to no other purpose whatever.
- Provides that no law, in any case whatever, control the free exercise and enjoyment of religious opinions, or interfere with the rights of conscience; that no preference be given, by law, to any creed, religious society or mode of worship; that no person be compelled to attend, erect or support any place of worship, or to maintain any ministry, against his consent; and that no money be drawn from the treasury, for the benefit of any religious or theological institution.
- Creates a state superintendent of public instruction.

### **Iowa**

- Provides that the general assembly make no law respecting an establishment of religion or prohibiting the free exercise thereof, and that no person be compelled to attend any place of worship, pay tithes, taxes or other rates for building, or repairing places of worship, or the maintenance of any minister or ministry.
- According to an official at the Iowa Department of Education, the state of Iowa removed the education section from the Iowa Constitution and placed it in the Iowa statutes in 1864.

### **Kansas**

- Requires the legislature to establish and maintain public schools, educational institutions and related activities.
- Forbids any religious sect or sects from controlling any part of the public educational funds.

- Provides that the right to worship God according to the dictates of conscience never be infringed; that no person be compelled to attend or support any form of worship; that no control of or interference with the rights of conscience be permitted; and that no preference be given by law to any religious establishment or mode of worship.
- Charges the legislature with providing for an elected state board of education, which shall have general supervision of public schools, educational institutions and all the educational interests of the state. Establishes the number of state board members. Charges the state board with appointing a state superintendent of public instruction, who shall be the state board's executive officer.
- Requires that local public schools under the general supervision of the state board of education be maintained, developed and operated by locally elected boards. Allows these local boards, under certain conditions, to make and carry out agreements for cooperative operation and administration of educational programs.
- Prohibits any state superintendent of public instruction or county superintendent of public instruction to be elected.

### **Kentucky**

- Requires the legislature to provide for an efficient system of common schools throughout the state.
- Forbids any monies raised or levied for educational purposes to be appropriated to or used by or in aid of any church, sectarian or denominational school.
- Provides that no preference ever be given by law to any religious sect, society or denomination, nor to any particular creed, mode of worship or system of ecclesiastical polity; that no person be compelled to attend any place of worship, to contribute to the erection or maintenance of any such place, or to the salary or support of any minister of religion; that no man be compelled to send his child to any school to which he may be conscientiously opposed; and that no human authority, in any case whatever, control or interfere with the rights of conscience.

### **Louisiana**

- Requires the legislature to provide for the education of the people of the state, and establish and maintain a public educational system.
- Provides that no law be enacted respecting an establishment of religion or prohibiting the free exercise thereof.
- Creates a state board of elementary and secondary education to supervise and control the public elementary and secondary schools, vocational technical training and other special schools. Establishes the terms of office, and the methods for appointing and electing state board members.
- Provides that the state board shall have no control over the business affairs of a parish or city school board, or the selection or removal of its officers and employees.
- Allows the state board to approve a private school with a sustained curriculum or specialized course of study of quality at least equal to that prescribed for similar public schools. Provides that a certificate issued by an approved private school carries the same privileges as one issued by a state public school.
- Provides for an elected state superintendent of education for public elementary and secondary education.
- Requires the legislature to create parish school boards and provide for the election of their members. Charges each parish board with electing a superintendent of parish schools.
- Allows any two or more school systems to be consolidated, subject to approval by a majority of the voting electors in each system affected.

- Requires the legislature to appropriate funds to supply free school books and other materials of instruction prescribed by the state board.

### **Maine**

- Authorizes the legislature to require towns to make suitable provision, at their own expense, for the support and maintenance of public schools.
- Authorizes the legislature to encourage and suitably endow all academies, colleges and seminaries of learning within the state.
- Provides that all persons demeaning themselves peaceably, as good members of the state, be equally under the protection of the laws, and no subordination nor preference of any one sect or denomination to another ever be established by law, nor any religious test be required as a qualification for any office or trust, under this state; and that all religious societies in this state, whether incorporate or unincorporate, at all times have the exclusive right of electing their public teachers, and contracting with them for their support and maintenance.

### **Maryland**

- Requires the legislature to provide for the establishment of a thorough and efficient system of free public schools, and to provide by taxation for their maintenance.
- Provides that the school fund be kept inviolate and appropriated only to the purposes of education.
- Provides that all persons are equally entitled to protection in their religious liberty, and that no person be compelled to frequent, maintain or contribute, unless on contract, to maintain any place of worship or any ministry.

### **Massachusetts**

- Requires the legislatures and magistrates to cherish the interests of literature and the sciences and all seminaries of them, especially the University at Cambridge, public schools and grammar schools in the towns. Requires the legislatures and magistrates to encourage private societies and public institutions for the promotion of agriculture, arts, sciences, commerce, trades, manufactures and a natural history of the country.
- Forbids any grant, appropriation or use of public money or property or loan of credit to be made or authorized by the commonwealth for the purpose of founding, maintaining or aiding any infirmary, hospital, institution, primary or secondary school or charitable or religious undertaking which is not publicly owned and under the exclusive control, order and supervision of public officers or public agents authorized by the commonwealth or federal authority or both. Prohibits any such grant, appropriation or use of public money or property or loan of public credit to be made or authorized for the purpose of founding, maintaining or aiding any church, religious denomination or society.
- Provides that all religious sects and denominations, demeaning themselves peaceably and as good citizens of the commonwealth, be equally under the protection of the law; that no subordination of any one sect or denomination to another ever be established by law; and that no law be passed prohibiting the free exercise of religion.

### **Michigan**

- Requires the legislature to maintain and support a system of free public elementary and secondary schools.
- Forbids any public monies or property to be appropriated or paid or any public credit utilized by the legislature or any other political subdivision or agency directly or indirectly to aid or maintain any private, denominational or other nonpublic pre-elementary, elementary or secondary school.
- Prohibits any payment, credit, tax benefit, exemption or deduction, tuition voucher, subsidy, grant or loan of public monies or property to be provided, directly or indirectly, to

support the attendance of any student or the employment of any person at any nonpublic school or at any location or institution where instruction is offered in whole or in part to nonpublic school systems.

- Provides that no person be compelled to attend or, against his consent, to contribute to the erection or support of any place of religious worship, or to pay tithes, taxes or other rates for the support of any minister of the gospel or teacher of religion; that no money be appropriated or drawn from the treasury for the benefit of any religious sect or society, theological or religious seminary; and that no property belonging to the state be appropriated for any such purpose.
- Vests leadership and general supervision over all public education in an elected state board of education. Establishes the number, method of election and terms of office of state board members. Charges the state board with appointing a state superintendent of public instruction, who shall be the chairman of the state board, the principal executive officer of a state department of education and responsible for the execution of the state board's policies.
- Allows the legislature to provide for the transportation of students to and from any school.

### **Minnesota**

- Requires the legislature to establish a general and uniform system of public schools and make such provisions by taxation or otherwise as will secure a thorough and efficient system of public schools throughout the state.
- Forbids any public money or property to be appropriated or used for the support of schools wherein the distinctive doctrines, creeds or tenets of any particular Christian or other religious sect are promulgated or taught.
- Provides that no man be compelled to attend, erect or support any place of worship, or to maintain any religious or ecclesiastical ministry, against his consent; that no preference be given by law to any religious establishment or mode of worship; and that no money be drawn from the treasury for the benefit of any religious societies or religious or theological seminaries.

### **Mississippi**

- Requires the legislature to provide for the establishment, maintenance and support of free public schools.
- Prohibits any funds to be appropriated toward the support of any sectarian school or to any school that at the time of receiving such appropriation is not conducted as a free school.
- Requires that public schools be free from sectarian control.
- Provides that no preference be given by law to any religious sect or mode of worship, but that the free enjoyment of all religious sentiments and the different modes of worship be held sacred.
- Creates an appointed state board of education. Establishes the method of appointment and terms of office for state board members. Delineates the state board's responsibilities. Charges the state board, with the advice and consent of the senate, with appointing a state superintendent of public education and a superintendent of public education in each county.
- Allows the legislature to make the office of county school superintendent elective, discharge the duties of county superintendent or abolish the office of county school superintendent.

### **Missouri**

- Requires the legislature to establish and maintain free public schools for the gratuitous instruction of all persons in the state within ages not in excess of 21 years.

- Forbids any appropriation or payment from any public fund in aid of any religious creed, church or sectarian purpose or to help support or sustain any private or public school, academy, seminary, college, university or other institution of learning controlled by any religious creed, church or sectarian denomination. Forbids any grant or donation of personal property or real estate by the state for any religious creed, church or sectarian purpose.
- Provides that no person be compelled to erect, support or attend any place or system of worship, or to maintain or support any priest, minister, preacher or teacher of any sect, church, creed or denomination of religion, but if any person voluntarily makes a contract for any such object, he shall be held to the performance of the same; that no money ever be taken from the public treasury, directly or indirectly, in aid of any church, sect or denomination of religion, or in aid of any priest, preacher, minister or teacher thereof, as such; and that no preference be given to nor any discrimination made against any church, sect or creed of religion, or any form of religious faith or worship.
- Vests the supervision of instruction in the public schools in a state board of education, with its members appointed by the governor by and with the advice and consent of the senate. Sets the terms of office for state board members. Requires that there are never more than four members of the same political party on the state board. Charges the state board with selecting and appointing a commissioner of education.

### **Montana**

- Requires the legislature to provide a basic system of free quality public elementary and secondary schools.
- Disallows any direct or indirect appropriation or payment from any public fund or monies or any grant of lands or other property for any sectarian purpose or to aid any church, school, academy, seminary, college, university or other literary or scientific institution controlled in whole or in part by any church, sect or denomination.
- Requires that public schools be free from sectarian instruction.
- Requires that the state make no law respecting an establishment of religion or prohibiting the free exercise thereof.
- Creates a state board of education, to be composed of the board of regents of higher education and the board of public education. Holds the state board responsible for long-range planning, and for coordinating and evaluating policies and programs for the state's educational systems.
- Creates a board of public education to exercise general supervision over the public school system, to be composed of the governor, the commissioner of higher education, the state superintendent of public instruction and seven members appointed by the governor and confirmed by the senate.
- Requires that the supervision and control of schools in each school district be vested in an elected board of trustees.

### **Nebraska**

- Requires the legislature to provide for the free instruction in the state's common schools of all persons between the ages of 5 and 21 years.
- Forbids the appropriation of public funds to any school or institution of learning not owned or exclusively controlled by the state. Prohibits the state from accepting money or property to be used for sectarian purposes.
- Allows the legislature to authorize the state to contract with institutions not wholly owned or controlled by the state for the provision of educational or other services for the benefit of children under the age of 21 years who are handicapped, if such services are nonsectarian in nature.

- Requires that public schools be free from sectarian instruction.
- Provides that no person be compelled to attend, erect or support any place of worship against his consent, and no preference be given by law to any religious society.
- Creates the state department of education, to be composed of the state board of education and the commissioner of education. Provides that the state department has general supervision and administration of the school system of the state.
- Creates an elected state board of education, to be composed of eight members. Establishes the terms of office for state board members. Charges the state board with appointing the commissioner of education, who shall be the executive officer of the state board and the administrative head of the state department of education.

### **Nevada**

- Requires the legislature to provide for a uniform system of common schools, by which a school shall be established and maintained in each school district at least six months in every year.
- Prohibits public funds of any kind or character to be used for sectarian purposes.
- Forbids any sectarian instruction to be imparted or tolerated in any school or university that is established under the state's constitution.
- Provides that any school district which allows instruction of a sectarian character may be deprived of its proportion of the interest of the public school fund during such neglect or infraction.
- Provides that the free exercise and enjoyment of religious profession and worship without discrimination or preference forever be allowed in the state.
- Requires the legislature to provide for a superintendent of public instruction.
- Allows the legislature to pass such laws as will secure a general attendance of the children at the public schools in each school district.

### **New Hampshire**

- Requires the legislature to cherish all seminaries and public schools, and to encourage private and public institutions for the promotion of agriculture, arts, sciences, commerce, trades, manufactures and the natural history of the country.
- Forbids the state from mandating or assigning any new, expanded or modified programs or responsibilities to any political subdivision in such a way as to necessitate additional local expenditures by the political subdivision unless such programs or responsibilities are fully funded by the state or unless such programs or responsibilities are approved for funding by a vote of the local legislative body of the political subdivision.
- Prohibits any money raised by taxation to ever be granted or applied for the use of the schools or institutions of any religious sect or denomination.
- Provides that the several parishes, bodies, corporate or religious societies at all times have the right of electing their own teachers and of contracting with them for their support or maintenance, or both; that no person ever be compelled to pay towards the support of the schools of any sect or denomination; and that every person, denomination or sect be equally under the protection of the law, and no subordination of any one sect, denomination or persuasion to another ever be established.

### **New Jersey**

- Requires the legislature to provide for the maintenance and support of a thorough and efficient system of free public schools for the instruction of all the children in the state between the ages of 5 and 18 years.
- Forbids the legislature from diverting the public school fund from the support of the public schools.

- Provides that no person be obliged to pay tithes, taxes or other rates for building or repairing any church or churches, place or places of worship, or for the maintenance of any minister or ministry, contrary to what he believes to be right or has deliberately and voluntarily engaged to perform, and that there be no establishment of one religious sect in preference to another.
- Allows the legislature to provide for the transportation of children between the ages of 5 to 18 years, inclusive, to and from any school.
- Provides that no person be denied the enjoyment of any civil or military right, nor be discriminated against in the exercise of any civil or military right, nor be segregated in the militia or in the public schools because of religious principles, race, color, ancestry or national origin.

### **New Mexico**

- Requires that a uniform system of free public schools sufficient for the education of, and open to, all children of school age in the state be established and maintained.
- Forbids any money appropriated, levied or collected for educational purposes to be used for the support of any sectarian, denominational or private school.
- Provides that no person be required to attend any place of worship or support any religious sect or denomination, and that no preference be given by law to any religious denomination or mode of worship.
- Creates a state board of education to determine, control, manage and direct public school policy and vocational educational policy. Sets the terms of office for state board members, some of whom are elected and some of whom are appointed by the governor with the consent of the senate. Charges the state board with appointing a superintendent of public instruction to direct the state department of public education.
- Requires the legislature to provide for the training of teachers in the normal schools or otherwise so they become proficient in both the English and Spanish languages and are able to teach Spanish-speaking pupils and students in the public schools and educational institutions of the state. Requires the legislature to provide proper means and methods to facilitate the teaching of the English language and other branches of learning to such pupils and teachers.
- Allows those local school districts having a population of more than 200,000 to choose to have a local school board composed of seven members, who must be residents of and elected from single member districts.
- Provides for the recall of any elected local school board member by the voters of a local school district.
- Provides that every child of school age and of sufficient physical and mental ability be required to attend a public or other school.

### **New York**

- Requires the legislature to provide for the maintenance and support of a system of free common schools, wherein all the state's children may be educated.
- Forbids the state from using its property or credit or any public money, or authorizing or permitting either to be used directly or indirectly in aid or maintenance of any school or institution of learning wholly or in part under the control or direction of any religious denomination, or in which any denominational tenet or doctrine is taught.
- Provides that the free exercise and enjoyment of religious profession and worship, without discrimination or preference, forever be allowed in New York to all mankind.
- Allows the legislature to provide for the transportation of children to and from any school or institution of learning.

**North Carolina**

- Provides that the people have a right to the privilege of education, and it is the duty of the state to guard and maintain that right.
- Requires the legislature to provide by taxation and otherwise for a general and uniform system of free public schools, which shall be maintained at least nine months in every year and wherein equal opportunities shall be provided for all students.
- Requires that the state school fund and the county school funds be faithfully appropriated and used exclusively for establishing and maintaining a uniform system of free public schools.
- Provides that no human authority, in any case whatever, control or interfere with the rights of conscience; that no person be denied the equal protection of the laws; and that no person be subjected to discrimination by the state because of race, color, religion or national origin.
- Creates a state board of education to supervise and administer the free public school system and the educational funds provided for its support. Requires that the state board consist of the lieutenant governor, the treasurer and eleven members appointed by the governor, and subject to confirmation by the legislature in a joint session. Establishes the methods of appointment and terms of office for state board members.
- Creates a state superintendent of public instruction, who shall be the secretary and chief administrative officer of the state board.

**North Dakota**

- Requires the legislature to make provision for the establishment and maintenance of a system of public schools, which shall be open to all the state's children.
- Requires the legislature to provide for a uniform system of free public schools throughout the state.
- Prohibits any money raised for the support of public schools to be appropriated to or used for the support of any sectarian school.
- Requires that public schools be free from sectarian control.
- Provides that the free exercise and enjoyment of religious profession and worship, without discrimination or preference, be forever guaranteed in North Dakota.

**Ohio**

- Requires the legislature to make such provision, by taxation or otherwise, as will secure a thorough and efficient system of common schools throughout the state.
- Requires that provisions be made by law for the organization, administration and control of the public school system of the state supported by public funds.
- Forbids any religious or other sect from having any exclusive right to, or control of, any part of the school funds of the state.
- Provides that no person be compelled to attend, erect or support any place of worship, or maintain any form of worship, against his consent; that no preference be given, by law, to any religious society; that no interference with the rights of conscience be permitted; and that it is the duty of the general assembly to pass suitable laws to protect every religious denomination in the peaceable enjoyment of its own mode of public worship, and to encourage schools and the means of instruction.
- Creates a state board of education. Charges the legislature with establishing the method of selection and terms of office for state board members. Charges the state board with appointing a state superintendent of public instruction.
- Authorizes each school district to determine by referendum vote the number of members and the organization of the district board of education.

**Oklahoma**

- Requires the legislature to establish and maintain a system of free public schools, which shall be open to all the children of the state and free from sectarian control; said schools shall always be conducted in English, although the teaching of other languages in said public schools is not precluded.
- Provides that no public money or property ever be appropriated, applied, donated or used, directly or indirectly, for the use, benefit or support of any sect, church, denomination, or system of religion, or for the use, benefit or support of any priest, preacher, minister, or other religious teacher or dignitary, or sectarian institution as such.
- Vests the supervision of instruction in the public schools in a state board of education. Requires the state superintendent of public instruction to be the president of the state board.
- Requires the legislature to provide for a system of textbooks for the common schools. Requires the state to furnish such textbooks free of cost for use by all the pupils of the common schools. Requires the legislature to authorize the governor to appoint a committee composed of active educators of the state, whose duty it shall be to prepare official multiple textbook lists from which textbooks for use in common schools shall be selected by committees composed of active educators in the local school districts in a manner to be designated by the legislature.
- Requires the legislature to provide for the teaching of the elements of agriculture, horticulture, stock feeding and domestic science in the common schools.
- Requires that the legislature provide for the compulsory attendance at some public or other school of all the children between the ages of 8 and 16 years for at least three months in each year.

**Oregon**

- Requires the legislature to provide for the establishment of a uniform and general system of common schools.
- Provides that no law in any case whatever control the free exercise and enjoyment of religious opinions, or interfere with the rights of conscience, that no money be drawn from the treasury for the benefit of any religious, or theological institution; and that no money be appropriated for the payment of any religious services in either house of the legislature.
- Charges the legislature with providing for the election of a state superintendent of public instruction.

**Pennsylvania**

- Requires the legislature to provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the commonwealth.
- Forbids any money raised for the support of the public schools to be appropriated to or used for the support of any sectarian school.
- Provides that no man can of right be compelled to attend, erect or support any place of worship, or to maintain any ministry against his consent; and that no preference ever be given by law to any religious establishments or modes of worship.

**Rhode Island**

- Requires the legislature to promote public schools and to adopt all means which it may deem necessary and proper to secure to the people the advantages and opportunities of education.
- Forbids the legislature from diverting the school fund from the support of the public schools.
- Provides that no person be compelled to frequent or to support any religious worship, place or ministry whatever, except in fulfillment of such person's voluntary contract.

**South Carolina**

- Requires the legislature to provide for the maintenance and support of a system of free public schools open to all children.
- Forbids any money to be paid from public funds for the direct benefit of any religious or other private educational institution.
- Provides that the legislature make no law respecting an establishment of religion or prohibiting the free exercise thereof.
- Creates a state board of education, all of whose members are elected (except a member appointed by the governor).
- Creates a state superintendent of education, who shall be the chief administrative officer of the public education system.

**South Dakota**

- Requires the legislature to establish and maintain a general and uniform system of public schools, equally open to all and wherein tuition shall be without charge.
- Disallows any appropriation of lands, money or other property or credits to aid any sectarian school by the state. Forbids the state to accept any grant, conveyance, gift or bequest of lands, money or other property to be used for sectarian purposes.
- Requires that public schools be free from sectarian instruction.
- Allows the legislature to authorize the loaning of nonsectarian textbooks to all children of school age.
- Provides that no person be compelled to attend or support any ministry or place of worship against his consent; that no preference be given by law to any religious establishment or mode of worship; and that no money or property of the state be given or appropriated for the benefit of any sectarian or religious society or institution.

**Tennessee**

- Requires the legislature to provide for the maintenance, support and eligibility standards of a system of free public schools.
- Provides that no man be compelled to attend, erect or support any place of worship, or to maintain any minister against his consent; and that no preference ever be given, by law, to any religious establishment or mode of worship.

**Texas**

- Requires the legislature to establish and make suitable provision for the support and maintenance of an efficient system of free public schools.
- Prohibits any part of the public school fund to ever be appropriated to or used for the support of any sectarian school.
- Provides that no man be compelled to attend, erect or support any place of worship, or to maintain any ministry against his consent; that no preference ever be given by law to any religious society or mode of worship; that it is the duty of the legislature to pass such laws as may be necessary to protect equally every religious denomination in the peaceable enjoyment of its own mode of public worship; that no money be appropriated, or drawn from the treasury for the benefit of any sect or religious society, theological or religious seminary; and that no property belonging to the state be appropriated for any such purposes.
- Provides for the support of public schools for not less than six months in each year.
- Requires the legislature to provide for a state board of education and establish the terms of office for each board member.
- Requires the legislature to set the terms of all offices of the public school system not to exceed six years.

- Charges the state board with providing free textbooks for children attending the public schools.

### **Utah**

- Requires the legislature to provide for the establishment and maintenance of a public education system, which shall include all public elementary and secondary schools, be open to all children of the state and free, except that the legislature may authorize the imposition of fees in secondary schools.
- Prohibits any appropriations for the direct support of any school or educational institution controlled by any religious organization.
- Requires that the public education system be free of sectarian control.
- Provides that the state make no law respecting an establishment of religion or prohibiting the free exercise thereof; that there be no union of church and state; that no church dominate the state or interfere with its functions; and that no public money or property be appropriated for or applied to any religious worship, exercise or instruction, or for the support of any ecclesiastical establishment.
- Vests the general control and supervision of public education in an elected state board of education. Charges the state board with appointing a state superintendent of public instruction.

### **Vermont**

- Provides that a competent number of schools ought to be maintained in each town unless the general assembly permits other provisions for the convenient instruction of youth.
- Provides that no person ought to, or of right be compelled to attend any religious worship, or erect or support any place of worship, or maintain any minister, contrary to the dictates of conscience, and that no authority can, or ought to be vested in, or assumed by, any power whatever, that in any case interferes with, or in any manner control the rights of conscience, in the free exercise of religious worship.

### **Virginia**

- Requires the legislature to provide for a system of free public elementary and secondary schools for all children of school age and to seek to ensure that an educational program of high quality is established and maintained.
- Allows the legislature to provide for the establishment, maintenance and operation of any educational institutions which are desirable for the intellectual, cultural and occupational development of the people.
- Prohibits any appropriation of public funds to any school or institution of learning not owned or exclusively controlled by the state or some political subdivision. Allows the state to appropriate funds for educational purposes in public and nonsectarian private schools and institutions of learning.
- Provides that no man be compelled to frequent or support any religious worship, place or ministry whatsoever; that the legislature not prescribe any religious test whatever, or confer any peculiar privileges or advantages on any sect or denomination, or pass any law requiring or authorizing any religious society, or the people of any district within the commonwealth, to levy on themselves or others, any tax for the erection or repair of any house of public worship, or for the support of any church or ministry; but it shall be left free to every person to select his religious instructor, and to make for his support such private contract as he shall please.
- Vests the general supervision of the public school system in a state board of education, to be composed of nine members appointed by the governor and subject to confirmation by the legislature. Establishes the terms of office for state board members. Prescribes the powers and duties of the state board.

- Creates a state superintendent of public instruction, who shall be an experienced educator, appointed by the governor and subject to confirmation by the legislature. Allows the legislature to alter the method of selection and term of office for the state superintendent of public instruction.
- Vests the supervision of schools in each school division in a school board.
- Requires the state board to certify to the school board of each division a list of qualified persons for the office of division superintendent of schools, one of whom shall be selected to fill the post by the division school board. Charges the state board with appointing a division superintendent if a division school board fails to select a division superintendent within the time prescribed by law.
- Requires the state board to periodically determine and prescribe standards of quality for school divisions, subject to revision only by the legislature.
- Authorizes the state board to approve textbooks and instructional aids and materials for use in courses in the public schools.
- Requires the legislature to ensure that textbooks are provided at no cost to each child attending public school whose parent or guardian is financially unable to furnish them.
- Charges the legislature with providing for the compulsory elementary and secondary education of every eligible child of appropriate age.

### **Washington**

- Requires the legislature to provide for a general and uniform system of public schools.
- Requires that the entire revenue derived from the common school fund and the state tax for common schools be exclusively applied to the support of the common schools.
- Requires that all schools maintained or supported wholly or in part by public funds be forever free from sectarian control or influence.
- Provides that no public money or property be appropriated for or applied to any religious worship, exercise or instruction, or the support of any religious establishment.

### **West Virginia**

- Requires the legislature to provide for a thorough and efficient system of free schools.
- Provides that no man be compelled to frequent or support any religious worship, place or ministry whatsoever; that the legislature not prescribe any religious test whatever, or confer any peculiar privileges or advantages on any sect or denomination, or pass any law requiring or authorizing any religious society, or the people of any district within the state, to levy on themselves, or others, any tax for the erection or repair of any house for public worship, or for the support of any church or ministry, but it shall be left free for every person to select his religious instructor, and to make for his support, such private contracts as he shall please.
- Requires public schools to provide a designated brief time at the beginning of each school day for any student desiring to exercise their right to personal and private contemplation, meditation or prayer; that no student of a public school be denied the right to personal and private contemplation, meditation or prayer; and that no student be required or encouraged to engage in any given contemplation, meditation or prayer as a part of the school curriculum.
- Vests the general supervision of the free schools in the state board of education, to be composed of nine members appointed by the governor by and with the advice and consent of the senate. Forbids any more than five members of the state board from belonging to the same political party. Establishes the terms of office and the grounds for removal from office for state board members. Charges the state board with selecting the state superintendent of free schools, who shall be the chief school officer of the state.

- Allows the legislature to provide for county superintendents and such other officers as may be necessary.

### **Wisconsin**

- Requires the legislature to provide for the establishment of district schools, which shall be as nearly uniform as practicable and free and without charge for tuition for all children between the ages of 4 and 20 years.
- Forbids any money to be drawn from the treasury for the benefit of religious societies or religious or theological seminaries.
- Prohibits any sectarian instruction in district schools. Allows the legislature, for the purpose of religious instruction outside the district schools, to authorize the release of students during regular school hours.
- Allows the legislature to provide for the transportation of children to and from any parochial or private school or institution of learning.
- Allows the legislature to authorize, by law, the use of public school buildings by civic, religious or charitable organizations during nonschool hours upon payment by the organization to the school district of reasonable compensation for such use.
- Provides that no man be compelled to attend, erect or support any place of worship, or to maintain any ministry, against his consent; that no control of, or interference with, the rights of conscience be permitted, or any preference be given by law to any religious establishments or modes of worship; and that no money be drawn from the treasury for the benefit of religious societies, or religious or theological seminaries.
- Vests the supervision of public instruction in an elected state superintendent of public instruction. Prescribes the method of election and the term of office for the state superintendent of public instruction.

### **Wyoming**

- Provides that the right of the citizens to opportunities for education have practical recognition, and requires the legislature to suitably encourage means and agencies calculated to advance the sciences and liberal arts.
- Requires the legislature to provide for the establishment and maintenance of a complete and uniform system of public instruction.
- Requires the legislature to create and maintain a thorough and efficient system of public schools, adequate to the proper instruction of all youth of the state between the ages of 6 and 21 years, and free of charge.
- Forbids any portion of any public school fund to ever be used to support or assist any private school or any school, academy, seminary, college or other institution of learning controlled by any church or sectarian organization or religious denomination.
- Requires that public schools be free from sectarian instruction.
- Provides that the free exercise and enjoyment of religious profession and worship without discrimination or preference be forever guaranteed in the state, and that no money of the state ever be given or appropriated to any sectarian or religious society or institution.
- Provides for the support of public schools for not less than three months in each year.
- Entrusts the general supervision of the public schools to the state superintendent of public instruction.
- Charges the legislature with requiring every child of sufficient physical and mental ability to attend a public school during the period between 6 and 18 years for a time equivalent to three years, unless educated by other means.
- Forbids the legislature and the state superintendent of public instruction from prescribing textbooks to be used in the public schools.

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## LEGISLATION

### LAND ORDINANCE OF 1785

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*An Ordinance for ascertaining the mode of disposing of Lands in the Western Territory.*

Be it ordained by the United States in Congress assembled, that the territory ceded by individual States to the United States, which has been purchased of the Indian inhabitants, shall be disposed of in the following manner:

A surveyor from each state shall be appointed by Congress, or a committee of the States, who shall take an Oath for the faithful discharge of his duty, before the Geographer of the United States, who is hereby empowered and directed to administer the same; and the like oath shall be administered to each chain carrier, by the surveyor under whom he acts.

The Geographer, under whose direction the surveyors shall act, shall occasionally form such regulations for their conduct, as he shall deem necessary; and shall have authority to suspend them for misconduct in Office, and shall make report of the same to Congress, or to the Committee of the States; and he shall make report in case of sickness, death, or resignation of any surveyor.

The Surveyors, as they are respectively qualified, shall proceed to divide the said territory into townships of six miles square, by lines running due north and south, and others crossing these at right angles, as near as may be, unless where the boundaries of the late Indian purchases may render the same impracticable, and then they shall depart from this rule no farther than such particular circumstances may require; and each surveyor shall be allowed and paid at the rate of two dollars for every mile, in length, he shall run, including the wages of chain carriers, markers, and every other expense attending the same.

The first line, running north and south as aforesaid, shall begin on the river Ohio, at a point that shall be found to be due north from the western termination of a line, which has been run as the southern boundary of the state of Pennsylvania; and the first line, running east and west, shall begin at the same point, and shall extend throughout the whole territory. Provided, that nothing herein shall be construed, as fixing the western boundary of the state of Pennsylvania. The geographer shall designate the townships, or fractional parts of townships, by numbers progressively from south to north; always beginning each range with number one; and the ranges shall be distinguished by their progressive numbers to the westward. The first range, extending from the Ohio to the lake Erie, being marked number one. The Geographer shall personally attend to the running of the first east and west line; and shall take the latitude of the extremes of the first north and south line, and of the mouths of the principal rivers.

The lines shall be measured with a chain; shall be plainly marked by chaps on the trees, and exactly described on a plat; whereon shall be noted by the surveyor, at their proper distances, all mines, salt springs, salt licks and mill seats, that shall come to his knowledge, and all water courses, mountains and other remarkable and permanent things, over and near which such lines shall pass, and also the quality of the lands.

The plats of the townships respectively, shall be marked by subdivisions into lots of one mile square, or 640 acres, in the same direction as the external lines, and numbered from 1

to 36; always beginning the succeeding range of the lots with the number next to that with which the preceding one concluded. And where, from the causes before mentioned, only a fractional part of a township shall be surveyed, the lots, protracted thereon, shall bear the same numbers as if the township had been entire. And the surveyors, in running the external lines of the townships, shall, at the interval of every mile, mark corners for the lots which are adjacent, always designating the same in a different manner from those of the townships.

The geographer and surveyors shall pay the utmost attention to the variation of the magnetic needle; and shall run and note all lines by the true meridian, certifying, with every plat, what was the variation at the times of running the lines thereon noted.

As soon as seven ranges of townships, and fractional parts of townships, in the direction from south to north, shall have been surveyed, the geographer shall transmit plats thereof to the board of treasury, who shall record the same, with the report, in well bound books to be kept for that purpose. And the geographer shall make similar returns, from time to time, of every seven ranges as they may be surveyed. The Secretary at War shall have recourse thereto, and shall take by lot therefrom, a number of townships, and fractional parts of townships, as well from those to be sold entire as from those to be sold in lots, as will be equal to one seventh part of the whole of such seven ranges, as nearly as may be, for the use of the late continental army; and he shall make a similar draught, from time to time, until a sufficient quantity is drawn to satisfy the same, to be applied in manner hereinafter directed. The board of treasury shall, from time to time, cause the remaining numbers, as well those to be sold entire, as those to be sold in lots, to be drawn for, in the name of the thirteen states respectively, according to the quotas in the last preceding requisition on all the states; provided, that in case more land than its proportion is allotted for sale, in any state, at any distribution, a deduction be made therefor at the next.

The board of treasury shall transmit a copy of the original plats, previously noting thereon, the townships, and fractional parts of townships, which shall have fallen to the several states, by the distribution aforesaid, to the Commissioners of the loan office of the several states, who, after giving notice of not less than two nor more than six months, by causing advertisements to be posted up at the court houses, or other noted places in every county, and to be inserted in one newspaper, published in the states of their residence respectively, shall proceed to sell the townships, or fractional parts of townships, at public venue, in the following manner, viz: The township, or fractional part of a township, N 1, in the first range, shall be sold entire; and N 2, in the same range, by lots; and thus in alternate order through the whole of the first range. The township, or fractional part of a township, N 1, in the second range, shall be sold by lots; and N 2, in the same range, entire; and so in alternate order through the whole of the second range; and the third range shall be sold in the same manner as the first, and the fourth in the same manner as the second, and thus alternately throughout all the ranges; provided, that none of the lands, within the said territory, be sold under the price of one dollar the acre, to be paid in specie, or loan office certificates, reduced to specie value, by the scale of depreciation, or certificates of liquidated debts of the United States, including interest, besides the expense of the survey and other charges thereon, which are hereby rated at thirty six dollars the township, in specie, or certificates as aforesaid, and so in the same proportion for a fractional part of a township, or of a lot, to be paid at the time of sales; on failure of which payment, the said lands shall again be offered for sale.

There shall be reserved for the United States out of every township, the four lots, being numbered 8, 11, 26, 29, and out of every fractional part of a township, so many lots of the same numbers as shall be found thereon, for future sale. There shall be reserved the lot N 16, of every township, for the maintenance of public schools, within the said township; also one third part of all gold, silver, lead and copper mines, to be sold, or otherwise disposed of as Congress shall hereafter direct.

When any township, or fractional part of a township, shall have been sold as aforesaid, and the money or certificates received therefor, the loan officer shall deliver a deed in the following terms:

The United States of America, to all to whom these presents shall come, greeting:

Know ye, That for the consideration of dollars, we have granted, and hereby do grant and confirm unto the township, (or fractional part of a township, as the case may be) numbered in the range excepting therefrom, and reserving one third part of all gold, silver, lead and copper mines within the same; and the lots Ns 8, 11, 26, and 29, for future sale or disposition, and the lot N 16, for the maintenance of public schools. To have to the said his heirs and assigns for ever; (or if more than one purchaser, to the said their heirs and assigns forever as tenants in Common.) In witness whereof, (A. B.) Commissioner of the loan office, in the State of hath, in conformity to the Ordinance passed by the United States in Congress assembled, the twentieth day of May, in the year of our Lord one thousand seven hundred and eighty five, hereunto set his hand, and affixed his seal, this day of in the year of our Lord and of the independence of the United States of America

And when any township, or fractional part of a township, shall be sold by lots as aforesaid, the Commissioner of the loan office shall deliver a deed therefor in the following form:

The United States of America, to all to whom these presents shall come, Greeting:

Know ye, That for the consideration of dollars, we have granted, and hereby do grant and confirm unto the lot (or lots, as the case may be, in the township or fractional part of the township, as the case may be) numbered in the range excepting and reserving one third part of all gold, silver, lead and copper mines within the same, for future sale or disposition. To have to the said his heirs and assigns for ever; (or if more than one purchaser, to the said their heirs and assigns for ever as tenants in common.) In witness whereof, (A. B.) Commissioner of the continental loan office in the state of hath, in conformity to the Ordinance passed by the United States in Congress assembled, the twentieth day of May, in the year of our Lord 1785, hereunto set his hand, and affixed his seal, this day of in the year of our Lord and of the independence of the United States of America

Which deeds shall be recorded in proper books, by the commissioner of the loan office, and shall be certified to have been recorded, previous to their being delivered to the purchaser, and shall be good and valid to convey the lands in the same described.

The commissioners of the loan offices respectively, shall transmit to the board of treasury every three months, an account of the townships, fractional parts of townships, and lots committed to their charge; specifying therein the names of the persons to whom sold, and the sums of money or certificates received for the same; and shall cause all certificates by them received, to be struck through with a circular punch; and they shall be duly charged in the books of the treasury, with the amount of the moneys or certificates, distinguishing the same, by them received as aforesaid.

If any township, or fractional part of a township or lot, remains unsold for eighteen months after the plat shall have been received, by the commissioners of the loan office, the same shall be returned to the board of treasury, and shall be sold in such manner as Congress may hereafter direct.

And whereas Congress, by their resolutions of September 16 and 18 in the year 1776, and the 12th of August, 1780, stipulated grants of land to certain officers and soldiers of the late continental army, and by the resolution of the 22d September, 1780, stipulated grants of land to certain officers in the hospital department of the late continental army; for complying therefore with such engagements, Be it ordained, That the secretary at war, from the returns in his office, or such other sufficient evidence as the nature of the case may admit, determine who are the objects of the above resolutions and engagements, and the quantity of land to which

such persons or their representatives are respectively entitled, and cause the townships, or fractional parts of townships, hereinbefore reserved for the use of the late continental army, to be drawn for in such manner as he shall deem expedient, to answer the purpose of an impartial distribution. He shall, from time to time, transmit certificates to the commissioners of the loan offices of the different states, to the lines of which the military claimants have respectively belonged, specifying the name and rank of the party, the terms of his engagement and time of his service, and the division, brigade, regiment or company to which he belonged, the quantity of land he is entitled to, and the township, or fractional part of a township, and range out of which his portion is to be taken.

The commissioners of the loan offices shall execute deeds for such undivided proportions in manner and form herein before-mentioned, varying only in such a degree as to make the same conformable to the certificate from the Secretary at War.

Where any military claimants of bounty in lands shall not have belonged to the line of any particular state, similar certificates shall be sent to the board of treasury, who shall execute deeds to the parties for the same.

The Secretary at War, from the proper returns, shall transmit to the board of treasury, a certificate, specifying the name and rank of the several claimants of the hospital department of the late continental army, together with the quantity of land each claimant is entitled to, and the township, or fractional part of a township, and range out of which his portion is to be taken; and thereupon the board of treasury shall proceed to execute deeds to such claimants.

The board of treasury, and the commissioners of the loan offices in the states, shall, within 18 months, return receipts to the secretary at war, for all deeds which have been delivered, as also all the original deeds which remain in their hands for want of applicants, having been first recorded; which deeds so returned, shall be preserved in the office, until the parties or their representatives require the same.

And be it further Ordained, That three townships adjacent to lake Erie be reserved, to be hereafter disposed of by Congress, for the use of the officers, men, and others, refugees from Canada, and the refugees from Nova Scotia, who are or may be entitled to grants of land under resolutions of Congress now existing, or which may hereafter be made respecting them, and for such other purposes as Congress may hereafter direct.

And be it further Ordained, That the towns of Gnadenhutzen, Schoenbrun and Salem, on the Muskingum, and so much of the lands adjoining to the said towns, with the buildings and improvements thereon, shall be reserved for the sole use of the Christian Indians, who were formerly settled there, or the remains of that society, as may, in the judgment of the Geographer, be sufficient for them to cultivate.

Saving and reserving always, to all officers and soldiers entitled to lands on the northwest side of the Ohio, by donation or bounty from the commonwealth of Virginia, and to all persons claiming under them, all rights to which they are so entitled, under the deed of cession executed by the delegates for the state of Virginia, on the first day of March, 1784, and the act of Congress accepting the same: and to the end, that the said rights may be fully and effectually secured, according to the true intent and meaning of the said deed of cession and act aforesaid, Be it Ordained, that no part of the land included between the rivers called little Miami and Sciota, on the northwest side of the river Ohio, be sold, or in any manner alienated, until there shall first have been laid off and appropriated for the said Officers and Soldiers, and persons claiming under them, the lands they are entitled to, agreeably to the said deed of cession and act of Congress accepting the same.

Done by the United States in Congress assembled, the 20th day of

May, in the year of our Lord 1785, and of our sovereignty and independence the ninth.

Charles Thomson, Secretary.

Richard H. Lee, President.

## NORTHWEST ORDINANCE OF 1787

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*An Ordinance for the government of the Territory of the United States northwest of the River Ohio.*

**Section 1.** Be it ordained by the United States in Congress assembled, That the said territory, for the purposes of temporary government, be one district, subject, however, to be divided into two districts, as future circumstances may, in the opinion of Congress, make it expedient.

**Sec. 2.** Be it ordained by the authority aforesaid, That the estates, both of resident and non-resident proprietors in the said territory, dying intestate, shall descend to, and be distributed among their children, and the descendants of a deceased child, in equal parts; the descendants of a deceased child or grandchild to take the share of their deceased parent in equal parts among them: And where there shall be no children or descendants, then in equal parts to the next of kin in equal degree; and among collaterals, the children of a deceased brother or sister of the intestate shall have, in equal parts among them, their deceased parents' share; and there shall in no case be a distinction between kindred of the whole and half-blood; saving, in all cases, to the widow of the intestate her third part of the real estate for life, and one-third part of the personal estate; and this law relative to descents and dower, shall remain in full force until altered by the legislature of the district. And until the governor and judges shall adopt laws as hereinafter mentioned, estates in the said territory may be devised or bequeathed by wills in writing, signed and sealed by him or her in whom the estate may be (being of full age), and attested by three witnesses; and real estates may be conveyed by lease and release, or bargain and sale, signed sealed and delivered by the person, being of full age, in whom the estate may be, and attested by two witnesses, provided such wills be duly proved, and such conveyances be acknowledged, or the execution thereof duly proved, and be recorded within one year after proper magistrates, courts, and registers shall be appointed for that purpose; and personal property may be transferred by delivery; saving, however to the French and Canadian inhabitants, and other settlers of the Kaskaskies, St. Vincents and the neighboring villages who have heretofore professed themselves citizens of Virginia, their laws and customs now in force among them, relative to the descent and conveyance, of property.

**Sec. 3.** Be it ordained by the authority aforesaid, That there shall be appointed from time to time by Congress, a governor, whose commission shall continue in force for the term of three years, unless sooner revoked by Congress; he shall reside in the district, and have a freehold estate therein in 1,000 acres of land, while in the exercise of his office.

**Sec. 4.** There shall be appointed from time to time by Congress, a secretary, whose commission shall continue in force for four years unless sooner revoked; he shall reside in the district, and have a freehold estate therein in 500 acres of land, while in the exercise of his office. It shall be his duty to keep and preserve the acts and laws passed by the legislature, and the public records of the district, and the proceedings of the governor in his executive department, and transmit authentic copies of such acts and proceedings, every six months, to the Secretary of Congress: There shall also be appointed a court to consist of three judges, any two of whom to form a court, who shall have a common law jurisdiction, and reside in the district, and have each therein a freehold estate in 500 acres of land while in the exercise of their offices; and their commissions shall continue in force during good behavior.

**Sec. 5.** The governor and judges, or a majority of them, shall adopt and publish in the district such laws of the original States, criminal and civil, as may be necessary and best suited to the circumstances of the district, and report them to Congress from time to time: which laws shall

be in force in the district until the organization of the General Assembly therein, unless disapproved of by Congress; but afterwards the Legislature shall have authority to alter them as they shall think fit.

**Sec. 6.** The governor, for the time being, shall be commander-in-chief of the militia, appoint and commission all officers in the same below the rank of general officers; all general officers shall be appointed and commissioned by Congress.

**Sec. 7.** Previous to the organization of the general assembly, the governor shall appoint such magistrates and other civil officers in each county or township, as he shall find necessary for the preservation of the peace and good order in the same: After the general assembly shall be organized, the powers and duties of the magistrates and other civil officers shall be regulated and defined by the said assembly; but all magistrates and other civil officers not herein otherwise directed, shall, during the continuance of this temporary government, be appointed by the governor.

**Sec. 8.** For the prevention of crimes and injuries, the laws to be adopted or made shall have force in all parts of the district, and for the execution of process, criminal and civil, the governor shall make proper divisions thereof; and he shall proceed from time to time as circumstances may require, to lay out the parts of the district in which the Indian titles shall have been extinguished, into counties and townships, subject however to such alterations as may thereafter be made by the legislature.

**Sec. 9.** So soon as there shall be five thousand free male inhabitants of full age in the district, upon giving proof thereof to the governor, they shall receive authority, with time and place, to elect representatives from their counties or townships to represent them in the general assembly: Provided, That, for every five hundred free male inhabitants, there shall be one representative, and so on progressively with the number of free male inhabitants shall the right of representation increase, until the number of representatives shall amount to twenty-five; after which, the number and proportion of representatives shall be regulated by the legislature: Provided, That no person be eligible or qualified to act as a representative unless he shall have been a citizen of one of the United States three years, and be a resident in the district, or unless he shall have resided in the district three years; and, in either case, shall likewise hold in his own right, in fee simple, two hundred acres of land within the same: Provided, also, That a freehold in fifty acres of land in the district, having been a citizen of one of the states, and being resident in the district, or the like freehold and two years residence in the district, shall be necessary to qualify a man as an elector of a representative.

**Sec. 10.** The representatives thus elected, shall serve for the term of two years; and, in case of the death of a representative, or removal from office, the governor shall issue a writ to the county or township for which he was a member, to elect another in his stead, to serve for the residue of the term.

**Sec. 11.** The general assembly or legislature shall consist of the governor, legislative council, and a house of representatives. The Legislative Council shall consist of five members, to continue in office five years, unless sooner removed by Congress; any three of whom to be a quorum: and the members of the Council shall be nominated and appointed in the following manner, to wit: As soon as representatives shall be elected, the Governor shall appoint a time and place for them to meet together; and, when met, they shall nominate ten persons, residents in the district, and each possessed of a freehold in five hundred acres of land, and return their names to Congress; five of whom Congress shall appoint and commission to serve as aforesaid; and, whenever a vacancy shall happen in the council, by death or removal from office, the house of representatives shall nominate two persons, qualified as aforesaid, for each vacancy, and return their names to Congress; one of whom Congress shall appoint and commission for the residue of the term. And every five years, four months at least before the expiration of the time of service of the members of council, the said house shall nominate ten persons,

qualified as aforesaid, and return their names to Congress; five of whom Congress shall appoint and commission to serve as members of the council five years, unless sooner removed. And the governor, legislative council, and house of representatives shall have authority to make laws in all cases, for the good government of the district, not repugnant to the principles and articles in this ordinance established and declared. And all bills, having passed by a majority in the house, and by a majority in the council, shall be referred to the governor for his assent; but no bill, or legislative act whatever, shall be of any force without his assent. The governor shall have power to convene, prorogue, and dissolve the general assembly, when, in his opinion, it shall be expedient.

**Sec. 12.** The governor, judges, legislative council, secretary, and such other officers as Congress shall appoint in the district, shall take an oath or affirmation of fidelity and of office; the governor before the president of congress, and all other officers before the Governor. As soon as a legislature shall be formed in the district, the council and house assembled in one room, shall have authority, by joint ballot, to elect a delegate to Congress, who shall have a seat in Congress, with a right of debating but not of voting during this temporary government.

**Sec. 13.** And, for extending the fundamental principles of civil and religious liberty, which form the basis whereon these republics, their laws and constitutions are erected; to fix and establish those principles as the basis of all laws, constitutions, and governments, which forever hereafter shall be formed in the said territory: to provide also for the establishment of States, and permanent government therein, and for their admission to a share in the federal councils on an equal footing with the original States, at as early periods as may be consistent with the general interest:

**Sec. 14.** It is hereby ordained and declared by the authority aforesaid, That the following articles shall be considered as articles of compact between the original States and the people and States in the said territory and forever remain unalterable, unless by common consent, to wit:

**Art. 1.** No person, demeaning himself in a peaceable and orderly manner, shall ever be molested on account of his mode of worship or religious sentiments, in the said territory.

**Art. 2.** The inhabitants of the said territory shall always be entitled to the benefits of the writ of habeas corpus, and of the trial by jury; of a proportionate representation of the people in the legislature; and of judicial proceedings according to the course of the common law. All persons shall be bailable, unless for capital offences, where the proof shall be evident or the presumption great. All fines shall be moderate; and no cruel or unusual punishments shall be inflicted. No man shall be deprived of his liberty or property, but by the judgment of his peers or the law of the land; and, should the public exigencies make it necessary, for the common preservation, to take any person's property, or to demand his particular services, full compensation shall be made for the same. And, in the just preservation of rights and property, it is understood and declared, that no law ought ever to be made, or have force in the said territory, that shall, in any manner whatever, interfere with or affect private contracts or engagements, bona fide, and without fraud, previously formed.

**Art. 3.** Religion, morality, and knowledge, being necessary to good government and the happiness of mankind, schools and the means of education shall forever be encouraged. The utmost good faith shall always be observed towards the Indians; their lands and property shall never be taken from them without their consent; and, in their property, rights, and liberty, they shall never be invaded or disturbed, unless in just and lawful wars authorized by Congress; but laws founded in justice and humanity, shall from time to time be made for preventing wrongs being done to them, and for preserving peace and friendship with them.

**Art. 4.** The said territory, and the States which may be formed therein, shall forever remain a part of this Confederacy of the United States of America, subject to the Articles of Confederation, and to such alterations therein as shall be constitutionally made; and to all the acts and ordinances of the United States in Congress assembled, conformable thereto. The inhabitants

and settlers in the said territory shall be subject to pay a part of the federal debts contracted or to be contracted, and a proportional part of the expenses of government, to be apportioned on them by Congress according to the same common rule and measure by which apportionments thereof shall be made on the other States; and the taxes for paying their proportion shall be laid and levied by the authority and direction of the legislatures of the district or districts, or new States, as in the original States, within the time agreed upon by the United States in Congress assembled. The legislatures of those districts or new States, shall never interfere with the primary disposal of the soil by the United States in Congress assembled, nor with any regulations Congress may find necessary for securing the title in such soil to the bona fide purchasers. No tax shall be imposed on lands the property of the United States; and, in no case, shall non-resident proprietors be taxed higher than residents. The navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways and forever free, as well to the inhabitants of the said territory as to the citizens of the United States, and those of any other States that may be admitted into the confederacy, without any tax, impost, or duty therefor.

**Art. 5.** There shall be formed in the said territory, not less than three nor more than five States; and the boundaries of the States, as soon as Virginia shall alter her act of cession, and consent to the same, shall become fixed and established as follows, to wit: The western State in the said territory, shall be bounded by the Mississippi, the Ohio, and Wabash Rivers; a direct line drawn from the Wabash and Post Vincents, due North, to the territorial line between the United States and Canada; and, by the said territorial line, to the Lake of the Woods and Mississippi. The middle State shall be bounded by the said direct line, the Wabash from Post Vincents to the Ohio, by the Ohio, by a direct line, drawn due north from the mouth of the Great Miami, to the said territorial line, and by the said territorial line. The eastern State shall be bounded by the last mentioned direct line, the Ohio, Pennsylvania, and the said territorial line: Provided, however, and it is further understood and declared, that the boundaries of these three States shall be subject so far to be altered, that, if Congress shall hereafter find it expedient, they shall have authority to form one or two States in that part of the said territory which lies north of an east and west line drawn through the southerly bend or extreme of lake Michigan. And, whenever any of the said States shall have sixty thousand free inhabitants therein, such State shall be admitted, by its delegates, into the Congress of the United States, on an equal footing with the original States in all respects whatever, and shall be at liberty to form a permanent constitution and State government: Provided, the constitution and government so to be formed, shall be republican, and in conformity to the principles contained in these articles; and, so far as it can be consistent with the general interest of the confederacy, such admission shall be allowed at an earlier period, and when there may be a less number of free inhabitants in the State than sixty thousand.

**Art. 6.** There shall be neither slavery nor involuntary servitude in the said territory, otherwise than in the punishment of crimes whereof the party shall have been duly convicted: Provided, always, That any person escaping into the same, from whom labor or service is lawfully claimed in any one of the original States, such fugitive may be lawfully reclaimed and conveyed to the person claiming his or her labor or service as aforesaid.

Be it ordained by the authority aforesaid, That the resolutions of the 23rd of April 1784, relative to the subject of this ordinance, be, and the same are hereby repealed and declared null and void.

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## CONSTITUTION OF THE UNITED STATES (1787)

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### PREAMBLE

WE THE PEOPLE of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Wel-

fare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.

## ARTICLE I

**Section 1.** All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

**Section 2.** The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, and the Electors in each State shall have the qualifications requisite for Electors of the most numerous Branch of the State Legislature. No Person shall be a Representative who shall not have attained to the age of twenty five Years, and been seven Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State in which he shall be chosen.

Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons. The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such Manner as they shall by Law direct. The Number of Representatives shall not exceed one for every thirty Thousand, but each State shall have at Least one Representative; and until such enumeration shall be made, the State of New Hampshire shall be entitled to chuse three, Massachusetts eight, Rhode Island and Providence Plantations one, Connecticut five, New York six, New Jersey four, Pennsylvania eight, Delaware one, Maryland six, Virginia ten, North Carolina five, South Carolina five and Georgia three.

When vacancies happen in the Representation from any State, the Executive Authority thereof shall issue Writs of Election to fill such Vacancies.

The House of Representatives shall chuse their Speaker and other officers; and shall have the sole Power of Impeachment.

**Section 3.** The Senate of the United States shall be composed of two Senators from each State, chosen by the Legislature thereof, for six Years; and each Senator shall have one Vote.

Immediately after they shall be assembled in Consequence of the first Election, they shall be divided as equally as may be into three Classes. The Seats of the Senators of the first class shall be vacated at the Expiration of the second Year, of the second Class at the Expiration of the fourth Year, and of the third Class at the Expiration of the sixth Year, so that one third may be chosen every second Year; and if Vacancies happen by Resignation, or otherwise, during the Recess of the Legislature of any State, the Executive thereof may make temporary Appointments until the next Meeting of the Legislature, which shall then fill such Vacancies.

No Person shall be a Senator who shall not have attained to the Age of thirty Years, and been nine Years a Citizen of the United States, and who shall not, when elected, be an Inhabitant of that State for which he shall be chosen.

The Vice President of the United States shall be President of the Senate, but shall have no Vote, unless they be equally divided.

The Senate shall chuse their other Officers, and also a President pro tempore, in the Absence of the Vice President, or when he shall exercise the Office of President of the United States.

The Senate shall have the sole Power to try all Impeachments. When sitting for that Purpose, they shall be on Oath or Affirmation. When the President of the United States is tried, the Chief Justice shall preside: and no Person shall be convicted without the Concurrence of two thirds of the Members present.

Judgment in Cases of Impeachment shall not extend further than to removal from Office, and disqualification to hold and enjoy any Office of honor, Trust or Profit under the United

States: but the Party convicted shall nevertheless be liable and subject to Indictment, Trial, Judgment and Punishment, according to Law.

**Section 4.** The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of chusing Senators.

The Congress shall assemble at least once in every Year, and such Meeting shall be on the first Monday in December, unless they shall by Law appoint a different Day.

**Section 5.** Each House shall be the Judge of the Elections, returns and Qualifications of its own Members, and a Majority of each shall constitute a Quorum to do Business; but a smaller Number may adjourn from day to day, and may be authorized to compel the Attendance of absent Members, in such Manner, and under such Penalties as each House may provide.

Each House may determine the Rules of its Proceedings, punish its Members for disorderly Behavior, and, with the Concurrence of two thirds, expel a Member.

Each House shall keep a Journal of its Proceedings, and from time to time publish the same, excepting such Parts as may in their Judgment require Secrecy; and the Yeas and Nays of the Members of either House on any question shall, at the Desire of one-fifth of those Present, be entered on the Journal.

Neither House, during the Session of Congress, shall, without the Consent of the other, adjourn for more than three days, nor to any other Place than that in which the two Houses shall be sitting.

**Section 6.** The Senators and Representatives shall receive a Compensation for their Services, to be ascertained by Law, and paid out of the Treasury of the United States. They shall in all Cases, except Treason, Felony and Breach of the Peace, be privileged from Arrest during their Attendance at the Session of their respective Houses, and in going to and returning from the same; and for any Speech or Debate in either House, they shall not be questioned in any other Place.

No Senator or Representative shall, during the Time for which he was elected, be appointed to any civil Office under the Authority of the United States which shall have been created, or the Emoluments whereof shall have been increased during such time; and no Person holding any Office under the United States, shall be a member of either House during his Continuance in Office.

**Section 7.** All Bills for raising Revenue shall originate in the House of Representatives; but the Senate may propose or concur with Amendments as on other Bills.

Every Bill which shall have passed the House of Representatives and the Senate, shall, before it become a Law, be presented to the President of the United States; if he approve he shall sign it, but if not he shall return it, with his Objections to that House in which it shall have originated, who shall enter the Objections at large on their Journal, and proceed to reconsider it. If after such Reconsideration two thirds of that House shall agree to pass the Bill, it shall be sent, together with the Objections, to the other House, by which it shall likewise be reconsidered, and if approved by two thirds of that House, it shall become a Law. But in all such Cases the Votes of both Houses shall be determined by yeas and Nays, and the Names of the Persons voting for and against the Bill shall be entered on the Journal of each House respectively. If any Bill shall not be returned by the President within ten Days (Sundays excepted) after it shall have been presented to him, the Same shall be a Law, in like Manner as if he had signed it, unless the Congress by their Adjournment prevent its Return, in which Case it shall not be a Law.

Every Order, resolution, or Vote to which the Concurrence of the Senate and House of Representatives may be necessary (except on a question of Adjournment) shall be presented to the President of the United States; and before the Same shall take Effect, shall be approved

by him, or being disapproved by him, shall be repassed by two thirds of the Senate and House of Representatives, according to the Rules and Limitations prescribed in the Case of a Bill.

**Section 8.** The Congress shall have Power To lay and collect Taxes, Duties, Imposts and Excises, to pay the Debts and provide for the common Defence and general Welfare of the United States; but all Duties, Imposts and Excises shall be uniform throughout the United States;

To borrow Money on the credit of the United States;

To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes;

To establish a uniform Rule of Naturalization, and uniform Laws on the subject of Bankruptcies throughout the United States;

To coin Money, regulate the Value thereof, and of foreign coin, and fix the Standard of Weights and Measures;

To provide for the Punishment of counterfeiting the Securities and current Coin of the United States;

To establish Post-Offices and post-Roads;

To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;

To constitute Tribunals inferior to the Supreme Court;

To define and punish Piracies and Felonies committed on the high Seas, and Offenses against the Law of Nations;

To declare War, grant Letters of Marque and Reprisal, and make Rules concerning Captures on Land and Water;

To raise and support Armies, but no Appropriation of Money to that Use shall be for a longer Term than two Years;

To provide and maintain a Navy;

To make Rules for the Government and Regulation of the land and naval Forces;

To provide for calling forth the Militia to execute the Laws of the Union, suppress insurrections and repel invasions;

To provide for organizing, arming, and disciplining, the Militia, and for governing such Part of them as may be employed in the Service of the United States, reserving to the States respectively, the Appointment of the Officers, and the Authority of training the Militia according to the discipline prescribed by Congress;

To exercise exclusive Legislation in all Cases whatsoever, over such District (not exceeding ten Miles square) as may, by Cession of particular States, and the Acceptance of Congress, become the Seat of the Government of the United States, and to exercise like Authority over all Places purchased by the Consent of the Legislature of the State in which the Same shall be, for the erection of Forts, Magazines, arsenals, dock-Yards, and other needful Buildings; and

To make all Laws which shall be necessary and proper for carrying into Execution the foregoing Powers, and all other Powers vested by this Constitution in the Government of the United States, or in any Department or Officer thereof.

**Section 9.** The Migration or Importation of such Persons as any of the States now existing shall think proper to admit, shall not be prohibited by the Congress prior to the Year one thousand eight hundred and eight, but a Tax or duty may be imposed on such Importation, not exceeding ten dollars for each Person.

The Privilege of the Writ of Habeas Corpus shall not be suspended, unless when in Cases of Rebellion or Invasion the public Safety may require it.

No bill of Attainder or ex post facto Law shall be passed.

No Capitation, or other direct Tax shall be laid, unless in Proportion to the Census or Enumeration herein before directed to be taken.

No Tax or Duty shall be laid on Articles exported from any State.

No Preference shall be given by any Regulation of Commerce or Revenue to the Ports of one State over those of another: nor shall Vessels bound to, or from, one State, be obliged to enter, clear, or pay Duties in another.

No Money shall be drawn from the Treasury, but in Consequence of Appropriations made by Law; and a regular Statement and Account of the Receipts and Expenditures of all public Money shall be published from time to time.

No Title of Nobility shall be granted by the United States: And no Person holding any Office of Profit or Trust under them, shall, without the Consent of the Congress, accept of any present, Emolument, Office, or Title, of any kind whatever, from any King, Prince or Foreign State.

**Section 10.** No State shall enter into any Treaty, Alliance, or Confederation; grant Letters of Marque and Reprisal; coin Money; emit Bills of Credit; make any Thing but gold and silver Coin a Tender in Payment of Debts; pass any Bill of Attainder, ex post facto Law, or Law impairing the Obligation of Contracts, or grant any Title of Nobility.

No State shall, without the Consent of the Congress, lay any Imposts or Duties on Imports or Exports, except what may be absolutely necessary for executing it's inspection Laws: and the net Produce of all Duties and Imposts, laid by any State on Imports or Exports, shall be for the use of the Treasury of the United States; and all such Laws shall be subject to the Revision and Controul of the Congress.

No State shall, without the Consent of Congress, lay any Duty of Tonnage, keep Troops, or Ships of War in time of Peace, enter into any Agreement or Compact with another State, or with a foreign Power, or engage in War, unless actually invaded, or in such imminent Danger as will not admit of delay.

## ARTICLE II

**Section 1.** The executive Power shall be vested in a President of the United States of America. He shall hold his Office during the Term of four Years, and, together with the Vice President chosen for the same Term, be elected, as follows:

Each State shall appoint, in such Manner as the Legislature thereof may direct, a Number of Electors, equal to the whole Number of Senators and Representatives to which the State may be entitled in the Congress: but no Senator or Representative, or person holding an Office of Trust or Profit under the United States, shall be appointed an elector.

The Electors shall meet in their respective States, and vote by Ballot for two Persons, of whom one at least shall not be an Inhabitant of the same State with themselves. And they shall make a List of all the persons voted for, and of the Number of Votes for each; which List they shall sign and certify, and transmit sealed to the Seat of the Government of the United States, directed to the President of the Senate. The President of the Senate shall, in the Presence of the Senate and House of Representatives, open all the Certificates, and the Votes shall then be counted. The Person having the greatest Number of Votes shall be the President, if such Number be a Majority of the whole Number of Electors appointed; and if there be more than one who have such Majority, and have an equal Number of Votes, then the House of Representatives shall immediately chuse by Ballot one of them for President; and if no person have a Majority, then from the five highest on the List the said House shall in like Manner chuse the President. But in chusing the President, the Votes shall be taken by States, the representation from each State having one Vote; a quorum for this Purpose shall consist of a Member or Members from two thirds of the States, and a Majority of all the States shall be necessary

to a Choice. In every Case, after the Choice of the President, the Person having the greatest number of votes of the electors shall be the Vice President. But if there should remain two or more who have equal Votes, the Senate shall chuse from them by Ballot the Vice President.

The Congress may determine the time of chusing the Electors, and the Day on which they shall give their Votes; which Day shall be the same throughout the United States.

No Person except a natural born Citizen, or a Citizen of the United States, at the time of the Adoption of this Constitution, shall be eligible to the Office of President; neither shall any person be eligible to that Office who shall not have attained to the Age of thirty five Years, and been fourteen Years a Resident within the United States.

In Case of the Removal of the President from Office, or of his Death, Resignation, or Inability to discharge the Powers and Duties of the said Office, the Same shall devolve on the Vice President, and the Congress may by Law provide for the Case of Removal, Death, Resignation or Inability, both of the President and Vice President, declaring what Officer shall then act as President, and such Officer shall act accordingly, until the Disability be removed, or a President shall be elected.

The President shall, at stated Times, receive for his Services, a Compensation, which shall neither be increased nor diminished during the Period for which he shall have been elected, and he shall not receive within that Period any other Emolument from the United States, or any of them.

Before he enter on the Execution of his Office, he shall take the following Oath or Affirmation:—"I do solemnly swear (or affirm) that I will faithfully execute the Office of President of the United States, and will to the best of my Ability, preserve, protect and defend the Constitution of the United States."

**Section 2.** The President shall be Commander in Chief of the Army and Navy of the United States, and of the Militia of the several States, when called into the actual service of the United States; he may require the Opinion, in writing, of the principal Officer in each of the executive Departments, upon any Subject relating to the Duties of their respective Offices, and he shall have Power to grant Reprieves and Pardons for Offenses against the United States, except in Cases of Impeachment.

He shall have Power, by and with the Advice and Consent of the Senate, to make Treaties, provided two thirds of the Senators present concur; and he shall nominate, and by and with the Advice and Consent of the Senate, shall appoint Ambassadors, other public Ministers and Consuls, Judges of the supreme Court, and all other Officers of the United States, whose appointments are not herein otherwise provided for, and which shall be established by law: but the Congress may by law vest the appointment of such inferior officers, as they think proper, in the President alone, in the Courts of Law, or in the Heads of Departments.

The President shall have Power to fill up all Vacancies that may happen during the Recess of the Senate, by granting Commissions which shall expire at the End of their next session.

**Section 3.** He shall from time to time give to the Congress Information of the State of the Union, and recommend to their consideration such Measures as he shall judge necessary and expedient; he may, on extraordinary Occasions, convene both Houses, or either of them, and in Case of Disagreement between them, with Respect to the Time of Adjournment, he may adjourn them to such Time as he shall think proper; he shall receive Ambassadors and other public Ministers; he shall take Care that the Laws be faithfully executed, and shall Commission all the Officers of the United States.

**Section 4.** The President, Vice President and all civil Officers of the United States, shall be removed from Office on Impeachment for, and Conviction of, Treason, Bribery, or other high Crimes and Misdemeanors.

### ARTICLE III

**Section 1.** The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish. The Judges, both of the supreme and inferior courts, shall hold their Offices during good Behavior, and shall, at stated times, receive for their Services, a Compensation, which shall not be diminished during their Continuance in Office.

**Section 2.** The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority; to all Cases affecting Ambassadors, other public Ministers and Consuls; to all Cases of admiralty and maritime Jurisdiction; to Controversies to which the United States shall be a Party; to Controversies between two or more States; between a State and Citizens of another State; between Citizens of different States; between Citizens of the same State claiming Lands under Grants of different States, and between a State, or the Citizens thereof, and foreign States, Citizens or Subjects.

In all Cases affecting Ambassadors, other public Ministers and Consuls, and those in which a State shall be party, the supreme Court shall have original Jurisdiction. In all the other Cases before mentioned, the supreme Court shall have appellate Jurisdiction, both as to Law and Fact, with such Exceptions, and under such Regulations as the Congress shall make.

The trial of all Crimes, except in Cases of Impeachment, shall be by Jury; and such trial shall be held in the State where the said Crimes shall have been committed; but when not committed within any State, the Trial shall be at such Place or Places as the Congress may by Law have directed.

**Section 3.** Treason against the United States, shall consist only in levying War against them, or in adhering to their Enemies, giving them Aid and Comfort. No Person shall be convicted of Treason unless on the Testimony of two Witnesses to the same overt Act, or on Confession in open court.

The Congress shall have Power to declare the Punishment of Treason, but no Attainder of Treason shall work Corruption of Blood, or Forfeiture except during the Life of the Person attainted.

### ARTICLE IV

**Section 1.** Full Faith and Credit shall be given in each State to the public Acts, Records, and judicial Proceedings of every other State. And the Congress may by general Laws prescribe the Manner in which such Acts, Records and Proceedings shall be proved, and the Effect thereof.

**Section 2.** The Citizens of each State shall be entitled to all Privileges and Immunities of Citizens in the several States.

A person charged in any State with Treason, Felony, or other Crime, who shall flee from Justice, and be found in another State, shall on Demand of the Executive Authority of the State from which he fled, be delivered up, to be removed to the State having Jurisdiction of the Crime.

No Person held to Service or Labour in one State, under the Laws thereof, escaping into another, shall, in Consequence of any Law or Regulation therein, be discharged from such Service or Labour, but shall be delivered up on Claim of the Party to whom such Service or Labour may be due.

**Section 3.** New States may be admitted by the Congress into this Union; but no new States shall be formed or erected within the Jurisdiction of any other State; nor any State be formed by the Junction of two or more States, or Parts of States, without the Consent of the Legislatures of the States concerned as well as of the Congress.

The Congress shall have Power to dispose of and make all needful Rules and Regulations respecting the Territory or other Property belonging to the United States; and nothing in this

Constitution shall be so construed as to Prejudice any Claims of the United States, or of any particular State.

**Section 4.** The United States shall guarantee to every State in this Union a Republican Form of government, and shall protect each of them against Invasion; and on Application of the Legislature, or of the Executive (when the legislature cannot be convened) against domestic Violence.

#### ARTICLE V

The Congress, whenever two thirds of both Houses shall deem it necessary, shall propose Amendments to this Constitution, or, on the Application of the Legislatures of two thirds of the several States, shall call a Convention for proposing Amendments, which, in either Case, shall be valid to all intents and purposes, as part of this Constitution, when ratified by the Legislatures of three fourths of the several States, or by Conventions in three fourths thereof, as the one or the other Mode of Ratification may be proposed by the Congress; Provided that no Amendment which may be made prior to the Year One thousand eight hundred and eight shall in any Manner affect the first and fourth Clauses in the Ninth Section of the first Article; and that no State, without its Consent, shall be deprived of its equal Suffrage in the Senate.

#### ARTICLE VI

All Debts contracted and Engagements entered into, before the Adoption of this Constitution, shall be as valid against the United States under this Constitution, as under the Confederation.

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

The Senators and Representatives before mentioned, and the Members of the several State Legislatures, and all executive and judicial Officers, both of the United States and of the several States, shall be bound by Oath or Affirmation, to support this Constitution; but no religious Test shall ever be required as a Qualification to any Office or public Trust under the United States

#### ARTICLE VII

The Ratification of the Conventions of nine States, shall be sufficient for the establishment of this Constitution between the States so ratifying the Same.

*Done* in Convention by the Unanimous Consent of the States present the assistant Seventeenth day of September in the Year of our Lord one thousand seven hundred and Eighty-seven and of the Independence of the United States of America the Twelfth, In witness whereof We have hereunto subscribed our Names,

George Washington  
President and deputy from Virginia

NEW HAMPSHIRE.

John Langdon  
Nicholas Gilman

GEORGIA.

William Few  
Abraham Baldwin

MASSACHUSETTS.

Nathaniel Gorham

Rufus King

CONNECTICUT.

William Samuel Johnson

Roger Sherman

NEW JERSEY.

William Livingston

David Brearley

William Paterson

Jonathan Dayton

NEW YORK.

Alexander Hamilton

MARYLAND.

James McHenry

Daniel Carrol

Daniel of St. Thomas Jenifer

PENNSYLVANIA.

Benjamin Franklin

Robert Morris

Thomas FitzSimons

James Wilson

Thomas Mifflin

George Clymer

Jared Ingersoll

Gouverneur Morris

VIRGINIA.

John Blair

James Madison Jr.

NORTH CAROLINA.

William Blount

Hugh Williamson

Richard Dobbs Spaight

DELAWARE.

George Read

John Dickinson

Jacob Broom

Gunning Bedford Jr.

Richard Bassett

SOUTH CAROLINA.

John Rutledge

Charles Pinckney

Charles Cotesworth Pinckney

Pierce Butler

Attest:

William Jackson, Secretary

## **AMENDMENTS**

*(The first ten Amendments were ratified December 15, 1791, and form what is known as the Bill of Rights.)*

### **AMENDMENT ONE**

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances.

### **AMENDMENT TWO**

A well regulated militia, being necessary to the security of a free State, the right of the people to keep and bear arms, shall not be infringed.

### **AMENDMENT THREE**

No soldier shall, in time of peace, be quartered in any house, without the consent of the owner, nor in time of war, but in a manner to be prescribed by law.

### **AMENDMENT FOUR**

The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

### **AMENDMENT FIVE**

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the militia, when in actual service in time of war or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use, without just compensation.

### **AMENDMENT SIX**

In all criminal prosecutions, the accused shall enjoy the right to a speedy and public trial, by an impartial jury of the State and district wherein the crime shall have been committed, which district shall have been previously ascertained by law, and to be informed of the nature and cause of the accusation; to be confronted with the witnesses against him; to have compulsory process for obtaining witnesses in his favor, and to have the assistance of counsel for his defence.

### **AMENDMENT SEVEN**

In suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any court of the United States, than according to the rules of the common law.

**AMENDMENT EIGHT**

Excessive bail shall not lie required, nor excessive fines imposed, nor cruel and unusual punishments inflicted.

**AMENDMENT NINE**

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.

**AMENDMENT TEN**

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

**AMENDMENT ELEVEN**

*(Ratified February 7, 1795)*

The judicial power of the United States shall not be construed to extend to any suit in law or equity, commenced or prosecuted against one of the United States by Citizens of another State, or by citizens or subjects of any foreign State.

**AMENDMENT TWELVE**

*(Ratified June 15, 1804)*

The Electors shall meet in their respective States, and vote by ballot for President and Vice President, one of whom at least, shall not be an inhabitant of the same State with themselves; they shall name in their ballots the person voted for as President, and in distinct ballots the person voted for as Vice President, and they shall make distinct lists of all persons voted for as President, and of all persons voted for as Vice President, and of the number of votes for each, which lists they shall sign and certify, and transmit sealed to the seat of the Government of the United States, directed to the President of the Senate; the President of the Senate shall, in the presence of the Senate and House of Representatives, open all the certificates and the votes shall then be counted; the person having the greatest number of votes for President, shall be the President, if such number be a majority of the whole number of Electors appointed; and if no person have such majority, then from the persons having the highest numbers not exceeding three on the list of those voted for as President, the House of Representatives shall choose immediately, by ballot, the President. But in choosing the President, the votes shall be taken by States, the representation from each State having one vote; a quorum for this purpose shall consist of a member or members from two-thirds of the States, and a majority of all the States shall be necessary to a choice. And if the House of Representatives shall not choose a President whenever the right of choice shall devolve upon them, before the fourth day of March next following, then the Vice President shall act as President, as in the case of the death or other constitutional disability of the President. The person having the greatest number of votes as Vice President, shall be the Vice President, if such number be a majority of the whole number of Electors appointed, and if no person have a majority, then from the two highest numbers on the list, the Senate shall choose the Vice President; a quorum for the purpose shall consist of two-thirds of the whole number of Senators, and a majority of the whole number shall be necessary to a choice. But no person constitutionally ineligible to the office of President shall be eligible to that of Vice-President of the United States.

**AMENDMENT THIRTEEN**

*(Ratified December 6, 1865)*

**Section 1.** Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction.

**Section 2.** Congress shall have power to enforce this article by appropriate legislation.

#### AMENDMENT FOURTEEN

*(Ratified July 9, 1868)*

**Section 1.** All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.

**Section 2.** Representatives shall be apportioned among the several States according to their respective numbers, counting the whole number of persons in each State, excluding Indians not taxed. But when the right to vote at any election for the choice of Electors for President and Vice President of the United States, Representatives in Congress, the executive and judicial officers of a State, or the members of the Legislature thereof, is denied to any of the male inhabitants of such State, being twenty-one years of age, and citizens of the United States, or in any way abridged, except for participation in rebellion, or other crime, the basis of representation therein shall be reduced in the proportion which the number of such male citizens shall bear to the whole number of male citizens twenty-one years of age in such State.

**Section 3.** No person shall be a Senator or Representative in Congress, or Elector of President and Vice-President, or hold any office, civil or military, under the United States, or under any State, who, having previously taken an oath, as a member of Congress, or as an officer of the United States, or as a member of any State Legislature, or as an executive or judicial officer of any State, to support the Constitution of the United States, shall have engaged in insurrection or rebellion against the same, or given aid or comfort to the enemies thereof, but Congress may by a vote of two-thirds of each House, remove such disability.

**Section 4.** The validity of the public debt of the United States, authorized by law, including debts incurred for payment of pensions and bounties for services in suppressing insurrection or rebellion, shall not be questioned. But neither the United States nor any State shall assume or pay any debt or obligation incurred in aid of insurrection or rebellion against the United States, or any claim for the loss or emancipation of any slave; but all such debts, obligations and claims shall be held illegal and void.

**Section 5.** The Congress shall have power to enforce, by appropriate legislation, the provisions of this article.

#### AMENDMENT FIFTEEN

*(Ratified February 3, 1870)*

**Section 1.** The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of race, color, or previous condition of servitude.

**Section 2.** The Congress shall have power to enforce this article by appropriate legislation.

#### AMENDMENT SIXTEEN

*(Ratified February 3, 1913)*

The Congress shall have power to lay and collect taxes on incomes, from whatever source derived, without apportionment among the several States and without regard to any census or enumeration.

#### AMENDMENT SEVENTEEN

*(Ratified April 8, 1913)*

The Senate of the United States shall be composed of two Senators from each State, elected by the people thereof, for six years; and each Senator shall have one vote. The electors in each State shall have the qualifications requisite for electors of the most numerous branch of the State legislature.

When vacancies happen in the representation of any State in the Senate, the executive authority of such State shall issue writs of election to fill such vacancies: Provided, That the legislature of any State may empower the Executive thereof to make temporary appointments until the people fill the vacancies by election as the legislature may direct.

This amendment shall not be so construed as to affect the election or term of any senator chosen before it becomes valid as part of the Constitution.

#### AMENDMENT EIGHTEEN

*(Ratified January 16, 1919. Repealed December 5, 1933 by Amendment 21)*

**Section 1.** After one year from the ratification of this article, the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.

**Section 2.** The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

**Section 3.** This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the Legislatures of the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by Congress.

#### AMENDMENT NINETEEN

*(Ratified August 18, 1920)*

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex.

The Congress shall have power by appropriate legislation to enforce the provisions of this article.

#### AMENDMENT TWENTY

*(Ratified January 23, 1933)*

**Section 1.** The terms of the President and Vice-President shall end at noon on the twentieth day of January, and the terms of Senators and Representatives at noon on the third day of January, of the years in which such terms would have ended if this article had not been ratified; and the terms of their successors shall then begin.

**Section 2.** The Congress shall assemble at least once in every year, and such meeting shall begin at noon on the third day of January, unless they shall by law appoint a different day.

**Section 3.** If, at the time fixed for the beginning of the term of the President, the President-elect shall have died, the Vice-President-elect shall become President. If a President shall not have been chosen before the time fixed for the beginning of his term, or if the President-elect shall have failed to qualify, then the Vice-President-elect shall act as President until a President shall have qualified; and the Congress may by law provide for the case wherein neither a President-elect nor a Vice-President-elect shall have qualified, declaring who shall then act as President, or the manner in which one who is to act shall be selected, and such person shall act accordingly until a President or Vice-President shall have qualified.

**Section 4.** The Congress may by law provide for the case of the death of any of the persons from whom the House of Representatives may choose a President whenever the right of choice

shall have devolved upon them, and for the case of the death of any of the persons from whom the Senate may choose a Vice-President whenever the right of choice shall have devolved upon them.

**Section 5.** Sections 1 and 2 shall take effect on the 15th day of October following the ratification of this article.

**Section 6.** This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the Legislatures of three-fourths of the several States within seven years from the date of its submission.

#### AMENDMENT TWENTY-ONE

*(Ratified December 5, 1933)*

**Section 1.** The eighteenth article of amendment to the Constitution of the United States is hereby repealed.

**Section 2.** The transportation or importation into any State, Territory, or Possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

**Section 3.** The article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by conventions in the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

#### AMENDMENT TWENTY-TWO

*(Ratified February 27, 1951)*

**Section 1.** No person shall be elected to the office of the President more than twice, and no person who has held the office of President, or acted as President for more than two years of a term to which some other person was elected President shall be elected to the office of the President more than once. But this Article shall not apply to any person holding the office of President when this Article was proposed by the Congress, and shall not prevent any person who may be holding the office of President, or acting as President, during the term within which this Article becomes operative from holding the office of President or acting as President during the remainder of such term.

**Section 2.** This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the Legislatures of three-fourths of the several States within seven years from the date of its submission to the States by the Congress.

#### AMENDMENT TWENTY-THREE

*(Ratified March 29, 1961)*

**Section 1.** The District constituting the seat of government of the United States shall appoint in such manner as the Congress may direct:

A number of electors of President and Vice-President equal to the whole number of Senators and Representatives in Congress to which the District would be entitled if it were a State, but in no event more than the least populous State; they shall be in addition to those appointed by the States, but they shall be considered, for the purposes of the election of President and Vice-President, to be electors appointed by a State; and they shall meet in the District and perform such duties as provided by the twelfth article of amendment.

**Section 2.** The Congress shall have power to enforce this article by appropriate legislation.

#### AMENDMENT TWENTY-FOUR

*(Ratified January 23, 1964)*

**Section 1.** The right of citizens of the United States to vote in any primary or other election for President or Vice-President, for electors for President or Vice-President, or for Senator

or Representative in Congress, shall not be denied or abridged by the United States or any State by reason of failure to pay any poll tax or other tax.

**Section 2.** The Congress shall have power to enforce this article by appropriate legislation.

#### AMENDMENT TWENTY-FIVE

*(Ratified February 10, 1967)*

**Section 1.** In case of the removal of the President from office or of his death or resignation, the Vice-President shall become President.

**Section 2.** Whenever there is a vacancy in the office of the Vice-President, the President shall nominate a Vice-President who shall take office upon confirmation by a majority vote of both Houses of Congress.

**Section 3.** Whenever the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that he is unable to discharge the powers and duties of his office, and until he transmits to them a written declaration to the contrary, such powers and duties shall be discharged by the Vice-President as Acting President.

**Section 4.** Whenever the Vice-President and a majority of either the principal officers of the executive departments or of such other body as Congress may by law provide, transmit to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office, the Vice-President shall immediately assume the powers and duties of the office as Acting President.

Thereafter, when the President transmits to the President pro tempore of the Senate and the Speaker of the House of Representatives his written declaration that no inability exists, he shall resume the powers and duties of his office unless the Vice-President and a majority of either the principal officers of the executive department or of such other body as Congress may by law provide, transmit within four days to the President pro tempore of the Senate and the Speaker of the House of Representatives their written declaration that the President is unable to discharge the powers and duties of his office. Thereupon Congress shall decide the issue, assembling within forty-eight hours for that purpose if not in session. If the Congress, within twenty-one days after receipt of the latter written declaration, or, if Congress is not in session, within twenty-one days after Congress is required to assemble, determines by two-thirds vote of both Houses that the President is unable to discharge the powers and duties of his office, the Vice-President shall continue to discharge the same as Acting President; otherwise, the President shall resume the powers and duties of his office.

#### AMENDMENT TWENTY-SIX

*(Ratified July 1, 1971)*

**Section 1.** The right of citizens of the United States, who are eighteen years of age or older, to vote shall not be denied or abridged by the United States or by any State on account of age.

**Section 2.** The Congress shall have power to enforce this article by appropriate legislation.

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### MORRILL LAND-GRANT ACT OF 1862

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*An Act donating Public Lands to the several States and Territories which may provide Colleges for the Benefit of Agriculture and the Mechanic Arts.*

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there be granted to the several States, for the purposes hereinafter

mentioned, an amount of public land, to be apportioned to each State a quantity equal to thirty thousand acres for each senator and representative in Congress to which the States are respectively entitled by the apportionment under the census of eighteen hundred and sixty: Provided, That no mineral lands shall be selected or purchased under the provisions of this act.

**Sec. 2.** And be it further enacted, That the land aforesaid, after being surveyed, shall be apportioned to the several States in sections or subdivisions of sections, not less than one quarter of a section; and whenever there are public lands in a State subject to sale at private entry at one dollar and twenty-five cents per acre, the quantity to which said State shall be entitled shall be selected from such lands within the limits of such State, and the Secretary of the Interior is hereby directed to issue to each of the States in which there is not the quantity of public lands subject to sale at private entry at one dollar and twenty-five cents per acre, to which said State may be entitled under the provisions of this act, land scrip to the amount in acres for the deficiency of its distributive share: said scrip to be sold by said States and the proceeds thereof applied to the uses and purposes prescribed in this act, and for no other use or purpose whatsoever: Provided, That in no case shall any State to which land scrip may thus be issued be allowed to locate the same within the limits of any other State, or of any Territory of the United States, but their assignees may thus locate said land scrip upon any of the unappropriated lands of the United States subject to sale at private entry at one dollar and twenty-five cents, or less, per acre: And provided, further, That not more than one million acres shall be located by such assignees in any one of the States: And provided, further, That no such location shall be made before one year from the passage of this act.

**Sec. 3.** And be it further enacted, That all the expenses of management, superintendence, and taxes from date of selection of said lands, previous to their sales, and all expenses incurred in the management and disbursement of the moneys which may be received therefrom, shall be paid by the States to which they may belong, out of the treasury of said States, so that the entire proceeds of the sale of said lands shall be applied without any diminution whatever to the purposes hereinafter mentioned.

**Sec. 4.** And be it further enacted, That all moneys derived from the sale of the lands aforesaid by the States to which the lands are apportioned, and from the sales of land scrip hereinbefore provided for, shall be invested in stocks of the United States, or of the States, or some other safe stocks, yielding not less than five per centum upon the par value of said stocks; and that the moneys so invested shall constitute a perpetual fund, the capital of which shall remain forever undiminished, (except so far as may be provided in section fifth of this act,) and the interest of which shall be inviolably appropriated, by each State which may take and claim the benefit of this act, to the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislatures of the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions in life.

**Sec. 5.** And be it further enacted, That the grant of land and land scrip hereby authorized shall be made on the following conditions, to which, as well as to the provisions hereinbefore contained, the previous assent of the several States shall be signified by legislative acts:

First. If any portion of the fund invested as provided by the foregoing section, or any portion of the interest thereon, shall, by any action or contingency, be diminished or lost, it shall be replaced by the State to which it belongs, so that the capital of the fund shall remain forever undiminished; and the annual interest shall be regularly applied without diminution to the purposes mentioned in the fourth section of this act, except that a sum, not exceeding ten per centum upon the amount received by any State under the provisions of this act, may be ex-

pending for the purchase of lands for sites or experimental farms, whenever authorized by the respective legislatures of said States.

Second. No portion of said fund, nor the interest thereon, shall be applied, directly or indirectly, under any pretence whatever, to the purchase, erection, preservation, or repair of any building or buildings.

Third. Any State which may take and claim the benefit of the provisions of this act shall provide, within five years, at least not less than one college, as described in the fourth section of this act, or the grant to such State shall cease; and said State shall be bound to pay the United States the amount received of any lands previously sold, and that the title to purchasers under the State shall be valid.

Fourth. An annual report shall be made regarding the progress of each college, recording any improvements and experiments made, with their cost and results, and such other matters, including State industrial and economical statistics, as may be supposed useful; one copy of which shall be transmitted by mail free, by each, to all the other colleges which may be endowed under the provisions of this act, and also one copy to the Secretary of the Interior.

Fifth. When lands shall be selected from those which have been raised to double the minimum price, in consequence of railroad grants, they shall be computed to the States at the maximum price, and the number of acres proportionally diminished.

Sixth. No State while in a condition of rebellion or insurrection against the government of the United States shall be entitled to the benefit of this act.

Seventh. No State shall be entitled to the benefits of this act unless it shall express its acceptance thereof by its legislature within two years from the date of its approval by the President.

Sec. 6. And be it further enacted, That land scrip issued under the provisions of this act shall not be subject to location until after the first day of January, one thousand eight hundred and sixty-three.

Sec. 7. And be it further enacted, That the land officers shall receive the same fees for locating land scrip issued under the provisions of this act as is now allowed for the location of military bounty land warrants under existing laws; Provided, their maximum compensation shall not be thereby increased.

Sec. 8. And be it further enacted, That the Governors of the several States to which scrip shall be issued under this act shall be required to report annually to Congress all sales made of such scrip until the whole shall be disposed of, the amount received for the same, and what appropriation has been made of the proceeds.

Approved, July 2, 1862.

## SECOND MORRILL ACT OF AUGUST 30, 1890

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*Providing for the further endowment and support of colleges of agriculture and mechanic arts*

[An act to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July second, eighteen hundred and sixty-two]

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That there shall be, and hereby is, annually appropriated, out of any money in the Treasury not otherwise appropriated, arising from the sale of public lands, to be paid as hereinafter provided, to each State and Territory for the more complete endowment and maintenance of colleges for the benefit of agriculture and the mechanic arts now established,

or which may be hereafter established, in accordance with an act of Congress approved July second, eighteen hundred and sixty-two, the sum of fifteen thousand dollars for the year ending June thirtieth, eighteen hundred and ninety, and an annual increase of the amount of such appropriation thereafter for ten years by an additional sum of one thousand dollars over the preceding year and the annual amount of be paid thereafter to each State and Territory shall be twenty-five thousands dollars to be applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural, and economic science, with special reference to their applications in the industries of life, and to the facilities for such instruction: *Provided*, That no money shall be paid out under this act to all State and Territory for the support and maintenance of a college where a distinction of race or color is made in the admission of students, but the establishment and maintenance of such colleges separately for white and colored students shall be held to be a compliance with the provisions of this act if the funds received in such State or Territory be equitably divided as hereinafter set forth: *Provided*, That in any State in which there has been one college established in pursuance of the act of July second, eighteen hundred and sixty-two, and also in which an educational institution of like character has been established, or may be hereafter established, and is now aided by such State from its own revenue for the education of colored students in agriculture and the mechanic arts, however named or styled, or whether or not it has received money heretofore under the act to which this act is an amendment, the legislature of such a State may propose and report to the Secretary of the Interior a just and equitable division of the fund to be received under this act between one college for white students and one institution for colored students established as aforesaid, which shall be divided into two parts and paid accordingly, and thereupon such institution for colored students shall be entitled to the benefits of this act and subject to its provisions, as much as it would have been if it had been included under the act of eighteen hundred and sixty-two, and the fulfillment of the foregoing provisions shall be taken as a compliance with the provision in reference to separate colleges for white and colored students.

## Section 2

That the sums hereby appropriated to the States and Territories for the further endowment and support of colleges shall be annually paid on or before the thirty-first day of July of each year, by the Secretary of the Treasury, upon the warrant of the Secretary of the Interior, out of the Treasury of the United States, to the State or Territorial treasurer, or to such officer as shall be designated by the laws of such State or Territory to receive the same, who shall, upon the order of the trustees of the college, or the institution for colored students, immediately pay over said sums to the treasurers of the respective colleges or other institutions entitled to receive the same, and such treasurer shall be required to report to the Secretary of Agriculture and to the Secretary of the Interior, on or before the first day of September of each year, a detailed statement of the amount so received and of its disbursement. The grants of moneys authorized by this act are made subject to the legislative assent of the several States and Territories to the purpose of said grants: *Provided*, That payments of such installments of the appropriation herein made as shall become due to any State before the adjournment of the regular session of legislature meeting next after the passage of this act shall be made upon the assent of the governor thereof, duly certified to the Secretary of the Treasury.

## Section 3

That if any portion of the moneys received by the designated officer of the State or Territory for the further and more complete endowment, support, and maintenance of colleges, or of institutions for colored students, as provided in this act, shall, by any action or contingency, be diminished or lost, or be misapplied, it shall be replaced by the State or Territory to which it belongs, and until so replaced no subsequent appropriation shall be apportioned or paid

to such State or Territory; and no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings. An annual report by the president of each of said colleges shall be made to the Secretary of Agriculture, as well as to the Secretary of the Interior, regarding the condition and progress of each college, including statistical information in relation to its receipts and expenditures, its library, the number of its students and professors, and also as to any improvements and experiments made under the direction of any experiment stations attached to said colleges, with their costs and results, and such other industrial and economical statistics as may be regarded as useful, one copy of which shall be transmitted by mail free to all other colleges further endowed under this act.

#### **Section 4**

That on or before the first day of July in each year, after the passage of this act, the Secretary of the Interior shall ascertain and certify to the Secretary of the Treasury as to each State and Territory whether it is entitled to receive its share of the annual appropriation for colleges, or of institutions for colored students, under this act, and the amount which thereupon each is entitled, respectively, to receive. If the Secretary of the Interior shall withhold a certificate from any State or Territory of its appropriation, the facts and reasons therefor shall be reported to the President, and the amount involved shall be kept separate in the Treasury until the close of the next Congress, in order that the State or Territory may, if it should so desire, appeal to Congress from the determination of the Secretary of the Interior. If the next Congress shall not direct such sum to be paid, it shall be covered into the Treasury. And the Secretary of the Interior is hereby charged with the proper administration of this law.

#### **Section 5**

That the Secretary of the Interior shall annually report to Congress the disbursements which have been made in all the States and Territories, and also whether the appropriation of any State or Territory has been withheld, and if so, the reasons therefor.

#### **Section 6**

Congress may at any time amend, suspend, or repeal any or all of the provisions of this act. Approved, August 30, 1890. (26 Stat. 417.)

## **ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965**

### **PUBLIC LAW 89-10**

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Elementary and Secondary Education Act of 1965".*

#### **TITLE I—FINANCIAL ASSISTANCE TO LOCAL EDUCATIONAL AGENCIES FOR THE EDUCATION OF CHILDREN OF LOW-INCOME FAMILIES AND EXTENSION OF PUBLIC LAW 874, EIGHTY-FIRST CONGRESS**

Sec. 2. The Act of September 30, 1950, Public Law 874, Eighty-first Congress, as amended (20 U.S.C. 236-244), is amended by inserting:

#### **"TITLE I—FINANCIAL ASSISTANCE FOR LOCAL EDUCATIONAL AGENCIES IN AREAS AFFECTED BY FEDERAL ACTIVITY"**

immediately above the heading of section 1, by striking out "this Act" wherever it appears in sections 1 through 6, inclusive (other than where it appears in clause (B) of section 4(a)), and

inserting in lieu thereof “this title”, and by adding immediately after section 6 the following new title:

**“TITLE II—FINANCIAL ASSISTANCE FOR LOCAL EDUCATIONAL AGENCIES FOR  
THE EDUCATION OF CHILDREN OF LOW-INCOME FAMILIES**

**“Declaration of Policy**

“Sec. 201. In recognition of the special educational needs of children of low-income families and the impact that concentrations of low-income families have on the ability of local educational agencies to support adequate educational programs, the Congress hereby declares it to be the policy of the United States to provide financial assistance (as set forth in this title) to local educational agencies serving areas with concentrations of children from low-income families to expand and improve their educational programs by various means (including pre-school programs) which contribute particularly to meeting the special educational needs of educationally deprived children.

**“Kinds and Duration of Grants**

“Sec. 202. The Commissioner shall, in accordance with the provisions of this title, make payments to State educational agencies for basic grants to local educational agencies for the period beginning July 1, 1965, and ending June 30, 1968, and he shall make payments to State educational agencies for special incentive grants to local educational agencies for the period beginning July 1, 1966, and ending June 30, 1968.

**“Basic Grants—Amount and Eligibility**

“Sec. 203. (a) (1) From the sums appropriated for making basic grants under this title for a fiscal year, the Commissioner shall reserve such amount, but not in excess of 2 per centum thereof, as he may determine and shall allot such amount among Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands according to their respective need for such grants. The maximum basic grant which a local educational agency in Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands shall be eligible to receive shall be determined pursuant to such criteria as the Commissioner determines will best carry out the purposes of this title.

“(2) In any case in which the Commissioner determines that satisfactory data for that purpose are available, the maximum basic grant which a local educational agency in a State shall be eligible to receive under this title for any fiscal year shall be (except as provided in paragraph (3)) an amount equal to the Federal percentage (established pursuant to subsection (c)) of the average per pupil expenditure in that State multiplied by the sum of (A) the number of children aged five to seventeen, inclusive, in the school district of such agency, of families having an annual income of less than the low-income factor (established pursuant to subsection (c)), and (B) the number of children of such ages in such school district of families receiving an annual income in excess of the low-income factor (as established pursuant to subsection (c)) from payments under the program of aid to families with dependent children under a State plan approved under title IV of the Social Security Act. In any other case, the maximum basic grant for any local educational agency in a State shall be determined on the basis of the aggregate maximum amount of such grants for all such agencies in the county or counties in which the school district of the particular agency is located, which aggregate maximum amount shall be equal to the Federal percentage of such per pupil expenditure multiplied by the number of children of such ages and families in such county or counties be allocated among those agencies upon such equitable basis as may be determined by the State educational agency in accordance with basic criteria prescribed by the Commissioner. For purposes of this subsection the ‘average per pupil expenditure’ in a State shall be the aggregate current expendi-

tures, during the second fiscal year preceding the fiscal year for which the computation is made, of all local educational agencies in the State (without regard to the sources of funds from which such expenditures are made), divided by the aggregate number of children in average daily attendance to whom such agencies provided free public education during such preceding year. In determining the maximum amount of a basic grant and the eligibility of a local educational agency for a basic grant for any fiscal year, the number of children determined under the first two sentences of this subsection or under subsection (b) shall be reduced by the number of children aged five to seventeen, inclusive, of families having an annual income of less than the low-income factor (as established pursuant to subsection (c)) for whom a payment was made under title I for the previous fiscal year.

“(3) If the maximum amount of the basic grant determined pursuant to paragraph (1) or (2) for any local educational agency for the fiscal year ending June 30, 1966, is greater than 30 per centum of the sum budgeted by that agency for current expenditures for that year (as determined pursuant to regulations of the Commissioner), such maximum amount shall be reduced to 30 per centum of such budgeted sum.

“(4) For purposes of this subsection, the term ‘State’ does not include Puerto Rico, Guam, American Samoa, the Virgin Islands, and the Trust Territory of the Pacific Islands.

“(b) A local educational agency shall be eligible for a basic grant for a fiscal year under this title only if it meets the following requirements with respect to the number of children aged five to seventeen, inclusive, of families having an annual income of less than the low-income factor (as established pursuant to subsection (c)):

“(1) In any case (except as provided in paragraph (3)) in which the Commissioner determines that satisfactory data for the purpose of this subsection as to the number of such children of such families are available on a school district basis, the number of such children of such families in the school district of such local educational agency shall be—

“(A) at least one hundred, or

“(B) equal to 3 per centum or more of the total number of all children aged five to seventeen, inclusive, in such district,

whichever is less, except that it shall in no case be less than ten.

“(2) In any other case, except as provided in paragraph (3), the number of children of such ages of families with such income in the county which includes such local educational agency’s school district shall be one hundred or more.

“(3) In any case in which a county includes a part of the school district of the local educational agency concerned and the Commissioner has not determined that satisfactory data for the purpose of this subsection are available on a school district basis for all the local educational agencies for all the counties into which the school district of the local educational agency concerned extends, the eligibility requirement with respect to the number of children of such ages of families of such income for such local educational agency shall be determined in accordance with regulations prescribed by the Commissioner for the purposes of this subsection.

“(c) For the purposes of this section, the ‘Federal percentage’ and the ‘low-income factor’ for the fiscal year ending June 30, 1966, shall be 50 per centum and \$2,000, respectively. For each of the two succeeding fiscal years the Federal percentage and the low-income factor shall be established by the Congress by law.

“(d) For the purposes of this section, the Commissioner shall determine the number of children aged five to seventeen, inclusive, of families having an annual income of less than the low-income factor (as established pursuant to subsection (c)) on the basis of the most recent satisfactory data available from the Department of Commerce. At any time such data for a

county are available in the Department of Commerce, such data shall be used in making calculations under this section. The Secretary of Health, Education, and Welfare shall determine the number of children of such ages from families receiving an annual income in excess of the low-income factor (established pursuant to subsection (c)) from payments under the program of aid to families with dependent children under a State plan approved under title IV of the Social Security Act on the basis of the best available data for the period most nearly comparable to those which are used by the Commissioner under the first two sentences of this subsection in making determinations for the purposes of subsections (a) and (b). When requested by the Commissioner, the Secretary of Commerce shall make a special estimate of the number of children of such ages who are from families having an annual income less than the low income factor (established pursuant to subsection (c)) in each county or school district, and the Commissioner is authorized to pay (either in advance or by way of reimbursement) the Secretary of Commerce the cost of making this special estimate. The Secretary of Commerce shall give consideration to any request of the chief executive of a State for the collection of additional census information.

#### **“Special Incentive Grants**

“Sec. 204. Each local educational agency which is eligible to receive a basic grant for the fiscal year ending June 30, 1967, shall be eligible to receive in addition a special incentive grant which does not exceed the product of (a) the aggregate number of children in average daily attendance to whom such agency provided free public education during the fiscal year ending June 30, 1965, and (b) the amount by which the average per pupil expenditure of that agency for the fiscal year ending June 30, 1965, exceeded 105 per centum of such expenditure for the fiscal year ending June 30, 1964. Each local educational agency which is eligible to receive a basic grant for the fiscal year ending June 30, 1968, shall be eligible to receive in addition a special incentive grant which does not exceed the product of (c) the aggregate number of children in average daily attendance to whom such agency provided free public education during the fiscal year ending June 30, 1966, and (d) the amount by which the average per pupil expenditure of that agency for the fiscal year ending June 30, 1966, exceeded 110 per centum of such expenditure for the fiscal year ending June 30, 1964. For the purpose of this section the ‘average per pupil expenditure’ of a local educational agency for any year shall be the aggregate expenditures (without regard to the sources of funds from which such expenditures are made, except that funds derived from Federal sources shall not be used in computing such expenditures) from current revenues made by that agency during that year for free public education, divided by the aggregate number of children in average daily attendance to whom such agency provided free public education during that year.

#### **“Application**

“Sec. 205. (a) A local educational agency may receive a basic grant or a special incentive grant under this title for any fiscal year only upon application therefor approved by the appropriate State educational agency, upon its determination (consistent with such basic criteria as the Commissioner may establish)—

- “(1) that payments under this title will be used for programs and projects (including the acquisition of equipment and where necessary the construction of school facilities)
  - (A) which are designed to meet the special educational needs of educationally deprived children in school attendance areas having high concentrations of children from low-income families and (B) which are of sufficient size, scope, and quality to give reasonable promise of substantial progress toward meeting those needs, and nothing herein shall be deemed to preclude two or more local educational agencies from entering into agreements, at their option, for carrying out jointly operated programs and projects under this title;
- “(2) that, to the extent consistent with the number of educationally deprived children in the school district of the local educational agency who are enrolled in private

elementary and secondary schools, such agency has made provision for including special educational services and arrangements (such as dual enrollment, educational radio and television, and mobile educational services and equipment) in which such children can participate;

- “(3) that the local educational agency has provided satisfactory assurance that the control of funds provided under this title, and title to property derived therefrom, shall be in a public agency for the uses and purposes provided in this title, and that a public agency will administer such funds and property;
- “(4) in the case of any project for construction of school facilities, that the project is not inconsistent with overall State plans for the construction of school facilities and that the requirements of section 209 will be complied with on all such construction projects;
- “(5) that effective procedures, including provision for appropriate objective measurements of educational achievement, will be adopted for evaluating at least annually the effectiveness of the programs in meeting the special educational needs of educationally deprived children;
- “(6) that the local educational agency will make an annual report and such other reports to the State educational agency, in such form and containing such information, as may be reasonably necessary to enable the State educational agency to perform its duties under this title, including information relating to the educational achievement of students participating in programs carried out under this title, and will keep such records and afford such access thereto as the State educational agency may find necessary to assure the correctness and verification of such reports;
- “(7) that wherever there is, in the area served by the local educational agency, a community action program approved pursuant to title II of the Economic Opportunity Act of 1964 (Public Law 88-452), the programs and projects have been developed in cooperation with the public or private nonprofit agency responsible for the community action program; and
- “(8) that effective procedures will be adopted for acquiring and disseminating to teachers and administrators significant information derived from educational research, demonstration, and similar projects, and for adopting, where appropriate, promising educational practices developed through such projects.
- “(b) The State educational agency shall not finally disapprove in whole or in part any application for funds under this title without first affording the local educational agency submitting the application reasonable notice and opportunity for a hearing.

**“Assurance from States**

“Sec. 206. (a) Any State desiring to participate in the program of this title shall submit through its State educational agency to the Commissioner an application, in such detail as the Commissioner deems necessary, which provides satisfactory assurance—

- “(1) that, except as provided in section 207 (b), payments under this title will be used only for programs and projects which have been approved by the State educational agency pursuant to section 205 (a) and which meet the requirements of that section, and that such agency will in all other respects comply with the provisions of this title, including the enforcement of any obligations imposed upon a local educational agency under section 205 (a);
- “(2) that such fiscal control and fund accounting procedures will be adopted as may be necessary to assure proper disbursement of, and accounting for, Federal funds paid to the State (including such funds paid by the State to local educational agencies) under this title; and

“(3) that the State educational agency will make to the Commissioner (A) periodic reports (including the results of objective measurements required by section 205(a) (5)) evaluating the effectiveness of payments under this title and of particular programs assisted under it in improving the educational attainment of educationally deprived children, and (B) such other reports as may be reasonably necessary to enable the Commissioner to perform his duties under this title (including such reports as he may require to determine the amounts which the local educational agencies of that State are eligible to receive for any fiscal year), and assurance that such agency will keep such records and afford such access thereto as the Commissioner may find necessary to assure the correctness and verification of such reports.

“(b) The Commissioner shall approve an application which meets the requirements specified in subsection (a), and he shall not finally disapprove an application except after reasonable notice and opportunity for a hearing to the State educational agency.

#### **“Payment**

“Sec. 207. (a) (1) The Commissioner shall, subject to the provisions of section 208, from time to time pay to each State, in advance or otherwise, the amount which the local educational agencies of that State are eligible to receive under this title. Such payments shall take into account the extent (if any) to which any previous payment to such State educational agency under this title (whether or not in the same fiscal year) was greater or less than the amount which should have been paid to it.

“(2) From the funds paid to it pursuant to paragraph (1) each State educational agency shall distribute to each local educational agency of the State which is not ineligible by reason of section 203 (b) and which has submitted an application approved pursuant to section 205(a) the amount for which such application has been approved, except that this amount shall not exceed an amount equal to the total of the maximum amount of the basic grant plus the maximum amount of the special incentive grant as determined for that agency pursuant to sections 203 and 204, respectively.

“(b) The Commissioner is authorized to pay to each State amounts equal to the amounts expended by it for the proper and efficient performance of its duties under this title (including technical assistance for the measurements and evaluations required by section 205 (a) (5)), except that the total of such payments in any fiscal year shall not exceed 1 per centum of the total of the amount of the basic grants paid under this title for that year to the local educational agencies of the State.

“(c) (1) No payments shall be made under this title for any fiscal year to a State which has taken into consideration payments under this title in determining the eligibility of any local educational agency in that State for State aid, or the amount of that aid, with respect to the free public education of children during that year or the preceding fiscal year.

“(2) No payments shall be made under this title to any local educational agency for any fiscal year unless the State educational agency finds that the combined fiscal effort (as determined in accordance with regulations of the Commissioner) of that agency and the State with respect to the provision of free public education by that agency for the preceding fiscal year was not less than such combined fiscal effort for that purpose for the fiscal year ending June 30, 1964.

#### **“Adjustments where Necessitated by Appropriations**

“Sec. 208. If the sums appropriated for the fiscal year ending June 30, 1966, for making the payments provided in this title are not sufficient to pay in full the total amounts which all local and State educational agencies are eligible to receive under this title for such year, such amounts shall be reduced ratably. In case additional funds become available for making payments under this title for that year, such reduced amounts shall be increased on the same basis that they were reduced.

**“Labor Standards**

“Sec. 209. All laborers and mechanics employed by contractors or subcontractors on all construction projects assisted under this title shall be paid wages at rates not less than those prevailing on similar construction in the locality as determined by the Secretary of Labor in accordance with the Davis-Bacon Act, as amended (40 U.S.C. 276a—276a-5). The Secretary of Labor shall have with respect to the labor standards specified in this section the authority and functions set forth in Reorganization Plan Numbered 14 of 1950 (15 F.R. 3176; 5 U.S.C. 133z-15) and section 2 of the Act of June 13, 1934, as amended (40 U.S.C. 276c).

**“Withholding**

“Sec. 210. Whenever the Commissioner, after reasonable notice and opportunity for hearing to any State educational agency, finds that there has been a failure to comply substantially with any assurance set forth in the application of that State approved under section 206 (b), the Commissioner shall notify the agency that further payments will not be made to the State under this title (or, in his discretion, that the State educational agency shall not make further payments under this title to specified local educational agencies affected by the failure) until he is satisfied that there is no longer any such failure to comply. Until he is so satisfied, no further payments shall be made to the State under this title, or payments by the State educational agency under this title shall be limited to local educational agencies not affected by the failure, as the case may be.

**“Judicial Review**

“Sec. 211. (a) If any State is dissatisfied with the Commissioner’s final action with respect to the approval of its application submitted under section 206 (a) or with his final action under section 210, such State may, within sixty days after notice of such action, file with the United States court of appeals for the circuit in which such State is located a petition for review of that action. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Commissioner. The Commissioner thereupon shall file in the court the record of the proceedings on which he based his action, as provided in section 2112 of title 28, United States Code.

“(b) The findings of fact by the Commissioner, if supported by substantial evidence, shall be conclusive; but the court, for good cause shown, may remand the case to the Commissioner to take further evidence, and the Commissioner may thereupon make new or modified findings of fact and may modify his previous action, and shall file in the court the record of the further proceedings. Such new or modified findings of fact shall likewise be conclusive if supported by substantial evidence.

“(c) Upon the filing of such petition, the court shall have jurisdiction to affirm the action of the Commissioner or to set it aside, in whole or in part. The judgment of the court shall be subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28, United States Code.

**“National Advisory Council**

“Sec. 212. (a) The President shall, within ninety days after the enactment of this title, appoint a National Advisory Council on the Education of Disadvantaged Children for the purpose of reviewing the administration and operation of this title, including its effectiveness in improving the educational attainment of educationally deprived children, and making recommendations for the improvement of this title and its administration and operation. These recommendations shall take into consideration experience gained under this and other Federal educational programs for disadvantaged children and, to the extent appropriate, experience gained under other public and private educational programs for disadvantaged children.

“(b) The Council shall be appointed by the President without regard to the civil service laws and shall consist of twelve persons. When requested by the President, the Secretary of Health,

Education, and Welfare shall engage such technical assistance as may be required to carry out the functions of the Council, and the Secretary shall make available to the Council such secretarial, clerical, and other assistance and such pertinent data prepared by the Department of Health, Education, and Welfare as it may require to carry out such functions.

“(c) The Council shall make an annual report of its findings and recommendations (including recommendations for changes in the provisions of this title) to the President not later than March 31 of each calendar year beginning after the enactment of this title. The President shall transmit each such report to the Congress together with his comments and recommendations.

“(d) Members of the Council who are not regular full-time employees of the United States shall, while serving on business of the Council, be entitled to receive compensation at rates fixed by the President, but not exceeding \$100 per day, including travel time; and while so serving away from their homes or regular places of business, they may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5 of the Administrative Expenses Act of 1946 (5 U.S.C. 73b-2) for persons in Government service employed intermittently.”

### **Technical and Conforming Amendments**

Sec. 3. (a) Clause (A) of section 3 (c) (4) of the Act of September 30, 1950, Public Law 874, Eighty-first Congress, as amended (20 U.S.C. 238 (c) (4)(A)) is amended by striking out “(c) is,” and inserting “, but excluding funds available under title II) is,”.

(b) The sentence which immediately follows clause (B) of section 4 (a) of such Act (20 U.S.C. 239(a) (B)) is amended by inserting “(exclusive of funds available under title II)” immediately after “Federal funds”.

(c) (1) Such Act is further amended by inserting “TITLE III—GENERAL” above the heading for section 7, and by redesignating sections 7, 8, and 9, and references thereto, as sections 301, 302, and 303, respectively.

(2) Subsections (b) and (c) of the section of such Act redesignated as section 302 are amended by striking out “this Act” wherever it appears and inserting in lieu thereof “title I”.

### **Definitions**

Sec. 4. (a) Paragraph (2) of the section of the Act of September 30, 1950, Public Law 874, Eighty-first Congress, as amended, redesignated by section 3 of this Act as section 303, is amended to read as follows:

“(2) The term ‘child’, except as used in title II, means any child who is within the age limits for which the applicable State provides free public education.”

(b) Paragraph (4) of such section 303 is amended by inserting before the period at the end thereof “, except that for the purposes of title II such term does not include any education provided beyond grade 12”.

(c) Paragraph (5) of such section 303 is amended by inserting immediately before the period at the end thereof the following: “, or any expenditures made from funds granted under title II of this Act or titles II or III of the Elementary and Secondary Education Act of 1965”.

(d) (1) Paragraph (8) of such section 303 is amended by inserting “American Samoa,” after “the District of Columbia,” and by inserting after “the Virgin Islands” the following: “, and for purposes of title II, such term includes the Trust Territory of the Pacific Islands”.

(2) Sections 3(d) and 6(c) of such Act (20 U.S.C. 238 (d), 241 (c)) are each amended by inserting “American Samoa,” after “Guam,” each time that it appears.

(e) Such section 303 is further amended by adding at the end thereof the following new paragraphs:

“(11) The term ‘county’ means those divisions of a State utilized by the Secretary of Commerce in compiling and reporting data regarding counties.

“(12) The term ‘construction’ includes the preparation of drawings and specifications for school facilities; erecting, building, acquiring, altering, remodeling, improving, or extending school facilities; and the inspection and supervision of the construction of school facilities.

“(13) The term ‘school facilities’ means classrooms and related facilities (including initial equipment) for free public education and interests in land (including site, grading, and improvements) on which such facilities are constructed, except that such term does not include those gymnasiums and similar facilities intended primarily for exhibitions for which admission is to be charged to the general public.

“(14) The term ‘equipment’ includes machinery, utilities, and built-in equipment and any necessary enclosures or structures to house them, and includes all other items necessary for the functioning of a particular facility as a facility for the provision of educational services, including items such as instructional equipment and necessary furniture, printed, published, and audio-visual instructional materials, and books, periodicals, documents, and other related materials.

“(15) For the purpose of title II, the term ‘elementary school’ means a day or residential school which provides elementary education, as determined under State law, and the term ‘secondary school’ means a day or residential school which provides secondary education, as determined under State law, except that it does not include any education provided beyond grade 12.”

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## TITLE IX OF THE EDUCATION AMENDMENTS OF 1972

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### PUBLIC LAW 92-318

### 20 U.S.C. SECS. 1681–1688

### TITLE 20—EDUCATION

### CHAPTER 38—DISCRIMINATION BASED ON SEX OR BLINDNESS

#### Sec. 1681. Sex

##### (a) Prohibition against discrimination; exceptions

No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance, except that:

- (1) Classes of educational institutions subject to prohibition
  - in regard to admissions to educational institutions, this section shall apply only to institutions of vocational education, professional education, and graduate higher education, and to public institutions of undergraduate higher education;
- (2) Educational institutions commencing planned change in admissions
  - in regard to admissions to educational institutions, this section shall not apply
    - (A) for one year from June 23, 1972, nor for six years after June 23, 1972, in the case of an educational institution which has begun the process of changing from being an institution which admits only students of one sex to being an institution which admits students of both sexes, but only if it is carrying out a plan for such a change which is approved by the Secretary of Education or
    - (B) for seven years from the date an educational institution begins the process of changing from being an institution which admits only students of only one sex to being an institution which admits students of both sexes, but only if it is carrying out a plan for such a change which is approved by the Secretary of Education, whichever is the later;
- (3) Educational institutions of religious organizations with contrary religious tenets

this section shall not apply to an educational institution which is controlled by a religious organization if the application of this subsection would not be consistent with the religious tenets of such organization;

- (4) Educational institutions training individuals for military services or merchant marine  
 this section shall not apply to an educational institution whose primary purpose is the training of individuals for the military services of the United States, or the merchant marine;

- (5) Public educational institutions with traditional and continuing admissions policy  
 in regard to admissions this section shall not apply to any public institution of undergraduate higher education which is an institution that traditionally and continually from its establishment has had a policy of admitting only students of one sex;

- (6) Social fraternities or sororities; voluntary youth service organizations  
 this section shall not apply to membership practices

- (A) of a social fraternity or social sorority which is exempt from taxation under section 501(a) of title 26, the active membership of which consists primarily of students in attendance at an institution of higher education, or  
 (B) of the Young Men's Christian Association, Young Women's Christian Association, Girl Scouts, Boy Scouts, Camp Fire Girls, and voluntary youth service organizations which are so exempt, the membership of which has traditionally been limited to persons of one sex and principally to persons of less than nineteen years of age;

- (7) Boy or Girl conferences

this section shall not apply to

- (A) any program or activity of the American Legion undertaken in connection with the organization or operation of any Boys State conference, Boys Nation conference, Girls State conference, or Girls Nation conference; or  
 (B) any program or activity of any secondary school or educational institution specifically for  
 (i) the promotion of any Boys State conference, Boys Nation conference, Girls State conference, or Girls Nation conference; or  
 (ii) the selection of students to attend any such conference;

- (8) Father-son or mother-daughter activities at educational institutions

this section shall not preclude father-son or mother-daughter activities at an educational institution, but if such activities are provided for students of one sex, opportunities for reasonably comparable activities shall be provided for students of the other sex; and

- (9) Institution of higher education scholarship awards in "beauty" pageants

this section shall not apply with respect to any scholarship or other financial assistance awarded by an institution of higher education to any individual because such individual has received such award in any pageant in which the attainment of such award is based upon a combination of factors related to the personal appearance, poise, and talent of such individual and in which participation is limited to individuals of one sex only, so long as such pageant is in compliance with other nondiscrimination provisions of Federal law.

**(b) Preferential or disparate treatment because of imbalance in participation or receipt of Federal benefits; statistical evidence of imbalance**

Nothing contained in subsection (a) of this section shall be interpreted to require any educational institution to grant preferential or disparate treatment to the members of one sex on account of an imbalance which may exist with respect to the total number or percentage of persons of that sex participating in or receiving the benefits of any federally supported program or activity, in comparison with the total number or percentage of persons of that sex in any community, State, section, or other area: \*Provided\*, That this subsection shall not be construed to prevent the consideration in any hearing or proceeding under this chapter of statistical evidence tending to show that such an imbalance exists with respect to the participation in, or receipt of the benefits of, any such program or activity by the members of one sex.

**(c)“Educational institution” defined**

For purposes of this chapter an educational institution means any public or private preschool, elementary, or secondary school, or any institution of vocational, professional, or higher education, except that in the case of an educational institution composed of more than one school, college, or department which are administratively separate units, such term means each such school, college, or department.

(*Pub. L. 92-318, title IX, Sec. 901, June 23, 1972, 86 Stat. 373; Pub. L. 93-568, Sec. 3(a), Dec. 31, 1974, 88 Stat. 1862; Pub. L. 94-482, title IV, Sec. 412(a), Oct. 12, 1976, 90 Stat. 2234; Pub. L. 96-88, title III, Sec. 301(a)(1), title V, Sec. 507, Oct. 17, 1979, 93 Stat. 677, 692; Pub. L. 99-514, Sec. 2, Oct. 22, 1986, 100 Stat. 2095.*)

REFERENCES IN TEXT

*This chapter, referred to in subsecs. (b) and (c), was in the original “this title”, meaning title IX of Pub. L. 92-318 which enacted this chapter and amended sections 203 and 213 of Title 29, Labor, and sections 2000c, 2000c-6, 2000c-9, and 2000h-2 of Title 42, The Public Health and Welfare. For complete classification of title IX to the Code, see Tables.*

AMENDMENTS

1986 - Subsec. (a)(6)(A). *Pub. L. 99-514 substituted “Internal Revenue Code of 1986” for “Internal Revenue Code of 1954”, which for purposes of codification was translated as “title 26” thus requiring no change in text.*

1976 - Subsec. (a)(6) to (9). *Pub. L. 94-482 substituted “this” for “This” in par. (6) and added pars. (7) to (9).*

1974 - Subsec. (a)(6). *Pub. L. 93-568 added par. (6).*

EFFECTIVE DATE OF 1976 AMENDMENT

*Section 412(b) of Pub. L. 94-482 provided that: “The amendment made by subsection (a) [amending this section] shall take effect upon the date of enactment of this Act [Oct. 12, 1976].”*

EFFECTIVE DATE OF 1974 AMENDMENT

*Section 3(b) of Pub. L. 93-568 provided that: “The provisions of the amendment made by subsection (a) [amending this section] shall be effective on, and retroactive to, July 1, 1972.”*

SHORT TITLE OF 1988 AMENDMENT

*Pub. L. 100-259, Sec. 1, Mar. 22, 1988, 102 Stat. 28, provided that: “This Act [enacting sections 1687 and 1688 of this title and section 2000d-4a of Title 42, The Public Health and Welfare, amending sections 706 and 794 of Title 29, Labor, and section 6107 of Title 42, and enacting provisions set out as notes under sections 1687 and 1688 of this title] may be cited as the ‘Civil Rights Restoration Act of 1987.’”*

TRANSFER OF FUNCTIONS

*“Secretary” substituted for “Commissioner” in subsec. (a)(2) pursuant to sections 301(a)(1) and 507 of Pub. L. 96-88, which are classified to sections 3441(a)(1) and 3507 of this title and which transferred all functions of Commissioner of Education to the Secretary of Education.*

COORDINATION OF IMPLEMENTATION AND ENFORCEMENT OF PROVISIONS

*For provisions relating to the coordination of implementation and enforcement of the provisions of this chapter by the Attorney General, see section 1-201(b) of Ex. Ord. No. 12250, Nov. 2, 1980, 45 F.R. 72995, set out as a note under section 2000d-1 of Title 42, The Public Health and Welfare. REGULATIONS; NATURE OF PARTICULAR SPORTS: INTERCOLLEGIATE ATHLETIC ACTIVITIES*

*Pub. L. 93-380, title VIII, Sec. 844, Aug. 21, 1974, 88 Stat. 612, provided that the Secretary prepare and publish, not more than 30 days after Aug. 21, 1974, proposed regulations implementing the provisions of this chapter regarding prohibition of sex discrimination in federally assisted programs, including reasonable regulations for intercollegiate athletic activities considering the nature of the particular sports.*

**SECTION REFERRED TO IN OTHER SECTIONS**

*This section is referred to in sections 1682, 1687 of this title.*

## **EDUCATION FOR ALL HANDICAPPED CHILDREN ACT OF 1975**

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### **PUBLIC LAW 94-142**

**SUMMARY AS OF:**

(REVISED AS OF 11/14/75—Conference report filed in Senate, S. Rept. 94-455)

Education for All Handicapped Children Act—Extends the provisions of the Education of the Handicapped Act through fiscal year 1977 and authorizes appropriations for such years.

States the findings of the Congress, including that: (1) the special educational needs of handicapped children are not being fully met; (2) one million of the handicapped children in the United States are excluded entirely from the public school system and will not go through the educational process with their peers; and (3) it is in the national interest that the Federal Government assist State and local efforts to provide programs to meet the educational needs of handicapped children in order to assure equal protection of the laws.

Describes the purposes of this Act, including to insure that all handicapped children have available to them special education and related services designed to meet their unique needs. Defines the terms used in this Act.

States that the maximum amount of the grant to which a State is entitled under such Act shall equal the number of handicapped children aged three to twenty-one, who are receiving special education in such State, multiplied by a percentage of the average per pupil expenditure in public elementary and secondary schools in the United States. Increases such percentage from 5 to 40 percent by 1982.

Requires States to distribute portions of such grants to local education agencies and intermediate educational units, to spend for administration, and to match Federal grants for specified expenditures for support services and direct services.

Sets forth provisions relating to extension of grants to Territories and to Indian children.

Sets forth requirements for eligibility including the following which a State must demonstrate to the Commissioner: (1) the State has in effect a policy that assures all handicapped children the right to a free appropriate public education; and (2) the State has developed a plan which requires it to assure that a free appropriate public education will be available for all handicapped children between the ages of three and eighteen within the State not later than September 1, 1978, and for all handicapped children between the ages of three and twenty-four within the State not later than September 1, 1980; and (3) each local educational agency in the State will maintain records of the individualized education program for each handicapped child and such program shall be established, reviewed, and revised.

Requires applications for assistance under this Act to: (1) set forth a description of programs and procedures for the development and implementation of a comprehensive system of personnel development which shall include the in-service training of general and special educational instructional and support personnel; (2) set forth policies and procedures to assure that to the extent consistent with the number and location of handicapped children in the State who are enrolled in private elementary and secondary schools, provision is made for the participation of such children in the program assisted or carried out under this part by providing for such children special education and related services; (3) provide satisfaction assurance that Federal funds made available will not be commingled with State funds, and will be so used as to supplement and increase the level of State and local funds expended for the education of handicapped children and not to supplant such State and local funds; and (4) provide that the State has an advisory panel, appointed by the Governor or any other official authorized under State law to make such appointments, composed of individuals involved in or concerned with the education of handicapped children, including handicapped individuals, teachers, parents or guardians of handicapped children, State and local education officials, and administrators of programs for handicapped children.

States that a local educational agency or an intermediate educational unit which desires to receive payments under this Act shall submit an application to the appropriate State educational agency, and such application shall: (1) provide satisfactory assurance that payments under this part will be used for excess costs directly attributable to programs which provide that all children residing within the jurisdiction of the local educational agency or the intermediate educational unit who are handicapped, regardless of the severity of their handicap, and are in need of special education and related services will be identified, located, and evaluated; and (2) provide assurances that the local educational agency or intermediate educational unit will establish, or revise, whichever is appropriate, an individualized education program of each handicapped child at the beginning of each school year and will then review and, if appropriate revise, its provisions periodically, but not less than annually.

Provides that whenever a State educational agency finds that a local educational agency or an intermediate educational unit, in the administration of an application approved by the State educational agency, has failed to comply with any requirement set forth in such application, the State educational agency, after giving appropriate notice to the local educational agency or the intermediate educational unit, shall make no further payments to such local educational agency or such intermediate educational unit until the State educational agency is satisfied that there is no longer any failure to comply with the requirement involved.

States that whenever a State educational agency determines that a local educational agency is unable or unwilling to establish and maintain programs of free appropriate public education; is unable or unwilling to be consolidated with other local educational agencies in order to establish and maintain such programs; or has one or more handicapped children who can best be served by a regional or State center designed to meet the needs of such children; the State educational agency shall use the payments which would have been available to such local educational agency to provide special education and related services directly to handicapped children residing in the area by such local educational agency.

Requires any State educational agency, any local educational agency, and any intermediate educational unit which receives assistance under this part to establish and maintain procedures to assure that handicapped children and their parents or guardians are guaranteed procedural safeguards with respect to the provision of free appropriate public education by such agencies and units, which procedures shall include, but shall not be limited to, an opportunity for the parents or guardian of a handicapped child to examine all relevant records with respect to the identification, evaluation, and educational placement of the child.

Provides that whenever a complaint has been received under this Act the parents or guardian shall have an opportunity for an impartial due process hearing, and a right of appeal therefrom to State or Federal court.

Provides that whenever the Commissioner, after reasonable notice and opportunity for hearing to the State educational agency involved, finds that there has been a failure to comply substantially with specified provisions of this Act, or that in the administration of the State plan there is a failure to comply or with any requirements set forth in the application of a local educational agency or intermediate educational unit the Commissioner of Education shall, after notifying the State educational agency, withhold any further payments to the State under this Act.

Permits an appeal to United States circuit court of appeals from any such action by the Commissioner.

Directs the Commissioner to conduct, directly or by grant or contract, such studies, investigations, and evaluations as are necessary to assure effective implementation of this Act, and through the National Center for Education Statistics, to provide to the appropriate committees of each House of the Congress and to the general public at least annually, programmatic information concerning programs and projects assisted under this Act and other Federal programs supporting the education of handicapped children.

Requires that, not later than 120 days after the close of each fiscal year, the Commissioner shall transmit to the appropriate committees of each House of the Congress a report on the progress being made toward the provisions of free appropriate public education to all handicapped children, including a detailed description of all evaluation activities conducted.

Authorizes grants to States which have met the eligibility requirements of this Act and have an approved State plan, to be used for the provision of special education and related services to the handicapped aged three to five. Sets a maximum for such grants of \$300 per child.

Sets forth provisions relating to the procedures of payments under this Act to State education agencies, and to local and intermediate educational agencies.

Requires any proposed changes in the definition of "children with specific learning disabilities" to be submitted to the Congress. Defines such term presently to mean those children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

Directs the Secretary of Health, Education, and Welfare to assure that each recipient of assistance under this Act shall make positive efforts to employ and advance in employment qualified handicapped individuals in programs assisted under this Act.

Authorizes, upon application by any State or local educational agency or intermediate educational unit, the Commissioner to make grants to pay part or all of the cost of altering existing buildings and equipment to remove architectural barriers.

Authorizes the Secretary to enter into agreements with institutions of higher education, State and local educational agencies, or other appropriate nonprofit agencies, for the establishment and operation of centers on educational media and materials for the handicapped.

## **EDUCATION OF THE HANDICAPPED ACT AMENDMENTS OF 1990**

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**PUBLIC LAW 101-476  
OCTOBER 30, 1990**

An Act

To amend the Education of the Handicaps Act to revise and extend the programs established in parts C through G of such Act, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; REFERENCE.

(a) Short Title. — This Act may be cited as the “Education of the Handicapped Act Amendments of 1990”.

(b) REFERENCE. — Except as otherwise provided in section 901, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision, the reference shall be considered to be made to a section or other provision of the Education of the Handicapped Act.

**TITLE I—GENERAL PROVISIONS**

SEC. 101. DEFINITIONS.

(a) HANDICAPPED CHILDREN. — Section 602(a)(1) (20 U.S.C. 1401(a)(1)) is amended to read as follows:

“(1) The term ‘children with disabilities’ means children —

“(A) with mental retardation, hearing impairments including deafness, speech or language impairments, visual impairments including blindness, serious emotional disturbance, orthopedic impairments, autism, traumatic brain injury, other health impairments, or specific learning disabilities; and

“(B) who, by reason thereof need special education and related services.”.

(b) SPECIAL EDUCATION. — Section 602(a)(16) (20 U.S.C. 1401(a)(16)) is amended by striking “including classroom instruction” and all that follows and inserting the following: “including —

“(A) instruction conducted in the classroom, in the home, in hospitals and institutions, and in other settings; and

“(B) instruction in physical education.”.

(c) RELATED SERVICES. — Section 602(a)(17) (20 U.S.C. 1401(a)(17)) is amended —

(1) by striking “recreation,” and inserting “recreation, including therapeutic recreation and social work services,”; and

(2) by inserting “, including rehabilitation counseling,” after counseling services.”.

(d) TRANSITION SERVICES. — Section 602(a) (20 U.S.C. 1401(a)) is amended by redesignating paragraphs (19) through (23) as paragraphs (20) through (24), respectively, and by inserting after paragraph (18) the following new paragraph:

“(19) The term ‘transition services’ means a coordinated set of activities for a student, designed within an outcome-oriented process, which promotes movement from school to post-school activities; including post-secondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. The coordinated set of activities shall be based upon the individual student’s needs, taking into account the student’s preferences and interests, and shall include instruction, community experiences, the development of employment and other post-school adult living objectives, and, when appropriate, acquisition of daily living skills and functional vocational evaluation.”.

(e) INDIVIDUALIZED EDUCATION PROGRAM. — Section 602(a)(20), as redesignated by subsection (d) of this section, is amended —

(1) by redesignating subparagraphs (D) and (E) as subparagraphs (E) and (F), respectively, and by inserting after subparagraph (C) the following new subparagraph:

“(D) a statement of the needed transition services for students beginning no later than age 16 and annually thereafter (and, when determined appropriate for the

individual, beginning at age 14 or younger), including, when appropriate, a statement of the interagency responsibilities or linkages (or both) before the student leaves the school setting,” and

(2) by inserting after subparagraph (F) (as so redesignated) the following: “In the case where a participating agency, other than the educational agency, fails to provide agreed upon services, the educational agency shall reconvene the IEP team to identify alternative strategies to meet the transition objectives.”.

(f) PUBLIC OR PRIVATE NONPROFIT AGENCY OR ORGANIZATION. — Section 602(a)(24)(A), as redesignated by subsection (d) of this section, is amended by inserting before the period the following: “and the Bureau of Indian Affairs of the Department of the Interior (when acting on behalf of schools operated by the Bureau for children and students on Indian reservations) and tribally controlled schools funded by the Department of the Interior”.

(g) ASSISTIVE TECHNOLOGY DEVICE. — Section 602(a), as amended by subsection (d) of this section, is amended by adding at the end the following new paragraph:

“(25) The term ‘assistive technology device’ means any item, piece of equipment, or product system, whether acquired commercially off the shelf, modified, or customized, that is used to increase, maintain, or improve functional capabilities of individuals with disabilities.”.

(h) ASSISTIVE TECHNOLOGY SERVICE. — Section 602(a), as amended by subsection (g) of this section, is amended by adding at the end the following new paragraph:

“(26) The term ‘assistive technology service’ means any service that directly assists an individual with a disability in the selection, acquisition, or use of an assistive technology device. Such term includes —

“(A) the evaluation of the needs of an individual with a disability, including a functional evaluation of the individual in the individual’s customary environment;

“(B) purchasing, leasing, or otherwise providing for the acquisition of assistive technology devices by individuals with disabilities;

“(C) selecting, designing, fitting, customizing, adapting, applying, maintaining, repairing, or replacing of assistive technology devices;

“(D) coordinating and using other therapies, interventions, or services with assistive technology devices, such as those associated with existing education and rehabilitation plans and programs;

“(E) training or technical assistance for an individual with disabilities, or, where appropriate, the family of an individual with disabilities; and

“(F) training or technical assistance for professionals (including individuals providing education and rehabilitation services), employers, or other individuals who provide services to, employ, or are otherwise substantially involved in the major life functions of individuals with disabilities.”.

(i) UNDERREPRESENTED. — Section 602(a), as amended by subsection (h) of this section, is amended by adding at the end the following new paragraph:

“(27) The term ‘underrepresented’ means populations such as minorities, the poor, the limited English proficient, and individuals with disabilities.”.

#### SEC. 102. NOTICE OF INQUIRY.

(a) PUBLICATION. — Not later than 30 days after the date of the enactment of the Education of the Handicapped Act Amendments of 1990, the Secretary shall publish a Notice of Inquiry in the Federal Register for the purpose of soliciting public comments regarding the appropriate components of an operational definition under such Act for the term “attention deficit disorder” (hereinafter referred to in this section as the “disorder”) in accordance with subsection (b)(2).

## (b) PUBLIC COMMENT. —

- (1) The Notice of Inquiry published under subsection (a) shall provide for a 120-day period for public comment.
- (2) The Notice of Inquiry shall request comments concerning the following issues:
  - (A) How should the disorder be described operationally for purposes of qualifying a child for special education and related services under part B of the Education of the Handicapped Act.
  - (B) What criteria should be included in the definition to qualify children with the disorder whose disability is comparable in severity to other children with disabilities currently determined to be eligible for special education and related services under part B of the Education of the Handicapped Act.
  - (C) What specific manifestations of the disorder, if any, should be included in the definition.
  - (D) Whether the definition should include references to characteristics or circumstances that produce transient inattentive behaviors that, in and of themselves, would not make a child eligible for special education and related services under the definition of the disorder.
  - (E) Whether the definition should address the concurrence of this disorder with other disabilities such as specific learning disabilities or serious emotional disturbance, and if so addressed, the manner in which such is to be accomplished.
  - (F) Whether guidelines should be provided to State and local educational agencies regarding their obligation to conduct an evaluation of a child suspected of having this disorder, and a description of such guidelines.
  - (G) Who should be authorized to conduct an assessment of a child having or suspected of having the disorder and whether the assessment should be conducted by more than one individual (such as a teacher and a psychologist).
  - (H) What provisions should be included in the definition and what additional steps, if any, not currently required by the regulations implementing part B of the Education of the Handicapped Act, should be included to ensure that racial, ethnic, and linguistic minorities are not misclassified under this definition.

(c) REPORT TO COMMITTEES. — Not later than 30 days after the close of the comment period referred to in subsection (b)(1), the Secretary shall transmit the public comments received in response to the Notice of Inquiry in a usable form, accompanied by a document summarizing such comments, to the Committee on Labor and Human Resources of the Senate and the Committee on Education and Labor of the House of Representatives.

## INDIVIDUALS WITH DISABILITIES EDUCATION ACT AMENDMENTS OF 1997

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### PUBLIC LAW 105-17

*Due to their length, the 1997 amendments to the Individuals with Disabilities Act are not reprinted in this volume. A complete text of the amendments is available from the U.S. Department of Education IDEA website: <[www.ed.gov/offices/OSERS/Policy/IDEA](http://www.ed.gov/offices/OSERS/Policy/IDEA)>.*

## HEAD START REAUTHORIZATION OF 1998: OVERVIEW OF PROGRAMS AND LEGISLATION

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### PUBLIC LAW 105-285

Head Start is a national program which provides comprehensive developmental services for America's low-income, pre-school children ages three to five and social services for their families. Approximately 1,400 community-based non-profit organizations and school systems develop unique and innovative programs to meet specific needs.

Head Start began in 1965 in the Office of Economic Opportunity and is now administered by the Administration for Children and Families. In FY 1999, \$4.66 billion was available for Head Start services.

#### Major Components of Head Start

Head Start provides diverse services to meet the goals of the following four components:

- **Education.** Head Start's educational program is designed to meet the needs of each child, the community served, and its ethnic and cultural characteristics. Every child receives a variety of learning experiences to foster intellectual, social, and emotional growth.
- **Health.** Head Start emphasizes the importance of the early identification of health problems. Every child is involved in a comprehensive health program, which includes immunizations, medical, dental, and mental health, and nutritional services.
- **Parent Involvement.** An essential part of Head Start is the involvement of parents in parent education, program planning, and operating activities. Many parents serve as members of policy councils and committees and have a voice in administrative and managerial decisions. Participation in classes and workshops on child development and staff visits to the home allow parents to learn about the needs of their children and about educational activities that can take place at home.
- **Social Services.** Specific services are geared to each family after its needs are determined. They include: community outreach; referrals; family need assessments; recruitment and enrollment of children; and emergency assistance and/or crisis intervention.

Grants are awarded to local public or private non-profit agencies. Twenty percent of the total cost of a Head Start program must be contributed by the community. Head Start programs operate in all 50 states, the District of Columbia, Puerto Rico, and the U.S. territories.

Most of the Head Start program's appropriation funds local Head Start projects. The remainder is used for: training and technical assistance to assist local projects in meeting the Head Start Program Performance Standards and in maintaining and improving the quality of local programs; research, demonstration, and evaluation activities to test innovative program models and to assess program effectiveness; and required monitoring activities. Head Start provides training to staff at all levels and in all program areas. The Child Development Associate (CDA) program gives professional and non-professional employees the opportunity to pursue academic degrees or certification in early childhood education.

Volunteers are an important part of all Head Start programs. High school and college students, homemakers, parents of Head Start children, retired senior citizens—all kinds of people—have offered critical help to local Head Start programs. Volunteers assist with: indoor creative play; transportation; parent education; renovation of centers; and recruiting and instructing other volunteers. Approximately 1,315,000 individuals volunteer, and community organizations provide a wide array of services to Head Start, including the donation of classroom space, educational materials, and equipment for children with disabilities.

Since 1965, Head Start has served over 15.3 million children and their families. Head Start plays a major role in focusing attention on the importance of early childhood development.

The program also has an impact on: child development and day care services; the expansion of state and local activities for children; the range and quality of services offered to young children and their families; and the design of training programs for those who staff such programs. Outreach and training activities also assist parents in increasing their parenting skills and knowledge of child development.

### **American Indian Head Start Program**

American Indian Head Start supports a rich, diverse and unique Indian language, heritage and legacy. Programs are encouraged to integrate language and culture into their curriculum and program goals. There are more than 84 different Indian languages spoken in Head Start.

As of May 1997, the American Indian Head Start Programs network has 131 funded grantees. These grantees are located in 25 states and represent the following tribes, villages and towns:

- 112 federally recognized Tribes who directly operate programs;
- 3 Inter-Tribal consortia representing 26 reservations, 12 colonies and 14 rancherias;
- 8 Native Alaskan Regional Corporations serving 35 villages and cities.

In FY 1997, 18,550 children are enrolled in American Indian Head Start programs and 320 children are enrolled in Parent Child Centers. The Head Start Bureau provides resources to 4 Tribal Governments to operate Parent Child Centers and to 7 Tribal Governments to operate Early Childhood Centers that serve pregnant women, infants, and toddlers (ages birth to three years). These programs offer a wide range of services to families living on the reservations.

Some 83 percent of Indian Head Start programs are center-based services, and 17 percent feature both center-based and home-based options. The Indian network has 487 centers and 919 classrooms. American Indian and Native Alaskan Head Start programs are typically located in remote areas and are usually small.

The Navajo Nation holds a major grant from the Head Start Bureau to facilitate the transition of Head Start children to the Bureau of Indian Affairs and public schools. Other transition activities are funded with the Crow Tribe, Turtle Mountain Band of Chippewa Indians and the Seminole Tribe of Oklahoma.

### **Migrant Head Start Program**

Services provided by the Migrant Head Start program are identical to those of regular Head Start, but Migrant grantees modify delivery to meet the specific needs of migrant farmworker families. However, the Migrant Head Start program has a unique emphasis on serving infants and toddlers as well as pre-school age children, so that they will not have to be cared for in the fields or left in the care of very young siblings while parents are working. Infants as young as 6 weeks of age are served in Migrant centers.

Making service available to all pre-schoolers (including infants and toddlers) means that both parents can work to maximize the meager earnings from farmwork. Migrant Head Start families earn more than half their annual income from agricultural work and move at least once within each 2-year period in search of farm work. Preference is given to those who must move more often. Families must also meet the annual Head Start poverty income guidelines.

There are two types of Migrant Head Start grantees: Home-Based Grantees are located in the southern part of the United States (generally in California, Arizona, New Mexico, Texas, and Florida), and provide services to mobile migrant farmworker families from October through May. Upstream Grantees (generally in Washington, Idaho, Michigan, Illinois, Maine, Indiana, Wisconsin, Nebraska, and Minnesota) provide services to families as they move northward in search of agricultural work during the spring, summer and fall months.

Families who are in an upstream location working crops rarely have family members who can provide child care outside traditional center hours. Therefore, Migrant centers provide

extended day services, usually up to 12 hours a day and up to 7 days a week during the height of the harvest season. Some grantees open and operate centers for as little as six weeks.

Migrant Head Start parents serve on Policy Councils and share decisionmaking with grantees. They volunteer to work at the centers and they attend literacy, ESL, GED, parenting, and safety and health classes.

A total of 25 grantees and 41 delegate agencies provide services in 33 States and serve over 30,000 migrant children.

### **Improving Head Start**

Funding for Head Start has increased by 68 percent, increasing from \$2.2 billion in 1992 to \$4.66 billion in FY 1999. These additional funds have enabled Head Start to increase enrollment by over 200,000 children, enhance the quality of Head Start services, launch a new initiative to serve infants and toddlers, and improve program research. In FY 1998, Head Start served an estimated 830,000 children and their families.

On January 12, 1994, the Advisory Committee on Head Start Quality and Expansion, appointed by HHS Secretary Donna E. Shalala, presented recommendations that called for improved staff training and career development, including better salaries for Head Start workers, improving management of local Head Start centers, reengineering federal oversight, and providing for better facilities. Bipartisan legislation was soon introduced to reauthorize and strengthen the Head Start program. The reauthorization bill, which reflected the Administration's commitment to strengthening the quality of all Head Start programs, was signed on May 18, 1994. It included tough new provisions to ensure that no Head Start grantee will be funded if it falls below a minimum quality level and fails to correct deficiencies promptly.

Acting on the committee's recommendation, HHS offered technical assistance, partnership and support to Head Start programs that are ready to pursue excellence—and terminated the grants of those programs that were not delivering quality services. HHS has helped turn around approximately 120 grantees identified as deficient. Since October 1993, approximately 100 grantees have been terminated or have relinquished their Head Start grants.

### **New Performance Standards**

A cornerstone of the bipartisan 1994 legislation was the requirement to develop a major revision of the Head Start Program Performance Standards—key regulations that set the guidelines and standards for quality in Head Start programs nationwide.

In the spirit of the Administration's reinvention goals, the revised Head Start Program Performance Standards were developed based on communication with Head Start and early childhood program practitioners. This new version focuses on quality services for children, including infants and toddlers, and their families. It was published as a final rule in the Federal Register on November 5, 1996.

The new guidelines integrate new standards for infants and toddlers, reform the structure of the earlier standards for increased ease of use, incorporate emerging research knowledge and expertise of health professionals, and highlight the importance of collaboration between Head Start programs and the broader community.

### **Early Head Start**

The Head Start Act Amendments of 1994 also established the Early Head Start program, which expands the benefits of early childhood development to low income families with children under three and to pregnant women.

The purpose of this program is to:

- enhance children's physical, social, emotional and cognitive development;
- enable parents to be better caregivers of and teachers to their children; and

- help parents meet their own goals, including that of economic independence.

The services provided by Early Head Start programs are designed to reinforce and respond to the unique strengths and needs of each child and family. Services include quality early education in and out of the home; home visits; parent education, including parent-child activities; comprehensive health services, including services to women before, during and after pregnancy; nutrition; and case management and peer support groups for parents.

Early Head Start focuses on four cornerstones essential to quality programs: child development, family development, community building and staff development. Projects must coordinate with local Head Start programs to ensure continuity of services for children and families.

In FY 1998, funding for Early Head Start totaled \$279 million, or more than 5 percent of the total Head Start budget, which served approximately 39,000 children and their families. In FY 1999, funding for Early Head Start totalled nearly \$340 million. Head Start proposes to more than double the number of children in Early Head Start over 5 years.

### **New Investments**

From 1992 through 1998, HHS will have invested more than \$600 million in quality improvements to ensure that every Head Start program works. Head Start programs across the country have used these quality resources to fix leaky roofs, make sure facilities are healthy and safe for children, and hire more teachers to reduce class size and eliminate double-session classes.

Head Start plays an important role as a national laboratory for early childhood development programs. Head Start is now taking up the challenge to focus on measurable results for social competence and school-readiness in young children. To initiate this effort, four major academic institutions and Head Start grantees around the country have formed Head Start Quality Research Centers which are piloting new approaches to measuring and collecting data.

Head Start is also increasing investment in research that follows children and families over time and is collaborating with the National Academy of Sciences and the National Institutes of Health to develop strong scientific research on young children.

**January 1999**

**U.S. Department of Health and Human Services**

**Administration for Children and Families**

**Phone: 202-401-9215**

**Website: <[www.acf.dhhs.gov](http://www.acf.dhhs.gov)>**

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## **NATIONAL EDUCATION GOALS PANEL: GOALS 2000**

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In September 1989, President Bush and 50 Governors convened a historic Education Summit at Charlottesville, Virginia, and agree to set education goals for the nation.

The National Education Goals Panel was thus established as an independent executive branch agency of the federal government charged with monitoring national and state progress toward the National Education Goals. Under the legislation, the Panel was charged with a variety of responsibilities to support systemwide reform, including:

- Reporting on national and state progress toward the Goals over a 10-year period;
- Working to establish a system of high academic standards and assessments;
- Identifying actions for federal, state, and local governments to take; and
- Building a nationwide, bipartisan consensus to achieve the Goals.

**Goal 1: Ready to Learn**

*By the year 2000, all children will start school ready to learn.*

Objectives:

- Children will receive the nutrition, physical activity experiences, and health care needed to arrive at school with healthy minds and bodies, and to maintain the mental alertness necessary to be prepared to learn, and the number of low-birthweight babies will be significantly reduced through enhanced prenatal health systems.
- Every parent in the United States will be a child's first teacher and devote time each day to helping such parent's preschool child learn, and parents will have access to the training and support parents need.
- All children will have access to high-quality and developmentally appropriate preschool programs that help prepare children for school.

**Goal 2: School Completion**

*By the year 2000, the high school graduation rate will increase to at least 90 percent.*

Objectives:

- The Nation must dramatically reduce its school dropout rate, and 75 percent of the students who do drop out will successfully complete a high school degree or its equivalent.
- The gap in high school graduation rates between American students from minority backgrounds and their non-minority counterparts will be eliminated.

**Goal 3: Student Achievement and Citizenship**

*By the year 2000, all students will leave grades 4, 8, and 12 having demonstrated competency over challenging subject matter including English, mathematics, science, foreign languages, civics and government, economics, arts, history, and geography, and every school in America will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our Nation's modern economy.*

Objectives:

- The academic performance of all students at the elementary and secondary level will increase significantly in every quartile, and the distribution of minority students in each quartile will more closely reflect the student population as a whole.
- The percentage of all students who demonstrate the ability to reason, solve problems, apply knowledge, and write and communicate effectively will increase substantially.
- All students will be involved in activities that promote and demonstrate good citizenship, good health, community service, and personal responsibility.
- All students will have access to physical education and health education to ensure they are healthy and fit.
- The percentage of all students who are competent in more than one language will substantially increase.
- All students will be knowledgeable about the diverse cultural heritage of this Nation and about the world community.

**Goal 4: Teacher Education and Professional Development**

*By the year 2000, the Nation's teaching force will have access to programs for the continued improvement of their professional skills and the opportunity to acquire the knowledge and skills needed to instruct and prepare all American students for the next century.*

Objectives:

- All teachers will have access to preservice teacher education and continuing professional development activities that will provide such teachers with the knowledge and skills needed to teach to an increasingly diverse student population with a variety of educational, social, and health needs.
- All teachers will have continuing opportunities to acquire additional knowledge and skills needed to teach challenging subject matter and to use emerging new methods, forms of assessment, and technologies.
- States and school districts will create integrated strategies to attract, recruit, prepare, re-train, and support the continued professional development of teachers, administrators, and other educators, so that there is a highly talented work force of professional educators to teach challenging subject matter.
- Partnerships will be established, whenever possible, among local educational agencies, institutions of higher education, parents, and local labor, business, and professional associations to provide and support programs for the professional development of educators.

### **Goal 5: Mathematics and Science**

*By the year 2000, United States students will be the first in the world in mathematics and science achievement.*

Objectives:

- Mathematics and science education, including the metric system of measurement, will be strengthened throughout the system, especially in the early grades.
- The number of teachers with a substantive background in mathematics and science, including the metric system of measurement, will increase by 50 percent.
- The number of United States undergraduate and graduate students, especially women and minorities, who complete degrees in mathematics, science, and engineering will increase significantly.

### **Goal 6: Adult Literacy and Lifelong Learning**

*By the year 2000, every adult American will be literate and will possess the knowledge and skills necessary to compete in a global economy and exercise the rights and responsibilities of citizenship.*

Objectives:

- Every major American business will be involved in strengthening the connection between education and work.
- All workers will have the opportunity to acquire the knowledge and skills, from basic to highly technical, needed to adapt to emerging new technologies, work methods, and markets through public and private educational, vocational, technical, workplace, or other programs.
- Schools, in implementing comprehensive parent involvement programs, will offer more adult literacy, parent training and lifelong learning opportunities to improve the ties between home and school, and enhance parents' work and home lives.
- The number of quality programs, including those at libraries, that are designed to serve more effectively the needs of the growing number of part-time and midcareer students will increase substantially.
- The proportion of qualified students, especially minorities, who enter college, who complete at least two years, and who complete their degree programs will increase substantially.
- The proportion of college graduates who demonstrate an advanced ability to think critically, communicate effectively, and solve problems will increase substantially.

**Goal 7: Safe, Disciplined, and Alcohol- and Drug-Free Schools**

*By the year 2000, every school in the United States will be free of drugs, violence and the unauthorized presence of firearms and alcohol and will offer a disciplined environment conducive to learning.*

Objectives:

- Every school will implement a firm and fair policy on use, possession, and distribution of drugs and alcohol.
- Parents, businesses, governmental and community organizations will work together to ensure the rights of students to study in a safe and secure environment that is free of drugs and crime, and that schools provide a healthy environment and are a safe haven for all children.
- Every local educational agency will develop and implement a policy to ensure that all schools are free of violence and the unauthorized presence of weapons.
- Every local educational agency will develop a sequential, comprehensive kindergarten through twelfth grade drug and alcohol prevention education program. Drug and alcohol curriculum should be taught as an integral part of sequential, comprehensive health education.
- Community-based teams should be organized to provide students and teachers with needed support.
- Every school should work to eliminate sexual harassment.

**Goal 8: Parental Participation**

*By the year 2000, every school will promote partnerships that will increase parental involvement and participation in promoting the social, emotional, and academic growth of children.*

Objectives:

- Every State will develop policies to assist local schools and local educational agencies to establish programs for increasing partnerships that respond to the varying needs of parents and the home, including parents of children who are disadvantaged or bilingual, or parents of children with disabilities.
- Every school will actively engage parents and families in a partnership which supports the academic work of children at home and shared educational decision making at school.
- Parents and families will help to ensure that schools are adequately supported and will hold schools and teachers to high standards of accountability.

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## NO CHILD LEFT BEHIND ACT OF 2001

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### PUBLIC LAW 107-110

**Executive Summary**

Three days after taking office in January 2001 as the 43rd President of the United States, George W. Bush announced *No Child Left Behind*, his framework for bipartisan education reform that he described as “the cornerstone of my Administration.” President Bush emphasized his deep belief in our public schools, but an even greater concern that “too many of our neediest children are being left behind,” despite the nearly \$200 billion in Federal spending since the passage of the Elementary and Secondary Education Act of 1965 (ESEA). The President called for bipartisan solutions based on accountability, choice, and flexibility in Federal education programs.

Less than a year later, despite the unprecedented challenges of engineering an economic recovery while leading the Nation in the war on terrorism following the events of September 11, President Bush secured passage of the landmark *No Child Left Behind Act* of 2001 (NCLB Act). The new law reflects a remarkable consensus—first articulated in the President’s *No Child Left Behind* framework—on how to improve the performance of America’s elementary and secondary schools while at the same time ensuring that no child is trapped in a failing school.

The NCLB Act, which reauthorizes the ESEA, incorporates the principles and strategies proposed by President Bush. These include increased accountability for States, school districts, and schools; greater choice for parents and students, particularly those attending low-performing schools; more flexibility for States and local educational agencies (LEAs) in the use of Federal education dollars; and a stronger emphasis on reading, especially for our youngest children.

### **Increased Accountability**

The NCLB Act will strengthen Title I accountability by requiring States to implement statewide accountability systems covering all public schools and students. These systems must be based on challenging State standards in reading and mathematics, annual testing for all students in grades 3–8, and annual statewide progress objectives ensuring that all groups of students reach proficiency within 12 years. Assessment results and State progress objectives must be broken out by poverty, race, ethnicity, disability, and limited English proficiency to ensure that no group is left behind. School districts and schools that fail to make adequate yearly progress (AYP) toward statewide proficiency goals will, over time, be subject to improvement, corrective action, and restructuring measures aimed at getting them back on course to meet State standards. Schools that meet or exceed AYP objectives or close achievement gaps will be eligible for State Academic Achievement Awards.

### **More Choices for Parents and Students**

The NCLB Act significantly increases the choices available to the parents of students attending Title I schools that fail to meet State standards, including immediate relief—beginning with the 2002–03 school year—for students in schools that were previously identified for improvement or corrective action under the 1994 ESEA reauthorization.

LEAs must give students attending schools identified for improvement, corrective action, or restructuring the opportunity to attend a better public school, which may include a public charter school, within the school district. The district must provide transportation to the new school, and must use at least 5 percent of its Title I funds for this purpose, if needed.

For students attending persistently failing schools (those that have failed to meet State standards for at least 3 of the 4 preceding years), LEAs must permit low-income students to use Title I funds to obtain supplemental educational services from the public- or private-sector provider selected by the students and their parents. Providers must meet State standards and offer services tailored to help participating students meet challenging State academic standards.

To help ensure that LEAs offer meaningful choices, the new law requires school districts to spend up to 20 percent of their Title I allocations to provide school choice and supplemental educational services to eligible students.

In addition to helping ensure that no child loses the opportunity for a quality education because he or she is trapped in a failing school, the choice and supplemental service requirements provide a substantial incentive for low-performing schools to improve. Schools that want to avoid losing students—along with the portion of their annual budgets typically associated with those students—will have to improve or, if they fail to make AYP for 5 years, run the risk of reconstitution under a restructuring plan.

### **Greater Flexibility for States, School Districts, and Schools**

One important goal of *No Child Left Behind* was to breathe new life into the “flexibility for accountability” bargain with States first struck by President George H.W. Bush during his historic 1989 education summit with the Nation’s Governors at Charlottesville, Virginia. Prior flexibility efforts have focused on the waiver of program requirements; the NCLB Act moves beyond this limited approach to give States and school districts unprecedented flexibility in the use of Federal education funds in exchange for strong accountability for results.

New flexibility provisions in the NCLB Act include authority for States and LEAs to transfer up to 50 percent of the funding they receive under 4 major State grant programs to any one of the programs, or to Title I. The covered programs include Teacher Quality State Grants, Educational Technology, Innovative Programs, and Safe and Drug-Free Schools.

The new law also includes a competitive State Flexibility Demonstration Program that permits up to 7 States to consolidate the State share of nearly all Federal State grant programs—including Title I, Part A Grants to Local Educational Agencies—while providing additional flexibility in their use of Title V Innovation funds. Participating States must enter into 5-year performance agreements with the Secretary covering the use of the consolidated funds, which may be used for any educational purpose authorized under the ESEA. As part of their plans, States also must enter into up to 10 local performance agreements with LEAs, which will enjoy the same level of flexibility granted under the separate Local Flexibility Demonstration Program.

The new competitive Local Flexibility Demonstration Program would allow up to 80 LEAs, in addition to the 70 LEAs under the State Flexibility Demonstration Program, to consolidate funds received under Teacher Quality State Grants, Educational Technology State Grants, Innovative Programs, and Safe and Drug-Free Schools programs. Participating LEAs would enter into performance agreements with the Secretary of Education, and would be able to use the consolidated funds for any ESEA-authorized purpose.

### **Putting Reading First**

*No Child Left Behind* stated President Bush’s unequivocal commitment to ensuring that every child can read by the end of third grade. To accomplish this goal, the new Reading First initiative would significantly increase the Federal investment in scientifically based reading instruction programs in the early grades. One major benefit of this approach would be reduced identification of children for special education services due to a lack of appropriate reading instruction in their early years.

The NCLB Act fully implements the President’s Reading First initiative. The new Reading First State Grant program will make 6-year grants to States, which will make competitive subgrants to local communities. Local recipients will administer screening and diagnostic assessments to determine which students in grades K–3 are at risk of reading failure, and provide professional development for K–3 teachers in the essential components of reading instruction.

The new Early Reading First program will make competitive 6-year awards to LEAs to support early language, literacy, and pre-reading development of preschool-age children, particularly those from low-income families. Recipients will use instructional strategies and professional development drawn from scientifically based reading research to help young children to attain the fundamental knowledge and skills they will need for optimal reading development in kindergarten and beyond.

### **Other Major Program Changes**

The *No Child Left Behind* Act of 2001 also put the principles of accountability, choice, and flexibility to work in its reauthorization of other major ESEA programs. For example, the new

law combines the Eisenhower Professional Development and Class Size Reduction programs into a new Improving Teacher Quality State Grants program that focuses on using practices grounded in scientifically based research to prepare, train, and recruit high-quality teachers. The new program gives States and LEAs flexibility to select the strategies that best meet their particular needs for improved teaching that will help them raise student achievement in the core academic subjects. In return for this flexibility, LEAs are required to demonstrate annual progress in ensuring that all teachers teaching in core academic subjects within the State are highly qualified.

The NCLB Act also simplified Federal support for English language instruction by combining categorical bilingual and immigrant education grants that benefited a small percentage of limited English proficient students in relatively few schools into a State formula program. The new formula program will facilitate the comprehensive planning by States and school districts needed to ensure implementation of programs that benefit all limited English proficient students by helping them learn English and meet the same high academic standards as other students.

Other changes will support State and local efforts to keep our schools safe and drug-free, while at the same time ensuring that students—particularly those who have been victims of violent crimes on school grounds—are not trapped in persistently dangerous schools. As proposed in No Child Left Behind, States must allow students who attend a persistently dangerous school, or who are victims of violent crime at school, to transfer to a safe school. States also must report school safety statistics to the public on a school-by-school basis, and LEAs must use Federal Safe and Drug-Free Schools and Communities funding to implement drug and violence prevention programs of demonstrated effectiveness.

**Internet Resource:** <[www.nochildleftbehind.gov](http://www.nochildleftbehind.gov)>

## INTERNATIONAL AGREEMENTS, CHARTERS, AND DECLARATIONS

### CHARTER OF THE UNITED NATIONS, ARTICLE 1: JUNE 26, 1945

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In its charter, which was adopted on June 25, 1945, the United Nations recognized the necessity of the preservation of human rights, and made states legally responsible for the promotion of those rights in order to ensure worldwide peace.

#### **Preamble**

WE THE PEOPLES OF THE UNITED NATIONS DETERMINED to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind, and to reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small, and to establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and to promote social progress and better standards of life in larger freedom,

AND FOR THESE ENDS to practice tolerance and live together in peace with one another as good neighbors, and to unite our strength to maintain international peace and security, and to ensure by the acceptance of principles and the institution of methods, that armed force shall not be used, save in the common interest, and to employ international machinery for the promotion of the economic and social advancement of all peoples,

HAVE RESOLVED TO COMBINE OUR EFFORTS TO ACCOMPLISH THESE AIMS  
Accordingly, our respective Governments, through representatives assembled in the city of San

Francisco, who have exhibited their full powers found to be in good and due form, have agreed to the present Charter of the United Nations and do hereby establish an international organization to be known as the United Nations.

## CHAPTER I: PURPOSES AND PRINCIPLES

### Article 1

#### The Purposes of the United Nations are:

1. To maintain international peace and security, and to that end: to take effective collective measures for the prevention and removal of threats to the peace, and for the suppression of acts of aggression or other breaches of the peace, and to bring about by peaceful means, and in conformity with the principles of justice and international law, adjustment or settlement of international disputes or situations which might lead to a breach of the peace;
2. To develop friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples, and to take other appropriate measures to strengthen universal peace;
3. To achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion; and
4. To be a center for harmonizing the actions of nations in the attainment of these common ends.

## CONSTITUTION OF THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

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*Adopted in London on 16 November 1945 and amended by the General Conference at its second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth, twelfth, fifteenth, seventeenth, nineteenth, twentieth, twenty-first, twenty-fourth, and twenty-fifth sessions.*

The Governments of the States Parties to this Constitution on behalf of their peoples declare:

That since wars begin in the minds of men, it is in the minds of men that the defenses of peace must be constructed;

That ignorance of each other's ways and lives has been a common cause, throughout the history of mankind, of that suspicion and mistrust between the peoples of the world through which their differences have all too often broken into war;

That the great and terrible war which has now ended was a war made possible by the denial of the democratic principles of the dignity, equality and mutual respect of men, and by the propagation, in their place, through ignorance and prejudice, of the doctrine of the inequality of men and races;

That the wide diffusion of culture, and the education of humanity for justice and liberty and peace are indispensable to the dignity of man and constitute a sacred duty which all the nations must fulfil in a spirit of mutual assistance and concern;

That a peace based exclusively upon the political and economic arrangements of governments would not be a peace which could secure the unanimous, lasting and sincere support of the peoples of the world, and that the peace must therefore be founded, if it is not to fail, upon the intellectual and moral solidarity of mankind.

For these reasons, the States Parties to this Constitution, believing in full and equal opportunities for education for all, in the unrestricted pursuit of objective truth, and in the free ex-

change of ideas and knowledge, are agreed and determined to develop and to increase the means of communication between their peoples and to employ these means for the purposes of mutual understanding and a truer and more perfect knowledge of each other's lives;

In consequence whereof they do hereby create the United Nations Educational, Scientific and Cultural Organization for the purpose of advancing, through the educational and scientific and cultural relations of the peoples of the world, the objectives of international peace and of the common welfare of mankind for which the United Nations Organization was established and which its Charter proclaims.

## ARTICLE I

### Purposes and Functions

1. The purpose of the Organization is to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations.
2. To realize this purpose the Organization will:
  - a. Collaborate in the work of advancing the mutual knowledge and understanding of peoples, through all means of mass communication and to that end recommend such international agreements as may be necessary to promote the free flow of ideas by word and image;
  - b. Give fresh impulse to popular education and to the spread of culture; By collaborating with Members, at their request, in the development of educational activities; By instituting collaboration among the nations to advance the ideal of equality of educational opportunity without regard to race, sex or any distinctions, economic or social; By suggesting educational methods best suited to prepare the children of the world for the responsibilities of freedom;
  - c. Maintain, increase and diffuse knowledge; By assuring the conservation and protection of the world's inheritance of books, works of art and monuments of history and science, and recommending to the nations concerned the necessary international conventions; By encouraging co-operation among the nations in all branches of intellectual activity, including the international exchange of persons active in the fields of education, science and culture and the exchange of publications, objects of artistic and scientific interest and other materials of information; By initiating methods of international co-operation calculated to give the people of all countries access to the printed and published materials produced by any of them.
3. With a view to preserving the independence, integrity and fruitful diversity of the cultures and educational systems of the States members of this Organization, the Organization is prohibited from intervening in matters which are essentially within their domestic jurisdiction.

## ARTICLE II

### Membership

1. Membership of the United Nations Organization shall carry with it the right to membership of the United Nations Educational, Scientific and Cultural Organization.
2. Subject to the conditions of the Agreement between this Organization and the United Nations Organization, approved pursuant to Article X of this Constitution, States not

members of the United Nations Organization may be admitted to membership of the Organization, upon recommendation of the Executive Board, by a two-thirds majority vote of the General Conference.

3. Territories or groups of territories which are not responsible for the conduct of their international relations may be admitted as Associate Members by the General Conference by a two-thirds majority of Members present and voting, upon application made on behalf of such territory or group of territories by the Member or other authority having responsibility for their international relations. The nature and extent of the rights and obligations of Associate Members shall be determined by the General Conference.
4. Members of the Organization which are suspended from the exercise of the rights and privileges of membership of the United Nations Organization shall, upon the request of the latter, be suspended from the rights and privileges of this Organization.
5. Members of the Organization which are expelled from the United Nations Organization shall automatically cease to be members of this Organization.
6. Any Member State or Associate Member of the Organization may withdraw from the Organization by notice addressed to the Director-General. Such notice shall take effect on 31 December of the year following that during which the notice was given. No such withdrawal shall affect the financial obligations owed to the Organization on the date the withdrawal takes effect. Notice of withdrawal by an Associate Member shall be given on its behalf by the Member State or other authority having responsibility for its international relations.

### ARTICLE III

#### Organs

The Organization shall include a General Conference, an Executive Board and a Secretariat.

### ARTICLE IV

#### The General Conference

##### A. Composition

1. The General Conference shall consist of the representatives of the States members of the Organization. The Government of each Member State shall appoint not more than five delegates, who shall be selected after consultation with the National Commission if established, or with educational, scientific and cultural bodies.

##### B. Functions

2. The General Conference shall determine the policies and the main lines of work of the Organization. It shall take decisions on programmes submitted to it by the Executive Board.
3. The General Conference shall, when it deems desirable and in accordance with the regulations to be made by it, summon international conferences of States on education, the sciences and humanities or the dissemination of knowledge; non-governmental conferences on the same subjects may be summoned by the General Conference or by the Executive Board in accordance with such regulations.
4. The General Conference shall, in adopting proposals for submission to the Member States, distinguish between recommendations and international conventions submitted for their approval. In the former case a majority vote shall suffice; in the latter case a two-thirds majority shall be required. Each of the

Member States shall submit recommendations or conventions to its competent authorities within a period of one year from the close of the session of the General Conference at which they were adopted.

5. Subject to the provisions of Article V, paragraph 5(c), the General Conference shall advise the United Nations Organization on the educational, scientific and cultural aspects of matters of concern to the latter; in accordance with the terms and procedure agreed upon between the appropriate authorities of the two Organizations.
6. The General Conference shall receive and consider the reports sent to the Organization by Member States on the action taken upon the recommendations and conventions referred to in paragraph 4 above or, if it so decides, analytical summaries of these reports.
7. The General Conference shall elect the members of the Executive Board and, on the recommendation of the Board, shall appoint the Director-General.

#### C. Voting

8.
  - a. Each Member State shall have one vote in the General Conference. Decisions shall be made by a simple majority except in cases in which a two-thirds majority is required by the provisions of this Constitution, or of the Rules of Procedure of the General Conference. A majority shall be a majority of the Members present and voting.
  - b. A Member State shall have no vote in the General Conference if the total amount of contributions due from it exceeds the total amount of contributions payable by it for the current year and the immediately preceding calendar year.
  - c. The General Conference may nevertheless permit such a Member State to vote, if it is satisfied that failure to pay is due to conditions beyond the control of the Member State.

#### D. Procedure

9.
  - a. The General Conference shall meet in ordinary session every two years. It may meet in extraordinary session if it decides to do so itself or if summoned by the Executive Board, or on the demand of at least one-third of the Member States.
  - b. At each session the location of its next ordinary session shall be designated by the General Conference. The location of an extraordinary session shall be decided by the General Conference if the session is summoned by it, or otherwise by the Executive Board.
10. The General Conference shall adopt its own rules of procedure. It shall at each session elect a President and other officers.
11. The General Conference shall set up special and technical committees and such other subordinate organs as may be necessary for its purposes.
12. The General Conference shall cause arrangements to be made for public access to meetings, subject to such regulations as it shall prescribe.

#### E. Observers

13. The General Conference, on the recommendation of the Executive Board and by a two-thirds majority may, subject to its rules of procedure, invite as observers at specified sessions of the Conference or of its Commissions representatives of international organizations, such as those referred to in Article XI, paragraph 4.

14. When consultative arrangements have been approved by the Executive Board for such international non-governmental or semi-governmental organizations in the manner provided in Article XI, paragraph 4, those organizations shall be invited to send observers to sessions of the General Conference and its Commissions.

## ARTICLE V

### Executive Board

#### A. Composition

1. The Executive Board shall be elected by the General Conference from among the delegates appointed by the Member States and shall consist of fifty-one members each of whom shall represent the Government of the Member State of which he is a national. The President of the General Conference shall sit *ex officio* in an advisory capacity on the Executive Board.
2. In electing the members of the Executive Board the General Conference shall endeavour to include persons competent in the arts, the humanities, the sciences, education and the diffusion of ideas, and qualified by their experience and capacity to fulfil the administrative and executive duties of the Board. It shall also have regard to the diversity of cultures and a balanced geographical distribution. Not more than one national of any Member State shall serve on the Board at any one time, the President of the Conference excepted.
3. Members of the Board shall serve from the close of the session of the General Conference which elected them until the close of the second ordinary session of the General Conference following that election. They shall not be immediately eligible for a second term. The General Conference shall, at each of its ordinary sessions, elect the number of members required to fill vacancies occurring at the end of the session.
4.
  - a. In the event of the death or resignation of a member of the Executive Board, his replacement for the remainder of his term shall be appointed by the Executive Board on the nomination of the Government of the Member State the former member of the Board represented.
  - b. The Government making the nomination and the Executive Board shall have regard to the factors set forth in paragraph 2 of this Article.
  - c. When exceptional circumstances arise, which, in the considered opinion of the represented State, make it indispensable for its representative to be replaced, even if he does not tender his resignation, measures shall be taken in accordance with the provisions of sub-paragraph (a) above.
  - d. In the event of the withdrawal from the Organization of a Member State a national of which is a member of the Executive Board, that member's term of office shall be terminated on the date the withdrawal becomes effective.

#### B. Functions

5.
  - a. The Executive Board shall prepare the agenda for the General Conference. It shall examine the programme of work for the Organization and corresponding budget estimates submitted to it by the Director-General in accordance with paragraph 3 of Article VI and shall submit them with such recommendations as it considers desirable to the General Conference.
  - b. The Executive Board, acting under the authority of the General Conference, shall be responsible for the execution of the programme adopted by the

Conference. In accordance with the decisions of the General Conference and having regard to circumstances arising between two ordinary sessions, the Executive Board shall take all necessary measures to ensure the effective and rational execution of the programme by the Director-General.

- c. Between ordinary sessions of the General Conference, the Board may discharge the functions of adviser to the United Nations, set forth in Article IV, paragraph 5, whenever the problem upon which advice is sought has already been dealt with in principle by the Conference, or when the solution is implicit in decisions of the Conference.
6. The Executive Board shall recommend to the General Conference the admission of new Members to the Organization.
7. Subject to decisions of the General Conference, the Executive Board shall adopt its own rules of procedure. It shall elect its officers from among its members.
8. The Executive Board shall meet in regular session at least twice a year and may meet in special session if convoked by the Chairman on his own initiative or upon the request of six members of the Board.
9. The Chairman of the Executive Board shall present, on behalf of the Board, to each ordinary session of the General Conference, with or without comments, the reports on the activities of the Organization which the Director-General is required to prepare in accordance with the provisions of Article VI.3(b).
10. The Executive Board shall make all necessary arrangements to consult the representatives of international organizations or qualified persons concerned with questions within its competence.
11. Between sessions of the General Conference, the Executive Board may request advisory opinions from the International Court of Justice on legal questions arising within the field of the Organization's activities.
12. Although the members of the Executive Board are representative of their respective Governments they shall exercise the powers delegated to them by the General Conference on behalf of the Conference as a whole.

## ARTICLE VI

### Secretariat

1. The Secretariat shall consist of a Director-General and such staff as may be required.
2. The Director-General shall be nominated by the Executive Board and appointed by the General Conference for a period of six years, under such conditions as the Conference may approve. The Director-General may be appointed for a further term of six years but shall not be eligible for reappointment for a subsequent term. The Director-General shall be the chief administrative officer of the Organization.
3.
  - a. The Director-General, or a deputy designated by him, shall participate, without the right to vote, in all meetings of the General Conference, of the Executive Board, and of the Committees of the Organization. He shall formulate proposals for appropriate action by the Conference and the Board, and shall prepare for submission to the Board a draft programme of work for the Organization with corresponding budget estimates.
  - b. The Director-General shall prepare and communicate to Member States and to the Executive Board periodical reports on the activities of the Organization. The General Conference shall determine the periods to be covered by these reports.

4. The Director-General shall appoint the staff of the Secretariat in accordance with staff regulations to be approved by the General Conference. Subject to the paramount consideration of securing the highest standards of integrity, efficiency and technical competence, appointment to the staff shall be on as wide a geographical basis as possible.
5. The responsibilities of the Director-General and of the staff shall be exclusively international in character. In the discharge of their duties they shall not seek or receive instructions from any Government or from any authority external to the Organization. They shall refrain from any action which might prejudice their position as international officials. Each State member of the Organization undertakes to respect the international character of the responsibilities of the Director-General and the staff, and not to seek to influence them in the discharge of their duties.
6. Nothing in this Article shall preclude the Organization from entering into special arrangements within the United Nations Organization for common services and staff and for the interchange of personnel.

## ARTICLE VII

### **National Co-operating Bodies**

1. Each Member State shall make such arrangements as suit its particular conditions for the purpose of associating its principal bodies interested in educational, scientific and cultural matters with the work of the Organization, preferably by the formation of a National Commission broadly representative of the Government and such bodies.
2. National Commissions or National Co-operating Bodies, where they exist, shall act in an advisory capacity to their respective delegations to the General Conference and to their Governments in matters relating to the Organization and shall function as agencies of liaison in all matters of interest to it.
3. The Organization may, on the request of a Member State, delegate, either temporarily or permanently, a member of its Secretariat to serve on the National Commission of that State, in order to assist in the development of its work.

## ARTICLE VIII

### **Reports by Member States**

Each Member State shall submit to the Organization, at such times and in such manner as shall be determined by the General Conference, reports on the laws, regulations and statistics relating to its educational, scientific and cultural institutions and activities, and on the action taken upon the recommendations and conventions referred to in Article IV, paragraph 4.

## ARTICLE IX

### **Budget**

1. The Budget shall be administered by the Organization.
2. The General Conference shall approve and give final effect to the budget and to the apportionment of financial responsibility among the States members of the Organization subject to such arrangement with the United Nations as may be provided in the agreement to be entered into pursuant to Article X.
3. The Director-General may accept voluntary contributions, gifts, bequests, and subventions directly from Governments, public and private institutions, associations and private persons, subject to the conditions specified in the Financial Regulations.

## ARTICLE X

### **Relations with the United Nations Organization**

This Organization shall be brought into relation with the United Nations Organization, as soon as practicable, as one of the Specialized Agencies referred to in Article 57 of the Charter of the United Nations. This relationship shall be effected through an agreement with the United Nations Organization under Article 63 of the Charter, which agreement shall be subject to the approval of the General Conference of this Organization. The agreement shall provide for effective co-operation between the two Organizations in the pursuit of their common purposes, and at the same time shall recognize the autonomy of this Organization, within the fields of its competence as defined in this Constitution. Such agreement may, among other matters, provide for the approval and financing of the budget of the Organization by the General Assembly of the United Nations.

## ARTICLE XI

### **Relations with other Specialized International Organizations and Agencies**

1. This Organization may cooperate with other specialized intergovernmental organizations and agencies whose interests and activities are related to its purposes. To this end the Director-General, acting under the general authority of the Executive Board, may establish effective working relationships with such organizations and agencies and establish such joint committees as may be necessary to assure effective co-operation. Any formal arrangements entered into with such organizations or agencies shall be subject to the approval of the Executive Board.
2. Whenever the General Conference of this Organization and the competent authorities of any other specialized intergovernmental organizations or agencies whose purpose and functions lie within the competence of this Organization, deem it desirable to effect a transfer of their resources and activities to this Organization, the Director-General, subject to the approval of the Conference, may enter into mutually acceptable arrangements for this purpose.
3. This Organization may make appropriate arrangements with other intergovernmental organizations for reciprocal representation at meetings.
4. The United Nations Educational, Scientific and Cultural Organization may make suitable arrangements for consultation and co-operation with non-governmental international organizations concerned with matters within its competence, and may invite them to undertake specific tasks. Such co-operation may also include appropriate participation by representatives of such organizations on advisory committees set up by the General Conference.

## ARTICLE XII

### **Legal status of the Organization**

The provisions of Articles 104 and 105 of the Charter of the United Nations Organization concerning the legal status of that Organization, its privileges and immunities, shall apply in the same way to this Organization.

## ARTICLE XIII

### **Amendments**

1. Proposals for amendments to this Constitution shall become effective upon receiving the approval of the General Conference by a two-thirds majority; provided, however,

that those amendments which involve fundamental alterations in the aims of the Organization or new obligations for the Member States shall require subsequent acceptance on the part of two-thirds of the Member States before they come into force. The draft texts of proposed amendments shall be communicated by the Director-General to the Member States at least six months in advance of their consideration by the General Conference.

2. The General Conference shall have power to adopt by a two-thirds majority rules of procedure for carrying out the provisions of this Article.

#### ARTICLE XIV

##### Interpretation

1. The English and French texts of this Constitution shall be regarded as equally authoritative.
2. Any question or dispute concerning the interpretation of this Constitution shall be referred for determination to the International Court of Justice or to an arbitral tribunal, as the General Conference may determine under its rules of procedure.

#### ARTICLE XV

##### Entry into Force

1. This Constitution shall be subject to acceptance. The instrument of acceptance shall be deposited with the Government of the United Kingdom.
2. This Constitution shall remain open for signature in the archives of the Government of the United Kingdom. Signature may take place either before or after the deposit of the instrument of acceptance. No acceptance shall be valid unless preceded or followed by signature. However, a State that has withdrawn from the Organization shall simply deposit a new instrument of acceptance in order to resume membership.
3. This Constitution shall come into force when it has been accepted by twenty of its signatories. Subsequent acceptances shall take effect immediately.

The Government of the United Kingdom will inform all Members of the United Nations of the receipt of all instruments of acceptance and of the date on which the Constitution comes into force in accordance with the preceding paragraph.

In faith whereof, the undersigned, duly authorized to that effect, have signed this Constitution in the English and French languages, both texts being equally authentic.

Done in London the sixteenth day of November, one thousand nine hundred and forty-five, in a single copy, in the English and French languages, of which certified copies will be communicated by the Government of the United Kingdom to the Governments of all the Members of the United Nations.

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## UNIVERSAL DECLARATION OF HUMAN RIGHTS

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*Adopted and proclaimed by General Assembly resolution 217 A (III) of 10 December 1948*

On December 10, 1948 the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights the full text of which appears in the following pages. Following this historic act the Assembly called upon all Member countries to publicize the text of the Declaration and “to cause it to be disseminated, displayed, read and expounded principally in schools and other educational institutions, without distinction based on the political status of countries or territories.”

**PREAMBLE**

Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,

Whereas disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind, and the advent of a world in which human beings shall enjoy freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people,

Whereas it is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law,

Whereas it is essential to promote the development of friendly relations between nations,

Whereas the peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom,

Whereas Member States have pledged themselves to achieve, in co-operation with the United Nations, the promotion of universal respect for and observance of human rights and fundamental freedoms,

Whereas a common understanding of these rights and freedoms is of the greatest importance for the full realization of this pledge,

Now, Therefore THE GENERAL ASSEMBLY proclaims THIS UNIVERSAL DECLARATION OF HUMAN RIGHTS as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction.

**Article 1.**

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

**Article 2.**

Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it be independent, trust, non-self-governing or under any other limitation of sovereignty.

**Article 3.**

Everyone has the right to life, liberty and security of person.

**Article 4.**

No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.

**Article 5.**

No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

**Article 6.**

Everyone has the right to recognition everywhere as a person before the law.

**Article 7.**

All are equal before the law and are entitled without any discrimination to equal protection of the law. All are entitled to equal protection against any discrimination in violation of this Declaration and against any incitement to such discrimination.

**Article 8.**

Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.

**Article 9.**

No one shall be subjected to arbitrary arrest, detention or exile.

**Article 10.**

Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him.

**Article 11.**

(1) Everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defence.

(2) No one shall be held guilty of any penal offence on account of any act or omission which did not constitute a penal offence, under national or international law, at the time when it was committed. Nor shall a heavier penalty be imposed than the one that was applicable at the time the penal offence was committed.

**Article 12.**

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

**Article 13.**

(1) Everyone has the right to freedom of movement and residence within the borders of each state.

(2) Everyone has the right to leave any country, including his own, and to return to his country.

**Article 14.**

(1) Everyone has the right to seek and to enjoy in other countries asylum from persecution.

(2) This right may not be invoked in the case of prosecutions genuinely arising from non-political crimes or from acts contrary to the purposes and principles of the United Nations.

**Article 15.**

- (1) Everyone has the right to a nationality.
- (2) No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality.

**Article 16.**

- (1) Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to found a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution.
- (2) Marriage shall be entered into only with the free and full consent of the intending spouses.
- (3) The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

**Article 17.**

- (1) Everyone has the right to own property alone as well as in association with others.
- (2) No one shall be arbitrarily deprived of his property.

**Article 18.**

Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.

**Article 19.**

Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

**Article 20.**

- (1) Everyone has the right to freedom of peaceful assembly and association.
- (2) No one may be compelled to belong to an association.

**Article 21.**

- (1) Everyone has the right to take part in the government of his country, directly or through freely chosen representatives.
- (2) Everyone has the right of equal access to public service in his country.
- (3) The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.

**Article 22.**

Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

**Article 23.**

- (1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.

- (2) Everyone, without any discrimination, has the right to equal pay for equal work.
- (3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.
- (4) Everyone has the right to form and to join trade unions for the protection of his interests.

**Article 24.**

Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

**Article 25.**

- (1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
- (2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

**Article 26.**

- (1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.
- (2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.
- (3) Parents have a prior right to choose the kind of education that shall be given to their children.

**Article 27.**

- (1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.
- (2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

**Article 28.**

Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized.

**Article 29.**

- (1) Everyone has duties to the community in which alone the free and full development of his personality is possible.
- (2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.
- (3) These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.

**Article 30.**

Nothing in this Declaration may be interpreted as implying for any State, group or person any right to engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms set forth herein.

## EUROPEAN CONVENTION ON HUMAN RIGHTS AND ITS FIVE PROTOCOLS

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ROME 4 NOVEMBER 1950

PARIS 20 MARCH 1952

STRASBOURG 6 MAY 1963

STRASBOURG 16 SEPTEMBER 1963

STRASBOURG 20 JANUARY 1966

### THE EUROPEAN CONVENTION ON HUMAN RIGHTS

The Governments signatory hereto, being Members of the Council of Europe,

Considering the Universal Declaration of Human Rights proclaimed by the General Assembly of the United Nations on 10 December 1948;

Considering that this Declaration aims at securing the universal and effective recognition and observance of the Rights therein declared;

Considering that the aim of the Council of Europe is the achievement of greater unity between its Members and that one of the methods by which the aim is to be pursued is the maintenance and further realization of Human Rights and Fundamental Freedoms;

Reaffirming their profound belief in those Fundamental Freedoms which are the foundation of justice and peace in the world and are best maintained on the one hand by an effective political democracy and on the other by a common understanding and observance of the Human Rights upon which they depend;

Being resolved, as the Governments of European countries which are like-minded and have a common heritage of political traditions, ideals, freedom and the rule of law to take the first steps for the collective enforcement of certain of the Rights stated in the Universal Declaration;

Have agreed as follows:

#### ARTICLE 1

The High Contracting Parties shall secure to everyone within their jurisdiction the rights and freedoms defined in Section I of this Convention.

#### SECTION I

#### ARTICLE 2

1. Everyone's right to life shall be protected by law. No one shall be deprived of his life intentionally save in the execution of a sentence of a court following his conviction of a crime for which this penalty is provided by law.
2. Deprivation of life shall not be regarded as inflicted in contravention of this article when it results from the use of force which is no more than absolutely necessary:
  - (a) in defence of any person from unlawful violence;
  - (b) in order to effect a lawful arrest or to prevent escape of a person lawfully detained;
  - (c) in action lawfully taken for the purpose of quelling a riot or insurrection.

**ARTICLE 3**

No one shall be subjected to torture or to inhuman or degrading treatment or punishment.

**ARTICLE 4**

1. No one shall be held in slavery or servitude.
2. No one shall be required to perform forced or compulsory labour.
3. For the purpose of this article the term forced or compulsory labour shall not include:
  - (a) any work required to be done in the ordinary course of detention imposed according to the provisions of Article 5 of this Convention or during conditional release from such detention;
  - (b) any service of a military character or, in case of conscientious objectors in countries where they are recognized, service exacted instead of compulsory military service;
  - (c) any service exacted in case of an emergency or calamity threatening the life or well-being of the community;
  - (d) any work or service which forms part of normal civic obligations.

**ARTICLE 5**

1. Everyone has the right to liberty and security of person.

No one shall be deprived of his liberty save in the following cases and in accordance with a procedure prescribed by law:

- (a) the lawful detention of a person after conviction by a competent court;
  - (b) the lawful arrest or detention of a person for non-compliance with the lawful order of a court or in order to secure the fulfilment of any obligation prescribed by law;
  - (c) the lawful arrest or detention of a person effected for the purpose of bringing him before the competent legal authority of reasonable suspicion of having committed an offence or when it is reasonably considered necessary to prevent his committing an offence or fleeing after having done so;
  - (d) the detention of a minor by lawful order for the purpose of educational supervision or his lawful detention for the purpose of bringing him before the competent legal authority;
  - (e) the lawful detention of persons for the prevention of the spreading of infectious diseases, of persons of unsound mind, alcoholics or drug addicts, or vagrants;
  - (f) the lawful arrest or detention of a person to prevent his effecting an unauthorized entry into the country or of a person against whom action is being taken with a view to deportation or extradition.
2. Everyone who is arrested shall be informed promptly, in a language which he understands, of the reasons for his arrest and the charge against him.
  3. Everyone arrested or detained in accordance with the provisions of paragraph 1(c) of this article shall be brought promptly before a judge or other officer authorized by law to exercise judicial power and shall be entitled to trial within a reasonable time or to release pending trial. Release may be conditioned by guarantees to appear for trial.
  4. Everyone who is deprived of his liberty by arrest or detention shall be entitled to take proceedings by which the lawfulness of his detention shall be decided speedily by a court and his release ordered if the detention is not lawful.

Everyone who has been the victim of arrest or detention in contravention of the provisions of this article shall have an enforceable right to compensation.

#### ARTICLE 6

1. In the determination of his civil rights and obligations or of any criminal charge against him, everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law. Judgement shall be pronounced publicly by the press and public may be excluded from all or part of the trial in the interest of morals, public order or national security in a democratic society, where the interests of juveniles or the protection of the private life of the parties so require, or the extent strictly necessary in the opinion of the court in special circumstances where publicity would prejudice the interests of justice.
2. Everyone charged with a criminal offence shall be presumed innocent until proved guilty according to law.
3. Everyone charged with a criminal offence has the following minimum rights:
  - (a) to be informed promptly, in a language which he understands and in detail, of the nature and cause of the accusation against him;
  - (b) to have adequate time and the facilities for the preparation of his defence;
  - (c) to defend himself in person or through legal assistance of his own choosing or, if he has not sufficient means to pay for legal assistance, to be given it free when the interests of justice so require;
  - (d) to examine or have examined witnesses against him and to obtain the attendance and examination of witnesses on his behalf under the same conditions as witnesses against him;
  - (e) to have the free assistance of an interpreter if he cannot understand or speak the language used in court.

#### ARTICLE 7

1. No one shall be held guilty of any criminal offence on account of any act or omission which did not constitute a criminal offence under national or international law at the time when it was committed. Nor shall a heavier penalty be imposed than the one that was applicable at the time the criminal offence was committed.
2. This article shall not prejudice the trial and punishment of any person for any act or omission which, at the time when it was committed, was criminal according to the general principles of law recognized by civilized nations.

#### ARTICLE 8

1. Everyone has the right to respect for his private and family life, his home and his correspondence.
2. There shall be no interference by a public authority with the exercise of this right except such as is in accordance with the law and is necessary in a democratic society in the interests of national security, public safety or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or for the protection of the rights and freedoms of others.

#### ARTICLE 9

1. Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief, in worship, teaching, practice and observance.

2. Freedom to manifest one's religion or beliefs shall be subject only to such limitations as are prescribed by law and are necessary in a democratic society in the interests of public safety, for the protection of public order, health or morals, or the protection of the rights and freedoms of others.

#### **ARTICLE 10**

1. Everyone has the right to freedom of expression. This right shall include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. This article shall not prevent States from requiring the licensing of broadcasting, television or cinema enterprises.
2. The exercise of these freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or the rights of others, for preventing the disclosure of information received in confidence, or for maintaining the authority and impartiality of the judiciary.

#### **ARTICLE 11**

1. Everyone has the right to freedom of peaceful assembly and to freedom of association with others, including the right to form and to join trade unions for the protection of his interests.
2. No restrictions shall be placed on the exercise of these rights other than such as are prescribed by law and are necessary in a democratic society in the interests of national security or public safety, for the prevention of disorder or crime, for the protection of health or morals or for the protection of the rights and freedoms of others. This article shall not prevent the imposition of lawful restrictions on the exercise of these rights by members of the armed forces, of the police or of the administration of the State.

#### **ARTICLE 12**

Men and women of marriageable age have the right to marry and to found a family, according to the national laws governing the exercise of this right.

#### **ARTICLE 13**

Everyone whose rights and freedoms as set forth in this Convention are violated shall have an effective remedy before a national authority notwithstanding that the violation has been committed by persons acting in an official capacity.

#### **ARTICLE 14**

The enjoyment of the rights and freedoms set forth in this Convention shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status.

#### **ARTICLE 15**

1. In time of war or other public emergency threatening the life of the nation any High Contracting Party may take measures derogating from its obligations under this Convention to the extent strictly required by the exigencies of the situation, provided that such measures are not inconsistent with its other obligations under international law.

2. No derogation from Article 2, except in respect of deaths resulting from lawful acts of war, or from Articles 3, 4 (paragraph 1) and 7 shall be made under this provision.
3. Any High Contracting Party availing itself of this right of derogation shall keep the Secretary-General of the Council of Europe fully informed of the measures which it has taken and the reasons therefor. It shall also inform the Secretary-General of the Council of Europe when such measures have ceased to operate and the provisions of the Convention are again being fully executed.

#### **ARTICLE 16**

Nothing in Articles 10, 11, and 14 shall be regarded as preventing the High Contracting Parties from imposing restrictions on the political activity of aliens.

#### **ARTICLE 17**

Nothing in this Convention may be interpreted as implying for any State, group or person any right to engage in any activity or perform any act aimed at the destruction on any of the rights and freedoms set forth herein or at their limitation to a greater extent than is provided for in the Convention.

#### **ARTICLE 18**

The restrictions permitted under this Convention to the said rights and freedoms shall not be applied for any purpose other than those for which they have been prescribed.

### **SECTION II**

#### **ARTICLE 19**

To ensure the observance of the engagements undertaken by the High Contracting Parties in the present Convention, there shall be set up:

1. A European Commission of Human Rights hereinafter referred to as 'the Commission';
2. A European Court of Human Rights, hereinafter referred to as 'the Court'.

### **SECTION III**

#### **ARTICLE 20**

The Commission shall consist of a number of members equal to that of the High Contracting Parties. No two members of the Commission may be nationals of the same state.

#### **ARTICLE 21**

1. The members of the Commission shall be elected by the Committee of Ministers by an absolute majority of votes, from a list of names drawn up by the Bureau of the Consultative Assembly; each group of the Representatives of the High Contracting Parties in the Consultative Assembly shall put forward three candidates, of whom two at least shall be its nationals.
2. As far as applicable, the same procedure shall be followed to complete the Commission in the event of other States subsequently becoming Parties to this Convention, and in filling casual vacancies.

#### **ARTICLE 22**

1. The members of the Commission shall be elected for a period of six years. They may be re-elected. However, of the members elected at the first election, the terms of seven members shall expire at the end of three years.

2. The members whose terms are to expire at the end of the initial period of three years shall be chosen by lot by the Secretary-General of the Council of Europe immediately after the first election has been completed.
3. A member of the Commission elected to replace a member whose term of office has not expired shall hold office for the remainder of his predecessor's term.
4. The members of the Commission shall hold office until replaced. After having been replaced, they shall continue to deal with such cases as they already have under consideration.

#### **ARTICLE 23**

The members of the Commission shall sit on the Commission in their individual capacity.

#### **ARTICLE 24**

Any High Contracting Party may refer to the Commission, through the Secretary-General of the Council of Europe, any alleged breach of the provisions of the Convention by another High Contracting Party.

#### **ARTICLE 25**

1. The Commission may receive petitions addressed to the Secretary-General of the Council of Europe from any person, non-governmental organization or group of individuals claiming to be the victim of a violation by one of the High Contracting Parties of the rights set forth in this Convention, provided that the High Contracting Party against which the complaint has been lodged has declared that it recognizes the competence of the Commission to receive such petitions. Those of the High Contracting Parties who made such a declaration undertake not to hinder in any way the effective exercise of this right.
2. Such declarations may be made for a specific period.
3. The declarations shall be deposited with the Secretary-General of the Council of Europe who shall transmit copies thereof to the High Contracting Parties and publish them.
4. The Commission shall only exercise the powers provided for in this article when at least six High Contracting Parties are bound by declarations made in accordance with the preceding paragraphs.

#### **ARTICLE 26**

The Commission may only deal with the matter after all domestic remedies have been exhausted, according to the generally recognized rules of international law, and within a period of six months from the date on which the final decision was taken.

#### **ARTICLE 27**

1. The Commission shall not deal with any petition submitted under Article 25 which
  - (a) is anonymous, or
  - (b) is substantially the same as a matter which has already been examined by the Commission or has already been submitted to another procedure or international investigation or settlement and if it contains no relevant new information.
2. The Commission shall consider inadmissible any petition submitted under Article 25 which it considers incompatible with the provisions of the present Convention, manifestly ill-founded, or an abuse of the right of petition.
3. The Commission shall reject any petition referred to it which it considers inadmissible under Article 26.

**ARTICLE 28**

In the event of the Commission accepting a petition referred to it:

- (a) it shall, with a view to ascertaining the facts undertake together with the representatives of the parties and examination of the petition and, if need be, an investigation, for the effective conduct of which the States concerned shall furnish all necessary facilities, after an exchange of views with the Commission;
- (b) it shall place itself at the disposal of the parties concerned with a view to securing a friendly settlement of the matter on the basis of respect for Human Rights as defined in this Convention.

**ARTICLE 29**

1. The Commission shall perform the functions set out in Article 28 by means of a Sub-Commission consisting of seven members of the Commission.
2. Each of the parties concerned may appoint as members of this Sub-Commission a person of its choice.
3. The remaining members shall be chosen by lot in accordance with arrangements prescribed in the Rules of Procedure of the Commission.

**ARTICLE 30**

If the Sub-Commission succeeds in effecting a friendly settlement in accordance with Article 28, it shall draw up a Report which shall be sent to the States concerned, to the Committee of Ministers and to the Secretary-General of the Council of Europe for publication. This Report shall be confined to a brief statement of the facts and of the solution reached.

**ARTICLE 31**

1. If a solution is not reached, the Commission shall draw up a Report on the facts and state its opinion as to whether the facts found disclose a breach by the State concerned of its obligations under the Convention. The opinions of all the members of the Commission on this point may be stated in the Report.
2. The Report shall be transmitted to the Committee of Ministers. It shall also be transmitted to the States concerned, who shall not be at liberty to publish it.
3. In transmitting the Report to the Committee of Ministers the Commission may make such proposals as it thinks fit.

**ARTICLE 32**

1. If the question is not referred to the Court in accordance with Article 48 of this Convention within a period of three months from the date of the transmission of the Report to the Committee of Ministers, the Committee of Ministers shall decide by a majority of two-thirds of the members entitled to sit on the Committee whether there has been a violation of the Convention.
2. In the affirmative case the Committee of Ministers shall prescribe a period during which the Contracting Party concerned must take the measures required by the decision of the Committee of Ministers.
3. If the High Contracting Party concerned has not taken satisfactory measures within the prescribed period, the Committee of Ministers shall decide by the majority provided for in paragraph 1 above what effect shall be given to its original decision and shall publish the Report.
4. The High Contracting Parties undertake to regard as binding on them any decision which the Committee of Ministers may take in application of the preceding paragraphs.

**ARTICLE 33**

The Commission shall meet ‘in camera’.

**ARTICLE 34**

The Commission shall take its decision by a majority of the Members present and voting; the Sub-Commission shall take its decisions by a majority of its members.

**ARTICLE 35**

The Commission shall meet as the circumstances require. The meetings shall be convened by the Secretary-General of the Council of Europe.

**ARTICLE 36**

The Commission shall draw up its own rules of procedure.

**ARTICLE 37**

The secretariat of The Commission shall be provided by the Secretary-General of the Council of Europe.

**SECTION IV****ARTICLE 38**

The European Court of Human Rights shall consist of a number of judges equal to that of the Members of the Council of Europe. No two judges may be nationals of the State.

**ARTICLE 39**

1. The members of the Court shall be elected by the Consultative Assembly by a majority of the votes cast from a list of persons nominated by Members of the Council of Europe; each Member shall nominate three candidates, of whom two at least shall be its nationals.
2. As far as applicable, the same procedure shall be followed to complete the Court in the event of the admission of new members of the Council of Europe, and in filling casual vacancies.
3. The candidates shall be of high moral character and must either possess the qualifications required for appointment to high judicial office or be jurisconsults of recognized competence.

**ARTICLE 40**

1. The members of the Court shall be elected for a period of nine years. They may be re-elected. However, of the members elected at the first election the terms of four members shall expire at the end of three years, and the terms of four more members shall expire at the end of six years.
2. The members whose terms are to expire at the end of the initial periods of three and six years shall be chosen by lot by the Secretary-General immediately after the first election has been completed.
3. A member of the Court elected to replace a member whose term of office has not expired shall hold office for the remainder of his predecessor’s term.
4. The members of the Court shall hold office until replaced. After having been replaced, they shall continue to deal with such cases as they already have under consideration.

**ARTICLE 41**

The Court shall elect the President and Vice-President for a period of three years. They may be re-elected.

**ARTICLE 42**

The members of the Court shall receive for each day of duty a compensation to be determined by the Committee of Ministers.

**ARTICLE 43**

For the consideration of each case brought before it the Court shall consist of a Chamber composed of seven judges. There shall sit as an 'ex officio' member of the Chamber the judge who is a national of any State party concerned, or, if there is none, a person of its choice who shall sit in the capacity of judge; the names of the other judges shall be chosen by lot by the President before the opening of the case.

**ARTICLE 44**

Only the High Contracting Parties and the Commission shall have the right to bring a case before the Court.

**ARTICLE 45**

The jurisdiction of the Court shall extend to all cases concerning the interpretation and application of the present Convention which the High Contracting Parties or the Commission shall refer to it in accordance with Article 48.

**ARTICLE 46**

1. Any of the High Contracting Parties may at any time declare that it recognizes as compulsory 'ipso facto' and without special agreement the jurisdiction of the Court in all matters concerning the interpretation and application of the present Convention.
2. The declarations referred to above may be made unconditionally or on condition of reciprocity on the part of several or certain other High Contracting Parties or for a specified period.
3. These declarations shall be deposited with the Secretary-General of the Council of Europe who shall transmit copies thereof to the High Contracting Parties.

**ARTICLE 47**

The Court may only deal with a case after the Commission has acknowledged the failure of efforts for a friendly settlement and within the period of three months provided for in Article 32.

**ARTICLE 48**

The following may bring a case before the Court, provided that the High Contracting Party concerned, if there is only one, or the High Contracting Parties concerned, if there is more than one, are subject to the compulsory jurisdiction of the Court, or failing that, with the consent of the High Contracting Party concerned, if there is only one, or of the High Contracting Parties concerned if there is more than one:

- (a) the Commission;
- (b) a High Contracting Party whose national is alleged to be a victim;
- (c) a High Contracting Party which referred the case to the Commission;
- (d) a High Contracting Party against which the complaint has been lodged.

**ARTICLE 49**

In the event of dispute as to whether the Court has the jurisdiction, the matter shall be settled by the decision of the Court.

**ARTICLE 50**

If the Court finds that a decision or a measure taken by a legal authority or any other authority of a High Contracting Party, is completely or partially in conflict with the obligations arising from the present convention, and if the internal law of the said Party allows only partial reparation to be made for the consequences of this decision or measure, the decision of the Court shall, if necessary, afford just satisfaction to the injured party.

**ARTICLE 51**

1. Reasons shall be given for the judgement of the Court.
2. If the judgement does not represent in whole or in part the unanimous opinion of the judges, any judges shall be entitled to deliver a separate opinion.

**ARTICLE 52**

The judgement of the Court shall be final.

**ARTICLE 53**

The High Contracting Parties undertake to abide by the decision of the Court in any case to which they are parties.

**ARTICLE 54**

The judgement of the Court shall be transmitted to the Committee of Ministers which shall supervise its execution.

**ARTICLE 55**

The Court shall draw up its own rules and shall determine its own procedure.

**ARTICLE 56**

1. The first election of the members of the Court shall take place after the declarations by the High Contracting Parties mentioned in Article 46 have reached a total of eight.

No case can be brought before the Court before this election.

**SECTION V****ARTICLE 57**

On receipt of a request from the Secretary-General of the Council of Europe any High Contracting Party shall furnish an explanation of the manner in which its internal law ensures the effective implementation of any of the provisions of this Convention.

**ARTICLE 58**

The expenses of the Commission and the Court shall be borne by the Council of Europe.

**ARTICLE 59**

The members of the Commission and of the Court shall be entitled, during the discharge of their functions, to the privileges and immunities provided for in Article 40 of the Statute of the Council of Europe and in the agreements made thereunder.

**ARTICLE 60**

Nothing in this Convention shall be construed as limiting or derogating from any of the human rights and fundamental freedoms which may be ensured under the laws of any High Contracting Party or under any other agreement to which it is a Party.

**ARTICLE 61**

Nothing in this Convention shall prejudice the powers conferred on the Committee of Ministers by the Statute of the Council of Europe.

**ARTICLE 62**

The High Contracting Parties agree that, except by special agreement, they will not avail themselves of treaties, conventions or declarations in force between them for the purpose of submitting, by way of petition, a dispute arising out of the interpretation or application of this Convention to a means of settlement other than those provided for in this Convention.

**ARTICLE 63**

1. Any State may at the time of its ratification or at any time thereafter declare by notification addressed to the Secretary-General of the Council of Europe that the present Convention shall extend to all or any of the territories for whose international relations it is responsible.
2. The Convention shall extend to the territory or territories named in the notification as from the thirtieth day after the receipt of this notification by the Secretary-General of the Council of Europe.
3. The provisions of this Convention shall be applied in such territories with due regard, however, to local requirements. Any State which has made a declaration in accordance with paragraph 1 of this article may at any time thereafter declare on behalf of one or more of the territories to which the declaration relates that it accepts the competence of the Commission to receive petitions from individuals, non-governmental organizations or groups of individuals in accordance with Article 25 of the present Convention.

**ARTICLE 64**

1. Any State may, when signing this Convention or when depositing its instrument of ratification, make a reservation in respect of any particular provision of the Convention to the extent that any law then in force in its territory is not in conformity with the provision. Reservations of a general character shall not be permitted under this article.
2. Any reservation made under this article shall contain a brief statement of the law concerned.

**ARTICLE 65**

1. A High Contracting Party may denounce the present Convention only after the expiry of five years from the date of which it became a Party to it and after six months' notice contained in a notification addressed to the Secretary-General of the Council of Europe, who shall inform the other High Contracting Parties.
2. Such a denunciation shall not have the effect of releasing the High Contracting Party concerned from its obligations under this Convention in respect of any act which, being capable of constituting a violation of such obligations, may have been performed by it before the date at which the denunciation became effective.
3. Any High Contracting Party which shall cease to be a Member of the Council of Europe shall cease to be a Party to this Convention under the same conditions.

4. The Convention may be denounced in accordance with the provisions of the preceding paragraphs in respect of any territory to which it has been declared to extend under the terms Article 63.

#### **ARTICLE 66**

1. This Convention shall be open to the signature of the Members of the Council of Europe. It shall be ratified. Ratifications shall be deposited with the Secretary-General of the Council of Europe.
2. The present Convention shall come into force after the deposit of ten instruments of ratification.
3. As regards any signatory ratifying subsequently, the Convention shall come into force at the date of the deposit of all instruments of ratification.
4. The Secretary-General of the Council of Europe shall notify all the Members of the Council of Europe of the entry into force of the Convention, the names of the High Contracting Parties who have ratified it, and the deposit of all instruments of ratification which may be effected subsequently.

*Done at Rome this 4th day of November, 1950, in English and French, both text being equally authentic, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary-General shall transmit certified copies to each of the signatories.*

### **PROTOCOLS**

#### **1. Enforcement of certain Rights and Freedoms not included in Section I of the Convention**

The Governments signatory hereto, being Members of the Council of Europe,

Being resolved to take steps to ensure the collective enforcement of certain rights and freedoms other than those already included in Section I of the Convention for the Protection of Human Rights and Fundamental Freedoms signed at Rome on 4th November, 1950 (hereinafter referred to as 'the Convention'),

Have agreed as follows:

#### **ARTICLE 1**

Every natural or legal person is entitled to the peaceful enjoyment of his possessions. No one shall be deprived of his possessions except in the public interest and subject to the conditions provided for by law and by the general principles of international law.

The preceding provisions shall not, however, in any way impair the right of a State to enforce such laws as it deems necessary to control the use of property in accordance with the general interest or to secure the payment of taxes or other contributions or penalties.

#### **ARTICLE 2**

No person shall be denied the right to education. In the exercise of any functions which it assumes in relation to education and to teaching, the State shall respect the right of parents to ensure such education and teaching in conformity with their own religions and philosophical convictions.

#### **ARTICLE 3**

The High Contracting Parties undertake to hold free elections at reasonable intervals by secret ballot, under conditions which will ensure the free expression of the opinion of the people in the choice of the legislature.

**ARTICLE 4**

Any High Contracting Party may at the time of signature or ratification or at any time thereafter communicate to the Secretary-General of the Council of Europe a declaration stating the extent to which it undertakes that the provisions of the present Protocol shall apply to such of the territories for the international relations of which it is responsible as are named therein.

Any High Contracting Party which has communicated a declaration in virtue of the preceding paragraph may from time to time communicate a further declaration modifying the terms of any former declaration or terminating the application of the provisions of this Protocol in respect of any territory.

A declaration made in accordance with this article shall be deemed to have been made in accordance with paragraph 1 of Article 63 of the Convention.

**ARTICLE 5**

As between the High Contracting Parties the provisions of Articles 1, 2, 3 and 4 of this Protocol shall be regarded as additional articles to the convention and all the provisions of the Convention shall apply accordingly.

**ARTICLE 6**

This Protocol shall be open for signature by the Members of the Council of Europe, who are the signatories of the Convention; it shall be ratified at the same time as or after the ratification of the Convention. It shall enter into force after the deposit of ten instruments of ratification. As regards any signatory ratifying subsequently, the Protocol shall enter into force at the date of the deposit of its instrument of ratification.

The instruments of ratification shall be deposited with the Secretary-General of the Council of Europe, who will notify all the Members of the names of those who have ratified.

*Done at Paris on the 20th day of March 1952, In English and French, both text being equally authentic, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary-General shall transmit certified copies to each of the signatory Governments.*

**2. Conferring upon the European Court of Human Rights Competence to give Advisory Opinions**

The Member States of the Council of Europe signatory hereto:

Having regard to the provisions of the Convention for the Protection of Human Rights and Fundamental Freedoms signed at Rome on 4 November 1950 (hereinafter referred to as 'the Convention'), and in particular Article 19 instituting, among other bodies, a European Court of Human Rights (hereinafter referred to as 'the Court');

Considering that it is expedient to confer upon the Court competence to give advisory opinions subject to certain conditions;

Have agreed as follows:

**ARTICLE 1**

1. The Court may, at the request of the Committee of Ministers, give advisory opinions on legal questions concerning the interpretation of the Convention and the Protocols thereto.
2. Such opinions shall not deal with any question relating to the content or scope of the rights or freedoms defined in Section I of the convention and in the Protocols thereto, or with any other question which the Commission, the Court, or the committee of Ministers might have to consider in consequence of any such proceedings as could be instituted in accordance with the Convention.

3. Decisions of the Committee of Ministers to request an advisory opinion of the Court shall require a two-thirds majority vote of the representatives entitled to sit on the Committee.

#### ARTICLE 2

The Court shall decide whether a request for an advisory opinion submitted by the Committee of Ministers is within its consultative competence as defined in Article 1 of this Protocol.

#### ARTICLE 3

1. For the consideration of requests for an advisory opinion, the Court shall sit in plenary session.
2. Reasons shall be given for advisory opinions of the Court.
3. If the advisory opinion does not represent in whole or in part the unanimous opinion of the judges, any judge shall be entitled to deliver a separate opinion.
4. Advisory opinions of the Court shall be communicated to the Committee of Ministers.

#### ARTICLE 4

The powers of the Court under Article 55 of the Convention shall extend to the drawing up of such rules and the determination of such procedure as the Court may think necessary for the purposes of this Protocol.

#### ARTICLE 5

1. This Protocol shall be open to signature by member States of the Council of Europe, signatories to the Convention, who may become Parties to it by:
  - (a) signature without reservation in respect of ratification or acceptance;
  - (b) signature with reservation in respect of ratification or acceptance, followed by ratification or acceptance. Instruments of ratification or acceptance shall be deposited with the Secretary-General of the Council of Europe.
2. This Protocol shall enter into force as soon as all the States Parties to the Convention shall have become Parties to the Protocol in accordance with the Provisions of paragraph 1 of this article.
3. From the date of the entry into force of this Protocol, Articles 1 to 4 shall be considered an integral part of the Convention.
4. The Secretary-General of the Council of Europe shall notify the Member States of the Council of:
  - (a) any signature without reservation in respect of ratification or acceptance;
  - (b) any signature with reservation in respect of ratification or acceptance;
  - (c) the deposit of any instrument of ratification or acceptance;
  - (d) the date of entry into force of this Protocol in accordance with paragraph 2 of this article.

*In witness whereof the undersigned, being duly authorized thereto, have signed this Protocol.*

*Done at Strasbourg, this 6th day of May 1963, in English and French, both text being equally authentic, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary-General shall transmit certified copies to each of the signatory States.*

### 3. Amending Articles 29, 30, and 94 of the Convention

The member States of the Council, signatories to this Protocol,

Considering that it is advisable to amend certain provisions of the Convention for the Protection of Human Rights and Fundamental Freedoms signed at Rome on 4 November 1950 (hereinafter referred to as ‘the Convention’) concerning the procedure of the European Commission of Human Rights,

Have agreed as follows:

#### ARTICLE 1

1. Article 29 of the Convention is deleted.
2. The following provision shall be inserted in the Convention:

“ARTICLE 29

After it has accepted a petition submitted under Article 25, the Commission may nevertheless decide unanimously to reject the petition if, in the course of its examination, it finds that the existence of one of the grounds for non-acceptance provided for in Article 27 has been established.

In such a case, the decision shall be communicated to the parties.”

#### ARTICLE 2

1. At the beginning of Article 34 of the Convention, the following shall be inserted:  
“Subject to the provisions of Article 29 . . . .”

At the end of the same article, the sentence “the Sub-commission shall take its decisions by a majority of its members” shall be deleted.

#### ARTICLE 4

1. The Protocol shall be open to signature by the member States of the Council of Europe, who may become Parties to it either by:
  - (a) signature without reservation in respect of ratification or acceptance, or
  - (b) signature with reservation in respect of ratification or acceptance, followed by ratification or acceptance. Instruments of ratification shall be deposited with the Secretary-General of the Council of Europe.
2. This Protocol shall enter force as soon as all States Parties to the Convention shall have become Parties to the Protocol, in accordance with paragraph 1 of this article.
3. The Secretary-General of the Council of Europe shall notify the Member States of the Council of:
  - (a) any signature without reservation in respect of ratification or acceptance;
  - (b) any signature with reservation in respect of ratification or acceptance;
  - (c) the deposit of any instrument of ratification or acceptance;
  - (d) the date of entry into force of this Protocol in accordance with paragraph 2 of this article.

*In witness whereof the undersigned, being duly authorized thereto, have signed this Protocol.*

*Done at Strasbourg, this 6th day of May 1963, in English and French, both text being equally authentic, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary-General shall transmit certified copies to each of the signatory States.*

#### 4. Protecting certain Additional Rights

The Governments signatory hereto, being Members of the Council of Europe,

Being resolved to take steps to ensure the collective enforcement of certain rights and freedoms other than those already included in Section 1 of the Convention for the Protection of Human Rights and Fundamental Freedoms signed at Rome on 4 November 1950 (hereinafter referred to as ‘the Convention’) and in Articles 1 to 3 of the First Protocol to the Convention, signed at Paris on 20 March 1952,

Have agreed as follows:

#### **ARTICLE 1**

No one shall be deprived of his liberty merely on the ground of inability to fulfil a contractual obligation.

#### **ARTICLE 2**

1. Everyone lawfully within the territory of a State shall, within that territory, have the right to liberty of movement and freedom to choose his residence.
2. Everyone shall be free to leave any country, including his own.
3. No restrictions shall be placed on the exercise of these rights other than such as are in accordance with law and are necessary in a democratic society in the interests of national security or public safety for the maintenance of 'ordre public', for the prevention of crime, for the protection of rights and freedoms of others.
4. The rights set forth in paragraph 1 may also be subject, in particular areas, to restrictions imposed in accordance with law and justified by the public interest in a democratic society.

#### **ARTICLE 3**

1. No one shall be expelled, by means either of an individual or of a collective measure, from the territory of the State of which he is a national.
2. No one shall be deprived of the right to enter the territory of the State of which he is a national.

#### **ARTICLE 4**

Collective expulsion of aliens is prohibited.

#### **ARTICLE 5**

1. Any High Contracting Party may, at the time of signature or ratification of this Protocol, or at any time thereafter, communicate to the Secretary-General of the Council of Europe a declaration stating the extent to which it undertakes that the provisions of this Protocol shall apply to such of the territories for the international relations of which it is responsible as are named therein.
2. Any High Contracting Party which has communicated a declaration in virtue of the preceding paragraph may, from time to time, communicate a further declaration modifying the terms of any former declaration or terminating the application of the provisions of this Protocol in respect of territory.
3. A declaration made in accordance with this article shall be deemed to have been made in accordance with paragraph 1 of Article 63 of the Convention.
4. The territory of any State to which this Protocol applies by virtue of the ratification or acceptance by that State, and each territory to which this Protocol is applied by virtue of a declaration by that State under this article, shall be treated as separate territories for the purpose of the references in Articles 2 and 3 to the territory of a State.

#### **ARTICLE 6**

1. As between the High Contracting Parties the provisions of Articles 1 to 5 of this Protocol shall be regarded as additional articles to the convention, and all the provisions of the Convention shall apply accordingly.

2. Nevertheless, the right of individual recourse recognized by a declaration made under Article 25 of the convention, or the acceptance of the compulsory jurisdiction of the court by a declaration made under Article 46 of the convention, shall not be effective in relation to this Protocol unless the High Contracting Party concerned has made a statement recognizing such a right, or accepting such jurisdiction, in respect of all or any of Articles 1 to 4 of the Protocol.

#### ARTICLE 7

1. This Protocol shall be open for signature by the members of the Council of Europe who are the signatories of the Convention; it shall be ratified at the same time as or after the ratification of the Convention. It shall enter into force after the deposit of five instruments of ratification. As regards any signatory ratifying subsequently, the Protocol shall enter into force at the date of the deposit of its instrument of ratification.

The instruments of ratification shall be deposited with the Secretary-General of the Council of Europe, who will notify all members of the names of those who have ratified.

*In witness thereof, the undersigned, being duly authorized thereto, have signed this Protocol.*

*Done at Strasbourg, this 16th day of September 1963, in English and French, both texts being equally authentic, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary-General shall transmit certified copies to each of the signatory States.*

#### 5. Amending Articles 22 and 40 of the Convention

The Governments signatory hereto, being Members of the Council of Europe,

Considering that certain inconveniences have arisen in the application of the provisions of Articles 22 and 40 of the Convention for the Protection of Human Rights and fundamental Freedoms signed at Rome of 4th November 1950 (hereinafter referred to as 'the Convention') relating to the length of the terms of office of the members of the European Commission of Human Rights (hereinafter referred to as 'the Commission') and of the European Court of Human Rights (hereinafter referred to as 'the Court');

Considering that it is desirable to ensure as far as possible an election every three years of one half of the members of the Commission and of one third of the members of the Court;

Considering therefore that it is desirable to amend certain provisions of the Convention,

Have agreed as follows:

#### ARTICLE 1

In Article 22 of the Convention, the following two paragraphs shall be inserted after paragraph (2):

“(3) In order to ensure that, as far as possible, one half of the membership of the Commission shall be renewed every three years, the Committee of Ministers may decide, before proceeding to any subsequent election, that the term or terms of office of one or more members to be elected shall be for a period other than six years but not more than nine and not less than three years.

(4) In cases where more than one term of office is involved and the Committee of Ministers applies the preceding paragraph, the allocation of the terms of office shall be effected by the drawing of lots by the Secretary-General, immediately after the election.”

#### ARTICLE 2

In Article 22 of the Convention, the former paragraphs (3) and (4) shall become respectively paragraphs (5) and (6).

**ARTICLE 3**

In Article 40 of the Convention, the following two paragraphs shall be inserted after paragraph (2):

“(3) In order to ensure that, as far as possible, one half of the membership of the Court shall be renewed every three years, the Consultative Assembly may decide, before proceeding to any subsequent election, that the term or terms of office of one or more members to be elected shall be for a period other than nine years but not more than twelve and not less than six years.

(4) In cases where more than one term of office is involved and the Consultative Assembly applies the preceding paragraph, the allocation of the terms of office shall be effected by the drawing of lots by the Secretary-General, immediately after the election.”

**ARTICLE 4**

In Article 40 of the Convention, the former paragraphs (3) and (4) shall become respectively paragraphs (5) and (6).

**ARTICLE 5**

1. This Protocol shall be open to signature by Members of the Council of Europe, signatories to the Convention, who may become Parties to it by;
  - (a) signature without reservation in respect of ratification or acceptance;
  - (b) signature with reservation in respect of ratification or acceptance, followed by ratification or acceptance.

Instruments of ratification or acceptance shall be deposited with the Secretary-General of the Council of Europe.

2. This Protocol shall enter into force as soon as all Contracting Parties to the Convention shall have become Parties to the Protocol, in accordance with the provisions of paragraph 1 of this article.
3. The Secretary-General of the Council of Europe shall notify the Members of the Council of:
  - (a) any signature without reservation in respect of ratification or acceptance;
  - (b) any signature with reservation in respect of ratification or acceptance;
  - (c) the deposit of any instrument of ratification or acceptance;
  - (d) the date of entry into force of this Protocol in accordance with paragraph 2 of this article.

*In witness whereof the undersigned, being duly authorized thereto, have signed this Protocol.*

*Done at Strasbourg, this 20th day of January 1966, in English and French, both texts being equally authentic, in a single copy which shall remain deposited in the archives of the Council of Europe. The Secretary-General shall transmit certified copies to each of the signatory Governments.*

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## **DECLARATION OF THE RIGHTS OF THE CHILD**

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*Proclaimed by General Assembly resolution 1386(XIV) of 20 November 1959*

**Preamble**

Whereas the peoples of the United Nations have, in the *Charter*, reaffirmed their faith in fundamental human rights and in the dignity and worth of the human person, and have determined to promote social progress and better standards of life in larger freedom,

Whereas the United Nations has, in the *Universal Declaration of Human Rights*, proclaimed that everyone is entitled to all the rights and freedoms set forth therein, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status,

Whereas the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate legal protection, before as well as after birth,

Whereas the need for such special safeguards has been stated in the *Geneva Declaration of the Rights of the Child* of 1924, and recognized in the *Universal Declaration of Human Rights* and in the statutes of specialized agencies and international organizations concerned with the welfare of children,

Whereas mankind owes to the child the best it has to give,

Now therefore,

### **The General Assembly**

Proclaims this *Declaration of the Rights of the Child* to the end that he may have a happy childhood and enjoy for his own good and for the good of society the rights and freedoms herein set forth, and calls upon parents, upon men and women as individuals, and upon voluntary organizations, local authorities and national Governments to recognize these rights and strive for their observance by legislative and other measures progressively taken in accordance with the following principles:

#### **Principle 1**

The child shall enjoy all the rights set forth in this Declaration. Every child, without any exception whatsoever, shall be entitled to these rights, without distinction or discrimination on account of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status, whether of himself or of his family.

#### **Principle 2**

The child shall enjoy special protection, and shall be given opportunities and facilities, by law and by other means, to enable him to develop physically, mentally, morally, spiritually and socially in a healthy and normal manner and in conditions of freedom and dignity. In the enactment of laws for this purpose, the best interests of the child shall be the paramount consideration.

#### **Principle 3**

The child shall be entitled from his birth to a name and a nationality.

#### **Principle 4**

The child shall enjoy the benefits of social security. He shall be entitled to grow and develop in health; to this end, special care and protection shall be provided both to him and to his mother, including adequate pre-natal and post-natal care. The child shall have the right to adequate nutrition, housing, recreation and medical services.

#### **Principle 5**

The child who is physically, mentally or socially handicapped shall be given the special treatment, education and care required by his particular condition.

#### **Principle 6**

The child, for the full and harmonious development of his personality, needs love and understanding. He shall, wherever possible, grow up in the care and under the responsibility of his

parents, and, in any case, in an atmosphere of affection and of moral and material security; a child of tender years shall not, save in exceptional circumstances, be separated from his mother. Society and the public authorities shall have the duty to extend particular care to children without a family and to those without adequate means of support. Payment of State and other assistance towards the maintenance of children of large families is desirable.

#### **Principle 7**

The child is entitled to receive education, which shall be free and compulsory, at least in the elementary stages. He shall be given an education which will promote his general culture and enable him, on a basis of equal opportunity, to develop his abilities, his individual judgement, and his sense of moral and social responsibility, and to become a useful member of society.

The best interests of the child shall be the guiding principle of those responsible for his education and guidance; that responsibility lies in the first place with his parents.

The child shall have full opportunity for play and recreation, which should be directed to the same purposes as education; society and the public authorities shall endeavour to promote the enjoyment of this right.

#### **Principle 8**

The child shall in all circumstances be among the first to receive protection and relief.

#### **Principle 9**

The child shall be protected against all forms of neglect, cruelty and exploitation. He shall not be the subject of traffic, in any form.

The child shall not be admitted to employment before an appropriate minimum age; he shall in no case be caused or permitted to engage in any occupation or employment which would prejudice his health or education, or interfere with his physical, mental or moral development.

#### **Principle 10**

The child shall be protected from practices which may foster racial, religious and any other form of discrimination. He shall be brought up in a spirit of understanding, tolerance, friendship among peoples, peace and universal brotherhood, and in full consciousness that his energy and talents should be devoted to the service of his fellow men.

## **CONVENTION AGAINST DISCRIMINATION IN EDUCATION**

*Adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization on 14 December 1960*

*The General Conference of the United Nations Educational, Scientific and Cultural Organization, meeting in Paris from 14 November to 15 December 1960, at its eleventh session,*

*Recalling* that the Universal Declaration of Human Rights asserts the principle of non-discrimination and proclaims that every person has the right to education,

*Considering* that discrimination in education is a violation of rights enunciated in that Declaration,

*Considering* that, under the terms of its Constitution, the United Nations Educational, Scientific and Cultural Organization has the purpose of instituting collaboration among the nations with a view to furthering for all universal respect for human rights and equality of educational opportunity,

*Recognizing* that, consequently, the United Nations Educational, Scientific and Cultural Organization, while respecting the diversity of national educational systems, has the duty not only to proscribe any form of discrimination in education but also to promote equality of opportunity and treatment for all in education,

*Having before it* proposals concerning the different aspects of discrimination in education, constituting item 17.1.4 of the agenda of the session,

*Having decided* at its tenth session that this question should be made the subject of an international convention as well as of recommendations to Member States,

*Adopts* this Convention on the fourteenth day of December 1960.

## **Article 1**

1. For the purpose of this Convention, the term “discrimination” includes any distinction, exclusion, limitation or preference which, being based on race, colour, sex, language, religion, political or other opinion, national or social origin, economic condition or birth, has the purpose or effect of nullifying or impairing equality of treatment in education and in particular:
  - (a) Of depriving any person or group of persons of access to education of any type or at any level;
  - (b) Of limiting any person or group of persons to education of an inferior standard;
  - (c) Subject to the provisions of article 2 of this Convention, of establishing or maintaining separate educational systems or institutions for persons or groups of persons; or
  - (d) Of inflicting on any person or group of persons conditions which are incompatible with the dignity of man.
2. For the purposes of this Convention, the term “education” refers to all types and levels of education, and includes access to education, the standard and quality of education, and the conditions under which it is given.

## **Article 2**

When permitted in a State, the following situations shall not be deemed to constitute discrimination, within the meaning of article 1 of this Convention:

- (a) The establishment or maintenance of separate educational systems or institutions for pupils of the two sexes, if these systems or institutions offer equivalent access to education, provide a teaching staff with qualifications of the same standard as well as school premises and equipment of the same quality, and afford the opportunity to take the same or equivalent courses of study;
- (b) The establishment or maintenance, for religious or linguistic reasons, of separate educational systems or institutions offering an education which is in keeping with the wishes of the pupil’s parents or legal guardians, if participation in such systems or attendance at such institutions is optional and if the education provided conforms to such standards as may be laid down or approved by the competent authorities, in particular for education of the same level;
- (c) The establishment or maintenance of private educational institutions, if the object of the institutions is not to secure the exclusion of any group but to provide educational facilities in addition to those provided by the public authorities, if the institutions are conducted in accordance with that object, and if the education provided conforms with such standards as may be laid down or approved by the competent authorities, in particular for education of the same level.

**Article 3**

In order to eliminate and prevent discrimination within the meaning of this Convention, the States Parties thereto undertake:

- (a) To abrogate any statutory provisions and any administrative instructions and to discontinue any administrative practices which involve discrimination in education;
- (b) To ensure, by legislation where necessary, that there is no discrimination in the admission of pupils to educational institutions;
- (c) Not to allow any differences of treatment by the public authorities between nationals, except on the basis of merit or need, in the matter of school fees and the grant of scholarships or other forms of assistance to pupils and necessary permits and facilities for the pursuit of studies in foreign countries;
- (d) Not to allow, in any form of assistance granted by the public authorities to educational institutions, any restrictions or preference based solely on the ground that pupils belong to a particular group;
- (e) To give foreign nationals resident within their territory the same access to education as that given to their own nationals.

**Article 4**

The States Parties to this Convention undertake furthermore to formulate, develop and apply a national policy which, by methods appropriate to the circumstances and to national usage, will tend to promote equality of opportunity and of treatment in the matter of education and in particular:

- (a) To make primary education free and compulsory; make secondary education in its different forms generally available and accessible to all; make higher education equally accessible to all on the basis of individual capacity; assure compliance by all with the obligation to attend school prescribed by law;
- (b) To ensure that the standards of education are equivalent in all public education institutions of the same level, and that the conditions relating to the quality of education provided are also equivalent;
- (c) To encourage and intensify by appropriate methods the education of persons who have not received any primary education or who have not completed the entire primary education course and the continuation of their education on the basis of individual capacity;
- (d) To provide training for the teaching profession without discrimination.

**Article 5**

1. The States Parties to this Convention agree that:

- (a) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms; it shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace;
- (b) It is essential to respect the liberty of parents and, where applicable, of legal guardians, firstly to choose for their children institutions other than those maintained by the public authorities but conforming to such minimum educational standards as may be laid down or approved by the competent authorities and, secondly, to ensure in a manner consistent with the procedures followed in the State for the application of its legislation, the religious and moral

education of the children in conformity with their own convictions; and no person or group of persons should be compelled to receive religious instruction inconsistent with his or their conviction;

- (c) It is essential to recognize the right of members of national minorities to carry on their own educational activities, including the maintenance of schools and, depending on the educational policy of each State, the use or the teaching of their own language, provided however:
    - (i) That this right is not exercised in a manner which prevents the members of these minorities from understanding the culture and language of the community as a whole and from participating in its—activities, or which prejudices national sovereignty;
    - (ii) That the standard of education is not lower than the general standard laid down or approved by the competent authorities; and
    - (iii) That attendance at such schools is optional.
2. The States Parties to this Convention undertake to take all necessary measures to ensure the application of the principles enunciated in paragraph 1 of this article.

### **Article 6**

In the application of this Convention, the States Parties to it undertake to pay the greatest attention to any recommendations hereafter adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization defining the measures to be taken against the different forms of discrimination in education and for the purpose of ensuring equality of opportunity and treatment in education.

### **Article 7**

The States Parties to this Convention shall in their periodic reports submitted to the General Conference of the United Nations Educational, Scientific and Cultural Organization on dates and in a manner to be determined by it, give information on the legislative and administrative provisions which they have adopted and other action which they have taken for the application of this Convention, including that taken for the formulation and the development of the national policy defined in article 4 as well as the results achieved and the obstacles encountered in the application of that policy.

### **Article 8**

Any dispute which may arise between any two or more States Parties to this Convention concerning the interpretation or application of this Convention which is not settled by negotiations shall at the request of the parties to the dispute be referred, failing other means of settling the dispute, to the International Court of Justice for decision.

### **Article 9**

Reservations to this Convention shall not be permitted.

### **Article 10**

This Convention shall not have the effect of diminishing the rights which individuals or groups may enjoy by virtue of agreements concluded between two or more States, where such rights are not contrary to the letter or spirit of this Convention.

### **Article 11**

This Convention is drawn up in English, French, Russian and Spanish, the four texts being equally authoritative.

**Article 12**

1. This Convention shall be subject to ratification or acceptance by States Members of the United Nations Educational, Scientific and Cultural Organization in accordance with their respective constitutional procedures.
2. The instruments of ratification or acceptance shall be deposited with the Director-General of the United Nations Educational, Scientific and Cultural Organization.

**Article 13**

1. This Convention shall be open to accession by all States not Members of the United Nations Educational, Scientific and Cultural Organization which are invited to do so by the Executive Board of the Organization.
2. Accession shall be effected by the deposit of an instrument of accession with the Director-General of the United Nations Educational, Scientific and Cultural Organization.

**Article 14**

This Convention shall enter into force three months after the date of the deposit of the third instrument of ratification, acceptance or accession, but only with respect to those States which have deposited their respective instruments on or before that date. It shall enter into force with respect to any other State three months after the deposit of its instrument of ratification, acceptance or accession.

**Article 15**

The States Parties to this Convention recognize that the Convention is applicable not only to their metropolitan territory but also to all non-self-governing, trust, colonial and other territories for the international relations of which they are responsible; they undertake to consult, if necessary, the governments or other competent authorities of these territories on or before ratification, acceptance or accession with a view to securing the application of the Convention to those territories, and to notify the Director-General of the United Nations Educational, Scientific and Cultural Organization of the territories to which it is accordingly applied, the notification to take effect three months after the date of its receipt.

**Article 16**

1. Each State Party to this Convention may denounce the Convention on its own behalf or on behalf of any territory for whose international relations it is responsible.
2. The denunciation shall be notified by an instrument in writing, deposited with the Director-General of the United Nations Educational, Scientific and Cultural Organization.
3. The denunciation shall take effect twelve months after the receipt of the instrument of denunciation.

**Article 17**

The Director-General of the United Nations Educational, Scientific and Cultural Organization shall inform the States Members of the Organization, the States not members of the Organization which are referred to in article 13, as well as the United Nations, of the deposit of all the instruments of ratification, acceptance and accession provided for in articles 12 and 13, and of notifications and denunciations provided for in articles 15 and 16 respectively.

**Article 18**

1. This Convention may be revised by the General Conference of the United Nations Educational, Scientific and Cultural Organization. Any such revision shall, however, bind only the States which shall become Parties to the revising convention.

2. If the General Conference should adopt a new convention revising this Convention in whole or in part, then, unless the new convention otherwise provides, this Convention shall cease to be open to ratification, acceptance or accession as from the date on which the new revising convention enters into force.

### **Article 19**

In conformity with Article 102 of the Charter of the United Nations, this Convention shall be registered with the Secretariat of the United Nations at the request of the Director-General of the United Nations Educational, Scientific and Cultural Organization.

DONE in Paris, this fifteenth day of December 1960, in two authentic copies bearing the signatures of the President of the eleventh session of the General Conference and of the Director-General of the United Nations Educational, Scientific and Cultural Organization, which shall be deposited in the archives of the United Nations Educational, Scientific and Cultural Organization, and certified true copies of which shall be delivered to all the States referred to in articles 12 and 13 as well as to the United Nations.

The foregoing is the authentic text of the Convention duly adopted by the General Conference of the United Nations Educational, Scientific and Cultural Organization during its eleventh session, which was held in Paris and declared closed the fifteenth day of December 1960.

IN FAITH WHEREOF we have appended our signatures this fifteenth day of December 1960.

## **DECLARATION ON RACE AND RACIAL PREJUDICE**

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*Adopted and proclaimed by the General Conference of the United Nations Educational, Scientific and Cultural Organization at its twentieth session, on 27 November 1978*

### **Preamble**

*The General Conference of the United Nations Educational, Scientific and Cultural Organization, meeting at Paris at its twentieth session, from 24 October to 28 November 1978,*

Whereas it is stated in the Preamble to the Constitution of UNESCO, adopted on 16 November 1945, that “the great and terrible war which has now ended was a war made possible by the denial of the democratic principles of the dignity, equality and mutual respect of men, and by the propagation, in their place, through ignorance and prejudice, of the doctrine of the inequality of men and races”, and whereas, according to Article I of the said Constitution, the purpose of UNESCO “is to contribute to peace and security by promoting collaboration among the nations through education, science and culture in order to further universal respect for justice, for the rule of law and for the human rights and fundamental freedoms which are affirmed for the peoples of the world, without distinction of race, sex, language or religion, by the Charter of the United Nations”,

Recognizing that, more than three decades after the founding of UNESCO, these principles are just as significant as they were when they were embodied in its Constitution,

Mindful of the process of decolonization and other historical changes which have led most of the peoples formerly under foreign rule to recover their sovereignty, making the international community a universal and diversified whole and creating new opportunities of eradicating the scourge of racism and of putting an end to its odious manifestations in all aspects of social and political life, both nationally and internationally,

Convinced that the essential unity of the human race and consequently the fundamental equality of all human beings and all peoples, recognized in the loftiest expressions of philosophy, morality and religion, reflect an ideal towards which ethics and science are converging today,

Convinced that all peoples and all human groups, whatever their composition or ethnic origin, contribute according to their own genius to the progress of the civilizations and cultures which, in their plurality and as a result of their interpenetration, constitute the common heritage of mankind,

Confirming its attachment to the principles proclaimed in the United Nations Charter and the Universal Declaration of Human Rights and its determination to promote the implementation of the International Covenants on Human Rights as well as the Declaration on the Establishment of a New International Economic Order,

Determined also to promote the implementation of the United Nations Declaration and the International Convention on the Elimination of All Forms of Racial Discrimination,

Noting the Convention on the Prevention and Punishment of the Crime of Genocide, the International Convention on the Suppression and Punishment of the Crime of Apartheid and the Convention on the Non-Applicability of Statutory Limitations to War Crimes and Crimes against Humanity,

Recalling also the international instruments already adopted by UNESCO, including in particular the Convention and Recommendation against Discrimination in Education, the Recommendation concerning the Status of Teachers, the Declaration of the Principles of International Cultural Co-operation, the Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms, the Recommendations on the Status of Scientific Researchers, and the Recommendation on participation by the people at large in cultural life and their contribution to it,

Bearing in mind the four statements on the race question adopted by experts convened by UNESCO,

Reaffirming its desire to play a vigorous and constructive part in the implementation of the programme of the Decade for Action to Combat Racism and Racial Discrimination, as defined by the General Assembly of the United Nations at its twenty-eighth session,

Noting with the gravest concern that racism, racial discrimination, colonialism and apartheid continue to afflict the world in ever-changing forms, as a result both of the continuation of legislative provisions and government and administrative practices contrary to the principles of human rights and also of the continued existence of political and social structures, and of relationships and attitudes, characterized by injustice and contempt for human beings and leading to the exclusion, humiliation and exploitation, or to the forced assimilation, of the members of disadvantaged groups,

Expressing its indignation at these offences against human dignity, deploring the obstacles they place in the way of mutual understanding between peoples and alarmed at the danger of their seriously disturbing international peace and security,

Adopts and solemnly proclaims this Declaration on Race and Racial Prejudice:

## **Article 1**

1. All human beings belong to a single species and are descended from a common stock. They are born equal in dignity and rights and all form an integral part of humanity.
2. All individuals and groups have the right to be different, to consider themselves as different and to be regarded as such. However, the diversity of life styles and the right to be different may not, in any circumstances, serve as a pretext for racial prejudice; they may not justify either in law or in fact any discriminatory practice whatsoever, nor provide a ground for the policy of apartheid, which is the extreme form of racism.

3. Identity of origin in no way affects the fact that human beings can and may live differently, nor does it preclude the existence of differences based on cultural, environmental and historical diversity nor the right to maintain cultural identity.
4. All peoples of the world possess equal faculties for attaining the highest level in intellectual, technical, social, economic, cultural and political development.
5. The differences between the achievements of the different peoples are entirely attributable to geographical, historical, political, economic, social and cultural factors. Such differences can in no case serve as a pretext for any rank-ordered classification of nations or peoples.

## **Article 2**

1. Any theory which involves the claim that racial or ethnic groups are inherently superior or inferior, thus implying that some would be entitled to dominate or eliminate others, presumed to be inferior, or which bases value judgements on racial differentiation, has no scientific foundation and is contrary to the moral and ethical principles of humanity.
2. Racism includes racist ideologies, prejudiced attitudes, discriminatory behaviour, structural arrangements and institutionalized practices resulting in racial inequality as well as the fallacious notion that discriminatory relations between groups are morally and scientifically justifiable; it is reflected in discriminatory provisions in legislation or regulations and discriminatory practices as well as in anti-social beliefs and acts; it hinders the development of its victims, perverts those who practise it, divides nations internally, impedes international co-operation and gives rise to political tensions between peoples; it is contrary to the fundamental principles of international law and, consequently, seriously disturbs international peace and security.
3. Racial prejudice, historically linked with inequalities in power, reinforced by economic and social differences between individuals and groups, and still seeking today to justify such inequalities, is totally without justification.

## **Article 3**

Any distinction, exclusion, restriction or preference based on race, colour, ethnic or national origin or religious intolerance motivated by racist considerations, which destroys or compromises the sovereign equality of States and the right of peoples to self-determination, or which limits in an arbitrary or discriminatory manner the right of every human being and group to full development is incompatible with the requirements of an international order which is just and guarantees respect for human rights; the right to full development implies equal access to the means of personal and collective advancement and fulfilment in a climate of respect for the values of civilizations and cultures, both national and world-wide.

## **Article 4**

1. Any restriction on the complete self-fulfilment of human beings and free communication between them which is based on racial or ethnic considerations is contrary to the principle of equality in dignity and rights; it cannot be admitted.
2. One of the most serious violations of this principle is represented by apartheid, which, like genocide, is a crime against humanity, and gravely disturbs international peace and security.
3. Other policies and practices of racial segregation and discrimination constitute crimes against the conscience and dignity of mankind and may lead to political tensions and gravely endanger international peace and security.

## Article 5

1. Culture, as a product of all human beings and a common heritage of mankind, and education in its broadest sense, offer men and women increasingly effective means of adaptation, enabling them not only to affirm that they are born equal in dignity and rights, but also to recognize that they should respect the right of all groups to their own cultural identity and the development of their distinctive cultural life within the national and international contexts, it being understood that it rests with each group to decide in complete freedom on the maintenance, and, if appropriate, the adaptation or enrichment of the values which it regards as essential to its identity.
2. States, in accordance with their constitutional principles and procedures, as well as all other competent authorities and the entire teaching profession, have a responsibility to see that the educational resources of all countries are used to combat racism, more especially by ensuring that curricula and textbooks include scientific and ethical considerations concerning human unity and diversity and that no invidious distinctions are made with regard to any people; by training teachers to achieve these ends; by making the resources of the educational system available to all groups of the population without racial restriction or discrimination; and by taking appropriate steps to remedy the handicaps from which certain racial or ethnic groups suffer with regard to their level of education and standard of living and in particular to prevent such handicaps from being passed on to children.
3. The mass media and those who control or serve them, as well as all organized groups within national communities, are urged-with due regard to the principles embodied in the Universal Declaration of Human Rights, particularly the principle of freedom of expression-to promote understanding, tolerance and friendship among individuals and groups and to contribute to the eradication of racism, racial discrimination and racial prejudice, in particular by refraining from presenting a stereotyped, partial, unilateral or tendentious picture of individuals and of various human groups. Communication between racial and ethnic groups must be a reciprocal process, enabling them to express themselves and to be fully heard without let or hindrance. The mass media should therefore be freely receptive to ideas of individuals and groups which facilitate such communication.

## Article 6

1. The State has prime responsibility for ensuring human rights and fundamental freedoms on an entirely equal footing in dignity and rights for all individuals and all groups.
2. So far as its competence extends and in accordance with its constitutional principles and procedures, the State should take all appropriate steps, inter alia by legislation, particularly in the spheres of education, culture and communication, to prevent, prohibit and eradicate racism, racist propaganda, racial segregation and apartheid and to encourage the dissemination of knowledge and the findings of appropriate research in natural and social sciences on the causes and prevention of racial prejudice and racist attitudes with due regard to the principles embodied in the Universal Declaration of Human Rights and in the International Covenant on Civil and Political Rights.
3. Since laws proscribing racial discrimination are not in themselves sufficient, it is also incumbent on States to supplement them by administrative machinery for the systematic investigation of instances of racial discrimination, by a comprehensive framework of legal remedies against acts of racial discrimination, by broadly based education and research programmes designed to combat racial prejudice and racial

discrimination and by programmes of positive political, social, educational and cultural measures calculated to promote genuine mutual respect among groups. Where circumstances warrant, special programmes should be undertaken to promote the advancement of disadvantaged groups and, in the case of nationals, to ensure their effective participation in the decision-making processes of the community.

#### **Article 7**

In addition to political, economic and social measures, law is one of the principal means of ensuring equality in dignity and rights among individuals, and of curbing any propaganda, any form of organization or any practice which is based on ideas or theories referring to the alleged superiority of racial or ethnic groups or which seeks to justify or encourage racial hatred and discrimination in any form. States should adopt such legislation as is appropriate to this end and see that it is given effect and applied by all their services, with due regard to the principles embodied in the Universal Declaration of Human Rights. Such legislation should form part of a political, economic and social framework conducive to its implementation. Individuals and other legal entities, both public and private, must conform with such legislation and use all appropriate means to help the population as a whole to understand and apply it.

#### **Article 8**

1. Individuals, being entitled to an economic, social, cultural and legal order, on the national and international planes, such as to allow them to exercise all their capabilities on a basis of entire equality of rights and opportunities, have corresponding duties towards their fellows, towards the society in which they live and towards the international community. They are accordingly under an obligation to promote harmony among the peoples, to combat racism and racial prejudice and to assist by every means available to them in eradicating racial discrimination in all its forms.
2. In the field of racial prejudice and racist attitudes and practices, specialists in natural and social sciences and cultural studies, as well as scientific organizations and associations, are called upon to undertake objective research on a wide interdisciplinary basis; all States should encourage them to this end.
3. It is, in particular, incumbent upon such specialists to ensure, by all means available to them, that their research findings are not misinterpreted, and also that they assist the public in understanding such findings.

#### **Article 9**

1. The principle of the equality in dignity and rights of all human beings and all peoples, irrespective of race, colour and origin, is a generally accepted and recognized principle of international law. Consequently any form of racial discrimination practised by a State constitutes a violation of international law giving rise to its international responsibility.
2. Special measures must be taken to ensure equality in dignity and rights for individuals and groups wherever necessary, while ensuring that they are not such as to appear racially discriminatory. In this respect, particular attention should be paid to racial or ethnic groups which are socially or economically disadvantaged, so as to afford them, on a completely equal footing and without discrimination or restriction, the protection of the laws and regulations and the advantages of the social measures in force, in particular in regard to housing, employment and health; to respect the authenticity of their culture and values; and to facilitate their social and occupational advancement, especially through education.
3. Population groups of foreign origin, particularly migrant workers and their families who contribute to the development of the host country, should benefit from

appropriate measures designed to afford them security and respect for their dignity and cultural values and to facilitate their adaptation to the host environment and their professional advancement with a view to their subsequent reintegration in their country of origin and their contribution to its development; steps should be taken to make it possible for their children to be taught their mother tongue.

4. Existing disequilibria in international economic relations contribute to the exacerbation of racism and racial prejudice; all States should consequently endeavour to contribute to the restructuring of the international economy on a more equitable basis.

#### **Article 10**

International organizations, whether universal or regional, governmental or non-governmental, are called upon to co-operate and assist, so far as their respective fields of competence and means allow, in the full and complete implementation of the principles set out in this Declaration, thus contributing to the legitimate struggle of all men, born equal in dignity and rights, against the tyranny and oppression of racism, racial segregation, apartheid and genocide, so that all the peoples of the world may be forever delivered from these scourges.

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## **CONVENTION ON THE RIGHTS OF THE CHILD**

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*Adopted and opened for signature, ratification and accession by General Assembly resolution 44/25 of 20 November 1989*

*Entry into force 2 September 1990, in accordance with article 49*

#### **Preamble**

The States Parties to the present Convention,

Considering that, in accordance with the principles proclaimed in the Charter of the United Nations, recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,

Bearing in mind that the peoples of the United Nations have, in the Charter, reaffirmed their faith in fundamental human rights and in the dignity and worth of the human person, and have determined to promote social progress and better standards of life in larger freedom,

Recognizing that the United Nations has, in the Universal Declaration of Human Rights and in the International Covenants on Human Rights, proclaimed and agreed that everyone is entitled to all the rights and freedoms set forth therein, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status,

Recalling that, in the Universal Declaration of Human Rights, the United Nations has proclaimed that childhood is entitled to special care and assistance,

Convinced that the family, as the fundamental group of society and the natural environment for the growth and well-being of all its members and particularly children, should be afforded the necessary protection and assistance so that it can fully assume its responsibilities within the community,

Recognizing that the child, for the full and harmonious development of his or her personality, should grow up in a family environment, in an atmosphere of happiness, love and understanding,

Considering that the child should be fully prepared to live an individual life in society, and brought up in the spirit of the ideals proclaimed in the Charter of the United Nations, and in particular in the spirit of peace, dignity, tolerance, freedom, equality and solidarity,

Bearing in mind that the need to extend particular care to the child has been stated in the Geneva Declaration of the Rights of the Child of 1924 and in the Declaration of the Rights of the Child adopted by the General Assembly on 20 November 1959 and recognized in the Universal Declaration of Human Rights, in the International Covenant on Civil and Political Rights (in particular in articles 23 and 24), in the International Covenant on Economic, Social and Cultural Rights (in particular in article 10) and in the statutes and relevant instruments of specialized agencies and international organizations concerned with the welfare of children,

Bearing in mind that, as indicated in the Declaration of the Rights of the Child, “the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate legal protection, before as well as after birth,”

Recalling the provisions of the Declaration on Social and Legal Principles relating to the Protection and Welfare of Children, with Special Reference to Foster Placement and Adoption Nationally and Internationally; the United Nations Standard Minimum Rules for the Administration of Juvenile Justice (The Beijing Rules); and the Declaration on the Protection of Women and Children in Emergency and Armed Conflict,

Recognizing that, in all countries in the world, there are children living in exceptionally difficult conditions, and that such children need special consideration,

Taking due account of the importance of the traditions and cultural values of each people for the protection and harmonious development of the child,

Recognizing the importance of international co-operation for improving the living conditions of children in every country, in particular in the developing countries, Have agreed as follows:

## **PART I**

### **Article 1**

For the purposes of the present Convention, a child means every human being below the age of eighteen years unless under the law applicable to the child, majority is attained earlier.

### **Article 2**

1. States Parties shall respect and ensure the rights set forth in the present Convention to each child within their jurisdiction without discrimination of any kind, irrespective of the child’s or his or her parent’s or legal guardian’s race, colour, sex, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
2. States Parties shall take all appropriate measures to ensure that the child is protected against all forms of discrimination or punishment on the basis of the status, activities, expressed opinions, or beliefs of the child’s parents, legal guardians, or family members.

### **Article 3**

1. In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.
2. States Parties undertake to ensure the child such protection and care as is necessary for his or her well-being, taking into account the rights and duties of his or her parents, legal guardians, or other individuals legally responsible for him or her, and, to this end, shall take all appropriate legislative and administrative measures.
3. States Parties shall ensure that the institutions, services and facilities responsible for the care or protection of children shall conform with the standards established by

competent authorities, particularly in the areas of safety, health, in the number and suitability of their staff, as well as competent supervision.

#### **Article 4**

States Parties shall undertake all appropriate legislative, administrative, and other measures for the implementation of the rights recognized in the present Convention. With regard to economic, social and cultural rights, States Parties shall undertake such measures to the maximum extent of their available resources and, where needed, within the framework of international co-operation.

#### **Article 5**

States Parties shall respect the responsibilities, rights and duties of parents or, where applicable, the members of the extended family or community as provided for by local custom, legal guardians or other persons legally responsible for the child, to provide, in a manner consistent with the evolving capacities of the child, appropriate direction and guidance in the exercise by the child of the rights recognized in the present Convention.

#### **Article 6**

1. States Parties recognize that every child has the inherent right to life.
2. States Parties shall ensure to the maximum extent possible the survival and development of the child.

#### **Article 7**

1. The child shall be registered immediately after birth and shall have the right from birth to a name, the right to acquire a nationality and, as far as possible, the right to know and be cared for by his or her parents.
2. States Parties shall ensure the implementation of these rights in accordance with their national law and their obligations under the relevant international instruments in this field, in particular where the child would otherwise be stateless.

#### **Article 8**

1. States Parties undertake to respect the right of the child to preserve his or her identity, including nationality, name and family relations as recognized by law without unlawful interference.
2. Where a child is illegally deprived of some or all of the elements of his or her identity, States Parties shall provide appropriate assistance and protection, with a view to re-establishing speedily his or her identity.

#### **Article 9**

1. States Parties shall ensure that a child shall not be separated from his or her parents against their will, except when competent authorities subject to judicial review determine, in accordance with applicable law and procedures, that such separation is necessary for the best interests of the child. Such determination may be necessary in a particular case such as one involving abuse or neglect of the child by the parents, or one where the parents are living separately and a decision must be made as to the child's place of residence.
2. In any proceedings pursuant to paragraph 1 of the present article, all interested parties shall be given an opportunity to participate in the proceedings and make their views known.
3. States Parties shall respect the right of the child who is separated from one or both parents to maintain personal relations and direct contact with both parents on a regular basis, except if it is contrary to the child's best interests.

4. Where such separation results from any action initiated by a State Party, such as the detention, imprisonment, exile, deportation or death (including death arising from any cause while the person is in the custody of the State) of one or both parents or of the child, that State Party shall, upon request, provide the parents, the child or, if appropriate, another member of the family with the essential information concerning the whereabouts of the absent member(s) of the family unless the provision of the information would be detrimental to the well-being of the child. States Parties shall further ensure that the submission of such a request shall of itself entail no adverse consequences for the person(s) concerned.

#### **Article 10**

1. In accordance with the obligation of States Parties under article 9, paragraph 1, applications by a child or his or her parents to enter or leave a State Party for the purpose of family reunification shall be dealt with by States Parties in a positive, humane and expeditious manner. States Parties shall further ensure that the submission of such a request shall entail no adverse consequences for the applicants and for the members of their family.
2. A child whose parents reside in different States shall have the right to maintain on a regular basis, save in exceptional circumstances personal relations and direct contacts with both parents. Towards that end and in accordance with the obligation of States Parties under article 9, paragraph 1, States Parties shall respect the right of the child and his or her parents to leave any country, including their own, and to enter their own country. The right to leave any country shall be subject only to such restrictions as are prescribed by law and which are necessary to protect the national security, public order (*ordre public*), public health or morals or the rights and freedoms of others and are consistent with the other rights recognized in the present Convention.

#### **Article 11**

1. States Parties shall take measures to combat the illicit transfer and non-return of children abroad.
2. To this end, States Parties shall promote the conclusion of bilateral or multilateral agreements or accession to existing agreements.

#### **Article 12**

1. States Parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child.
2. For this purpose, the child shall in particular be provided the opportunity to be heard in any judicial and administrative proceedings affecting the child, either directly, or through a representative or an appropriate body, in a manner consistent with the procedural rules of national law.

#### **Article 13**

1. The child shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of the child's choice.
2. The exercise of this right may be subject to certain restrictions, but these shall only be such as are provided by law and are necessary:
  - (a) For respect of the rights or reputations of others; or

- (b) For the protection of national security or of public order (*ordre public*), or of public health or morals.

#### **Article 14**

1. States Parties shall respect the right of the child to freedom of thought, conscience and religion.
2. States Parties shall respect the rights and duties of the parents and, when applicable, legal guardians, to provide direction to the child in the exercise of his or her right in a manner consistent with the evolving capacities of the child.
3. Freedom to manifest one's religion or beliefs may be subject only to such limitations as are prescribed by law and are necessary to protect public safety, order, health or morals, or the fundamental rights and freedoms of others.

#### **Article 15**

1. States Parties recognize the rights of the child to freedom of association and to freedom of peaceful assembly.
2. No restrictions may be placed on the exercise of these rights other than those imposed in conformity with the law and which are necessary in a democratic society in the interests of national security or public safety, public order (*ordre public*), the protection of public health or morals or the protection of the rights and freedoms of others.

#### **Article 16**

1. No child shall be subjected to arbitrary or unlawful interference with his or her privacy, family, home or correspondence, nor to unlawful attacks on his or her honour and reputation.
2. The child has the right to the protection of the law against such interference or attacks.

#### **Article 17**

States Parties recognize the important function performed by the mass media and shall ensure that the child has access to information and material from a diversity of national and international sources, especially those aimed at the promotion of his or her social, spiritual and moral well-being and physical and mental health. To this end, States Parties shall:

- (a) Encourage the mass media to disseminate information and material of social and cultural benefit to the child and in accordance with the spirit of article 29;
- (b) Encourage international co-operation in the production, exchange and dissemination of such information and material from a diversity of cultural, national and international sources;
- (c) Encourage the production and dissemination of children's books;
- (d) Encourage the mass media to have particular regard to the linguistic needs of the child who belongs to a minority group or who is indigenous;
- (e) Encourage the development of appropriate guidelines for the protection of the child from information and material injurious to his or her well-being, bearing in mind the provisions of articles 13 and 18.

#### **Article 18**

1. States Parties shall use their best efforts to ensure recognition of the principle that both parents have common responsibilities for the upbringing and development of

the child. Parents or, as the case may be, legal guardians, have the primary responsibility for the upbringing and development of the child. The best interests of the child will be their basic concern.

2. For the purpose of guaranteeing and promoting the rights set forth in the present Convention, States Parties shall render appropriate assistance to parents and legal guardians in the performance of their child-rearing responsibilities and shall ensure the development of institutions, facilities and services for the care of children.
3. States Parties shall take all appropriate measures to ensure that children of working parents have the right to benefit from child-care services and facilities for which they are eligible.

#### **Article 19**

1. States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse, while in the care of parent(s), legal guardian(s) or any other person who has the care of the child.
2. Such protective measures should, as appropriate, include effective procedures for the establishment of social programmes to provide necessary support for the child and for those who have the care of the child, as well as for other forms of prevention and for identification, reporting, referral, investigation, treatment and follow-up of instances of child maltreatment described heretofore, and, as appropriate, for judicial involvement.

#### **Article 20**

1. A child temporarily or permanently deprived of his or her family environment, or in whose own best interests cannot be allowed to remain in that environment, shall be entitled to special protection and assistance provided by the State.
2. States Parties shall in accordance with their national laws ensure alternative care for such a child.
3. Such care could include, inter alia, foster placement, kafalah of Islamic law, adoption or if necessary placement in suitable institutions for the care of children. When considering solutions, due regard shall be paid to the desirability of continuity in a child's upbringing and to the child's ethnic, religious, cultural and linguistic background.

#### **Article 21**

States Parties that recognize and/or permit the system of adoption shall ensure that the best interests of the child shall be the paramount consideration and they shall:

- (a) Ensure that the adoption of a child is authorized only by competent authorities who determine, in accordance with applicable law and procedures and on the basis of all pertinent and reliable information, that the adoption is permissible in view of the child's status concerning parents, relatives and legal guardians and that, if required, the persons concerned have given their informed consent to the adoption on the basis of such counselling as may be necessary;
- (b) Recognize that inter-country adoption may be considered as an alternative means of child's care, if the child cannot be placed in a foster or an adoptive family or cannot in any suitable manner be cared for in the child's country of origin;
- (c) Ensure that the child concerned by inter-country adoption enjoys safeguards and standards equivalent to those existing in the case of national adoption;

- (d) Take all appropriate measures to ensure that, in inter-country adoption, the placement does not result in improper financial gain for those involved in it;
- (e) Promote, where appropriate, the objectives of the present article by concluding bilateral or multilateral arrangements or agreements, and endeavour, within this framework, to ensure that the placement of the child in another country is carried out by competent authorities or organs.

#### **Article 22**

1. States Parties shall take appropriate measures to ensure that a child who is seeking refugee status or who is considered a refugee in accordance with applicable international or domestic law and procedures shall, whether unaccompanied or accompanied by his or her parents or by any other person, receive appropriate protection and humanitarian assistance in the enjoyment of applicable rights set forth in the present Convention and in other international human rights or humanitarian instruments to which the said States are Parties.
2. For this purpose, States Parties shall provide, as they consider appropriate, co-operation in any efforts by the United Nations and other competent intergovernmental organizations or non-governmental organizations co-operating with the United Nations to protect and assist such a child and to trace the parents or other members of the family of any refugee child in order to obtain information necessary for reunification with his or her family. In cases where no parents or other members of the family can be found, the child shall be accorded the same protection as any other child permanently or temporarily deprived of his or her family environment for any reason, as set forth in the present Convention.

#### **Article 23**

1. States Parties recognize that a mentally or physically disabled child should enjoy a full and decent life, in conditions which ensure dignity, promote self-reliance and facilitate the child's active participation in the community.
2. States Parties recognize the right of the disabled child to special care and shall encourage and ensure the extension, subject to available resources, to the eligible child and those responsible for his or her care, of assistance for which application is made and which is appropriate to the child's condition and to the circumstances of the parents or others caring for the child.
3. Recognizing the special needs of a disabled child, assistance extended in accordance with paragraph 2 of the present article shall be provided free of charge, whenever possible, taking into account the financial resources of the parents or others caring for the child, and shall be designed to ensure that the disabled child has effective access to and receives education, training, health care services, rehabilitation services, preparation for employment and recreation opportunities in a manner conducive to the child's achieving the fullest possible social integration and individual development, including his or her cultural and spiritual development.
4. States Parties shall promote, in the spirit of international cooperation, the exchange of appropriate information in the field of preventive health care and of medical, psychological and functional treatment of disabled children, including dissemination of and access to information concerning methods of rehabilitation, education and vocational services, with the aim of enabling States Parties to improve their capabilities and skills and to widen their experience in these areas. In this regard, particular account shall be taken of the needs of developing countries.

**Article 24**

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
  - (a) To diminish infant and child mortality;
  - (b) To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care;
  - (c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;
  - (d) To ensure appropriate pre-natal and post-natal health care for mothers;
  - (e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents;
  - (f) To develop preventive health care, guidance for parents and family planning education and services.
3. States Parties shall take all effective and appropriate measures with a view to abolishing traditional practices prejudicial to the health of children.
4. States Parties undertake to promote and encourage international co-operation with a view to achieving progressively the full realization of the right recognized in the present article. In this regard, particular account shall be taken of the needs of developing countries.

**Article 25**

States Parties recognize the right of a child who has been placed by the competent authorities for the purposes of care, protection or treatment of his or her physical or mental health, to a periodic review of the treatment provided to the child and all other circumstances relevant to his or her placement.

**Article 26**

1. States Parties shall recognize for every child the right to benefit from social security, including social insurance, and shall take the necessary measures to achieve the full realization of this right in accordance with their national law.
2. The benefits should, where appropriate, be granted, taking into account the resources and the circumstances of the child and persons having responsibility for the maintenance of the child, as well as any other consideration relevant to an application for benefits made by or on behalf of the child.

**Article 27**

1. States Parties recognize the right of every child to a standard of living adequate for the child's physical, mental, spiritual, moral and social development.
2. The parent(s) or others responsible for the child have the primary responsibility to secure, within their abilities and financial capacities, the conditions of living necessary for the child's development.

3. States Parties, in accordance with national conditions and within their means, shall take appropriate measures to assist parents and others responsible for the child to implement this right and shall in case of need provide material assistance and support programmes, particularly with regard to nutrition, clothing and housing.
4. States Parties shall take all appropriate measures to secure the recovery of maintenance for the child from the parents or other persons having financial responsibility for the child, both within the State Party and from abroad. In particular, where the person having financial responsibility for the child lives in a State different from that of the child, States Parties shall promote the accession to international agreements or the conclusion of such agreements, as well as the making of other appropriate arrangements.

#### **Article 28**

1. States Parties recognize the right of the child to education, and with a view to achieving this right progressively and on the basis of equal opportunity, they shall, in particular:
  - (a) Make primary education compulsory and available free to all;
  - (b) Encourage the development of different forms of secondary education, including general and vocational education, make them available and accessible to every child, and take appropriate measures such as the introduction of free education and offering financial assistance in case of need;
  - (c) Make higher education accessible to all on the basis of capacity by every appropriate means;
  - (d) Make educational and vocational information and guidance available and accessible to all children;
  - (e) Take measures to encourage regular attendance at schools and the reduction of drop-out rates.
2. States Parties shall take all appropriate measures to ensure that school discipline is administered in a manner consistent with the child's human dignity and in conformity with the present Convention.
3. States Parties shall promote and encourage international cooperation in matters relating to education, in particular with a view to contributing to the elimination of ignorance and illiteracy throughout the world and facilitating access to scientific and technical knowledge and modern teaching methods. In this regard, particular account shall be taken of the needs of developing countries.

#### **Article 29**

1. States Parties agree that the education of the child shall be directed to:
  - (a) The development of the child's personality, talents and mental and physical abilities to their fullest potential;
  - (b) The development of respect for human rights and fundamental freedoms, and for the principles enshrined in the Charter of the United Nations;
  - (c) The development of respect for the child's parents, his or her own cultural identity, language and values, for the national values of the country in which the child is living, the country from which he or she may originate, and for civilizations different from his or her own;
  - (d) The preparation of the child for responsible life in a free society, in the spirit of understanding, peace, tolerance, equality of sexes, and friendship among all peoples, ethnic, national and religious groups and persons of indigenous origin;

- (e) The development of respect for the natural environment.
2. No part of the present article or article 28 shall be construed so as to interfere with the liberty of individuals and bodies to establish and direct educational institutions, subject always to the observance of the principle set forth in paragraph 1 of the present article and to the requirements that the education given in such institutions shall conform to such minimum standards as may be laid down by the State.

### **Article 30**

In those States in which ethnic, religious or linguistic minorities or persons of indigenous origin exist, a child belonging to such a minority or who is indigenous shall not be denied the right, in community with other members of his or her group, to enjoy his or her own culture, to profess and practise his or her own religion, or to use his or her own language.

### **Article 31**

1. States Parties recognize the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life and the arts.
2. States Parties shall respect and promote the right of the child to participate fully in cultural and artistic life and shall encourage the provision of appropriate and equal opportunities for cultural, artistic, recreational and leisure activity.

### **Article 32**

States Parties recognize the right of the child to be protected from economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.

States Parties shall take legislative, administrative, social and educational measures to ensure the implementation of the present article. To this end, and having regard to the relevant provisions of other international instruments, States Parties shall in particular:

- (a) Provide for a minimum age or minimum ages for admission to employment;
- (b) Provide for appropriate regulation of the hours and conditions of employment;
- (c) Provide for appropriate penalties or other sanctions to ensure the effective enforcement of the present article.

### **Article 33**

States Parties shall take all appropriate measures, including legislative, administrative, social and educational measures, to protect children from the illicit use of narcotic drugs and psychotropic substances as defined in the relevant international treaties, and to prevent the use of children in the illicit production and trafficking of such substances.

### **Article 34**

States Parties undertake to protect the child from all forms of sexual exploitation and sexual abuse. For these purposes, States Parties shall in particular take all appropriate national, bilateral and multilateral measures to prevent:

- (a) The inducement or coercion of a child to engage in any unlawful sexual activity;
- (b) The exploitative use of children in prostitution or other unlawful sexual practices;
- (c) The exploitative use of children in pornographic performances and materials.

**Article 35**

States Parties shall take all appropriate national, bilateral and multilateral measures to prevent the abduction of, the sale of or traffic in children for any purpose or in any form.

**Article 36**

States Parties shall protect the child against all other forms of exploitation prejudicial to any aspects of the child's welfare.

**Article 37**

States Parties shall ensure that:

- (a) No child shall be subjected to torture or other cruel, inhuman or degrading treatment or punishment. Neither capital punishment nor life imprisonment without possibility of release shall be imposed for offences committed by persons below eighteen years of age;
- (b) No child shall be deprived of his or her liberty unlawfully or arbitrarily. The arrest, detention or imprisonment of a child shall be in conformity with the law and shall be used only as a measure of last resort and for the shortest appropriate period of time;
- (c) Every child deprived of liberty shall be treated with humanity and respect for the inherent dignity of the human person, and in a manner which takes into account the needs of persons of his or her age. In particular, every child deprived of liberty shall be separated from adults unless it is considered in the child's best interest not to do so and shall have the right to maintain contact with his or her family through correspondence and visits, save in exceptional circumstances;
- (d) Every child deprived of his or her liberty shall have the right to prompt access to legal and other appropriate assistance, as well as the right to challenge the legality of the deprivation of his or her liberty before a court or other competent, independent and impartial authority, and to a prompt decision on any such action.

**Article 38**

1. States Parties undertake to respect and to ensure respect for rules of international humanitarian law applicable to them in armed conflicts which are relevant to the child.
2. States Parties shall take all feasible measures to ensure that persons who have not attained the age of fifteen years do not take a direct part in hostilities.
3. States Parties shall refrain from recruiting any person who has not attained the age of fifteen years into their armed forces. In recruiting among those persons who have attained the age of fifteen years but who have not attained the age of eighteen years, States Parties shall endeavour to give priority to those who are oldest.
4. In accordance with their obligations under international humanitarian law to protect the civilian population in armed conflicts, States Parties shall take all feasible measures to ensure protection and care of children who are affected by an armed conflict.

**Article 39**

States Parties shall take all appropriate measures to promote physical and psychological recovery and social reintegration of a child victim of: any form of neglect, exploitation, or abuse; torture or any other form of cruel, inhuman or degrading treatment or punishment; or armed conflicts. Such recovery and reintegration shall take place in an environment which fosters the health, self-respect and dignity of the child.

**Article 40**

1. States Parties recognize the right of every child alleged as, accused of, or recognized as having infringed the penal law to be treated in a manner consistent with the promotion of the child's sense of dignity and worth, which reinforces the child's respect for the human rights and fundamental freedoms of others and which takes into account the child's age and the desirability of promoting the child's reintegration and the child's assuming a constructive role in society.
2. To this end, and having regard to the relevant provisions of international instruments, States Parties shall, in particular, ensure that:
  - (a) No child shall be alleged as, be accused of, or recognized as having infringed the penal law by reason of acts or omissions that were not prohibited by national or international law at the time they were committed;
  - (b) Every child alleged as or accused of having infringed the penal law has at least the following guarantees:
    - (i) To be presumed innocent until proven guilty according to law;
    - (ii) To be informed promptly and directly of the charges against him or her, and, if appropriate, through his or her parents or legal guardians, and to have legal or other appropriate assistance in the preparation and presentation of his or her defence;
    - (iii) To have the matter determined without delay by a competent, independent and impartial authority or judicial body in a fair hearing according to law, in the presence of legal or other appropriate assistance and, unless it is considered not to be in the best interest of the child, in particular, taking into account his or her age or situation, his or her parents or legal guardians;
    - (iv) Not to be compelled to give testimony or to confess guilt; to examine or have examined adverse witnesses and to obtain the participation and examination of witnesses on his or her behalf under conditions of equality;
    - (v) If considered to have infringed the penal law, to have this decision and any measures imposed in consequence thereof reviewed by a higher competent, independent and impartial authority or judicial body according to law;
    - (vi) To have the free assistance of an interpreter if the child cannot understand or speak the language used;
    - (vii) To have his or her privacy fully respected at all stages of the proceedings.
3. States Parties shall seek to promote the establishment of laws, procedures, authorities and institutions specifically applicable to children alleged as, accused of, or recognized as having infringed the penal law, and, in particular:
  - (a) The establishment of a minimum age below which children shall be presumed not to have the capacity to infringe the penal law;
  - (b) Whenever appropriate and desirable, measures for dealing with such children without resorting to judicial proceedings, providing that human rights and legal safeguards are fully respected.
4. A variety of dispositions, such as care, guidance and supervision orders; counselling; probation; foster care; education and vocational training programmes and other alternatives to institutional care shall be available to ensure that children are dealt with in a manner appropriate to their well-being and proportionate both to their circumstances and the offence.

**Article 41**

Nothing in the present Convention shall affect any provisions which are more conducive to the realization of the rights of the child and which may be contained in:

- (a) The law of a State party; or
- (b) International law in force for that State.

**PART II****Article 42**

States Parties undertake to make the principles and provisions of the Convention widely known, by appropriate and active means, to adults and children alike.

**Article 43**

1. For the purpose of examining the progress made by States Parties in achieving the realization of the obligations undertaken in the present Convention, there shall be established a Committee on the Rights of the Child, which shall carry out the functions hereinafter provided.
2. The Committee shall consist of ten experts of high moral standing and recognized competence in the field covered by this Convention. The members of the Committee shall be elected by States Parties from among their nationals and shall serve in their personal capacity, consideration being given to equitable geographical distribution, as well as to the principal legal systems.
3. The members of the Committee shall be elected by secret ballot from a list of persons nominated by States Parties. Each State Party may nominate one person from among its own nationals.
4. The initial election to the Committee shall be held no later than six months after the date of the entry into force of the present Convention and thereafter every second year. At least four months before the date of each election, the Secretary-General of the United Nations shall address a letter to States Parties inviting them to submit their nominations within two months. The Secretary-General shall subsequently prepare a list in alphabetical order of all persons thus nominated, indicating States Parties which have nominated them, and shall submit it to the States Parties to the present Convention.
5. The elections shall be held at meetings of States Parties convened by the Secretary-General at United Nations Headquarters. At those meetings, for which two thirds of States Parties shall constitute a quorum, the persons elected to the Committee shall be those who obtain the largest number of votes and an absolute majority of the votes of the representatives of States Parties present and voting.
6. The members of the Committee shall be elected for a term of four years. They shall be eligible for re-election if renominated. The term of five of the members elected at the first election shall expire at the end of two years; immediately after the first election, the names of these five members shall be chosen by lot by the Chairman of the meeting.
7. If a member of the Committee dies or resigns or declares that for any other cause he or she can no longer perform the duties of the Committee, the State Party which nominated the member shall appoint another expert from among its nationals to serve for the remainder of the term, subject to the approval of the Committee.
8. The Committee shall establish its own rules of procedure.
9. The Committee shall elect its officers for a period of two years.

10. The meetings of the Committee shall normally be held at United Nations Headquarters or at any other convenient place as determined by the Committee. The Committee shall normally meet annually. The duration of the meetings of the Committee shall be determined, and reviewed, if necessary, by a meeting of the States Parties to the present Convention, subject to the approval of the General Assembly.
11. The Secretary-General of the United Nations shall provide the necessary staff and facilities for the effective performance of the functions of the Committee under the present Convention.
12. With the approval of the General Assembly, the members of the Committee established under the present Convention shall receive emoluments from United Nations resources on such terms and conditions as the Assembly may decide.

#### **Article 44**

1. States Parties undertake to submit to the Committee, through the Secretary-General of the United Nations, reports on the measures they have adopted which give effect to the rights recognized herein and on the progress made on the enjoyment of those rights:
  - (a) Within two years of the entry into force of the Convention for the State Party concerned;
  - (b) Thereafter every five years.
2. Reports made under the present article shall indicate factors and difficulties, if any, affecting the degree of fulfilment of the obligations under the present Convention. Reports shall also contain sufficient information to provide the Committee with a comprehensive understanding of the implementation of the Convention in the country concerned.
3. A State Party which has submitted a comprehensive initial report to the Committee need not, in its subsequent reports submitted in accordance with paragraph 1 (b) of the present article, repeat basic information previously provided.
4. The Committee may request from States Parties further information relevant to the implementation of the Convention.
5. The Committee shall submit to the General Assembly, through the Economic and Social Council, every two years, reports on its activities.
6. States Parties shall make their reports widely available to the public in their own countries.

#### **Article 45**

In order to foster the effective implementation of the Convention and to encourage international co-operation in the field covered by the Convention:

- (a) The specialized agencies, the United Nations Children's Fund, and other United Nations organs shall be entitled to be represented at the consideration of the implementation of such provisions of the present Convention as fall within the scope of their mandate. The Committee may invite the specialized agencies, the United Nations Children's Fund and other competent bodies as it may consider appropriate to provide expert advice on the implementation of the Convention in areas falling within the scope of their respective mandates. The Committee may invite the specialized agencies, the United Nations Children's Fund, and other United Nations organs to submit reports on the implementation of the Convention in areas falling within the scope of their activities;
- (b) The Committee shall transmit, as it may consider appropriate, to the specialized agencies, the United Nations Children's Fund and other competent bodies, any

reports from States Parties that contain a request, or indicate a need, for technical advice or assistance, along with the Committee's observations and suggestions, if any, on these requests or indications;

- (c) The Committee may recommend to the General Assembly to request the Secretary-General to undertake on its behalf studies on specific issues relating to the rights of the child;
- (d) The Committee may make suggestions and general recommendations based on information received pursuant to articles 44 and 45 of the present Convention. Such suggestions and general recommendations shall be transmitted to any State Party concerned and reported to the General Assembly, together with comments, if any, from States Parties.

### **PART III**

#### **Article 46**

The present Convention shall be open for signature by all States.

#### **Article 47**

The present Convention is subject to ratification. Instruments of ratification shall be deposited with the Secretary-General of the United Nations.

#### **Article 48**

The present Convention shall remain open for accession by any State. The instruments of accession shall be deposited with the Secretary-General of the United Nations.

#### **Article 49**

1. The present Convention shall enter into force on the thirtieth day following the date of deposit with the Secretary-General of the United Nations of the twentieth instrument of ratification or accession.
2. For each State ratifying or acceding to the Convention after the deposit of the twentieth instrument of ratification or accession, the Convention shall enter into force on the thirtieth day after the deposit by such State of its instrument of ratification or accession.

#### **Article 50**

1. Any State Party may propose an amendment and file it with the Secretary-General of the United Nations. The Secretary-General shall thereupon communicate the proposed amendment to States Parties, with a request that they indicate whether they favour a conference of States Parties for the purpose of considering and voting upon the proposals. In the event that, within four months from the date of such communication, at least one third of the States Parties favour such a conference, the Secretary-General shall convene the conference under the auspices of the United Nations. Any amendment adopted by a majority of States Parties present and voting at the conference shall be submitted to the General Assembly for approval.
2. An amendment adopted in accordance with paragraph 1 of the present article shall enter into force when it has been approved by the General Assembly of the United Nations and accepted by a two-thirds majority of States Parties.
3. When an amendment enters into force, it shall be binding on those States Parties which have accepted it, other States Parties still being bound by the provisions of the present Convention and any earlier amendments which they have accepted.

**Article 51**

1. The Secretary-General of the United Nations shall receive and circulate to all States the text of reservations made by States at the time of ratification or accession.
2. A reservation incompatible with the object and purpose of the present Convention shall not be permitted.
3. Reservations may be withdrawn at any time by notification to that effect addressed to the Secretary-General of the United Nations, who shall then inform all States. Such notification shall take effect on the date on which it is received by the Secretary-General.

**Article 52**

A State Party may denounce the present Convention by written notification to the Secretary-General of the United Nations. Denunciation becomes effective one year after the date of receipt of the notification by the Secretary-General.

**Article 53**

The Secretary-General of the United Nations is designated as the depositary of the present Convention.

**Article 54**

The original of the present Convention, of which the Arabic, Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations.

IN WITNESS THEREOF the undersigned plenipotentiaries, being duly authorized thereto by their respective governments, have signed the present Convention.

## **DOCUMENT OF THE COPENHAGEN MEETING OF THE CONFERENCE ON THE HUMAN DIMENSION OF THE CONFERENCE ON SECURITY AND CO-OPERATION IN EUROPE**

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### **COPENHAGEN 1990**

The representatives of the participating States of the Conference on Security and Co-operation in Europe (CSCE), Austria, Belgium, Bulgaria, Canada, Cyprus, Czechoslovakia, Denmark, Finland, France, the German Democratic Republic, the Federal Republic of Germany, Greece, the Holy See, Hungary, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Monaco, the Netherlands, Norway, Poland, Portugal, Romania, San Marino, Spain, Sweden, Switzerland, Turkey, the Union of Soviet Socialist Republics, the United Kingdom, the United States of America and Yugoslavia, met in Copenhagen from 5 to 29 June 1990, in accordance with the provisions relating to the Conference on the Human Dimension of the CSCE contained in the Concluding Document of the Vienna Follow-up Meeting of the CSCE.

The representative of eting was opened and closed by the Minister for Foreign Affairs of Denmark Albania attended the Copenhagen Meeting as observer.

The first Meeting of the Conference was held in Paris from 30 May to 23 June 1989.

The Copenhagen Meeting was opened and closed by the Minister for Foreign Affairs of Denmark.

The formal opening of the Copenhagen Meeting was attended by Her Majesty the Queen of Denmark and His Royal Highness the Prince Consort.

Opening statements were made by Ministers and Deputy Ministers of the participating States.

At a special meeting of the Ministers for Foreign Affairs of the participating States of the CSCE on 5 June 1990, convened on the invitation of the Minister for Foreign Affairs of Denmark, it was agreed to convene a Preparatory Committee in Vienna on 10 July 1990 to prepare a Summit Meeting in Paris of their Heads of State or Government.

The participating States welcome with great satisfaction the fundamental political changes that have occurred in Europe since the first Meeting of the Conference on the Human Dimension of the CSCE in Paris in 1989. They note that the CSCE process has contributed significantly to bringing about these changes and that these developments in turn have greatly advanced the implementation of the provisions of the Final Act and of the other CSCE documents.

They recognize that pluralistic democracy and the rule of law are essential for ensuring respect for all human rights and fundamental freedoms, the development of human contacts and the resolution of other issues of a related humanitarian character. They therefore welcome the commitment expressed by all participating States to the ideals of democracy and political pluralism as well as their common determination to build democratic societies based on free elections and the rule of law.

At the Copenhagen Meeting the participating States held a review of the implementation of their commitments in the field of the human dimension. They considered that the degree of compliance with the commitments contained in the relevant provisions of the CSCE documents had shown a fundamental improvement since the Paris Meeting. They also expressed the view, however, that further steps are required for the full realization of their commitments relating to the human dimension.

The participating States express their conviction that full respect for human rights and fundamental freedoms and the development of societies based on pluralistic democracy and the rule of law are prerequisites for progress in setting up the lasting order of peace, security, justice and co-operation that they seek to establish in Europe. They therefore reaffirm their commitment to implement fully all provisions of the Final Act and of the other CSCE documents relating to the human dimension and undertake to build on the progress they have made.

They recognize that co-operation among themselves, as well as the active involvement of persons, groups, organizations and institutions, will be essential to ensure continuing progress towards their shared objectives.

In order to strengthen respect for, and enjoyment of, human rights and fundamental freedoms, to develop human contacts and to resolve issues of a related humanitarian character, the participating States agree on the following:

## I

(1). The participating States express their conviction that the protection and promotion of human rights and fundamental freedoms is one of the basic purposes of government, and reaffirm that the recognition of these rights and freedoms constitutes the foundation of freedom, justice and peace.

(2). They are determined to support and advance those principles of justice which form the basis of the rule of law. They consider that the rule of law does not mean merely a formal legality which assures regularity and consistency in the achievement and enforcement of democratic order, but justice based on the recognition and full acceptance of the supreme value of the human personality and guaranteed by institutions providing a framework for its fullest expression.

(3). They reaffirm that democracy is an inherent element of the rule of law. They recognize the importance of pluralism with regard to political organizations.

(4). They confirm that they will respect each others right freely to choose and develop, in accordance with international human rights standards, their political, social, economic and cultural systems. In exercising this right, they will ensure that their laws, regulations, practices and policies conform with their obligations under international law and are brought into harmony with the provisions of the Declaration on Principles and other CSCE commitments.

(5). They solemnly declare that among those elements of justice which are essential to the full expression of the inherent dignity and of the equal and inalienable rights of all human beings are the following:

(5.1). free elections that will be held at reasonable intervals by secret ballot or by equivalent free voting procedure, under conditions which ensure in practice the free expression of the opinion of the electors in the choice of their representatives;

(5.2). a form of government that is representative in character, in which the executive is accountable to the elected legislature or the electorate;

(5.3). the duty of the government and public authorities to comply with the constitution and to act in a manner consistent with law;

(5.4). a clear separation between the State and political parties; in particular, political parties will not be merged with the State;

(5.5). the activity of the government and the administration as well as that of the judiciary will be exercised in accordance with the system established by law. Respect for that system must be ensured;

(5.6). military forces and the police will be under the control of, and accountable to, the civil authorities;

(5.7). human rights and fundamental freedoms will be guaranteed by law and in accordance with their obligations under international law;

(5.8). legislation, adopted at the end of a public procedure, and regulations will be published, that being the condition for their applicability. Those texts will be accessible to everyone;

(5.9). all persons are equal before the law and are entitled without any discrimination to the equal protection of the law. In this respect, the law will prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any ground;

(5.10). everyone will have an effective means of redress against administrative decisions, so as to guarantee respect for fundamental rights and ensure legal integrity;

(5.11). administrative decisions against a person must be fully justifiable and must as a rule indicate the usual remedies available;

(5.12). the independence of judges and the impartial operation of the public judicial service will be ensured;

(5.13). the independence of legal practitioners will be recognized and protected, in particular as regards conditions for recruitment and practice;

(5.14). the rules relating to criminal procedure will contain a clear definition of powers in relation to prosecution and the measures preceding and accompanying prosecution;

(5.15). any person arrested or detained on a criminal charge will have the right, so that the lawfulness of his arrest or detention can be decided, to be brought promptly before a judge or other officer authorized by law to exercise this function;

(5.16). in the determination of any criminal charge against him, or of his rights and obligations in a suit at law, everyone will be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law;

(5.17). any person prosecuted will have the right to defend himself in person or through prompt legal assistance of his own choosing or, if he does not have sufficient means to pay for legal assistance, to be given it free when the interests of justice so require;

(5.18). no one will be charged with, tried for or convicted of any criminal offence unless the offence is provided for by a law which defines the elements of the offence with clarity and precision;

(5.19). everyone will be presumed innocent until proved guilty according to law;

(5.20). considering the important contribution of international instruments in the field of human rights to the rule of law at a national level, the participating States reaffirm that they will consider acceding to the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights and other relevant international instruments, if they have not yet done so;

(5.21). in order to supplement domestic remedies and better to ensure that the participating States respect the international obligations they have undertaken, the participating States will consider acceding to a regional or global international convention concerning the protection of human rights, such as the European Convention on Human Rights or the Optional Protocol to the International Covenant on Civil and Political Rights, which provide for procedures of individual recourse to international bodies.

(6). The participating States declare that the will of the people, freely and fairly expressed through periodic and genuine elections, is the basis of the authority and legitimacy of all government. The participating States will accordingly respect the right of their citizens to take part in the governing of their country, either directly or through representatives freely chosen by them through fair electoral processes. They recognize their responsibility to defend and protect, in accordance with their laws, their international human rights obligations and their international commitments, the democratic order freely established through the will of the people against the activities of persons, groups or organizations that engage in or refuse to renounce terrorism or violence aimed at the overthrow of that order or of that of another participating State.

(7). To ensure that the will of the people serves as the basis of the authority of government, the participating States will

(7.1). hold free elections at reasonable intervals, as established by law;

(7.2). permit all seats in at least one chamber of the national legislature to be freely contested in a popular vote;

(7.3). guarantee universal and equal suffrage to adult citizens;

(7.4). ensure that votes are cast by secret ballot or by equivalent free voting procedure, and that they are counted and reported honestly with the official results made public;

(7.5). respect the right of citizens to seek political or public office, individually or as representatives of political parties or organizations, without discrimination;

(7.6). respect the right of individuals and groups to establish, in full freedom, their own political parties or other political organizations and provide such political parties and organizations with the necessary legal guarantees to enable them to compete with each other on a basis of equal treatment before the law and by the authorities;

(7.7). ensure that law and public policy work to permit political campaigning to be conducted in a fair and free atmosphere in which neither administrative action, violence nor intimidation bars the parties and the candidates from freely presenting their views and qualifications, or

prevents the voters from learning and discussing them or from casting their vote free of fear of retribution;

(7.8). provide that no legal or administrative obstacle stands in the way of unimpeded access to the media on a non-discriminatory basis for all political groupings and individuals wishing to participate in the electoral process;

(7.9). ensure that candidates who obtain the necessary number of votes required by law are duly installed in office and are permitted to remain in office until their term expires or is otherwise brought to an end in a manner that is regulated by law in conformity with democratic parliamentary and constitutional procedures.

(8). The participating States consider that the presence of observers, both foreign and domestic, can enhance the electoral process for States in which elections are taking place. They therefore invite observers from any other CSCE participating States and any appropriate private institutions and organizations who may wish to do so to observe the course of their national election proceedings, to the extent permitted by law. They will also endeavour to facilitate similar access for election proceedings held below the national level. Such observers will undertake not to interfere in the electoral proceedings.

## II

(9). The participating States reaffirm that

(9.1). everyone will have the right to freedom of expression including the right to communication. This right will include freedom to hold opinions and to receive and impart information and ideas without interference by public authority and regardless of frontiers. The exercise of this right may be subject only to such restrictions as are prescribed by law and are consistent with international standards. In particular, no limitation will be imposed on access to, and use of, means of reproducing documents of any kind, while respecting, however, rights relating to intellectual property, including copyright;

(9.2). everyone will have the right of peaceful assembly and demonstration. Any restrictions which may be placed on the exercise of these rights will be prescribed by law and consistent with international standards;

(9.3). the right of association will be guaranteed. The right to form and subject to the general right of a trade union to determine its own membership freely to join a trade union will be guaranteed. These rights will exclude any prior control. Freedom of association for workers, including the freedom to strike, will be guaranteed, subject to limitations prescribed by law and consistent with international standards;

(9.4). everyone will have the right to freedom of thought, conscience and religion. This right includes freedom to change ones religion or belief and freedom to manifest ones religion or belief, either alone or in community with others, in public or in private, through worship, teaching, practice and observance. The exercise of these rights may be subject only to such restrictions as are prescribed by law and are consistent with international standards;

(9.5). they will respect the right of everyone to leave any country, including his own, and to return to his country, consistent with a States international obligations and CSCE commitments. Restrictions on this right will have the character of very rare exceptions, will be considered necessary only if they respond to a specific public need, pursue a legitimate aim and are proportionate to that aim, and will not be abused or applied in an arbitrary manner;

(9.6). everyone has the right peacefully to enjoy his property either on his own or in common with others. No one may be deprived of his property except in the public interest and subject to the conditions provided for by law and consistent with international commitments and obligations.

(10). In reaffirming their commitment to ensure effectively the rights of the individual to know and act upon human rights and fundamental freedoms, and to contribute actively, individually

or in association with others, to their promotion and protection, the participating States express their commitment to

(10.1). respect the right of everyone, individually or in association with others, to seek, receive and impart freely views and information on human rights and fundamental freedoms, including the rights to disseminate and publish such views and information;

(10.2). respect the rights of everyone, individually or in association with others, to study and discuss the observance of human rights and fundamental freedoms and to develop and discuss ideas for improved protection of human rights and better means for ensuring compliance with international human rights standards;

(10.3). ensure that individuals are permitted to exercise the right to association, including the right to form, join and participate effectively in non-governmental organizations which seek the promotion and protection of human rights and fundamental freedoms, including trade unions and human rights monitoring groups;

(10.4). allow members of such groups and organizations to have unhindered access to and communication with similar bodies within and outside their countries and with international organizations, to engage in exchanges, contacts and co-operation with such groups and organizations and to solicit, receive and utilize for the purpose of promoting and protecting human rights and fundamental freedoms voluntary financial contributions from national and international sources as provided for by law.

(11). The participating States further affirm that, where violations of human rights and fundamental freedoms are alleged to have occurred, the effective remedies available include

(11.1). the right of the individual to seek and receive adequate legal assistance;

(11.2). the right of the individual to seek and receive assistance from others in defending human rights and fundamental freedoms, and to assist others in defending human rights and fundamental freedoms;

(11.3). the right of individuals or groups acting on their behalf to communicate with international bodies with competence to receive and consider information concerning allegations of human rights abuses.

(12). The participating States, wishing to ensure greater transparency in the implementation of the commitments undertaken in the Vienna Concluding Document under the heading of the human dimension of the CSCE, decide to accept as a confidence-building measure the presence of observers sent by participating States and representatives of non-governmental organizations and other interested persons at proceedings before courts as provided for in national legislation and international law; it is understood that proceedings may only be held *in camera* in the circumstances prescribed by law and consistent with obligations under international law and international commitments.

(13). The participating States decide to accord particular attention to the recognition of the rights of the child, his civil rights and his individual freedoms, his economic, social and cultural rights, and his right to special protection against all forms of violence and exploitation. They will consider acceding to the Convention on the Rights of the Child, if they have not yet done so, which was opened for signature by States on 26 January 1990. They will recognize in their domestic legislation the rights of the child as affirmed in the international agreements to which they are Parties.

(14). The participating States agree to encourage the creation, within their countries, of conditions for the training of students and trainees from other participating States, including persons taking vocational and technical courses. They also agree to promote travel by young people from their countries for the purpose of obtaining education in other participating States and to that end to encourage the conclusion, where appropriate, of bilateral and multi-

lateral agreements between their relevant governmental institutions, organizations and educational establishments.

(15). The participating States will act in such a way as to facilitate the transfer of sentenced persons and encourage those participating States which are not Parties to the Convention on the Transfer of Sentenced Persons, signed at Strasbourg on 21 November 1983, to consider acceding to the Convention.

(16). The participating States

(16.1). reaffirm their commitment to prohibit torture and other cruel, inhuman or degrading treatment or punishment, to take effective legislative, administrative, judicial and other measures to prevent and punish such practices, to protect individuals from any psychiatric or other medical practices that violate human rights and fundamental freedoms and to take effective measures to prevent and punish such practices;

(16.2). intend, as a matter of urgency, to consider acceding to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, if they have not yet done so, and recognizing the competences of the Committee against Torture under articles 21 and 22 of the Convention and withdrawing reservations regarding the competence of the Committee under article 20;

(16.3). stress that no exceptional circumstances whatsoever, whether a state of war or a threat of war, internal political instability or any other public emergency, may be invoked as a justification of torture;

(16.4). will ensure that education and information regarding the prohibition against torture are fully included in the training of law enforcement personnel, civil or military, medical personnel, public officials and other persons who may be involved in the custody, interrogation or treatment of any individual subjected to any form of arrest, detention or imprisonment;

(16.5). will keep under systematic review interrogation rules, instructions, methods and practices as well as arrangements for the custody and treatment of persons subjected to any form of arrest, detention or imprisonment in any territory under their jurisdiction, with a view to preventing any cases of torture;

(16.6). will take up with priority for consideration and for appropriate action, in accordance with the agreed measures and procedures for the effective implementation of the commitments relating to the human dimension of the CSCE, any cases of torture and other inhuman or degrading treatment or punishment made known to them through official channels or coming from any other reliable source of information;

(16.7). will act upon the understanding that preserving and guaranteeing the life and security of any individual subjected to any form of torture and other inhuman or degrading treatment or punishment will be the sole criterion in determining the urgency and priorities to be accorded in taking appropriate remedial action; and, therefore, the consideration of any cases of torture and other inhuman or degrading treatment or punishment within the framework of any other international body or mechanism may not be invoked as a reason for refraining from consideration and appropriate action in accordance with the agreed measures and procedures for the effective implementation of the commitments relating to the human dimension of the CSCE.

(17). The participating States

(17.1). recall the commitment undertaken in the Vienna Concluding Document to keep the question of capital punishment under consideration and to co-operate within relevant international organizations;

(17.2). recall, in this context, the adoption by the General Assembly of the United Nations, on 15 December 1989, of the Second Optional Protocol to the International Covenant on Civil and Political Rights, aiming at the abolition of the death penalty;

(17.3). note the restrictions and safeguards regarding the use of the death penalty which have been adopted by the international community, in particular article 6 of the International Covenant on Civil and Political Rights;

(17.4). note the provisions of the Sixth Protocol to the European Convention for the Protection of Human Rights and Fundamental Freedoms, concerning the abolition of the death penalty;

(17.5). note recent measures taken by a number of participating States towards the abolition of capital punishment;

(17.6). note the activities of several non-governmental organizations on the question of the death penalty;

(17.7). will exchange information within the framework of the Conference on the Human Dimension on the question of the abolition of the death penalty and keep that question under consideration;

(17.8). will make available to the public information regarding the use of the death penalty.

(18). The participating States

(18.1). note that the United Nations Commission on Human Rights has recognized the right of everyone to have conscientious objections to military service;

(18.2). note recent measures taken by a number of participating States to permit exemption from compulsory military service on the basis of conscientious objections;

(18.3). note the activities of several non-governmental organizations on the question of conscientious objections to compulsory military service;

(18.4). agree to consider introducing, where this has not yet been done, various forms of alternative service, which are compatible with the reasons for conscientious objection, such forms of alternative service being in principle of a non-combatant or civilian nature, in the public interest and of a non-punitive nature;

(18.5). will make available to the public information on this issue;

(18.6). keep under consideration, within the framework of the Conference on the Human Dimension, the relevant questions related to the exemption from compulsory military service, where it exists, of individuals on the basis of conscientious objections to armed service, and will exchange information on these questions.

(19). The participating States affirm that freer movement and contacts among their citizens are important in the context of the protection and promotion of human rights and fundamental freedoms. They will ensure that their policies concerning entry into their territories are fully consistent with the aims set out in the relevant provisions of the Final Act, the Madrid Concluding Document and the Vienna Concluding Document. While reaffirming their determination not to recede from the commitments contained in CSCE documents, they undertake to implement fully and improve present commitments in the field of human contacts, including on a bilateral and multilateral basis. In this context they will

(19.1). strive to implement the procedures for entry into their territories, including the issuing of visas and passport and customs control, in good faith and without unjustified delay. Where necessary, they will shorten the waiting time for visa decisions, as well as simplify practices and reduce administrative requirements for visa applications;

(19.2). ensure, in dealing with visa applications, that these are processed as expeditiously as possible in order, *inter alia*, to take due account of important family, personal or professional considerations, especially in cases of an urgent, humanitarian nature;

(19.3). endeavour, where necessary, to reduce fees charged in connection with visa applications to the lowest possible level.

(20). The participating States concerned will consult and, where appropriate, cooperate in dealing with problems that might emerge as a result of the increased movement of persons.

(21). The participating States recommend the consideration, at the next CSCE Follow-up Meeting in Helsinki, of the advisability of holding a meeting of experts on consular matters.

(22). The participating States reaffirm that the protection and promotion of the rights of migrant workers have their human dimension. In this context, they

(22.1). agree that the protection and promotion of the rights of migrant workers are the concern of all participating States and that as such they should be addressed within the CSCE process;

(22.2). reaffirm their commitment to implement fully in their domestic legislation the rights of migrant workers provided for in international agreements to which they are parties;

(22.3). consider that, in future international instruments concerning the rights of migrant workers, they should take into account the fact that this issue is of importance for all of them;

(22.4). express their readiness to examine, at future CSCE meetings, the relevant aspects of the further promotion of the rights of migrant workers and their families.

(23). The participating States reaffirm their conviction expressed in the Vienna Concluding Document that the promotion of economic, social and cultural rights as well as of civil and political rights is of paramount importance for human dignity and for the attainment of the legitimate aspirations of every individual. They also reaffirm their commitment taken in the Document of the Bonn Conference on Economic Co-operation in Europe to the promotion of social justice and the improvement of living and working conditions. In the context of continuing their efforts with a view to achieving progressively the full realization of economic, social and cultural rights by all appropriate means, they will pay special attention to problems in the areas of employment, housing, social security, health, education and culture.

(24). The participating States will ensure that the exercise of all the human rights and fundamental freedoms set out above will not be subject to any restrictions except those which are provided by law and are consistent with their obligations under international law, in particular the International Covenant on Civil and Political Rights, and with their international commitments, in particular the Universal Declaration of Human Rights. These restrictions have the character of exceptions. The participating States will ensure that these restrictions are not abused and are not applied in an arbitrary manner, but in such a way that the effective exercise of these rights is ensured.

Any restriction on rights and freedoms must, in a democratic society, relate to one of the objectives of the applicable law and be strictly proportionate to the aim of that law.

(25). The participating States confirm that any derogations from obligations relating to human rights and fundamental freedoms during a state of public emergency must remain strictly within the limits provided for by international law, in particular the relevant international instruments by which they are bound, especially with respect to rights from which there can be no derogation. They also reaffirm that

(25.1). measures derogating from such obligations must be taken in strict conformity with the procedural requirements laid down in those instruments;

(25.2). the imposition of a state of public emergency must be proclaimed officially, publicly, and in accordance with the provisions laid down by law;

(25.3). measures derogating from obligations will be limited to the extent strictly required by the exigencies of the situation;

(25.4). such measures will not discriminate solely on the grounds of race, colour, sex, language, religion, social origin or of belonging to a minority.

### III

(26). The participating States recognize that vigorous democracy depends on the existence as an integral part of national life of democratic values and practices as well as an extensive range of democratic institutions. They will therefore encourage, facilitate and, where appropriate, support practical co-operative endeavours and the sharing of information, ideas and expertise among themselves and by direct contacts and co-operation between individuals, groups and organizations in areas including the following:

- constitutional law, reform and development,
- electoral legislation, administration and observation,
- establishment and management of courts and legal systems,
- the development of an impartial and effective public service where recruitment and advancement are based on a merit system,
- law enforcement,
- local government and decentralization,
- access to information and protection of privacy,
- developing political parties and their role in pluralistic societies,
- free and independent trade unions,
- co-operative movements,
- developing other forms of free associations and public interest groups,
- journalism, independent media, and intellectual and cultural life,
- the teaching of democratic values, institutions and practices in educational institutions and the fostering of an atmosphere of free enquiry.

Such endeavours may cover the range of co-operation encompassed in the human dimension of the CSCE, including training, exchange of information, books and instructional materials, co-operative programmes and projects, academic and professional exchanges and conferences, scholarships, research grants, provision of expertise and advice, business and scientific contacts and programmes.

(27). The participating States will also facilitate the establishment and strengthening of independent national institutions in the area of human rights and the rule of law, which may also serve as focal points for co-ordination and collaboration between such institutions in the participating States. They propose that co-operation be encouraged between parliamentarians from participating States, including through existing inter-parliamentary associations and, *inter alia*, through joint commissions, television debates involving parliamentarians, meetings and round-table discussions. They will also encourage existing institutions, such as organizations within the United Nations system and the Council of Europe, to continue and expand the work they have begun in this area.

(28). The participating States recognize the important expertise of the Council of Europe in the field of human rights and fundamental freedoms and agree to consider further ways and means to enable the Council of Europe to make a contribution to the human dimension of the CSCE. They agree that the nature of this contribution could be examined further in a future CSCE forum.

(29). The participating States will consider the idea of convening a meeting or seminar of experts to review and discuss co-operative measures designed to promote and sustain viable

democratic institutions in participating States, including comparative studies of legislation in participating States in the area of human rights and fundamental freedoms, *inter alia* drawing upon the experience acquired in this area by the Council of Europe and the activities of the Commission “Democracy through Law”.

#### IV

(30). The participating States recognize that the questions relating to national minorities can only be satisfactorily resolved in a democratic political framework based on the rule of law, with a functioning independent judiciary. This framework guarantees full respect for human rights and fundamental freedoms, equal rights and status for all citizens, the free expression of all their legitimate interests and aspirations, political pluralism, social tolerance and the implementation of legal rules that place effective restraints on the abuse of governmental power.

They also recognize the important role of non-governmental organizations, including political parties, trade unions, human rights organizations and religious groups, in the promotion of tolerance, cultural diversity and the resolution of questions relating to national minorities.

They further reaffirm that respect for the rights of persons belonging to national minorities as part of universally recognized human rights is an essential factor for peace, justice, stability and democracy in the participating States.

(31). Persons belonging to national minorities have the right to exercise fully and effectively their human rights and fundamental freedoms without any discrimination and in full equality before the law.

The participating States will adopt, where necessary, special measures for the purpose of ensuring to persons belonging to national minorities full equality with the other citizens in the exercise and enjoyment of human rights and fundamental freedoms.

(32). To belong to a national minority is a matter of a persons individual choice and no disadvantage may arise from the exercise of such choice.

Persons belonging to national minorities have the right freely to express, preserve and develop their ethnic, cultural, linguistic or religious identity and to maintain and develop their culture in all its aspects, free of any attempts at assimilation against their will. In particular, they have the right

(32.1). to use freely their mother tongue in private as well as in public;

(32.2). to establish and maintain their own educational, cultural and religious institutions, organizations or associations, which can seek voluntary financial and other contributions as well as public assistance, in conformity with national legislation;

(32.3). to profess and practise their religion, including the acquisition, possession and use of religious materials, and to conduct religious educational activities in their mother tongue;

(32.4). to establish and maintain unimpeded contacts among themselves within their country as well as contacts across frontiers with citizens of other States with whom they share a common ethnic or national origin, cultural heritage or religious beliefs;

(32.5). to disseminate, have access to and exchange information in their mother tongue;

(32.6). to establish and maintain organizations or associations within their country and to participate in international non-governmental organizations.

Persons belonging to national minorities can exercise and enjoy their rights individually as well as in community with other members of their group. No disadvantage may arise for a person belonging to a national minority on account of the exercise or non-exercise of any such rights.

(33). The participating States will protect the ethnic, cultural, linguistic and religious identity of national minorities on their territory and create conditions for the promotion of that identi-

ty. They will take the necessary measures to that effect after due consultations, including contacts with organizations or associations of such minorities, in accordance with the decision-making procedures of each State.

Any such measures will be in conformity with the principles of equality and non-discrimination with respect to the other citizens of the participating State concerned.

(34). The participating States will endeavour to ensure that persons belonging to national minorities, notwithstanding the need to learn the official language or languages of the State concerned, have adequate opportunities for instruction of their mother tongue or in their mother tongue, as well as, wherever possible and necessary, for its use before public authorities, in conformity with applicable national legislation.

In the context of the teaching of history and culture in educational establishments, they will also take account of the history and culture of national minorities.

(35). The participating States will respect the right of persons belonging to national minorities to effective participation in public affairs, including participation in the affairs relating to the protection and promotion of the identity of such minorities.

The participating States note the efforts undertaken to protect and create conditions for the promotion of the ethnic, cultural, linguistic and religious identity of certain national minorities by establishing, as one of the possible means to achieve these aims, appropriate local or autonomous administrations corresponding to the specific historical and territorial circumstances of such minorities and in accordance with the policies of the State concerned.

(36). The participating States recognize the particular importance of increasing constructive co-operation among themselves on questions relating to national minorities. Such co-operation seeks to promote mutual understanding and confidence, friendly and good-neighbourly relations, international peace, security and justice.

Every participating State will promote a climate of mutual respect, understanding, co-operation and solidarity among all persons living on its territory, without distinction as to ethnic or national origin or religion, and will encourage the solution of problems through dialogue based on the principles of the rule of law.

(37). None of these commitments may be interpreted as implying any right to engage in any activity or perform any action in contravention of the purposes and principles of the Charter of the United Nations, other obligations under international law or the provisions of the Final Act, including the principle of territorial integrity of States.

(38). The participating States, in their efforts to protect and promote the rights of persons belonging to national minorities, will fully respect their undertakings under existing human rights conventions and other relevant international instruments and consider adhering to the relevant conventions, if they have not yet done so, including those providing for a right of complaint by individuals.

(39). The participating States will co-operate closely in the competent international organizations to which they belong, including the United Nations and, as appropriate, the Council of Europe, bearing in mind their on-going work with respect to questions relating to national minorities.

They will consider convening a meeting of experts for a thorough discussion of the issue of national minorities.

(40). The participating States clearly and unequivocally condemn totalitarianism, racial and ethnic hatred, anti-semitism, xenophobia and discrimination against anyone as well as persecution on religious and ideological grounds. In this context, they also recognize the particular problems of Roma (gypsies).

They declare their firm intention to intensify the efforts to combat these phenomena in all their forms and therefore will

(40.1). take effective measures, including the adoption, in conformity with their constitutional systems and their international obligations, of such laws as may be necessary, to provide protection against any acts that constitute incitement to violence against persons or groups based on national, racial, ethnic or religious discrimination, hostility or hatred, including anti-semitism;

(40.2). commit themselves to take appropriate and proportionate measures to protect persons or groups who may be subject to threats or acts of discrimination, hostility or violence as a result of their racial, ethnic, cultural, linguistic or religious identity, and to protect their property;

(40.3). take effective measures, in conformity with their constitutional systems, at the national, regional and local levels to promote understanding and tolerance, particularly in the fields of education, culture and information;

(40.4). endeavour to ensure that the objectives of education include special attention to the problem of racial prejudice and hatred and to the development of respect for different civilizations and cultures;

(40.5). recognize the right of the individual to effective remedies and endeavour to recognize, in conformity with national legislation, the right of interested persons and groups to initiate and support complaints against acts of discrimination, including racist and xenophobic acts;

(40.6). consider adhering, if they have not yet done so, to the international instruments which address the problem of discrimination and ensure full compliance with the obligations therein, including those relating to the submission of periodic reports;

(40.7). consider, also, accepting those international mechanisms which allow States and individuals to bring communications relating to discrimination before international bodies.

## V

(41). The participating States reaffirm their commitment to the human dimension of the CSCE and emphasize its importance as an integral part of a balanced approach to security and co-operation in Europe. They agree that the Conference on the Human Dimension of the CSCE and the human dimension mechanism described in the section on the human dimension of the CSCE of the Vienna Concluding Document have demonstrated their value as methods of furthering their dialogue and co-operation and assisting in the resolution of relevant specific questions. They express their conviction that these should be continued and developed as part of an expanding CSCE process.

(42). The participating States recognize the need to enhance further the effectiveness of the procedures described in paragraphs 1 to 4 of the section on the human dimension of the CSCE of the Vienna Concluding Document and with this aim decide

(42.1). to provide in as short a time as possible, but no later than four weeks, a written response to requests for information and to representations made to them in writing by other participating States under paragraph 1;

(42.2). that the bilateral meetings, as contained in paragraph 2, will take place as soon as possible, as a rule within three weeks of the date of the request;

(42.3). to refrain, in the course of a bilateral meeting held under paragraph 2, from raising situations and cases not connected with the subject of the meeting, unless both sides have agreed to do so.

(43). The participating States examined practical proposals for new measures aimed at improving the implementation of the commitments relating to the human dimension of the CSCE. In this regard, they considered proposals related to the sending of observers to examine situations and specific cases, the appointment of rapporteurs to investigate and suggest appro-

priate solutions, the setting up of a Committee on the Human Dimension of the CSCE, greater involvement of persons, organizations and institutions in the human dimension mechanism and further bilateral and multilateral efforts to promote the resolution of relevant issues.

They decide to continue to discuss thoroughly in subsequent relevant CSCE fora these and other proposals designed to strengthen the human dimension mechanism, and to consider adopting, in the context of the further development of the CSCE process, appropriate new measures. They agree that these measures should contribute to achieving further effective progress, enhance conflict prevention and confidence in the field of the human dimension of the CSCE.

\* \* \*

(44). The representatives of the participating States express their profound gratitude to the people and Government of Denmark for the excellent organization of the Copenhagen Meeting and the warm hospitality extended to the delegations which participated in the Meeting.

(45). In accordance with the provisions relating to the Conference on the Human Dimension of the CSCE contained in the Concluding Document of the Vienna Follow-up Meeting of the CSCE, the third Meeting of the Conference will take place in Moscow from 10 September to 4 October 1991.

Copenhagen, 29 June 1990

**CHAIRMAN'S STATEMENT  
ON THE ACCESS OF NON-GOVERNMENTAL ORGANIZATIONS AND THE MEDIA  
TO MEETINGS OF THE CONFERENCE ON THE HUMAN DIMENSION**

The Chairman notes that the practices of openness and access to the Meetings of the Conference on the Human Dimension, as they were applied at the Vienna Meeting and as contained in Annex XI of the Concluding Document of that Meeting, are of importance to all participating States. In order to follow and build upon those practices at forthcoming CSCE meetings of the Conference on the Human Dimension, the participating States agree that the following practices of openness and access should be respected:

- free movement by members of interested non-governmental organizations (NGOs) in the Conference premises, except for the areas restricted to delegations and to the services of the Executive Secretariat. Accordingly, badges will be issued to them, at their request, by the Executive Secretariat;
- unimpeded contacts between members of interested NGOs and delegates, as well as with accredited representatives of the media;
- access to official documents of the Conference in all the working languages and also to any document that delegates might wish to communicate to members of interested NGOs;
- the opportunity for members of interested NGOs to transmit to delegates communications relating to the human dimension of the CSCE. Mailboxes for each delegation will be accessible to them for this purpose;
- free access for delegates to all documents emanating from interested NGOs and addressed to the Executive Secretariat for the information of the Conference. Accordingly, the Executive Secretariat will make available to delegates a regularly updated collection of such documents.

They further undertake to guarantee to representatives of the media

- free movement in the Conference premises, except for the areas restricted to delegations and to the services of the Executive Secretariat. Accordingly, badges will be issued to them by the Executive Secretariat upon presentation of the requisite credentials;
- unimpeded contacts with delegates and with members of interested NGOs;

- access to official documents of the Conference in all the working languages.

The Chairman notes further that this statement will be an Annex to the Document of the Copenhagen Meeting and will be published with it.

## WORLD DECLARATION ON EDUCATION FOR ALL

### MEETING BASIC LEARNING NEEDS

#### PREAMBLE

More than 40 years ago, the nations of the world, speaking through the *Universal Declaration of Human Rights*, asserted that “everyone has a right to education”.

Despite notable efforts by countries around the globe to ensure the right to education for all, the following realities persist:

More than 100 million children, including at least 60 million girls, have no access to primary schooling;

More than 960 million adults, two-thirds of whom are women, are illiterate, and functional illiteracy is a significant problem in all countries, industrialized and developing;

More than one-third of the world’s adults have no access to the printed knowledge, new skills and technologies that could improve the quality of their lives and help them shape, and adapt to, social and cultural change; and

More than 100 million children and countless adults fail to complete basic education programmes; millions more satisfy the attendance requirements but do not acquire essential knowledge and skills;

At the same time, the world faces daunting problems: notably mounting debt burdens, the threat of economic stagnation and decline, rapid population growth, widening economic disparities among and within nations, war, occupation, civil strife, violent crime, the preventable deaths of millions of children and widespread environmental degradation. These problems constrain efforts to meet basic learning needs, while the lack of basic education among a significant proportion of the population prevents societies from addressing such problems with strength and purpose.

These problems have led to major setbacks in basic education in the 1980s in many of the least developed countries. In some other countries, economic growth has been available to finance education expansion, but even so, many millions remain in poverty and unschooled or illiterate. In certain industrialized countries too, cutbacks in government expenditure over the 1980s have led to the deterioration of education

Yet the world is also at the threshold of a new century, with all its promise and possibilities. Today, there is genuine progress toward peaceful detente and greater cooperation among nations. Today, the essential rights and capacities of women are being realized. Today, there are many useful scientific and cultural developments. Today, the sheer quantity of information available in the world—much of it relevant to survival and basic well-being—is exponentially greater than that available only a few years ago, and the rate of its growth is accelerating. This includes information about obtaining more life-enhancing knowledge—or learning how to learn. A synergistic effect occurs when important information is coupled with another modern advance—our new capacity to communicate. These new forces, when combined with the cumulative experience of reform, innovation, research and the remarkable educational progress of many countries, make the goal of basic education for all—for the first time in history—an attainable goal.

Therefore, we participants in the World Conference on Education for All, assembled in Jomtien, Thailand, from 5 to 9 March, 1990:

- Recalling that education is a fundamental right for all people, women and men, of all ages, throughout our world;
- Understanding that education can help ensure a safer, healthier, more prosperous and environmentally sound world, while simultaneously contributing to social, economic, and cultural progress, tolerance, and international cooperation;
- Knowing that education is an indispensable key to, though not a sufficient condition for, personal and social improvement;
- Recognizing that traditional knowledge and indigenous cultural heritage have a value and validity in their own right and a capacity to both define and promote development;
- Acknowledging that, overall, the current provision of education is seriously deficient and that it must be made more relevant and qualitatively improved, and made universally available;
- Recognizing that sound basic education is fundamental to the strengthening of higher levels of education and of scientific and technological literacy and capacity and thus to self-reliant development; and
- Recognizing the necessity to give to present and coming generations an expanded vision of, and a renewed commitment to, basic education to address the scale and complexity of the challenge; proclaim the following

### **EDUCATION FOR ALL: THE PURPOSE**

#### **ARTICLE I—MEETING BASIC LEARNING NEEDS**

1. Every person—child, youth and adult—shall be able to benefit from educational opportunities designed to meet their basic learning needs. These needs comprise both essential learning tools (such as literacy, oral expression, numeracy, and problem solving) and the basic learning content (such as knowledge, skills, values, and attitudes) required by human beings to be able to survive, to develop their full capacities, to live and work in dignity, to participate fully in development, to improve the quality of their lives, to make informed decisions, and to continue learning. The scope of basic learning needs and how they should be met varies with individual countries and cultures, and inevitably, changes with the passage of time.
2. The satisfaction of these needs empowers individuals in any society and confers upon them a responsibility to respect and build upon their collective cultural, linguistic and spiritual heritage, to promote the education of others, to further the cause of social justice, to achieve environmental protection, to be tolerant towards social, political and religious systems which differ from their own, ensuring that commonly accepted humanistic values and human rights are upheld, and to work for international peace and solidarity in an interdependent world.
3. Another and no less fundamental aim of educational development is the transmission and enrichment of common cultural and moral values. It is in these values that the individual and society find their identity and worth.
4. Basic education is more than an end in itself. It is the foundation for lifelong learning and human development on which countries may build, systematically, further levels and types of education and training.

## EDUCATION FOR ALL: AN EXPANDED VISION AND A RENEWED COMMITMENT

### ARTICLE II—SHAPING THE VISION

To serve the basic learning needs of all requires more than a recommitment to basic education as it now exists. What is needed is an “expanded vision” that surpasses present resource levels, institutional structures, curricula, and conventional delivery systems while building on the best in current practices. New possibilities exist today which result from the convergence of the increase in information and the unprecedented capacity to communicate. We must seize them with creativity and a determination for increased effectiveness. As elaborated in Articles III-VII, the expanded vision encompasses:

- Universalizing access and promoting equity;
- Focussing on learning;
- Broadening the means and scope of basic education;
- Enhancing the environment for learning;
- Strengthening partnerships.

The realization of an enormous potential for human progress and empowerment is contingent upon whether people can be enabled to acquire the education and the start needed to tap into the ever-expanding pool of relevant knowledge and the new means for sharing this knowledge.

### ARTICLE III—UNIVERSALIZING ACCESS AND PROMOTING EQUITY

1. Basic education should be provided to all children, youth and adults. To this end, basic education services of quality should be expanded and consistent measures must be taken to reduce disparities.
2. For basic education to be equitable, all children, youth and adults must be given the opportunity to achieve and maintain an acceptable level of learning.
3. The most urgent priority is to ensure access to, and improve the quality of, education for girls and women, and to remove every obstacle that hampers their active participation. All gender stereotyping in education should be eliminated.
4. An active commitment must be made to removing educational disparities. Underserved groups: the poor; street and working children; rural and remote populations; nomads and migrant workers; indigenous peoples; ethnic, racial, and linguistic minorities; refugees; those displaced by war; and people under occupation, should not suffer any discrimination in access to learning opportunities.
5. The learning needs of the disabled demand special attention. Steps need to be taken to provide equal access to education to every category of disabled persons as an integral part of the education system.

### ARTICLE IV—FOCUSING ON LEARNING

Whether or not expanded educational opportunities will translate into meaningful development—for an individual or for society—depends ultimately on whether people actually learn as a result of those opportunities, i.e., whether they incorporate useful knowledge, reasoning ability, skills, and values. The focus of basic education must, therefore, be on actual learning acquisition and outcome, rather than exclusively upon enrolment, continued participation in organized programmes and completion of certification requirements. Active and participatory approaches are particularly valuable in assuring learning acquisition and allowing learners to reach their fullest potential. It is, therefore, necessary to define acceptable levels of learning acquisition for educational programmes and to improve and apply systems of assessing learning achievement.

## **ARTICLE V—BROADENING THE MEANS AND SCOPE OF BASIC EDUCATION**

The diversity, complexity, and changing nature of basic learning needs of children, youth and adults necessitates broadening and constantly redefining the scope of basic education to include the following components:

Learning begins at birth. This calls for early childhood care and initial education.

These can be provided through arrangements involving families, communities, or institutional programmes, as appropriate.

The main delivery system for the basic education of children outside the family is primary schooling. Primary education must be universal, ensure that the basic learning needs of all children are satisfied, and take into account the culture, needs, and opportunities of the community. Supplementary alternative programmes can help meet the basic learning needs of children with limited or no access to formal schooling, provided that they share the same standards of learning applied to schools, and are adequately supported.

The basic learning needs of youth and adults are diverse and should be met through a variety of delivery systems. Literacy programmes are indispensable because literacy is a necessary skill in itself and the foundation of other life skills. Literacy in the mother-tongue strengthens cultural identity and heritage. Other needs can be served by: skills training, apprenticeships, and formal and non-formal education programmes in health, nutrition, population, agricultural techniques, the environment, science, technology, family life, including fertility awareness, and other societal issues.

All available instruments and channels of information, communications, and social action could be used to help convey essential knowledge and inform and educate people on social issues. In addition to the traditional means, libraries, television, radio and other media can be mobilized to realize their potential towards meeting basic education needs of all.

These components should constitute an integrated system—complementary, mutually reinforcing, and of comparable standards, and they should contribute to creating and developing possibilities for lifelong learning.

## **ARTICLE VI—ENHANCING THE ENVIRONMENT FOR LEARNING**

Learning does not take place in isolation. Societies, therefore, must ensure that all learners receive the nutrition, health care, and general physical and emotional support they need in order to participate actively in and benefit from their education. Knowledge and skills that will enhance the learning environment of children should be integrated into community learning programmes for adults. The education of children and their parents or other caretakers is mutually supportive and this interaction should be used to create, for all, a learning environment of vibrancy and warmth.

## **ARTICLE VII—STRENGTHENING PARTNERSHIPS**

National, regional, and local educational authorities have a unique obligation to provide basic education for all, but they cannot be expected to supply every human, financial or organizational requirement for this task. New and revitalized partnerships at all levels will be necessary: partnerships among all sub-sectors and forms of education, recognizing the special role of teachers and that of administrators and other educational personnel; partnerships between education and other government departments, including planning, finance, labour, communications, and other social sectors; partnerships between government and non-governmental organizations, the private sector, local communities, religious groups, and families. The recog-

dition of the vital role of both families and teachers is particularly important. In this context, the terms and conditions of service of teachers and their status, which constitute a determining factor in the implementation of education for all, must be urgently improved in all countries in line with the joint ILO/UNESCO Recommendation Concerning the Status of Teachers (1966). Genuine partnerships contribute to the planning, implementing, managing and evaluating of basic education programmes. When we speak of “an expanded vision and a renewed commitment”, partnerships are at the heart of it.

## **EDUCATION FOR ALL: THE REQUIREMENTS**

### **ARTICLE VIII—DEVELOPING A SUPPORTIVE POLICY CONTEXT**

1. Supportive policies in the social, cultural, and economic sectors are required in order to realize the full provision and utilization of basic education for individual and societal improvement. The provision of basic education for all depends on political commitment and political will backed by appropriate fiscal measures and reinforced by educational policy reforms and institutional strengthening. Suitable economic, trade, labour, employment and health policies will enhance learners’ incentives and contributions to societal development.
2. Societies should also insure a strong intellectual and scientific environment for basic education. This implies improving higher education and developing scientific research. Close contact with contemporary technological and scientific knowledge should be possible at every level of education.

### **ARTICLE IX—MOBILIZING RESOURCES**

1. If the basic learning needs of all are to be met through a much broader scope of action than in the past, it will be essential to mobilize existing and new financial and human resources, public, private and voluntary. All of society has a contribution to make, recognizing that time, energy and funding directed to basic education are perhaps the most profound investment in people and in the future of a country which can be made.
2. Enlarged public-sector support means drawing on the resources of all the government agencies responsible for human development, through increased absolute and proportional allocations to basic education services with the clear recognition of competing claims on national resources of which education is an important one, but not the only one. Serious attention to improving the efficiency of existing educational resources and programmes will not only produce more, it can also be expected to attract new resources. The urgent task of meeting basic learning needs may require a reallocation between sectors, as, for example, a transfer from military to educational expenditure. Above all, special protection for basic education will be required in countries undergoing structural adjustment and facing severe external debt burdens. Today, more than ever, education must be seen as a fundamental dimension of any social, cultural, and economic design.

### **ARTICLE X—STRENGTHENING INTERNATIONAL SOLIDARITY**

1. Meeting basic learning needs constitutes a common and universal human responsibility. It requires international solidarity and equitable and fair economic relations in order to redress existing economic disparities. All nations have valuable knowledge and experiences to share for designing effective educational policies and programmes.
2. Substantial and long-term increases in resources for basic education will be needed. The world community, including intergovernmental agencies and institutions, has an

urgent responsibility to alleviate the constraints that prevent some countries from achieving the goal of education for all. It will mean the adoption of measures that augment the national budgets of the poorest countries or serve to relieve heavy debt burdens. Creditors and debtors must seek innovative and equitable formulae to resolve these burdens, since the capacity of many developing countries to respond effectively to education and other basic needs will be greatly helped by finding solutions to the debt problem.

3. Basic learning needs of adults and children must be addressed wherever they exist. Least developed and low-income countries have special needs which require priority in international support for basic education in the 1990s.
4. All nations must also work together to resolve conflicts and strife, to end military occupations, and to settle displaced populations, or to facilitate their return to their countries of origin, and ensure that their basic learning needs are met. Only a stable and peaceful environment can create the conditions in which every human being, child and adult alike, may benefit from the goals of this Declaration.

**We, the participants in the World Conference on Education for All, reaffirm the right of all people to education. This is the foundation of our determination, singly and together, to ensure education for all.**

We commit ourselves to act cooperatively through our own spheres of responsibility, taking all necessary steps to achieve the goals of education for all. Together we call on governments, concerned organizations and individuals to join in this urgent undertaking.

The basic learning needs of all can and must be met. There can be no more meaningful way to begin the International Literacy Year, to move forward the goals of the United Nations Decade of Disabled Persons (1983–92), the World Decade for Cultural Development (1988–97), the Fourth United Nations Development Decade (1991–2000), of the Convention on the Elimination of Discrimination against Women and the Forward Looking Strategies for the Advancement of Women, and of the Convention on the Rights of the Child. There has never been a more propitious time to commit ourselves to providing basic learning opportunities for all the people of the world.

We adopt, therefore, this World Declaration on Education for All: Meeting Basic Learning Needs and agree on the *Framework for Action to Meet Basic Learning Needs*, to achieve the goals set forth in this *Declaration*.

## **DECLARATION ON THE RIGHTS OF PERSONS BELONGING TO NATIONAL OR ETHNIC, RELIGIOUS AND LINGUISTIC MINORITIES**

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*Adopted by General Assembly resolution 47/135 of 18 December 1992*

### **The General Assembly,**

Reaffirming that one of the basic aims of the United Nations, as proclaimed in the Charter, is to promote and encourage respect for human rights and for fundamental freedoms for all, without distinction as to race, sex, language or religion,

Reaffirming faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small,

Desiring to promote the realization of the principles contained in the Charter, the Universal Declaration of Human Rights, the Convention on the Prevention and Punishment of the

Crime of Genocide, the International Convention on the Elimination of All Forms of Racial Discrimination, the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, the Declaration on the Elimination of All Forms of Intolerance and of Discrimination Based on Religion or Belief, and the Convention on the Rights of the Child, as well as other relevant international instruments that have been adopted at the universal or regional level and those concluded between individual States Members of the United Nations,

Inspired by the provisions of article 27 of the International Covenant on Civil and Political Rights concerning the rights of persons belonging to ethnic, religious and linguistic minorities,

Considering that the promotion and protection of the rights of persons belonging to national or ethnic, religious and linguistic minorities contribute to the political and social stability of States in which they live,

Emphasizing that the constant promotion and realization of the rights of persons belonging to national or ethnic, religious and linguistic minorities, as an integral part of the development of society as a whole and within a democratic framework based on the rule of law, would contribute to the strengthening of friendship and cooperation among peoples and States,

Considering that the United Nations has an important role to play regarding the protection of minorities,

Bearing in mind the work done so far within the United Nations system, in particular by the Commission on Human Rights, the Subcommission on Prevention of Discrimination and Protection of Minorities and the bodies established pursuant to the International Covenants on Human Rights and other relevant international human rights instruments in promoting and protecting the rights of persons belonging to national or ethnic, religious and linguistic minorities,

Taking into account the important work which is done by intergovernmental and non-governmental organizations in protecting minorities and in promoting and protecting the rights of persons belonging to national or ethnic, religious and linguistic minorities,

Recognizing the need to ensure even more effective implementation of international human rights instruments with regard to the rights of persons belonging to national or ethnic, religious and linguistic minorities,

Proclaims this Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities:

#### **Article 1**

1. States shall protect the existence and the national or ethnic, cultural, religious and linguistic identity of minorities within their respective territories and shall encourage conditions for the promotion of that identity.
2. States shall adopt appropriate legislative and other measures to achieve those ends.

#### **Article 2**

1. Persons belonging to national or ethnic, religious and linguistic minorities (hereinafter referred to as persons belonging to minorities) have the right to enjoy their own culture, to profess and practise their own religion, and to use their own language, in private and in public, freely and without interference or any form of discrimination.
2. Persons belonging to minorities have the right to participate effectively in cultural, religious, social, economic and public life.
3. Persons belonging to minorities have the right to participate effectively in decisions on the national and, where appropriate, regional level concerning the minority to which they belong or the regions in which they live, in a manner not incompatible with national legislation.

4. Persons belonging to minorities have the right to establish and maintain their own associations.
5. Persons belonging to minorities have the right to establish and maintain, without any discrimination, free and peaceful contacts with other members of their group and with persons belonging to other minorities, as well as contacts across frontiers with citizens of other States to whom they are related by national or ethnic, religious or linguistic ties.

### **Article 3**

1. Persons belonging to minorities may exercise their rights, including those set forth in the present Declaration, individually as well as in community with other members of their group, without any discrimination.
2. No disadvantage shall result for any person belonging to a minority as the consequence of the exercise or non-exercise of the rights set forth in the present Declaration.

### **Article 4**

1. States shall take measures where required to ensure that persons belonging to minorities may exercise fully and effectively all their human rights and fundamental freedoms without any discrimination and in full equality before the law.
2. States shall take measures to create favourable conditions to enable persons belonging to minorities to express their characteristics and to develop their culture, language, religion, traditions and customs, except where specific practices are in violation of national law and contrary to international standards.
3. States should take appropriate measures so that, wherever possible, persons belonging to minorities may have adequate opportunities to learn their mother tongue or to have instruction in their mother tongue.
4. States should, where appropriate, take measures in the field of education, in order to encourage knowledge of the history, traditions, language and culture of the minorities existing within their territory. Persons belonging to minorities should have adequate opportunities to gain knowledge of the society as a whole.
5. States should consider appropriate measures so that persons belonging to minorities may participate fully in the economic progress and development in their country.

### **Article 5**

1. National policies and programmes shall be planned and implemented with due regard for the legitimate interests of persons belonging to minorities.
2. Programmes of cooperation and assistance among States should be planned and implemented with due regard for the legitimate interests of persons belonging to minorities.

### **Article 6**

States should cooperate on questions relating to persons belonging to minorities, *inter alia*, exchanging information and experiences, in order to promote mutual understanding and confidence.

### **Article 7**

States should cooperate in order to promote respect for the rights set forth in the present Declaration.

**Article 8**

1. Nothing in the present Declaration shall prevent the fulfillment of international obligations of States in relation to persons belonging to minorities. In particular, States shall fulfil in good faith the obligations and commitments they have assumed under international treaties and agreements to which they are parties.
2. The exercise of the rights set forth in the present Declaration shall not prejudice the enjoyment by all persons of universally recognized human rights and fundamental freedoms.
3. Measures taken by States to ensure the effective enjoyment of the rights set forth in the present Declaration shall not prima facie be considered contrary to the principle of equality contained in the Universal Declaration of Human Rights.
4. Nothing in the present Declaration may be construed as permitting any activity contrary to the purposes and principles of the United Nations, including sovereign equality, territorial integrity and political independence of States.

**Article 9**

The specialized agencies and other organizations of the United Nations system shall contribute to the full realization of the rights and principles set forth in the present Declaration, within their respective fields of competence.

## EUROPEAN CHARTER FOR REGIONAL OR MINORITY LANGUAGES

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*Strasbourg, 5.XI.1992*

**PREAMBLE**

The member States of the Council of Europe signatory hereto, Considering that the aim of the Council of Europe is to achieve a greater unity between its members, particularly for the purpose of safeguarding and realising the ideals and principles which are their common heritage; Considering that the protection of the historical regional or minority languages of Europe, some of which are in danger of eventual extinction, contributes to the maintenance and development of Europe's cultural wealth and traditions; Considering that the right to use a regional or minority language in private and public life is an inalienable right conforming to the principles embodied in the United Nations International Covenant on Civil and Political Rights, and according to the spirit of the Council of Europe Convention for the Protection of Human Rights and Fundamental Freedoms; Having regard to the work carried out within the CSCE and in particular to the Helsinki Final Act of 1975 and the document of the Copenhagen Meeting of 1990; Stressing the value of interculturalism and multilingualism and considering that the protection and encouragement of regional or minority languages should not be to the detriment of the official languages and the need to learn them; Realising that the protection and promotion of regional or minority languages in the different countries and regions of Europe represent an important contribution to the building of a Europe based on the principles of democracy and cultural diversity within the framework of national sovereignty and territorial integrity; Taking into consideration the specific conditions and historical traditions in the different regions of the European States, Have agreed as follows:

## PART I—GENERAL PROVISIONS

### Article 1—Definitions

For the purposes of this Charter:

- a. “regional or minority languages” means languages that are:
  - i. traditionally used within a given territory of a State by nationals of that State who form a group numerically smaller than the rest of the State’s population; and
  - ii. different from the official language(s) of that State;

it does not include either dialects of the official language(s) of the State or the languages of migrants;

- a. “territory in which the regional or minority language is used” means the geographical area in which the said language is the mode of expression of a number of people justifying the adoption of the various protective and promotional measures provided for in this Charter;
- b. “non-territorial languages” means languages used by nationals of the State which differ from the language or languages used by the rest of the State’s population but which, although traditionally used within the territory of the State, cannot be identified with a particular area thereof.

### Article 2—Undertakings

1. Each Party undertakes to apply the provisions of Part II to all the regional or minority languages spoken within its territory and which comply with the definition in Article 1.
2. In respect of each language specified at the time of ratification, acceptance or approval, in accordance with Article 3, each Party undertakes to apply a minimum of thirty-five paragraphs or sub-paragraphs chosen from among the provisions of Part III of the Charter, including at least three chosen from each of the Articles 8 and 12 and one from each of the Articles 9, 10, 11 and 13.

### Article 3—Practical arrangements

1. Each Contracting State shall specify in its instrument of ratification, acceptance or approval, each regional or minority language, or official language which is less widely used on the whole or part of its territory, to which the paragraphs chosen in accordance with Article 2, paragraph 2, shall apply.
2. Any Party may, at any subsequent time, notify the Secretary General that it accepts the obligations arising out of the provisions of any other paragraph of the Charter not already specified in its instrument of ratification, acceptance or approval, or that it will apply paragraph 1 of the present article to other regional or minority languages, or to other official languages which are less widely used on the whole or part of its territory.
3. The undertakings referred to in the foregoing paragraph shall be deemed to form an integral part of the ratification, acceptance or approval and will have the same effect as from their date of notification.

### Article 4—Existing regimes of protection

1. Nothing in this Charter shall be construed as limiting or derogating from any of the rights guaranteed by the European Convention on Human Rights.
2. The provisions of this Charter shall not affect any more favourable provisions concerning the status of regional or minority languages, or the legal regime of persons

belonging to minorities which may exist in a Party or are provided for by relevant bilateral or multilateral international agreements.

#### **Article 5—Existing obligations**

Nothing in this Charter may be interpreted as implying any right to engage in any activity or perform any action in contravention of the purposes of the Charter of the United Nations or other obligations under international law, including the principle of the sovereignty and territorial integrity of States.

#### **Article 6—Information**

The Parties undertake to see to it that the authorities, organisations and persons concerned are informed of the rights and duties established by this Charter.

### **PART II—OBJECTIVES AND PRINCIPLES PURSUED IN ACCORDANCE WITH ARTICLE 2, PARAGRAPH 1**

#### **Article 7—Objectives and principles**

1. In respect of regional or minority languages, within the territories in which such languages are used and according to the situation of each language, the Parties shall base their policies, legislation and practice on the following objectives and principles:
  - a. the recognition of the regional or minority languages as an expression of cultural wealth;
  - b. the respect of the geographical area of each regional or minority language in order to ensure that existing or new administrative divisions do not constitute an obstacle to the promotion of the regional or minority language in question;
  - c. the need for resolute action to promote regional or minority languages in order to safeguard them;
  - d. the facilitation and/or encouragement of the use of regional or minority languages, in speech and writing, in public and private life;
  - e. the maintenance and development of links, in the fields covered by this Charter, between groups using a regional or minority language and other groups in the State employing a language used in identical or similar form, as well as the establishment of cultural relations with other groups in the State using different languages;
  - f. the provision of appropriate forms and means for the teaching and study of regional or minority languages at all appropriate stages;
  - g. the provision of facilities enabling non-speakers of a regional or minority language living in the area where it is used to learn it if they so desire;
  - h. the promotion of study and research on regional or minority languages at universities or equivalent institutions;
  - i. the promotion of appropriate types of transnational exchanges, in the fields covered by this Charter, for regional or minority languages used in identical or similar form in two or more States.
2. The Parties undertake to eliminate, if they have not yet done so, any unjustified distinction, exclusion, restriction or preference relating to the use of a regional or minority language and intended to discourage or endanger the maintenance or development of it. The adoption of special measures in favour of regional or minority languages aimed at promoting equality between the users of these languages and the rest of the population or which take due account of their specific conditions is not considered to be an act of discrimination against the users of more widely-used languages.

3. The Parties undertake to promote, by appropriate measures, mutual understanding between all the linguistic groups of the country and in particular the inclusion of respect, understanding and tolerance in relation to regional or minority languages among the objectives of education and training provided within their countries and encouragement of the mass media to pursue the same objective.
4. In determining their policy with regard to regional or minority languages, the Parties shall take into consideration the needs and wishes expressed by the groups which use such languages. They are encouraged to establish bodies, if necessary, for the purpose of advising the authorities on all matters pertaining to regional or minority languages.
5. The Parties undertake to apply, *mutatis mutandis*, the principles listed in paragraphs 1 to 4 above to non-territorial languages. However, as far as these languages are concerned, the nature and scope of the measures to be taken to give effect to this Charter shall be determined in a flexible manner, bearing in mind the needs and wishes, and respecting the traditions and characteristics, of the groups which use the languages concerned.

**PART III—MEASURES TO PROMOTE THE USE OF REGIONAL OR MINORITY LANGUAGES IN PUBLIC LIFE IN ACCORDANCE WITH THE UNDERTAKINGS ENTERED INTO UNDER ARTICLE 2, PARAGRAPH 2**

**Article 8—Education**

1. With regard to education, the Parties undertake, within the territory in which such languages are used, according to the situation of each of these languages, and without prejudice to the teaching of the official language(s) of the State:
  - a.
    - i. to make available pre-school education in the relevant regional or minority languages; or
    - ii. to make available a substantial part of pre-school education in the relevant regional or minority languages; or
    - iii. to apply one of the measures provided for under i and ii above at least to those pupils whose families so request and whose number is considered sufficient; or
    - iv. if the public authorities have no direct competence in the field of pre-school education, to favour and/or encourage the application of the measures referred to under i to iii above;
  - b.
    - i. to make available primary education in the relevant regional or minority languages; or
    - ii. to make available a substantial part of primary education in the relevant regional or minority languages; or
    - iii. to provide, within primary education, for the teaching of the relevant regional or minority languages as an integral part of the curriculum; or
    - iv. to apply one of the measures provided for under i to iii above at least to those pupils whose families so request and whose number is considered sufficient;
  - c.
    - i. to make available secondary education in the relevant regional or minority languages; or
    - ii. to make available a substantial part of secondary education in the relevant regional or minority languages; or

- iii. to provide, within secondary education, for the teaching of the relevant regional or minority languages as an integral part of the curriculum; or
  - iv. to apply one of the measures provided for under i to iii above at least to those pupils who, or where appropriate whose families, so wish in a number considered sufficient;
- d.
- i. to make available technical and vocational education in the relevant regional or minority languages; or
  - ii. to make available a substantial part of technical and vocational education in the relevant regional or minority languages; or
  - iii. to provide, within technical and vocational education, for the teaching of the relevant regional or minority languages as an integral part of the curriculum; or
  - iv. to apply one of the measures provided for under i to iii above at least to those pupils who, or where appropriate whose families, so wish in a number considered sufficient;
- e.
- i. to make available university and other higher education in regional or minority languages; or
  - ii. to provide facilities for the study of these languages as university and higher education subjects; or
  - iii. if, by reason of the role of the State in relation to higher education institutions, sub-paragraphs i and ii cannot be applied, to encourage and/or allow the provision of university or other forms of higher education in regional or minority languages or of facilities for the study of these languages as university or higher education subjects;
- f.
- i. to arrange for the provision of adult and continuing education courses which are taught mainly or wholly in the regional or minority languages; or
  - ii. to offer such languages as subjects of adult and continuing education; or
  - iii. if the public authorities have no direct competence in the field of adult education, to favour and/or encourage the offering of such languages as subjects of adult and continuing education;
- g. to make arrangements to ensure the teaching of the history and the culture which is reflected by the regional or minority language;
- h. to provide the basic and further training of the teachers required to implement those of paragraphs a to g accepted by the Party;
- i. to set up a supervisory body or bodies responsible for monitoring the measures taken and progress achieved in establishing or developing the teaching of regional or minority languages and for drawing up periodic reports of their findings, which will be made public.
2. With regard to education and in respect of territories other than those in which the regional or minority languages are traditionally used, the Parties undertake, if the number of users of a regional or minority language justifies it, to allow, encourage or provide teaching in or of the regional or minority language at all the appropriate stages of education.

#### **Article 9—Judicial authorities**

1. The Parties undertake, in respect of those judicial districts in which the number of residents using the regional or minority languages justifies the measures specified

below, according to the situation of each of these languages and on condition that the use of the facilities afforded by the present paragraph is not considered by the judge to hamper the proper administration of justice:

- a. in criminal proceedings:
    - i. to provide that the courts, at the request of one of the parties, shall conduct the proceedings in the regional or minority languages; and/or
    - ii. to guarantee the accused the right to use his/her regional or minority language; and/or
    - iii. to provide that requests and evidence, whether written or oral, shall not be considered inadmissible solely because they are formulated in a regional or minority language; and/or
    - iv. to produce, on request, documents connected with legal proceedings in the relevant regional or minority language, if necessary by the use of interpreters and translations involving no extra expense for the persons concerned;
  - b. in civil proceedings:
    - i. to provide that the courts, at the request of one of the parties, shall conduct the proceedings in the regional or minority languages; and/or
    - ii. to allow, whenever a litigant has to appear in person before a court, that he or she may use his or her regional or minority language without thereby incurring additional expense; and/or
    - iii. to allow documents and evidence to be produced in the regional or minority languages, if necessary by the use of interpreters and translations;
  - c. in proceedings before courts concerning administrative matters:
    - i. to provide that the courts, at the request of one of the parties, shall conduct the proceedings in the regional or minority languages; and/or
    - ii. to allow, whenever a litigant has to appear in person before a court, that he or she may use his or her regional or minority language without thereby incurring additional expense; and/or
    - iii. to allow documents and evidence to be produced in the regional or minority languages, if necessary by the use of interpreters and translations;
  - d. to take steps to ensure that the application of sub-paragraphs i and iii of paragraphs b and c above and any necessary use of interpreters and translations does not involve extra expense for the persons concerned.
2. The Parties undertake:
    - a. not to deny the validity of legal documents drawn up within the State solely because they are drafted in a regional or minority language; or
    - b. not to deny the validity, as between the parties, of legal documents drawn up within the country solely because they are drafted in a regional or minority language, and to provide that they can be invoked against interested third parties who are not users of these languages on condition that the contents of the document are made known to them by the person(s) who invoke(s) it; or
    - c. not to deny the validity, as between the parties, of legal documents drawn up within the country solely because they are drafted in a regional or minority language.
  3. The Parties undertake to make available in the regional or minority languages the most important national statutory texts and those relating particularly to users of these languages, unless they are otherwise provided.

**Article 10—Administrative authorities and public services**

1. Within the administrative districts of the State in which the number of residents who are users of regional or minority languages justifies the measures specified below and according to the situation of each language, the Parties undertake, as far as this is reasonably possible:
  - a.
    - i. to ensure that the administrative authorities use the regional or minority languages; or
    - ii. to ensure that such of their officers as are in contact with the public use the regional or minority languages in their relations with persons applying to them in these languages; or
    - iii. to ensure that users of regional or minority languages may submit oral or written applications and receive a reply in these languages; or
    - iv. to ensure that users of regional or minority languages may submit oral or written applications in these languages; or
    - v. to ensure that users of regional or minority languages may validly submit a document in these languages;
  - b. to make available widely used administrative texts and forms for the population in the regional or minority languages or in bilingual versions;
  - c. to allow the administrative authorities to draft documents in a regional or minority language.
2. In respect of the local and regional authorities on whose territory the number of residents who are users of regional or minority languages is such as to justify the measures specified below, the Parties undertake to allow and/or encourage:
  - a. the use of regional or minority languages within the framework of the regional or local authority;
  - b. the possibility for users of regional or minority languages to submit oral or written applications in these languages;
  - c. the publication by regional authorities of their official documents also in the relevant regional or minority languages;
  - d. the publication by local authorities of their official documents also in the relevant regional or minority languages;
  - e. the use by regional authorities of regional or minority languages in debates in their assemblies, without excluding, however, the use of the official language(s) of the State;
  - f. the use by local authorities of regional or minority languages in debates in their assemblies, without excluding, however, the use of the official language(s) of the State;
  - g. the use or adoption, if necessary in conjunction with the name in the official language(s), of traditional and correct forms of place-names in regional or minority languages.
3. With regard to public services provided by the administrative authorities or other persons acting on their behalf, the Parties undertake, within the territory in which regional or minority languages are used, in accordance with the situation of each language and as far as this is reasonably possible:
  - a. to ensure that the regional or minority languages are used in the provision of the service; or

- b. to allow users of regional or minority languages to submit a request and receive a reply in these languages; or
  - c. to allow users of regional or minority languages to submit a request in these languages.
4. With a view to putting into effect those provisions of paragraphs 1, 2 and 3 accepted by them, the Parties undertake to take one or more of the following measures:
- a. translation or interpretation as may be required;
  - b. recruitment and, where necessary, training of the officials and other public service employees required;
  - c. compliance as far as possible with requests from public service employees having a knowledge of a regional or minority language to be appointed in the territory in which that language is used.
5. The Parties undertake to allow the use or adoption of family names in the regional or minority languages, at the request of those concerned.

#### **Article 11—Media**

1. The Parties undertake, for the users of the regional or minority languages within the territories in which those languages are spoken, according to the situation of each language, to the extent that the public authorities, directly or indirectly, are competent, have power or play a role in this field, and respecting the principle of the independence and autonomy of the media:
- a. to the extent that radio and television carry out a public service mission:
    - i. to ensure the creation of at least one radio station and one television channel in the regional or minority languages; or
    - ii. to encourage and/or facilitate the creation of at least one radio station and one television channel in the regional or minority languages; or
    - iii. to make adequate provision so that broadcasters offer programmes in the regional or minority languages;
  - b.
    - i. to encourage and/or facilitate the creation of at least one radio station in the regional or minority languages; or
    - ii. to encourage and/or facilitate the broadcasting of radio programmes in the regional or minority languages on a regular basis;
  - c.
    - i. to encourage and/or facilitate the creation of at least one television channel in the regional or minority languages; or
    - ii. to encourage and/or facilitate the broadcasting of television programmes in the regional or minority languages on a regular basis;
  - d. to encourage and/or facilitate the production and distribution of audio and audiovisual works in the regional or minority languages;
  - e.
    - i. to encourage and/or facilitate the creation and/or maintenance of at least one newspaper in the regional or minority languages; or
    - ii. to encourage and/or facilitate the publication of newspaper articles in the regional or minority languages on a regular basis;

- f.
    - i. to cover the additional costs of those media which use regional or minority languages, wherever the law provides for financial assistance in general for the media; or
    - ii. to apply existing measures for financial assistance also to audiovisual productions in the regional or minority languages;
  - g. to support the training of journalists and other staff for media using regional or minority languages.
2. The Parties undertake to guarantee freedom of direct reception of radio and television broadcasts from neighbouring countries in a language used in identical or similar form to a regional or minority language, and not to oppose the retransmission of radio and television broadcasts from neighbouring countries in such a language. They further undertake to ensure that no restrictions will be placed on the freedom of expression and free circulation of information in the written press in a language used in identical or similar form to a regional or minority language. The exercise of the above-mentioned freedoms, since it carries with it duties and responsibilities, may be subject to such formalities, conditions, restrictions or penalties as are prescribed by law and are necessary in a democratic society, in the interests of national security, territorial integrity or public safety, for the prevention of disorder or crime, for the protection of health or morals, for the protection of the reputation or rights of others, for preventing disclosure of information received in confidence, or for maintaining the authority and impartiality of the judiciary.
  3. The Parties undertake to ensure that the interests of the users of regional or minority languages are represented or taken into account within such bodies as may be established in accordance with the law with responsibility for guaranteeing the freedom and pluralism of the media.

#### **Article 12—Cultural activities and facilities**

1. With regard to cultural activities and facilities—especially libraries, video libraries, cultural centres, museums, archives, academies, theatres and cinemas, as well as literary work and film production, vernacular forms of cultural expression, festivals and the culture industries, including *inter alia* the use of new technologies—the Parties undertake, within the territory in which such languages are used and to the extent that the public authorities are competent, have power or play a role in this field:
  - a. to encourage types of expression and initiative specific to regional or minority languages and foster the different means of access to works produced in these languages;
  - b. to foster the different means of access in other languages to works produced in regional or minority languages by aiding and developing translation, dubbing, post-synchronisation and subtitling activities;
  - c. to foster access in regional or minority languages to works produced in other languages by aiding and developing translation, dubbing, post-synchronisation and subtitling activities;
  - d. to ensure that the bodies responsible for organising or supporting cultural activities of various kinds make appropriate allowance for incorporating the knowledge and use of regional or minority languages and cultures in the undertakings which they initiate or for which they provide backing;
  - e. to promote measures to ensure that the bodies responsible for organising or supporting cultural activities have at their disposal staff who have a full command

of the regional or minority language concerned, as well as of the language(s) of the rest of the population;

- f. to encourage direct participation by representatives of the users of a given regional or minority language in providing facilities and planning cultural activities;
  - g. to encourage and/or facilitate the creation of a body or bodies responsible for collecting, keeping a copy of and presenting or publishing works produced in the regional or minority languages;
  - h. if necessary, to create and/or promote and finance translation and terminological research services, particularly with a view to maintaining and developing appropriate administrative, commercial, economic, social, technical or legal terminology in each regional or minority language.
2. In respect of territories other than those in which the regional or minority languages are traditionally used, the Parties undertake, if the number of users of a regional or minority language justifies it, to allow, encourage and/or provide appropriate cultural activities and facilities in accordance with the preceding paragraph.
  3. The Parties undertake to make appropriate provision, in pursuing their cultural policy abroad, for regional or minority languages and the cultures they reflect.

#### **Article 13—Economic and social life**

1. With regard to economic and social activities, the Parties undertake, within the whole country:
  - a. to eliminate from their legislation any provision prohibiting or limiting without justifiable reasons the use of regional or minority languages in documents relating to economic or social life, particularly contracts of employment, and in technical documents such as instructions for the use of products or installations;
  - b. to prohibit the insertion in internal regulations of companies and private documents of any clauses excluding or restricting the use of regional or minority languages, at least between users of the same language;
  - c. to oppose practices designed to discourage the use of regional or minority languages in connection with economic or social activities;
  - d. to facilitate and/or encourage the use of regional or minority languages by means other than those specified in the above sub-paragraphs.
2. With regard to economic and social activities, the Parties undertake, in so far as the public authorities are competent, within the territory in which the regional or minority languages are used, and as far as this is reasonably possible:
  - a. to include in their financial and banking regulations provisions which allow, by means of procedures compatible with commercial practice, the use of regional or minority languages in drawing up payment orders (cheques, drafts, etc.) or other financial documents, or, where appropriate, to ensure the implementation of such provisions;
  - b. in the economic and social sectors directly under their control (public sector), to organise activities to promote the use of regional or minority languages;
  - c. to ensure that social care facilities such as hospitals, retirement homes and hostels offer the possibility of receiving and treating in their own language persons using a regional or minority language who are in need of care on grounds of ill-health, old age or for other reasons;
  - d. to ensure by appropriate means that safety instructions are also drawn up in regional or minority languages;

- e. to arrange for information provided by the competent public authorities concerning the rights of consumers to be made available in regional or minority languages.

#### **Article 14—Transfrontier exchanges**

The Parties undertake:

- a. to apply existing bilateral and multilateral agreements which bind them with the States in which the same language is used in identical or similar form, or if necessary to seek to conclude such agreements, in such a way as to foster contacts between the users of the same language in the States concerned in the fields of culture, education, information, vocational training and permanent education;
- b. for the benefit of regional or minority languages, to facilitate and/ or promote co-operation across borders, in particular between regional or local authorities in whose territory the same language is used in identical or similar form.

### **PART IV—APPLICATION OF THE CHARTER**

#### **Article 15—Periodical reports**

1. The Parties shall present periodically to the Secretary General of the Council of Europe, in a form to be prescribed by the Committee of Ministers, a report on their policy pursued in accordance with Part II of this Charter and on the measures taken in application of those provisions of Part III which they have accepted. The first report shall be presented within the year following the entry into force of the Charter with respect to the Party concerned, the other reports at three-yearly intervals after the first report.
2. The Parties shall make their reports public.

#### **Article 16—Examination of the reports**

1. The reports presented to the Secretary General of the Council of Europe under Article 15 shall be examined by a committee of experts constituted in accordance with Article 17.
2. Bodies or associations legally established in a Party may draw the attention of the committee of experts to matters relating to the undertakings entered into by that Party under Part III of this Charter. After consulting the Party concerned, the committee of experts may take account of this information in the preparation of the report specified in paragraph 3 below. These bodies or associations can furthermore submit statements concerning the policy pursued by a Party in accordance with Part II.
3. On the basis of the reports specified in paragraph 1 and the information mentioned in paragraph 2, the committee of experts shall prepare a report for the Committee of Ministers. This report shall be accompanied by the comments which the Parties have been requested to make and may be made public by the Committee of Ministers.
4. The report specified in paragraph 3 shall contain in particular the proposals of the committee of experts to the Committee of Ministers for the preparation of such recommendations of the latter body to one or more of the Parties as may be required.
5. The Secretary General of the Council of Europe shall make a two-yearly detailed report to the Parliamentary Assembly on the application of the Charter.

#### **Article 17—Committee of experts**

1. The committee of experts shall be composed of one member per Party, appointed by the Committee of Ministers from a list of individuals of the highest integrity and

recognised competence in the matters dealt with in the Charter, who shall be nominated by the Party concerned.

2. Members of the committee shall be appointed for a period of six years and shall be eligible for reappointment. A member who is unable to complete a term of office shall be replaced in accordance with the procedure laid down in paragraph 1, and the replacing member shall complete his predecessor's term of office.
3. The committee of experts shall adopt rules of procedure. Its secretarial services shall be provided by the Secretary General of the Council of Europe.

## PART V—FINAL PROVISIONS

### Article 18

This Charter shall be open for signature by the member States of the Council of Europe. It is subject to ratification, acceptance or approval. Instruments of ratification, acceptance or approval shall be deposited with the Secretary General of the Council of Europe.

### Article 19

1. This Charter shall enter into force on the first day of the month following the expiration of a period of three months after the date on which five member States of the Council of Europe have expressed their consent to be bound by the Charter in accordance with the provisions of Article 18.
2. In respect of any member State which subsequently expresses its consent to be bound by it, the Charter shall enter into force on the first day of the month following the expiration of a period of three months after the date of the deposit of the instrument of ratification, acceptance or approval.

### Article 20

1. After the entry into force of this Charter, the Committee of Ministers of the Council of Europe may invite any State not a member of the Council of Europe to accede to this Charter.
2. In respect of any acceding State, the Charter shall enter into force on the first day of the month following the expiration of a period of three months after the date of deposit of the instrument of accession with the Secretary General of the Council of Europe.

### Article 21

1. Any State may, at the time of signature or when depositing its instrument of ratification, acceptance, approval or accession, make one or more reservations to paragraphs 2 to 5 of Article 7 of this Charter. No other reservation may be made.
2. Any Contracting State which has made a reservation under the preceding paragraph may wholly or partly withdraw it by means of a notification addressed to the Secretary General of the Council of Europe. The withdrawal shall take effect on the date of receipt of such notification by the Secretary General.

### Article 22

1. Any Party may at any time denounce this Charter by means of a notification addressed to the Secretary General of the Council of Europe.
2. Such denunciation shall become effective on the first day of the month following the expiration of a period of six months after the date of receipt of the notification by the Secretary General.

**Article 23**

The Secretary General of the Council of Europe shall notify the member States of the Council and any State which has acceded to this Charter of:

- a. any signature;
- b. the deposit of any instrument of ratification, acceptance, approval or accession;
- c. any date of entry into force of this Charter in accordance with Articles 19 and 20;
- d. any notification received in application of the provisions of Article 3, paragraph 2;
- e. any other act, notification or communication relating to this Charter.

In witness whereof the undersigned, being duly authorised thereto, have signed this Charter. Done at Strasbourg, this 5th day of November 1992, in English and French, both texts being equally authentic, in a single copy which shall be deposited in the archives of the Council of Europe. The Secretary General of the Council of Europe shall transmit certified copies to each member State of the Council of Europe and to any State invited to accede to this Charter.

## **COUNCIL OF EUROPE FRAMEWORK CONVENTION FOR THE PROTECTION OF NATIONAL MINORITIES**

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*Strasbourg, 1.II.1995*

The member States of the Council of Europe and the other States, signatories to the present framework Convention,

Considering that the aim of the Council of Europe is to achieve greater unity between its members for the purpose of safeguarding and realising the ideals and principles which are their common heritage;

Considering that one of the methods by which that aim is to be pursued is the maintenance and further realisation of human rights and fundamental freedoms;

Wishing to follow-up the Declaration of the Heads of State and Government of the member States of the Council of Europe adopted in Vienna on 9 October 1993;

Being resolved to protect within their respective territories the existence of national minorities;

Considering that the upheavals of European history have shown that the protection of national minorities is essential to stability, democratic security and peace in this continent;

Considering that a pluralist and genuinely democratic society should not only respect the ethnic, cultural, linguistic and religious identity of each person belonging to a national minority, but also create appropriate conditions enabling them to express, preserve and develop this identity;

Considering that the creation of a climate of tolerance and dialogue is necessary to enable cultural diversity to be a source and a factor, not of division, but of enrichment for each society;

Considering that the realisation of a tolerant and prosperous Europe does not depend solely on co-operation between States but also requires transfrontier co-operation between local and regional authorities without prejudice to the constitution and territorial integrity of each State;

Having regard to the Convention for the Protection of Human Rights and Fundamental Freedoms and the Protocols thereto;

Having regard to the commitments concerning the protection of national minorities in United Nations conventions and declarations and in the documents of the Conference on Security and Co-operation in Europe, particularly the Copenhagen Document of 29 June 1990;

Being resolved to define the principles to be respected and the obligations which flow from them, in order to ensure, in the member States and such other States as may become Parties

to the present instrument, the effective protection of national minorities and of the rights and freedoms of persons belonging to those minorities, within the rule of law, respecting the territorial integrity and national sovereignty of states;

Being determined to implement the principles set out in this framework Convention through national legislation and appropriate governmental policies,

Have agreed as follows:

## SECTION I

### Article 1

The protection of national minorities and of the rights and freedoms of persons belonging to those minorities forms an integral part of the international protection of human rights, and as such falls within the scope of international co-operation.

### Article 2

The provisions of this framework Convention shall be applied in good faith, in a spirit of understanding and tolerance and in conformity with the principles of good neighbourliness, friendly relations and co-operation between States.

### Article 3

1. Every person belonging to a national minority shall have the right freely to choose to be treated or not to be treated as such and no disadvantage shall result from this choice or from the exercise of the rights which are connected to that choice.
2. Persons belonging to national minorities may exercise the rights and enjoy the freedoms flowing from the principles enshrined in the present framework Convention individually as well as in community with others.

## SECTION II

### Article 4

1. The Parties undertake to guarantee to persons belonging to national minorities the right of equality before the law and of equal protection of the law. In this respect, any discrimination based on belonging to a national minority shall be prohibited.
2. The Parties undertake to adopt, where necessary, adequate measures in order to promote, in all areas of economic, social, political and cultural life, full and effective equality between persons belonging to a national minority and those belonging to the majority. In this respect, they shall take due account of the specific conditions of the persons belonging to national minorities.
3. The measures adopted in accordance with paragraph 2 shall not be considered to be an act of discrimination.

### Article 5

1. The Parties undertake to promote the conditions necessary for persons belonging to national minorities to maintain and develop their culture, and to preserve the essential elements of their identity, namely their religion, language, traditions and cultural heritage.
2. Without prejudice to measures taken in pursuance of their general integration policy, the Parties shall refrain from policies or practices aimed at assimilation of persons belonging to national minorities against their will and shall protect these persons from any action aimed at such assimilation.

**Article 6**

1. The Parties shall encourage a spirit of tolerance and intercultural dialogue and take effective measures to promote mutual respect and understanding and co-operation among all persons living on their territory, irrespective of those persons' ethnic, cultural, linguistic or religious identity, in particular in the fields of education, culture and the media.
2. The Parties undertake to take appropriate measures to protect persons who may be subject to threats or acts of discrimination, hostility or violence as a result of their ethnic, cultural, linguistic or religious identity.

**Article 7**

The Parties shall ensure respect for the right of every person belonging to a national minority to freedom of peaceful assembly, freedom of association, freedom of expression, and freedom of thought, conscience and religion.

**Article 8**

The Parties undertake to recognise that every person belonging to a national minority has the right to manifest his or her religion or belief and to establish religious institutions, organisations and associations.

**Article 9**

1. The Parties undertake to recognise that the right to freedom of expression of every person belonging to a national minority includes freedom to hold opinions and to receive and impart information and ideas in the minority language, without interference by public authorities and regardless of frontiers. The Parties shall ensure, within the framework of their legal systems, that persons belonging to a national minority are not discriminated against in their access to the media.
2. Paragraph 1 shall not prevent Parties from requiring the licensing, without discrimination and based on objective criteria, of sound radio and television broadcasting, or cinema enterprises.
3. The Parties shall not hinder the creation and the use of printed media by persons belonging to national minorities. In the legal framework of sound radio and television broadcasting, they shall ensure, as far as possible, and taking into account the provisions of paragraph 1, that persons belonging to national minorities are granted the possibility of creating and using their own media.
4. In the framework of their legal systems, the Parties shall adopt adequate measures in order to facilitate access to the media for persons belonging to national minorities and in order to promote tolerance and permit cultural pluralism.

**Article 10**

1. The Parties undertake to recognise that every person belonging to a national minority has the right to use freely and without interference his or her minority language, in private and in public, orally and in writing.
2. In areas inhabited by persons belonging to national minorities traditionally or in substantial numbers, if those persons so request and where such a request corresponds to a real need, the Parties shall endeavour to ensure, as far as possible, the conditions which would make it possible to use the minority language in relations between those persons and the administrative authorities.
3. The Parties undertake to guarantee the right of every person belonging to a national minority to be informed promptly, in a language which he or she understands, of the

reasons for his or her arrest, and of the nature and cause of any accusation against him or her, and to defend himself or herself in this language, if necessary with the free assistance of an interpreter.

#### **Article 11**

1. The Parties undertake to recognise that every person belonging to a national minority has the right to use his or her surname (patronym) and first names in the minority language and the right to official recognition of them, according to modalities provided for in their legal system.
2. The Parties undertake to recognise that every person belonging to a national minority has the right to display in his or her minority language signs, inscriptions and other information of a private nature visible to the public.
3. In areas traditionally inhabited by substantial numbers of persons belonging to a national minority, the Parties shall endeavour, in the framework of their legal system, including, where appropriate, agreements with other States, and taking into account their specific conditions, to display traditional local names, street names and other topographical indications intended for the public also in the minority language when there is a sufficient demand for such indications.

#### **Article 12**

1. The Parties shall, where appropriate, take measures in the fields of education and research to foster knowledge of the culture, history, language and religion of their national minorities and of the majority.
2. In this context the Parties shall *inter alia* provide adequate opportunities for teacher training and access to textbooks, and facilitate contacts among students and teachers of different communities.
3. The Parties undertake to promote equal opportunities for access to education at all levels for persons belonging to national minorities.

#### **Article 13**

1. Within the framework of their education systems, the Parties shall recognise that persons belonging to a national minority have the right to set up and to manage their own private educational and training establishments.

The exercise of this right shall not entail any financial obligation for the Parties.

#### **Article 14**

1. The Parties undertake to recognise that every person belonging to a national minority has the right to learn his or her minority language.
2. In areas inhabited by persons belonging to national minorities traditionally or in substantial numbers, if there is sufficient demand, the Parties shall endeavour to ensure, as far as possible and within the framework of their education systems, that persons belonging to those minorities have adequate opportunities for being taught the minority language or for receiving instruction in this language.
3. Paragraph 2 of this article shall be implemented without prejudice to the learning of the official language or the teaching in this language.

#### **Article 15**

The Parties shall create the conditions necessary for the effective participation of persons belonging to national minorities in cultural, social and economic life and in public affairs, in particular those affecting them.

**Article 16**

The Parties shall refrain from measures which alter the proportions of the population in areas inhabited by persons belonging to national minorities and are aimed at restricting the rights and freedoms flowing from the principles enshrined in the present framework Convention.

**Article 17**

1. The Parties undertake not to interfere with the right of persons belonging to national minorities to establish and maintain free and peaceful contacts across frontiers with persons lawfully staying in other States, in particular those with whom they share an ethnic, cultural, linguistic or religious identity, or a common cultural heritage.
2. The Parties undertake not to interfere with the right of persons belonging to national minorities to participate in the activities of non-governmental organisations, both at the national and international levels.

**Article 18**

1. The Parties shall endeavour to conclude, where necessary, bilateral and multilateral agreements with other States, in particular neighbouring States, in order to ensure the protection of persons belonging to the national minorities concerned.
2. Where relevant, the Parties shall take measures to encourage transfrontier co-operation.

**Article 19**

The Parties undertake to respect and implement the principles enshrined in the present framework Convention making, where necessary, only those limitations, restrictions or derogations which are provided for in international legal instruments, in particular the Convention for the Protection of Human Rights and Fundamental Freedoms, in so far as they are relevant to the rights and freedoms flowing from the said principles.

**SECTION III****Article 20**

In the exercise of the rights and freedoms flowing from the principles enshrined in the present framework Convention, any person belonging to a national minority shall respect the national legislation and the rights of others, in particular those of persons belonging to the majority or to other national minorities.

**Article 21**

Nothing in the present framework Convention shall be interpreted as implying any right to engage in any activity or perform any act contrary to the fundamental principles of international law and in particular of the sovereign equality, territorial integrity and political independence of States.

**Article 22**

Nothing in the present framework Convention shall be construed as limiting or derogating from any of the human rights and fundamental freedoms which may be ensured under the laws of any Contracting Party or under any other agreement to which it is a Party.

**Article 23**

The rights and freedoms flowing from the principles enshrined in the present framework Convention, in so far as they are the subject of a corresponding provision in the Convention for the Protection of Human Rights and Fundamental Freedoms or in the Protocols thereto, shall be understood so as to conform to the latter provisions.

## SECTION IV

### Article 24

1. The Committee of Ministers of the Council of Europe shall monitor the implementation of this framework Convention by the Contracting Parties.
2. The Parties which are not members of the Council of Europe shall participate in the implementation mechanism, according to modalities to be determined.

### Article 25

1. Within a period of one year following the entry into force of this framework Convention in respect of a Contracting Party, the latter shall transmit to the Secretary General of the Council of Europe full information on the legislative and other measures taken to give effect to the principles set out in this framework Convention.
2. Thereafter, each Party shall transmit to the Secretary General on a periodical basis and whenever the Committee of Ministers so requests any further information of relevance to the implementation of this framework Convention.
3. The Secretary General shall forward to the Committee of Ministers the information transmitted under the terms of this article.

### Article 26

1. In evaluating the adequacy of the measures taken by the Parties to give effect to the principles set out in this framework Convention the Committee of Ministers shall be assisted by an advisory committee, the members of which shall have recognised expertise in the field of the protection of national minorities.
2. The composition of this advisory committee and its procedure shall be determined by the Committee of Ministers within a period of one year following the entry into force of this framework Convention.

## SECTION V

### Article 27

This framework Convention shall be open for signature by the member States of the Council of Europe. Up until the date when the Convention enters into force, it shall also be open for signature by any other State so invited by the Committee of Ministers. It is subject to ratification, acceptance or approval. Instruments of ratification, acceptance or approval shall be deposited with the Secretary General of the Council of Europe.

### Article 28

1. This framework Convention shall enter into force on the first day of the month following the expiration of a period of three months after the date on which twelve member States of the Council of Europe have expressed their consent to be bound by the Convention in accordance with the provisions of Article 27.
2. In respect of any member State which subsequently expresses its consent to be bound by it, the framework Convention shall enter into force on the first day of the month following the expiration of a period of three months after the date of the deposit of the instrument of ratification, acceptance or approval.

### Article 29

1. After the entry into force of this framework Convention and after consulting the Contracting States, the Committee of Ministers of the Council of Europe may invite

to accede to the Convention, by a decision taken by the majority provided for in Article 20.d of the Statute of the Council of Europe, any non-member State of the Council of Europe which, invited to sign in accordance with the provisions of Article 27, has not yet done so, and any other non-member State.

2. In respect of any acceding State, the framework Convention shall enter into force on the first day of the month following the expiration of a period of three months after the date of the deposit of the instrument of accession with the Secretary General of the Council of Europe.

### **Article 30**

1. Any State may at the time of signature or when depositing its instrument of ratification, acceptance, approval or accession, specify the territory or territories for whose international relations it is responsible to which this framework Convention shall apply.
2. Any State may at any later date, by a declaration addressed to the Secretary General of the Council of Europe, extend the application of this framework Convention to any other territory specified in the declaration. In respect of such territory the framework Convention shall enter into force on the first day of the month following the expiration of a period of three months after the date of receipt of such declaration by the Secretary General.
3. Any declaration made under the two preceding paragraphs may, in respect of any territory specified in such declaration, be withdrawn by a notification addressed to the Secretary General. The withdrawal shall become effective on the first day of the month following the expiration of a period of three months after the date of receipt of such notification by the Secretary General.

### **Article 31**

1. Any Party may at any time denounce this framework Convention by means of a notification addressed to the Secretary General of the Council of Europe.
2. Such denunciation shall become effective on the first day of the month following the expiration of a period of six months after the date of receipt of the notification by the Secretary General.

### **Article 32**

The Secretary General of the Council of Europe shall notify the member States of the Council, other signatory States and any State which has acceded to this framework Convention, of:

- a. any signature;
- b. the deposit of any instrument of ratification, acceptance, approval or accession;
- c. any date of entry into force of this framework Convention in accordance with Articles 28, 29 and 30;
- d. any other act, notification or communication relating to this framework Convention.

*In witness whereof the undersigned, being duly authorised thereto, have signed this framework Convention. Done at Strasbourg, this 1st day of February 1995, in English and French, both texts being equally authentic, in a single copy which shall be deposited in the archives of the Council of Europe. The Secretary General of the Council of Europe shall transmit certified copies to each member State of the Council of Europe and to any State invited to sign or accede to this framework Convention.*

## APPENDIX IV

# INTERNET RESOURCES

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### EDUCATION WEBSITES—INTERNATIONAL

#### **MULTILATERAL INSTITUTIONS**

- African Development Bank Group <[www.afdb.org](http://www.afdb.org)>
- Asian Development Bank <[www.adb.org](http://www.adb.org)>
- Food and Agriculture Organization of the United Nations (FAO) <[www.fao.org](http://www.fao.org)>
- Inter-American Development Bank <[www.iadb.org](http://www.iadb.org)>
- International Labour Organization (ILO) <[www.ilo.org/public/english/dialogue/sector/sectors/educat.htm](http://www.ilo.org/public/english/dialogue/sector/sectors/educat.htm)>
- United Nations Children's Fund (UNICEF) <[www.unicef.org](http://www.unicef.org)>
- United Nations Development Programme (UNDP) <[www.undp.org](http://www.undp.org)>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) <[www.unesco.org](http://www.unesco.org)>
- Mid-Decade Meeting on Education for All, 1996 <[www.unesco.org/education/efa/ed\\_for\\_all/background/mid\\_decade\\_amman.shtml](http://www.unesco.org/education/efa/ed_for_all/background/mid_decade_amman.shtml)>
- UNESCO Institute for Education (UIE) <[www.unesco.org/education/uiie](http://www.unesco.org/education/uiie)>
- UNESCO Institute for Statistics (UIS) <[www.uis.unesco.org](http://www.uis.unesco.org)>
- UNESCO International Bureau of Education (IBE) <[www.ibe.unesco.org](http://www.ibe.unesco.org)>
- UNESCO International Institute for Educational Planning (IIEP) <[www.unesco.org/iiep](http://www.unesco.org/iiep)>
- UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC) <[www.iesalc.unesco.org.ve](http://www.iesalc.unesco.org.ve)>
- UNESCO World Education Report 2000 <[www.unesco.org/education/information/wer](http://www.unesco.org/education/information/wer)>
- United Nations General Assembly Resolution <[www.unesco.org/education/efa/ed\\_for\\_all/background/un\\_resolution\\_1997.shtml](http://www.unesco.org/education/efa/ed_for_all/background/un_resolution_1997.shtml)>
- United Nations Resolution on a UN Literacy Decade <[www.unesco.org/education/efa/ed\\_for\\_all/background/un\\_draft\\_literacy.shtml](http://www.unesco.org/education/efa/ed_for_all/background/un_draft_literacy.shtml)>

The World Conference on Education for All, Jomtien, Thailand <[www.unesco.org/education/efa/ed\\_for\\_all/background/background\\_documents.shtml](http://www.unesco.org/education/efa/ed_for_all/background/background_documents.shtml)>

World Education Forum (Dakar, Senegal, April 2000) <[www.unesco.org/education/efa/wef\\_2000/index.shtml](http://www.unesco.org/education/efa/wef_2000/index.shtml)>

United Nations Population Fund (UNFPA) <[www.unfpa.org](http://www.unfpa.org)>

World Bank Group <[www.worldbank.org](http://www.worldbank.org)>

Schools (for students and teachers) <[www.worldbank.org/html/schools](http://www.worldbank.org/html/schools)>

Statistical databases <[www.worldbank.org/data](http://www.worldbank.org/data)>

World Health Organization, School Health and Youth Health Promotion <[www.who.int/hpr/gshi/docs/index.html](http://www.who.int/hpr/gshi/docs/index.html)>

#### **BILATERAL INSTITUTIONS**

- Canadian International Development Agency (CIDA) <[www.acdi-cida.gc.ca/index.htm](http://www.acdi-cida.gc.ca/index.htm)>
- Danish Ministry of Foreign Affairs <[www.um.dk/english](http://www.um.dk/english)>
- Department for International Development (DFID), United Kingdom <[www.dfid.gov.uk](http://www.dfid.gov.uk)>
- Federal Ministry for Economic Cooperation and Development (BMZ), Germany <[www.bmz.de](http://www.bmz.de)>
- Finnish International Development Cooperation (FINNIDA) <<http://global.finland.fi/index.php?kieli=3>>
- Ministry of Development Cooperation, France <[www.france.diplomatie.fr/index.html](http://www.france.diplomatie.fr/index.html)>
- Ministry of Foreign Affairs, Italy <[www.esteri.it/eng/index.htm](http://www.esteri.it/eng/index.htm)>
- Ministry of Foreign Affairs, Japan <[www.mofa.go.jp/policy/oda](http://www.mofa.go.jp/policy/oda)>
- Ministry of Foreign Affairs, the Netherlands <[www.bz.minbuza.nl/homepage.asp](http://www.bz.minbuza.nl/homepage.asp)>
- Norwegian Agency for Development Cooperation (NORAD) <[www.norad.no](http://www.norad.no)>
- Swedish International Development Agency (SIDA) <[www.sida.se](http://www.sida.se)>

United States Agency for International Development (USAID) <[www.usaid.gov](http://www.usaid.gov)>

#### **INTERGOVERNMENTAL ORGANIZATIONS**

European Commission DG Development <[http://europa.eu.int/comm/development/index\\_en.htm](http://europa.eu.int/comm/development/index_en.htm)>

G8-Summit <[www.g7.utoronto.ca](http://www.g7.utoronto.ca)>

Inter-Parliamentary Union (IPU) <[www.ipu.org](http://www.ipu.org)>

Islamic Educational, Scientific and Cultural Organization (ISESCO) <[www.isesco.org.ma](http://www.isesco.org.ma)>

Organisation for Economic Co-operation and Development (OECD) <[www.oecd.org](http://www.oecd.org)>

OECD Development Assistance Committee (DAC)  
<[www.oecd.org/oecd/pages/home/displaygeneral/0,3380,EN-home-notheme-2-no-no-no,FF.html](http://www.oecd.org/oecd/pages/home/displaygeneral/0,3380,EN-home-notheme-2-no-no-no,FF.html)>

Organization of American States (OAS) <[www.oas.org](http://www.oas.org)>

South East Asian Ministers of Education Organization  
<[www.seameo.org](http://www.seameo.org)>

#### **CIVIL SOCIETY ORGANIZATIONS AND NONGOVERNMENTAL ORGANIZATIONS**

Academy for Educational Development <[www.aed.org](http://www.aed.org)>

ActionAid <[www.actionaid.org](http://www.actionaid.org)>

Civitas International <[www.civnet.org](http://www.civnet.org)>

Dhaka Ahsania Mission <[www.ahsaniamission.org](http://www.ahsaniamission.org)>

Education International <[www.ei-ie.org](http://www.ei-ie.org)>

Enda Third World <[www.enda.sn](http://www.enda.sn)>

Global Campaign for Education  
<[www.campaignforeducation.org](http://www.campaignforeducation.org)>

International Association of Universities  
<[www.unesco.org/iau](http://www.unesco.org/iau)>

International Dance Council <[www.unesco.org/ngo/cid](http://www.unesco.org/ngo/cid)>

International Federation of University Women  
<[www.ifuw.org](http://www.ifuw.org)>

International Reading Association (IRA)  
<[www.reading.org](http://www.reading.org)>

International Save the Children Alliance  
<[www.savethechildren.net](http://www.savethechildren.net)>

Oxfam International <[www.oxfam.org](http://www.oxfam.org)>

Summer Institute of Linguistics (SIL International)  
<[www.sil.org/sil](http://www.sil.org/sil)>

Tamer Institute for Community Education  
<[www.tamerinst.org](http://www.tamerinst.org)>

World Education <[www.worlded.org](http://www.worlded.org)>

World Learning <[www.worldlearning.org](http://www.worldlearning.org)>

#### **MISCELLANEOUS**

Center for Higher Education Policy Studies  
<[www.utwente.nl/cheps](http://www.utwente.nl/cheps)>

Educational Testing Service (ETS) Global Institute  
<[www.ets.org/etsglobal](http://www.ets.org/etsglobal)>

Institute of International Education <[www.iie.org](http://www.iie.org)>

Inter-American Dialogue <[www.iadialog.org](http://www.iadialog.org)>

Open Learning Agency <[www.ola.bc.ca](http://www.ola.bc.ca)>

### **EDUCATION WEBSITES—UNITED STATES**

#### **FEDERAL**

U.S. Department of Education <[www.ed.gov](http://www.ed.gov)>

U.S. Department of Education publications  
<[www.ed.gov/about/ordering.jsp](http://www.ed.gov/about/ordering.jsp)>

#### **MIDWESTERN UNITED STATES**

Coordinating Commission for Postsecondary Education—Nebraska  
<[www.ccpe.state.ne.us/PublicDoc/CCPE/Default.asp](http://www.ccpe.state.ne.us/PublicDoc/CCPE/Default.asp)>

Illinois Board of Higher Education <[www.ibhe.state.il.us](http://www.ibhe.state.il.us)>

Kansas Board of Regents <[www.kansasregents.org](http://www.kansasregents.org)>

Midwestern Higher Education Commission  
<[www.mhec.org](http://www.mhec.org)>

Missouri Coordinating Board for Higher Education  
<[www.mocbhe.gov](http://www.mocbhe.gov)>

North Dakota University System <[www.ndus.edu](http://www.ndus.edu)>

Ohio Board of Regents <[www.regents.state.oh.us](http://www.regents.state.oh.us)>

South Dakota Board of Regents <[www.ris.sdbor.edu](http://www.ris.sdbor.edu)>

University of Wisconsin System Administration  
<[www.uwsa.edu](http://www.uwsa.edu)>

#### **NORTHEASTERN UNITED STATES**

Center for the Study of Higher Education, the Pennsylvania State University College of Education  
<[www.ed.psu.edu/cshe](http://www.ed.psu.edu/cshe)>

Massachusetts Board of Higher Education  
<[www.mass.edu](http://www.mass.edu)>

New England Board of Higher Education  
<[www.nebhe.org](http://www.nebhe.org)>

New Jersey Commission on Higher Education  
<[www.state.nj.us/highereducation](http://www.state.nj.us/highereducation)>

Office of Higher Education—New York  
<[www.highered.nysed.gov](http://www.highered.nysed.gov)>

Rhode Island Board of Governors for Higher Education  
<[www.ribghe.org](http://www.ribghe.org)>

State of Connecticut Department of Higher Education  
<[www.ctdhe.org](http://www.ctdhe.org)>

University of Maine System <[www.maine.edu](http://www.maine.edu)>

University System of Maryland  
<[www.usmd.edu/IndexNB.html](http://www.usmd.edu/IndexNB.html)>

University System of New Hampshire  
<<http://usnh.unh.edu>>

**SOUTHERN UNITED STATES**

- Board of Regents of the University System of Georgia  
<[www.usg.edu](http://www.usg.edu)>
- Florida Board of Education <[www.flboe.org](http://www.flboe.org)>
- Kentucky Council on Postsecondary Education  
<[www.che.state.ky.us/index/index.asp](http://www.che.state.ky.us/index/index.asp)>
- Louisiana Board of Regents <[www.regents.state.la.us](http://www.regents.state.la.us)>
- Mississippi Board of Trustees of State Institutions of  
Higher Learning <[www.ihl.state.ms.us](http://www.ihl.state.ms.us)>
- Oklahoma Higher Education <[www.okhighered.org](http://www.okhighered.org)>
- Southern Regional Education Board <[www.sreb.org](http://www.sreb.org)>
- State Council of Higher Education for Virginia  
<[www.schev.edu/main.asp](http://www.schev.edu/main.asp)>
- Tennessee Higher Education Commission  
<[www.state.tn.us/thec](http://www.state.tn.us/thec)>
- Texas Higher Education Coordinating Board  
<[www.thecb.state.tx.us](http://www.thecb.state.tx.us)>
- University of North Carolina General Administration  
<[www.ga.unc.edu/UNCGA](http://www.ga.unc.edu/UNCGA)>

**WESTERN UNITED STATES**

- Access Washington List of Education Resources  
<<http://access.wa.gov/education/awedu.asp>>
- Arizona Board of Regents <[www.abor.asu.edu](http://www.abor.asu.edu)>
- California Postsecondary Education Commission  
<[www.cpec.ca.gov](http://www.cpec.ca.gov)>
- Center for Studies in Higher Education, University of  
California, Berkeley <<http://ishi.lib.berkeley.edu/cshe>>
- Colorado Commission on Higher Education  
<[www.state.co.us/cche\\_dir/hechche.html](http://www.state.co.us/cche_dir/hechche.html)>
- Idaho State Board of Education  
<[www.sde.state.id.us/osbe/board.htm](http://www.sde.state.id.us/osbe/board.htm)>
- Montana Board of Regents of Higher Education  
<[www.montana.edu/wwwbor](http://www.montana.edu/wwwbor)>
- New Mexico Commission on Higher Education  
<[www.nmche.org](http://www.nmche.org)>
- Oregon State Board of Higher Education  
<[www.ous.edu/board](http://www.ous.edu/board)>
- University and Community College System of Nevada  
<[www.nevada.edu](http://www.nevada.edu)>
- University of Alaska Board of Regents  
<<http://gemini.atspg.alaska.edu/bor>>
- University of Hawaii Board of Regents  
<[www.hawaii.edu/admin/bor](http://www.hawaii.edu/admin/bor)>
- Utah System of Higher Education <[www.utahsbr.edu](http://www.utahsbr.edu)>
- Western Governors University  
<[www.wgu.edu/wgu/index.html](http://www.wgu.edu/wgu/index.html)>
- Western Interstate Commission for Higher Education  
<[www.wiche.edu](http://www.wiche.edu)>
- Wyoming Postsecondary Education  
<[www.k12.wy.us/higher\\_ed](http://www.k12.wy.us/higher_ed)>

**MISCELLANEOUS**

- American Association of State Colleges and Universities  
<[www.aascu.org](http://www.aascu.org)>
- American Council on Education Internet Sources for  
Higher Education Policy and Research Topics  
<[www.acenet.edu/resources/policy-research/home.cfm](http://www.acenet.edu/resources/policy-research/home.cfm)>
- American Institutes for Research <[www.air.org](http://www.air.org)>
- Association of American Universities <[www.aau.edu](http://www.aau.edu)>
- Brookings Institution <[www.brookings.org](http://www.brookings.org)>
- Carnegie Foundation for the Advancement of Teaching  
<[www.carnegiefoundation.org](http://www.carnegiefoundation.org)>
- Center on Juvenile and Criminal Justice <[www.cjcj.org](http://www.cjcj.org)>
- The Century Foundation <[www.tcf.org](http://www.tcf.org)>
- Chronicle of Higher Education* <<http://chronicle.com>>
- College Board <[www.collegeboard.com](http://www.collegeboard.com)>
- College Savings Plans Network <[www.collegesavings.org](http://www.collegesavings.org)>
- Consortium for Policy Research in Education  
<[www.wcer.wisc.edu/cpre](http://www.wcer.wisc.edu/cpre)>
- Council for Adult and Experiential Learning  
<[www.cael.org/index.asp](http://www.cael.org/index.asp)>
- Council for Aid to Education <[www.cae.org](http://www.cae.org)>
- Council for Basic Education <[www.c-b-e.org](http://www.c-b-e.org)>
- Council of Chief State School Officers <[www.ccsso.org](http://www.ccsso.org)>
- Educational Resources Information Center (ERIC)  
<[www.eric.ed.gov](http://www.eric.ed.gov)>
- ERIC Clearinghouse on Assessment and Education  
<<http://ericae.net>>
- Educational Testing Service <[www.ets.org](http://www.ets.org)>
- Education Commission of the States <[www.ecs.org](http://www.ecs.org)>
- Education Development Center <[www.edc.org](http://www.edc.org)>
- The Education Trust  
<[www.edtrust.org/main/main/index.asp](http://www.edtrust.org/main/main/index.asp)>
- Education Week* <[www.edweek.com](http://www.edweek.com)>
- FinAid <[www.finaid.org](http://www.finaid.org)>
- Ford Foundation <[www.fordfound.org](http://www.fordfound.org)>
- The Futures Project <[www.futuresproject.org](http://www.futuresproject.org)>
- Grapevine: National Database of Tax Support for Higher  
Education <[www.coe.ilstu.edu/grapevine](http://www.coe.ilstu.edu/grapevine)>
- Hechinger Institute on Education and the Media  
<[www.teacherscollege.edu/hechinger](http://www.teacherscollege.edu/hechinger)>
- Higher Education Abstracts*  
<[www.cgu.edu/inst/hea/hea.html](http://www.cgu.edu/inst/hea/hea.html)>
- Institute for Educational Leadership <[www.iel.org](http://www.iel.org)>
- Institute for Higher Education Policy <[www.ihep.com](http://www.ihep.com)>
- James Irvine Foundation <[www.irvine.org](http://www.irvine.org)>
- National Association for College Admission Counseling  
<[www.nacac.com/index.html](http://www.nacac.com/index.html)>

- National Association of College and University Business Officers <[www.nacubo.org](http://www.nacubo.org)>
- National Association of Independent Colleges and Universities <[www.naicu.edu](http://www.naicu.edu)>
- National Association of State Budget Officers <[www.nasbo.org](http://www.nasbo.org)>
- National Association of State Student Grant and Aid Programs <[www.nassgap.org](http://www.nassgap.org)>
- National Association of State Universities and Land-Grant Colleges <[www.nasulg.org](http://www.nasulg.org)>
- National Center for Higher Education Management Systems <[www.nchems.org](http://www.nchems.org)>
- National Center for Postsecondary Improvement <[www.stanford.edu/group/ncpi](http://www.stanford.edu/group/ncpi)>
- National Center for Public Policy and Higher Education <[www.highereducation.org](http://www.highereducation.org)>
- National Center on Education and the Economy <[www.ncee.org](http://www.ncee.org)>
- National Conference of States Legislatures <[www.ncsl.org](http://www.ncsl.org)>
- National Education Association <[www.nea.org](http://www.nea.org)>
- National Governors Association <[www.nga.org](http://www.nga.org)>
- National School Boards Association <[www.nsba.org](http://www.nsba.org)>
- Public Agenda <[www.publicagenda.org](http://www.publicagenda.org)>
- RAND <[www.rand.org](http://www.rand.org)>
- State Higher Education Executive Officers <[www.sheeo.org](http://www.sheeo.org)>
- Urban Institute <[www.urban.org](http://www.urban.org)>
- U.S. Department of Commerce, Bureau of Economic Analysis <[www.bea.doc.gov](http://www.bea.doc.gov)>
- U.S. Department of Education, Individuals with Disabilities Education Act Amendments of 1997 <[www.ed.gov/offices/OSERS/Policy/IDEA](http://www.ed.gov/offices/OSERS/Policy/IDEA)>
- U.S. Department of Labor, Bureau of Labor Statistics <[www.bls.gov](http://www.bls.gov)>
- DATA SOURCES**
- American Legislative Exchange Council Report Card on American Education <[www.alec.org/meSWFiles/pdf/education2000.pdf](http://www.alec.org/meSWFiles/pdf/education2000.pdf)>
- College Board Advanced Placement Library: 2000 State and National Summary Reports <[www.collegeboard.org/ap/library/state\\_nat\\_rpts\\_00.html](http://www.collegeboard.org/ap/library/state_nat_rpts_00.html)>
- Digest of Education Statistics 2000 [www.nces.ed.gov/pubs2001/digest](http://www.nces.ed.gov/pubs2001/digest)
- Education Commission of the States Selected State Policies 1990–2000 <[www.ecs.org/clearinghouse/19/04/1904.pdf](http://www.ecs.org/clearinghouse/19/04/1904.pdf)>
- Education Week* Special Reports <[www.edweek.com/sreports](http://www.edweek.com/sreports)>
- Kids Count Databook <[www.aecf.org/kidscount/kc2001/index.htm](http://www.aecf.org/kidscount/kc2001/index.htm)>
- National Assessment of Educational Progress <[www.nces.ed.gov/nationsreportcard](http://www.nces.ed.gov/nationsreportcard)>
- National Center for Education Statistics <<http://nces.ed.gov>>
- National Center for Education Statistics Common Core of Data <<http://nces.ed.gov/ccd>>
- National Center for Education Statistics Education Finance Statistical Center <<http://nces.ed.gov/edfin>>
- National Education Goals Panel Interactive Data Center <[www.negp.gov/datasystemlinks.html](http://www.negp.gov/datasystemlinks.html)>
- Regional Educational Laboratories <[www.lab.brown.edu/public/national/national.shtml](http://www.lab.brown.edu/public/national/national.shtml)>
- U.S. Department of Commerce, U.S. Census Bureau <[www.census.gov](http://www.census.gov)>
- U.S. Census Bureau Educational Attainment <[www.census.gov/population/www/socdemo/educ-attn.html](http://www.census.gov/population/www/socdemo/educ-attn.html)>
- U.S. Department of Education <[www.ed.gov](http://www.ed.gov)>
- U.S. Department of Education Office of Education Research and Improvement <[www.ed.gov/offices/OERI](http://www.ed.gov/offices/OERI)>
- U.S. Department of Education Research and Statistics <[www.ed.gov/topics/topics.jsp?&top=Research+%26+Stats](http://www.ed.gov/topics/topics.jsp?&top=Research+%26+Stats)>

## APPENDIX V

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## APPENDIX VI

# OUTLINE OF CONTENTS

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*The systematic outline in this Appendix is designed to provide a general overview of the conceptual scheme of the Encyclopedia, listing entries or subentries found in the main body of the text along with primary source documents from Appendix III: Court Cases, Legislation, and International Agreements. The outline is divided into sixteen parts: Curriculum; Learning and Instruction; Assessment, Measurement, and Methods; Elementary and Secondary Education; Postsecondary Education; History of Education; Philosophy of Education; Educational Policy and Governance; International Education; Social Context of Education; Out-of-School Influences on Academic Success; Exceptional Students and Special Education; Teacher Education; Administration; Professional Education; and Education and Commerce. Most parts are divided into several sections. Because the section headings are not mutually exclusive, certain entries from the main text and documents from Appendix III are listed more than once.*

### I. CURRICULUM

#### A. SCHOOL

Advanced Placement Courses/Exams  
Agricultural Education  
Art Education: School  
Bilingual Education  
Business Education: School  
Civics and Citizenship Education  
Curriculum, School: Core Knowledge Curriculum  
Curriculum, School: Hidden Curriculum  
Curriculum, School: Overview  
Driver Education  
English Education: Teaching of  
Family and Consumer Sciences Education  
Foreign Language Education  
Geography, Teaching of  
Handwriting, Teaching of  
Health Education, School  
History: Learning  
History: Teaching of  
Journalism, Teaching of  
Language Arts, Teaching of  
Latin in Schools, Teaching of

Mathematics Learning: Algebra  
Mathematics Learning: Complex Problem Solving  
Mathematics Learning: Geometry  
Mathematics Learning: Learning Tools  
Mathematics Learning: Myths, Mysteries, and Realities  
Mathematics Learning: Number Sense  
Mathematics Learning: Numeracy and Culture  
Mathematics Learning: Word-Problem Solving  
Multicultural Education  
Music Education: Overview  
Outdoor and Environmental Education  
Physical Education: Overview  
Physical Education: Preparation of Teachers  
Reading: Teaching of  
Science Education: Overview  
Science Learning: Explanation and Argumentation  
Science Learning: Knowledge Organization and Understanding  
Science Learning: Standards  
Science Learning: Tools  
Service Learning: School

- Sexuality Education
  - Social Studies Education: Overview
  - Speech and Theater Education
  - Spelling, Teaching of
  - Student Activities: Overview
  - Technology Education
  - Vocational and Technical Education: Current Trends
  - Vocational and Technical Education: History of
  - Writing, Teaching of
- B. HIGHER EDUCATION**
- Academic Calendars
  - Academic Major, The
  - African-American Studies
  - Berea College
  - Bethune, Mary McLeod
  - Buchanan, Scott
  - Capstone Courses in Higher Education
  - College Seminars for First-Year Students
  - Curriculum, Higher Education: Innovations in the Undergraduate Curriculum
  - Curriculum, Higher Education: National Reports on the Undergraduate Curriculum
  - Curriculum, Higher Education: Traditional and Contemporary Perspectives
  - Eliot, Charles
  - Gay and Lesbian Studies
  - General Education in Higher Education
  - Honors Programs in Higher Education
  - Hutchins, Robert
  - Interdisciplinary Courses and Majors in Higher Education
  - Internships in Higher Education
  - Learning Communities and the Undergraduate Curriculum
  - Life Experience for College Credit
  - Lifelong Learning
  - Micklejohn, Alexander
  - Multiculturalism in Higher Education
  - Rice, John A.
  - Service Learning: Higher Education
  - Study Abroad
  - Taylor, Harold
  - Women's Studies
- C. INTERNATIONAL**
- Curriculum, International
  - Elementary Education: Current Trends
- Freire, Paulo
  - Froebel, Friedrich
  - Herbart, Johann
  - Montessori, Maria
  - Neill, A. S.
  - Pestalozzi, Johann
  - Secondary Education: International Issues
  - Steiner, Rudolf
  - Vocational and Technical Education: International Context
- II. LEARNING AND INSTRUCTION**
- Pressey, Sidney L.
  - Rogers, Carl
  - Skinner, B. F.
  - Teaching and Learning: International Perspective
  - Vygotsky, Lev
  - Watson, John B.
- A. AFFECTIVE AND SOCIAL PROCESSES IN LEARNING AND DEVELOPMENT**
- 1. Affective and Social Processes**
    - Aggressive Behavior
    - Character Development
    - Cooperative and Collaborative Learning
    - Educational Psychology
    - Instructional Design: Learning Communities
    - Moral Development
    - Peace Education
    - Peer Relations and Learning
  - 2. Motivation**
    - Motivation: Instruction
    - Motivation: Overview
    - Motivation: Self-Regulated Learning
  - 3. Effort and Interest**
    - Effort and Interest
    - Motivation: Self-Regulated Learning
    - Reading: Interest
- B. THEORIES OF DEVELOPMENT AND LEARNING**
- Bloom, B. S.
  - Developmental Theory: Cognitive and Information Processing
  - Developmental Theory: Evolutionary Approach
  - Developmental Theory: Historical Overview
  - Developmental Theory: Vygotskian Theory

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 Learning Theory: Historical Overview  
 Learning Theory: Schema Theory  
 Motor Learning  
 Piaget, Jean

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 Aggressive Behavior  
 Character Development  
 Child Development, Stages of Growth  
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 Erikson, Erik  
 Havighurst, Robert J.  
 Kohlberg, Lawrence  
 Memory: Development of  
 Moral Development  
 Peer Relations and Learning

**C. LEARNING PROCESSES**

Teaching and Learning: International  
 Perspective

**1. Biological Bases of Behavior**

Brain-Based Education  
 Learning: Neurological Foundation

**2. Individual Differences**

Individual Differences: Abilities and  
 Aptitudes  
 Individual Differences: Affective and  
 Conative Processes  
 Individual Differences: Ethnicity  
 Individual Differences: Gender Equity and  
 Schooling

**3. Intelligence**

Intelligence: Emotional Intelligence  
 Intelligence: Measurement  
 Intelligence: Multiple Intelligences  
 Intelligence: Myths, Mysteries, and  
 Realities  
 Intelligence: Triarchic Theory of  
 Intelligence

**4. Attention, Memory, and Perception**

Attention  
 Learning: Perceptual Processes  
 Memory: Autobiographical Memory  
 Memory: Development of  
 Memory: Graphics, Diagrams, and Videos  
 Memory: Implicit Memory  
 Memory: Mental Models

Memory: Metamemory  
 Memory: Myths, Mysteries, and Realities  
 Memory: Structures and Functions  
 Mnemonic Strategies and Techniques

**5. Knowledge Acquisition and Expertise**

Expertise: Adaptive Expertise  
 Expertise: Domain Expertise  
 Knowledge Building  
 Knowledge Management  
 Learning to Learn and Metacognition  
 Learning: Conceptual Change  
 Learning: Knowledge Acquisition,  
 Representation, and Organization  
 Reading: Comprehension  
 Reading: Learning from Text  
 Reading: Prior Knowledge, Beliefs, and  
 Learning  
 Science Learning: Knowledge Organization  
 and Understanding

**6. Problem Solving and Reasoning**

Creativity  
 Instructional Design: Problem-Based  
 Learning  
 Learning: Analogical Reasoning  
 Learning: Causal Reasoning  
 Learning: Problem Solving  
 Learning: Reasoning  
 Learning: Transfer of Learning  
 Learning to Learn and Metacognition

**7. Technology, Media, and Learning**

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 Learning  
 International Assessments: IEA Study of  
 Technology in the Classroom  
 International Gap in Technology, The  
 Literacy: Learning from Multimedia  
 Sources  
 Literacy: Multimedia Literacy  
 Mathematics Learning: Learning Tools  
 Media and Learning  
 Media, Influence on Children  
 School-Linked Services: Outcomes  
 School-Linked Services: Types of Services  
 and Organizational Forms  
 Science Learning: Tools  
 Sexual Orientation  
 Summer Enrichment Programs  
 Technology Education  
 Technology in Education: Current Trends

Technology in Education: Higher Education

Technology in Education: School

Vocational and Technical Education: International Context

#### D. LITERACY, LITERACY STUDIES, AND READING

Bilingualism, Second Language Learning, and English as a Second Language

Chall, Jeanne

Discourse: Classroom Discourse

Discourse: Cognitive Perspective

Gray, William Scott

International Assessments: IEA and OECD Studies of Reading Literacy

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Language Arts, Teaching of

Literacy: Emergent Literacy

Literacy: Intertextuality

Literacy: Learning from Multimedia Sources

Literacy: Multimedia Literacy

Literacy: Narrative Comprehension and Production

Literacy: Vocabulary and Vocabulary Learning

Literacy: Writing and Composition

Literacy and Culture

Literacy and Reading

Readability Indices

Reading: Beginning Reading

Reading: Comprehension

Reading: Content Areas

Reading: Interest

Reading: Learning from Text

Reading: Prior Knowledge, Beliefs, and Learning

Reading: Value of Reading Engagement for Children

#### E. CONTENT AREA LEARNING

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International Assessments: IEA Third International Mathematics and Science Study

Mathematics Learning: Algebra

Mathematics Learning: Complex Problem Solving

Mathematics Learning: Geometry

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Mathematics Learning: Myths, Mysteries, and Realities

Mathematics Learning: Number Sense

Mathematics Learning: Numeracy and Culture

Mathematics Learning: Word-Problem Solving

##### 2. Science

International Assessments: IEA Third International Mathematics and Science Study

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Science Learning: Explanation and Argumentation

Science Learning: Knowledge Organization and Understanding

Science Learning: Standards

Science Learning: Tools

##### 3. Social Studies

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History: Learning

History: Teaching of

International Assessments: Political Democracy and the IEA Study of Civic Education

Social Studies Education: Overview

##### 4. Language Arts

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Children's Literature

Gray, William Scott

Handwriting, Teaching of

International Assessments: IEA and OECD Studies of Reading Literacy

Language Acquisition

Language Arts, Teaching of

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Literacy: Intertextuality

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Institute of International Education

Journalism Education Association

Modern Language Association of America

National Academy of Sciences

National Archives and Records Administration

National Board for Professional Teaching Standards

National Center for Education Statistics

National Conference of State Legislatures

National Council for Accreditation of Teacher Education

National Council for the Social Studies

National Council of Teachers of English

National Council of Teachers of Mathematics

National Endowment for the Arts

National Endowment for the Humanities

National Governors Association

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American Academy of Arts and Sciences

American Alliance for Health, Physical Education, Recreation, and Dance

American Association for the Advancement of Science

American Association of Colleges for Teacher Education

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